rebred Dog Health Survey Results

Kennel Club/British Small Animal Veterinary Association
tific Committee joined forces with scientists in the
miology Unit at the Animal Health Trust to carry out a
wide survey of UK purebred dogs and, with the help of
rs, to identify important health conditions in UK dog breeds
g 2004. The Kennel Club Charitable Trust committed
antial funds to support this project, which could only succeed
he help of owners.

tionnaires were sent to the numerically largest club of each breed, and secretaries were asked to send them
their members. Only the largest club of each breed was selected to try and avoid duplication, and also to
he vast number, and therefore cost, of the 70,000 forms needed.

lerstanding dog health challenges in the UK

questionnaire was divided in different sections, concentrating on different types of information. There were
ions on the health of the owner's dogs, breeding, causes of death and birth defects in any puppies.

l clubs have received detailed feedback on the results of this survey where breed response rate was at least
which should greatly assist with the recognition and control of important conditions in specific breeds. Data
red from this survey will provide baseline information against which the success of future control schemes
e measured.

Example questionnaire

Example appendix

lts of the survey

Summary Results for all breeds (PDF)

Affenpinscher

Afghan Hound (extended results)

Airedale Terrier

Akita

Alaskan Malamute

American Cocker Spaniel

Anatolian / Karabash

Australian Cattle Dog

Australian Shepherd

Go

Vets & researchers

Kennel Club publications and statistics

Downloads

Purebred survey questionnaire

Purebred survey appendix

Purebred survey summary results

canine health schemes

Helping breeders to identify dogs that are clinically free of conditions so that the best possible choices for breeding programmes can be made.

- Australian Silky Terrier
- Australian Terrier
- Basenji
- Basset Fauve
- Basset Griffon
- Basset Hound
- Beagle
- Bearded Collie
- Bedlington Terrier
- Belgian Shepherd
- Bergamasco
- Bernese Mountain Dog
- Bichon Frise
- Bloodhound
- Border Collie
- Border Terrier
- Borzoi
- Boston Terrier
- Bouvier
- Boxer
- Bracco Italiano
- Briard
- British Bulldog
- Brittany
- Bull Terrier
- Bullmastiff
- Cairn Terrier
- Canaan
- Cavalier King Charles Spaniel
- Cesky Terrier
- Chesapeake Bay Retriever
- Chinese Crested
- Cocker Spaniel
- Curly Coated Retriever
- Dachshund
- Dalmatian
- Dandie Dinmont Terrier
- Deerhound
- Dobermann

- Dogue de Bordeaux
- English Setter
- English Springer Spaniel
- English Toy Terrier
- Estrela Mountain Dog
- Field Spaniel
- Finnish Lapphund
- Finnish Spitz
- Flatcoated Retriever
- Fox Terrier
- French Bulldog
- German Longhaired Pointer
- German Pinscher
- German Shorthaired Pointer
- German Spitz
- German Wirehaired Pointer
- Giant Schnauzer
- Glen of Imaal Terrier
- Golden Retrievers
- Gordon Setters
- Grand Bleu de Gascoigne
- Great Dane
- Greenland Dog
- Greyhound
- Griffon Bruxellois
- Hamiltonstovare
- Havanese
- Hovawart
- Hungarian Wirehaired Viszla
- Irish Red and White Setter
- Irish Setter
- Irish Water Spaniel
- Irish Wolfhound
- Italian Greyhound
- Italian Spinone
- Japanese Chin
- Japanese Shiba Inu
- Keeshond
- Komondor

Kooikerhondje

Labrador Retriever

Lagotto Romagnolo

Lancashire Heeler

Large Munsterlander

Leonberger

Lhasa Apso

Lowchen

Maltese

Manchester Terrier

Maremma Sheepdog

Miniature Bull Terrier

Miniature Schnauzer

Newfoundland

Norvegian Buhund

Norwich Terrier

Nova Scotia Duck Tolling Retriever

Old English Sheepdog

Pekingese

Pharoah Hound

Pointer

Polish Lowland Sheepdog

Pomeranian

Poodle (miniature)

Poodle (standard)

Poodle (toy)

Portuguese Water Dog

Pug

Rhodesian Ridgeback

Rottweiler

Russian Black Terrier

Saluki

Samoyed

Schipperke

Scottish Terrier

Sealyham Terrier

Shetland Sheepdog

Shih Tzu

Siberian Husky

Skye Terrier

Sloughi

Soft-Coated Wheaten Terrier

St Bernard

Staffordshire Bull Terrier

Sussex Spaniels

Swedish Vallhund

Tibetan Mastiff

Tibetan Spaniel

Tibetan Terrier

Weimaraner

Welsh Corgi Cardigan

Welsh Corgi Pembroke

Welsh Springer Spaniel

Welsh Terrier

Whippet

wish to receive further information concerning this survey or if you have any queries then please email
n and Breeder Services.

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Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for all breeds

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%. While we had hoped to achieve an overall response rate of at least 40% we have, due to the high level of interest expressed, agreed to produce breed-specific summary reports for those breeds where the individual breed response rate was greater than or equal to 15%.

All breeds

Approximately 56,938 forms were sent out, 13,773 forms were returned of which 13,741 were useable and represented 36,006 live dogs. This was an overall response rate of 24%.

Mortality data

Deaths were reported for 165 breeds with the Bergamasco, Bolognese, Ibizan Hound and Lagotto Romagnolo each reporting no deaths for a total of 15,881 deaths. The median age at death overall was 11 years and 3 months (minimum=2 months, maximum=23 yrs and 5 months). Only 20% of dogs remained alive at 14 years of age and this had fallen to <10% by 15 years (Figure 1). Table 1 shows the twenty most common causes of death. Age at death is presented for the 10 most common causes of death (Figure 2).

Table 1. Cause of death by organ system/category for all breeds.

Cause of death	N*	%†	Most common specific causes in descending order
1 Cancer	4282	27.0	Unspecified, lymphosarcoma, carcinoma
2 Old age	2830	17.8	Old age and old age combinations
3 Cardiac	1770	11.1	Failure, attack, defect, cardiomyopathy, unspecified, MVD
4 Urologic	783	4.9	Chronic kidney failure, acute kidney failure
5 Combinations	732	4.6	Kidney & liver failure, multiple organ failure, cardiac, endocrine, cancer
6 Neurologic	671	4.2	Seizures, intervertebral disc disease (IVDD), unspecified
7 Gastrointestinal	662	4.2	GDV, pancreatitis, colitis, foreign body, HGE, gastroenteritis
8 Cerebrovascular	597	3.8	Stroke or cerebral vascular accident
9 Trauma	384	2.4	Road traffic accident, unspecified, spinal trauma, attacked by dog
10 Hepatic	336	2.1	Failure, unspecified
11 Unknown	295	1.9	Undiagnosed illness
12 Musculoskeletal	272	1.7	Arthritis/osteoarthritis, hip dysplasia
13 Endocrine	234	1.5	Cushings disease (hyperadrenocorticism), diabetes mellitus
14 Perioperative	222	1.4	Perioperative or anaesthetic related, postoperative or after surgery
15 Behaviour	209	1.3	Aggression, unspecified
16 Respiratory	189	1.2	Pneumonia, larnygeal paralysis, unspecified failure
17 Immune mediated	158	1.0	Unspecified, AIHA, immune mediated thrombocytopaenia
18 Reproductive	145	0.9	Pyometra, prostatic disease
19 Poisoning	84	0.5	
20 Sudden death	71	0.4	
Sub-total	14926	94.0	
The rest	955	6.0	
Total	15881	100.0	

* N=number of cases; † %=proportional mortality=N/158881=N/total number of deaths in ten years.
Cancer: lymphosarcoma=lymphoma
Cardiac: MVD=mitral valve disease
Gastrointestinal: GDV = gastric dilatation/volvulus, HGE = haemorrhagic gastroenteritis
Immune mediated: AIHA = autoimmune haemolytic anaemia
The rest included the following reported causes of death in descending order: uncodeable causes of death categorized as other, senility, internal bleeding, collapse, infection, ocular, dermatologic, portosystemic shunt (PSS), septicaemia, systemic, cardiovascular, pining, hyperthermia and drowning.

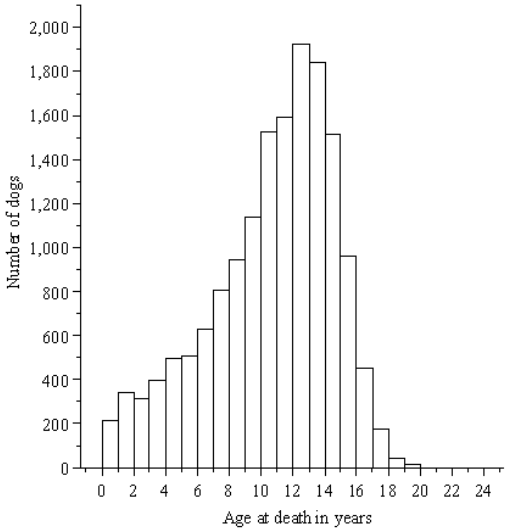

Figure 1. Histogram of the overall longevity for 15,881 deaths representing 165 breeds with reported deaths: overall median age at death was 11 years and 3 months (minimum=2 months, maximum=23 years and 5 months); mean age at death was 10 years and 6 months (SD=4 years).

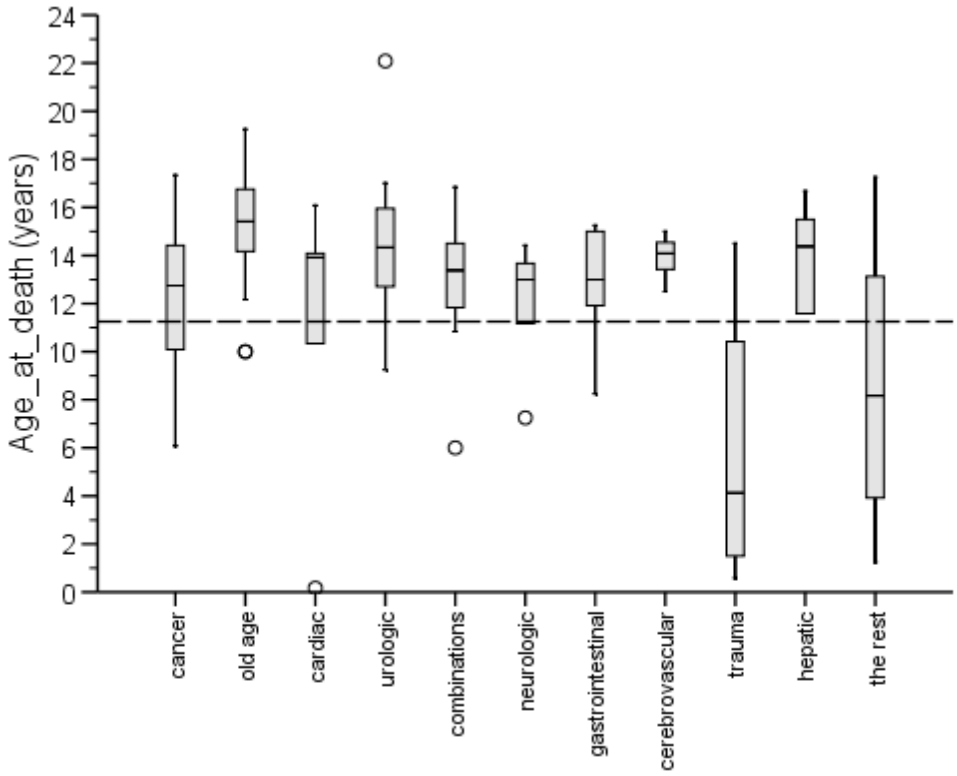

Figure 2. Box and whisker plot of age at death in years for the ten most common causes of death (N=15,881). The dashed line (– – –) is the overall median age at death for all dogs in the survey. The solid line within each grey box represents the median age at death from the condition. The grey box represents 50% of the dogs and the whiskers represent 95% of the dogs for each condition. The circles (o) represent possible outliers.

Morbidity data

The median current age of all live dogs with a reported age (N=35,907) was 4 years and 10 months (min=1 month, max=19 years, Figure 3). Health information was reported for 36,006 live dogs of which 22,540 (62.6%) were healthy and 13,466 (37.4%) had at least one reported health condition, resulting in a total of 22,504 reported conditions with a median of 1 condition/dog (min=1, max=14).

The median current age of all healthy dogs with a reported age (N=22,467) was 3 years and 10 months (min=1 month, max=19 years). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=13,432) was 6 years and 9 months (min=1month, max=18 years and 11 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=21,551) was 3 years and 4 months (min=1 month, max=16 years and 11 months, Figure 4). Table 3 shows the frequency of occurrence of all reported disease conditions. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for dogs with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	15,038	7,162	22,200 (62%)
Male	10,493	2,986	13,479 (38%)
Totals	25,531 (72%)	10,148 (28%)	35,679 (100%)

Females were 1.7 times more likely to be neutered compared with males (95% confidence interval: 1.6-1.8, P<0.0001).

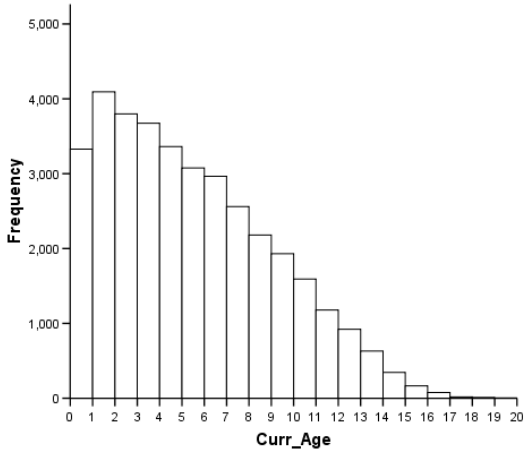

Figure 3. Histogram showing frequency of current age in years for live dogs with age reported (N=35,907).

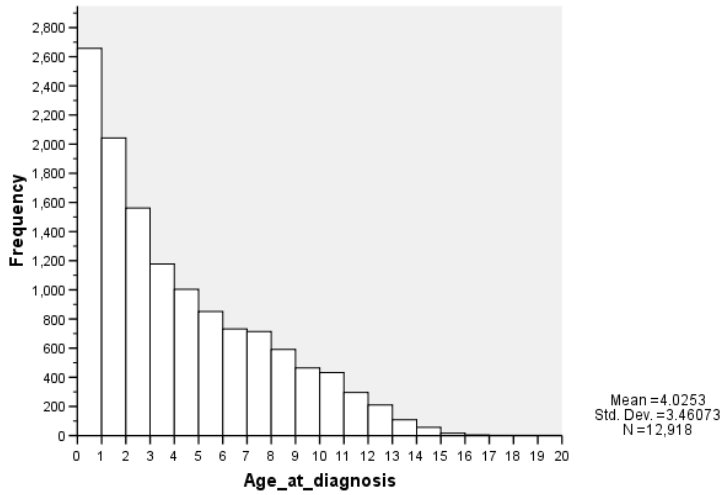

Figure 4. Histogram showing frequency of age at diagnosis for the 12,918 dogs with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

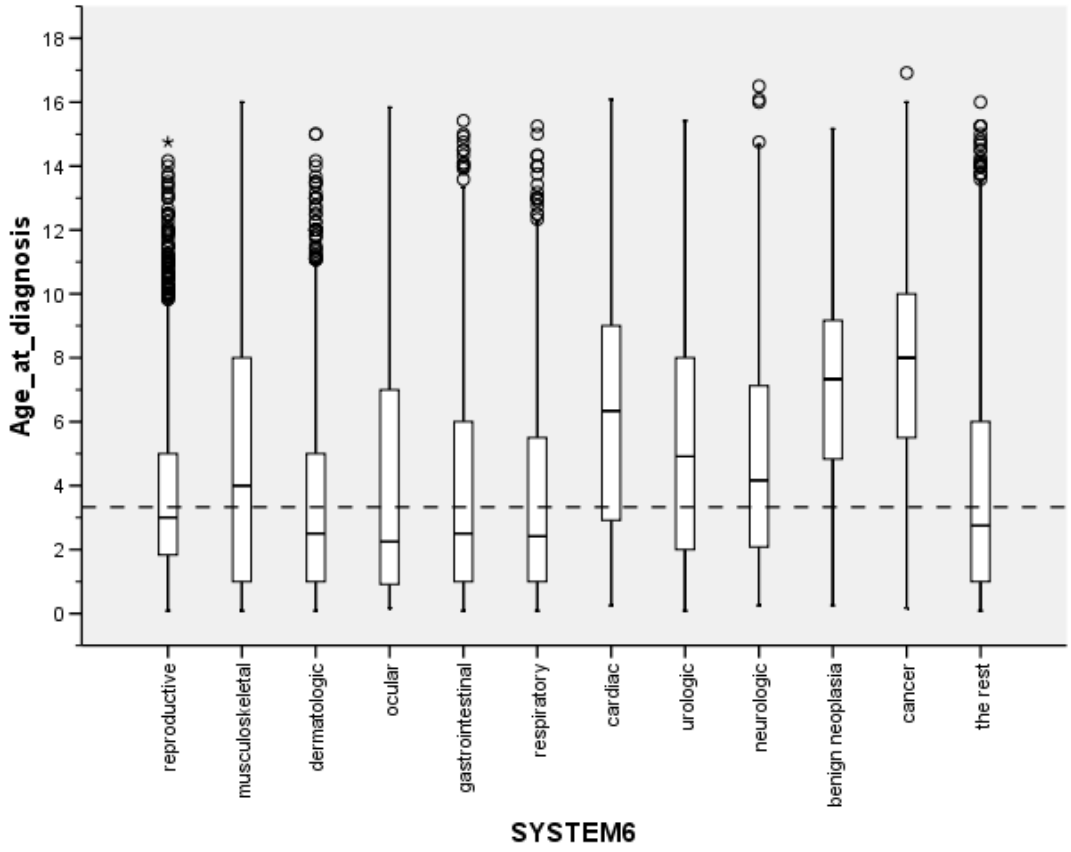

Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order. The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey. The solid line within each grey box represents the median age at diagnosis from the condition. The box represents 50% of the dogs and the whiskers represent 95% of the dogs for each condition. The circles (o) represent possible outliers and the asterisks (∗) represent extreme outliers.

Table 3. Disease condition by organ systems for all breeds (N=36,0006 live dogs).

	Disease condition	All conditions N*	%†	Prevalence %††	Most common specific conditions in descending order
1	Reproductive	3233	14.4	8.98	Pyometra, false pregnancy, dystochia, infertility, cryptorchid, irregular heats
2	Musculoskeletal	2910	12.9	8.08	Arthritis, cruciate ligament injury, hip dysplasia, patellar luxation, OCD
3	Dermatologic	2320	10.5	6.44	Dermatitis, mites, pyotraumatic dermatitis, alopecia, pyoderma, fading nose pigment
4	Ocular	2167	9.6	6.02	Cataract, entropion, corneal ulcer, epiphora, KCS, cherry eye, distichiasis
5	Gastrointestinal	1690	7.5	4.69	Colitis, GDV, diarrhoea, pancreatitis, foreign body obstruction, vomiting
6	Respiratory	1242	5.5	3.45	Kennel cough, noisy breathing, coughing, rhinitis, long soft palate
7	Cardiac	1159	5.2	3.22	Heart murmur unspecified, arrhythmia, MVD, CHF, DCMP
8	Urologic	1009	4.5	2.80	Cystitis, incontinence, cystouroliths, haematuria, kidney failure (chronic>acute)
9	Immune mediated	990	4.4	2.75	Food allergy, atopy, flea allergy, allergy unspecified, AIHA
10	Neurologic	937	4.2	2.60	Seizures, IVDD, deafness, meningitis, vestibular disease
11	Aural (ears)	825	3.4	2.29	Otitis externa, earmites, excessive ear wax, aural haematoma
12	Benign neoplasia	762	3.4	2.12	Lipoma, histiocytoma, unspecified
13	Cancer	646	2.9	1.79	Type unspecified, MCT, carcinoma, lymphoma, soft tissue sarcoma, SCC
14	Dental	613	2.7	1.70	Retained puppy teeth, dental disease, defect other than extra teeth
15	Endocrine	573	2.6	1.59	Hypothyroidism, Cushings disease, diabetes mellitus, Addisons disease
16	Unknown	457	2.0	1.27	Dermatologic, hepatic, musculoskeletal, ocular, neurologic, unspecified undiagnosed illness
17	Trauma	342	1.5	0.95	Musculoskeletal, ocular,dermatologic, neurologic
18	Other	213	1.0	0.59	Hernia (umbilical>inguinal), poisoning, fever of unknown origin, uncodeable conditions
19	Anal gland	127	0.6	0.35	Anal sacculitis (anal gland impaction or infection or removal)
20	Behaviour	87	0.4	0.24	Unspecified, aggression
21	Hepatic	78	0.4	0.22	Hepatitis, portosystemic shunt, liver disease/failure (chronic>acute)
22	Cerebrovascular	55	0.2	0.15	Stroke or cerebrovascular accident
23	Haematopoietic	53	0.2	0.15	Anaemia, bleeding disorder, platelet disorder
24	Cardiopulmonary	16	0.1	0.04	Coughing, pleural effusion, pulmonary oedema
	Total	22504	100.0	62.50	

* N = number of cases of disease; † % = proportional morbidity as N/225044 dogs with disease conditions; †† prevalence % = N/360006 live dogs
Reproductive: dystochia= uterine inertia (failure to push)>physical blockage (stuck puppy), cryptorchid=undescended testicle or monorchid as missing testicle
Musculoskeletal: arthritis=osteoarthritis or degenerative joint disease (hindlimbs>forelimbs), OCD=osteochondrosis dissecans (elbow=shoulder>hock>stifle)
Dermatologic: dermatitis=undiagnosed skin irritation or scratching or itchy skin or pruritis, mites in descending order – sarcoptes>cheyletiella> demodex, pyotraumatic dermatitis=hot spot or wet eczema, alopecia=hairloss (unspecified), pyoderma=skin infection
Ocular: entropion=inward turning eyelid, epiphora=overflow of tears or excessive tearing, cherry eye=prolapsed gland of the third eyelid, KCS=keratoconjuctivitis sicca or dry eye, distichiasis=extra eyelashes,
Gastrointestinal: colitis=chronic large bowel diarrhea, GDV=gastric dilatation/volvulus
Respiratory: kennel cough or infectious tracheobronchitis, rhinitis=chronic rhinitis or nasal discharge
Cardiac: MVD=mitral valve disease, CHF=congestive heart failure, DCMP=dilated cardiomyopathy
Urologic: cystitis=bladder infection, incontinence (unspecified>after spay), cystouroliths=bladder stones (unspecified>struvite or magnesium ammonium phosphate>calcium oxalate>urate>cystine>mixed), haematuria=blood in urine
Immune mediated: atopy=inhalant allergy, AIHA=autoimmune haemolytic anemia
Neurologic: seizures include idiopathic epilepsy and unspecified fits, IVDD=intervertebral disk disease
Cancer: lymphoma=lymphosarcoma, MCT=mast cell tumour, SCC=squamous cell carcinoma
Endocrine: Cushings disease=hyperadrenocorticism, Addisons disease=hypoadrenocorticism
Haematopoietic: blood conditions excluding those reported as immune mediated and all were non-specific conditions

Information for the breed-specific reports:

Breeds with a response rate of >15% and having had >50 completed questionnaires returned were included as separate breeds and the remaining breeds were combined into 'other breeds' for the scientific papers.

Breed-specific reports have been prepared for those breeds with response rates ≥15% regardless of the total number of completed questionnaires returned.

Mortality or cause of death data are reported as breed-specific proportional mortalities.

Breed-specific proportional mortality is reported as the number of deaths due to a specific cause affecting a specific organ system divided by the total number of deaths for the breed in the past ten years reported in the survey.

Table 1:

N=number of deaths due to a specific cause for the breed

% = proportional mortality as N/total number of deaths for the breed in the past ten years

For Figure 2:

Box and whisker plot of age at death in years for the most common causes of death in the breed (N=total number of deaths in the breed). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the breed. The solid line within each grey box represents the median age at death from the condition. The box represents 50% of the dogs and the whiskers represent 95% of the dogs for each condition. The circles (o) represent possible outliers and the asterisks (∗) represent extreme outliers.

Morbidity or frequency of disease occurrence data are reported as breed-specific proportional morbidities.

Breed-specific proportional morbidity is reported as the number of cases of a specific disease condition divided by the total number of diseased dogs for the breed.

For Table 3:

N = number of cases of a specific disease for the breed

% = proportional morbidity as N/total number of dogs with disease conditions for the breed

For Figure 5:

Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the breed (N=total number of dogs with n conditions and age at diagnosis reported. The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the breed. The solid line within each grey box represents the median age at diagnosis from the condition. The box represents 50% of the dogs and the whiskers represent 95% of the dogs for each condition. The circles (o) represent possible outliers and the asterisks (∗) represent extreme outliers.

Medians with minimum and maximum values are reported throughout the reports as these are the most appropriate statistics for skewed distributions such as age at death. When data are not normally distributed, the median value is a more appropriate measure of the central tendency or average for the data. The median value represents the middle value, below which lie 50% of the values and above which lie 50% of the values.

Coding and abbreviations for disease conditions (abbreviations also apply to causes of death):

Organ system code	Meaning (abbreviation for graphs)
Anal gland	(anal gla)
Aural	ears
Behaviour	
Benign neoplasia	non-cancerous masses, lumps or cysts (benign n)
Cancer	malignant neoplasia
Cardiac	heart
Cardiopulmonary	conditions that affect the heart & lungs (cardiopu)
Cerebrovascular	stroke or cerebrovascular accident (cerebrov)
Dental	
Dermatologic	skin (dermatol)
Endocrine	conditions of the hormonal system (endocrin)
Gastrointestinal	stomach, intestines and pancreas(gastroin)
Haematopoietic	blood
Hepatic	liver and gall bladder
Immune mediated	conditions involving the immune system (immune m)
Musculoskeletal	muscles, tendons, ligaments and bones (musculos)
Neurologic	nervous system including the brain (neurolog)
Ocular	eyes
Other	uncodeable conditions* (uncode a or other)
Reproductive	male and female repoductive organs including the prostate gland (reproduc)
Respiratory	nasal cavity, nasopharynx, larynx, trachea and lungs (respirat)
Trauma	traumatic conditions affecting any organ system
Unknown	undiagnosed illness
Urologic	urinary tract (kidneys, ureters, bladder & urethra)

* conditions that could not be coded to one of the specified organ system categories.

Other abbreviations used in the breed-specific reports include:

CDRM	Chronic degenerative radiculomyelopathy
CHD	Canine hip dysplasia
CLR	Cruciate ligament rupture
EPI	Exocrine pancreatic insufficiency
GME	Granulomatous meningoencephalitis
IBD	Inflammatory bowel disease
MMM	Masticatory muscle myositis
OCD	Osteochonrosis dissecans
PLE	Protein losing enteropathy
PLN	Protein losing nephropathy
PPM	Persistent papillary membrane

Section D: Causes of Death

*This section is about any **adult dogs** that you have owned and that have **died in the past 10 years.***

23. For each dog that has died (or been euthanased), please tell us about the cause of death or reason for euthanasia. Please be as specific as possible in describing the cause of death, using the diagnosis made by your veterinary surgeon whenever possible. If you have difficulty remembering, please consider contacting your veterinary practice to ask.

Age at time of death	Please describe the reason(s) for euthanasia or cause(s) of death, if known	Was a post mortem (autopsy) performed? (cross if yes)
☐☐ years and ☐☐ months		☐
☐☐ years and ☐☐ months		☐
☐☐ years and ☐☐ months		☐
☐☐ years and ☐☐ months		☐
☐☐ years and ☐☐ months		☐
☐☐ years and ☐☐ months		☐

Section E: Comments

This section provides space for you to make any additional comments that you may have on the questionnaire, this survey or specific issues you feel may be important to us. Your input is welcomed.

Thank you very much for taking the time to complete this questionnaire.
Your help is greatly appreciated!

Please return the completed questionnaire by **30 April 2004** with your comments to:
Dr. Vicki Adams, Small Animal Epidemiologist, Animal Health Trust
Lanwades Park, Kentford, Newmarket, Suffolk CB8 7UU, UK
in the prepaid envelope supplied.

The support of the Kennel Club Charitable Trust, the Animal Health Trust and the Kennel Club is gratefully acknowledged.

Example

KENNEL CLUB/
BRITISH SMALL ANIMAL
VETERINARY ASSOCIATION
SCIENTIFIC COMMITTEE

THE KENNEL CLUB

Purebred dog health survey

Please use a **cross** to indicate your choice(s) for each question eg. ☒ or write clearly within the spaces provided

Please complete one questionnaire for each breed of dog that you own. If you own more than 10 dogs of the same breed, or dogs of a different breed, please ask your breed club for an additional questionnaire. Alternatively, you have the permission of the Kennel Club to make a copy (ies) of the questionnaire to allow you to complete the survey for all your dogs/breeds.

Please fill in the name of your **DOG BREED** below: (please use BLOCK CAPITALS)

Section A: Health conditions that have affected the dogs that you currently own

This section is about dogs of your breed that are **alive and that you currently own.**

Please indicate the age (in years and months), the sex of each dog and whether the dog has been neutered (spay or castratic

Dog code no.	Current age of dog	Sex (cross as appropriate)	Neutered (cross if yes)
1	☐☐ years and ☐☐ months	Male ☐ ☐ Female	☐
2	☐☐ years and ☐☐ months	Male ☐ ☐ Female	☐
3	☐☐ years and ☐☐ months	Male ☐ ☐ Female	☐
4	☐☐ years and ☐☐ months	Male ☐ ☐ Female	☐
5	☐☐ years and ☐☐ months	Male ☐ ☐ Female	☐
6	☐☐ years and ☐☐ months	Male ☐ ☐ Female	☐
7	☐☐ years and ☐☐ months	Male ☐ ☐ Female	☐
8	☐☐ years and ☐☐ months	Male ☐ ☐ Female	☐
9	☐☐ years and ☐☐ months	Male ☐ ☐ Female	☐
10	☐☐ years and ☐☐ months	Male ☐ ☐ Female	☐

Please use the above dog code numbers for the remainder of this section.

For each of the following questions in this section, please indicate the specific condition(s) for each dog that has ever been affected. Please be as specific as possible in describing the condition, using the diagnosis made by your veterinary surgeon whenever possible. If you have difficulty remembering, please consider contacting your veterinary clinic to ask for help. If you do not know about any conditions that might have occurred before you obtained your dog, please answer No and continue on to the next question.

*To aid your memory, some examples of possible conditions are included for each body system question in an Appendix. The lists are ordered from the more general to the more specific to help you be as specific as possible. Each indented line is more specific than the line above it. Please take your description of the condition as far as possible. These lists are **not** all-inclusive so please **do** write down a condition that is not on a list if one of your dogs has been diagnosed with it.*

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Example: *Dogs 2, 3, & 8 have suffered from digestive system conditions with dog 8 having suffered from two conditions.*

1. Have any of the dogs that you currently own ever suffered from a serious or persistent digestive system (including the mouth and teeth) condition? Symptoms might include regurgitation, vomiting, constipation, diarrhoea, weight loss, or a change in appetite.

☐ No → If No, go to question 2.

☒ Yes → If Yes, please complete the section below for each affected dog.
See the Appendix list for some example digestive system conditions.

Dog code no.	Age at time of diagnosis	Name/description of **digestive** system condition
2	2 years & months	PANCREATITIS
3	3 years & months	CHRONIC VOMITING (not on list)
8	years & 6 months	RETAINED PUPPY TEETH
8	8 years & months	CANCER - STOMACH CARCINOMA

1. Have any of the dogs that you currently own ever suffered from a serious or persistent **digestive** system (including the mouth and teeth) condition? Symptoms might include regurgitation, vomiting, constipation, diarrhoea, weight loss, or a change in appetite.

☐ No → If No, go to question 2.

☐ Yes → If Yes, please complete the section below for each affected dog.
See the Appendix list for some example digestive system conditions.

Dog code no.	Age at time of diagnosis	Name/description of **digestive** system condition
	years & months	
	years & months	
	years & months	
	years & months	
	years & months	
	years & months	

2. Have any of the dogs that you currently own ever suffered from a serious or persistent **heart** condition? Symptoms might include a cough, collapse, heart murmur, abnormal heart rhythm, exercise intolerance or difficulty breathing.

☐ No → If No, go to question 3.

☐ Yes → If Yes, please complete the section below for each affected dog.
See the Appendix list for some example heart conditions.

Dog code no.	Age at time of diagnosis	Name/description of **heart** system condition
	years & months	
	years & months	
	years & months	
	years & months	
	years & months	
	years & months	

Section B: Breeding history of all dogs that you have owned and bred

*This section is about all dogs of this breed that you have owned and **bred in the past 10 years.** Please fill each of the spaces with a **number (eg** 3 **if none write** 0 **)***

15. How many of your female dogs have ever had a litter?
16. How many litters have your female dogs had in total?
17. How many litters were delivered without surgery?
18. How many litters were delivered by Caesarian section?
19. How many puppies were born in total (dead and alive)?
20. How many puppies were born alive?
21. How many puppies were born alive but died in the first week of life?

Section C: Birth defects and conditions affecting puppies in the first 8 weeks of life

*This section is about any conditions that **puppies** have been **born with in the past 10 years.***

Please be as specific as possible in describing the condition, using the diagnosis made by your veterinary surgeon wherever possible. If you have difficulty remembering, please consider contacting your veterinary practice to ask.

22. Have any of your puppies ever suffered from a birth defect or other congenital condition?

☐ No → If No, go to question 23 in SECTION D.

☐ Yes → If Yes, please write down the details for each condition any puppies were born with.
See the Appendix list for some examples of congenital conditions.

Name or description of condition puppies born with	No. of puppies ever affected

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12. Have any of the dogs that you currently own ever suffered from a **hormonal (endocrine)** condition? Symptoms might include excessive thirst, lethargy, poor growth, weight loss or weight gain.

☐ No → If No, go to question 13.

☐ Yes → If Yes, please complete the section below for each affected dog.
See the Appendix list for some example endocrine conditions.

Dog code no.	Age at time of diagnosis	Name/description of **hormonal (endocrine)** condition
	years & months	
	years & months	
	years & months	
	years & months	
	years & months	
	years & months	

13. Have any of the dogs that you currently own ever suffered from any **other** serious or persistent condition not covered in the previous questions?

☐ No → If No, go to question 14.

☐ Yes → If Yes, please complete the section below for each affected dog.

Dog code no.	Age at time of diagnosis	Name/description of **other** condition
	years & months	
	years & months	
	years & months	
	years & months	
	years & months	
	years & months	
	years & months	
	years & months	

14. Have any of the dogs that you currently own ever suffered from **cancer** not covered in the previous questions?

☐ No → If No, go to question 15 in Section B.

☐ Yes → If Yes, please complete the section below for each affected dog. Please also indicate if the diagnosis was confirmed, for example with a biopsy or tissue sent to a pathology laboratory. Examples of types of cancer are adenoma, adenocarcinoma, carcinoma, lymphoma and sarcoma.

Example:

Dog code no.	Age at time of diagnosis	Location and type of **cancer**	Confirmed
8	8 years & months	LIPOMA (FATTY LUMP) UNDER SKIN	☒

Dog code no.	Age at time of diagnosis	Location and type of **cancer**	Confirmed
	years & months		☐
	years & months		☐
	years & months		☐
	years & months		☐
	years & months		☐
	years & months		☐

3. Have any of the dogs that you currently own ever suffered from a serious or persistent **respiratory** condition? Symptoms might include noisy breathing, wheezing, difficulty breathing, coughing, nasal discharge or exercise intolerance.

☐ No → If No, go to question 4.

☐ Yes → If Yes, please complete the section below for each affected dog.
See the Appendix list for some example respiratory conditions.

Dog code no.	Age at time of diagnosis	Name/description of **respiratory** system conditions
	years & months	
	years & months	
	years & months	
	years & months	
	years & months	
	years & months	

4. Have any of the dogs that you currently own ever suffered from a serious or persistent **eye** condition? Symptoms might include red eyes, a painful eye, overflow of tears or a loss of vision.

☐ No → If No, go to question 5.

☐ Yes → If Yes, please complete the section below for each affected dog.
See the Appendix list for some example eye conditions.

Dog code no.	Age at time of diagnosis	Name/description of **eye** condition
	years & months	
	years & months	
	years & months	
	years & months	
	years & months	
	years & months	
	years & months	
	years & months	

5. Have any of the dogs that you currently own ever suffered from a serious or persistent **skin, coat or ear** condition? Symptoms might include hair loss, scratching or skin lesions such as pustules, crusts or scabs

☐ No → If No, go to question 6.

☐ Yes → If Yes, please complete the section below for each affected dog.
See the Appendix list for some example skin, coat and ear conditions.

Dog code no.	Age at time of diagnosis	Name/description of **skin, coat or ear** condition
	years & months	
	years & months	
	years & months	
	years & months	
	years & months	
	years & months	

Example
Copy

6. Have any of the dogs that you currently own ever suffered from a serious or persistent condition affecting the **bones, muscles or joints** (including the jaws)? Symptoms might include pain stiffness or lameness.

☐ No → If No, go to question 7.

☐ Yes → If Yes, please complete the section below for each affected dog.
See the Appendix list for some example musculo-skeletal conditions.

Dog code no.	Age at time of diagnosis	Name/description of condition affecting the **bones, muscles or joints**
	years & months	
	years & months	
	years & months	
	years & months	
	years & months	
	years & months	

7. Have any of the dogs that you currently own ever suffered from a serious or persistent **nervous system** condition? Symptoms might include incoordination, paralysis, seizures (fits) or behavioural changes.

☐ No → If No, go to question 8.

☐ Yes → If Yes, please complete the section below for each affected dog.
See the Appendix list for some example nervous system conditions.

Dog code no.	Age at time of diagnosis	Name/description of **nervous system** condition
	years & months	
	years & months	
	years & months	
	years & months	
	years & months	
	years & months	

8. Have any of the dogs that you currently own ever suffered from a serious or persistent **reproductive** condition? Symptoms might include abnormal discharge, lack of fertility or nursing problems.

☐ No → If No, go to question 9.

☐ Yes → If Yes, please complete the section below for each affected dog.
See the Appendix list for some example reproductive conditions.

Dog code no.	Age at time of diagnosis	Name/description of **reproductive** condition
	years & months	
	years & months	
	years & months	
	years & months	
	years & months	
	years & months	

9. Have any of the dogs that you currently own ever suffered from a serious or persistent **liver** condition? Symptoms might include weight loss, jaundice or ascites (fluid in abdomen).

☐ No → If No, go to question 10.

☐ Yes → If Yes, please complete the section below for each affected dog.
See the Appendix list for some example liver conditions.

Dog code no.	Age at time of diagnosis	Name/description of **liver** condition
	years & months	
	years & months	
	years & months	
	years & months	
	years & months	
	years & months	

10. Have any of the dogs that you currently own ever suffered from a serious or persistent **urinary tract** condition? Symptoms might include incontinence, difficulty urinating, change in frequency of urination or drinking, or blood in urine.

☐ No → If No, go to question 11.

☐ Yes → If Yes, please complete the section below for each affected dog.
See the Appendix list for some example urinary tract conditions.

Dog code no.	Age at time of diagnosis	Name/description of **urinary tract** condition
	years & months	
	years & months	
	years & months	
	years & months	
	years & months	
	years & months	

11. Have any of the dogs that you currently own ever suffered from a serious or persistent **blood** condition? Symptoms might include bruising, bleeding or collapse.

☐ No → If No, go to question 12.

☐ Yes → If Yes, please complete the section below for each affected dog.
See the Appendix list for some example blood conditions.

Dog code no.	Age at time of diagnosis	Name/description of **blood** condition
	years & months	
	years & months	
	years & months	
	years & months	
	years & months	
	years & months	

Example
Copy

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Question 9

Some examples of liver conditions

Acute liver failure
Amyloidosis of the liver
Cholangiohepatitis
Chronic liver disease/failure
Copper toxicosis
Hepatitis
Polycystic liver (and kidney) disease
Portosystemic shunt
Cancer (please specify location, eg bile duct and type, eg carcinoma)
Traumatic injury (please specify location)

Question 10

Some examples of urinary tract conditions

Kidney
- Acute kidney failure
- Amyloidosis of the kidneys
- Chronic kidney failure
- Cystinuria
- Tubular transport dysfunction (Fanconi's syndrome)
- Kidney stones (uroliths, please specify type if known)
- Polycystic kidney disease
- Protein-losing nephropathy (PLN)
- Pyelonephritis
- Renal dysplasia

Ureters
- Ectopic ureters

Bladder
- Bladder stones (cystouroliths, please specify type if known)
- Bladder infection (cystitis)

Urethra
- Urethral obstruction

Cancer (please specify location, eg. bladder and type, eg transitional cell carcinoma)
Traumatic injury (please specify location)

Question 11

Some examples of blood conditions

Anaemia
- Autoimmune haemolytic anemia
- Phosphofructokinase (PFK) enzyme deficiency
- Pyruvate kinase (PK) enzyme deficiency

Bleeding disorders/Coagulation factor deficiencies
- Factor 7 deficiency
- Fibrinogen deficiency
- Haemophilia A
- Platelet disorder
  - Immune-mediated thrombocytopenia
- Von Willebrand disease (VWD)

Femoral artery occlusive disease
Immune system disorders
- Canine cyclic neutropenia (hematopoiesis)
- Canine leucocyte adhesion deficiency (CLAD)
- Complement (C3) deficiency
- Immunoglobulin A (IgA) deficiency
- Severe combined immunodeficiency disease (SCID)

Cancer (please specify location, eg lymph nodes and spleen [multicentric] and type, eg lymphosarcoma [lymphoma])

Question 12

Some examples of hormonal (endocrine) conditions

Brain/pituitary gland
- Acromegaly (Giantism)
- Diabetes insipidus (Water diabetes)
- Pituitary dwarfism

Adrenal glands
- Addison's disease (hypoadrenocorticism)
- Cushing's disease (hyperadrenocorticism)

Pancreas
- Diabetes mellitus (Sugar diabetes)

Thyroid gland
- Hyperthyroidism (too much thyroid hormone)
- Hypothyroidism (not enough thyroid hormone)

Parathyroid glands
- Hyperparathyroidism (too much parathyroid hormone)
- Hypoparathyroidism (not enough parathyroid hormone)

SECTION C - Question 22

Some examples of birth defects and congenital conditions

Cleft palate/lip
Cryptorchid (undescended testicle[s])
Extra teeth
Fading puppies
Heart defects
Incomplete abdominal wall (umbilical hernia)
Liver shunt (portosystemic shunt)
Missing teeth
Spina bifida
Traumatic injury (please specify location)
Vascular anomalies

These lists are not all-inclusive so please do write down a condition that is not on a list if one of your dogs has been diagnosed with it.

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KENNEL CLUB/ BRITISH SMALL ANIMAL VETERINARY ASSOCIATION SCIENTIFIC COMMITTEE

Animal *Health* Trust

THE KENNEL CLUB

Purebred dog health survey

Appendix

Instructions for the survey

Please read the instructions for each section carefully.

Section A is about dogs of your breed that are **alive and that you currently own.**

Section B is about all dogs of your breed that you have **owned and bred in the past 10 years.**

Section C is about **conditions that puppies** have been **born with in the past 10 years.**

Section D is about the **causes of death for all your adult** purebred dogs that have died or been euthanased in the **past 10 years.**

Please answer each question as accurately as possible.

Please write in **BLOCK CAPITALS** as clearly as you can.

Please mark all check boxes with an X as shown:

☒ **Yes**

Each questionnaire is designed to be completed for ten dogs of the same breed. If you own more than 10 dogs of the same breed, or dogs of a different breed, please ask your breed club for an additional questionnaire. Alternatively, you have the permission of the Kennel Club to make a copy(ies) of the questionnaire to allow you to complete the survey for all your dogs/breeds.

All information that you provide will be kept strictly confidential and anonymous.

Please tell us about any difficulties that you had understanding or answering any of the questions.

There is room on the last page for any additional comments you may wish to make.

Your help with this survey is greatly appreciated.

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Question 1

Some examples of digestive system conditions

- Oral cavity and teeth
  - Retained puppy teeth
- Oesophagus
  - Megaoesophagus
  - Vascular anomaly causing stricture or dilation
- Stomach
  - Bloat or Gastric Torsion/Volvulus (GDV)
  - Pyloric stenosis
- Intestines
  - Allergy to wheat products (Gluten-sensitive enteropathy)
  - Anal furunculosis/ Perianal fistula
  - Chronic colitis/diarrhoea
  - Infectious (Campylobacter, Parvovirus)
  - Inflammatory bowel disease
  - Telescoping bowel (intussusception)
  - Protein-losing enteropathy (PLE)
- Pancreas
  - Exocrine pancreatic insufficiency (EPI)
  - Pancreatitis
- Cancer (please specify location, eg intestinal and type, eg lymphosarcoma)
- Foreign body obstruction (please specify location)
- Traumatic injury (please specify location)

Question 2

Some examples of heart conditions

- Congenital heart defect
  - Atrial septal defect
  - Patent ductus arteriosus
  - Persistent right aortic arch
  - Tetrology of Fallot
  - Ventricular septal defect
- Heart failure
- Heart murmur (give grade if known, eg. IV or 4)
  - With clinical signs
  - Without any clinical signs
- Heart muscle condition
  - Dilated cardiomyopathy
- Heart rhythm disorders
  - Atrial fibrillation
  - Slow or fast that required pacing
- Heart valve conditions
  - Mitral valve disease
  - Tricuspid valve disease
  - Aortic/Subaortic stenosis
  - Pulmonic stenosis
- Pericardial disease
  - Pericardial effusion
- Cancer (please specify location, eg atria and type, eg haemangiosarcoma)
- Traumatic injury

Question 3

Some examples of respiratory conditions

- Nose
  - Rhinitis
  - Constricted nostrils
- Pharynx (throat)
  - Long soft palate
- Larynx (voicebox)
  - Laryngeal paralysis
- Trachea
  - Hypoplastic trachea
  - Tracheal collapse
- Bronchi
  - Chronic bronchitis
  - Kennel cough
- Lungs
  - Lung lobe torsion
  - Pneumonia
- Pleural cavity
  - Pyothorax (pus in chest)
- Cancer (please specify location, eg lung and type, eg carcinoma)
- Traumatic injury (please specify location)

Question 4

Some examples of eye conditions

- Cornea
  - Dry eye (KCS or Keratoconjunctivitis sicca)
  - Pannus
  - Ulcer
- Eyelash abnormalities
  - Extra eyelashes (distichiasis)
- Eyelid abnormalities
  - Buckled cartilage of the 3rd eyelid
  - Cherry eye (prolapsed gland of the 3rd eyelid)
  - Outward drooping of eyelid (ectropion)
  - Inward turning eyelid (entropion)
- Glaucoma/Goniodysgenesis
- Lens problems
  - Cataracts
  - Lens luxation
- Pannus
- Persistent hyperplastic primary vitreous (PHPV)
- Persistent pupillary membrane (PPM)
- Retinal abnormalities
  - Collie eye anomaly (CEA)
  - Hemeralopia (day-blindness)
  - Multifocal retinal dysplasia (MRD)
  - Progressive retinal atrophy (PRA)
    - Central (pigment epithelial dystrophy)
    - Generalised (night blindness)
- Cancer (please specify location, eg eyelid margin and type, eg papilloma)
- Traumatic injury (please specify location)

These lists are not all-inclusive so please do write down a condition that is not on a list if one of your dogs has been diagnosed with it.

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Question 5

Some examples of skin, coat and ear conditions

- Allergies and related conditions
  - Atopy or atopic dermatitis
  - Chronic ear infections
  - Flea Allergy
  - Food hypersensitivity
- Calcinosis circumscripta (calcium nodules)
- Dermoid Sinus
- Hairloss
  - Colour mutant alopecia (follicular dysplasia)
- Hot spot (pyotraumatic dermatitis)
- Immune-mediated skin disease
  - Discoid lupus erythematosis (DLE)
  - Pemphigus foliaceous or vulgaris
  - Systemic lupus erythematosis (SLE)
- Parasites (mange)
  - Cheyletiella
  - Demodex
  - Sarcoptic
- Pigmentation abnormalities
  - Black hair follicular dysplasia
  - Loss or fading of nose pigment
- Recurrent pyoderma/bacterial skin infections
- Ringworm
- Sebaceous adenitis
- Seborrhea
- Zinc-responsive dermatosis
- Cancer (please specify location, eg skin of hock or multiple sites and type, eg mast cell tumour[s])
- Traumatic injury (please specify location)
- Undiagnosed skin irritation (eg. causing scratching)

Question 6

Some examples of conditions affecting the bones, muscles and joints (including the jaws)

- Bones and Joints
  - Arthritis (please specify location)
    - Degenerative joint disease
    - Osteoarthritis
  - Avascular necrosis of the femoral head (Legg Calve Perthes disease)
  - Bone malformations
    - Hemivertebra
    - Extra digits (polydactyl)
    - Spina bifida
    - Tail abnormalities
      - Partial tail (natural tail dock)
  - Cruciate ligament rupture
  - Craniomandibular osteopathy
  - Elbow dysplasia
  - Hip dysplasia (CHD)
  - Hypertrophic osteodystrophy
  - Osteochondrosis (OCD, please specify location)
  - Panosteitis
  - Patella luxation
  - Overshot jaw (brachygnathism)
  - Rheumatoid arthritis
  - Spondylitis
  - Undershot jaw (prognathism)
- Muscles
  - Muscular dystrophy
  - Myopathy
- Cancer (please specify location, eg femur (thigh bone) and type, eg osteosarcoma)
- Traumatic injury (please specify location)

Question 7

Some examples of nervous system conditions

- Brain
  - Deafness
  - Epilepsy (seizures, fits)
  - Hydrocephalus
  - Lissencephaly
  - Lysosomal storage diseases (enzyme deficiency)
  - Narcolepsy
  - Necrotizing encephalitis
  - Stroke (cerebral vascular accident, infarct)
- Brain and spinal cord
  - Granulomatous meningoencephalitis (GME)
  - Myelin disorders
- Spinal cord
  - Cauda equine syndrome
  - Chronic degenerative radiculomyelopathy (CDRM)
  - Degenerative myelopathy
  - Discospondylitis
  - Disc prolapse (intervertebral disc disease)
    - Cervical
    - Thoracic
    - Lumbar/lumbosacral
  - Wobbler syndrome
- Peripheral nervous system
  - Distal denervating disease
  - Laryngeal paralysis
  - Myelin disorders
  - Neuropathy
  - Polyneuropathy
- Neuromuscular conditions
  - Myesthenia gravis
- Miscellaneous conditions
  - Rage Syndrome
  - Scottie cramp
  - Vestibular disease (central or peripheral)
  - White dog tremor disorder (Shaker syndrome)
- Cancer (please specify location, eg meninges and type, eg meningioma)
- Traumatic injury (please specify location)

Question 8

Some examples of reproductive conditions

- Female:
  - Agalactia (lactation failure)
  - Difficulty whelping
    - Physical blockage (stuck puppy)
    - Uterine inertia (failure to push)
  - Eclampsia (lactation tetany or hypocalcemia)
  - False pregnancy
  - Infertility/poor fertility
  - Irregular heat cycles
  - Metritis (inflammation of the uterus)
  - Pyometra
  - Spontaneous abortion/foetal resorption
  - Vaginitis (inflammation of the vagina)
- Male:
  - Cryptorchid (undescended testicle[s])/missing testicle
  - Infertility/poor fertility
  - Prostatic cyst/infection/abscess
  - Prostatic enlargement
- Cancer (please specify location, eg mammary gland and type, eg carcinoma)
- Traumatic injury (please specify location)

These lists are not all-inclusive so please do write down a condition that is not on a list if one of your dogs has been diagnosed with it.

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for the Affenpinscher breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Affenpinscher breed

A total of 225 forms were sent out and 66 were returned, representing 202 live dogs. This breed had a 29.3 % response rate (66/225) and it represented 0.48% of all returns (66/13,741).

Mortality data

A total of 21 deaths were reported and this represents 0.13 % of all deaths reported in the survey (21/15,881). The median age at death for the Affenpinscher breed was 11 years and 5 months (min = 3 months, max = 15 years and 2 months) and this was similar to the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Affenpinscher breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Affenpinscher breed.

Cause of death		N	%	Most common specific causes in descending order
1	Old age	5	23.8	Old age
2	Urologic	4	19.0	Urethral obstruction, kidney failure (chronic>acute)
3	Combinations	3	14.3	
4	Cancer	2	9.5	Liver – type unspecified
5	Cardiac	2	9.5	Heart failure, heart attack
6	Hepatic	1	4.8	Liver disease unspecified
7	Immune mediated	1	4.8	Haemolytic anaemia
8	Musculoskeletal	1	4.8	Hip dysplasia
9	Respiratory	1	4.8	Choked
10	Trauma	1	4.8	
	Total	21	100	

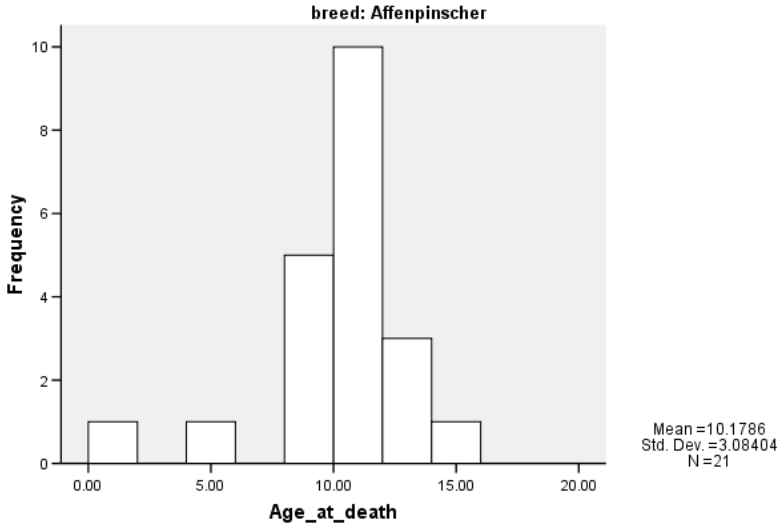

Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 21 Affenpinscher deaths with age at death reported.

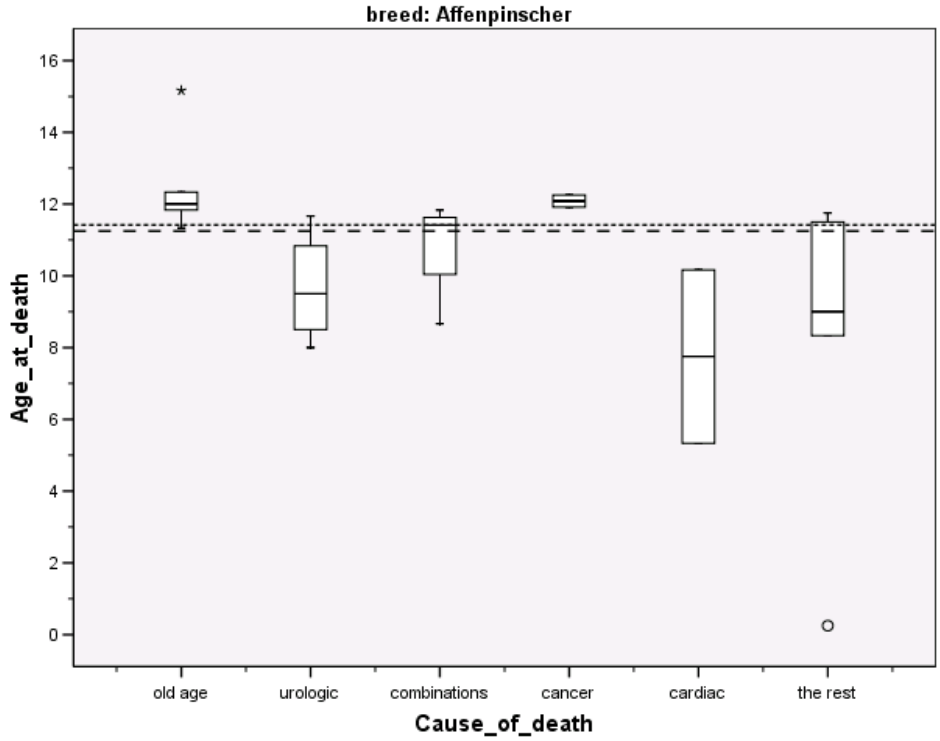

Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the Affenpinscher breed (N=21). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the Affenpinscher breed. The solid line within each grey box represents the median age at death from the condition

Morbidity data

The median current age of the 202 live dogs with a reported age was 3 years and 2 months (min=2 months, max=14 years and 1 month, Figure 3). Health information was reported for 202 live dogs of which 131 (65%) were healthy and 71 (35%) had at least one reported health condition, resulting in a total of 101 reported conditions with a median of 1 condition/dog (min=1, max=4).

The median current age of all healthy dogs with a reported age (N=131) was 2 years and 9 months (min=2 months, max=14 years and 1 month). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=71) was 4 years and 6 months (min=3 months, max=11 years and 10 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=95) was 2 years (min= 3 months, max= 8 years and 6 months, Figure 4). Table 3 shows the disease conditions for the Affenpinscher breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 201 the Affenpinscher breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	102	20	122 (61%)
Male	58	21	79 (39%)
Totals	160 (80%)	41 (20%)	201 (100%)

There was no association between gender and neuter status (P=0.08).

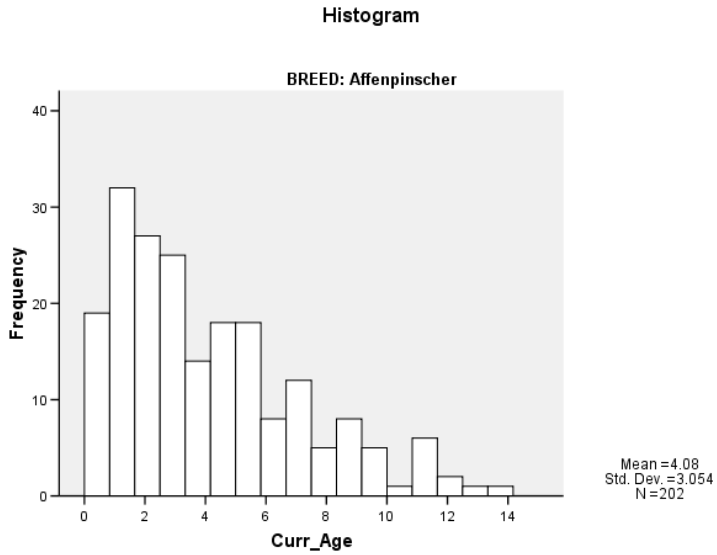

Figure 3. Histogram showing frequency of current age in years for the 202 live dogs in the Affenpinscher breed with age reported.

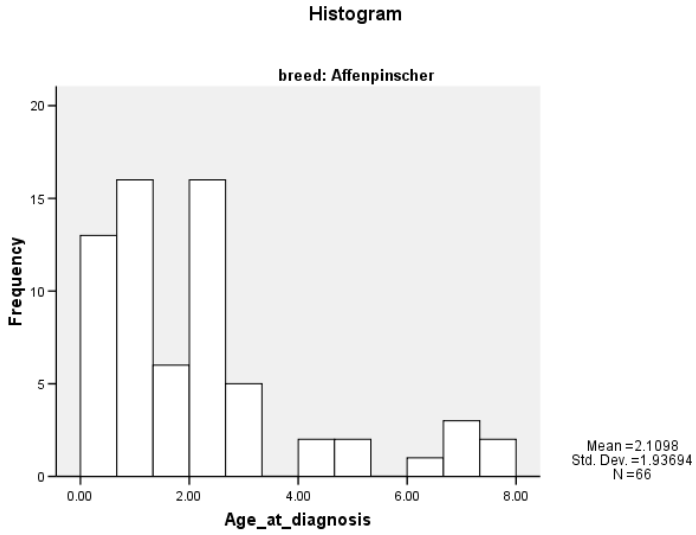

Figure 4. Histogram showing frequency of age at diagnosis for the 66 dogs in the Affenpinscher breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

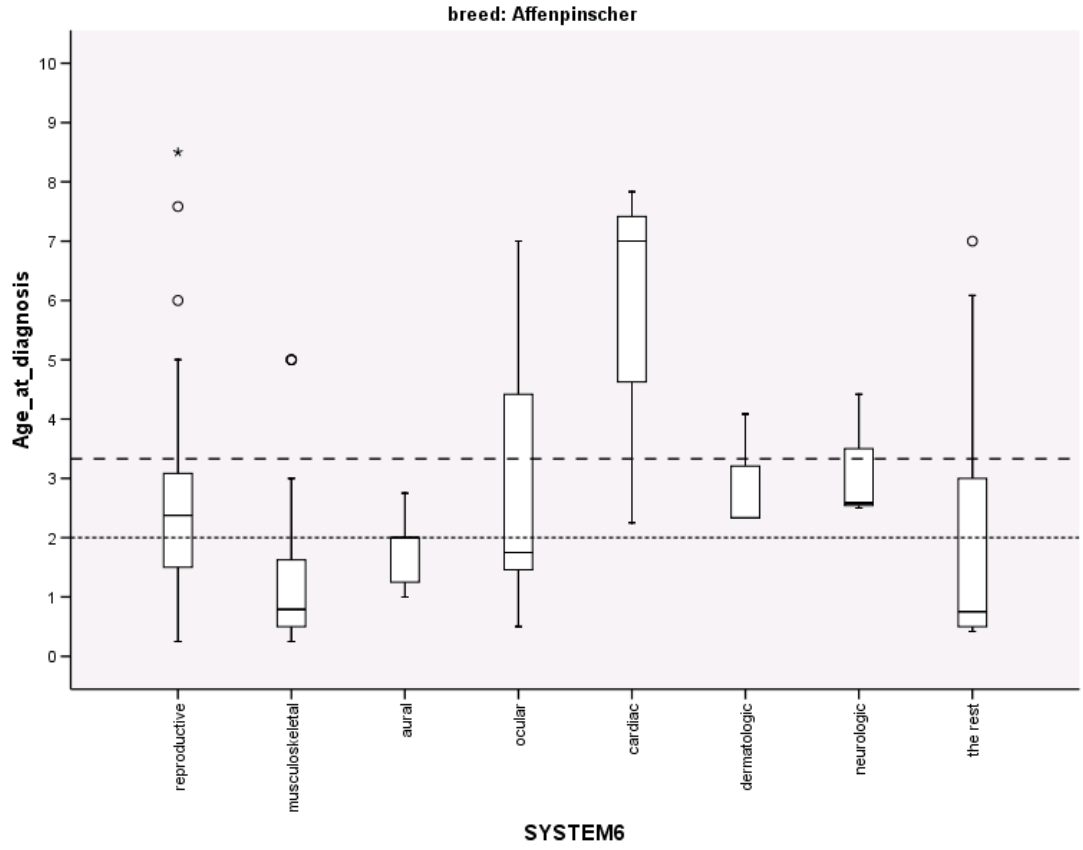

Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Affenpinscher breed (N=71 dogs with 95 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Affenpinscher breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Affenpinscher breed.

	Disease condition	All conditions N	%	Most common specific conditions in descending order
1	Reproductive	26	25.7	Dystochia, spontaneous abortion, pyometra, prostatomegaly, infertility, false pregnancy, cryptorchid, caesarian section
2	Musculoskeletal	25	24.8	Patellar luxation, fracture, avascular necrosis FH, arthritis, hip dysplasia
3	Dental	12	11.9	Retained puppy teeth, dental disease
4	Aural	8	7.9	Otitis externa
5	Ocular	8	7.9	Corneal ulcer, PPM, trichiasis, conjunctivitis, cataracts
6	Respiratory	4	4.0	Tracheal collapse, noisy breathing, kennel cough
7	Cardiac	3	3.0	Heart murmur
8	Dermatologic	3	3.0	Dermatitis, hairloss
9	Neurologic	3	3.0	Seizures or fits or epilepsy idiopathic
10	Anal gland	2	2.0	Anal sacculitis (anal gland impaction or infection or removal)
11	Other	2	2.0	Umbilical hernia
12	Benign neoplasia	1	1.0	Myelofibroma
13	Endocrine	1	1.0	Diabetes mellitus
14	Immune mediated	1	1.0	Flea allergy
15	Unknown	1	1.0	
16	Urologic	1	1.0	Cystouroliths (bladder stones)
	Total	101	100.0	

Reproductive: Dystochia – uterine inertia>physical blockage
Ocular: PPM=persistent pupillary membrane, trichiasis=ingrowing eyelashes

Report from the Animal Health Trust
and The Kennel Club

Extended results of the Purebred Dog Health Survey for Afghan Hounds

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Afghan Hounds

A total of 206 forms were sent out and 58 were returned, representing 193 live dogs. This breed had a 28.2 % response rate (58/206) and it represented 0.42% of all returns (58/13,741).

Mortality data

A total of 143 deaths were reported and this represents 0.90 % of all deaths reported in the survey (143/15,881). The median age at death for Afghan Hounds was 11 years and 11 months (min = 10 months, max = 16 years and 7 months) and this was similar to the overall median of 11 years and 3 months (Figure 1). A total of 34 Afghan Hounds (24%) reached an age of 13 years and only 17 (12%) reached an age of 14 years. Table 1 shows the causes of death for Afghan Hounds. Age at death is presented for the most common causes of death (Figure 2). The most frequent causes of death were cancer and old age, accounting for approximately 50% of deaths between them. The four most common causes of death in Afghans were the same as for all breeds reported on in the survey.

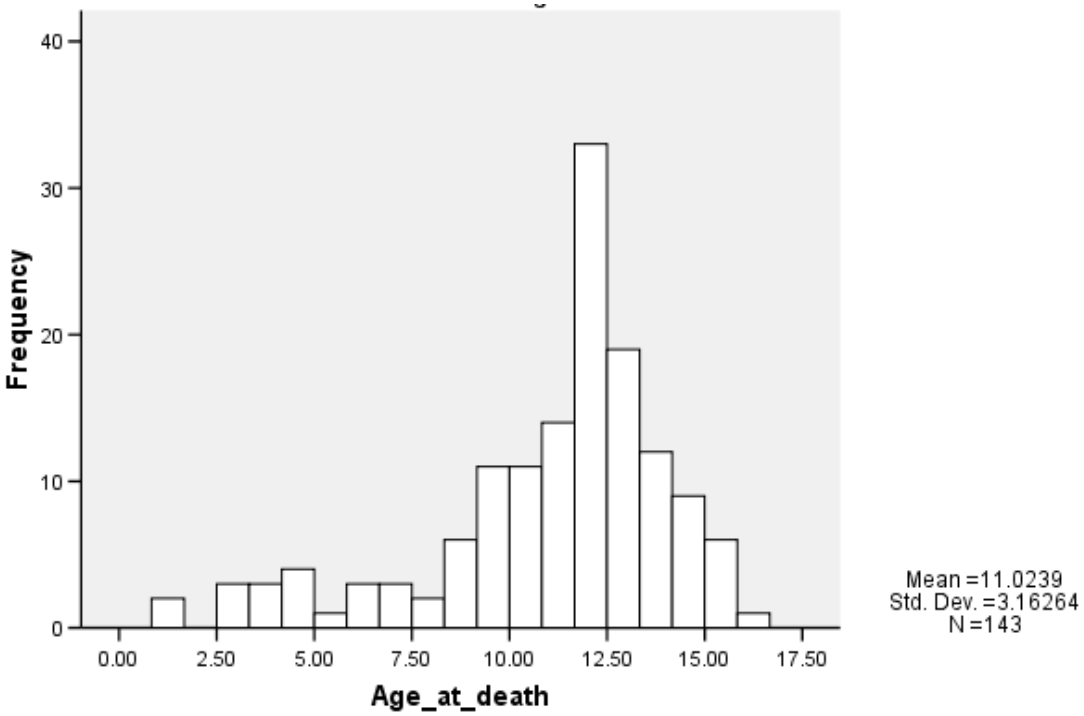

Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 143 Afghan Hound deaths with age at death reported.

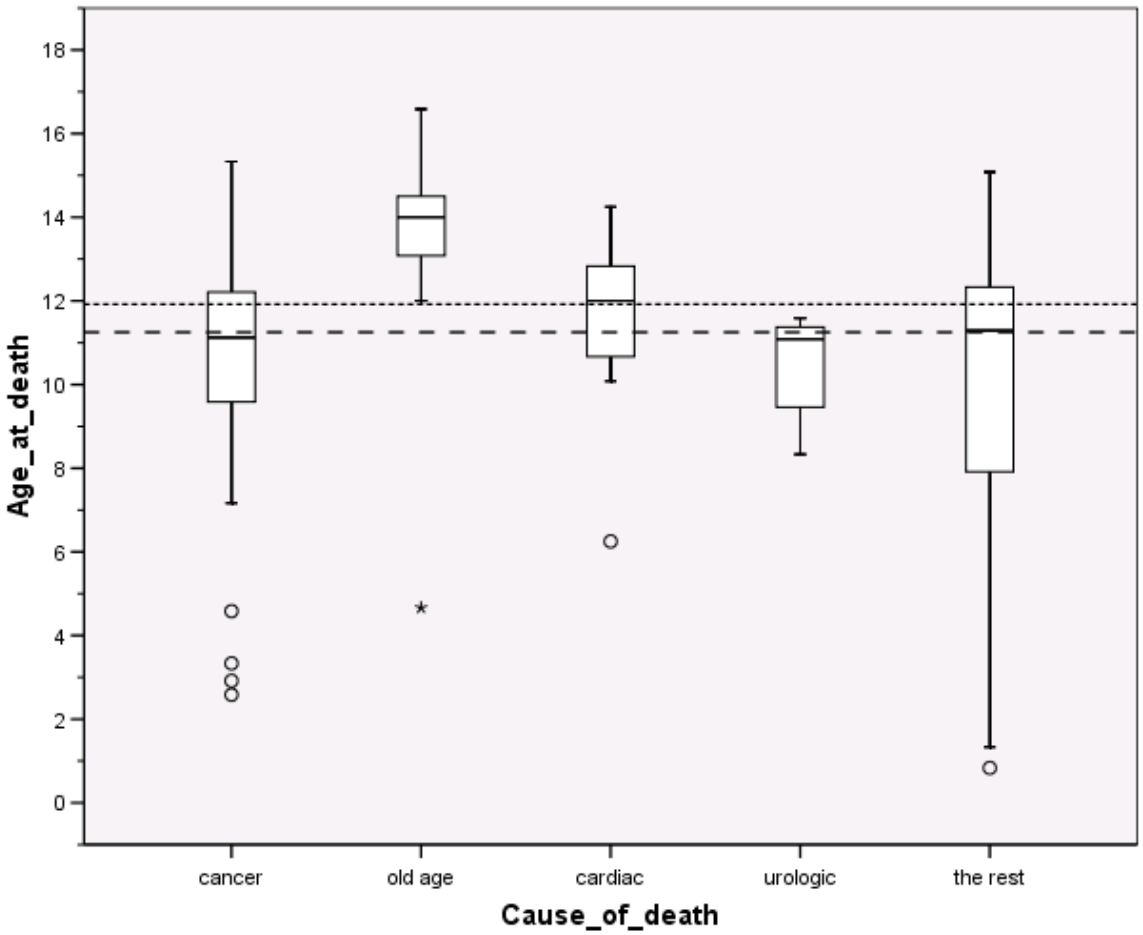

Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Afghan Hounds (N=143). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Afghan Hounds. The solid line within each grey box represents the median age at death from the condition.

Table 1. Causes of death by organ system/category for Afghan Hounds.

	Cause of death	No. of deaths	% of deaths	Most common specific causes in descending order (number of dogs affected)
1	Cancer	44	30.8	Bone/osteosarcoma (7), mammary (7), type unspecified (7), lung (4), lymphoma (3), brain tumour (3), gastrointestinal tract (3), perianal/anal gland (2), testicle (2), heart, liver, nasal, prostate, spleen, tongue (1 each)
2	Old age	29	20.3	Old age & age combinations, including multiple reasons for euthanasia
3	Cardiac	15	10.5	Heart failure (9), heart attack (3), heart defect unspecified (2), DCMP (1)
4	Urologic	7	4.9	Chronic or unspecified kidney failure (4), acute kidney failure (1)
5	Trauma	5	3.5	Unspecified trauma or accident (4), road traffic accident (1)
6	Combinations	4	2.8	Collapse + laryngeal collapse, epilepsy + heart failure (1), chronic kidney failure + senility (1), weakness + kidney failure unspecified
7	Hepatic	4	2.8	Chronic or unspecified liver failure
8	Neurologic	4	2.8	Seizures (2), spinal cord disease unspecified (1), meningitis (1)
9	Other	4	2.8	Uncodeable – weakness or loss of limb function or paresis
10	Respiratory	4	2.8	Unspecified, laryngeal paralysis
11	Cerebral vascular	3	2.1	Stroke or cerebral vascular accident (CVA) (3)
12	Endocrine	3	2.1	Addisons disease (2), Cushings disease (1)
13	Gastrointestinal	3	2.1	Pancreatitis (1), malabsorption (1), gastroenteritis unspecified (1)
14	Sudden death	3	2.1	Sudden death (3)
15	Unknown	3	2.1	Unknown or undiagnosed illness
16	Behaviour	2	1.4	Unspecified behavioural problem (2), aggression (1)
17	Musculoskeletal	2	1.4	Joint pain (1), arthritis (1)
18	Immune mediated	1	0.7	Haemolytic anaemia
19	Internal bleeding	1	0.7	Internal bleeding
20	Perioperative	1	0.7	Perioperative
21	Pining	1	0.7	Pining or sadness
	Total	143	100.0	

Morbidity data

The median current age of the 193 live dogs with a reported age was 6 years (min=6 months, max=14 years, Figure 3). Health information was reported for 193 live dogs of which 135 (70%) were healthy and 58 (30%) had at least one reported health condition, resulting in a total of 90 reported conditions with a median of 1 condition/dog (min=1, max=5).

The median current age of all healthy dogs with a reported age (N=135) was 6 years (min=6 months, max=13 years and 6 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=57) was 6 years (min=9 months, max=14 years). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=84) was 2 years and 5 months (min= 2 months, max= 14 years, Figure 4). Table 3 shows the disease conditions for Afghan Hounds. The top three diseases reported in Afghans was similar to that reported for all breeds in the survey. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Respiratory conditions warrant a special mention because of concerns that have been raised previously in the Afghan Hound. As in most large breeds of dog, laryngeal paralysis occurs in the Afghan Hound. In our survey, it was reported as the cause of death in 2 dogs and a contributing factor in a third death, and 3 cases were reported under disease conditions. It has been reported that chylothorax, a rare, serious, potentially fatal, condition in which lymphatic fluid (chyle) accumulates in the thorax, occurs more frequently in Afghan Hounds than in other pedigree breeds of dog. However, the evidence for this is poor – although it undeniably has occurred in this breed there is little to suggest that it is more common in the Afghan than in any other breed. This condition was not reported at all in the breed in our survey, although 2 deaths due to unspecified respiratory disease were reported which may or may not have been related to chylothorax.

There were 3 reported cases of hypothyroidism, a condition which is suspected of perhaps being over-diagnosed in this breed as a result of the fact that all sight hounds have lower thyroid hormone levels as normal and this may not always be taken into consideration by the reporting laboratory service/veterinary practitioner. Interestingly there was also one reported case of hyperthyroidism in this breed, diagnosed at 2 years and 10 months of age. This may have been a true case of hyperthyroidism, perhaps secondary to thyroid gland neoplasia (adenoma or carcinoma) although this would be unusual in such a young dog, or this could have been a result of misreporting by the owner. This case highlights one of the limitations of using owner reported diagnoses without veterinary confirmation or validation of the reported data.

Table 2. Distribution of gender and neuter status for 193 Afghan Hounds with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	79	22	101 (52%)
Male	85	7	92 (48%)
Totals	164 (85%)	29 (15%)	193 (100%)

Significantly more females were neutered (P=0.006).

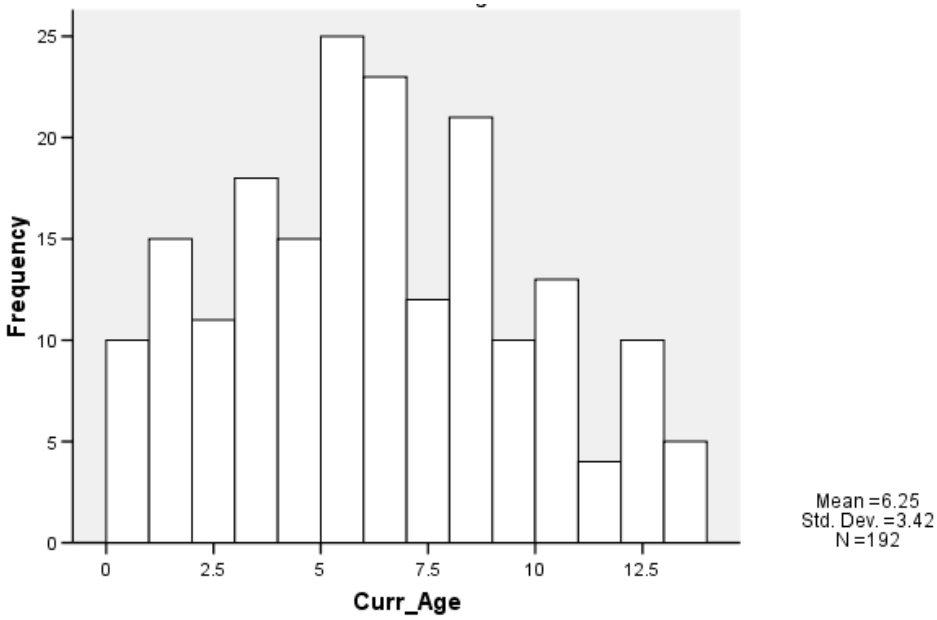

Figure 3. Histogram showing frequency of current age in years for the 192 live Afghan Hounds with age reported.

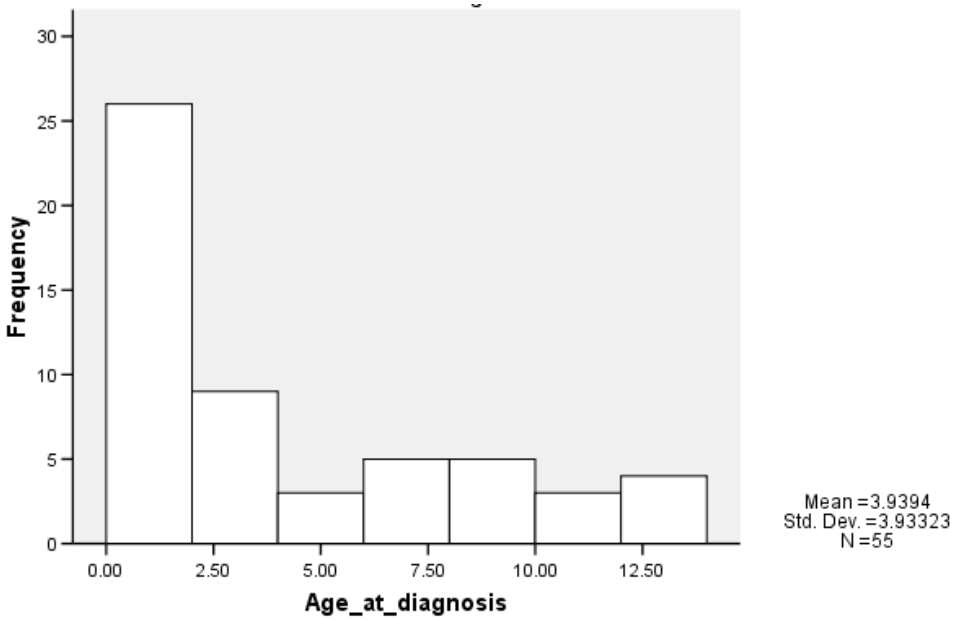

Figure 4. Histogram showing frequency of age at diagnosis for the 55 Afghan Hounds with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

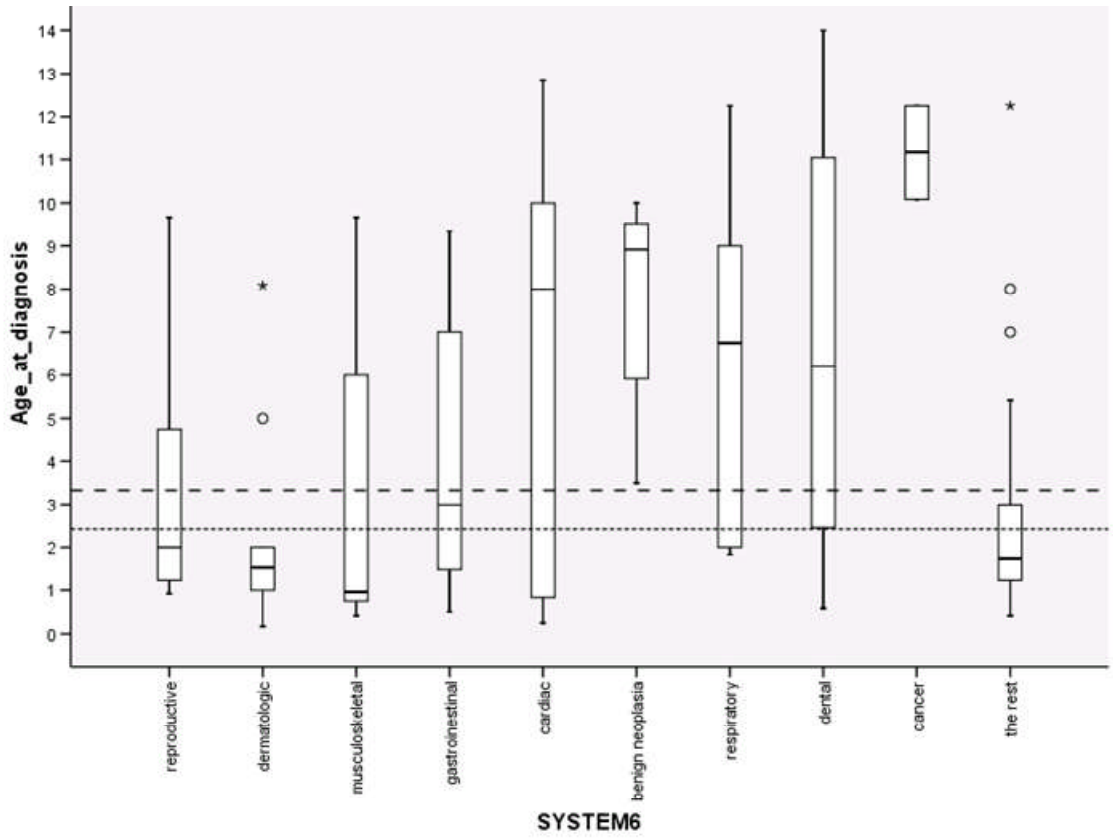

Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Afghan Hounds (N=57 dogs with 84 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Afghan Hounds. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Afghan Hounds.

	Disease condition	All conditions N	All conditions %	Most common specific conditions in descending order
1	Reproductive	14	15.6	False pregnancy (8), pyometra (2), infertility or poor fertiity (2), vaginitis (1), prostatomegaly (1)
2	Dermatologic	11	12.2	Dermatitis* (4), puppy pyoderma (2), interdigital cysts (2), pyotraumatic dermatitis or hot spot (1), fading nose pigment (1), hairloss (1)
3	Musculoskeletal	10	11.1	Arthritis (3), stiff joints (2), prognathism or undershot jaw (1), osteochrondosis dissecans shoulder (1), cruciate ligament rupture (1), fracture (1), unspecified lameness (1)
4	Gastrointestinal	9	10.0	Gastric dilatation/volvulus (GDV) (2), pancreatitis (2), Vomiting (1), gastroenteritis acute (1), constipation (1), colitis (1), unspecified bowel disease (1)
5	Cardiac	7	7.8	Heart murmur (1 grade III, 2 unspecified), chronic coughing (2), congestive heart failure (1), cardiomegaly or enlarged heart (1)
6	Benign neoplasia	6	6.7	Lipoma (5), adenoma (1)
7	Respiratory	6	6.7	laryngeal paralysis (2), lung lobe torsion (1), kennel cough (1), chronic coughing (1), rhinitis (1)
8	Aural	5	5.6	Otitis externa (5)
9	Dental	4	4.4	Dental disease (3), retained puppy teeth
10	Endocrine	4	4.4	Hypothyroidism (3), hyperthyroidism (1)
11	Cancer	3	3.3	Type unspecified – one each of liver, lung and mammary
12	Ocular	3	3.3	Red eye (1), extra eyelashes or distichiasis (1), keratoconjunctivitis sicca (KCS) or dry eye (1)
13	Behaviour	2	2.2	Unspecified behavioural problem (1), aggression (1)
14	Immune mediated	2	2.2	Insect bite reaction (1), flea allergy (1)
15	Unknown	2	2.2	Unknown or undiagnosed illness (2)
16	Neurologic	1	1.1	Polyneuropathy
17	Trauma	1	1.1	Forelimb trauma
	Total	90	100.0	

* Undiagnosed skin irritation or scratching or itchy skin (3) and 1 case with undiagnosed infection

The original report is available online at The Kennel Club website: http://www.thekennelclub.org.uk/item/549.

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for Afghan Hounds

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Afghan Hounds

A total of 206 forms were sent out and 58 were returned, representing 193 live dogs. This breed had a 28.2 % response rate (58/206) and it represented 0.42% of all returns (58/13,741).

Mortality data

A total of 143 deaths were reported and this represents 0.90 % of all deaths reported in the survey (143/15,881). The median age at death for Afghan Hounds was 11 years and 11 months (min = 10 months, max = 16 years and 7 months) and this was similar to the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Afghan Hounds. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Afghan Hounds.

	Cause of death	No. of deaths	% of deaths	Most common specific causes in descending order
1	Cancer	44	30.8	Type unspecified, lymphoma, osteosarcoma
2	Old age	29	20.3	Old age & age combinations
3	Cardiac	15	10.5	Heart failure, heart defect unspecified, heart attack, DCMP
4	Urologic	7	4.9	Kidney failure (chronic>acute)
5	Trauma	5	3.5	Unspecified, road traffic accident
6	Combinations	4	2.8	
7	Hepatic	4	2.8	Chronic liver failure
8	Neurologic	4	2.8	Spinal unspecified, meningitis, seizures
9	Other	4	2.8	Uncodeable
10	Respiratory	4	2.8	Unspecified, laryngeal paralysis
11	Cerebral vascular	3	2.1	Stroke or cerebral vascular accident
12	Endocrine	3	2.1	Addisons disease, Cushings disease
13	Gastrointestinal	3	2.1	Pancreatitis, malabsorption, gastroenteritis unspecified
14	Sudden death	3	2.1	
15	Unknown	3	2.1	
16	Behaviour	2	1.4	Unspecified, aggression
17	Musculoskeletal	2	1.4	Joint pain, arthritis
18	Immune mediated	1	0.7	Haemolytic anaemia
19	Internal bleeding	1	0.7	
20	Perioperative	1	0.7	
21	Pining	1	0.7	
	Total	143	100.0	

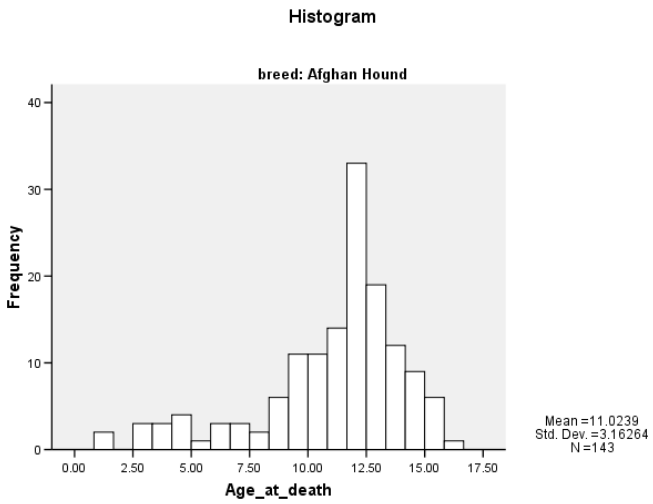

Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 143 Afghan Hound deaths with age at death reported.

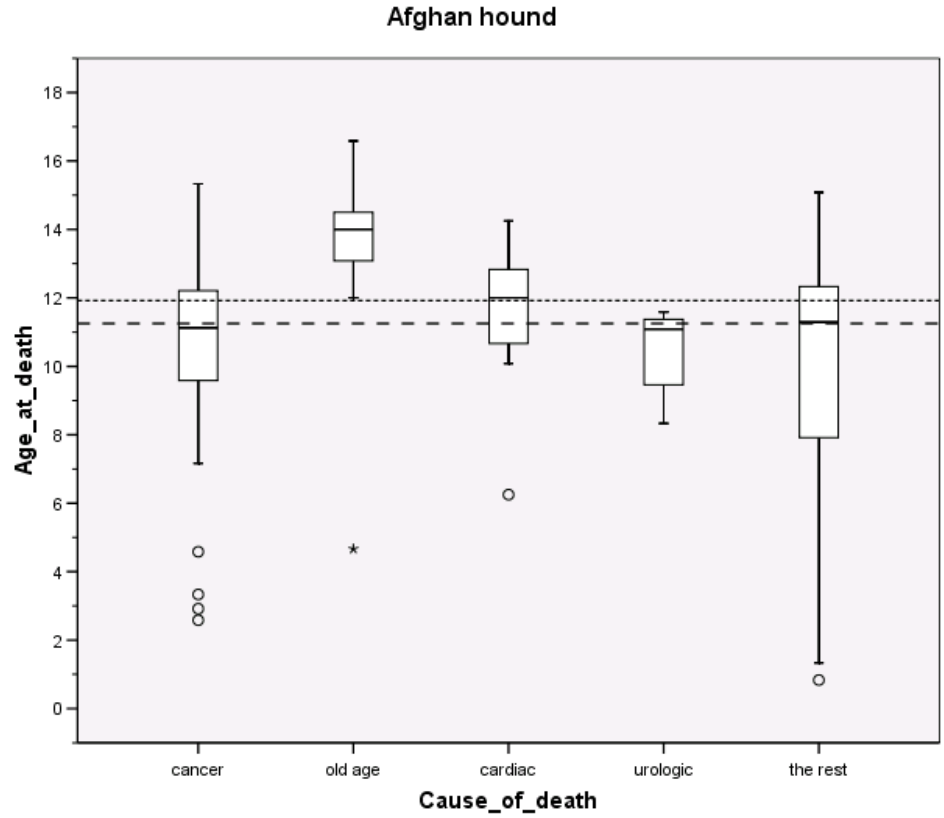

Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Afghan Hounds (N=143). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Afghan Hounds. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 193 live dogs with a reported age was 6 years (min=6 months, max=14 years, Figure 3). Health information was reported for 193 live dogs of which 135 (70%) were healthy and 58 (30%) had at least one reported health condition, resulting in a total of 90 reported conditions with a median of 1 condition/dog (min=1, max=5).

The median current age of all healthy dogs with a reported age (N=135) was 6 years (min=6 months, max=13 years and 6 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=57) was 6 years (min=9 months, max=14 years). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=84) was 2 years and 5 months (min= 2 months, max= 14 years, Figure 4). Table 3 shows the disease conditions for Afghan Hounds. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 193 Afghan Hounds with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	79	22	101 (52%)
Male	85	7	92 (48%)
Totals	164 (85%)	29 (15%)	193 (100%)

Significantly more females were neutered (P=0.006).

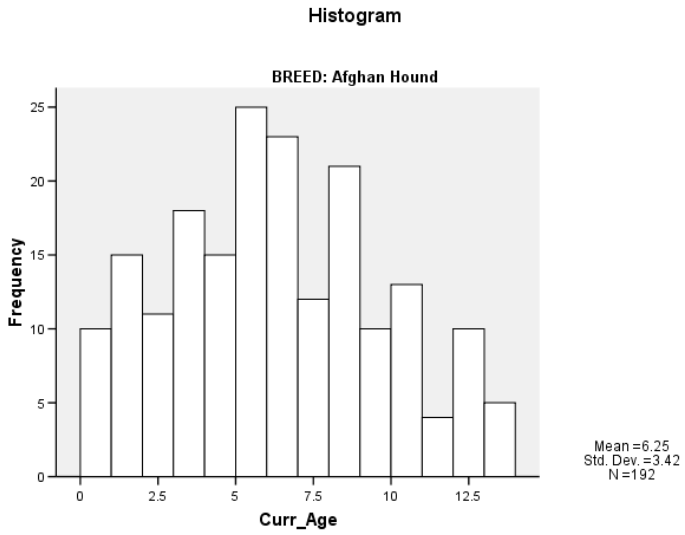

Figure 3. Histogram showing frequency of current age in years for the 192 live Afghan Hounds with age reported.

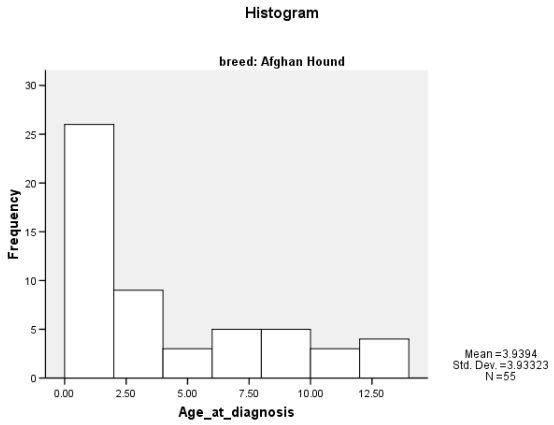

Figure 4. Histogram showing frequency of age at diagnosis for the 55 Afghan Hounds with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

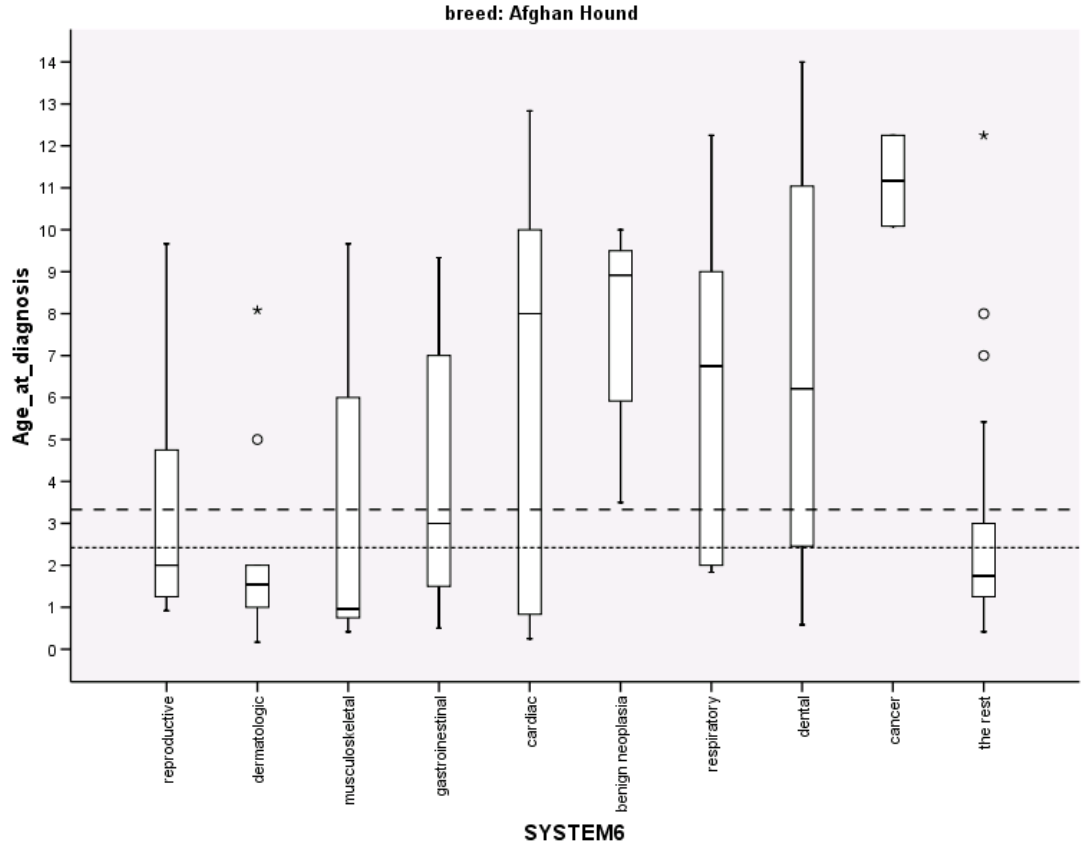

Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Afghan Hounds (N=57 dogs with 84 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Afghan Hounds. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Afghan Hounds.

	Disease condition	All conditions N	All conditions %	Most common specific conditions in descending order
1	Reproductive	14	15.6	Vaginitis, pyometra, prostatomegaly, infertility, false pregnancy
2	Dermatologic	11	12.2	Dermatitis, pyotraumatic dermatitis, puppy pyoderma, interdigital cysts, fading nose pigment
3	Musculoskeletal	10	11.1	Arthritis, prognathism, osteochrondosis dissecans shoulder, cruciate ligament rupture
4	Gastrointestinal	9	10.0	Vomiting, pancreatitis, gastroenteritis acute, constipation, colitis, gastric dilatation/volvulus (GDV)
5	Cardiac	7	7.8	Heart murmur, coughing, congestive heart failure, cardiomegaly
6	Benign neoplasia	6	6.7	Lipoma, adenoma
7	Respiratory	6	6.7	Rhinitis, lung lobe torsion, laryngeal paralysis, kennel cough, coughing
8	Aural	5	5.6	Otitis externa
9	Dental	4	4.4	Retained puppy teeth, dental disease
10	Endocrine	4	4.4	Hypothyroidism, hyperthyroidism
11	Cancer	3	3.3	Type unspecified
12	Ocular	3	3.3	Red eye, extra eyelashes (distichiasis), KCS (keratoconjunctivitis sicca or dry eye)
13	Behaviour	2	2.2	Unspecified, aggression
14	Immune mediated	2	2.2	Insect bite reaction, flea allergy
15	Unknown	2	2.2	Undiagnosed illness
16	Neurologic	1	1.1	Polyneuropathy
17	Trauma	1	1.1	Forelimb
	Total	90	100.0	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for Airedale Terriers

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Airedale Terriers

A total of 260 forms were sent out and 66 were returned, representing 153 live dogs. This breed had a 25.4 % response rate (66/260) and it represented 0.48% of all returns (66/13,741).

Mortality data

A total of 81 deaths were reported and this represents 0.51 % of all deaths reported in the survey (81/15,881). The median age at death for Airedale Terriers was 10 years and 9 months (min = 8 months, max = 16 years and 2 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Airedale Terriers. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Airedale Terriers.

	Cause of death	No. of deaths	% of deaths	Most common specific causes in descending order
1	Cancer	32	39.5	Type unspecified, lymphoma, leukaemia
2	Old age	11	13.6	Old age
3	Urologic	7	8.6	Bladder rupture, chronic kidney failure
4	Cardiac	6	7.4	Heart failure, heart disease and heart defect unspecified
5	Unknown	4	4.9	
6	Cerebral vascular	3	3.7	Stroke or cerebral vascular accident
7	Hepatic	3	3.7	Chronic liver failure
8	Other	3	3.7	Uncodeable
9	Reproductive	3	3.7	Pyometra, prostatic disease
10	Combinations	2	2.5	
11	Neurologic	2	2.5	Seizures, Wobblers syndrome
12	Poisoning	2	2.5	
13	Behaviour	1	1.2	Unspecified
14	Immune mediated	1	1.2	Haemolytic anaemia
15	Trauma	1	1.2	Road traffic accident
	Total	81	100.0	

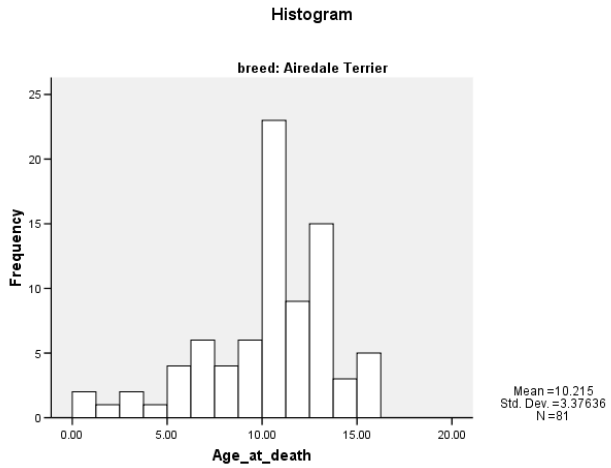

Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 81 Airedale Terrier deaths with age at death reported.

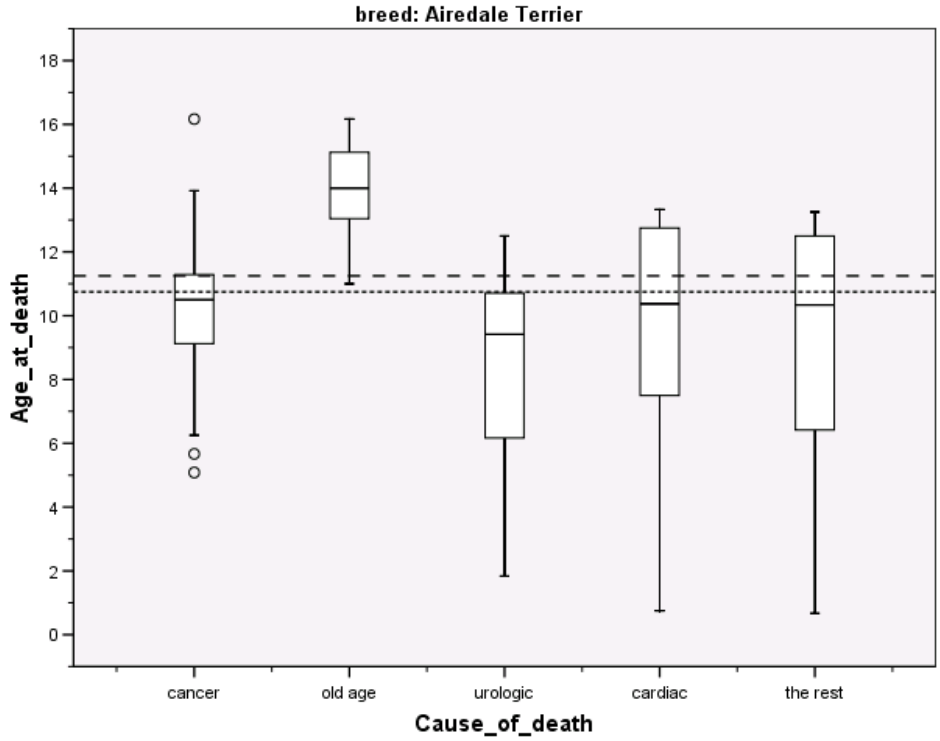

Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Airedale Terriers (N=81). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Airedale Terriers. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 153 live dogs with a reported age was 4 years and 6 months (min=1 month, max=15 years and 1 month, Figure 3). Health information was reported for 153 live dogs of which 107 (70%) were healthy and 46 (30%) had at least one reported health condition, resulting in a total of 84 reported conditions with a median of 1 condition/dog (min=1, max=7).

The median current age of all healthy dogs with a reported age (N=107) was 3 years and 6 months (min=1 month, max=12 years and 3 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=46) was 7 years and 7 months (min=11 months, max=15 years and 1 month). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=79) was 4 years and 4 months (min= 4 months, max= 15 years, Figure 4). Table 3 shows the disease conditions for Airedale Terriers. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 151 Airedale Terriers with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	71	30	101 (67%)
Male	41	9	50 (33%)
Totals	112 (74%)	39 (26%)	151 (100%)

There was no association between gender and neuter status (P=0.1).

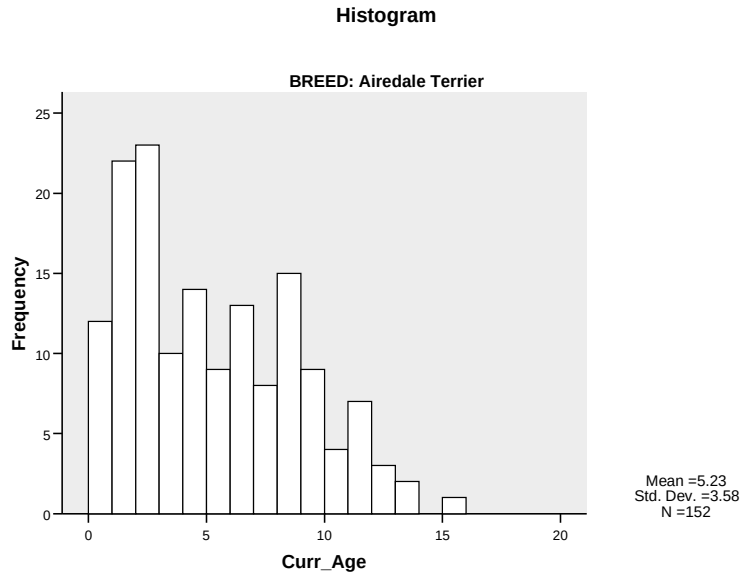

Figure 3. Histogram showing frequency of current age in years for the 152 live Airedale Terriers with age reported.

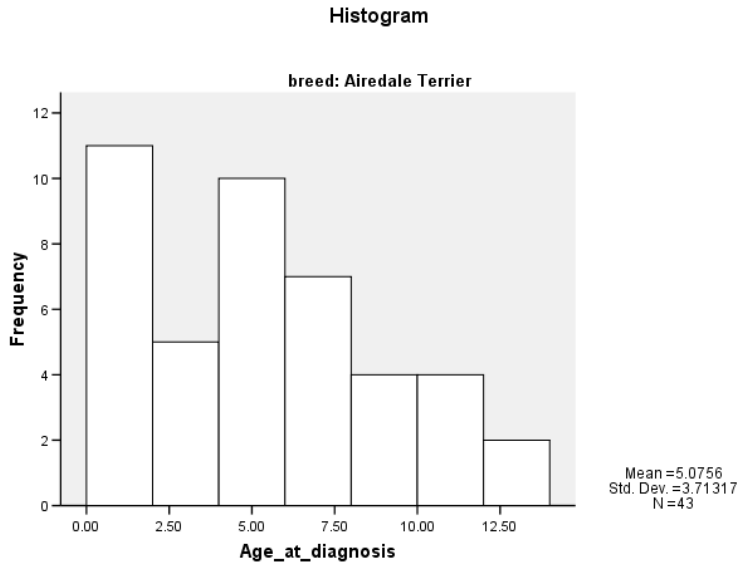

Figure 4. Histogram showing frequency of age at diagnosis for the 43 Airedale Terriers with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

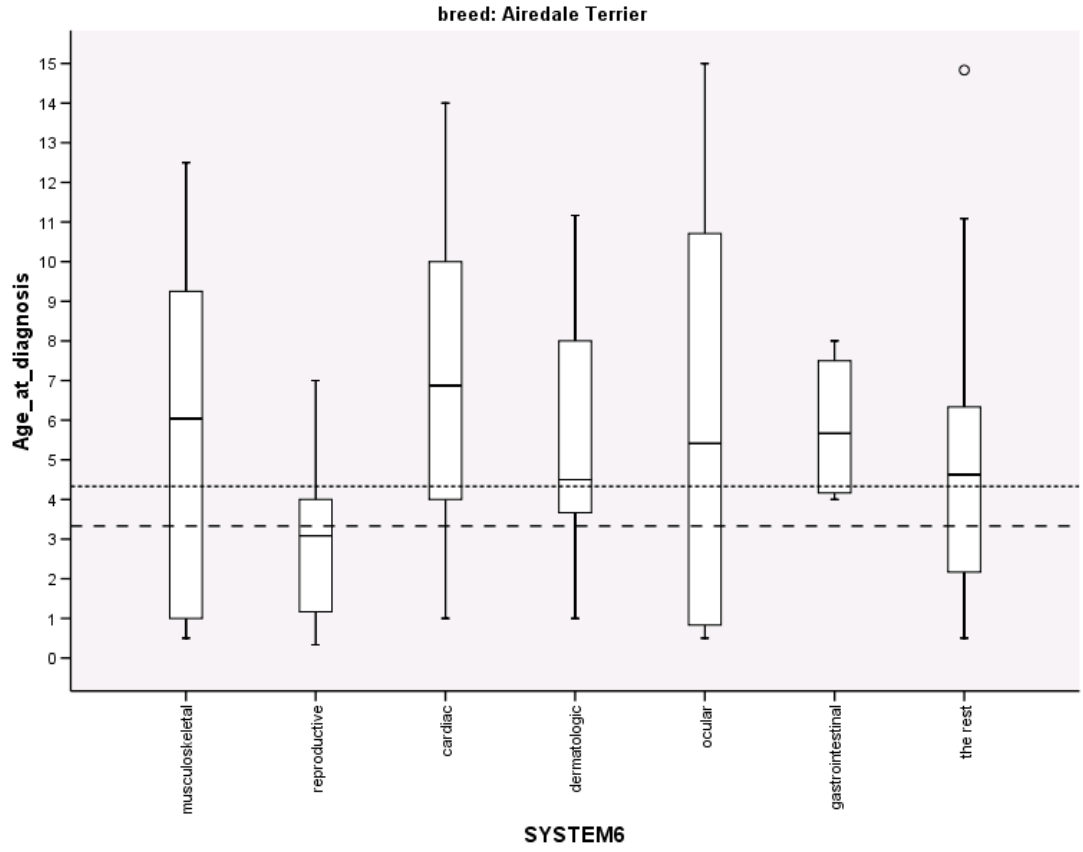

Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Airedale Terriers (N=79 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Airedale Terriers. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Airedale Terriers.

	Disease condition	All conditions N	All conditions %	Prevalence %	Most common specific conditions in descending order
1	Musculoskeletal	14	16.7	9.15	Arthritis, tendon injury, bone malformation unspecified, hip dysplasia
2	Reproductive	14	16.7	9.15	Uterine inertia (failure to push), spontaneous abortion, pyometra, prostatomegaly, polycystic ovaries, irregular heats, false pregnancy, cryptorchid
3	Cardiac	10	11.9	6.54	Arrhythmia, heart murmur
4	Dermatologic	9	10.7	5.88	Dermatitis, pyotraumatic dermatitis, perianal fistula, hairloss
5	Ocular	8	9.5	5.23	Ingrowing eyelashes (trichiasis), epiphora, entropion, cataracts, blocked tear duct
6	Respiratory	5	6.0	3.27	Infection, noisy breathing, kennel cough
7	Gastrointestinal	4	4.8	2.61	Pancreatitis, inflammatory bowel disease (IBD)
8	Urologic	4	4.8	2.61	Urate cystouroliths (bladder stones), haematuria (blood in urine), cystitis (bladder infection)
9	Dental	3	3.6	1.96	Retained puppy teeth, dental deformity other than extra teeth
10	Endocrine	3	3.6	1.96	Weight gain undiagnosed, Addisons disease (hypoadrenocorticism), hair loss undiagnosed
11	Immune mediated	3	3.6	1.96	Flea allergy
12	Aural	2	2.4	1.31	Otitis externa
13	Neurologic	2	2.4	1.31	Seizures, lumbosacral disorder
14	Benign neoplasia	1	1.2	0.65	Unspecified
15	Cancer	1	1.2	0.65	Type unspecified
16	Unknown	1	1.2	0.65	
	Total	84	100.0	54.90	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for the Akita breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Akita breed

A total of 176 forms were sent out and 23 were returned, representing 87 live dogs. This breed had a 13.1 % response rate (23/176) and it represented 0.17% of all returns (23/13,741).

Mortality data

A total of 28 deaths were reported and this represents 0.18 % of all deaths reported in the survey (28/15,881). The median age at death for the Akita breed was 9 years and 11 months (min = 4 months, max = 13 years and 8 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Akita breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Akita breed.

	Cause of death	No. of deaths	% of deaths	Most common specific causes in descending order
1	Cancer	9	32.1	Type unspecified, lymphoma, carcinoma
2	Cardiac	4	14.3	Heart failure, cardiomegaly (enlarged heart)
3	Gastrointestinal	4	14.3	Gastroenteritis unspecified, gastric dilatation/volvulus (GDV)
4	Old age	3	10.7	Old age
5	Combinations	2	7.1	
6	Endocrine	2	7.1	Hypothyroidism, Cushings disease (hyperadrenocorticism)
7	Hepatic	2	7.1	Chronic liver failure, liver disease unspecified
8	Dermatologic	1	3.6	Skin disease unspecified
9	Infection	1	3.6	Viral infection
	Total	28	100.0	

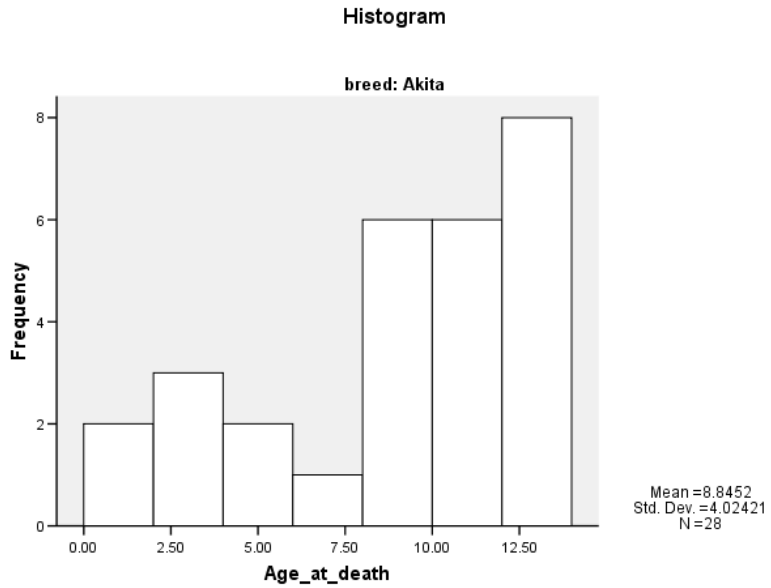

Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 28 Akita deaths with age at death reported.

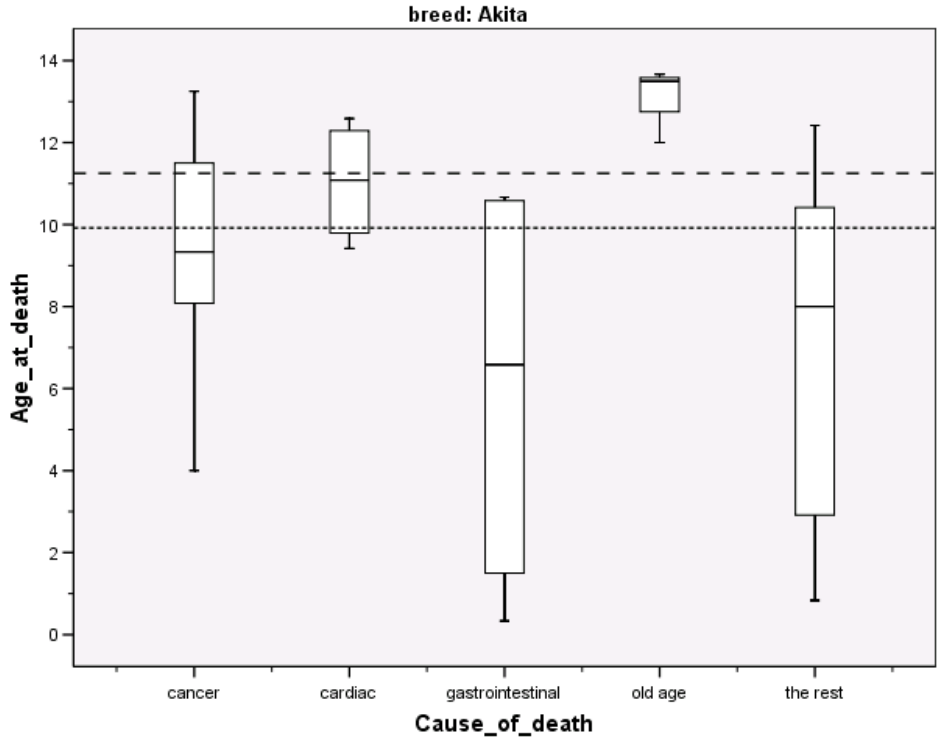

Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the Akita breed (N=28). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the Akita breed. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 87 live dogs with a reported age was 4 years and 6 months (min=2 months, max=13 years and 5 months, Figure 3). Health information was reported for 87 live dogs of which 54 (62%) were healthy and 33 (38%) had at least one reported health condition, resulting in a total of 50 reported conditions with a median of 1 condition/dog (min=1, max=4).

The median current age of all healthy dogs with a reported age (N=54) was 3 years and 7 months (min=2 months, max=11 years and 4 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=33) was 7 years and 2 months (min=1 year and 8 months, max=13 years and 5 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=48) was 4 years and 2 months (min= 6 months, max= 12 years and 2 months, Figure 4). Table 3 shows the disease conditions for the Akita breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 87 the Akita breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	35	18	53 (61%)
Male	29	5	34 (39%)
Totals	64 (74%)	23 (26%)	87 (100%)

Significantly more females were neutered (P=0.047).

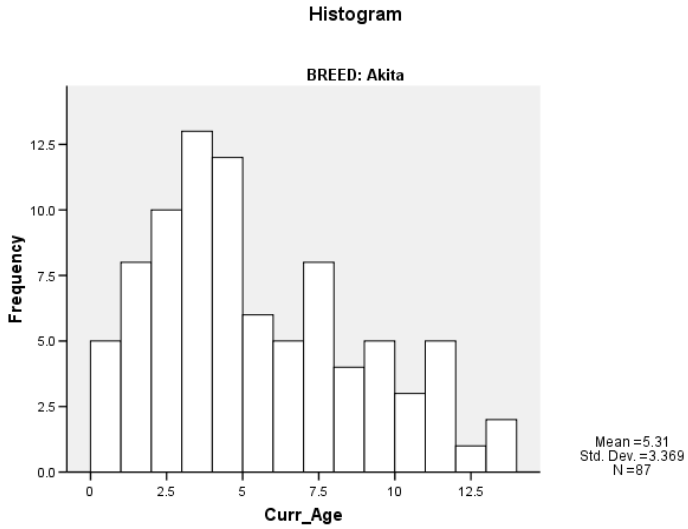

Figure 3. Histogram showing frequency of current age in years for the 87 live dogs in the Akita breed with age reported.

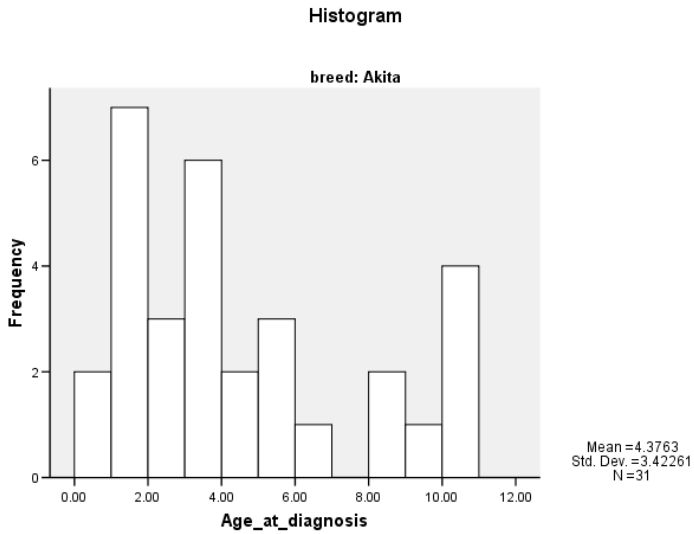

Figure 4. Histogram showing frequency of age at diagnosis for the 31 the Akita breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

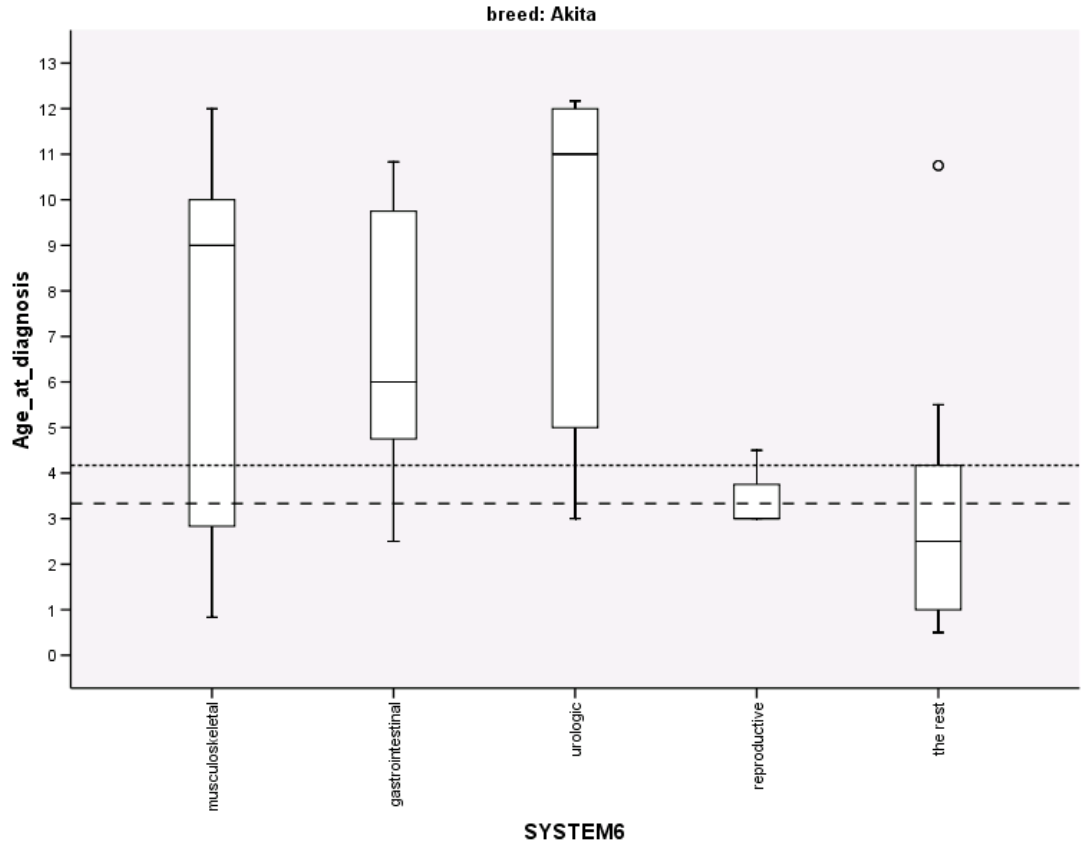

Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Akita breed (N=48 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Akita breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Akita breed.

	Disease condition	All conditions N	All conditions %	Prevalence %	Most common specific conditions in descending order
1	Musculoskeletal	10	20.0	11.49	Patellar luxation, arthritis, cruciate ligament rupture
2	Gastrointestinal	8	16.0	9.20	Regurgitation, pancreatitis, intussusception, chronic colitis or large bowel diarrhea, GDV
3	Ocular	6	12.0	6.90	PHPV, epiphora, entropion, conjunctivitis, blocked tear duct, KCS
4	Urologic	6	12.0	6.90	Incontinence, cystitis (bladder infection)
5	Dermatologic	5	10.0	5.75	Dermatitis, sebaceous adenitis, pyotraumatic dermatitis (hot spot or wet eczema)
6	Reproductive	4	8.0	4.60	Pyometra, infertility, inability to breed, false pregnancy
7	Endocrine	3	6.0	3.45	Hypothyroidism
8	Unknown	2	4.0	2.30	Undiagnosed liver disease, undiagnosed illness
9	Aural	1	2.0	1.15	Otitis externa
10	Cancer	1	2.0	1.15	Type unspecified
11	Hepatic	1	2.0	1.15	Hepatitis
12	Immune mediated	1	2.0	1.15	Immune mediated skin disease
13	Neurologic	1	2.0	1.15	Seizures
14	Respiratory	1	2.0	1.15	Kennel cough
	Total	50	100.0	57.47	

Ocular: PHPV=Persistent hyperplastic primary vitreous, epiphora=overflow of tears or excessive tearing, entropion= inward turning eyelid

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for the Alaskan Malamute breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Alaskan Malamute breed

A total of 185 forms were sent out and 57 were returned, representing 111 live dogs. This breed had a 30.8 % response rate (57/185) and it represented 0.41% of all returns (57/13,741).

Mortality data

A total of 14 deaths were reported and this represents 0.09 % of all deaths reported in the survey (14/15,881). The median age at death for the Alaskan Malamute breed was 10 years and 8 months (min = 2 years and 2 months, max = 13 years and 6 months) and this was similar to the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Alaskan Malamute breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Alaskan Malamute breed.

	Cause of death	No. of deaths	% of deaths	Most common specific causes in descending order
1	Cancer	5	35.7	Type unspecified
2	Gastrointestinal	2	14.3	Gastric dilatation/volvulus (GDV), foreign body obstruction
3	Old age	2	14.3	Old age
4	Other	2	14.3	Uncodeable
5	Dermatologic	1	7.1	Skin disease unspecified
6	Neurologic	1	7.1	Epilepsy
7	Reproductive	1	7.1	Pyometra
	Total	14	100.0	

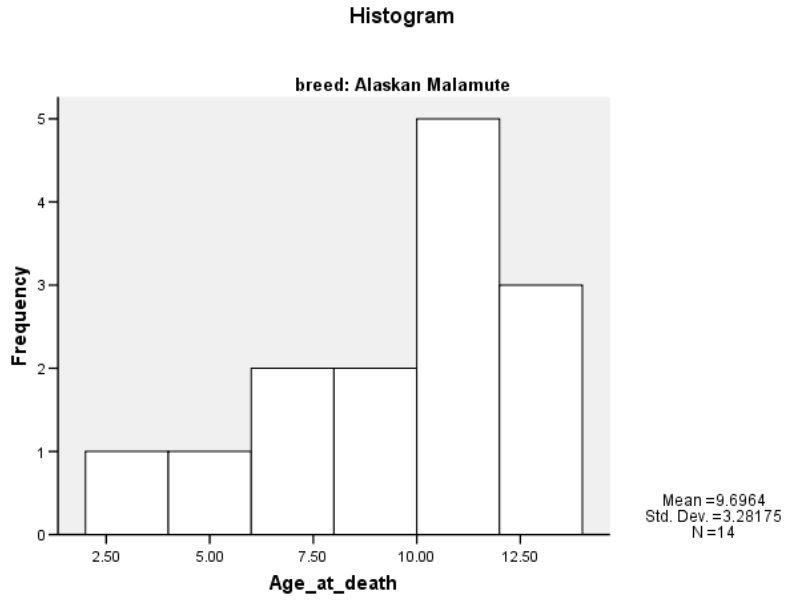

Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 14 Alaskan Malamute deaths with age at death reported.

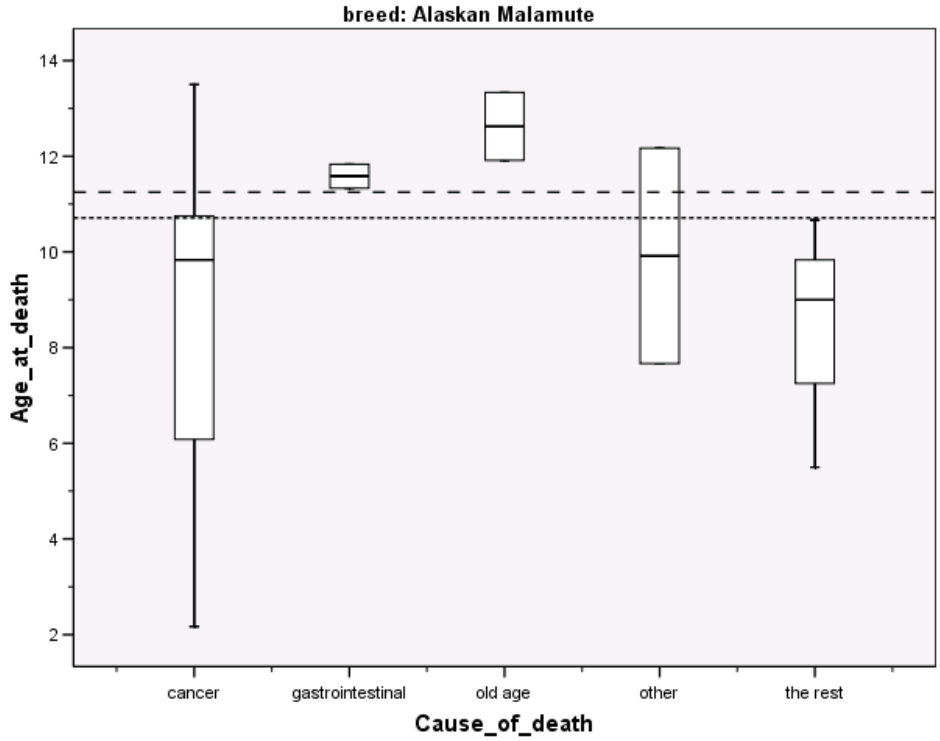

Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the Alaskan Malamute breed (N=14). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the Alaskan Malamute breed. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 111 live dogs with a reported age was 3 years and 2 months (min=2 months, max=11 years and 8 months, Figure 3). Health information was reported for 111 live dogs of which 71 (64%) were healthy and 40 (36%) had at least one reported health condition, resulting in a total of 64 reported conditions with a median of 1 condition/dog (min=1, max=4).

The median current age of all healthy dogs with a reported age (N=71) was 2 years and 4 months (min=2 months, max=10 years and 5 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=40) was 4 years and 11 months (min=4 months, max=11 years and 8 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=64) was 2 years (min= 2 months, max= 10 years and 6 months, Figure 4). Table 3 shows the disease conditions for the Alaskan Malamute breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 111 the Alaskan Malamute breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	38	16	54 (49%)
Male	38	19	57 (51%)
Totals	76 (68%)	35 (32%)	111 (100%)

There was no association between gender and neuter status (P=0.7).

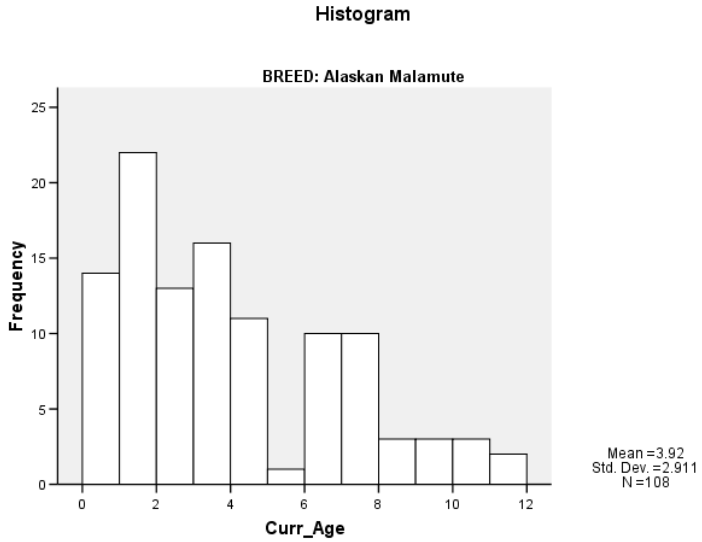

Figure 3. Histogram showing frequency of current age in years for the 108 live dogs in the Alaskan Malamute breed with age reported.

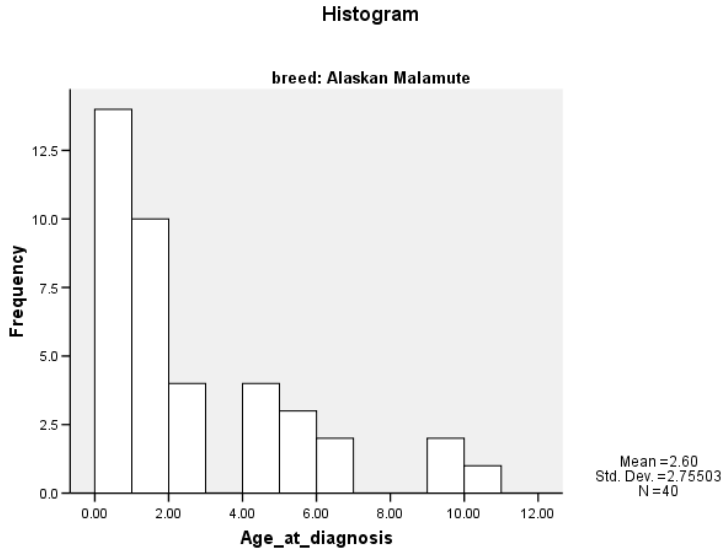

Figure 4. Histogram showing frequency of age at diagnosis for the 40 the Alaskan Malamute breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

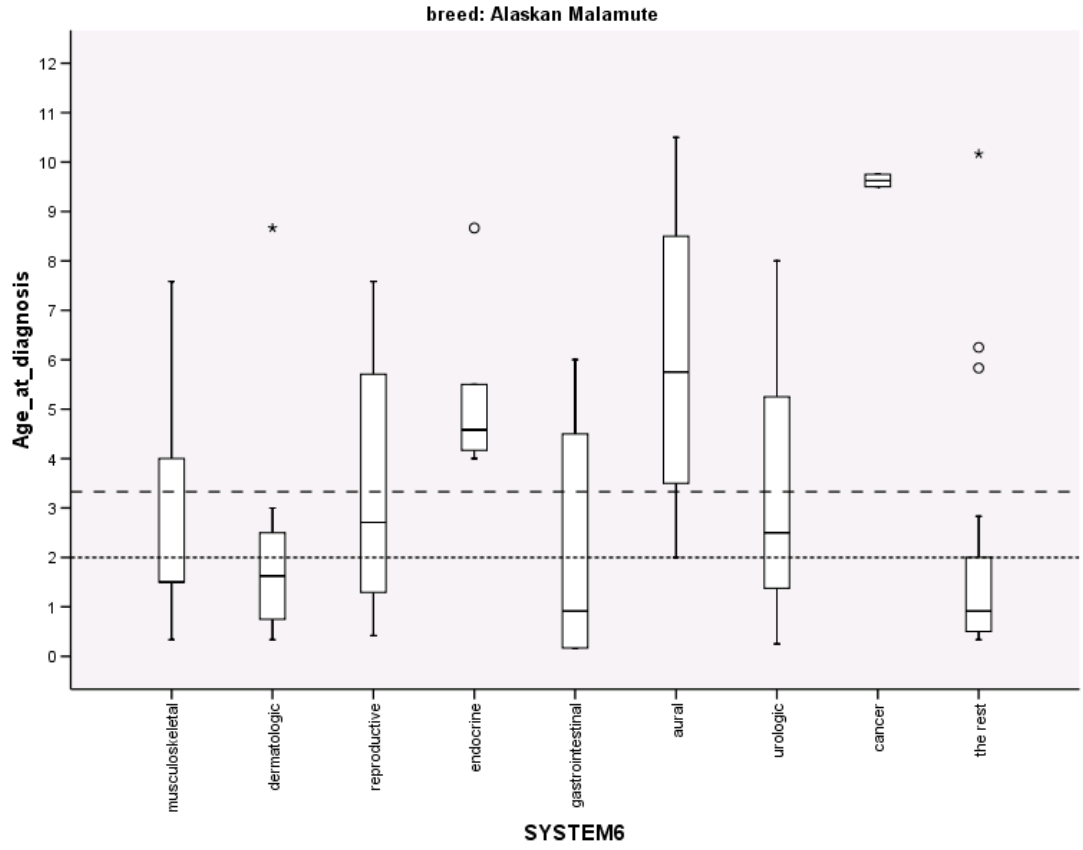

Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Alaskan Malamute breed (N=68 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Alaskan Malamute breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Alaskan Malamute breed.

	Disease condition	All conditions N	All conditions %	Prevalence %	Specific causes in descending order
1	Musculoskeletal	10	15.6	9.01	Tendon injury, patellar luxation, fracture, arthritis, cruciate ligament rupture, hip dysplasia
2	Dermatologic	8	12.5	7.21	Pyotraumatic dermatitis, interdigital cysts, hairloss, fading nose pigment
3	Reproductive	8	12.5	7.21	Dystochia, pyometra, prostatitis, polycystic ovaries, irregular heats, false pregnancy, cryptorchid
4	Endocrine	6	9.4	5.41	Hypothyroidism, Cushings disease (hypoadrenocorticism)
5	Gastrointestinal	6	9.4	5.41	Inappetance, diarrhea, colitis, campylobacter, GDV
6	Aural	4	6.3	3.60	Otitis externa
7	Immune mediated	3	4.7	2.70	Food allergy, allergy to wheat products or gluten-sensitive enteropathy
8	Ocular	3	4.7	2.70	Epiphora, conjunctivitis
9	Trauma	3	4.7	2.70	Spine, skin, unspecified
10	Urologic	3	4.7	2.70	Cystitis (bladder infection)
11	Cancer	2	3.1	1.80	Type unspecified
12	Dental	2	3.1	1.80	Retained puppy teeth
13	Neurologic	2	3.1	1.80	Polyneuropathy, meningitis
14	Cardiac	1	1.6	0.90	Slow or fast heart rhythm that required pacing
15	Haematopoietic	1	1.6	0.90	von Willebrands disease (VWD)
16	Respiratory	1	1.6	0.90	Kennel cough
17	Unknown	1	1.6	0.90	Undiagnosed liver disease
	Total	64	100.0	57.66	

Reproductive: dystochia= uterine inertia (failure to push)>physical blockage (stuck puppy)

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for American Cocker Spaniels

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

American Cocker Spaniels

A total of 198 forms were sent out and 33 were returned, representing 132 live dogs. This breed had a 16.7 % response rate (33/198) and it represented 0.24% of all returns (33/13,741).

Mortality data

A total of 60 deaths were reported and this represents 0.38 % of all deaths reported in the survey (60/15,881). The median age at death for American Cocker Spaniels was 10 years and 4 months (min = 2 months, max = 17 years and 4 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for American Cocker Spaniels. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for American Cocker Spaniels.

	Cause of death	No. of deaths	% of deaths	Most common specific causes in descending order
1	Cancer	14	23.3	Type unspecified
2	Old age	12	20.0	Old age & age combinations
3	Cardiac	5	8.3	Heart failure, heart defect unspecified, heart attack, CMP
4	Immune mediated	5	8.3	Haemolytic anaemia
5	Hepatic	4	6.7	Chronic liver failure
6	Neurologic	3	5.0	Spinal unspecified, epilepsy, intervertebral disc disease
7	Combinations	2	3.3	
8	Endocrine	2	3.3	Hypothyroidism, diabetes mellitus
9	Gastrointestinal	2	3.3	Intussusception, unspecified
10	Ocular	2	3.3	Glaucoma, blindness
11	Urologic	2	3.3	Amyloidosis, chronic kidney failure
12	Behaviour	1	1.7	Aggression
13	Cerebral vascular	1	1.7	Stroke or cerebral vascular accident
14	Poisoning	1	1.7	
15	Sudden death	1	1.7	
16	Systemic	1	1.7	
17	Trauma	1	1.7	
18	Unknown	1	1.7	
	Total	60	100.0	

Cardiac: CMP=cardiomyopathy

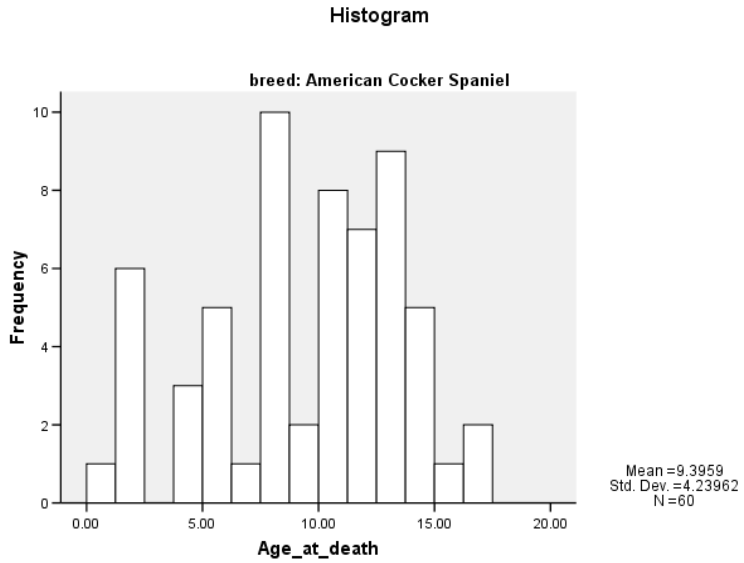

Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 60 American Cocker Spaniel deaths with age at death reported.

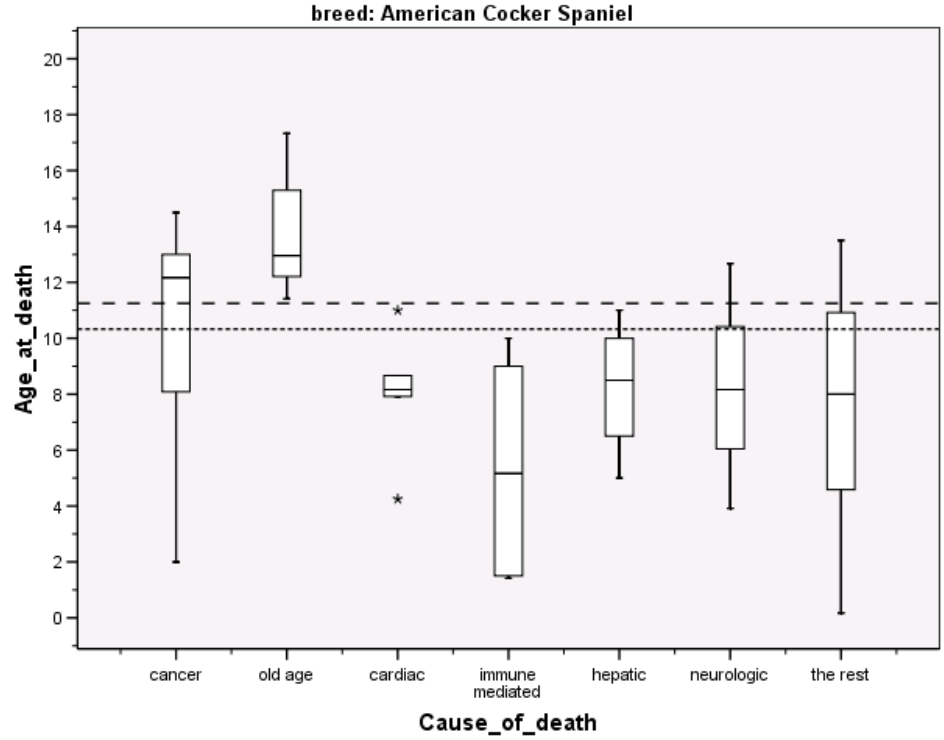

Figure 2. Box and whisker plot of age at death in years for the most common causes of death in American Cocker Spaniels (N=60). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for American Cocker Spaniels. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 132 live dogs with a reported age was 4 years and 3 months (min=4 months, max=12 years and 9 months, Figure 3). Health information was reported for 132 live dogs of which 75 (57%) were healthy and 57 (43%) had at least one reported health condition, resulting in a total of 89 reported conditions with a median of 1 condition/dog (min=1, max=6).

The median current age of all healthy dogs with a reported age (N=75) was 3 years and 2 months (min=4 months, max=11 years and 10 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=57) was 5 years and 8 months (min=9 months, max=12 years and 9 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=79) was 3 years (min= 3 months, max= 12 years, Figure 4). Table 3 shows the disease conditions for American Cocker Spaniels. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 132 American Cocker Spaniels with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	69	17	86 (65%)
Male	41	5	46 (35%)
Totals	110 (83%)	22 (17%)	132 (100%)

There was no association between gender and neuter status (P=0.2).

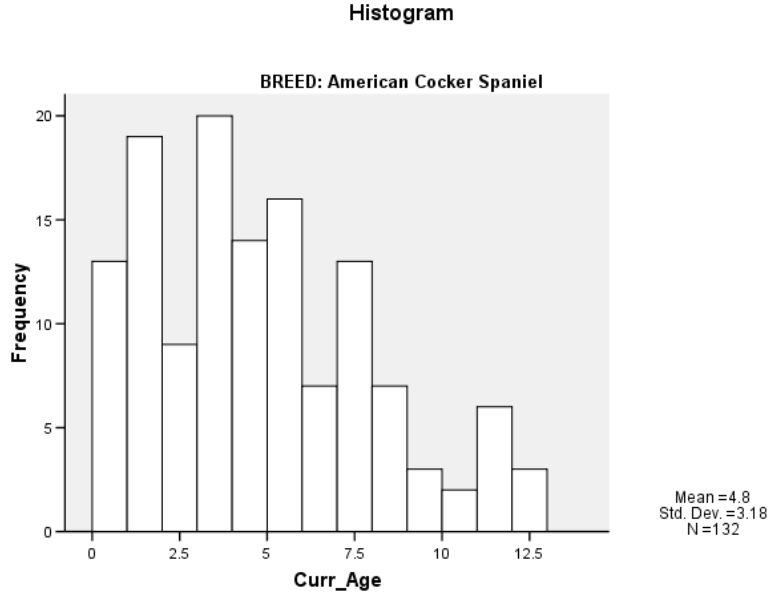

Figure 3. Histogram showing frequency of current age in years for the 132 live American Cocker Spaniels with age reported.

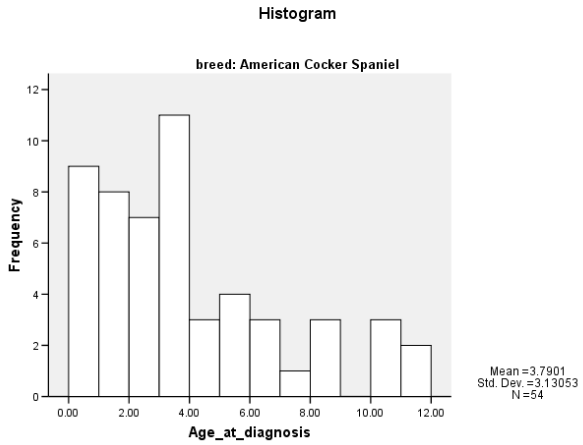

Figure 4. Histogram showing frequency of age at diagnosis for the 54 American Cocker Spaniels with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

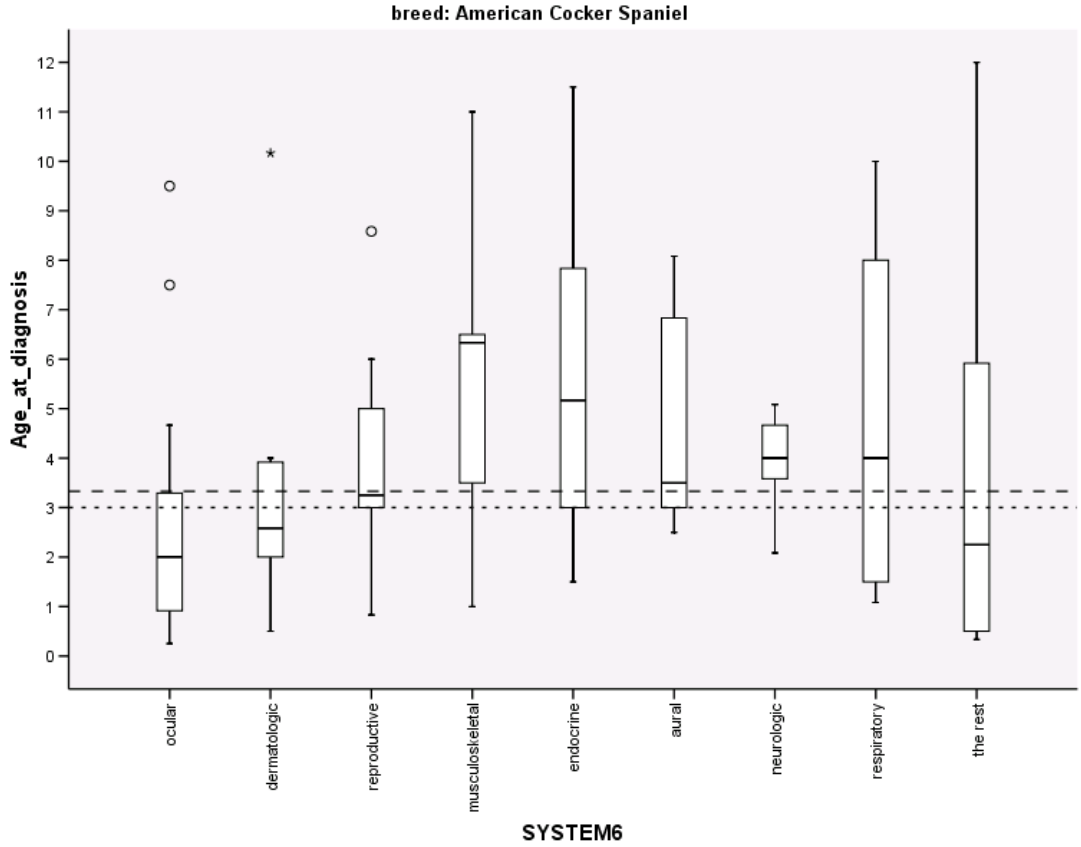

Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for American Cocker Spaniels (N=79 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for American Cocker Spaniels. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for American Cocker Spaniels.

	Disease condition	All conditions N	All conditions %	Prevalence %	Most common specific conditions in descending order
1	Ocular	20	22.5	15.15	MRD, distichiasis, epiphora, cherry eye, cataract, KCS
2	Dermatologic	12	13.5	9.09	Dermatitis, seborrhea, pyoderma, fungal skin infection, cheyletiellosis, calcinosis circumscripta
3	Gastrointestinal	9	10.1	6.82	Weight loss, pancreatitis, diarrhoea, colitis (chronic large bowel diarrhea)
4	Reproductive	9	10.1	6.82	Uterine inertia (failure to push), pyometra, irregular heats, infertility, false pregnancy
5	Musculoskeletal	8	9.0	6.06	Spondylitis/spondylosis, patellar luxation, arthritis, cruciate ligament rupture, hip dysplasia
6	Endocrine	6	6.7	4.55	Hypothyroidism, Addisons disease (hypoadrenocorticism)
7	Aural	5	5.6	3.79	Otitis media, Otitis externa
8	Neurologic	5	5.6	3.79	Seizures or fits or epilepsy idiopathic, intervertebral disc disease
9	Respiratory	5	5.6	3.79	Noisy breathing, kennel cough, asthma
10	Cancer	2	2.2	1.52	Type unspecified
11	Cardiac	2	2.2	1.52	Heart murmur
12	Immune mediated	2	2.2	1.52	Food allergy
13	Urologic	2	2.2	1.52	Incontinence, cystitis (bladder infection)
14	Anal gland	1	1.1	0.76	Anal sacculitis (anal gland impaction or infection or removal)
15	Unknown	1	1.1	0.76	Undiagnosed illness
	Total	89	100.0	67.42	

Ocular: MRD= multifocal retinal dysplasia

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for the Anatolian/Karabash breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Anatolian/Karabash breed

A total of 180 forms were sent out and 22 were returned, representing 34 live dogs. This breed had a 12.2 % response rate (22/180) and it represented 0.16% of all returns (22/13,741).

Mortality data

A total of 23 deaths were reported and this represents 0.14 % of all deaths reported in the survey (23/15,881). The median age at death for the Anatolian/Karabash breed was 10 years and 9 months (min = 4 years and 5 months, max = 13 years and 5 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Anatolian/Karabash breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Anatolian/Karabash breed.

	Cause of death	No. of deaths	% of deaths	Most common specific causes in descending order
1	Cancer	5	21.7	Type unspecified, lymphosarcoma, leukaemia
2	Combinations	4	17.4	
3	Cardiac	3	13.0	Heart attack, cardiomyopathy
4	Old age	3	13.0	Old age
5	Other	2	8.7	Uncodeable
6	Unknown	2	8.7	
7	Gastrointestinal	1	4.3	Gastric dilatation/volvulus (GDV)
8	Musculoskeletal	1	4.3	Hip dysplasia
9	Systemic	1	4.3	
10	Trauma	1	4.3	Road traffic accident
	Total	23	100.0	

Cancer: lymphosarcoma=lymphoma

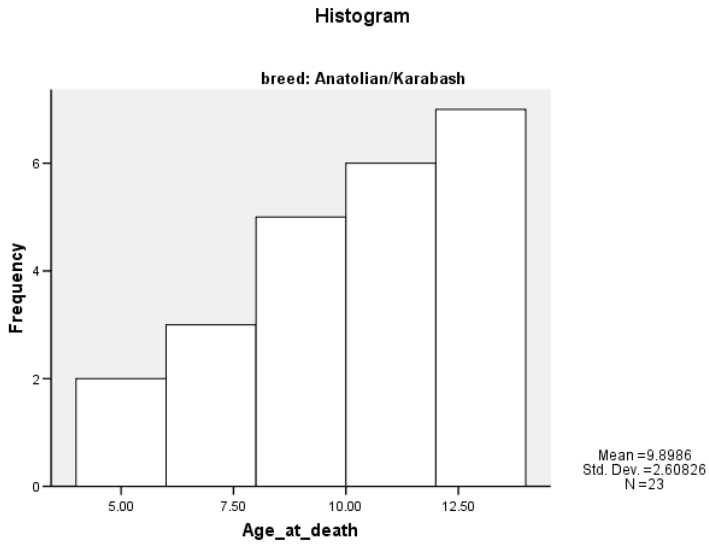

Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 23 Anatolian/Karabash deaths with age at death reported.

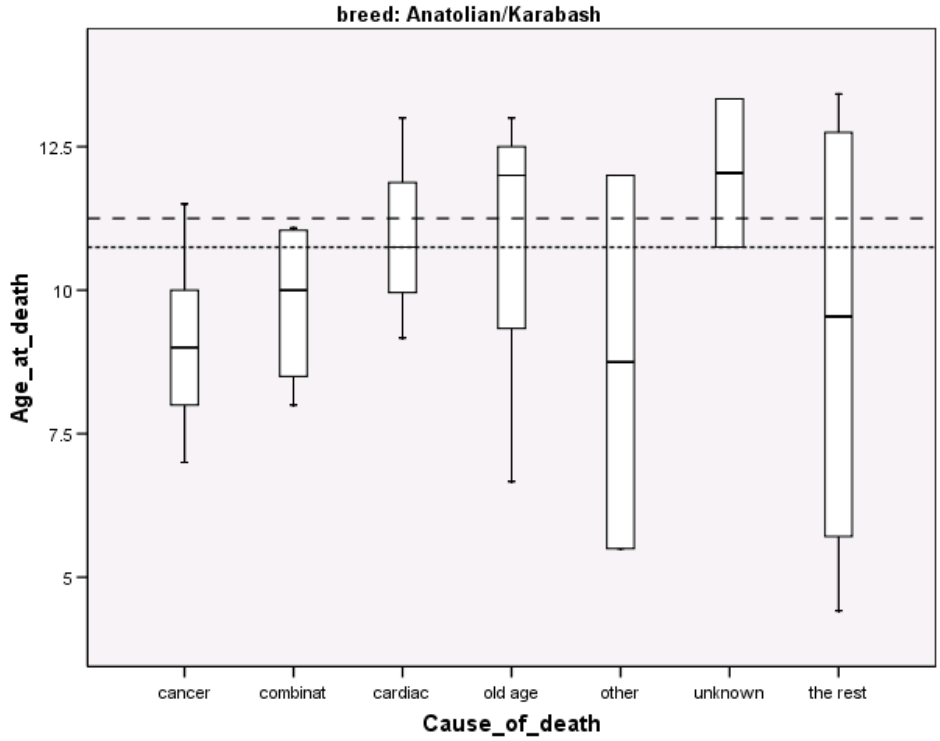

Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the Anatolian/Karabash breed (N=23). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the Anatolian/Karabash breed. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 34 live dogs with a reported age was 6 years and 9 months (min=1 year, max=13 years and 3 months, Figure 3). Health information was reported for 34 live dogs of which 21 (62%) were healthy and 13 (38%) had at least one reported health condition, resulting in a total of 24 reported conditions with a median of 2 conditions/dog (min=1, max=6).

The median current age of all healthy dogs with a reported age (N=21) was 3 years and 8 months (min=1 year, max=10 years and 10 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=13) was 9 years and 8 months (min=2 years and 6 months, max=13 years and 3 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=24) was 6 years and 5 months (min= 9 months, max= 10 years, Figure 4). Table 3 shows the disease conditions for the Anatolian/Karabash breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 34 the Anatolian/Karabash breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	13	10	23 (68%)
Male	10	1	11 (32%)
Totals	23 (68%)	11 (32%)	34 (100%)

Significantly more females were neutered (P=0.045).

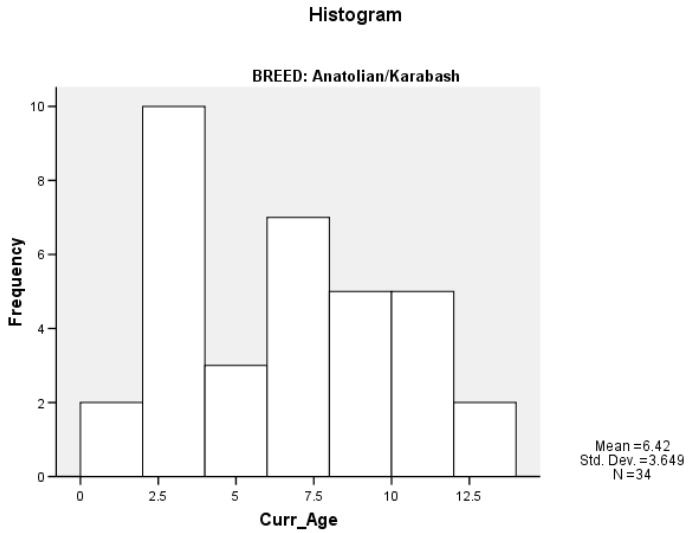

Figure 3. Histogram showing frequency of current age in years for the 34 live dogs in the Anatolian/Karabash breed with age reported.

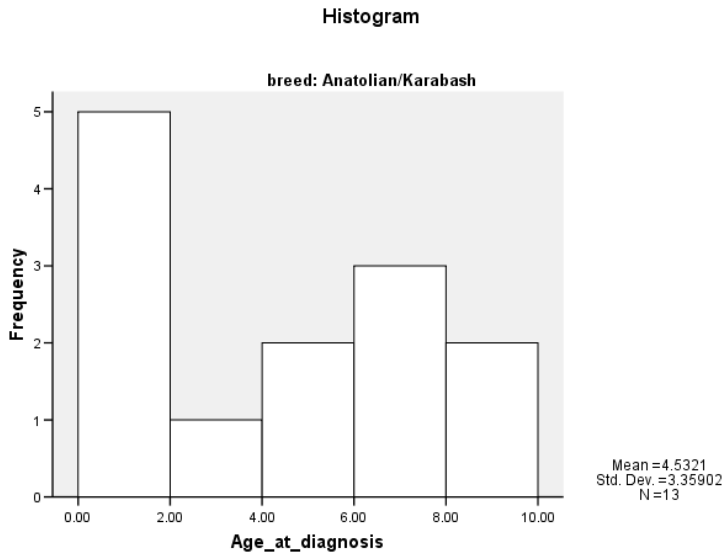

Figure 4. Histogram showing frequency of age at diagnosis for the 13 the Anatolian/Karabash breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

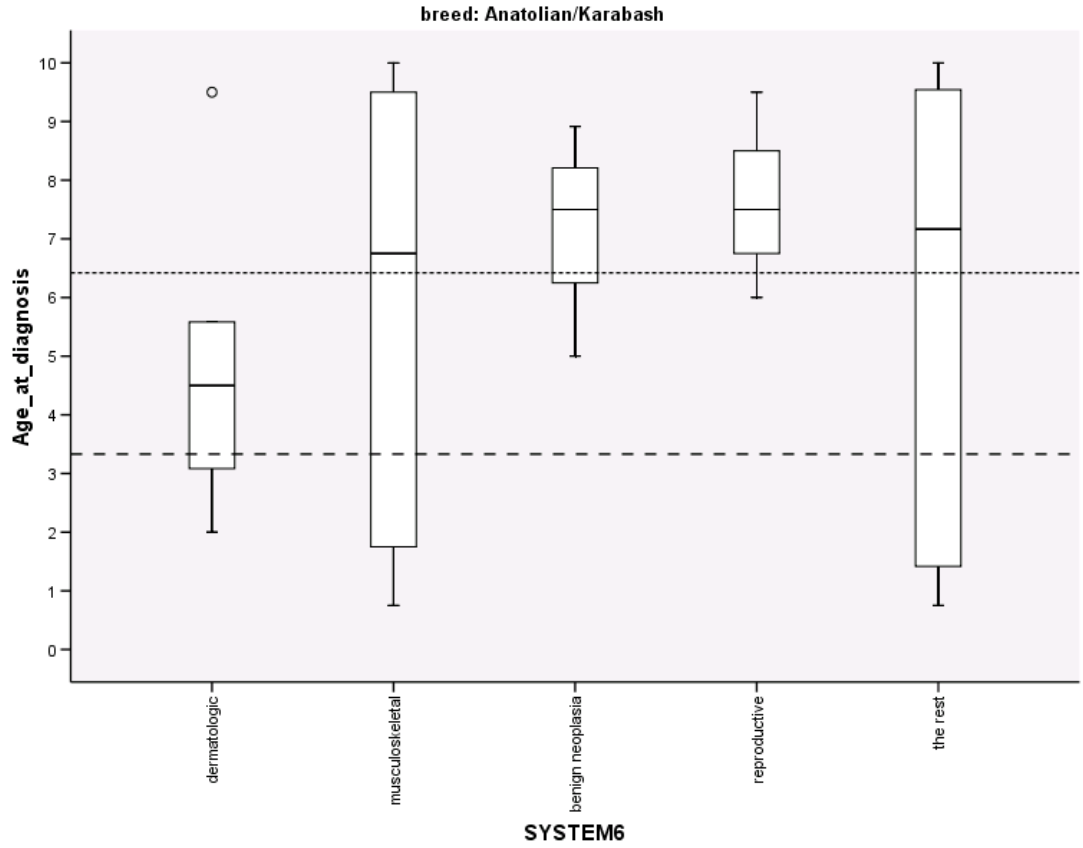

Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Anatolian/Karabash breed (N=24 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Anatolian/Karabash breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Anatolian/Karabash breed.

		All conditions		Prevalence	
Disease condition		N	%	%	Most common specific conditions in descending order
1	Dermatologic	5	20.8	14.71	Dermatitis, mites – type unspecified
2	Musculoskeletal	5	20.8	14.71	Arthritis, bone malformation unspecified, CLR rupture
3	Benign neoplasia	3	12.5	8.82	Lipoma
4	Reproductive	3	12.5	8.82	Pyometra
5	Gastrointestinal	2	8.3	5.88	Haemorrhagic gastroenteritis (HGE)
6	Ocular	2	8.3	5.88	Distichiasis, ectropion
7	Cancer	1	4.2	2.94	Type unspecified
8	Neurologic	1	4.2	2.94	Seizures or fits or epilepsy idiopathic
9	Respiratory	1	4.2	2.94	Laryngeal paralysis
10	Urologic	1	4.2	2.94	Cystitis (bladder infection)
	Total	24	100.0	70.59	

Musculoskeletal: CLR cruciate ligament rupture
Ocular: distichiasis=extra eyelashes, ectropion=outward drooping of eyelid

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for Australian Cattle Dogs

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Australian Cattle Dogs

A total of 83 forms were sent out and 22 were returned, representing 69 live dogs. This breed had a 26.5 % response rate (22/83) and it represented 0.16% of all returns (22/13,741).

Mortality data

A total of 11 deaths were reported and this represents 0.07 % of all deaths reported in the survey (11/15,881). The median age at death for Australian Cattle Dogs was 11 years and 8 months (min = 1 year and 6 months, max = 15 years and 11 months) and this was similar to the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Australian Cattle Dogs. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Australian Cattle Dogs.

	Cause of death	No. of deaths	% of deaths	Most common specific causes in descending order
1	Cancer	3	27.3	Type unspecified
2	Cerebral vascular	3	27.3	Stroke or cerebral vascular accident
3	Endocrine	1	9.1	Cushings disease (hyperadrenocorticism)
4	Hepatic	1	9.1	Chronic liver failure
5	Ocular	1	9.1	Blindness
6	Perioperative	1	9.1	
7	Trauma	1	9.1	
	Total	11	100.0	

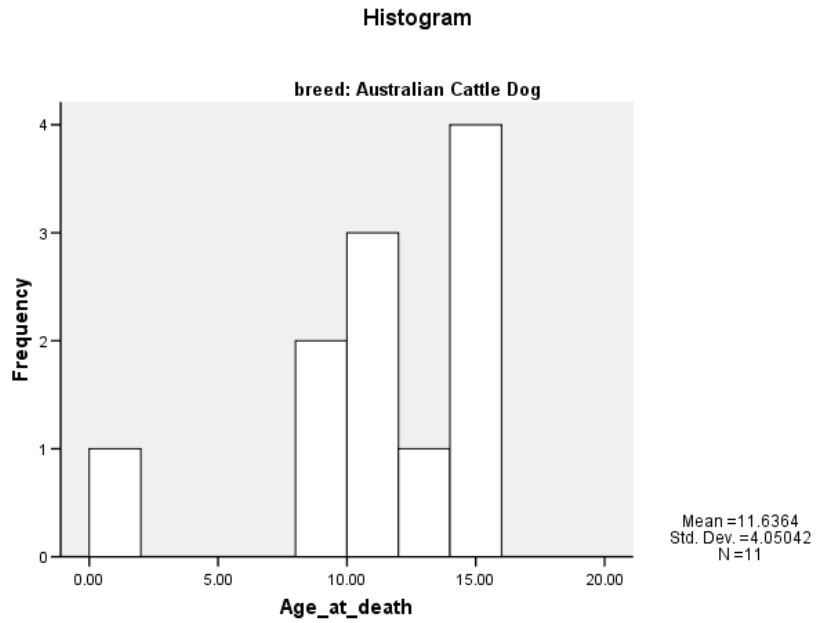

Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 11 Australian Cattle Dog deaths with age at death reported.

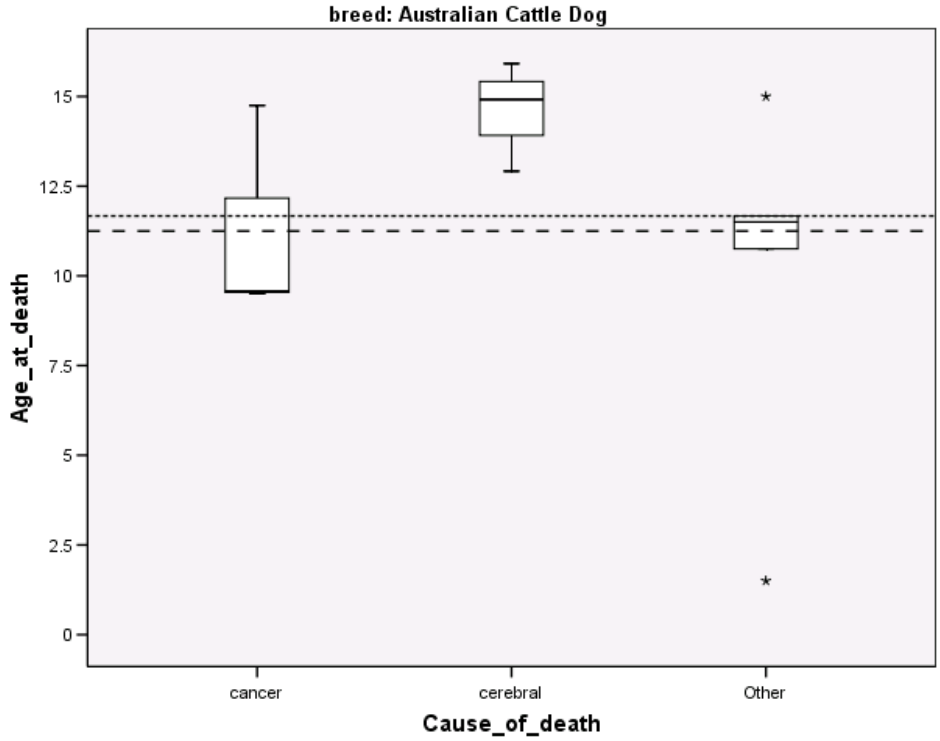

Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Australian Cattle Dogs (N=11). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Australian Cattle Dogs. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 69 live dogs with a reported age was 4 years and 1 month (min=2 months, max=15 years, Figure 3). Health information was reported for 69 live dogs of which 53 (77%) were healthy and 16 (23%) had at least one reported health condition, resulting in a total of 18 reported conditions with a median of 1 condition/dog (min=1, max=2).

The median current age of all healthy dogs with a reported age (N=53) was 3 years and 5 months (min=2 months, max=15 years). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=16) was 7 years and 5 months (min=6 months, max=14 years and 11 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=15) was 4 years (min= 6 months, max= 14 years and 10 months, Figure 4). Table 3 shows the disease conditions for Australian Cattle Dogs. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 69 Australian Cattle Dogs with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	31	11	42 (61%)
Male	21	6	27 (39%)
Totals	52 (75%)	17 (25%)	69 (100%)

There was no association between gender and neuter status (P=0.7).

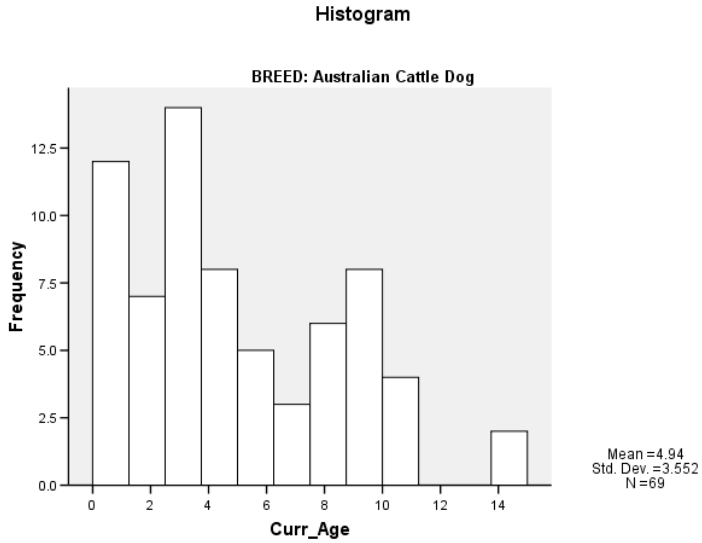

Figure 3. Histogram showing frequency of current age in years for the 69 live Australian Cattle Dogs with age reported.

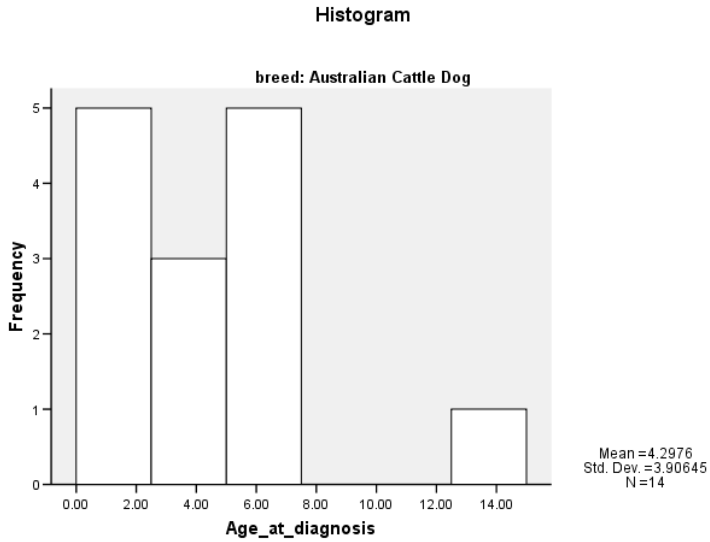

Figure 4. Histogram showing frequency of age at diagnosis for the 14 Australian Cattle Dogs with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

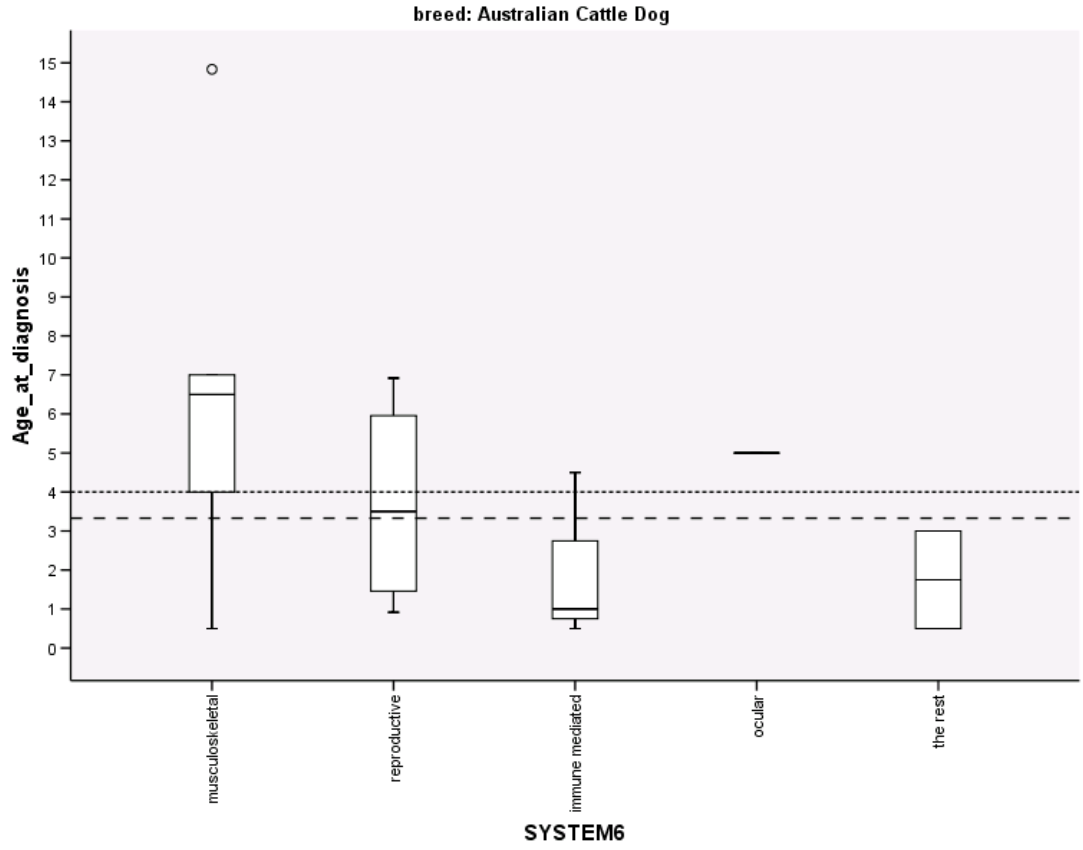

Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Australian Cattle Dogs (N=15 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Australian Cattle Dogs. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Australian Cattle Dogs.

		All conditions		Prevalence	
Disease condition		N	%	%	Most common specific conditions in descending order
1	Musculoskeletal	5	27.8	7.25	Spondylitis/spondylosis, elbow dysplasia, arthritis
2	Reproductive	4	22.2	5.80	Pyometra, infertility, false pregnancy
3	Immune mediated	3	16.7	4.35	Allergy to wheat products (gluten-sensitive enteropathy)
4	Ocular	3	16.7	4.35	Progressive retinal atrophy (PRA)
5	Neurologic	1	5.6	1.45	Lumbosacral disorder
6	Trauma	1	5.6	1.45	Forelimb
7	Unknown	1	5.6	1.45	Undiagnosed illness
	Total	18	100.0	26.09	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for the Australian Shepherd breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Australian Shepherd breed

A total of 132 forms were sent out and 49 were returned, representing 104 live dogs. This breed had a 37.1 % response rate (49/132) and it represented 0.36% of all returns (49/13,741).

Mortality data

A total of 22 deaths were reported and this represents 0.14 % of all deaths reported in the survey (22/15,881). The median age at death for the Australian Shepherd breed was 9 years (min = 3 years, max = 15 years) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Australian Shepherd breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Australian Shepherd breed.

	Cause of death	No. of deaths	% of deaths	Most common specific causes in descending order
1	Cancer	7	31.8	Type unspecified
2	Combinations	4	18.2	
3	Old age	3	13.6	Old age & age combinations
4	Behaviour	1	4.5	Aggression
5	Cardiac	1	4.5	Heart failure
6	Infection	1	4.5	
7	Internal bleeding	1	4.5	
8	Neurologic	1	4.5	Epilepsy
9	Reproductive	1	4.5	Pyometra
10	Respiratory	1	4.5	Pneumonia
11	Septicaemia	1	4.5	
	Total	22	100.0	

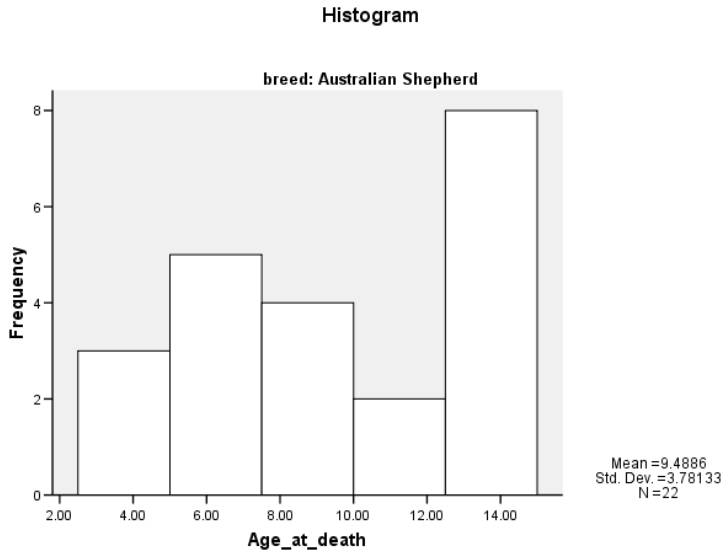

Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 22 Australian Shepherd deaths with age at death reported.

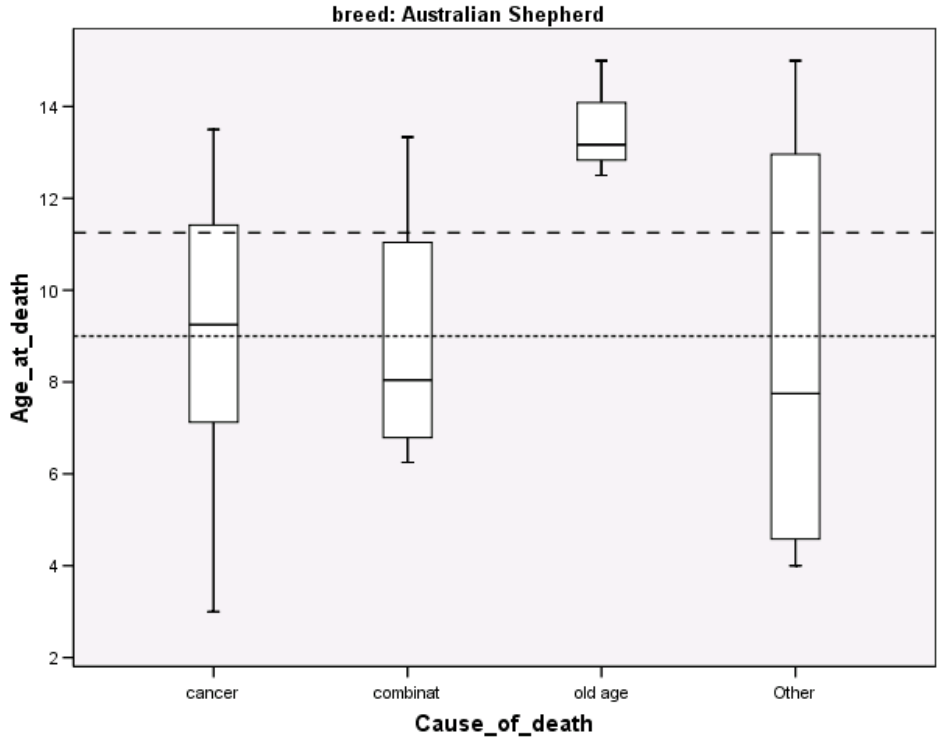

Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the Australian Shepherd breed (N=22). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the Australian Shepherd breed. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 104 live dogs with a reported age was 4 years and 6 months (min=4 months, max=13 years and 8 months, Figure 3). Health information was reported for 104 live dogs of which 77 (74%) were healthy and 27 (26%) had at least one reported health condition, resulting in a total of 48 reported conditions with a median of 1 condition/dog (min=1, max=5).

The median current age of all healthy dogs with a reported age (N=77) was 3 years and 3 months (min=4 months, max=13 years and 8 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=27) was 7 years (min=7 months, max=13 years and 7 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=47) was 2 years and 7 months (min= 3 months, max= 12 years, Figure 4). Table 3 shows the disease conditions for the Australian Shepherd breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 104 the Australian Shepherd breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	32	15	47 (45%)
Male	39	18	57 (55%)
Totals	71 (68%)	33 (32%)	104 (100%)

There was no association between gender and neuter status (P=1.0).

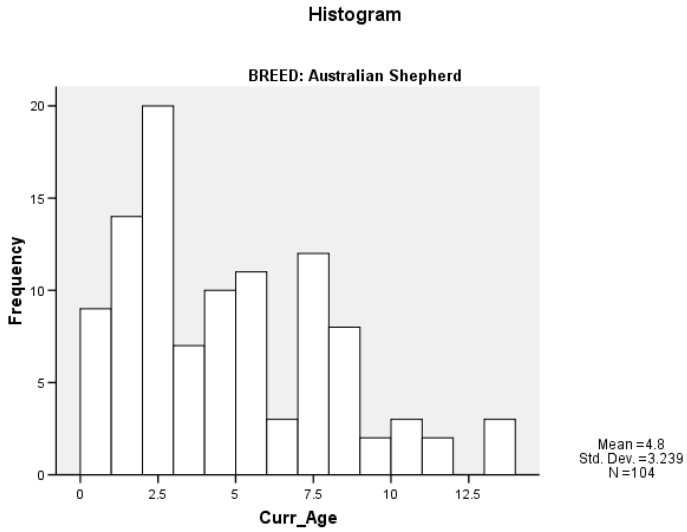

Figure 3. Histogram showing frequency of current age in years for the 104 live dogs in the Australian Shepherd breed with age reported.

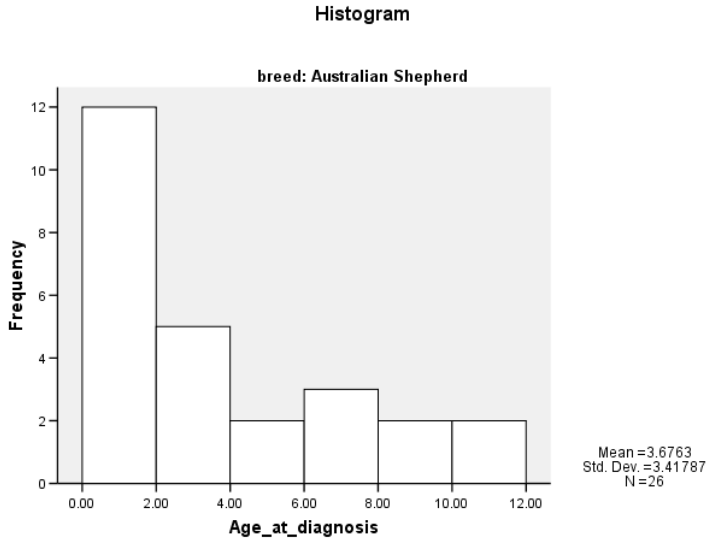

Figure 4. Histogram showing frequency of age at diagnosis for the 26 the Australian Shepherd breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

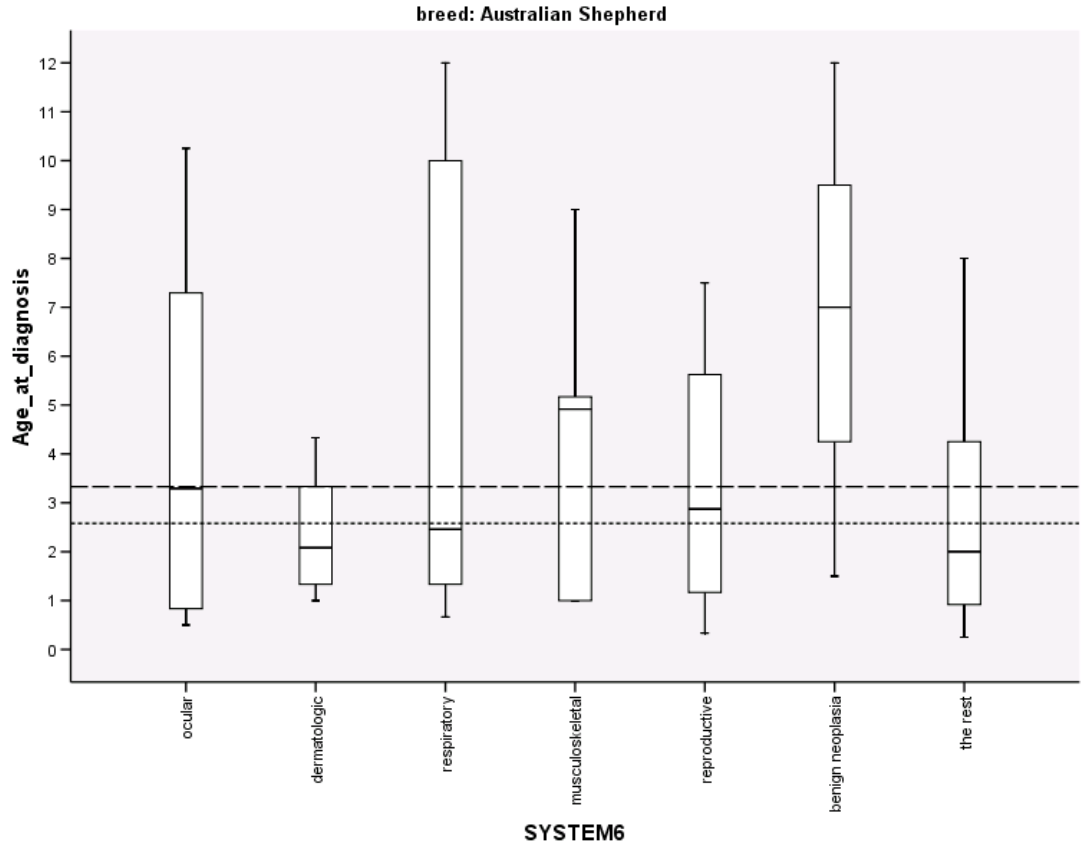

Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Australian Shepherd breed (N=47 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Australian Shepherd breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Australian Shepherd breed.

		All conditions		Prevalence	
Disease condition		N	%	%	Most common specific conditions in descending order
1	Ocular	9	18.8	8.65	Red eye, epiphora, conjunctivitis, congenital cataract, cataract
2	Dermatologic	6	12.5	5.77	Dermatitis, pyoderma
3	Respiratory	6	12.5	5.77	Noisy breathing, laryngeal paralysis, kennel cough, bronchitis or chronic bronchitis
4	Gastrointestinal	5	10.4	4.81	IBD, gastroenteritis unspecified, foreign body obstruction, colitis, campylobacter
5	Musculoskeletal	5	10.4	4.81	Arthritis, spondylitis/spondylosis, prognathism, cruciate ligament rupture
6	Reproductive	4	8.3	3.85	Pyometra, irregular heats, false pregnancy, cryptorchid
7	Benign neoplasia	3	6.3	2.88	Lipoma, histiocytoma
8	Cardiac	2	4.2	1.92	Persistent right aortic arch, coughing
9	Endocrine	2	4.2	1.92	Hypothyroidism
10	Neurologic	2	4.2	1.92	Seizures or fits or epilepsy idiopathic
11	Cancer	1	2.1	0.96	Type unspecified
12	Immune mediated	1	2.1	0.96	Flea allergy
13	Unknown	1	2.1	0.96	Undiagnosed illness
14	Urologic	1	2.1	0.96	Cystitis (bladder infection)
	Total	48	100.0	46.15	

Ocular: epiphora=overflow of tears or excessive tearing
Dermatologic: dermatitis=undiagnosed skin irritation or scratching or itchy skin or pruritis, pyoderma=skin infection
Gastrointestinal: IBD=inflammatory bowel disease, colitis=chronic large bowel diarrhea

Confidential

Report from the Kennel Club/British Small Animal Veterinary Association Scientific Committee on the Purebred Dog Health Survey:

Results for Australian Silky Terriers

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Australian Silky Terriers

A total of 37 forms were sent out and 7 were returned, representing 22 live dogs. This breed had a 18.9 % response rate (7/37) and it represented 0.05% of all returns (7/13,741).

Mortality data

A total of 3 deaths were reported and this represents 0.02 % of all deaths reported in the survey (3/15,881). The median age at death for Australian Silky Terriers was 14 years and 3 months (min = 11 years and 1 month, max = 15 years and 4 months) and this was higher than the overall median of 11 years and 3 months. Table 1 shows the causes of death and age at death for Australian Silky Terriers.

Table 1. Causes of death by organ system/category for Australian Silky Terriers.

	Cause of death	No. of deaths	% of deaths	Age at death
1	Cancer	1	33.3	15 years and 4 months
2	Old age	1	33.3	14 years and 3 months
3	Trauma – attacked by dog	1	33.3	11 years and 1 month
	Total	3	100.0	

Morbidity data

The median current age of the 22 live dogs with a reported age was 4 years and 3 months (min=7 months, max=13 years and 7 months, Figure 1). Health information was reported for 22 live dogs of which 21 (95%) were healthy and 1 (5%) had at least one reported health condition, resulting in a total of 2 reported conditions with a median of 2 conditions/dog (min=2, max=2).

The median current age of all healthy dogs with a reported age (N=21) was 4 years and 3 months (min=7 months, max=13 years and 7 months). The distribution of gender and neuter status is shown in Table 2.

The current age of the one Australian Silky Terrier with one or more disease conditions and a reported age was 4 years and 8 months and the age at diagnosis for the one disease occurrence with a reported age at diagnosis was 3 years and 4 months. Table 3 shows the disease conditions for Australian Silky Terriers.

Table 2. Distribution of gender and neuter status for 22 Australian Silky Terriers with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	10	4	14 (64%)
Male	7	1	8 (36%)
Totals	17 (77%)	5 (23%)	22 (100%)

There was no association between gender and neuter status (P=0.4).

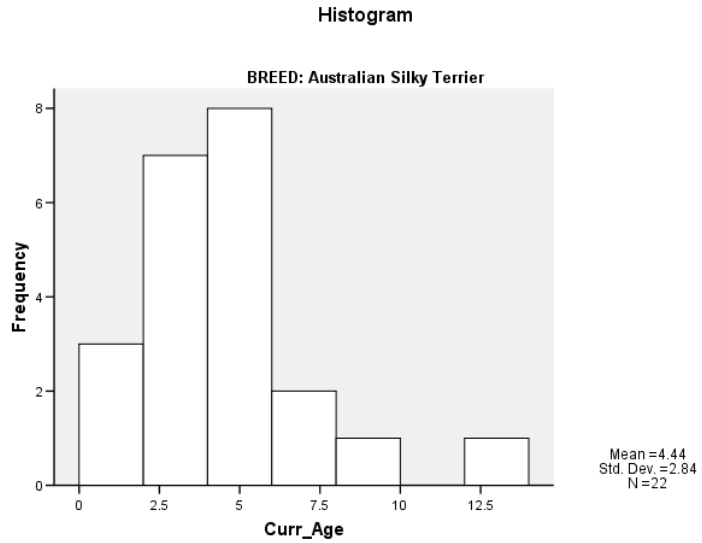


Figure 1. Histogram showing frequency of current age in years for the 22 live Australian Silky Terriers with age reported.

Table 3. Disease conditions by organ system/category for Australian Silky Terriers.

		All conditions		Prevalence	
Disease condition		N	%	%	Age at diagnosis
1	Ocular - epiphora	1	50.0	4.55	
2	Respiratory – kennel cough	1	50.0	4.55	3 years and 4 months
	Total	2	100.0	9.09	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for Australian Terriers

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Australian Terriers

A total of 74 forms were sent out and 12 were returned, representing 28 live dogs. This breed had a 16.2 % response rate (12/74) and it represented 0.09% of all returns (12/13,741).

Mortality data

A total of 11 deaths were reported and this represents 0.07 % of all deaths reported in the survey (11/15,881). The median age at death for Australian Terriers was 12 years and 1 month (min = 3 years and 11 months, max = 15 years) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Australian Terriers. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Australian Terriers.

Cause of death		No. of deaths	% of deaths	Most common specific causes in descending order
1	Old age	5	45.5	
2	Endocrine	3	27.3	Diabetes mellitus
3	Cancer	2	18.2	
4	Trauma	1	9.1	Attacked by dog
	Total	11	100.0	

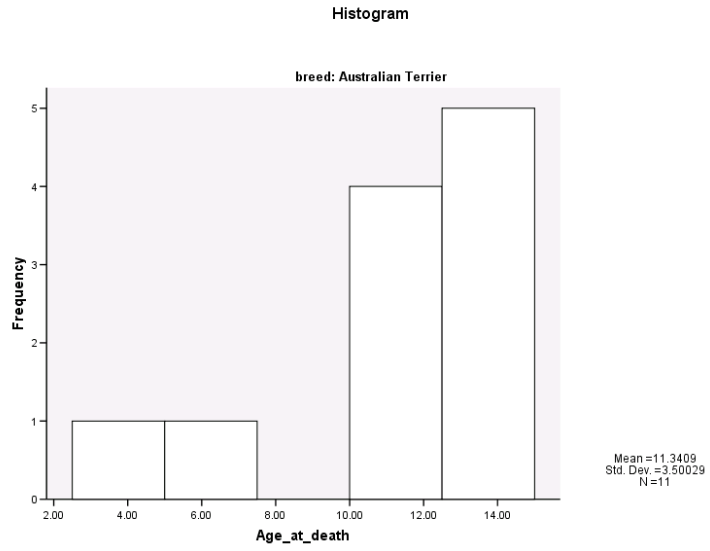


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 11 Australian Terrier deaths with age at death reported.

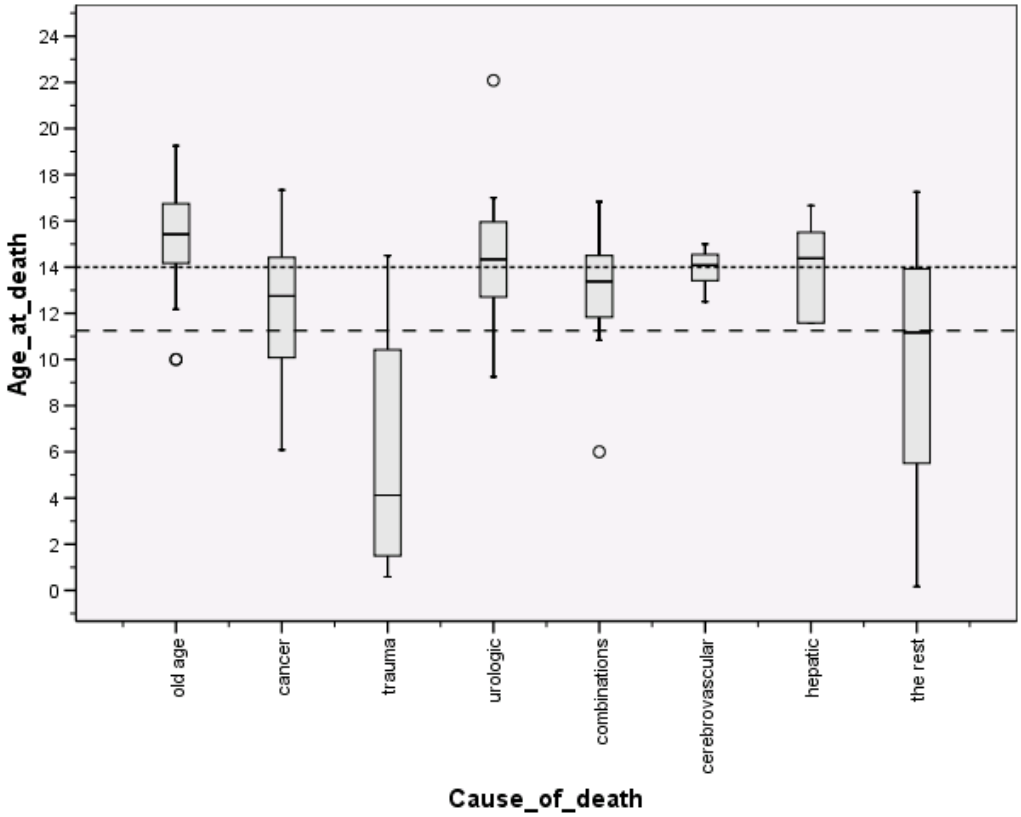


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Australian Terriers (N=11). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Australian Terriers. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 28 live dogs with a reported age was 5 years and 10 months (min=6 months, max=12 years, Figure 3). Health information was reported for 28 live dogs of which 19 (68%) were healthy and 9 (32%) had at least one reported health condition, resulting in a total of 12 reported conditions with a median of 1 condition/dog (min=1, max=3).

The median current age of all healthy dogs with a reported age (N=19) was 5 years and 1 month (min=6 months, max=10 years and 8 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=9) was 6 years (min=1 year, max=12 years). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=11) was 3 years (min= 9 months, max= 6 years, Figure 4). Table 3 shows the disease conditions for Australian Terriers. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 28 Australian Terriers with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	15	1	16 (57%)
Male	11	1	12 (43%)
Totals	26 (93%)	2 (7%)	28 (100%)

There was no association between gender and neuter status (P=0.8322).

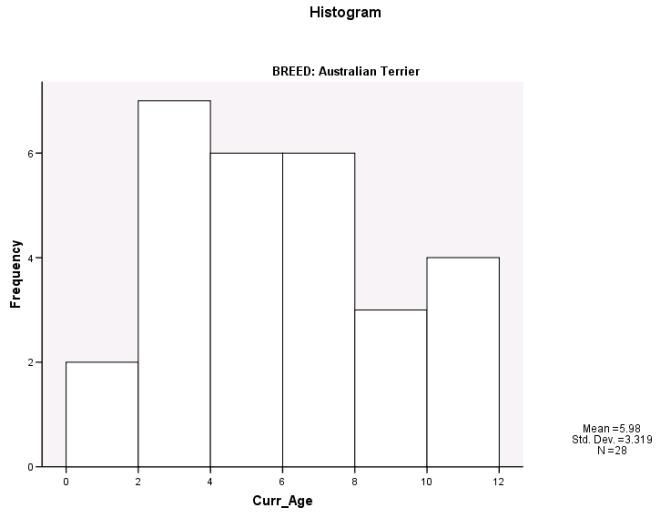


Figure 3. Histogram showing frequency of current age in years for the 28 live Australian Terriers with age reported.

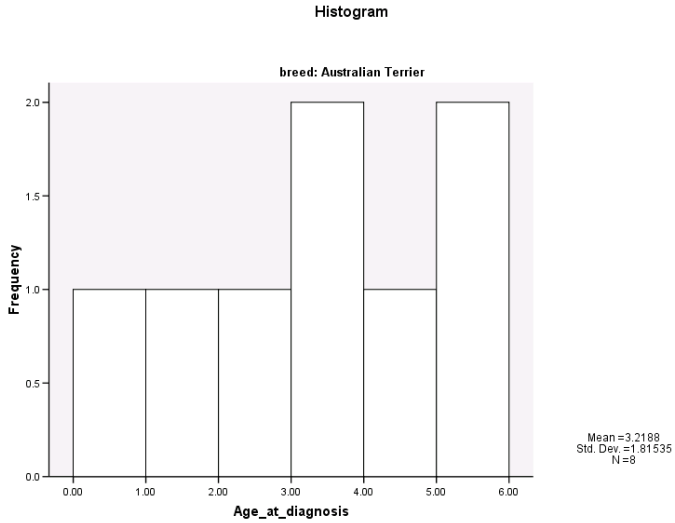


Figure 4. Histogram showing frequency of age at diagnosis for the 8 Australian Terriers with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

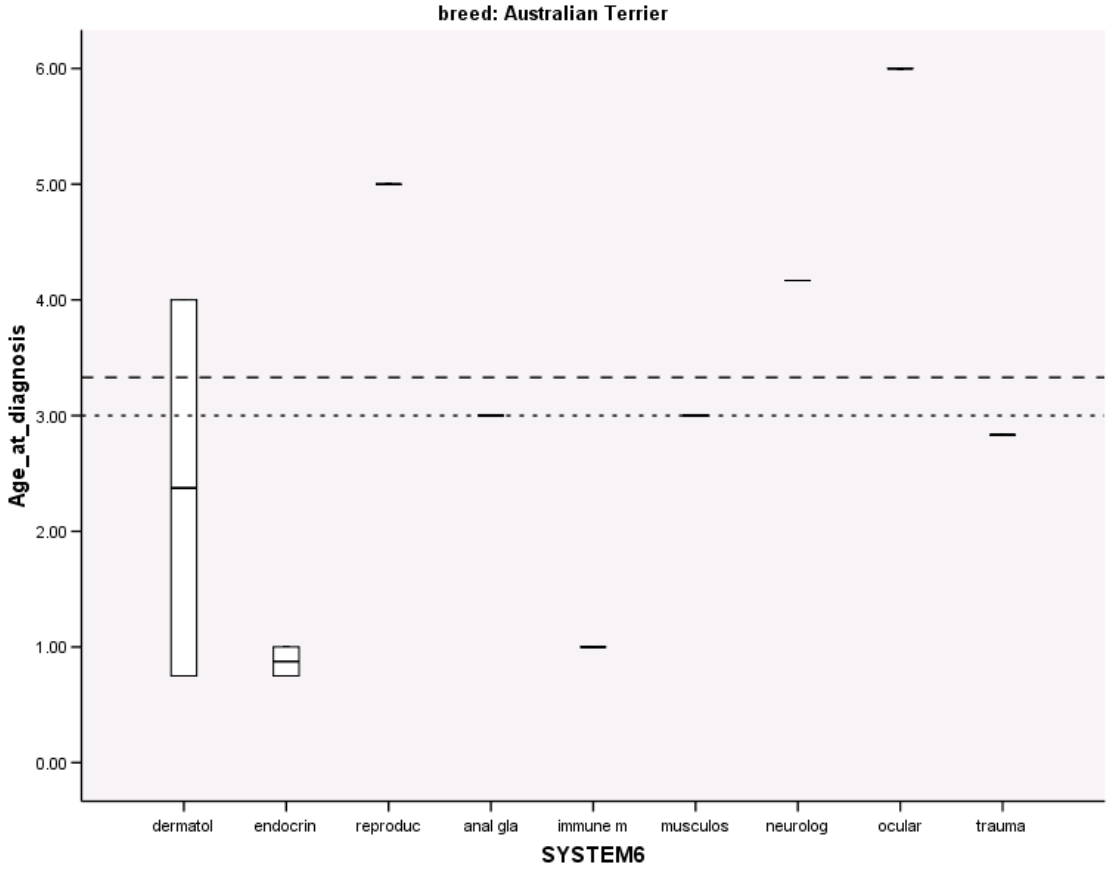


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Australian Terriers (N=12 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Australian Terriers. The solid line within each grey box represents the median age at diagnosis from the condition. The grey box represents 50% of the dogs and the whiskers represent 95% of the dogs for each condition. The circles (o) represent possible outliers and the asterisks (∗) represent extreme outliers.

Table 3. Disease conditions by organ system/category for Australian Terriers.

	Disease condition	All conditions N	All conditions %	Prevalence %	Most common specific conditions in descending order
1	Dermatologic	2	16.7	7.14	Dermatitis, hair loss
2	Endocrine	2	16.7	7.14	Hair loss undiagnosed
3	Reproductive	2	16.7	7.14	Infertility, false pregnancy
4	Anal gland	1	8.3	3.57	Anal sacculitis (anal gland impaction or infection or removal)
5	Immune mediated	1	8.3	3.57	Allergy to wheat products (gluten-sensitive enteropathy)
6	Musculoskeletal	1	8.3	3.57	Cruciate ligament rupture
7	Neurologic	1	8.3	3.57	Seizures or fits or epilepsy idiopathic
8	Ocular	1	8.3	3.57	KCS (keratoconjunctivitis sicca or dry eye)
9	Trauma	1	8.3	3.57	Spine
	Total	12	100.0	42.86	

Dermatologic: dermatitis=undiagnosed skin irritation or scratching or itchy skin or pruritis

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for the Basenji breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Basenji breed

A total of 171 forms were sent out and 40 were returned, representing 78 live dogs. This breed had a 23.4 % response rate (40/171) and it represented 0.29% of all returns (40/13,741).

Mortality data

A total of 46 deaths were reported and this represents 0.29 % of all deaths reported in the survey (46/15,881). The median age at death for the Basenji breed was 13 years and 7 months (min = 11 months, max = 17 years and 6 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Basenji breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Basenji breed.

	Cause of death	No. of deaths	% of deaths	Most common specific causes in descending order
1	Old age	14	30.4	Old age & age combinations
2	Urologic	6	13.0	Incontinence, Fanconi's syndrome, chronic kidney failure
3	Behaviour	4	8.7	Unspecified, aggression
4	Cancer	4	8.7	
5	Cardiac	3	6.5	Heart failure, heart defect unspecified, cardiomegaly
6	Cerebral vascular	3	6.5	Stroke or cerebral vascular accident
7	Neurologic	3	6.5	Seizures, deafness, intervertebral disc disease
8	Combinations	2	4.3	
9	Other	2	4.3	Uncodeable
10	Endocrine	1	2.2	Diabetes mellitus
11	Hepatic	1	2.2	Chronic liver failure
12	Immune mediated	1	2.2	Unspecified
13	Poisoning	1	2.2	
14	Trauma	1	2.2	
	Total	46	100.0	

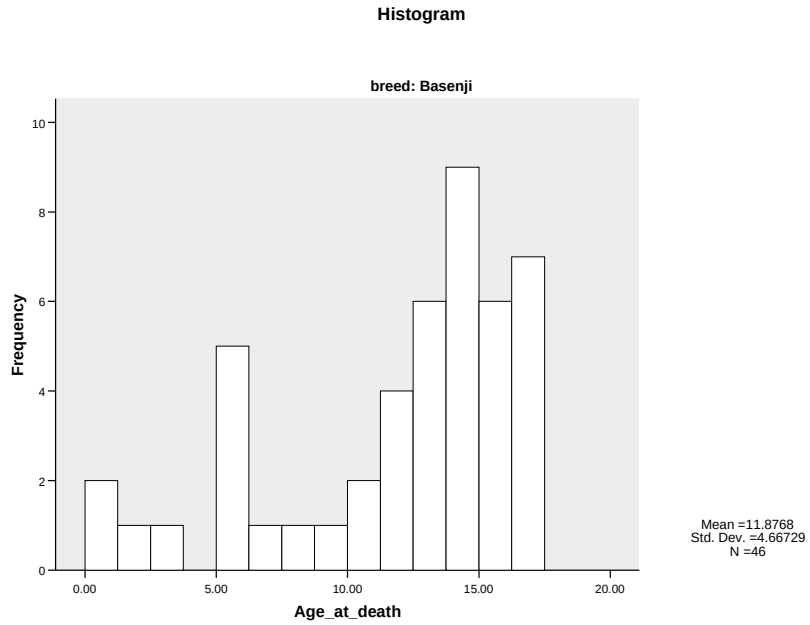


Figure 1. Histogram showing frequency (number of dogs) of age at death (in years) for the 46 Basenji deaths with age at death reported.

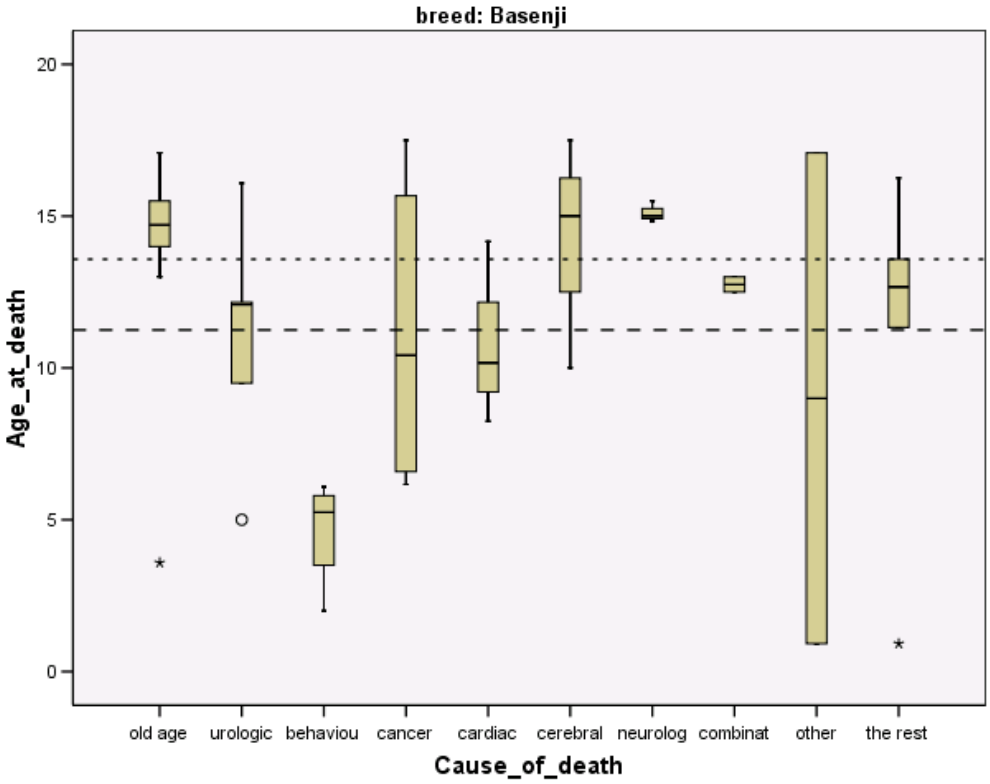


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the Basenji breed (N=46). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the Basenji breed. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 78 live dogs with a reported age was 6 years and 6 months (min=4 months, max=15 years and 2 months, Figure 3). Health information was reported for 78 live dogs of which 52 (67%) were healthy and 26 (33%) had at least one reported health condition, resulting in a total of 38 reported conditions with a median of 1 condition/dog (min=1, max=3).

The median current age of all healthy dogs with a reported age (N=52) was 6 years and 1 month (min=4 months, max=14 years and 2 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=26) was 7 years and 9 months (min=1 year and 2 months, max=15 years and 2 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=37) was 5 years (min= 1 month, max= 14 years and 7 months, Figure 4). Table 3 shows the disease conditions for the Basenji breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 77 the Basenji breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	23	19	42 (55%)
Male	30	5	35 (45%)
Totals	53 (69%)	24 (31%)	77 (100%)

Significantly more females were neutered (P=0.0035).

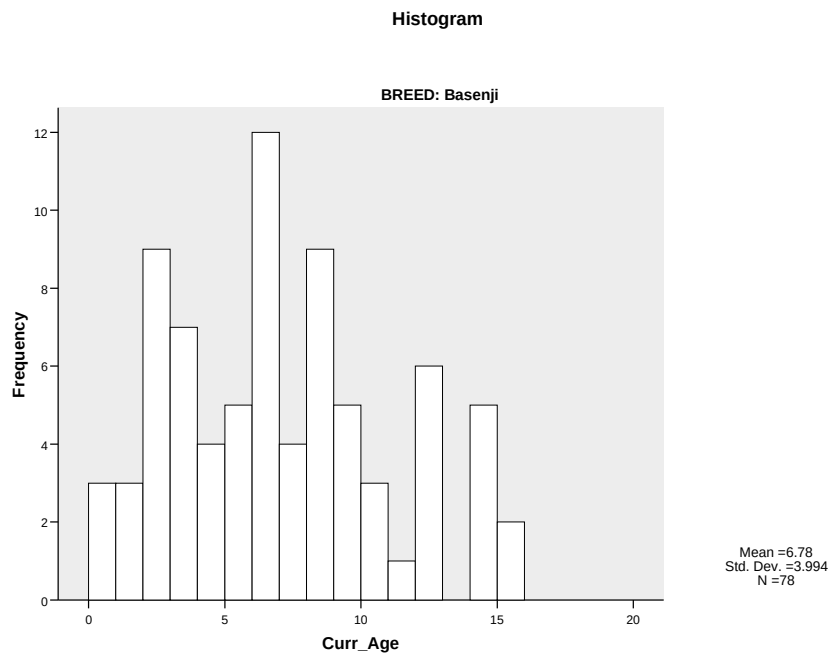


Figure 3. Histogram showing frequency of current age in years for the 78 live the Basenji breed with age reported.

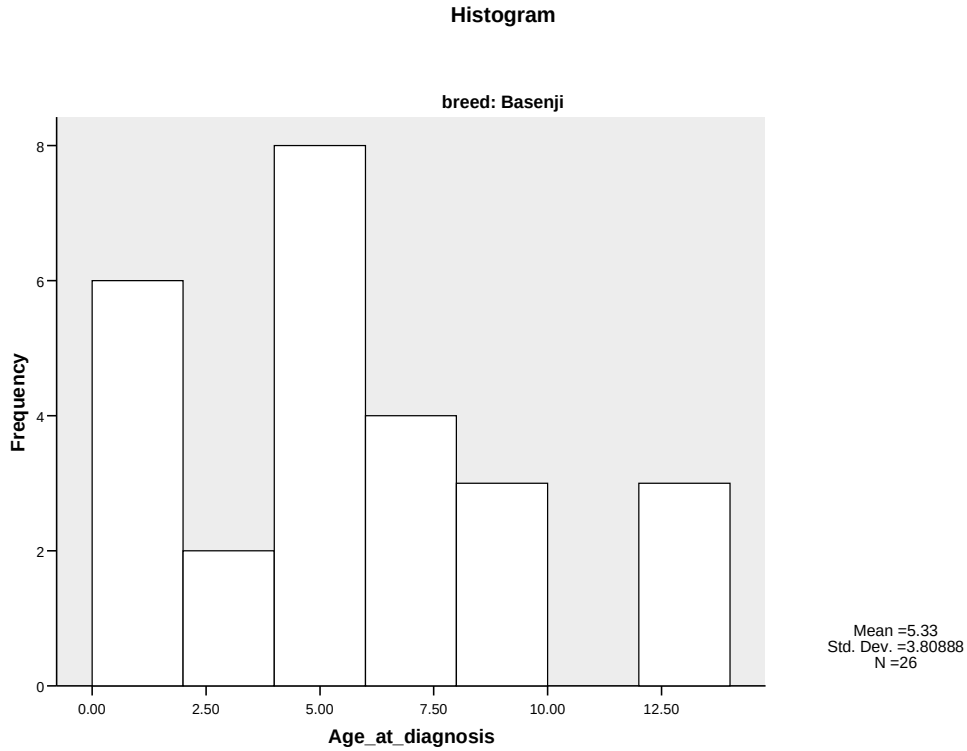


Figure 4. Histogram showing frequency of age at diagnosis for the 26 the Basenji breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

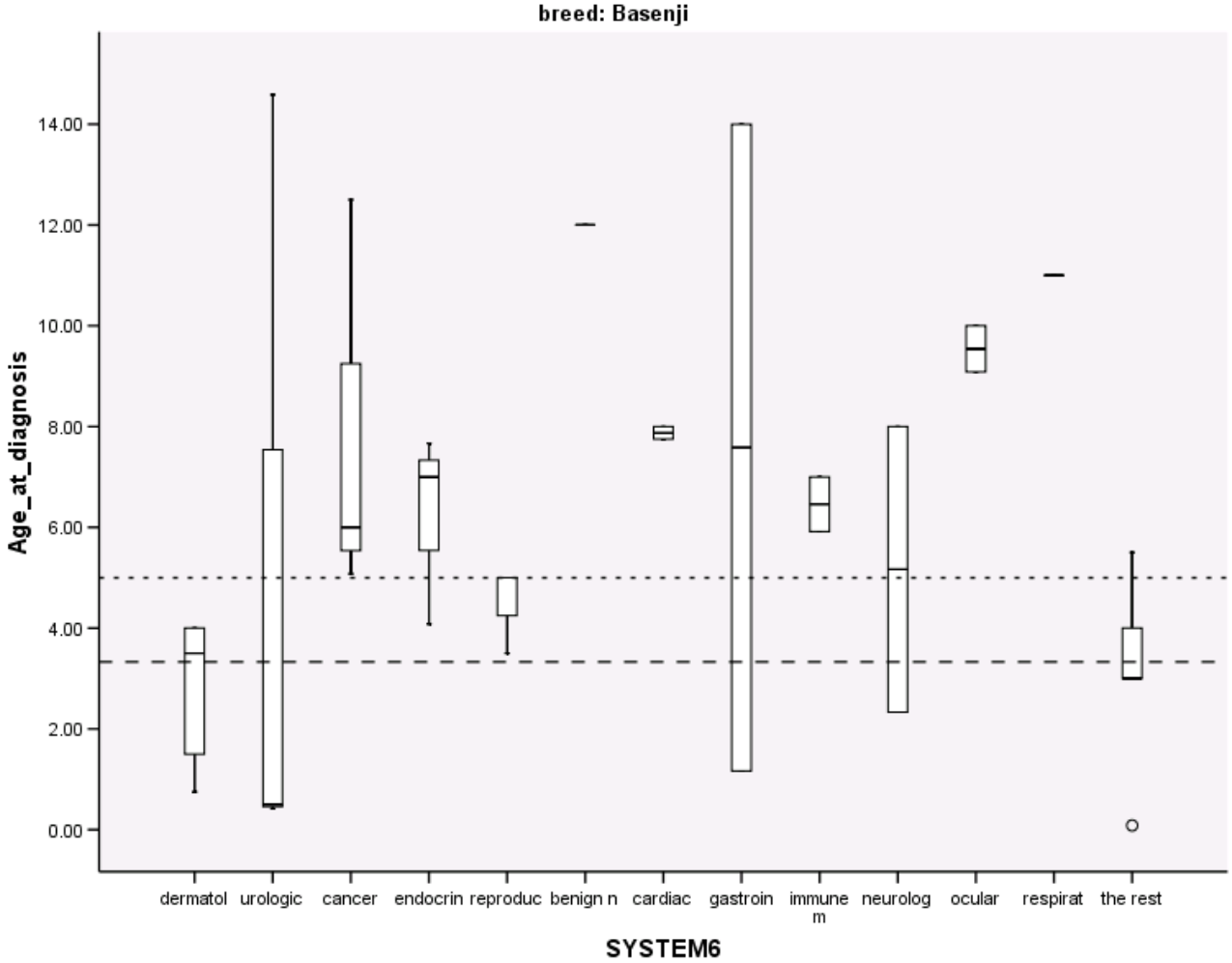


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Basenji breed (N=37 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Basenji breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Basenji breed.

		All conditions		Prevalence	
Disease condition		N	%	%	Most common specific conditions in descending order
1	Dermatologic	7	18.4	8.97	Dermatitis, pyoderma, hair loss, fading nose pigment, demodex
2	Urologic	4	10.5	5.13	Incontinence, cystitis (bladder infection)
3	Cancer	3	7.9	3.85	Type unspecified
4	Endocrine	3	7.9	3.85	Hypothyroidism
5	Reproductive	3	7.9	3.85	Pyometra, infertility
6	Benign neoplasia	2	5.3	2.56	Lipoma
7	Cardiac	2	5.3	2.56	Heart murmur
8	Gastrointestinal	2	5.3	2.56	Weight loss, regurgitation
9	Immune mediated	2	5.3	2.56	Autoimmune haemolytic anemia, atopy (inhalant allergy)
10	Musculoskeletal	2	5.3	2.56	Arthritis, hip dysplasia
11	Neurologic	2	5.3	2.56	Seizures
12	Ocular	2	5.3	2.56	Corneal ulcer
13	Unknown	2	5.3	2.56	Undiagnosed illness
14	Respiratory	1	2.6	1.28	Coughing
15	Other	1	2.6	1.28	Hernia unspecified
	Total	38	100.0	48.72	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for the Basset Fauve de Bretagne breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Basset Fauve de Bretagne breed

A total of 125 forms were sent out and 41 were returned, representing 84 live dogs. This breed had a 32.8 % response rate (41/125) and it represented 0.30% of all returns (41/13,741).

Mortality data

A total of 15 deaths were reported and this represents 0.09 % of all deaths reported in the survey (15/15,881). The median age at death for the Basset Fauve de Bretagne breed was 10 years and 5 months (min = 11 months, max = 13 years and 11 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Basset Fauve de Bretagne breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Basset Fauve de Bretagne breed.

	Cause of death	No. of deaths	% of deaths	Most common specific causes in descending order
1	Trauma	3	20.0	Road traffic accident
2	Cancer	2	13.3	Lung (type unspecified); oral (type unspecified)
3	Cardiac	2	13.3	Heart failure
4	Urologic	2	13.3	Chronic kidney failure
5	Behaviour	1	6.7	Unspecified
6	Neurologic	1	6.7	Spinal unspecified
7	Old age	1	6.7	Old age
8	Other	1	6.7	Uncodeable
9	Poisoning	1	6.7	
10	Sudden death	1	6.7	
	Total	15	100.0	

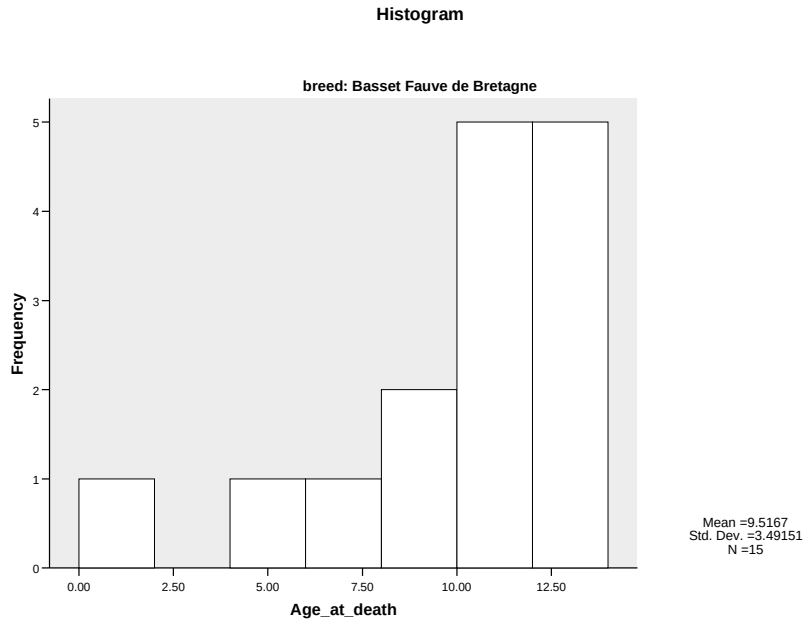


Figure 1. Histogram showing frequency (number of dogs) of age at death (in years) for the 15 Basset Fauve de Bretagne deaths with age at death reported.

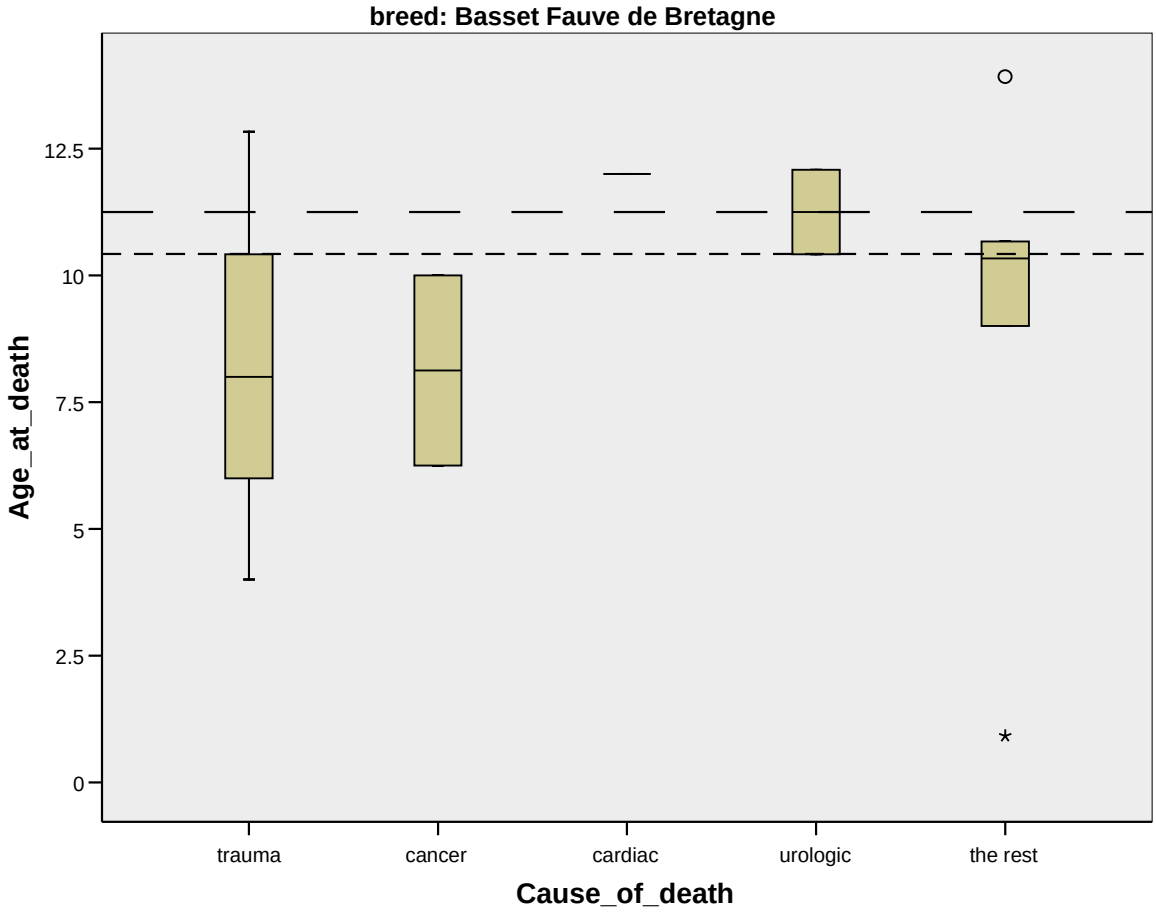


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the Basset Fauve de Bretagne breed (N=15). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the Basset Fauve de Bretagne breed. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 84 live dogs with a reported age was 4 years and 8 months (min=4 months, max=14 years and 1 month, Figure 3). Health information was reported for 84 live dogs of which 58 (69%) were healthy and 26 (31%) had at least one reported health condition, resulting in a total of 38 reported conditions with a median of 1 condition/dog (min=1, max=3).

The median current age of all healthy dogs with a reported age (N=58) was 3 years and 11 months (min=4 months, max=14 years and 1 month). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=26) was 5 years and 8 months (min=6 months, max=12 years and 6 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=37) was 3 years (min= 2 months, max= 10 years and 11 months, Figure 4). Table 3 shows the disease conditions for the Basset Fauve de Bretagne breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 84 the Basset Fauve de Bretagne breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	34	16	50 (60%)
Male	25	9	34 (40%)
Totals	59 (70%)	25 (30%)	84 (100%)

There was no association between gender and neuter status (P=0.5864).

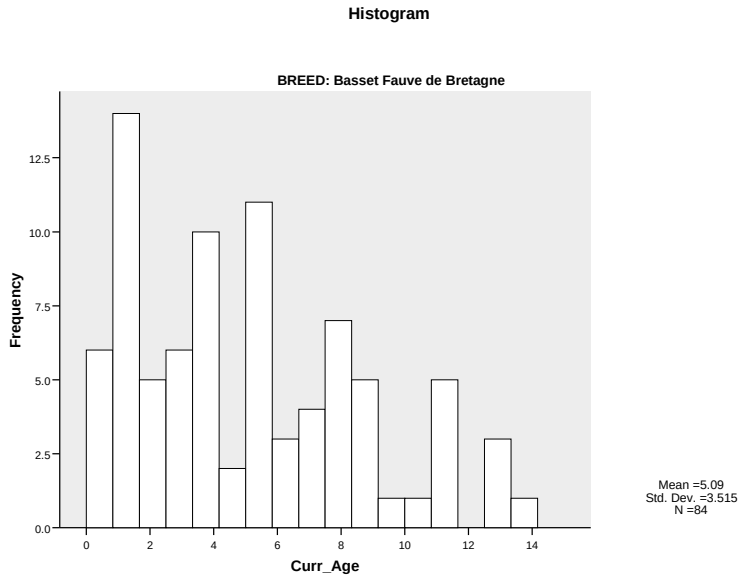


Figure 3. Histogram showing frequency of current age in years for the 84 live the Basset Fauve de Bretagne breed with age reported.

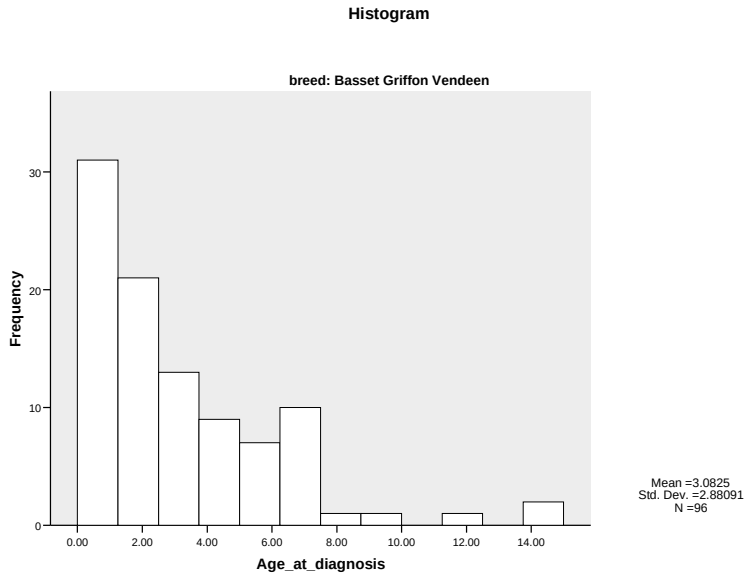


Figure 4. Histogram showing frequency of age at diagnosis for the 96 Basset Fauve de Bretagne breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

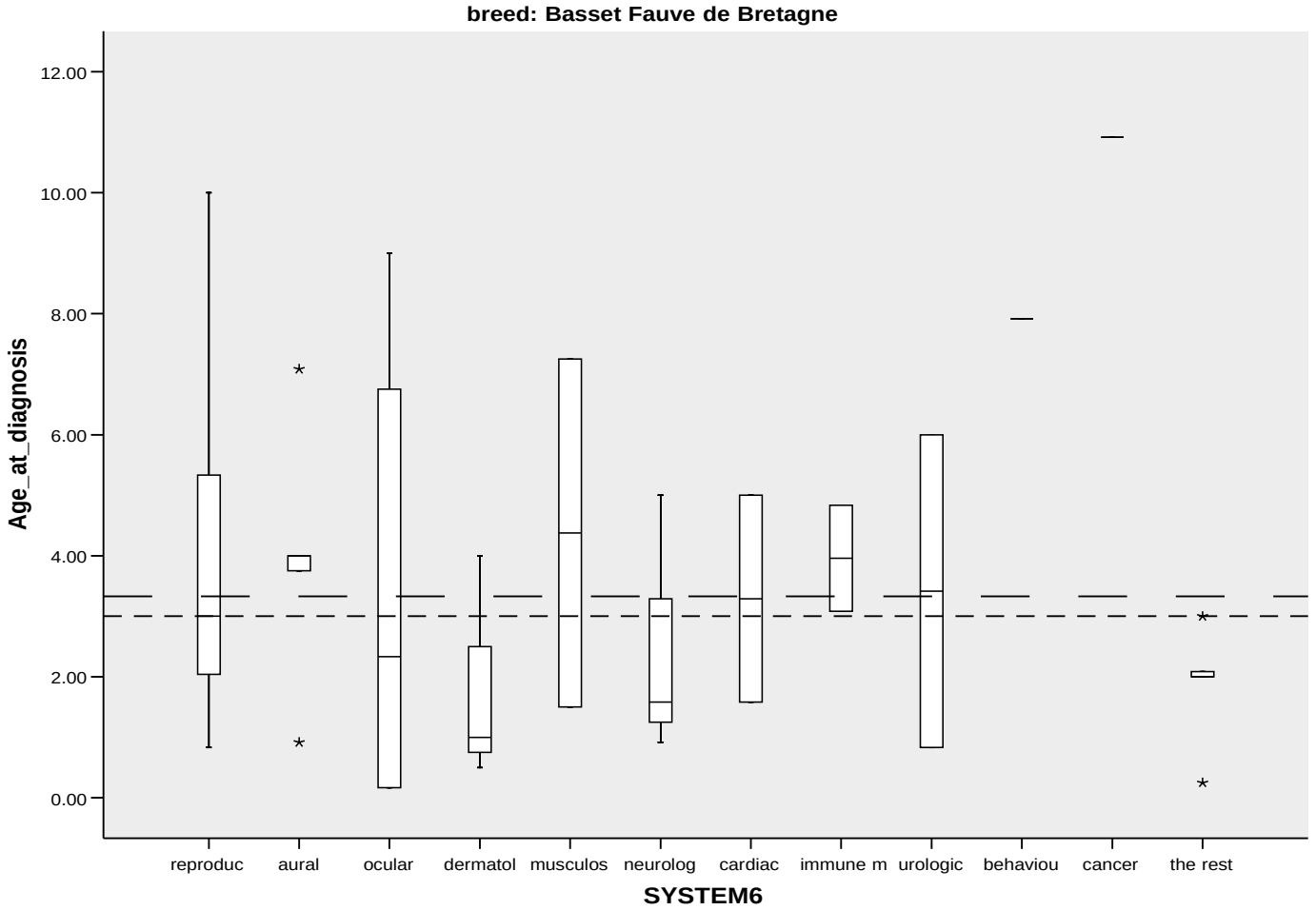


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Basset Fauve de Bretagne breed (N=37 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Basset Fauve de Bretagne breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Basset Fauve de Bretagne breed.

		All conditions		Prevalence	
Disease condition		N	%	%	Most common specific conditions in descending order
1	Reproductive	7	18.4	8.33	Pyometra, infertility, false pregnancy, cryptorchid, agalactia (milk failure)
2	Aural	5	13.2	5.95	Otitis media, otitis externa
3	Ocular	4	10.5	4.76	Corneal ulcer, cataract
4	Dermatologic	3	7.9	3.57	Dermatitis
5	Musculoskeletal	3	7.9	3.57	Bone malformation unspecified, arthritis
6	Neurologic	3	7.9	3.57	Seizures or fits or epilepsy idiopathic
7	Cardiac	2	5.3	2.38	Arrhythmia (heart rhythm disorder), heart murmur
8	Immune mediated	2	5.3	2.38	Dust mite allergy, gluten-sensitive enteropathy (allergy to wheat products)
9	Respiratory	2	5.3	2.38	Kennel cough
10	Urologic	2	5.3	2.38	Cystouroliths (bladder stones), cystitis (bladder infection)
11	Behaviour	1	2.6	1.19	Unspecified
12	Cancer	1	2.6	1.19	Type unspecified
13	Gastrointestinal	1	2.6	1.19	Pyloric stenosis
14	Trauma	1	2.6	1.19	Head or jaw
15	Unknown	1	2.6	1.19	Undiagnosed illness
	Total	38	100.0	45.24	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for the Basset Griffon Vendeen breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Basset Griffon Vendeen breed

A total of 306 forms were sent out and 135 were returned, representing 289 live dogs. This breed had a 44.1 % response rate (135/306) and it represented 0.98% of all returns (135/13,741).

Mortality data

A total of 76 deaths were reported and this represents 0.48 % of all deaths reported in the survey (76/15,881). The median age at death for the Basset Griffon Vendeen breed was 12 years and 1 month (min = 1 year and 3 months, max = 17 years and 4 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Basset Griffon Vendeen breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Basset Griffon Vendeen breed.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	25	32.9	Unspecified; liver (type unspecified)
2	Old age	18	23.7	Old age
3	Cardiac	5	6.6	Heart attack; heart failure
4	Behaviour	4	5.3	Aggression; unspecified
5	Neurologic	4	5.3	Epilepsy; seizures or fits
6	Urologic	4	5.3	Kidney failure, chronic or unspecified
7	Cerebral vascular	2	2.6	Stroke or cerebral vascular accident
8	Combinations	2	2.6	Kidney failure & pancreatitis; kidney failure & liver failure
9	Internal bleeding	2	2.6	
10	Senility	2	2.6	
11	Trauma	2	2.6	Road traffic accident; unspecified trauma or accident
12	Unknown	2	2.6	
13	Dermatologic	1	1.3	Chronic skin infections
14	Endocrine	1	1.3	Cushings or hyperadrenocorticism
15	Gastrointestinal	1	1.3	Haemorrhagic gastroenteritis
16	Ocular	1	1.3	Glaucoma
	Total	76	100.0	

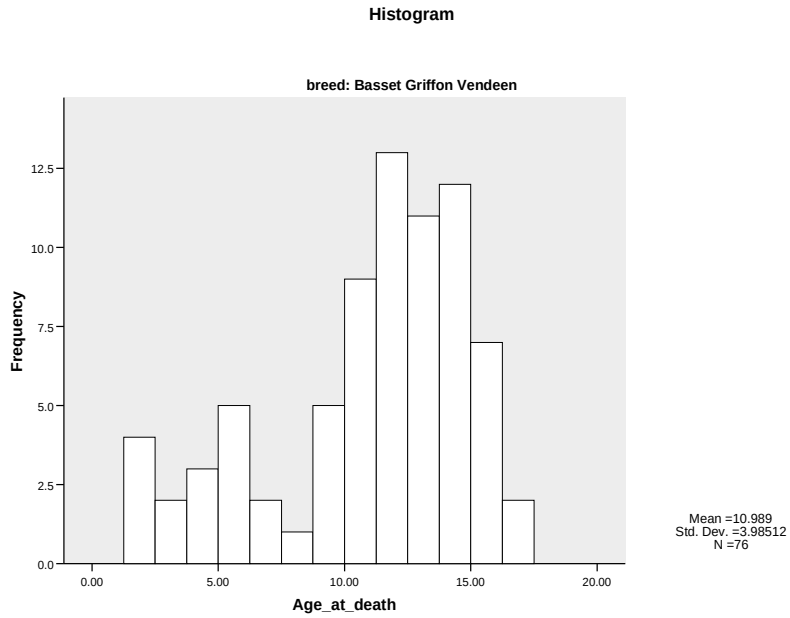


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 76 Basset Griffon Vendeen deaths with age at death reported.

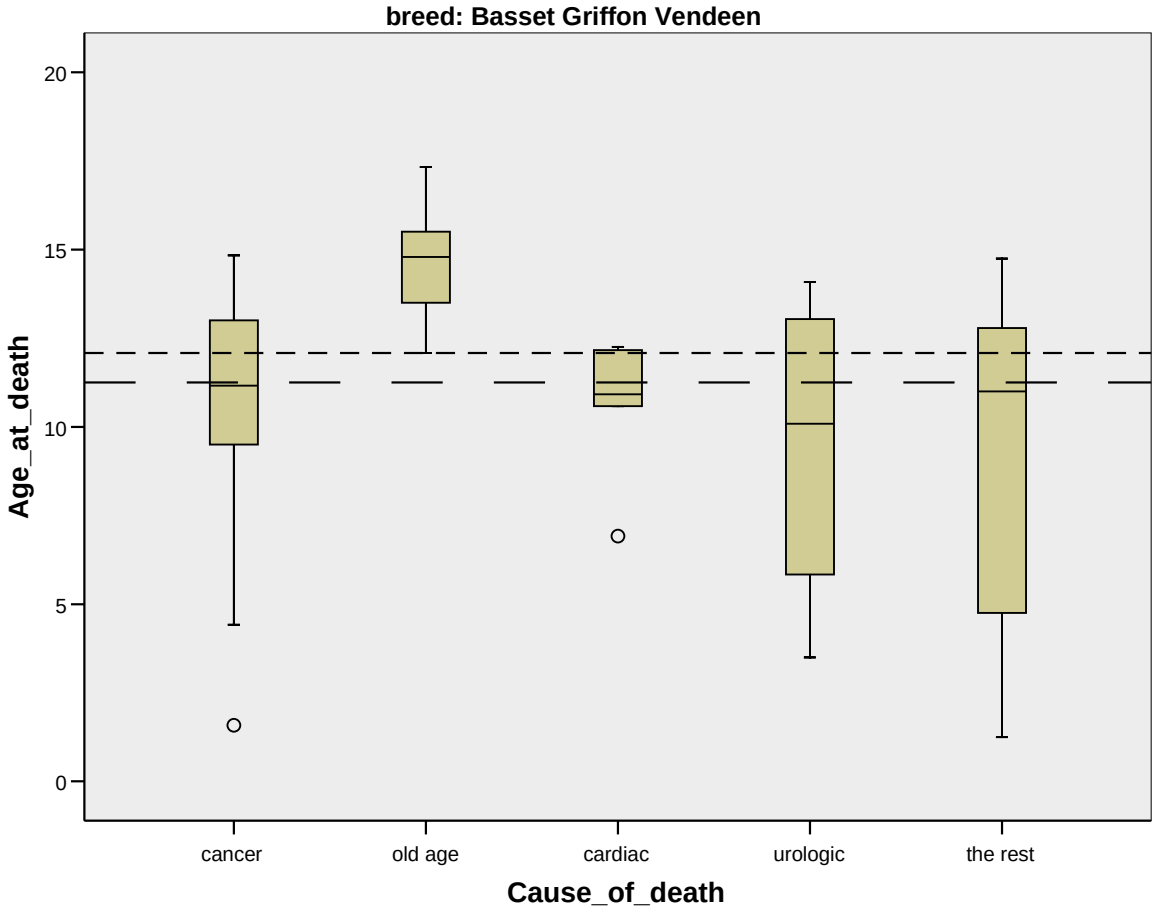


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the Basset Griffon Vendeen breed (N=76). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the Basset Griffon Vendeen breed. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 289 live dogs with a reported age was 4 years (min=2 months, max=16 years and 3 months, Figure 3). Health information was reported for 289 live dogs of which 191 (66%) were healthy and 98 (34%) had at least one reported health condition, resulting in a total of 146 reported conditions with a median of 1 condition/dog (min=1, max=4).

The median current age of all healthy dogs with a reported age (N=191) was 3 years and 4 months (min=2 months, max=15 years and 5 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=98) was 5 years and 1 month (min=7 months, max=16 years and 3 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=141) was 2 years and 6 months (min= 2 months, max= 14 years and 6 months, Figure 4). Table 3 shows the disease conditions for the Basset Griffon Vendeen breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 287 the Basset Griffon Vendeen breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	123	54	177 (62%)
Male	79	31	110 (38%)
Totals	202 (70%)	85 (30%)	287 (100%)

There was no association between gender and neuter status (P=0.6747).

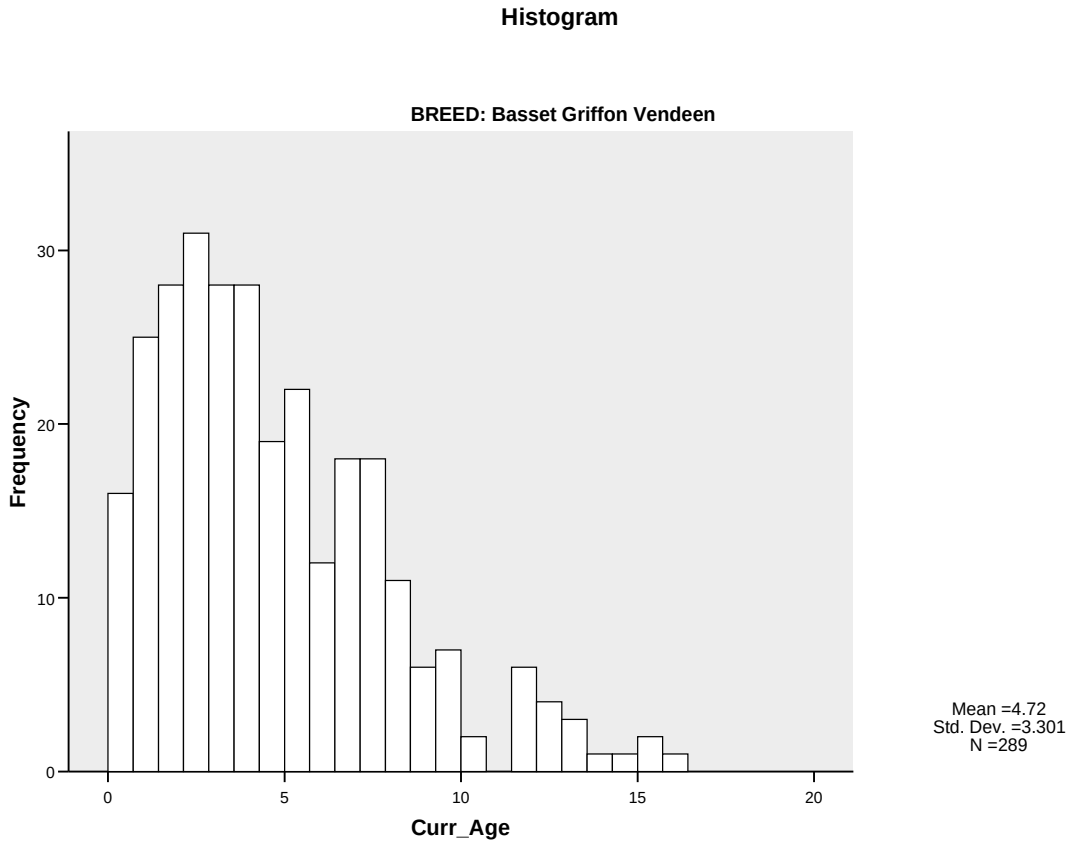


Figure 3. Histogram showing frequency of current age in years for the 289 live Basset Griffon Vendeens with age reported.

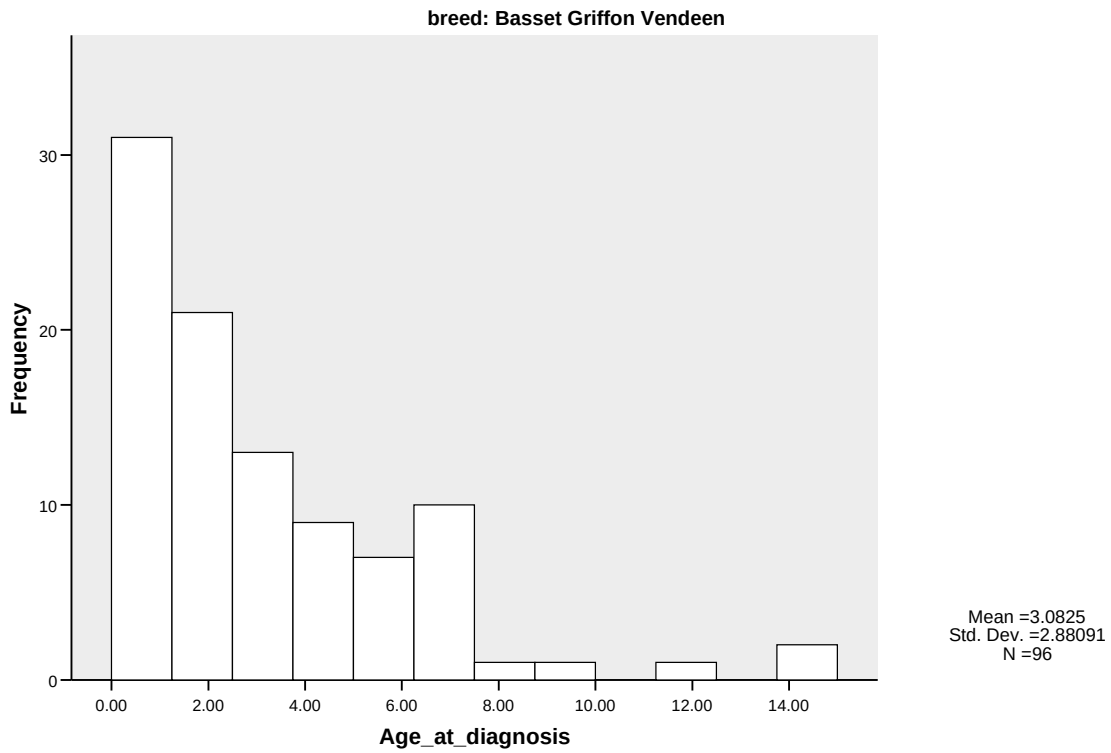


Figure 4. Histogram showing frequency of age at diagnosis for the 96 Basset Griffon Vendeen breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

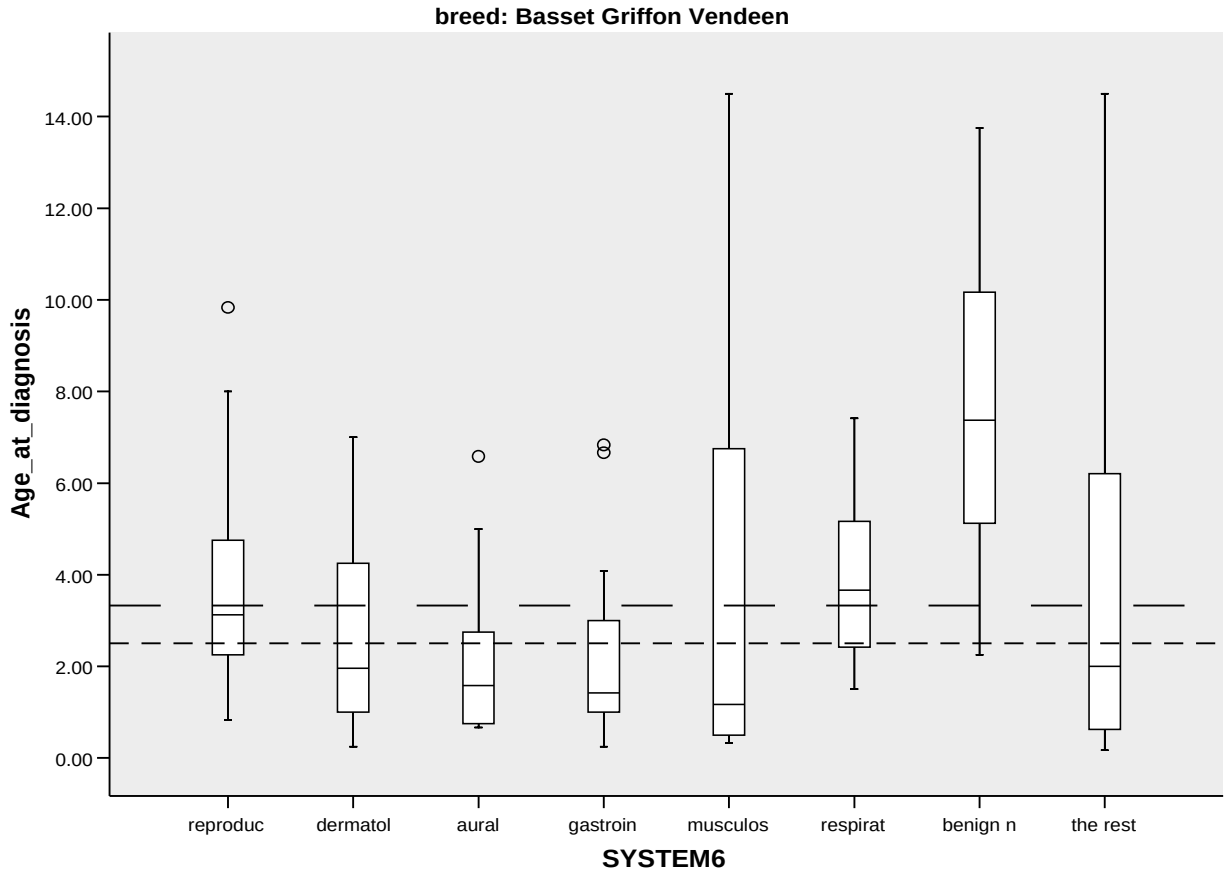


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Basset Griffon Vendeen breed (N=98 dogs with 141 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Basset Griffon Vendeen breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Basset Griffon Vendeen breed.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Reproductive	21	14.4	False pregnancy; pyometra; infertility; irregular heat cycles; prostatomegaly
2	Dermatologic	20	13.7	Dermatitis; mites (demodex>sarcoptes); pyotraumatic dermatitis
3	Aural	15	10.3	Otitis externa; excessive ear wax; ear mites
4	Gastrointestinal	13	8.9	Vomiting; diarrhoea; colitis; IBD; infection (unspecified); campylobacter; pancreatitis
5	Musculoskeletal	11	7.5	Arthritis; prognathism; CHD; OCD; stiff joints
6	Respiratory	9	6.2	Kennel cough; bronchitis
7	Benign neoplasia	8	5.5	Lipoma; type unspecified; adenoma; histiocytoma
8	Urologic	7	4.8	Cystitis; cystouroliths (struvite); ectopic ureter; haematuria; incontinence
9	Endocrine	6	4.1	Hypothyroidism
10	Ocular	6	4.1	Conjunctivitis; corneal dermoid; KCS; entropion; PPM; corneal ulcer
11	Unknown	5	3.4	Undiagnosed illness
12	Cardiac	4	2.7	Heart murmur unspecified; cardiomegaly; ventricular septal defect
13	Dental	4	2.7	Retained puppy teeth; dental deformity (unspecified); dental disease
14	Neurologic	4	2.7	Seizures or fits or idiopathic epilepsy; IVDD; Wobbler syndrome
15	Behaviour	3	2.1	Unspecified
16	Anal gland	2	1.4	Anal sacculitis
17	Cancer	2	1.4	Squamous cell carcinoma (SCC) (nasal); unspecified (stomach)
18	Haematopoietic	2	1.4	Haemolytic anaemia; unspecified anaemia
19	Immune mediated	2	1.4	Atopy; discoid lupus erythematosis (DLE)
20	Trauma	1	0.7	Unspecified
21	Uncode and other	1	0.7	Inguinal hernia
	Total	146	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for Basset Hounds

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Basset Hounds

A total of 500 forms were sent out and 88 were returned, representing 226 live dogs. This breed had a 17.6 % response rate (88/500) and it represented 0.64% of all returns (88/13,741).

Mortality data

A total of 142 deaths were reported and this represents 0.89 % of all deaths reported in the survey (142/15,881). The median age at death for Basset Hounds was 11 years and 4 months (min = 3 months, max = 16 years and 8 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Basset Hounds. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Basset Hounds.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	44	31.0	Unspecified
2	Old age	19	13.4	Old age unspecified; old age euthanased
3	Gastrointestinal	16	11.3	Gastric dilatation/volvulus (GDV)
4	Cardiac	11	7.7	Heart failure; heart attack
5	Neurologic	8	5.6	Seizures; spinal or back or vertebral disease unspecified
6	Urologic	8	5.6	Chronic kidney failure
7	Cerebral vascular	7	4.9	Stroke or cerebral vascular accident
8	Combinations	5	3.5	
9	Other	5	3.5	Uncodeable
10	Trauma	5	3.5	Road traffic accident
11	Dermatologic	2	1.4	Skin disease unspecified
12	Hepatic	2	1.4	Liver failure chronic or unspecified
13	Musculoskeletal	2	1.4	Arthritis; hip dysplasia and spondylitis
14	Reproductive	2	1.4	Prostatomegaly; pyometra
15	Respiratory	2	1.4	Pneumonia; respiratory failure
16	Senility	2	1.4	
17	Ocular	1	0.7	Glaucoma
18	Perioperative	1	0.7	
	Total	142	100.0	

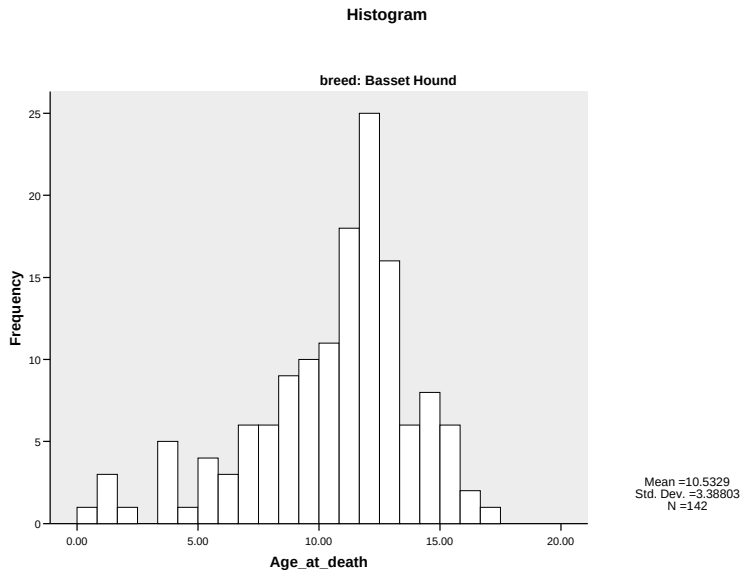


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 142 Basset Hound deaths with age at death reported.

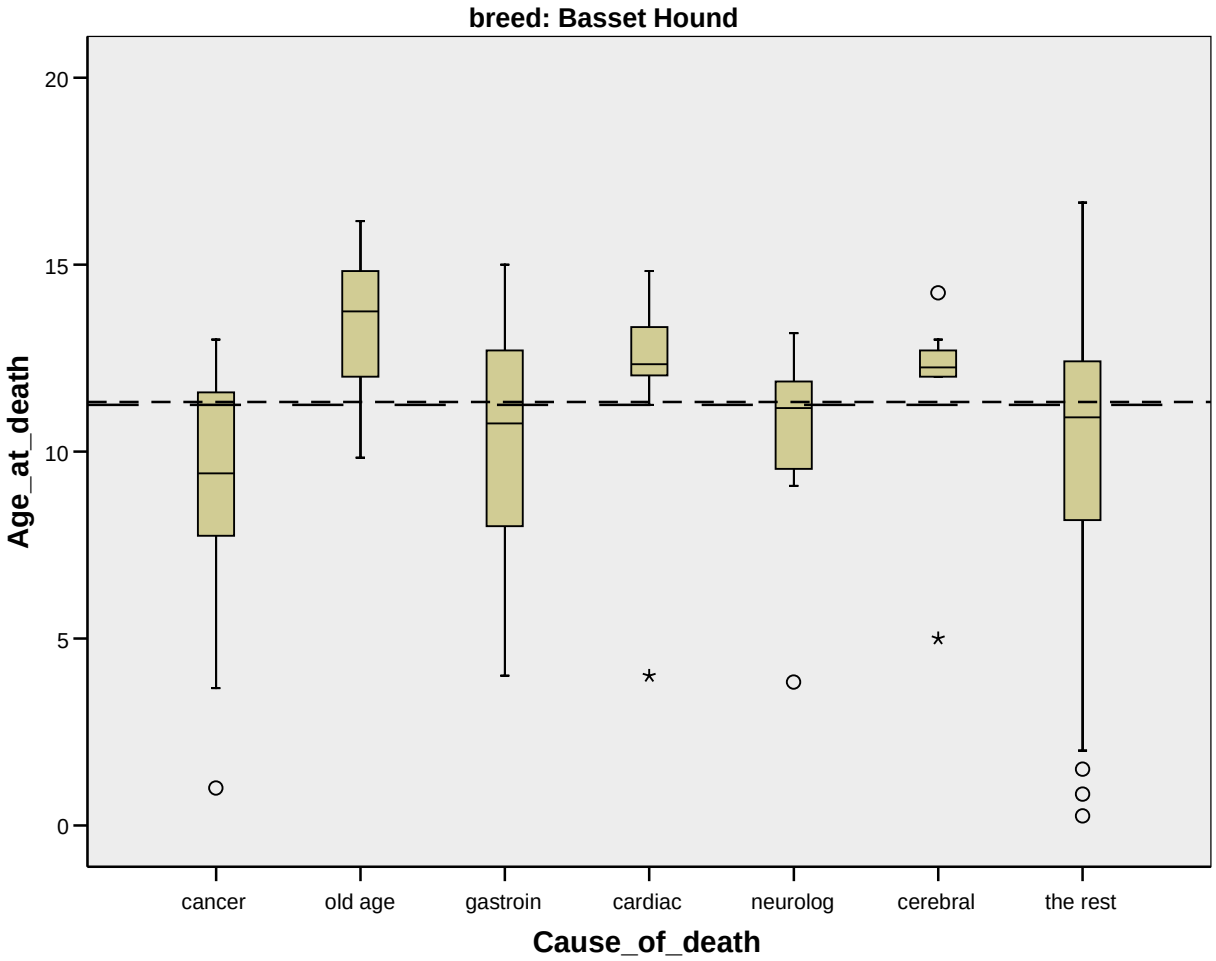


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Basset Hounds (N=142). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Basset Hounds. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 226 live dogs with a reported age was 6 years and 3 months (min=3 months, max=15 years and 3 months, Figure 3). Health information was reported for 226 live dogs of which 109 (48%) were healthy and 117 (52%) had at least one reported health condition, resulting in a total of 251 reported conditions with a median of 2 conditions/dog (min=1, max=9).

The median current age of all healthy dogs with a reported age (N=109) was 5 years (min=3 months, max=13 years and 6 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=117) was 7 years and 4 months (min=10 months, max=15 years and 3 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=236) was 3 years and 8 months (min= 2 months, max= 15 years, Figure 4). Table 3 shows the disease conditions for Basset Hounds. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 222 Basset Hounds with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	58	72	130 (59%)
Male	59	33	92 (41%)
Totals	117 (53%)	105 (47%)	222 (100%)

Significantly more females were neutered (P=0.0041).

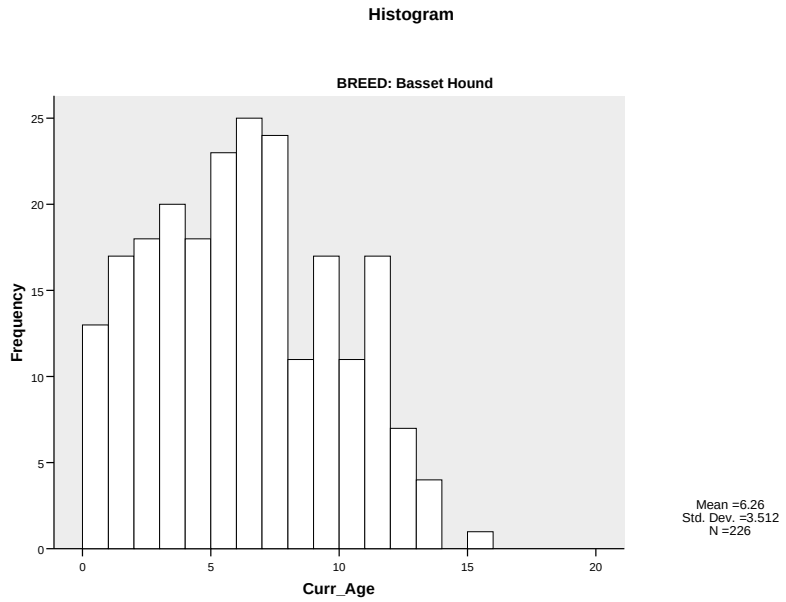


Figure 3. Histogram showing frequency of current age in years for the 226 live Basset Hounds with age reported.

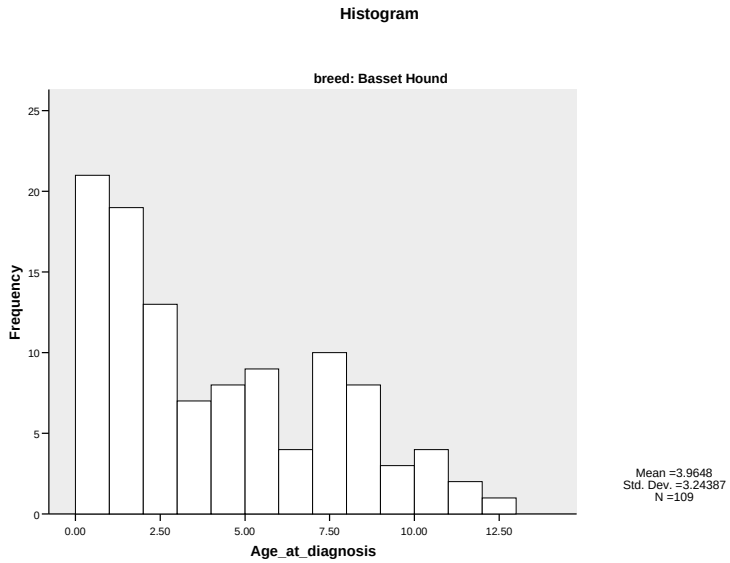


Figure 4. Histogram showing frequency of age at diagnosis for the 109 Basset Hounds with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

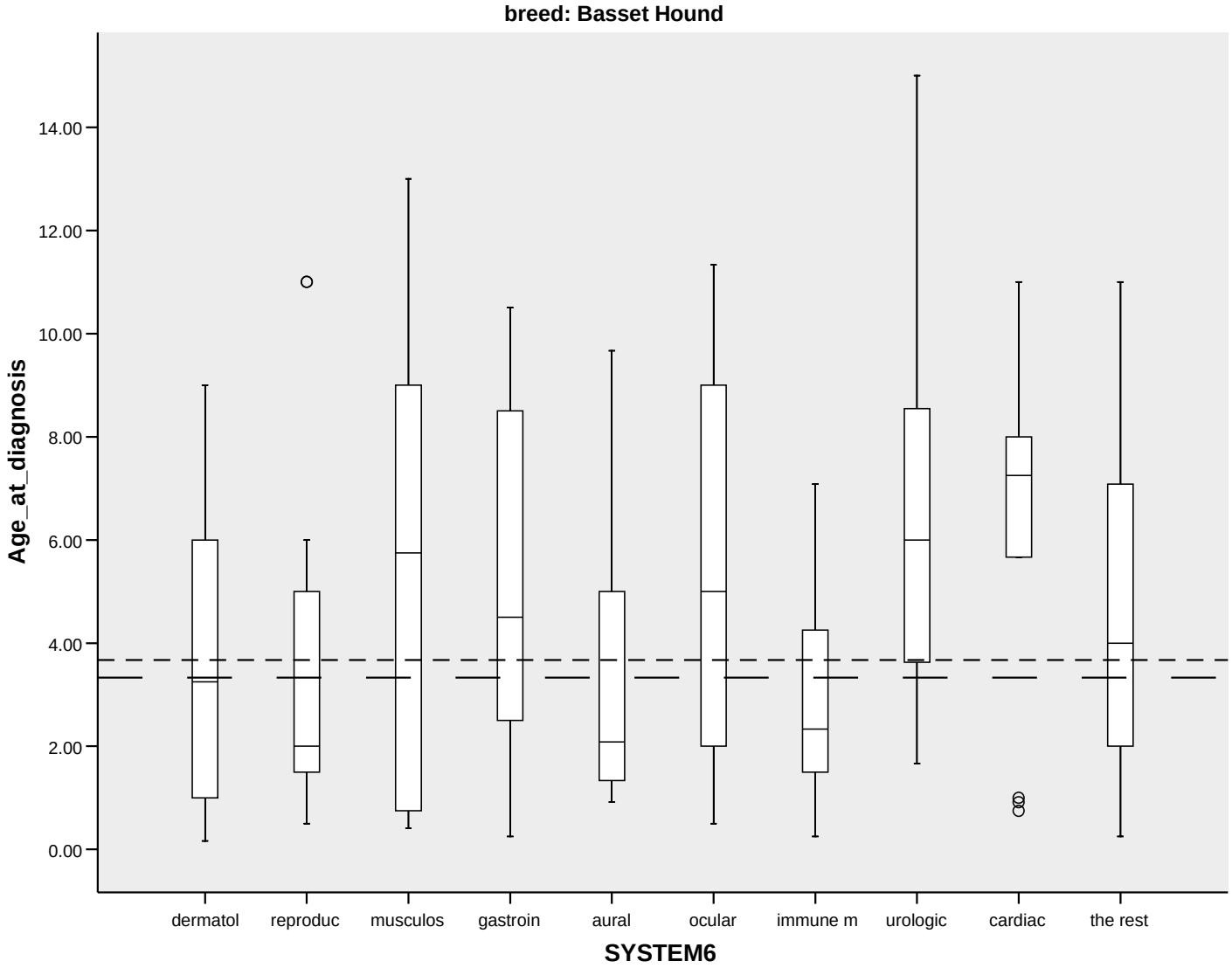


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Basset Hounds (N=117 dogs with 236 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Basset Hounds. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Basset Hounds.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Dermatologic	45	17.9	Dermatitis; fungal skin infection; sebaceous cyst; recurrent pyoderma
2	Reproductive	34	13.5	False pregnancy; pyometra; prostatomegaly; dystochia (physical blockage>uterine inertia)
3	Musculoskeletal	28	11.2	Arthritis; lameness (unspecified>forelimb); CLR; panosteitis; prognathism
4	Gastrointestinal	21	8.4	GDV; colitis; foreign body obstruction; IBD; pancreatitis; vomiting
5	Aural	18	7.2	Otitis externa; aural haematoma; excessive ear wax
6	Ocular	18	7.2	Cataracts; glaucoma; cherry eye; entropion; lens luxation
7	Immune mediated	16	6.4	Food allergy; gluten-sensitive enteropathy; atopy; dust mites; DLE; flea allergy
8	Cardiac	13	5.2	Heart murmur
9	Urologic	10	4.0	Cystitis; cystouroliths (mixed=unspecified=struvite); incontinence
10	Neurologic	8	3.2	Seizures or fits or idiopathic epilepsy
11	Unknown	7	2.8	Undiagnosed illness
12	Endocrine	6	2.4	Hypothyroidism; Addisons disease; diabetes insipidus; diabetes mellitus
13	Respiratory	6	2.4	Kennel cough; rhinitis; long soft palate; tracheal collapse
14	Benign neoplasia	5	2.0	Lipoma
15	Cancer	5	2.0	Type unspecified
16	Dental	4	1.6	Retained puppy teeth; dental disease
17	Behaviour	3	1.2	Aggression; unspecified
18	Trauma	2	0.8	Musculoskeletal; neurologic
19	Anal gland	1	0.4	Anal sacculitis
20	Hepatic	1	0.4	Hepatitis
	Total	251	100.0	

DLE=discoid lupus erythematosis

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for Beagles

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Beagles

A total of 585 forms were sent out and 177 were returned, representing 507 live dogs. This breed had a 30.3 % response rate (177/585) and it represented 1.29% of all returns (177/13,741).

Mortality data

A total of 241 deaths were reported and this represents 1.52 % of all deaths reported in the survey (241/15,881). The median age at death for Beagles was 12 years and 8 months (min = 1 year and 2 months, max = 17 years and 9 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Beagles. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Beagles.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	79	32.8	Liver (type unspecified); mammary (type unspecified)
2	Old age	38	15.8	Old age unspecified; old age died or natural causes
3	Cardiac	30	12.4	Heart failure; heart attack; heart defect unspecified
4	Cerebral vascular	14	5.8	Stroke or cerebral vascular accident or infarct
5	Neurologic	14	5.8	Seizures
6	Combinations	13	5.4	Kidney failure and liver failure; multiple organ failure
7	Urologic	8	3.3	Chronic kidney failure
8	Endocrine	6	2.5	Cushings or hyperadrenocorticism; hypothyroidism
9	Unknown	6	2.5	
10	Immune mediated	5	2.1	Unspecified; AIHA; rheumatoid arthritis
11	Other	5	2.1	Other u/s; perforated spleen; purulent lymphadenitis
12	Trauma	5	2.1	Road traffic accident
13	Respiratory	4	1.7	Choked; laryngeal paralysis; respiratory failure
14	Behaviour	3	1.2	Aggression
15	Gastrointestinal	3	1.2	Gastroenteritis; gastroenteritis and cancer; pancreatitis
16	Hepatic	2	0.8	Liver failure chronic or unspecified
17	Perioperative	2	0.8	Perioperative or anaesthetic related; post-operative
18	Internal bleeding	1	0.4	
19	Ocular	1	0.4	Blind or blindness
20	Poisoning	1	0.4	
21	Senility	1	0.4	
	Total	241	100.0	

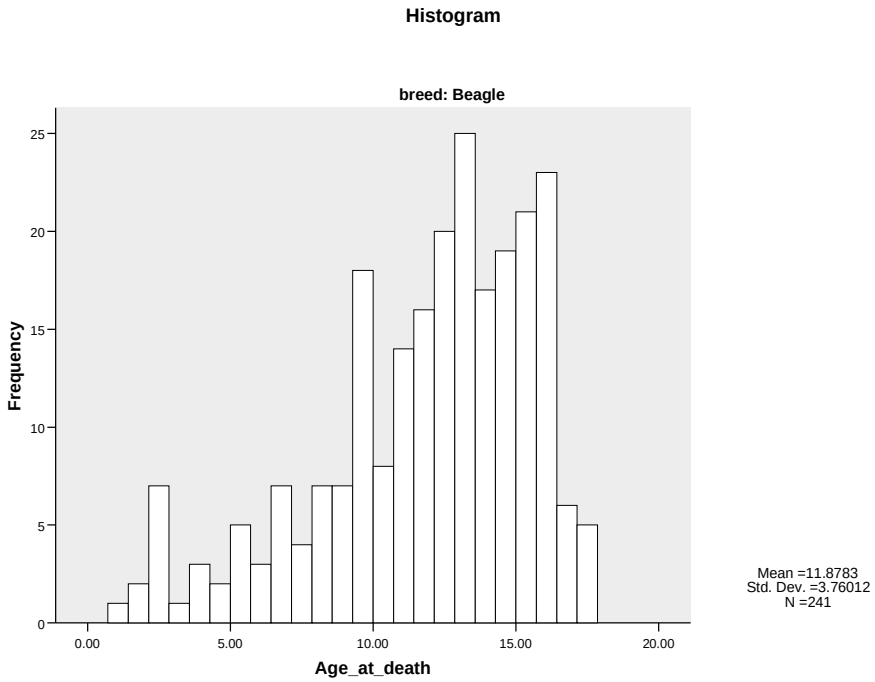


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 241 Beagle deaths with age at death reported.

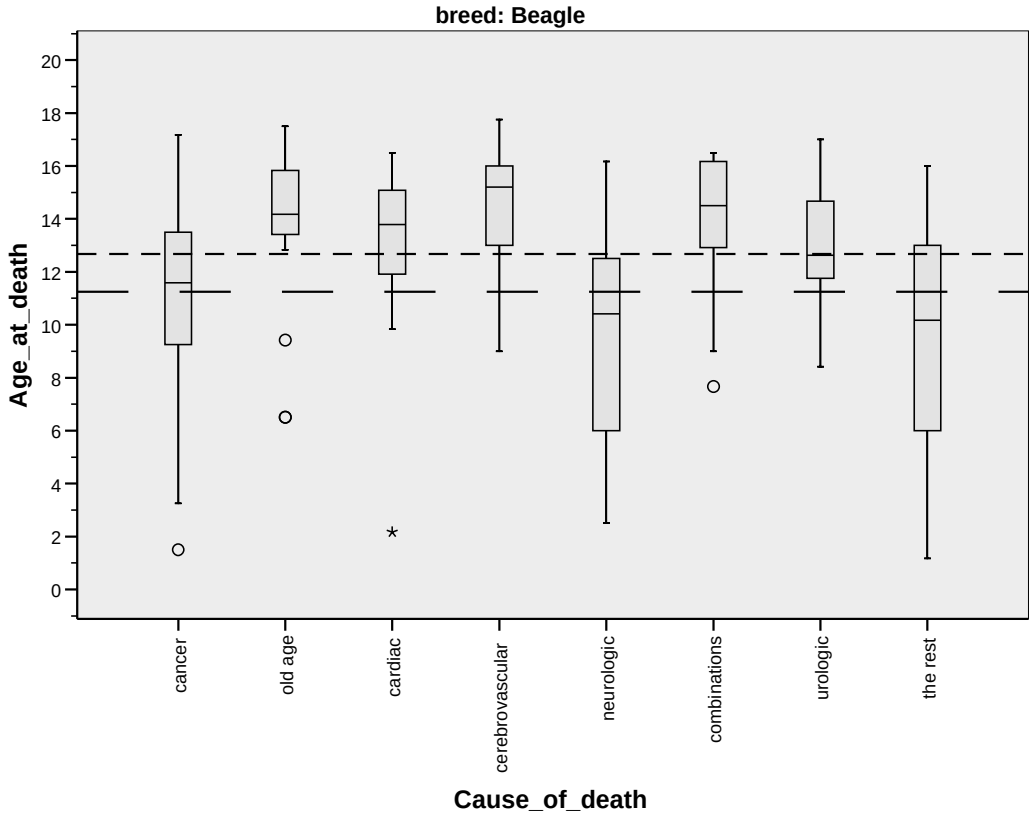


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Beagles (N=241). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Beagles. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 507 live dogs with a reported age was 4 years and 7 months (min=2 months, max=16 years and 11 months, Figure 3). Health information was reported for 507 live dogs of which 324 (64%) were healthy and 183 (36%) had at least one reported health condition, resulting in a total of 279 reported conditions with a median of 1 condition/dog (min=1, max=6).

The median current age of all healthy dogs with a reported age (N=324) was 3 years and 8 months (min=2 months, max=15 years). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=183) was 6 years and 9 months (min=4 months, max=16 years and 11 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=271) was 3 years and 3 months (min= 2 months, max= 16 years and 1 month, Figure 4). Table 3 shows the disease conditions for Beagles. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 505 Beagles with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	212	117	329 (65%)
Male	149	27	176 (35%)
Totals	361 (71%)	144 (29%)	505 (100%)

Significantly more females were neutered (P=0.0000).

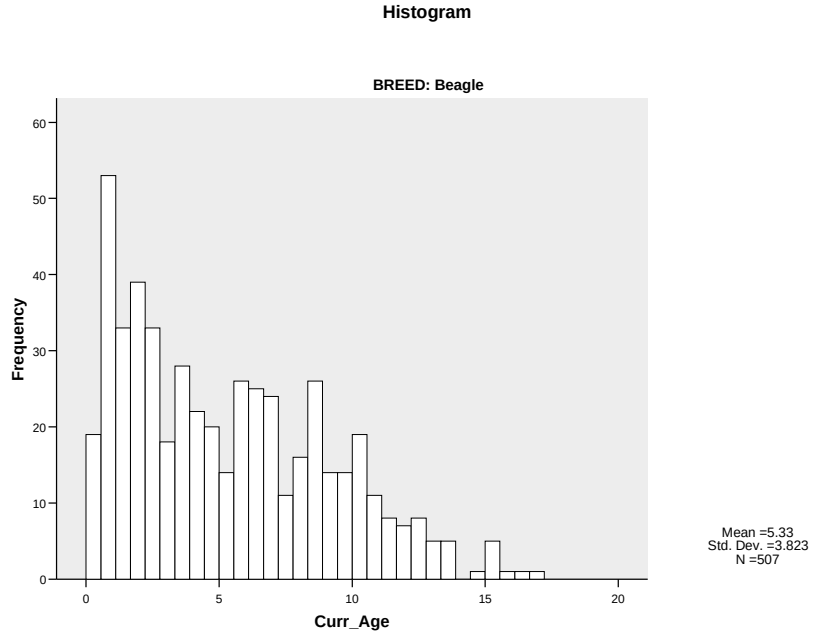


Figure 3. Histogram showing frequency of current age in years for the 507 live Beagles with age reported.

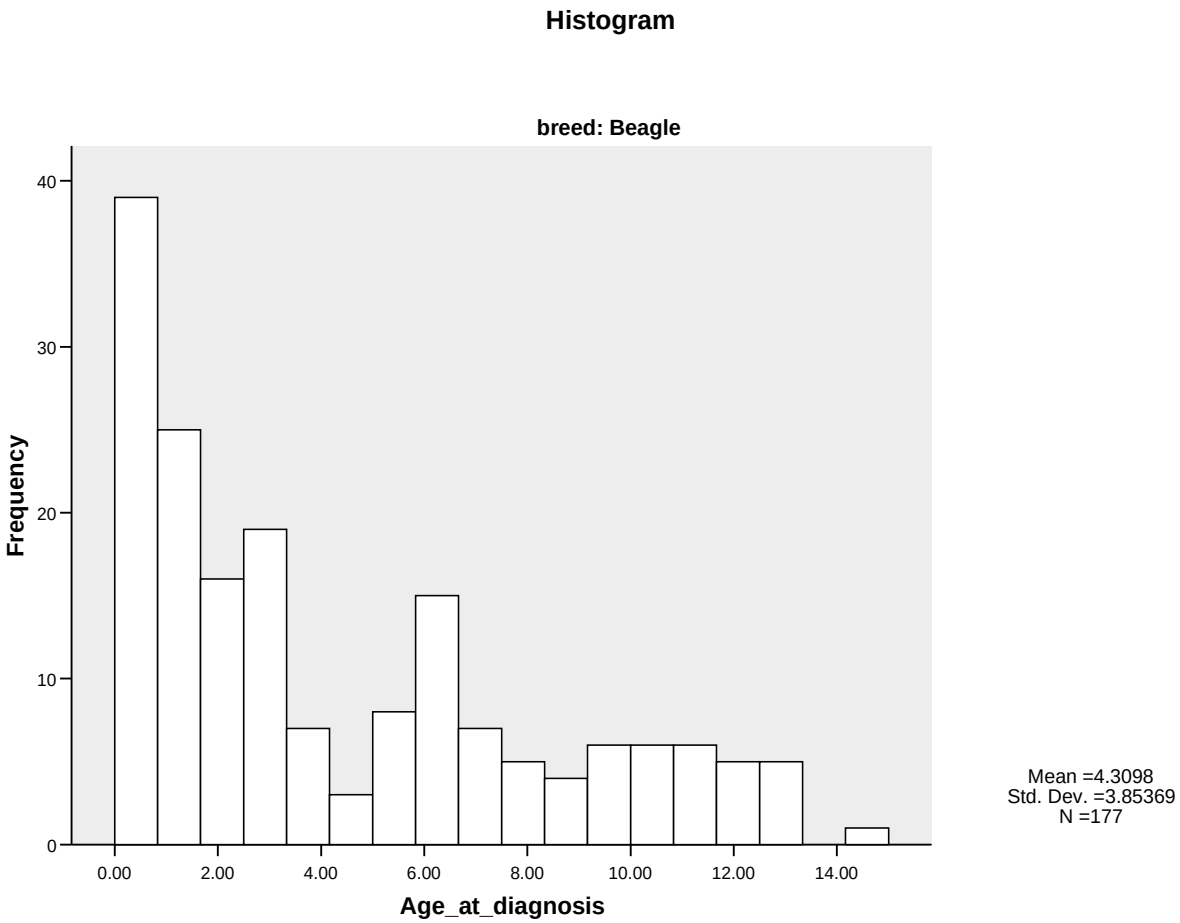


Figure 4. Histogram showing frequency of age at diagnosis for the 177 Beagles with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

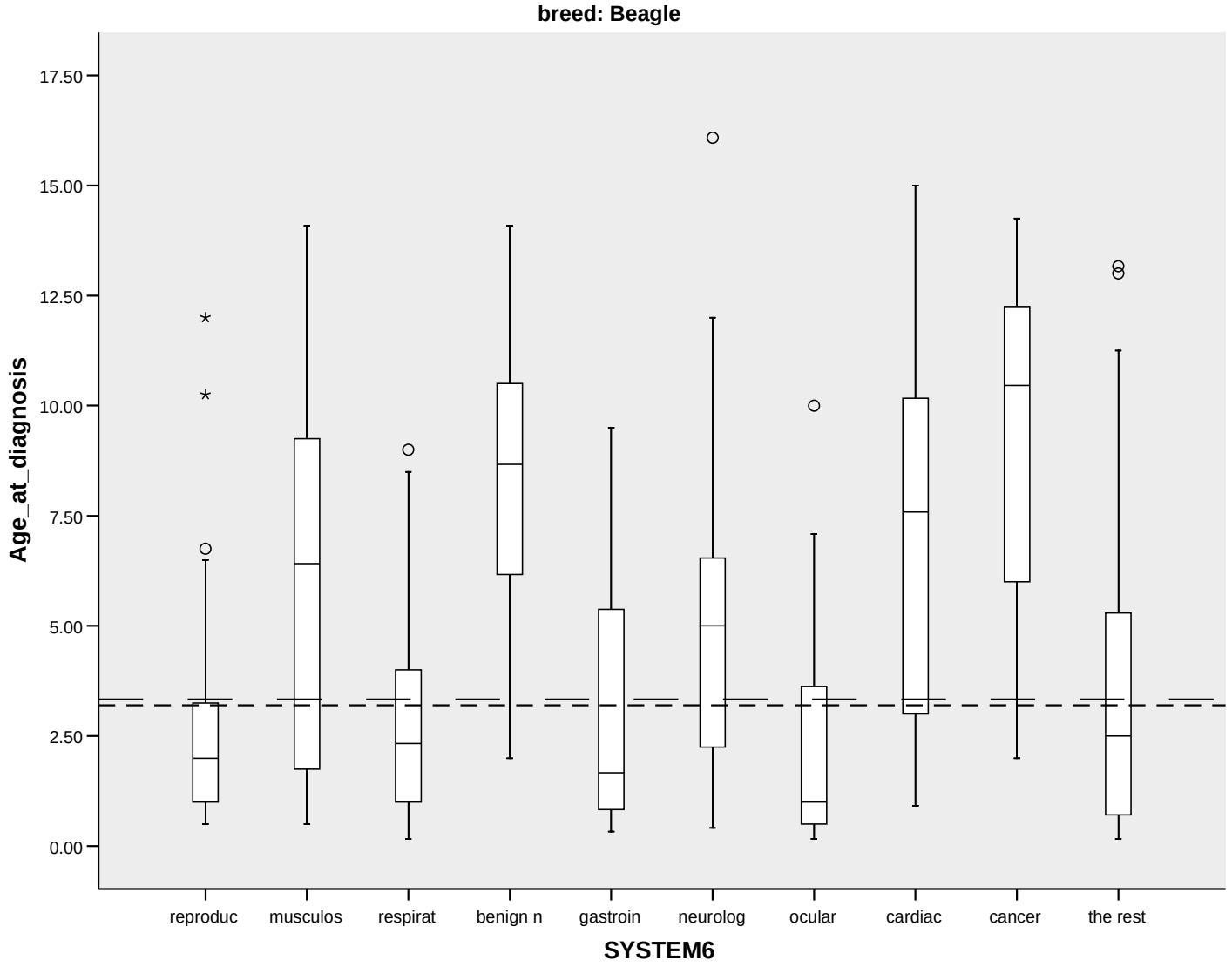


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Beagles (N=183 dogs with 271 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Beagles. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Beagles.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Reproductive	40	14.3	False pregnancy; dystochia (uterine inertia>stuck puppy); infertility; prostatomegaly; pyometra
2	Musculoskeletal	28	10.0	CHD; arthritis; CLR; stiff joints
3	Respiratory	25	9.0	Kennel cough; noisy breathing; chronic coughing
4	Benign neoplasia	24	8.6	Lipoma; unspecified
5	Gastrointestinal	24	8.6	Colitis; diarrhoea; vomiting; campylobacter
6	Neurologic	24	8.6	Idiopathic epilepsy; meningitis; IVDD
7	Ocular	23	8.2	Epiphora; blocked tear duct; cataracts; cherry eye; red eye
8	Cardiac	18	6.5	Heart murmur (unspecified>grade 1> grade 2=grade 4); CHF; slow heart rate
9	Cancer	14	5.0	Type unspecified; MCT
10	Immune mediated	11	3.9	Atopy; food allergy; gluten-sensitive enteropathy; unspecified
11	Dental	8	2.9	Retained puppy teeth; dental disease
12	Dermatologic	8	2.9	Dermatitis; mites (cheyletiella=demodex=unspecified)
13	Urologic	8	2.9	Cystitis; incontinence
14	Unknown	5	1.8	Undiagnosed illness
15	Anal gland	4	1.4	Anal sacculitis
16	Aural	4	1.4	Excessive ear wax; otitis externa; ear mites
17	Endocrine	4	1.4	Cushing's disease; diabetes mellitus; hypothyroidism; weight gain (unspecified)
18	Uncode and other	4	1.4	Pyrexia; lifelessness
19	Trauma	2	0.7	Unspecified; musculoskeletal
20	Hepatic	1	0.4	Acute liver failure
	Total	279	100.0	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for Bearded Collies

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Bearded Collies

A total of 729 forms were sent out and 239 were returned, representing 563 live dogs. This breed had a 32.8 % response rate (239/729) and it represented 1.74% of all returns (239/13,741).

Mortality data

A total of 278 deaths were reported and this represents 1.75 % of all deaths reported in the survey (278/15,881). The median age at death for Bearded Collies was 13 years and 6 months (min = 4 months, max = 19 years and 6 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Bearded Collies. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Bearded Collies.

Cause of death		N	%	Most common specific causes in descending order
1	Old age	72	25.9	Old age
2	Cancer	54	19.4	Unspecified; brain tumour; liver (type unspecified)
3	Cerebral vascular	26	9.4	Stroke or cerebral vascular accident (CVA) or infarct
4	Urologic	22	7.9	Chronic kidney failure
5	Cardiac	16	5.8	Heart failure; heart attack
6	Combinations	16	5.8	Cardiomyopathy & arthritis; kidney failure & liver failure
7	Hepatic	9	3.2	Liver failure chronic or unspecified
8	Neurologic	9	3.2	Seizures
9	Other	8	2.9	Uncodeable
10	Trauma	8	2.9	Road traffic accident or RTA; unspecified trauma
11	Behaviour	6	2.2	Aggression
12	Immune mediated	6	2.2	Unspec.; AIHA; rheumatoid arthritis; thrombocytopaenia
13	Gastrointestinal	5	1.8	
14	Endocrine	3	1.1	Addison's disease or hypoadrenocorticism
15	Musculoskeletal	3	1.1	Arthritis; atrophic myositis
16	Unknown	3	1.1	
17	Dermatologic	2	0.7	Anal furunculosis; unspecified
18	Infection	2	0.7	Viral infection; deep seated infection of a wound
19	Reproductive	2	0.7	Pyometra; vaginal polyp, major haemorrhage
20	Collapse	1	0.4	
21	Perioperative	1	0.4	Perioperative or anaesthetic related
22	Pining	1	0.4	
23	Poisoning	1	0.4	
24	Respiratory	1	0.4	Pneumonia
25	Senility	1	0.4	
	Total	278	100.0	

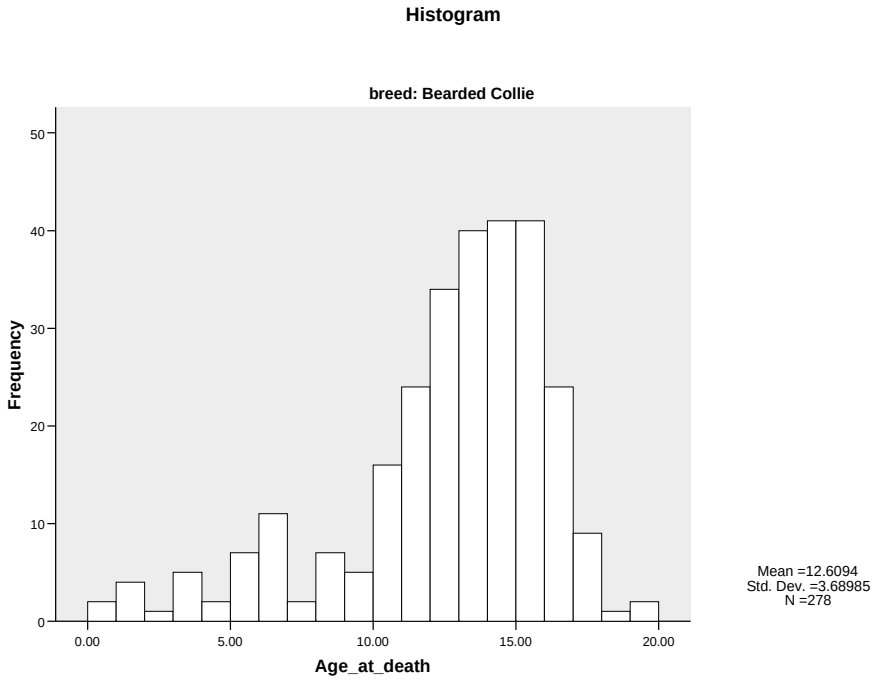


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 278 Bearded Collie deaths with age at death reported.

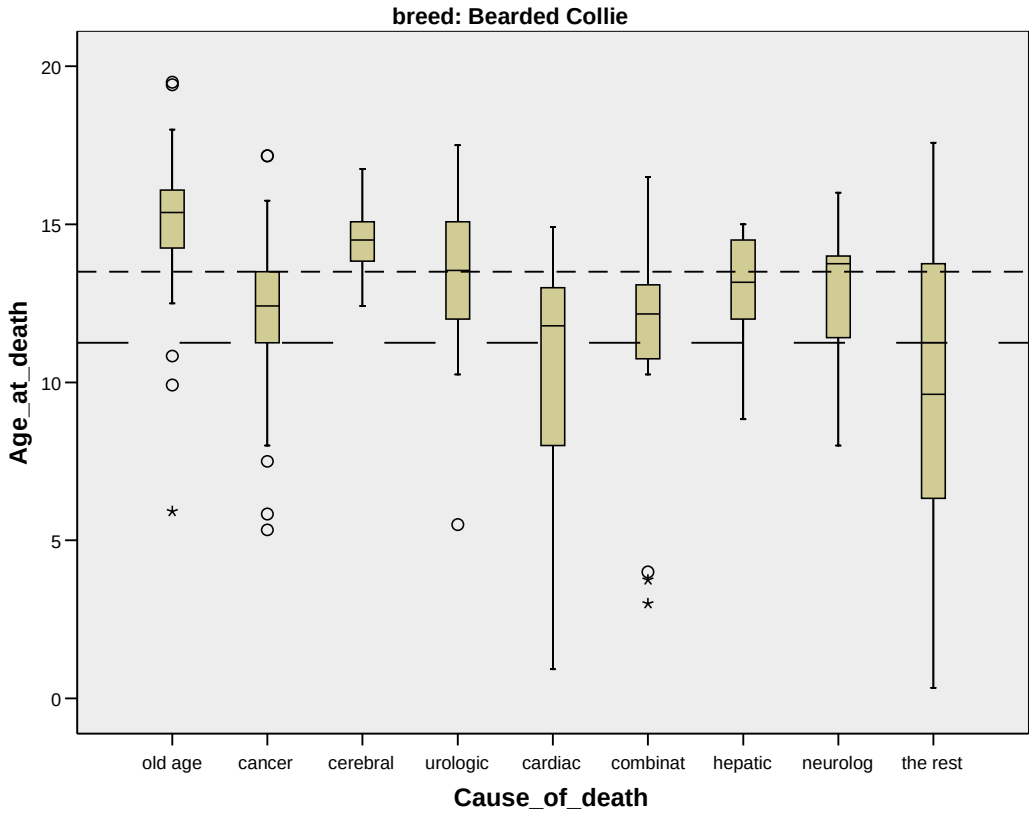


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Bearded Collies (N=278). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Bearded Collies. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 563 live dogs with a reported age was 6 years and 6 months (min=2 months, max=16 years and 6 months, Figure 3). Health information was reported for 563 live dogs of which 324 (58%) were healthy and 239 (42%) had at least one reported health condition, resulting in a total of 437 reported conditions with a median of 1 condition/dog (min=1, max=14).

The median current age of all healthy dogs with a reported age (N=324) was 5 years and 2 months (min=2 months, max=16 years and 6 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=239) was 8 years and 10 months (min=6 months, max=16 years and 2 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=427) was 4 years and 9 months (min= 2 months, max= 15 years and 6 months, Figure 4). Table 3 shows the disease conditions for Bearded Collies. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 558 Bearded Collies with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	196	138	334 (60%)
Male	160	64	224 (40%)
Totals	356 (64%)	202 (36%)	558 (100%)

Significantly more females were neutered (P=0.0021).

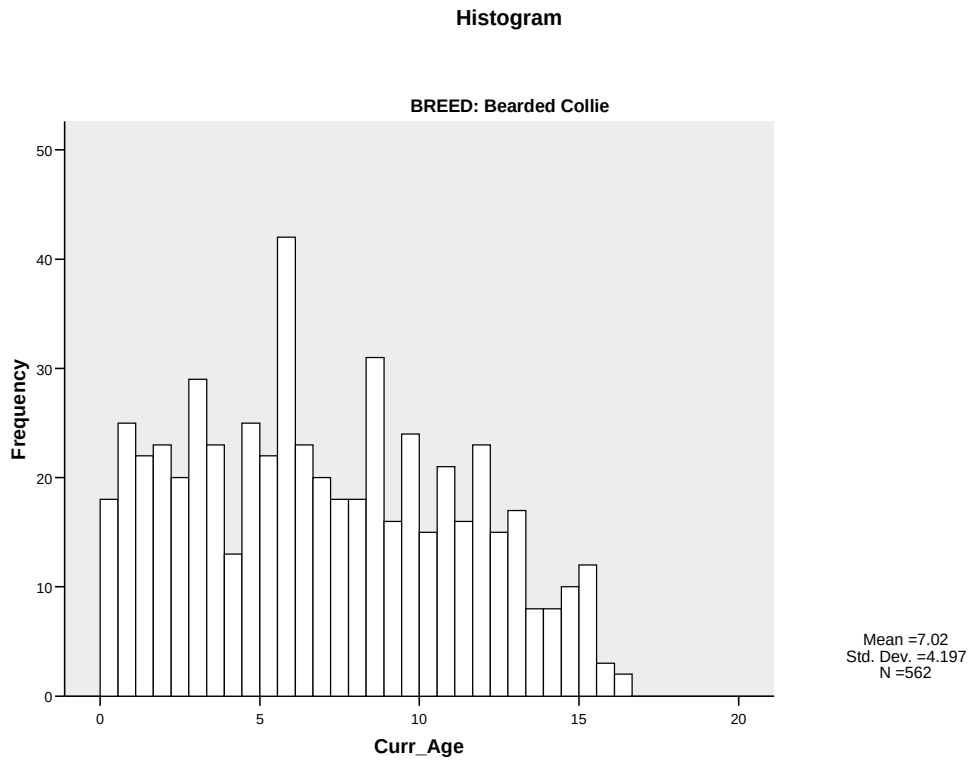


Figure 3. Histogram showing frequency of current age in years for the 562 live Bearded Collies with age reported.

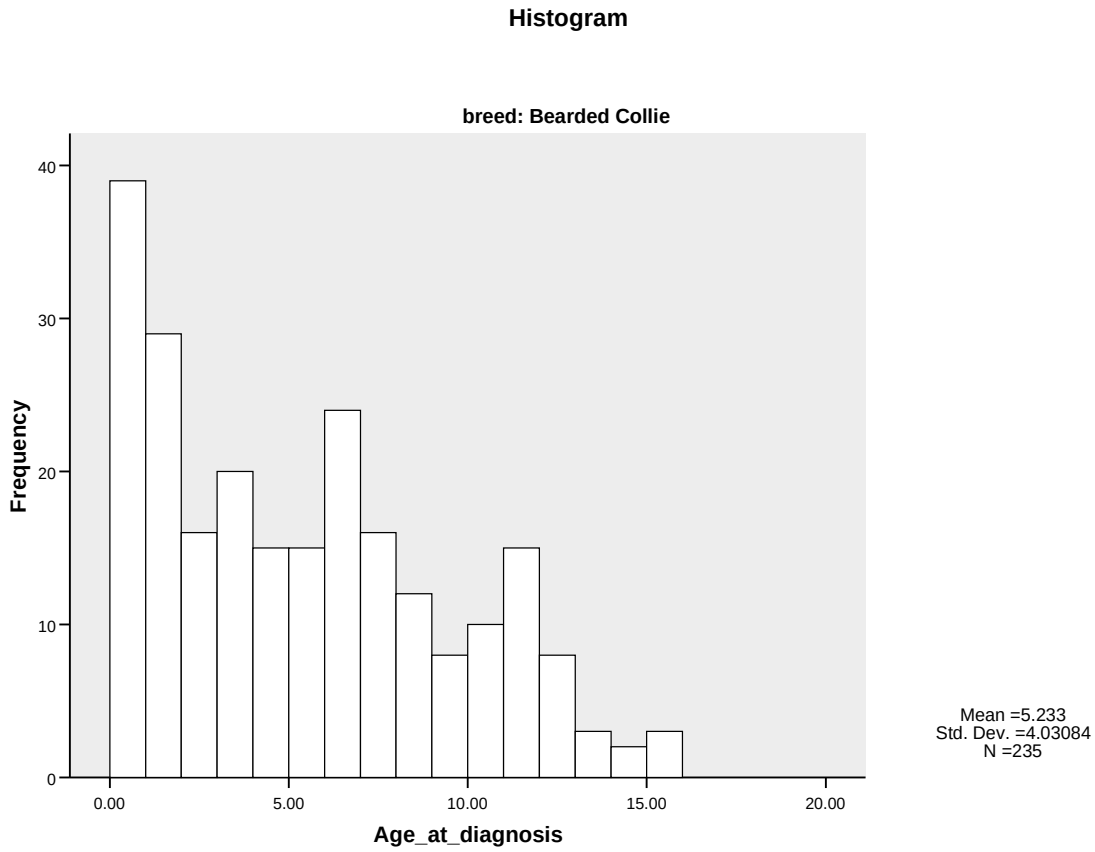


Figure 4. Histogram showing frequency of age at diagnosis for the 235 Bearded Collies with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

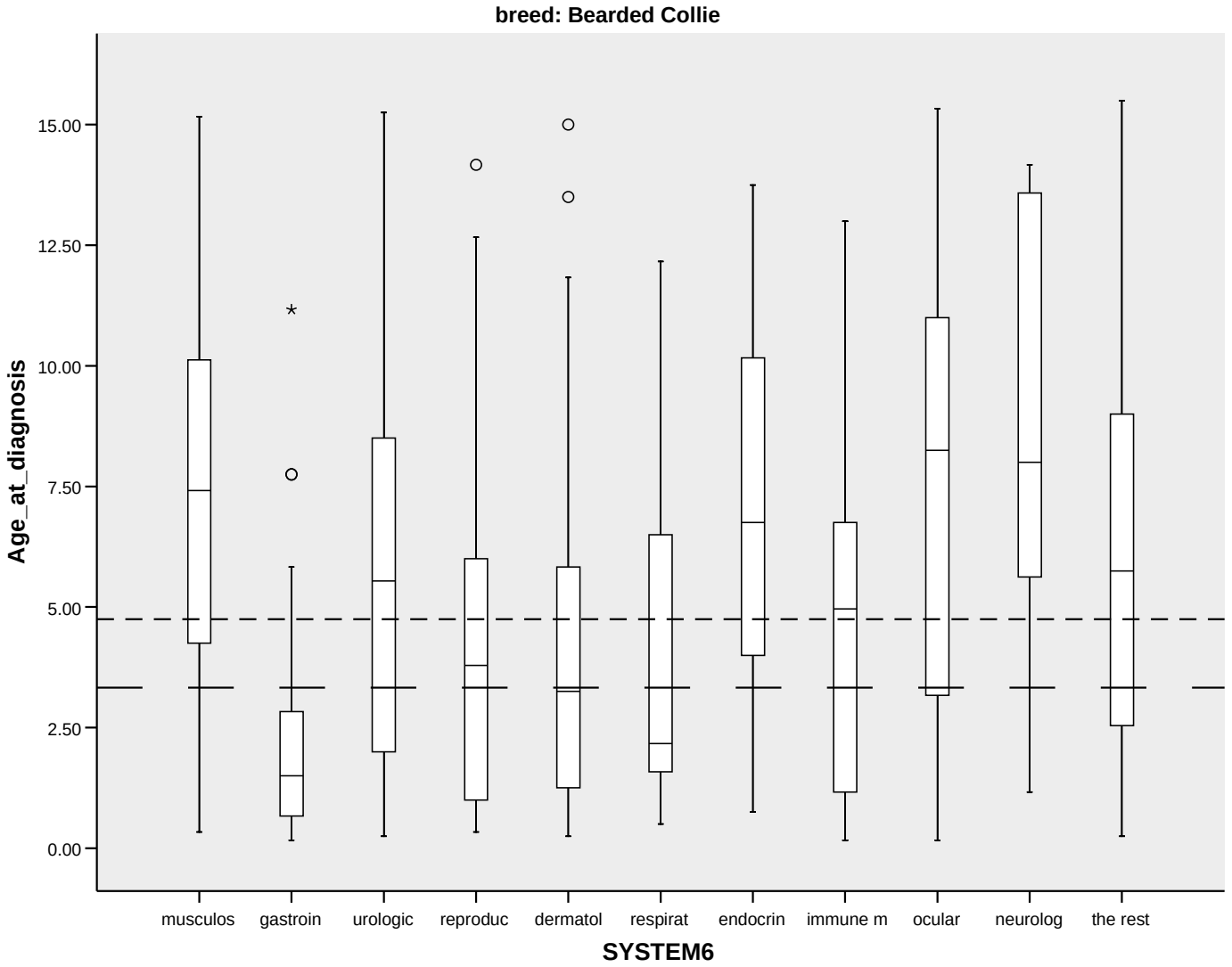


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Bearded Collies (N=239 dogs with 427 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Bearded Collies. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Bearded Collies.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Musculoskeletal	63	14.4	Arthritis; CLR; lameness (forelimb>hindlimb=unspecified); CHD; OCD
2	Gastrointestinal	55	12.6	Colitis; diarrhoea; campylobacter; IBD; regurgitation; vomiting; EPI
3	Urologic	43	9.8	Cystitis; incontinence; cystouroliths (unspecified>calcium oxalate=struvite)
4	Reproductive	42	9.6	Pyometra; infertility; false pregnancy; cryptorchid; vaginitis
5	Dermatologic	41	9.4	Dermatitis; mites (sarcoptes>unspecified); pyotraumatic dermatitis
6	Respiratory	33	7.6	Kennel cough; noisy breathing; coughing
7	Endocrine	26	5.9	Hypothyroidism; Addisons disease
8	Immune mediated	22	5.0	Flea allergy; food allergy; gluten-sensitive enteropathy; AIHA
9	Ocular	17	3.9	Cataracts; conjunctivitis; blocked tear ducts; KCS
10	Unknown	17	3.9	Unknown illness
11	Neurologic	15	3.4	Deafness; IVDD; seizures
12	Dental	11	2.5	Dental disease; defect other than extra teeth; retained puppy teeth
13	Benign neoplasia	8	1.8	Lipoma
14	Cancer	8	1.8	Type unspecified; SCC; carcinoma
15	Cardiac	8	1.8	Heart murmur (unspecified>grade 2=no clinical signs); cardiomyopathy unspecified
16	Behaviour	6	1.4	Unspecified
17	Aural	5	1.1	Otitis externa
18	Trauma	5	1.1	Musculoskeletal; neurologic; unspecified
19	Uncode and other	5	1.1	Hernia; unspecified; obesity
20	Anal gland	3	0.7	Anal sacculitis
21	Haematopoietic	3	0.7	Unspecified bleeding disorder; anaemia (unspecified)
22	Cerebrovascular	1	0.2	Stroke or cerebral vascular accident
	Total	437	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for Bedlington Terriers

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Bedlington Terriers

A total of 200 forms were sent out and 61 were returned, representing 187 live dogs. This breed had a 30.5 % response rate (61/200) and it represented 0.44% of all returns (61/13,741).

Mortality data

A total of 48 deaths were reported and this represents 0.30 % of all deaths reported in the survey (48/15,881). The median age at death for Bedlington Terriers was 13 years and 5 months (min = 1 year and 2 months, max = 18 years and 5 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Bedlington Terriers. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Bedlington Terriers.

Cause of death		N	%	Most common specific causes in descending order
1	Old age	11	22.9	Old age
2	Urologic	7	14.6	Kidney failure chronic or unspecified
3	Hepatic	6	12.5	Copper Toxicosis; liver disease; liver failure
4	Cancer	5	10.4	Unspecified (mammary); brain tumour; unspecified
5	Trauma	4	8.3	Road traffic accident; unspecified trauma
6	Endocrine	3	6.3	Cushings or hyperadrenocorticism
7	Combinations	2	4.2	Cushings & cancer unspecified; multiple organ failure
8	Cardiac	1	2.1	Heart failure
9	Cerebral vascular	1	2.1	Stroke or cerebral vascular accident
10	Collapse	1	2.1	
11	Gastrointestinal	1	2.1	Colitis or chronic colitis
12	Immune mediated	1	2.1	Unspecified
13	Infection	1	2.1	Viral infection
14	Other	1	2.1	Uncodeable
15	Poisoning	1	2.1	
16	Reproductive	1	2.1	Prostatic disease
17	Senility	1	2.1	
	Total	48	100.0	

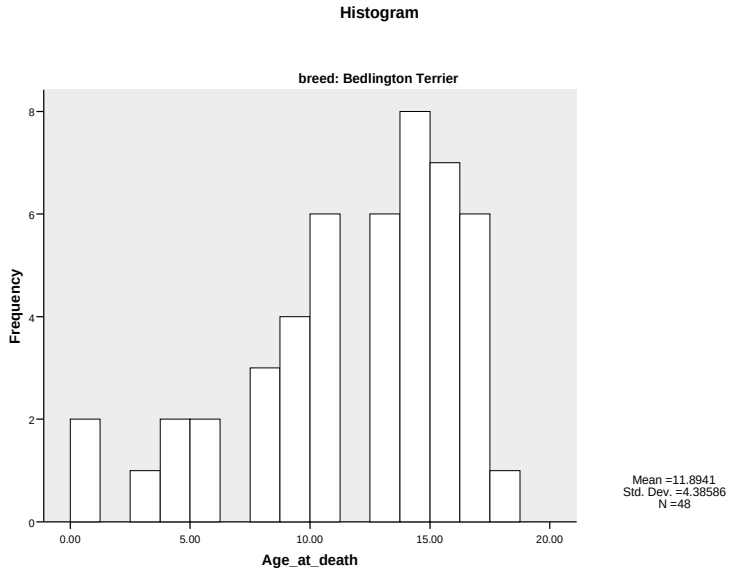


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 48 Bedlington Terrier deaths with age at death reported.

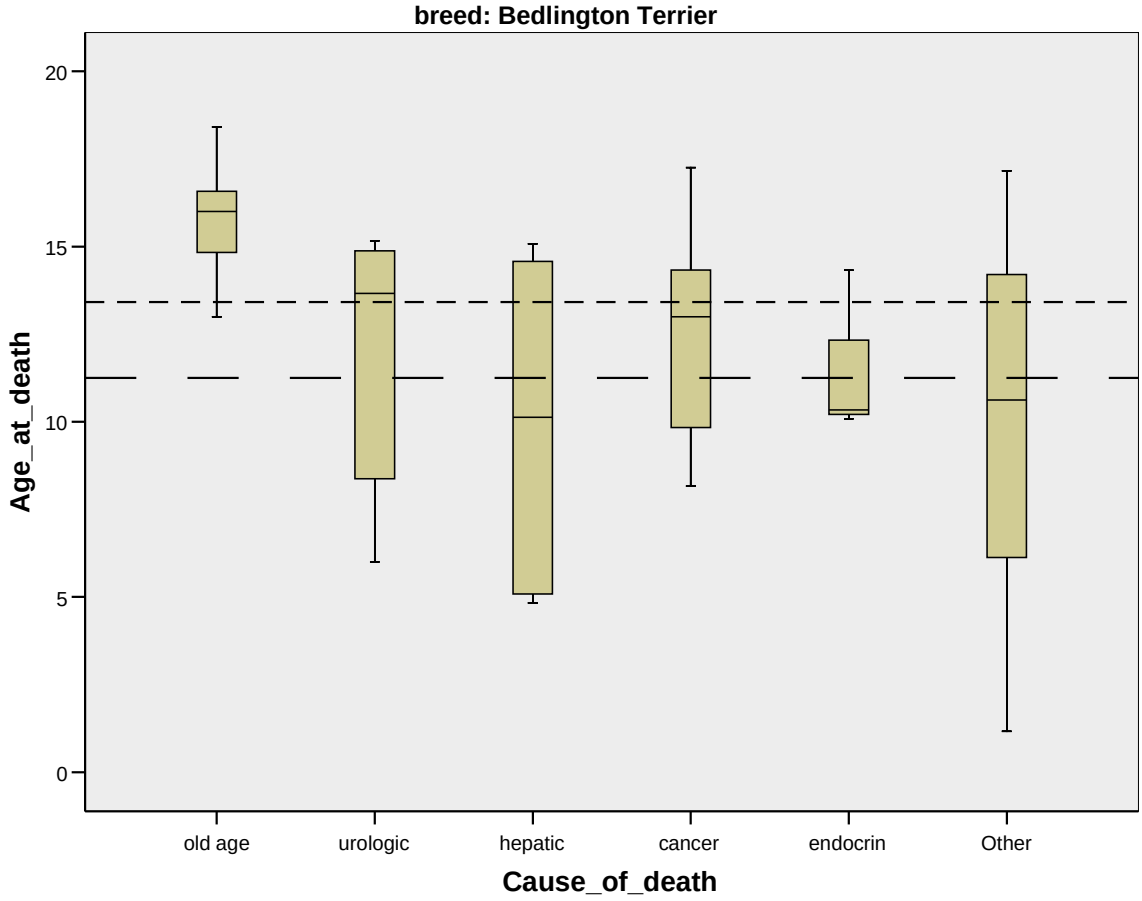


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Bedlington Terriers (N=48). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Bedlington Terriers. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 187 live dogs with a reported age was 5 years and 2 months (min=3 months, max=16 years and 1 month, Figure 3). Health information was reported for 187 live dogs of which 130 (70%) were healthy and 57 (30%) had at least one reported health condition, resulting in a total of 87 reported conditions with a median of 1 condition/dog (min=1, max=5).

The median current age of all healthy dogs with a reported age (N=130) was 3 years and 9 months (min=3 months, max=14 years and 4 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=57) was 7 years (min=2 years and 4 months, max=16 years and 1 month). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=82) was 3 years and 3 months (min= 3 months, max= 15 years and 8 months, Figure 4). Table 3 shows the disease conditions for Bedlington Terriers. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 186 Bedlington Terriers with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	90	32	122 (66%)
Male	55	9	64 (34%)
Totals	145 (78%)	41 (22%)	186 (100%)

There was no association between gender and neuter status (P=0.0572).

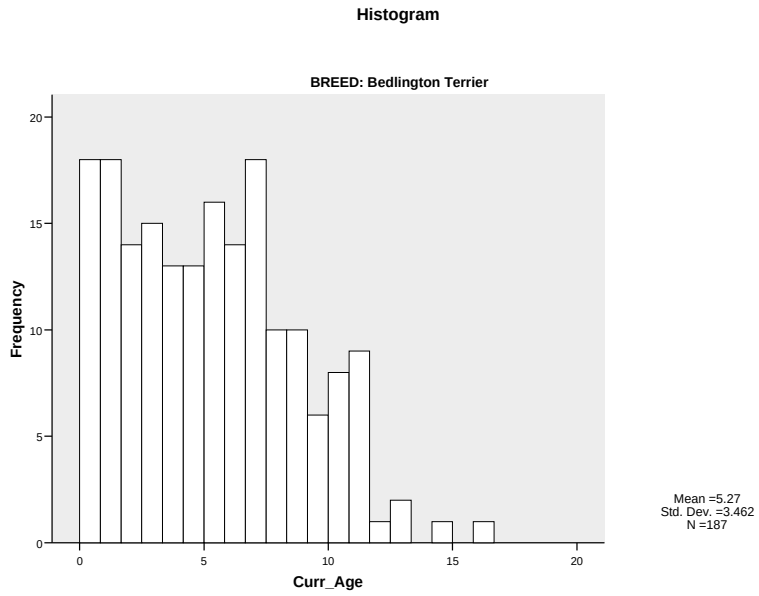


Figure 3. Histogram showing frequency of current age in years for the 187 live Bedlington Terriers with age reported.

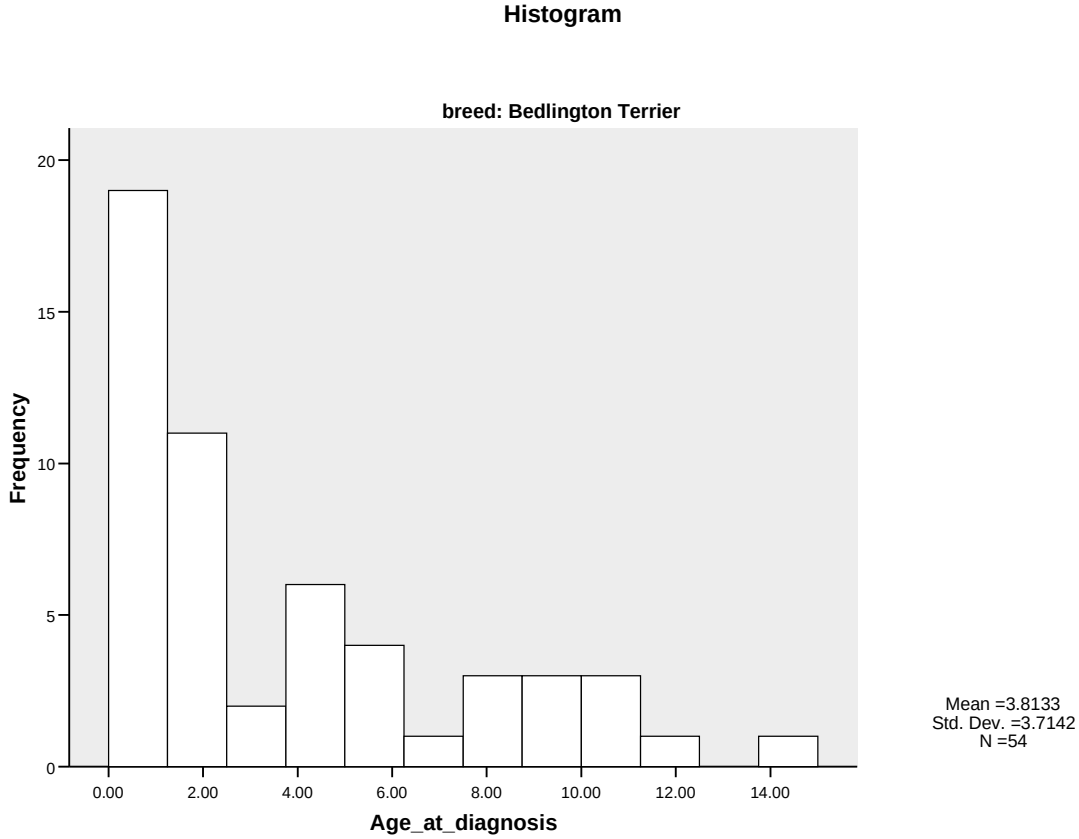


Figure 4. Histogram showing frequency of age at diagnosis for the 54 Bedlington Terriers with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

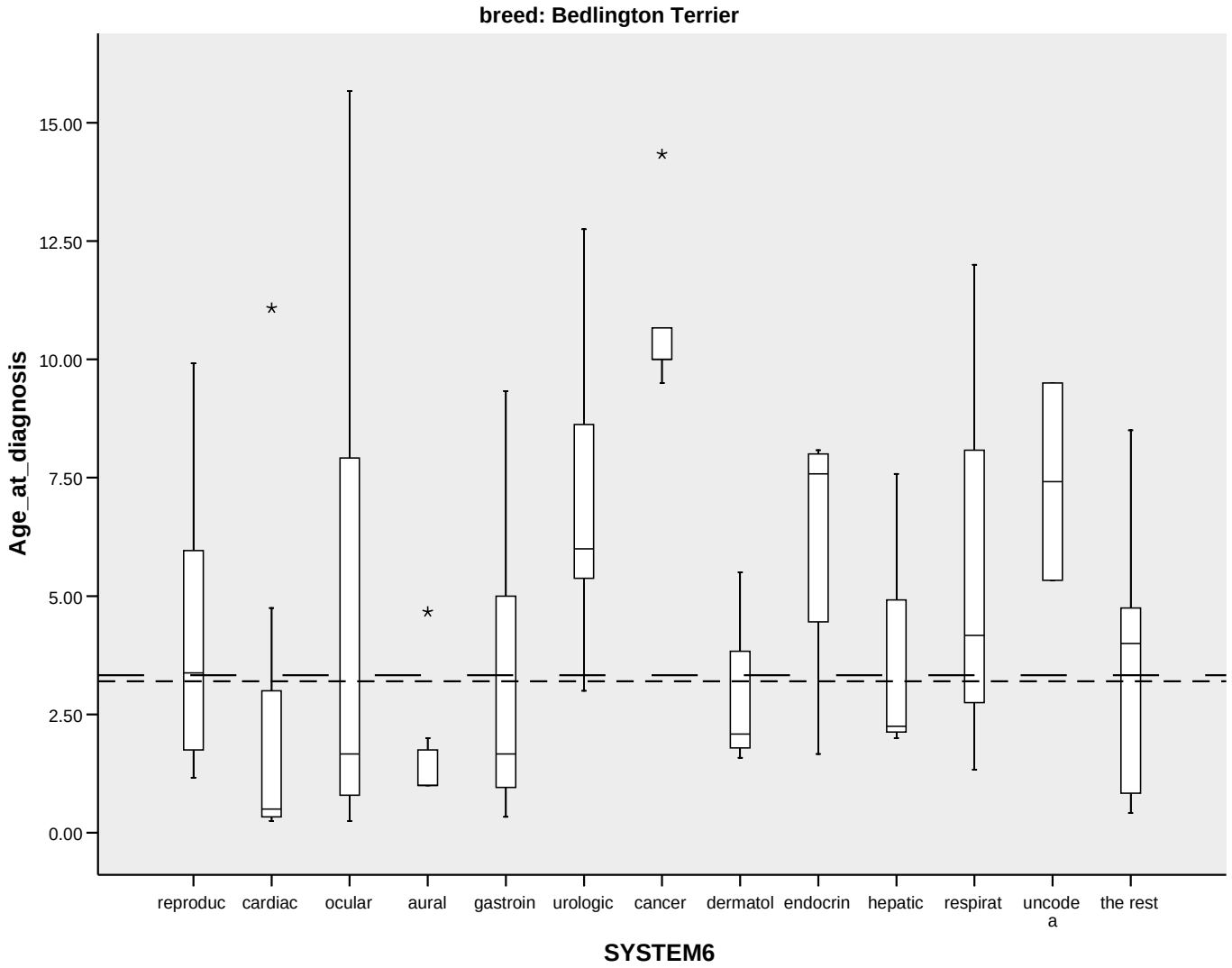


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Bedlington Terriers (N=57 dogs with 82 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Bedlington Terriers. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Bedlington Terriers.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Reproductive	14	16.1	Infertility; false pregnancy; pyometra
2	Cardiac	10	11.5	Heart murmur
3	Ocular	8	9.2	Epiphora; cataracts; blocked tear duct; glaucoma
4	Aural	7	8.0	Excessive ear wax; otitis externa; ear mites
5	Gastrointestinal	7	8.0	Gastroenteritis; colitis; pancreatitis; vomiting; diarrhoea
6	Urologic	7	8.0	Incontinence; chronic kidney failure
7	Cancer	5	5.7	Type unspecified
8	Dermatologic	4	4.6	Dermatitis; mites (unspecified)
9	Endocrine	4	4.6	Cushings disease; hypothyroidism
10	Hepatic	4	4.6	Copper toxicosis
11	Musculoskeletal	3	3.4	Stiff joints
12	Respiratory	3	3.4	Kennel cough; noisy breathing
13	Immune mediated	2	2.3	Atopy; food allergy
14	Neurologic	2	2.3	Seizures
15	Trauma	2	2.3	Skin
16	Uncode and other	2	2.3	Heat stroke
17	Benign neoplasia	1	1.1	Lipoma
18	Dental	1	1.1	Defect other than extra teeth
19	Unknown	1	1.1	Undiagnosed illness
	Total	87	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for the Belgian Shepherd breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Belgian Shepherd breed

A total of 339 forms were sent out and 98 were returned, representing 261 live dogs. This breed had a 28.9 % response rate (98/339) and it represented 0.71% of all returns (98/13,741).

Mortality data

A total of 113 deaths were reported and this represents 0.71 % of all deaths reported in the survey (113/15,881). The median age at death for the Belgian Shepherd breed was 12 years and 6 months (min = 1 year and 6 months, max = 18 years and 2 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Belgian Shepherd breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Belgian Shepherd breed.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	26	23.0	Type unspecified; mammary - type unspecified
2	Cerebral vascular	15	13.3	Stroke or cerebral vascular accident
3	Old age	15	13.3	Old age unspecified
4	Combinations	9	8.0	
5	Neurologic	7	6.2	Seizures
6	Cardiac	6	5.3	Heart failure; heart defect unspecified; dilated cardiomyopathy
7	Trauma	6	5.3	Road traffic accident or RTA
8	Endocrine	3	2.7	Addison's disease or hypoadrenocorticism; diabetes
9	Hepatic	3	2.7	Liver failure (chronic or unspecified > acute)
10	Musculoskeletal	3	2.7	Arthritis; hip dysplasia
11	Sudden death	3	2.7	
12	Urologic	3	2.7	Kidney failure (chronic or unspecified > acute)
13	Behaviour	2	1.8	Aggression; behavioural problem
14	Perioperative	2	1.8	
15	Respiratory	2	1.8	Pneumonia; unspecified
16	Unknown	2	1.8	
17	Died	1	0.9	Natural causes
18	Gastrointestinal	1	0.9	Exocrine pancreatic insufficiency or EPI
19	Immune mediated	1	0.9	Unspecified
20	Other	1	0.9	Uncodeable
21	Poisoning	1	0.9	
22	Reproductive	1	0.9	Prostatic disease
	Total	113	100.0	

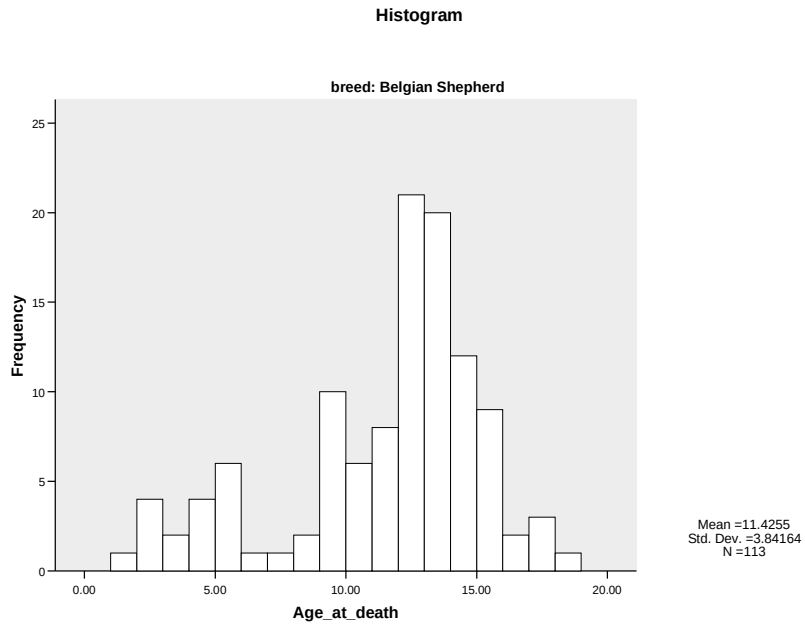


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 113 Belgian Shepherd deaths with age at death reported.

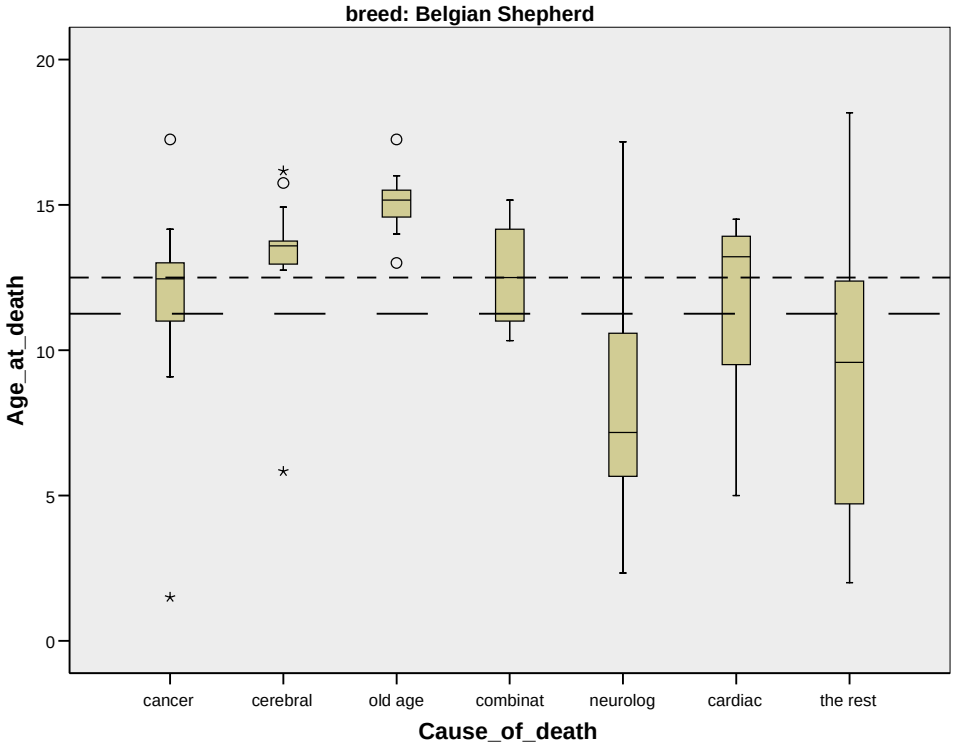


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the Belgian Shepherd breed (N=113). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the Belgian Shepherd breed. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 261 live dogs with a reported age was 5 years and 7 months (min=2 months, max=16 years and 4 months, Figure 3). Health information was reported for 261 live dogs of which 174 (67%) were healthy and 87 (33%) had at least one reported health condition, resulting in a total of 125 reported conditions with a median of 1 condition/dog (min=1, max=6).

The median current age of all healthy dogs with a reported age (N=174) was 4 years and 9 months (min=2 months, max=15 years). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=87) was 7 years and 11 months (min=1 year and 10 months, max=15 years and 11 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=123) was 3 years and 9 months (min= 1 month, max= 13 years and 3 months, Figure 4). Table 3 shows the disease conditions for the Belgian Shepherd breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for the 261 Belgian Shepherd breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	76	84	160 (61%)
Male	61	40	101 (39%)
Totals	137 (52%)	124 (48%)	261 (100%)

Significantly more females were neutered (P=0.0422).

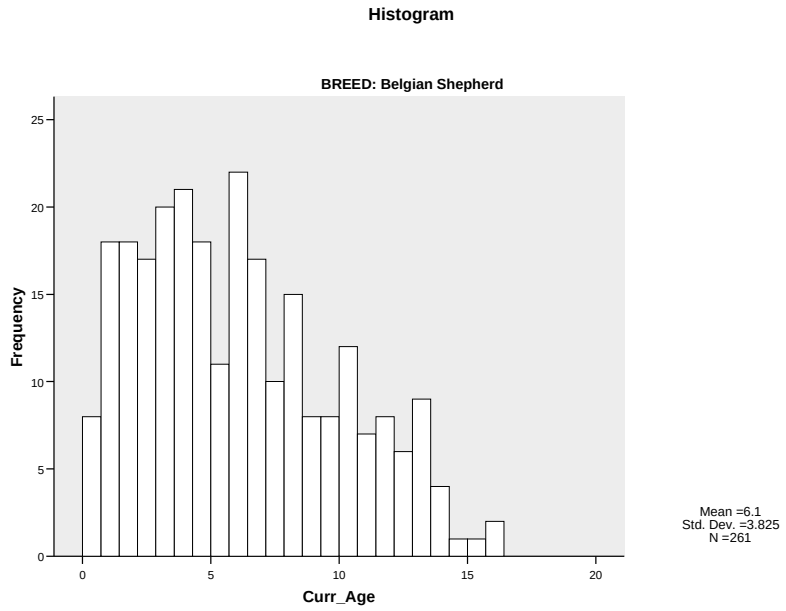


Figure 3. Histogram showing frequency of current age in years for the 261 live Belgian Shepherd breed with age reported.

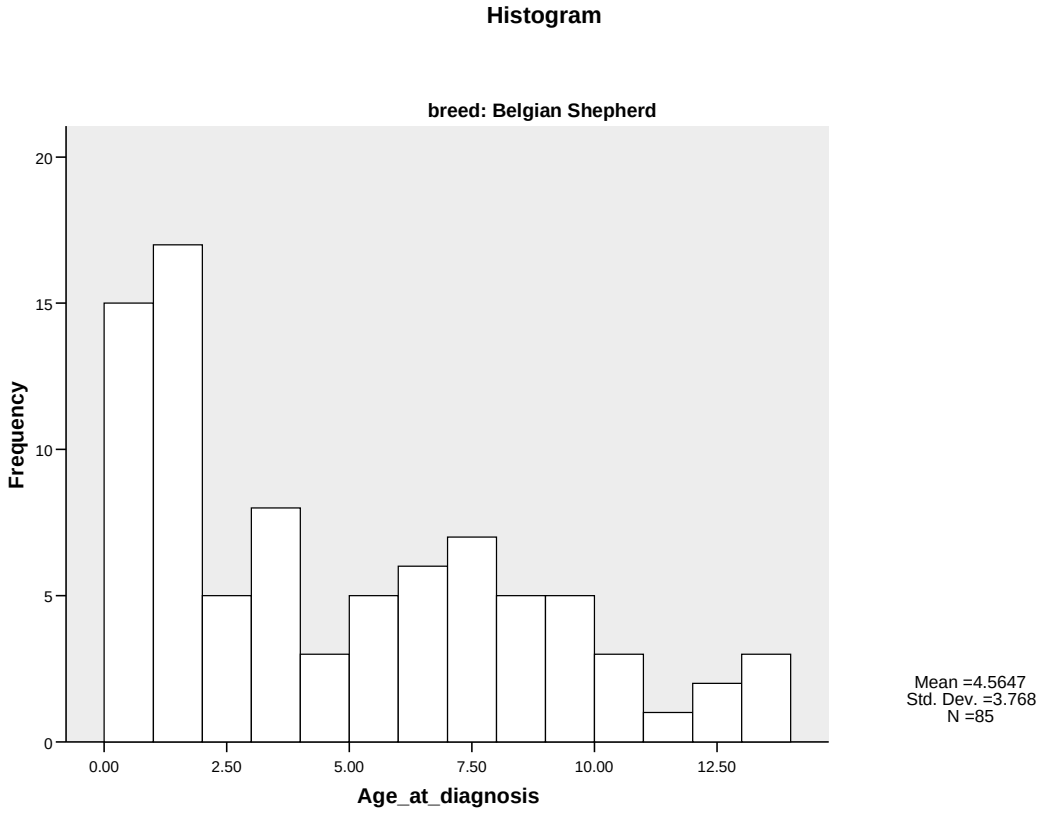


Figure 4. Histogram showing frequency of age at diagnosis for the 85 Belgian Shepherd breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

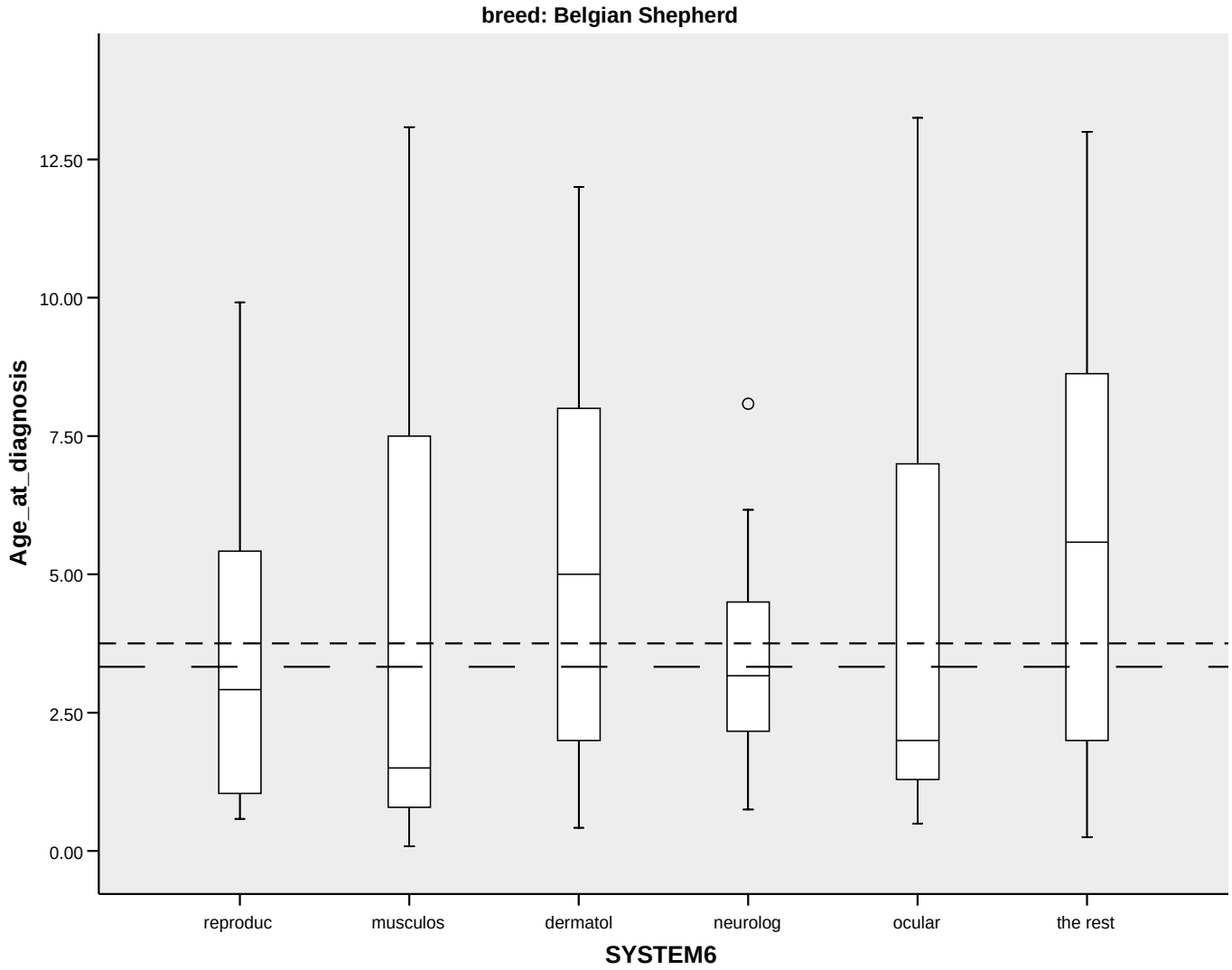


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Belgian Shepherd breed (N=87 dogs with 123 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Belgian Shepherd breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Belgian Shepherd breed.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Reproductive	20	16.0	Pyometra; cryptorchid; false pregnancy; dystochia (uterine inertia); infertility
2	Musculoskeletal	19	15.2	Arthritis; CHD; fracture; (spine>unspecified); stiff joints
3	Dermatologic	14	11.2	Mites (unspecified>sarcoptes); pyotraumatic dermatitis; dermatitis; recurrent pyoderma
4	Neurologic	11	8.8	Seizures; epilepsy; spondylopathy
5	Ocular	11	8.8	Cataracts; conjunctivitis; blindness; pannus; red eye
6	Gastrointestinal	7	5.6	Colitis; vomiting; intussusception; megaoesophagus
7	Immune mediated	5	4.0	Food allergy; atopy; flea allergy; unspecified
8	Respiratory	5	4.0	Rhinitis; kennel cough; pneumonia
9	Other	4	3.2	Uncodeable
10	Urologic	4	3.2	Incontinence
11	Cancer	3	2.4	Lymphoma (mammary); SCC (chest); type unspecified
12	Cardiac	3	2.4	Heart murmur; heart rhythm disorder
13	Dental	3	2.4	Dental disease; gingivitis
14	Unknown	3	2.4	Undiagnosed illness
15	Aural	2	1.6	Otitis externa
16	Behaviour	2	1.6	Unspecified
17	Benign neoplasia	2	1.6	Lipoma; type unspecified
18	Cerebrovascular	2	1.6	Stroke or cerebral vascular accident
19	Endocrine	2	1.6	Hyperparathyroidism (unspecified); hypothyroidism
20	Trauma	2	1.6	Neurologic
21	Anal gland	1	0.8	Anal sacculitis
	Total	125	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for the Bergamasco breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Bergamasco breed

A total of 14 forms were sent out and 4 were returned, representing 10 live dogs. This breed had a 28.6 % response rate (4/14) and it represented 0.03% of all returns (4/13,741).

Mortality data
No deaths were reported for this breed.

Morbidity data
The median current age of the 10 live dogs with a reported age was 5 years and 2 months (min=3 years and 2 months, max=13 years and 9 months, Figure 3). Health information was reported for 10 live dogs of which 7 (70%) were healthy and 3 (30%) had at least one reported health condition, resulting in a total of 3 reported conditions with a median of 1 condition/dog (min=1, max=1).

The median current age of all healthy dogs with a reported age (N=7) was 4 years and 8 months (min=3 years and 2 months, max=13 years and 9 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=3) was 6 years and 9 months (min=3 years and 2 months, max=9 years and 2 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=3) was 4 years and 6 months (min= 2 months, max= 9 years and 1 month, Figure 4). Table 3 shows the disease conditions for the Bergamasco breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 10 the Bergamasco breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	1	1	2 (20%)
Male	7	1	8 (80%)
Totals	8 (80%)	2 (20%)	10 (100%)

There was no association between gender and neuter status (P=0.2357).

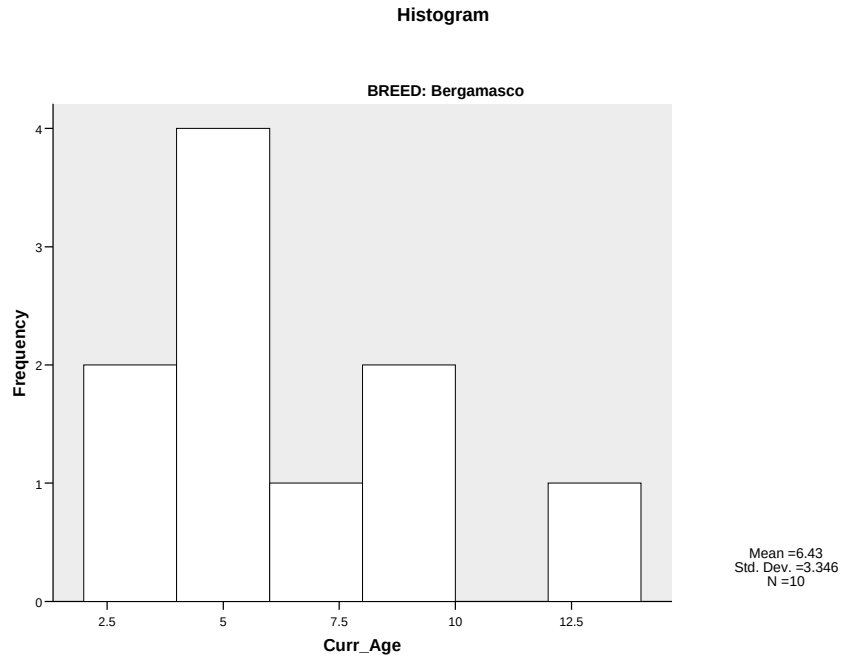


Figure 3. Histogram showing frequency of current age in years for the 10 live the Bergamasco breed with age reported.

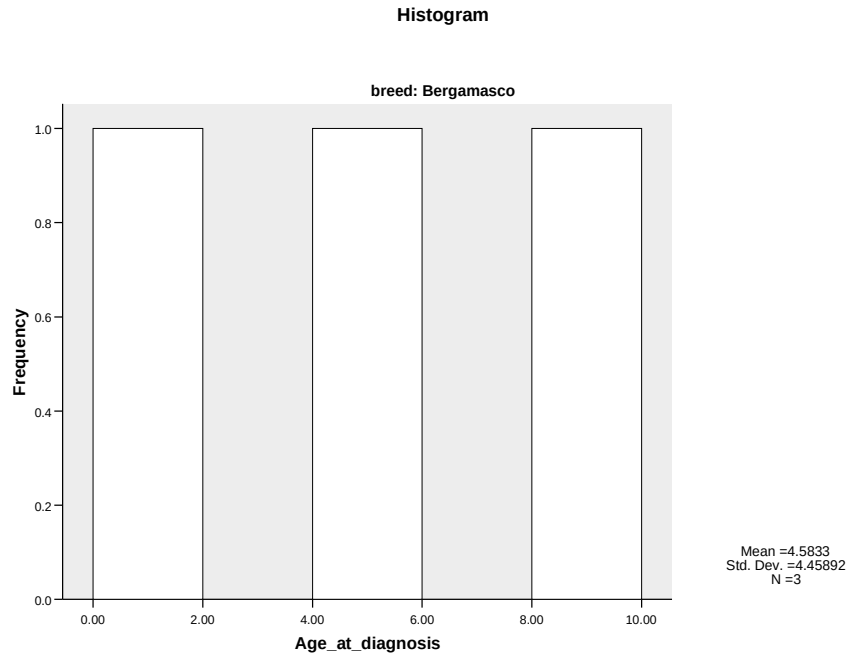


Figure 4. Histogram showing frequency of age at diagnosis for the 3 Bergamasco breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

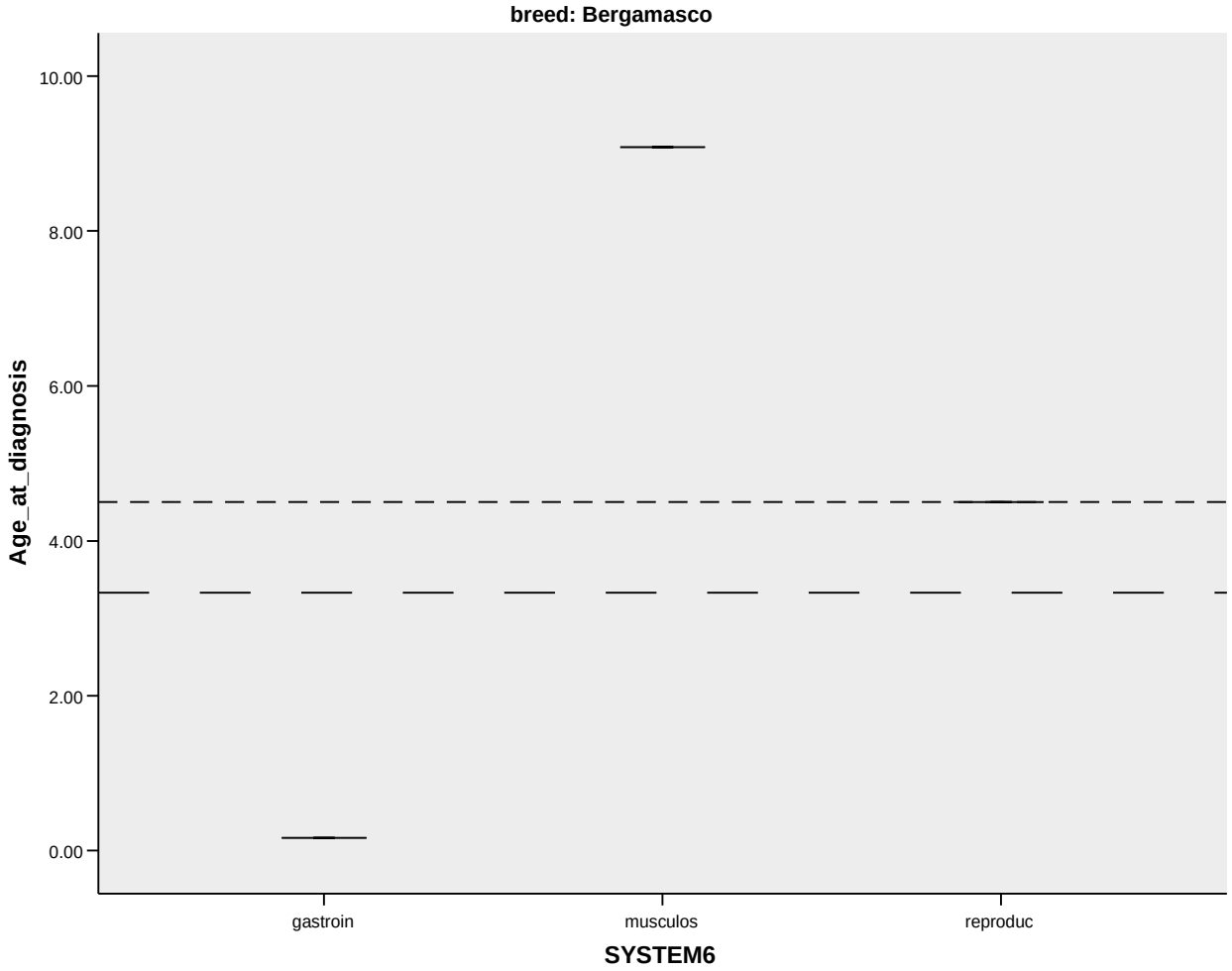


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Bergamasco breed (N=3 dogs with 3 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Bergamasco breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Bergamasco breed.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Gastrointestinal	1	33.3	IBD
2	Musculoskeletal	1	33.3	Arthritis (hindlimbs)
3	Reproductive	1	33.3	False pregnancy
	Total	3	100.0	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for Bernese Mountain Dogs

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Bernese Mountain Dogs

A total of 1200 forms were sent out and 361 were returned, representing 629 live dogs. This breed had a 30.1 % response rate (361/1200) and it represented 2.63% of all returns (361/13,741).

Mortality data

A total of 394 deaths were reported and this represents 2.48 % of all deaths reported in the survey (394/15,881). The median age at death for Bernese Mountain Dogs was 8 years (min = 5 months, max = 15 years and 2 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Bernese Mountain Dogs. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Bernese Mountain Dogs.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	180	45.7	Type unspecified; lymphoma; liver – type unspecified
2	Musculoskeletal	24	6.1	Arthritis; hip dysplasia; cruciate ligament rupture or CLR
3	Old age	24	6.1	Old age
4	Other	22	5.6	Uncodeable
5	Cardiac	20	5.1	Heart failure; heart attack; heart enlarged or cardiomegaly
6	Neurologic	20	5.1	Seizures or fits; disc disease or IVDD; epilepsy
7	Gastrointestinal	18	4.6	Gastric dilatation/volvulus (GDV); protein losing enteropathy
8	Urologic	16	4.1	Kidney failure chronic or unspecified or chronic renal failure
9	Immune mediated	13	3.3	Unspecified; AIHA; MMM; systemic lupus erythematosus
10	Combinations	12	3.0	
11	Behaviour	10	2.5	Aggression; behavioural problem unspecified
12	Hepatic	5	1.3	Liver failure chronic or unspecified; liver disease
13	Trauma	5	1.3	Road traffic accident; trauma or accident unspecified
14	Unknown	5	1.3	
15	Perioperative	4	1.0	
16	Cerebral vascular	3	0.8	Stroke or cerebral vascular accident
17	Reproductive	3	0.8	Pyometra
18	Respiratory	3	0.8	
19	Dermatologic	2	0.5	Anal furunculosis; skin disease unspecified
20	Sudden death	2	0.5	
21	PSS	1	0.3	
22	Infection	1	0.3	Toxoplasmosis
23	Internal bleeding	1	0.3	
	Total	394	100.0	

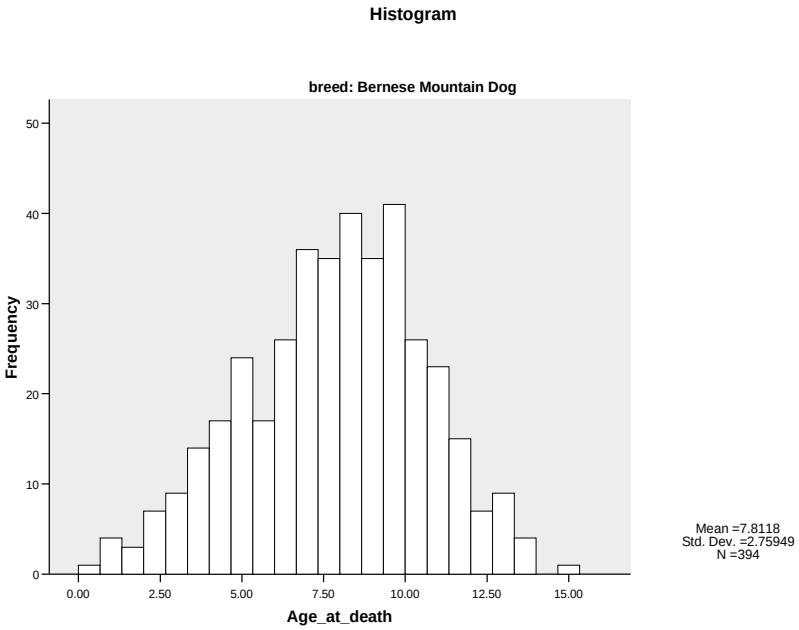


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 394 Bernese Mountain Dog deaths with age at death reported.

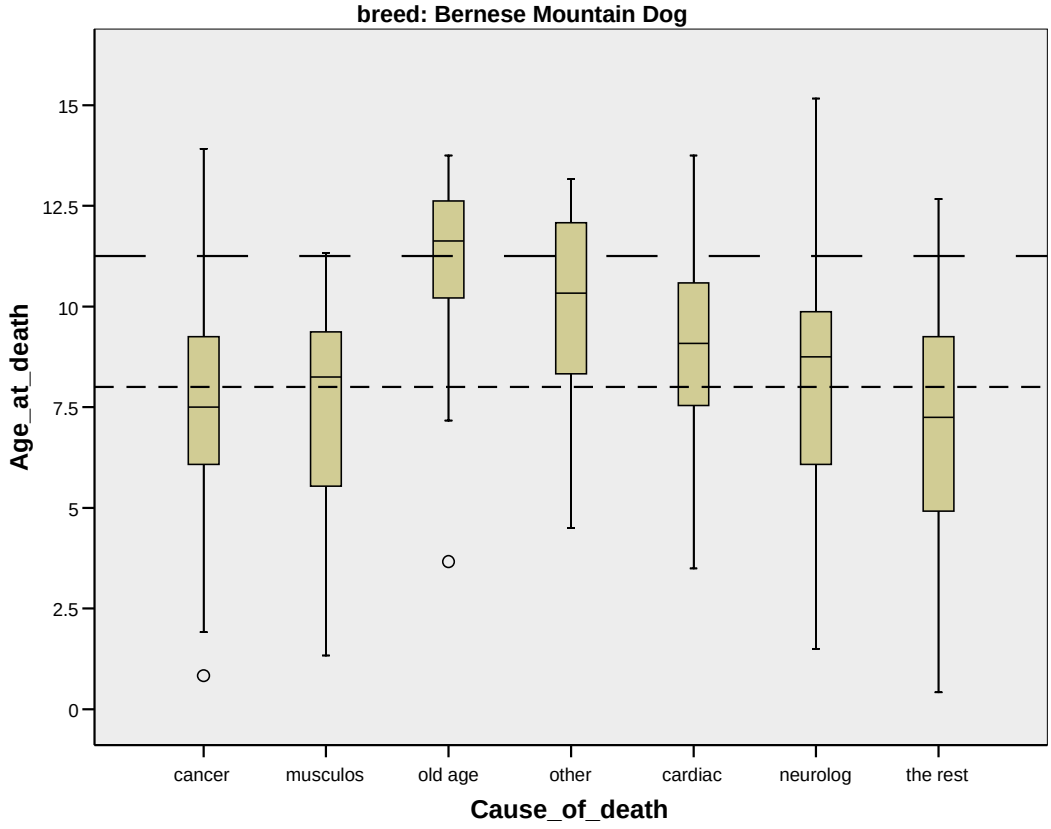


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Bernese Mountain Dogs (N=394). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Bernese Mountain Dogs. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 629 live dogs with a reported age was 4 years and 0 months (min=2 months, max=12 years and 8 months, Figure 3). Health information was reported for 629 live dogs of which 338 (54%) were healthy and 291 (46%) had at least one reported health condition, resulting in a total of 511 reported conditions with a median of 1 condition/dog (min=1, max=9).

The median current age of all healthy dogs with a reported age (N=338) was 3 years and 2 months (min=2 months, max=12 years). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=290) was 5 years and 0 months (min=4 months, max=12 years and 8 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=489) was 2 years and 5 months (min= 2 months, max= 12 years and 8 months, Figure 4). Table 3 shows the disease conditions for Bernese Mountain Dogs. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 624 Bernese Mountain Dogs with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	199	163	362 (58%)
Male	164	98	262 (42%)
Totals	363 (58%)	261 (42%)	624 (100%)

There was no association between gender and neuter status (P=0.0567).

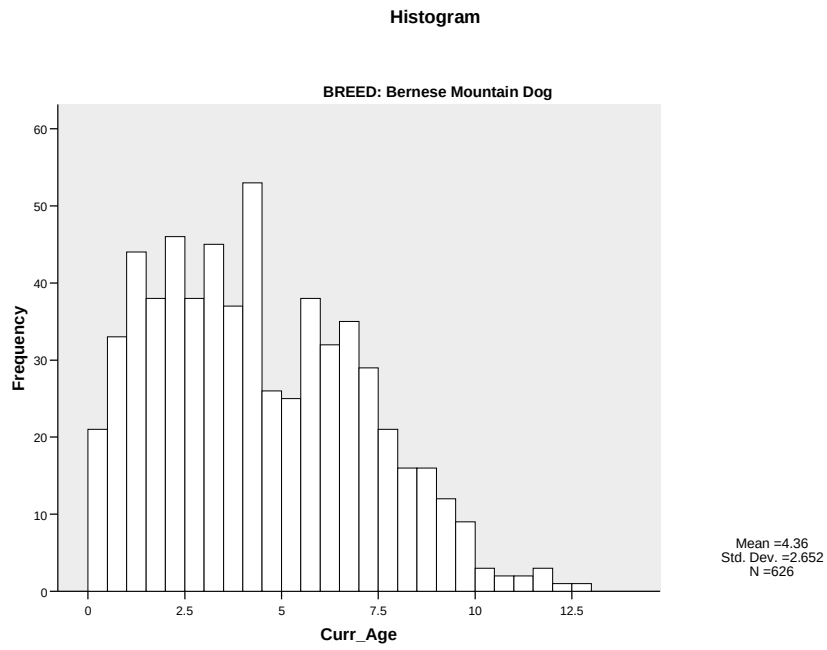


Figure 3. Histogram showing frequency of current age in years for the 626 live Bernese Mountain Dogs with age reported.

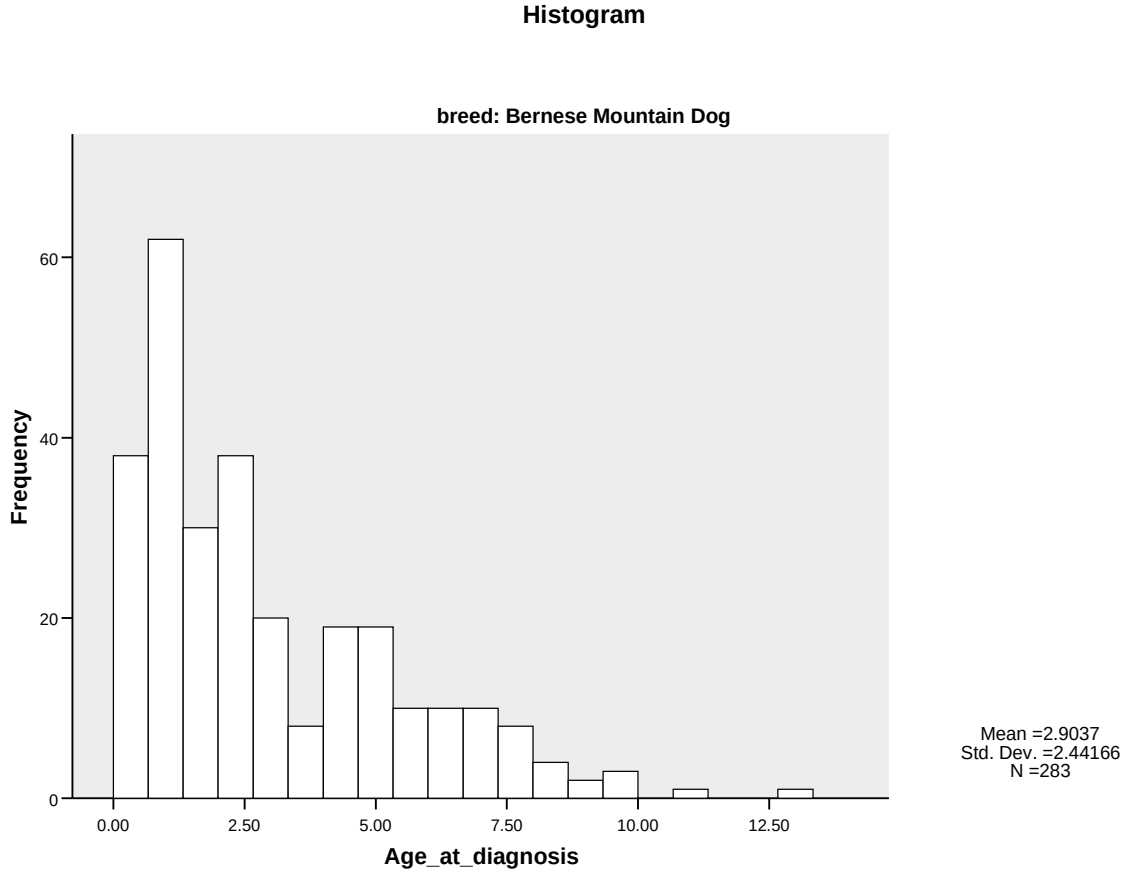


Figure 4. Histogram showing frequency of age at diagnosis for the 283 Bernese Mountain Dogs with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

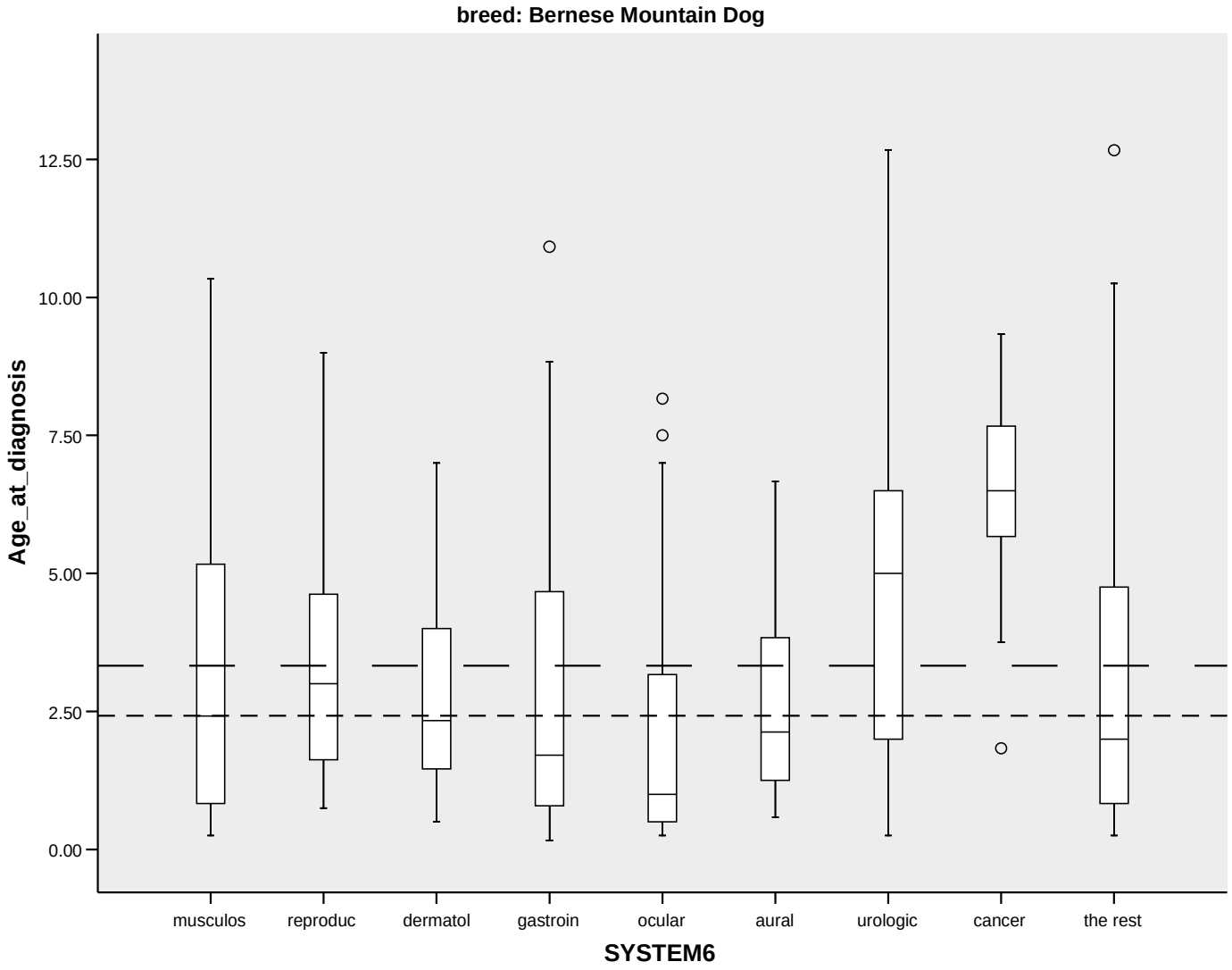


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Bernese Mountain Dogs (N=290 dogs with 489 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Bernese Mountain Dogs. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Bernese Mountain Dogs.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Musculoskeletal	161	31.5	CLR; arthritis (elbows>shoulders>rest); CHD; OCD (elbow>shoulder>unspecified)
2	Reproductive	71	13.9	Pyometra; false pregnancy; dystochia (uterine inertia>stuck puppy); infertility
3	Dermatologic	48	9.4	Dermatitis; pyotraumatic dermatitis; mites (sarcoptes>unspecified)
4	Gastrointestinal	43	8.4	GDV; colitis; diarrhoea; gastroenteritis; pancreatitis
5	Ocular	35	6.8	Entropion; cataracts; conjunctivitis
6	Aural	22	4.3	Otitis externa; aural haematoma; excessive ear wax
7	Urologic	21	4.1	Cystitis; haematuria; cystouroliths (unspecified); incontinence
8	Immune mediated	19	3.7	Flea allergy; gluten-sensitive enteropathy; atopy; dust mites; allergy unspecified
9	Neurologic	19	3.7	Seizures; meningitis; myelin disorders
10	Cancer	15	2.9	MCT (paw); type unspecified; histiocytosis; sarcoma
11	Unknown	12	2.3	Undiagnosed illness
12	Benign neoplasia	8	1.6	Lipoma; histiocytoma (skin)
13	Respiratory	7	1.4	Kennel cough; long soft palate; noisy breathing; tracheal collapse
14	Endocrine	6	1.2	Hypothyroidism; diabetes mellitus
15	Trauma	6	1.2	Musculoskeletal; ocular; dermatologic
16	Cardiac	5	1.0	Heart murmur; dilated cardiomyopathy; heart rhythm disorder
17	Behaviour	4	0.8	Unspecified; aggression
18	Dental	2	0.4	Dental disease; retained puppy teeth
19	Hepatic	2	0.4	Cholangiohepatitis; portosystemic shunt (PSS)
20	Other	2	0.4	Uncodeable
21	Anal gland	1	0.2	Anal sacculitis
22	Cerebrovascular	1	0.2	Stroke or cerebral vascular accident
23	Haematopoietic	1	0.2	Anaemia (unspecified)
	Total	511	100.0	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee Report

Summary results of the Purebred Dog Health Survey: for the Bichon Frise breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Bichon Frise breed

A total of 161 forms were sent out and 34 were returned, representing 105 live dogs. This breed had a 21.1 % response rate (34/161) and it represented 0.25% of all returns (34/13,741).

Mortality data

A total of 34 deaths were reported and this represents 0.21 % of all deaths reported in the survey (34/15,881). The median age at death for the Bichon Frise breed was 12 years and 11 months (min = 3 years and 3 months, max = 16 years and 5 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Bichon Frise breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Bichon Frise breed.

	Cause of death	No. of deaths	% of deaths	Most common specific causes in descending order
1	Old age	8	23.5	Old age
2	Cancer	7	20.6	Type unspecified
3	Combinations	4	11.8	
4	Urologic	4	11.8	Chronic kidney failure chronic
5	Cardiac	2	5.9	Heart defect unspecified; heart failure
6	Gastrointestinal	2	5.9	Unspecified
7	Cardiovascular	1	2.9	Unspecified
8	Cerebral vascular	1	2.9	Stroke or cerebral vascular accident
9	Endocrine	1	2.9	Diabetes mellitus
10	Immune mediated	1	2.9	Haemolytic anaemia
11	Infection	1	2.9	Viral infection
12	Neurologic	1	2.9	IVDD
13	Perioperative	1	2.9	
	Total	34	100.0	

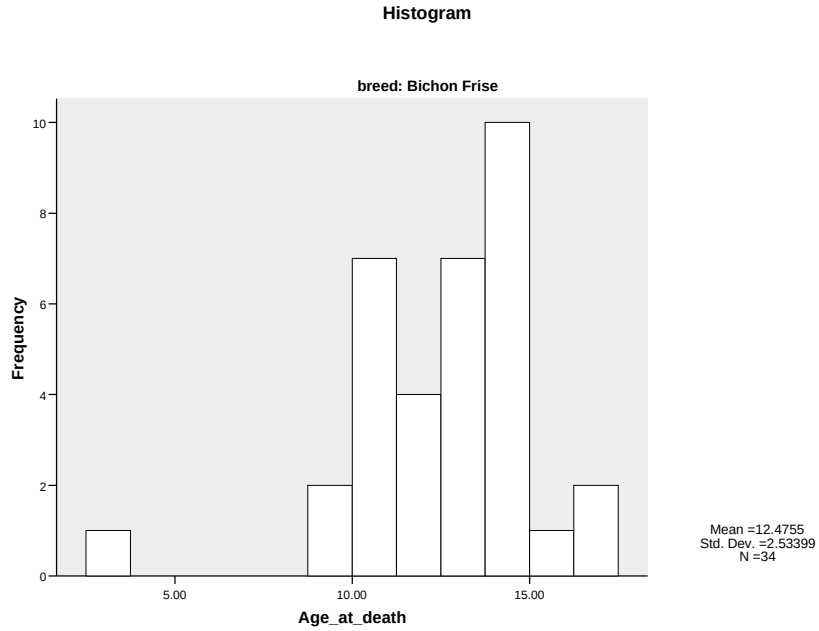


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 34 Bichon Frise deaths with age at death reported.

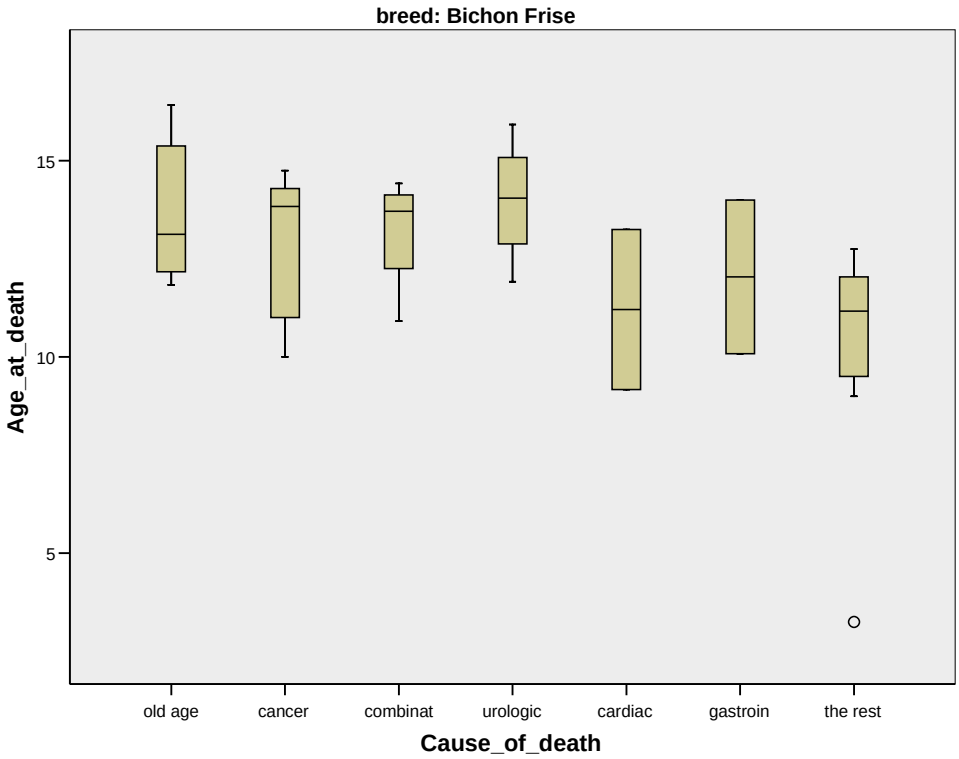


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the Bichon Frise breed (N=34). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the Bichon Frise breed. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 105 live dogs with a reported age was 6 years and 1 month (min=3 months, max=18 years and 4 months, Figure 3). Health information was reported for 105 live dogs of which 69 (66%) were healthy and 36 (34%) had at least one reported health condition, resulting in a total of 57 reported conditions with a median of 1 condition/dog (min=1, max=5).

The median current age of all healthy dogs with a reported age (N=69) was 4 years and 1 month (min=3 months, max=15 years and 2 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=36) was 8 years and 8 months (min=1 year and 1 month, max=18 years and 4 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=55) was 5 years (min= 2 months, max= 14 years, Figure 4). Table 3 shows the disease conditions for the Bichon Frise breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 103 the Bichon Frise breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	41	22	63 (61%)
Male	26	14	40 (39%)
Totals	67 (65%)	36 (35%)	103 (100%)

There was no association between gender and neuter status (P=0.9934).

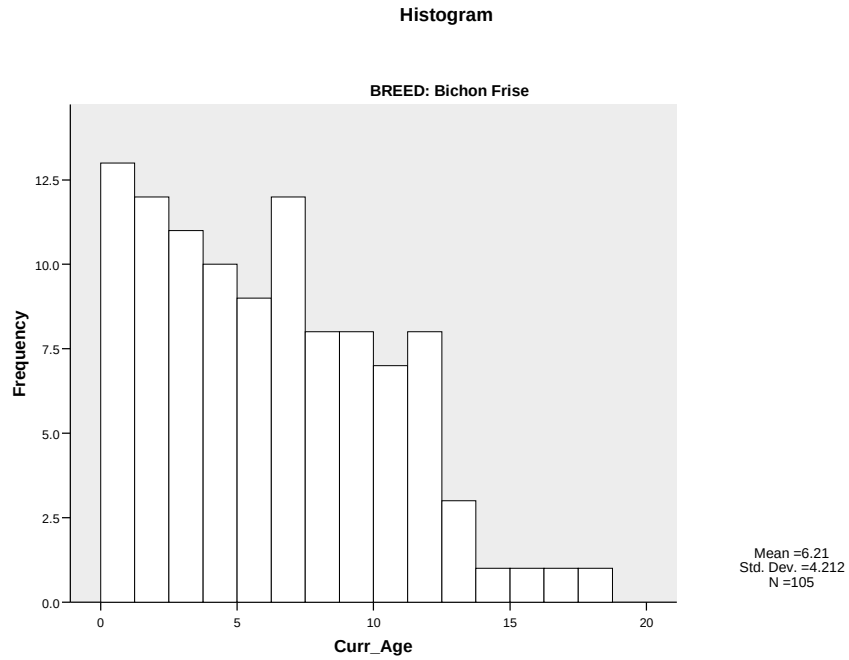


Figure 3. Histogram showing frequency of current age in years for the 105 live the Bichon Frise breed with age reported.

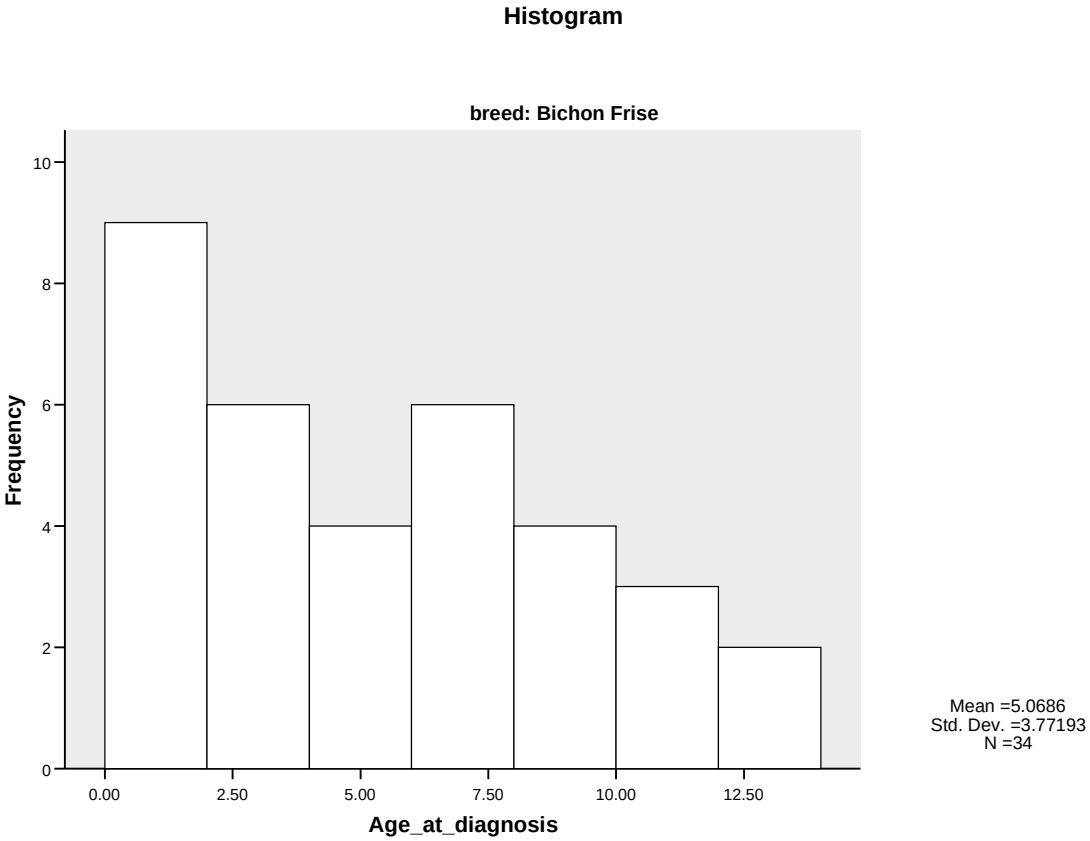


Figure 4. Histogram showing frequency of age at diagnosis for the 34 dogs in the Bichon Frise breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

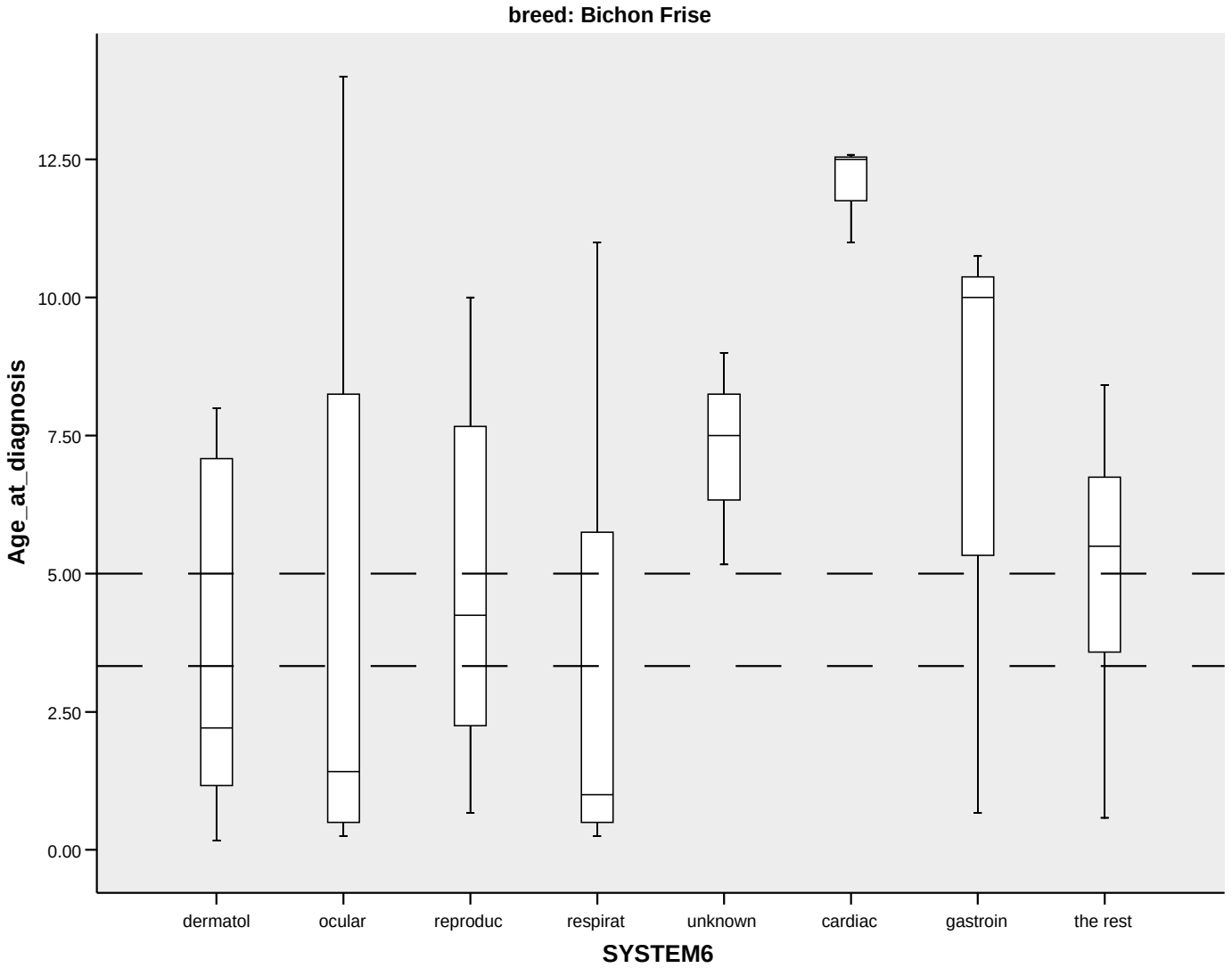


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Bichon Frise breed (N=55 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Bichon Frise breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Bichon Frise breed.

		All conditions		Prevalence	
Disease condition		N	%	%	Most common specific conditions in descending order
1	Dermatologic	11	19.3	7.14	Fading nose pigment; dermatitis; pyotraumatic dermatitis
2	Ocular	11	19.3	4.56	Epiphora; blocked tear duct; cherry eye
3	Reproductive	8	14.0	3.77	Pyometra; dystochia (uterine inertia)
4	Respiratory	5	8.8	2.78	Coughing; long soft palate; rhinitis; noisy breathing
5	Unknown	4	7.0	2.58	Undiagnosed illness
6	Cardiac	3	5.3	2.18	Heart murmur
7	Dental	3	5.3	1.79	Dental disease; retained puppy teeth
8	Gastrointestinal	3	5.3	1.39	Colitis; diarrhoea; haemorrhagic gastroenteritis (HGE)
9	Neurologic	2	3.5	1.39	IVDD
10	Benign neoplasia	1	1.8	1.19	Lipoma
11	Cancer	1	1.8	1.19	Type unspecified
12	Haematopoietic	1	1.8	0.99	Platelet disorder (unspecified)
13	Hepatic	1	1.8	0.79	Chronic liver disease or failure
14	Musculoskeletal	1	1.8	0.60	Arthritis
15	Trauma	1	1.8	0.60	Musculoskeletal
16	Other	1	1.8	0.40	IUncodeable
	Total	57	100.0	35.12	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for Bloodhounds

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Bloodhounds

A total of 180 forms were sent out and 46 were returned, representing 112 live dogs. This breed had a 25.6 % response rate (46/180) and it represented 0.33% of all returns (46/13,741).

Mortality data

A total of 82 deaths were reported and this represents 0.52 % of all deaths reported in the survey (82/15,881). The median age at death for Bloodhounds was 6 years and 9 months (min = 11 months, max = 12 years and 1 month) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Bloodhounds. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Bloodhounds.

	Cause of death	No. of deaths	% of deaths	Most common specific causes in descending order
1	Gastrointestinal	28	34.1	Gastric dilatation/volvulus (GDV)
2	Cancer	22	26.8	Lymphoma; type unspecified
3	Other	6	7.3	Uncodeable
4	Old age	5	6.1	Old age
5	Cardiac	4	4.9	Heart failure; heart attack; cardiomyopathy unspecified
6	Neurologic	4	4.9	Spinal disease unspecified
7	Behaviour	2	2.4	Behavioural problem unspecified
8	Musculoskeletal	2	2.4	Arthritis; polymyositis
9	Trauma	2	2.4	Road traffic accident
10	Urologic	2	2.4	Chronic kidney failure
11	Combinations	1	1.2	Multiple organ failure
12	Died	1	1.2	Natural causes
13	Immune mediated	1	1.2	Unspecified
14	Poisoning	1	1.2	
15	Senility	1	1.2	
	Total	82	100.0	

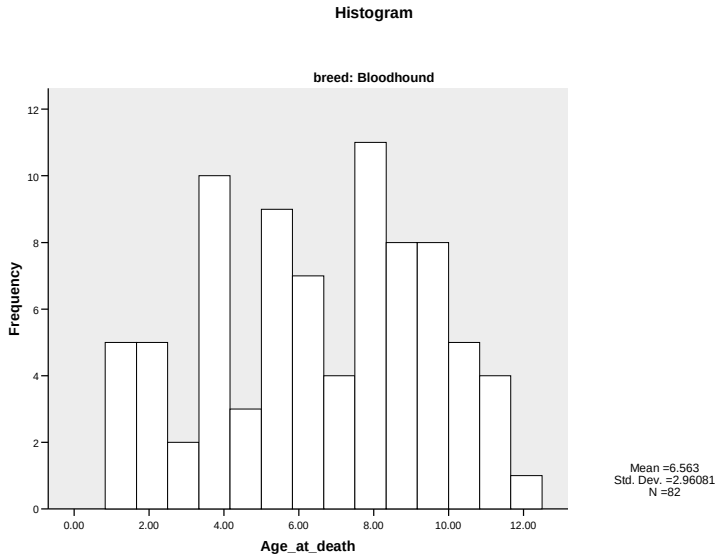


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 82 Bloodhound deaths with age at death reported.

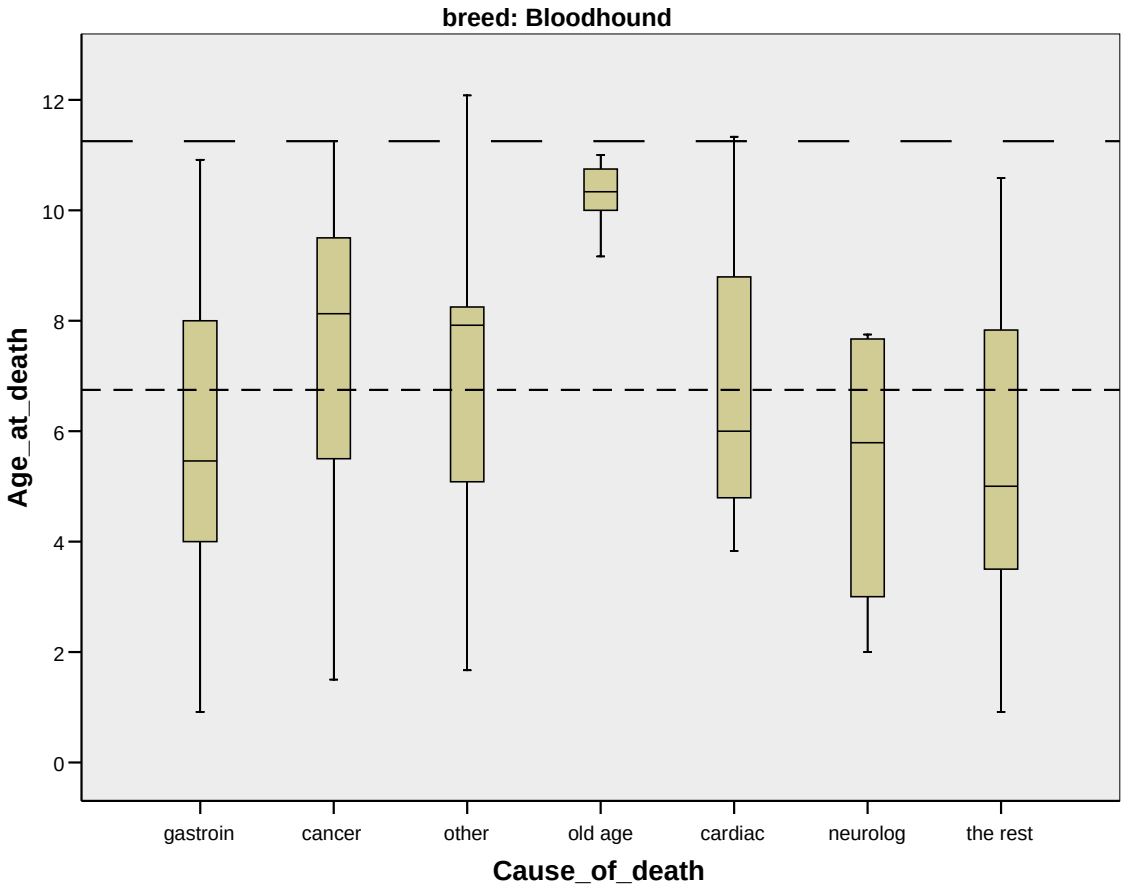


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Bloodhounds (N=82). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Bloodhounds. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 112 live dogs with a reported age was 4 years (min=7 months, max=9 years and 10 months, Figure 3). Health information was reported for 112 live dogs of which 54 (48%) were healthy and 58 (52%) had at least one reported health condition, resulting in a total of 103 reported conditions with a median of 1 condition/dog (min=1, max=6).

The median current age of all healthy dogs with a reported age (N=54) was 2 years and 5 months (min=7 months, max=8 years and 3 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=58) was 5 years and 4 months (min=11 months, max=9 years and 10 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=97) was 2 years and 7 months (min= 4 months, max= 9 years and 10 months, Figure 4). Table 3 shows the disease conditions for Bloodhounds. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 111 Bloodhounds with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	43	29	72 (65%)
Male	34	5	39 (35%)
Totals	77 (69%)	34 (31%)	111 (100%)

Significantly more females were neutered (P=0.0027).

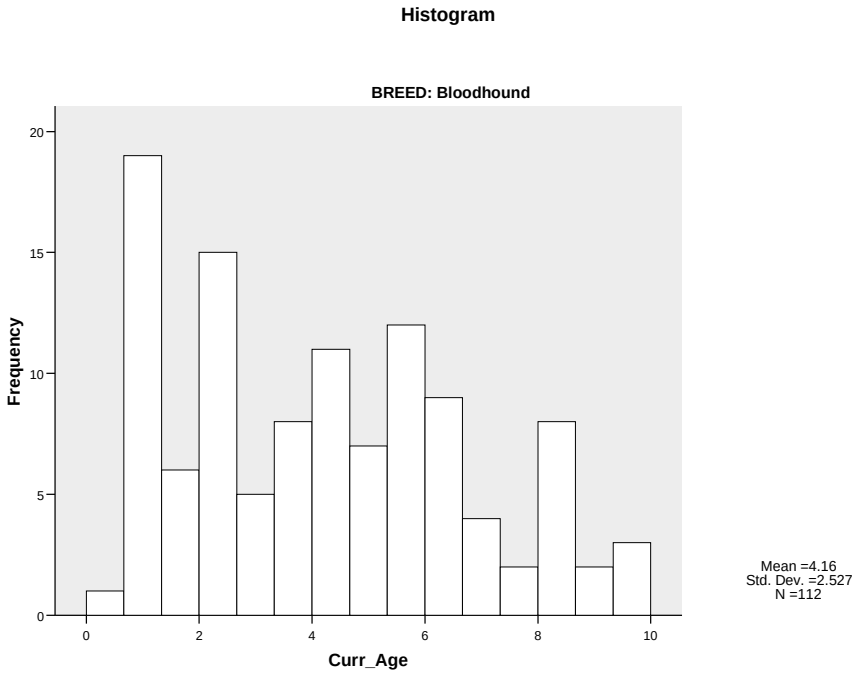


Figure 3. Histogram showing frequency of current age in years for the 112 live Bloodhounds with age reported.

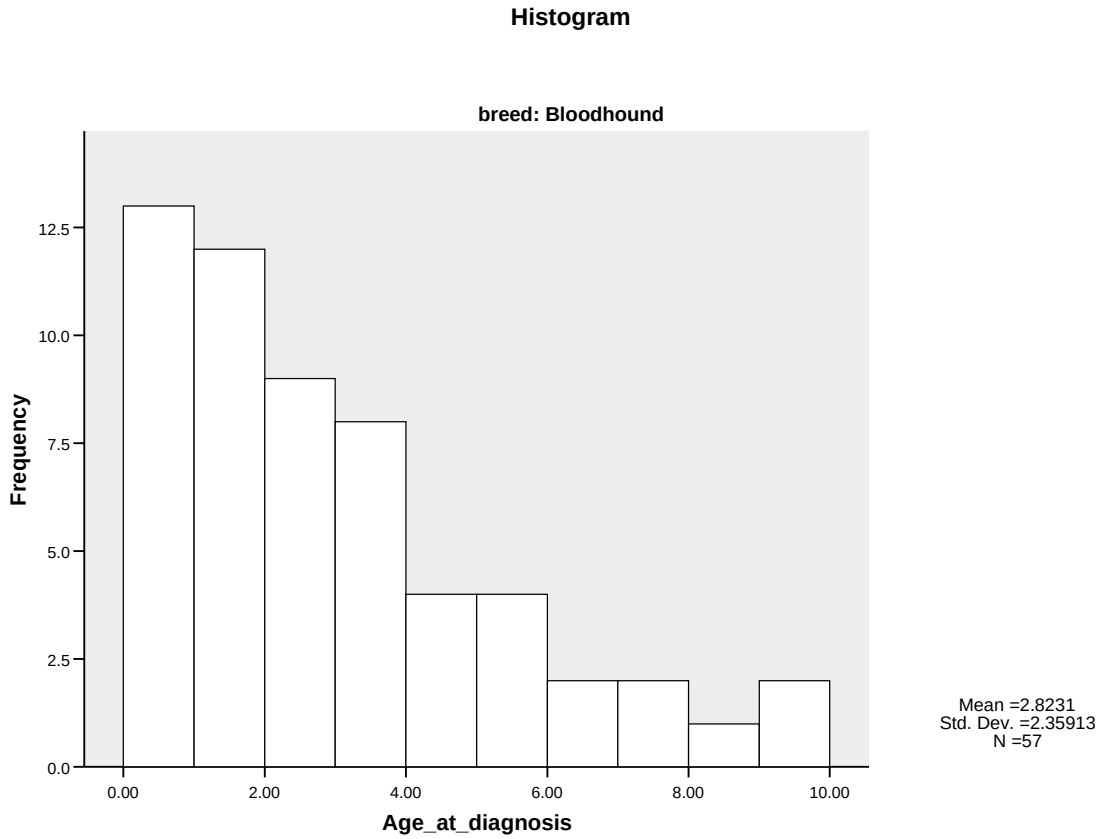


Figure 4. Histogram showing frequency of age at diagnosis for the 57 Bloodhounds with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

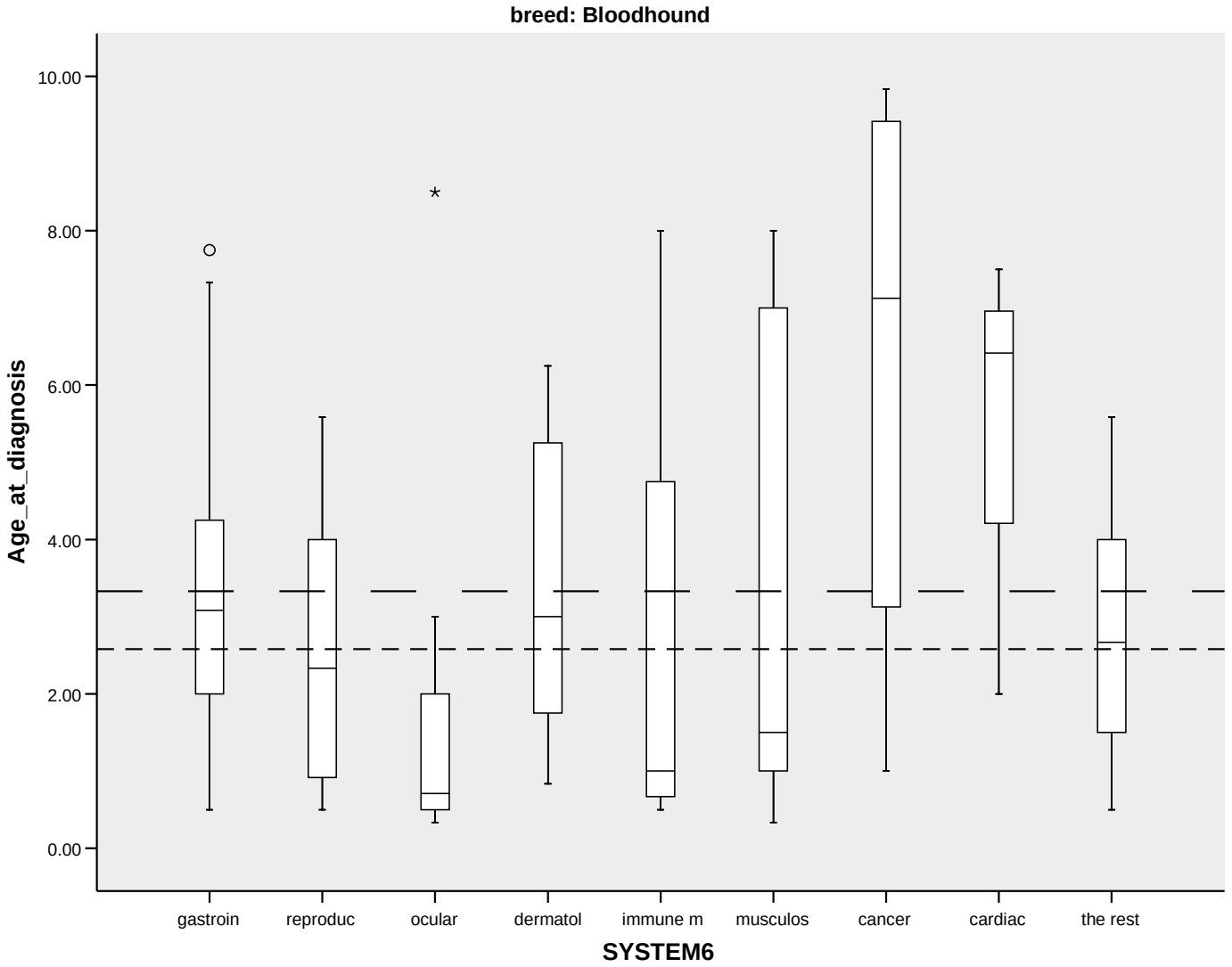


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Bloodhounds (N=97 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Bloodhounds. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Bloodhounds.

		All conditions		Prevalence	
Disease condition		N	%	%	Most common specific conditions in descending order
1	Gastrointestinal	22	21.4	7.14	Gastric dilatation/volvulus (GDV); gastroenteritis
2	Reproductive	18	17.5	4.56	False pregnancy; pyometra; infertility
3	Ocular	14	13.6	3.77	Cherry eye; entropion
4	Dermatologic	12	11.7	2.78	Dermatitis; unspecified parasites; unspecified skin infection
5	Immune mediated	7	6.8	2.58	Gluten-sensitive enteropathy; atopy; dust mites; unspecified
6	Musculoskeletal	7	6.8	2.18	Arthritis; pelvic fracture; elbow dysplasia; prognathism
7	Aural	5	4.9	1.79	Otitis externa
8	Cancer	4	3.9	1.39	Type unspecified; carcinoma; SCC
9	Cardiac	3	2.9	1.39	Hear murmur; pericardial effusion
10	Neurologic	3	2.9	1.19	Seizures; rage syndrome
11	Trauma	2	1.9	1.19	Musculoskeletal; unspecified
12	Other	2	1.9	0.99	Uncodeable
13	Endocrine	1	1.0	0.79	Addisons disease
14	Haematopoietic	1	1.0	0.60	Unspecified platelet disorder
15	Respiratory	1	1.0	0.60	Pneumonia
16	Urologic	1	1.0	0.40	Cystitis
	Total	103	100.0	35.12	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for Border Collies

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Border Collies

A total of 558 forms were sent out and 96 were returned, representing 376 live dogs. This breed had a 17.2 % response rate (96/558) and it represented 0.70% of all returns (96/13,741).

Mortality data

A total of 106 deaths were reported and this represents 0.67 % of all deaths reported in the survey (106/15,881). The median age at death for Border Collies was 12 years and 3 months (min = 2 months, max = 17 years and 4 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Border Collies. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Border Collies.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	25	23.6	Type unspecified
2	Old age	19	17.9	Old age
3	Cerebral vascular	10	9.4	Stroke or cerebral vascular accident
4	Cardiac	7	6.6	Heart attack; heart failure; heart defect unspecified
5	Combinations	6	5.7	Chronic liver failure & kidney failure
6	Unknown	6	5.7	
7	Trauma	5	4.7	Road traffic accident; unspecified
8	Behaviour	4	3.8	Aggression; rage syndrome
9	Neurologic	4	3.8	Seizures; vestibular syndrome
10	Other	4	3.8	Uncodeable
11	Urologic	4	3.8	Chronic kidney failure chronic
12	Respiratory	3	2.8	
13	Musculoskeletal	2	1.9	Arthritis; hip dysplasia
14	Poisoning	2	1.9	
15	Endocrine	1	0.9	Diabetes mellitus
16	Gastrointestinal	1	0.9	Campylobacter
17	Infection	1	0.9	Viral infection
18	Perioperative	1	0.9	Perioperative or anaesthetic related
19	Reproductive	1	0.9	Unspecified
	Total	106	100.0	

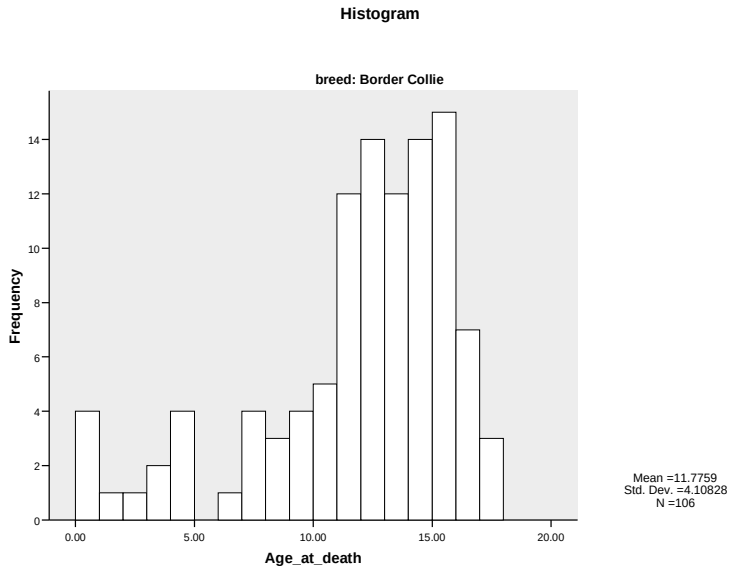


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 106 Border Collie deaths with age at death reported.

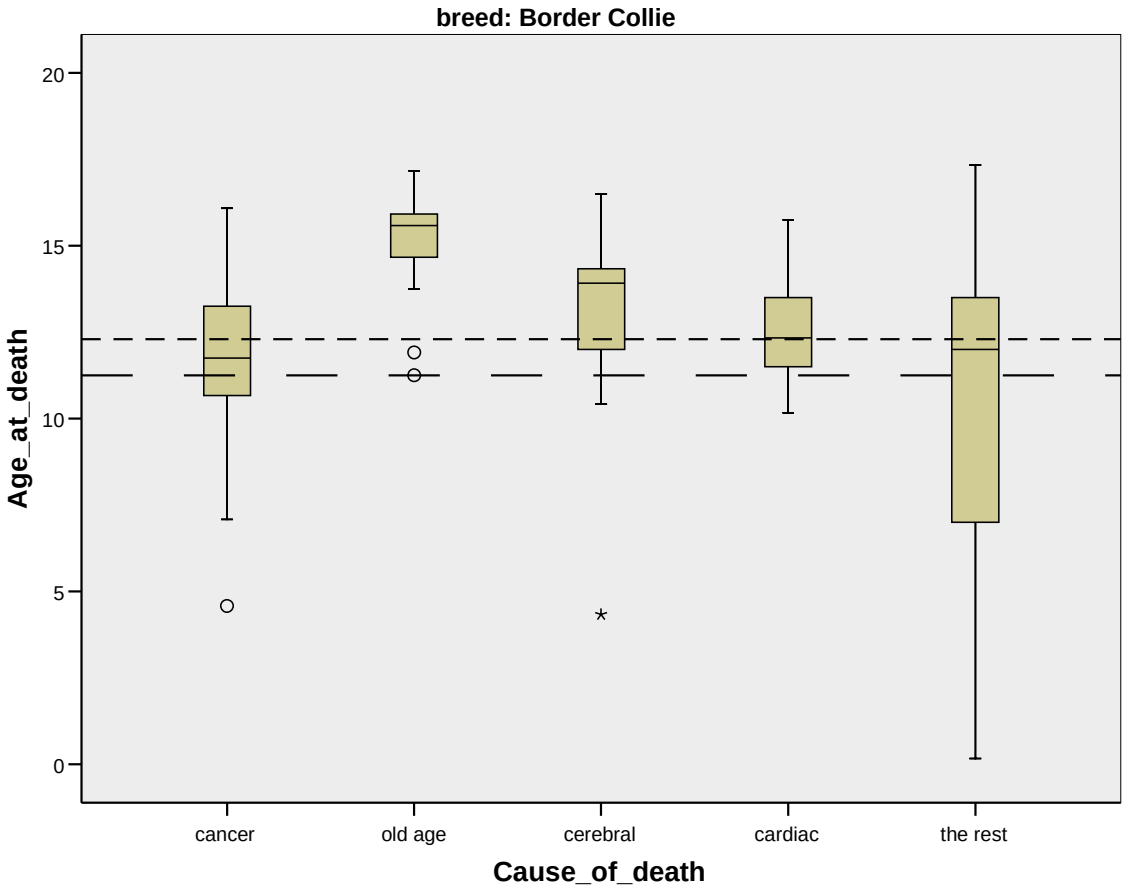


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Border Collies (N=106). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Border Collies. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 375 live dogs with a reported age was 5 years (min=2 months, max=16 years and 7 months, Figure 3). Health information was reported for 376 live dogs of which 266 (71%) were healthy and 110 (29%) had at least one reported health condition, resulting in a total of 172 reported conditions with a median of 1 condition/dog (min=1, max=6).

The median current age of all healthy dogs with a reported age (N=266) was 3 years and 9 months (min=2 months, max=16 years and 3 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=110) was 7 years and 3 months (min=6 months, max=16 years and 7 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=154) was 4 years (min= 2 months, max= 14 years and 7 months, Figure 4). Table 3 shows the disease conditions for Border Collies. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 376 Border Collies with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	147	88	235 (63%)
Male	109	32	141 (38%)
Totals	256 (68%)	120 (32%)	376 (100%)

Significantly more females were neutered (P=0.0030).

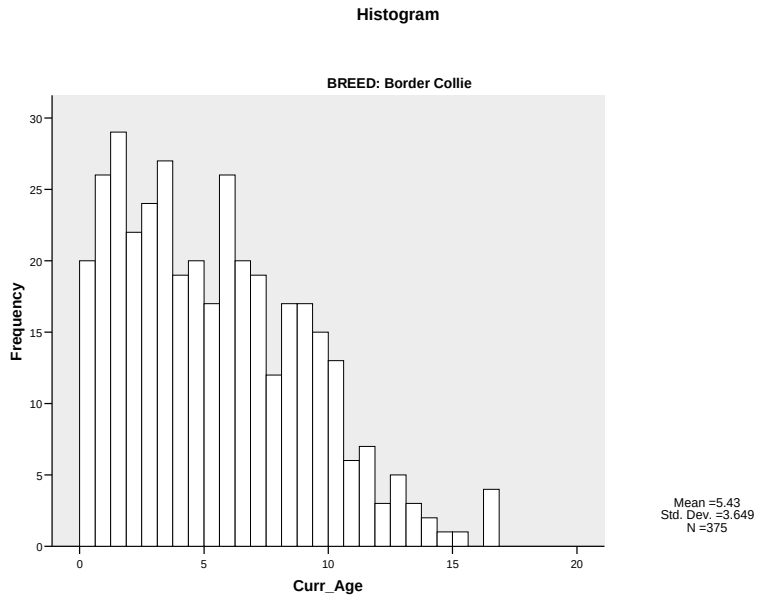


Figure 3. Histogram showing frequency of current age in years for the 375 live Border Collies with age reported.

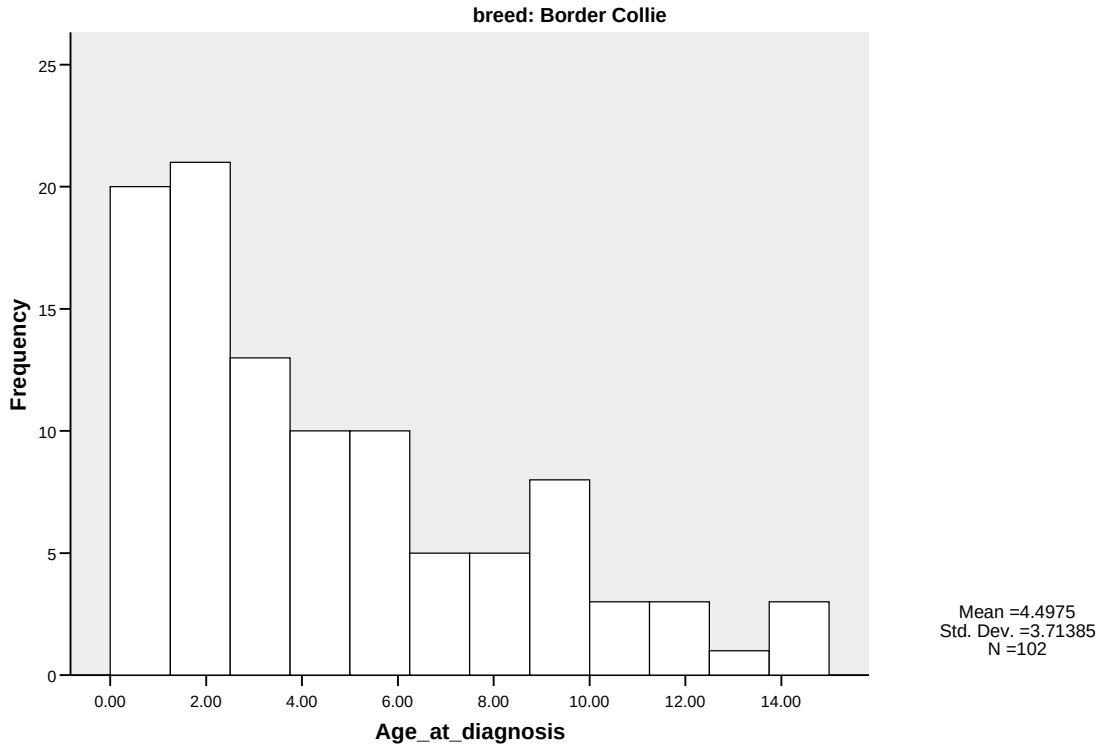


Figure 4. Histogram showing frequency of age at diagnosis for the 102 Border Collies with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

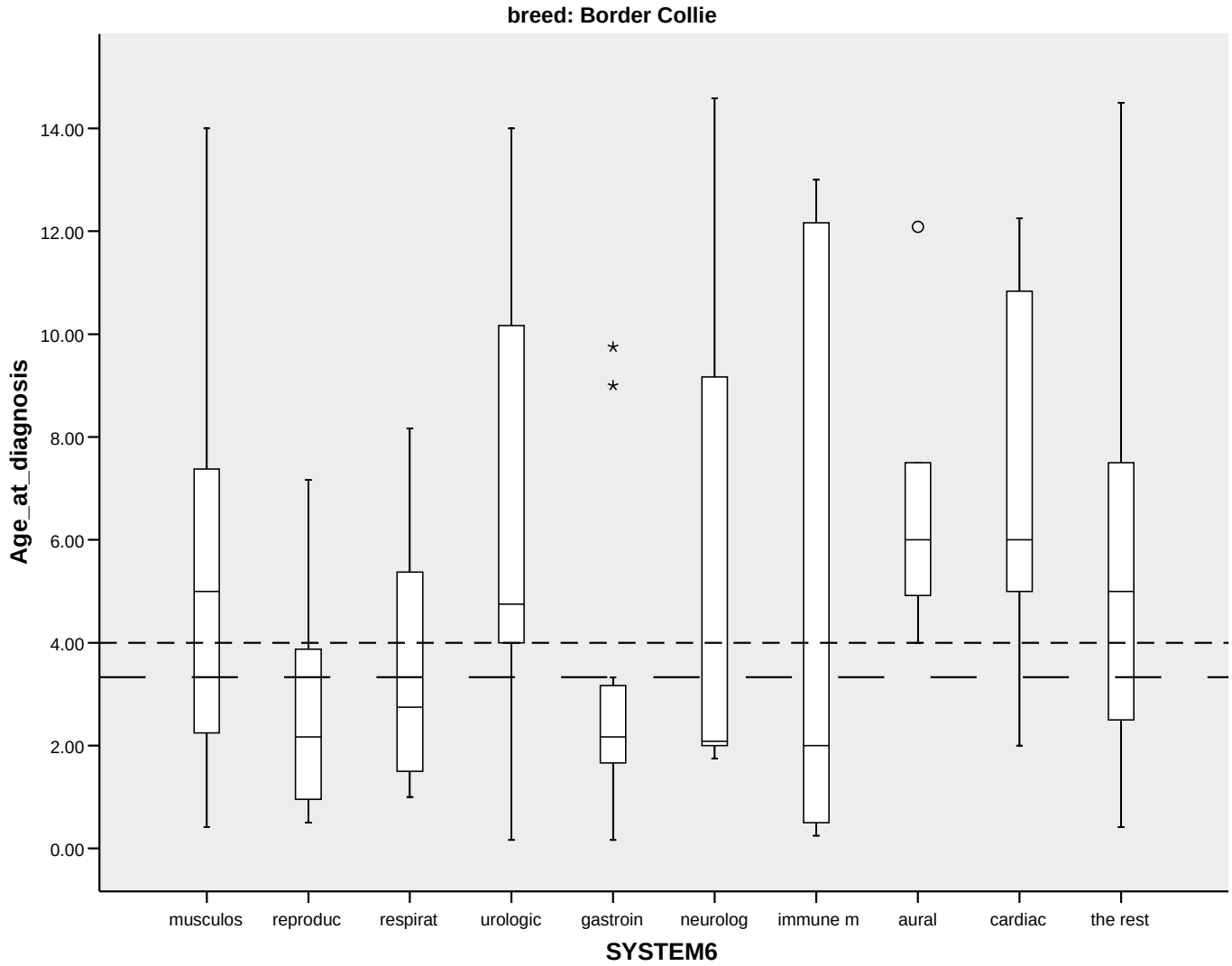


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Border Collies (N=110 dogs with 154 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Border Collies. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Border Collies.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Musculoskeletal	32	18.6	Arthritis; lameness; CLR; OCD; CHD
2	Reproductive	24	14.0	Dystochia (uterine inertia=physical blockage); false pregnancy; cryptorchid
3	Respiratory	20	11.6	Kennel cough; pneumonia
4	Dermatologic	15	8.7	Mites (cheyletiella); dermatitis; alopecia; pyotraumatic dermatitis
5	Urologic	13	7.6	Cystitis; incontinence
6	Gastrointestinal	12	7.0	Colitis; diarrhoea; campylobacter; EPI; pancreatitis; vomiting
7	Neurologic	9	5.2	Seizures; deafness; IVDD; vestibular disease; vestibular syndrome
8	Trauma	7	4.1	Musculoskeletal; neurologic
9	Immune mediated	6	3.5	Unspecified; flea allergy; gluten-sensitive enteropathy
10	Aural	5	2.9	Otitis externa; aural haematoma
11	Cardiac	5	2.9	Heart murmur; pericardial effusion
12	Endocrine	5	2.9	Hypothyroidism; weight gain unspecified
13	Cancer	3	1.7	Type unspecified
14	Dental	3	1.7	Retained puppy teeth; dental disease
15	Ocular	3	1.7	Conjunctivitis; KCS; pannus
16	Unknown	3	1.7	Undiagnosed illness
17	Benign neoplasia	2	1.2	Lipoma
18	Uncode and other	2	1.2	Fluid retention; pyrexia
19	Anal gland	1	0.6	Anal sacculitis
20	Behaviour	1	0.6	Unspecified
21	Cardiopulmonary	1	0.6	Pleural effusion
	Total	172	100.0	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for Border Terriers

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Border Terriers

A total of 528 forms were sent out and 152 were returned, representing 504 live dogs. This breed had a 28.8 % response rate (152/528) and it represented 1.11% of all returns (152/13,741).

Mortality data

A total of 177 deaths were reported and this represents 1.11 % of all deaths reported in the survey (177/15,881). The median age at death for Border Terriers was 14 years (min = 2 months, max = 22 years and 1 month) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Border Terriers. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Border Terriers.

	Cause of death	No. of deaths	% of deaths	Most common specific causes in descending order
1	Old age	54	30.5	Old age & age combinations
2	Cancer	34	19.2	Type unspecified, lymphoma, carcinoma
3	Trauma	14	7.9	Road traffic accident, attacked by dog, unspecified
4	Urologic	12	6.8	Chronic kidney failure, unspecified
5	Combinations	10	5.6	Kidney and liver failure, seizures
6	Cerebrovascular	8	4.5	Stroke or cerebral vascular accident
7	Hepatic	6	3.4	Chronic liver failure
8	Behaviour	5	2.8	Aggression
9	Cardiac	5	2.8	Failure, murmur, attack
10	Gastrointestinal	5	2.8	IBD, colitis, foreign body, unspecified
11	Neurologic	5	2.8	Seizures, intervertebral disc disease
12	Endocrine	3	1.7	Diabetes mellitus, Cushings
13	Respiratory	3	1.7	Pneumonia, emphysema, unspecified
14	Musculoskeletal	2	1.1	Arthritis, muscle weakness
15	Other	2	1.1	Uncodeable
16	Perioperative	2	1.1	
17	Unknown	2	1.1	
18	Collapse	1	.6	
19	Immune mediated	1	.6	Immune disorder unspecified
20	Poisoning	1	.6	
21	Portosystemic shunt	1	.6	
22	Senility	1	.6	
	Total	177	100.0	

Cancer: lymphosarcoma=lymphoma
Gastrointestinal: IBD=inflammatory bowel disease
Endocrine: Cushings disease=hyperadrenocorticism

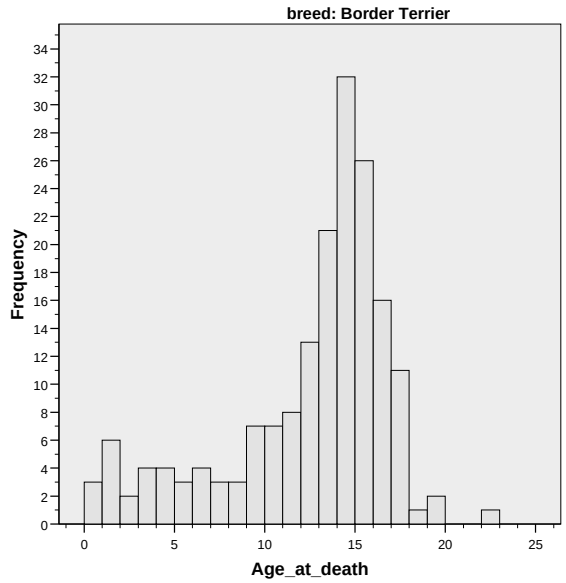


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 177 Border Terrier deaths with age at death reported.

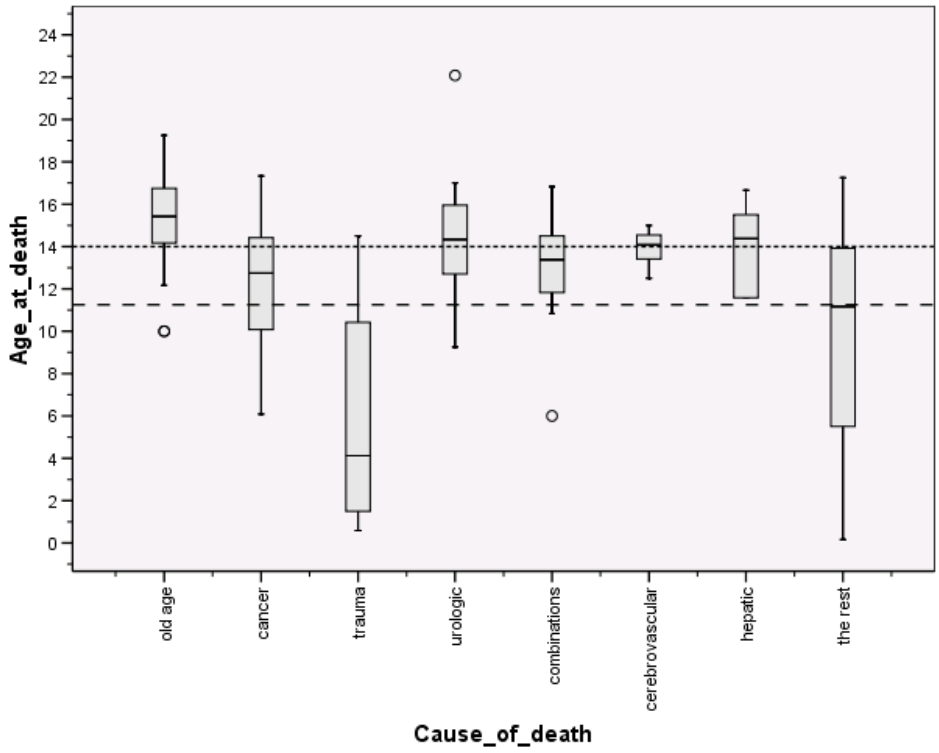


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Border Terriers (N=177). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Border Terriers. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 504 live dogs with a reported age was 4 years and 7 months (min=1 month, max=17 years and 3 months, Figure 3). Health information was reported for 504 live dogs of which 376 (75%) were healthy and 128 (25%) had at least one reported health condition, resulting in a total of 177 reported conditions with a median of 1 condition/dog (min=1, max=4).

The median current age of all healthy dogs with a reported age (N=376) was 3 years and 9 months (min=1 month, max=15 years and 5 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=128) was 8 years (min=1 year and 2 months, max=17 years and 3 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=164) was 4 years and 1 month (min= 2 months, max= 14 years and 6 months, Figure 4). Table 3 shows the disease conditions for Border Terriers. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 499 Border Terriers with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	250	80	330 (66%)
Male	149	20	169 (34%)
Totals	399 (80%)	100 (20%)	499 (100%)

Significantly more females were neutered (P=0.0010).

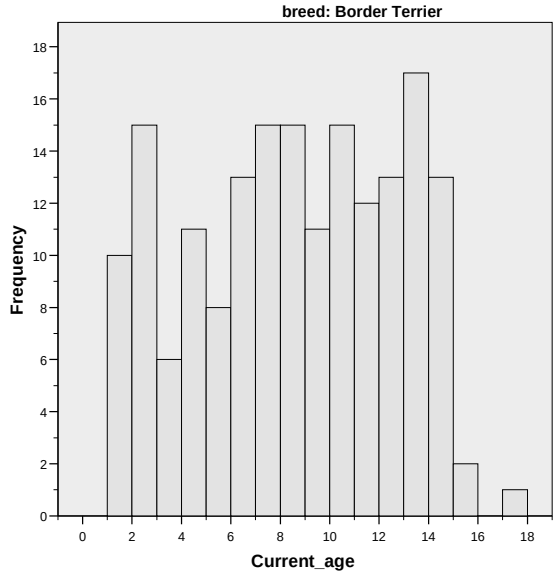


Figure 3. Histogram showing frequency of current age in years for the 504 live Border Terriers with age reported.

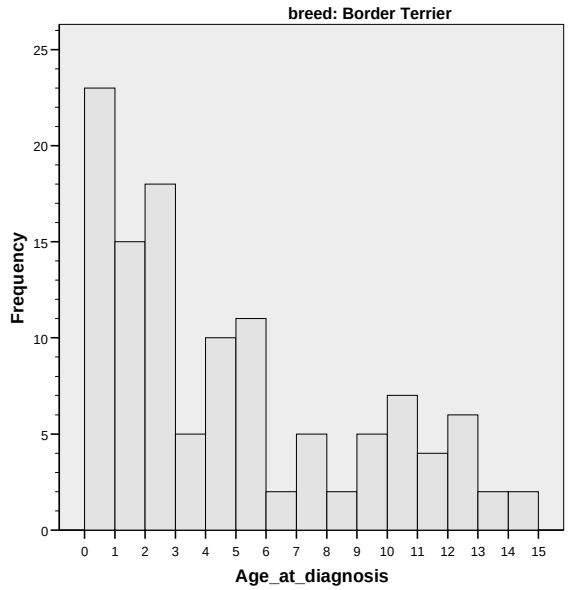


Figure 4. Histogram showing frequency of age at diagnosis for the 128 Border Terriers with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

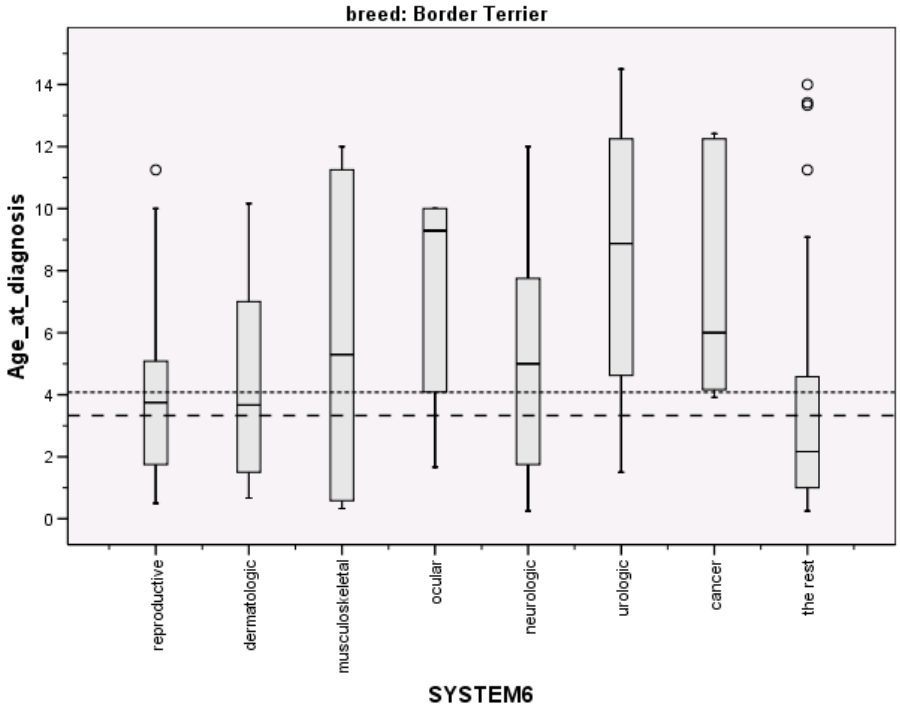


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Border Terriers (N=117 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Border Terriers. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Border Terriers.

	Disease condition	All conditions N	All conditions %	Prevalence %	Most common specific conditions in descending order
1	Reproductive	36	20.3	7.14	Dystochia, pyometra, false pregnancy, infertility, irregular heats eclampsia, prostatic disease, cryptorchid
2	Dermatologic	23	13.0	4.56	Dermatitis, cheyletiella, demodex, fading nose pigment, pyoderma, ringworm, seborrhoea
3	Musculoskeletal	19	10.7	3.77	Arthritis, patellar luxation, prognathism, fracture, avascular necrosis FH, CHD, CLR, tendon injury, tail abnormality
4	Ocular	14	7.9	2.78	Cataracts, conjunctivitis, blindness, blepharitis, epiphora, infection
5	Neurologic	13	7.3	2.58	Seizures, granulomatous meningoencephalitis (GME), deafness
6	Cardiac	11	6.2	2.18	Murmur, arrhythmia, VSD, MVD, valve disease unspecified
7	Immune mediated	9	5.1	1.79	Atopy, food allergy, flea allergy
8	Respiratory	7	4.0	1.39	Kennel cough, bronchitis, noisy breathing
9	Urologic	7	4.0	1.39	Bladder infection, incontinence, blood in urine
10	Aural (ears)	6	3.4	1.19	Otitis externa
11	Gastrointestinal	6	3.4	1.19	Vomiting, pancreatitis, inappetance, intussusception, gastroenteritis unspecified, colitis
12	Cancer	5	2.8	0.99	Type unspecified – mammary, skin, unspecified, oral carcinoma, nasal adenocarcinoma
13	Dental	4	2.3	0.79	Dental disease, retained puppy teeth
14	Hepatic	3	1.7	0.60	Unspecified liver disease
15	Trauma	3	1.7	0.60	Hindlimb, forepaw
16	Anal gland	2	1.1	0.40	Anal sacculitis (anal gland impaction or infection or removal)
17	Behaviour	2	1.1	0.40	Aggression, unspecified
18	Benign neoplasia	2	1.1	0.40	Lipoma
19	Other	3	1.7	0.60	Uncodeable
20	Cerebrovascular	1	.6	0.20	Stroke or cerebral vascular accident
21	Endocrine	1	.6	0.20	Diabetes mellitus
	Total	177	100.0	35.12	

Reproductive: dystochia= uterine inertia (failure to push) slightly>physical blockage (stuck puppy)
Dermatologic: dermatitis=undiagnosed skin irritation or scratching or itchy skin or pruritis
Musculoskeletal: FH=femoral head, CHD=canine hip dysplasia, CLR=cruciate ligament ruptures
Cardiac: VSD=ventricular septal defect, MVD=mitral valve disease
Gastrointestinal: inappetance=loss of appetite or anorexia

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for the Borzoi breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Borzoi breed

A total of 182 forms were sent out and 42 were returned, representing 133 live dogs. This breed had a 23.1 % response rate (42/182) and it represented 0.31% of all returns (42/13,741).

Mortality data

A total of 87 deaths were reported and this represents 0.55 % of all deaths reported in the survey (87/15,881). The median age at death for the Borzoi breed was 9 years and 1 month (min = 7 months, max = 14 years and 3 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Borzoi breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Borzoi breed.

	Cause of death	No. of deaths	% of deaths	Most common specific causes in descending order
1	Old age	19	21.8	Old age
2	Cancer	16	18.4	Bone (type unspecified); lung (type unspecified)
3	Cardiac	11	12.6	Heart failure; heart attack; dilated cardiomyopathy
4	Gastrointestinal	9	10.3	Gastric dilatation/volvulus (GDV); pancreatitis
5	Other	7	8.0	Uncodeable
6	Urologic	6	6.9	Chronic kidney failure > acute
7	Hepatic	3	3.4	Liver failure chronic or unspecified
8	Cerebral vascular	2	2.3	Stroke or cerebral vascular accident
9	Combinations	2	2.3	Kidney & liver failure
10	Neurologic	2	2.3	Seizures; meningitis
11	Trauma	2	2.3	Unspecified
12	Behaviour	1	1.1	Aggression
13	Collapse	1	1.1	
14	Internal bleeding	1	1.1	
15	Musculoskeletal	1	1.1	Arthritis
16	Pining	1	1.1	
17	Reproductive	1	1.1	Toxic shock after whelping
18	Sudden death	1	1.1	
19	Unknown	1	1.1	Undiagnosed illness
	Total	87	100.0	

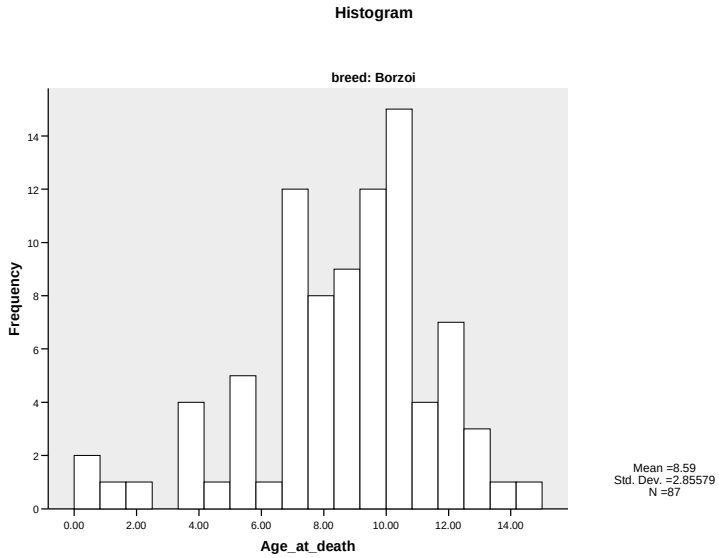


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 87 Borzoi deaths with age at death reported.

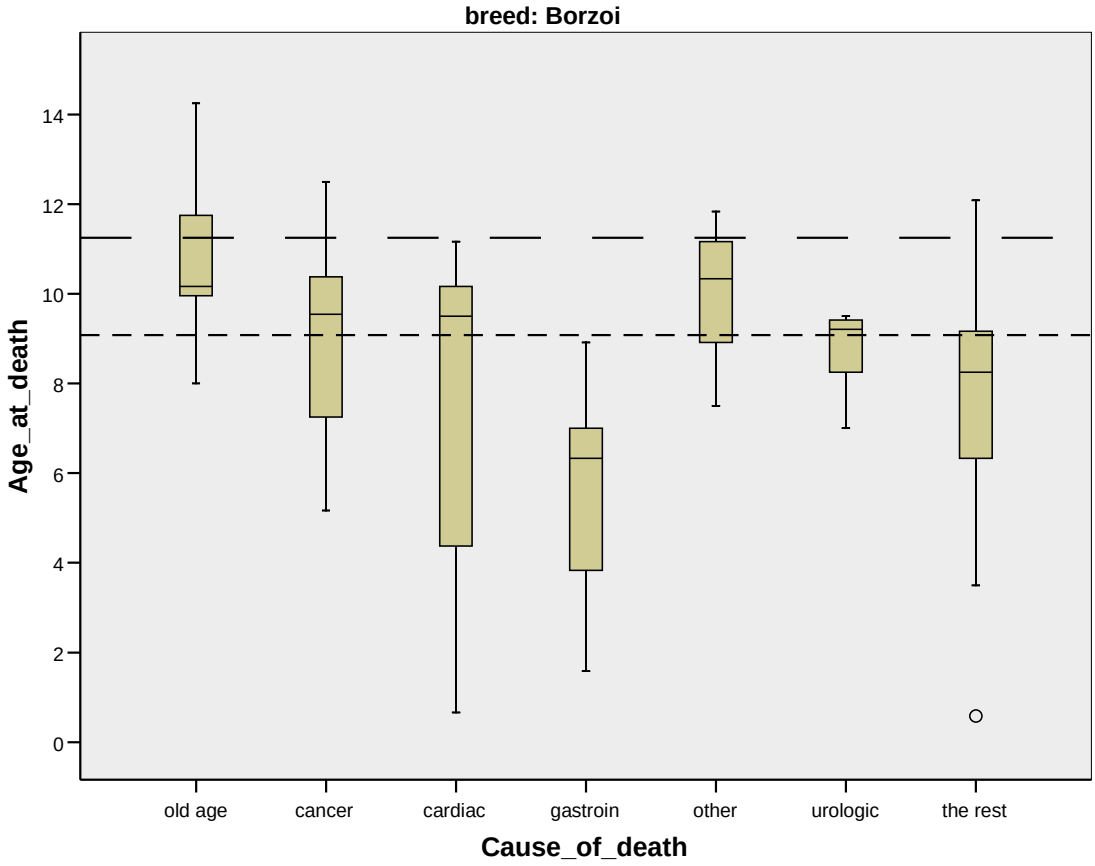


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the Borzoi breed (N=87). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the Borzoi breed. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 133 live dogs with a reported age was 4 years and 8 months (min=4 months, max=12 years and 6 months, Figure 3). Health information was reported for 133 live dogs of which 89 (67%) were healthy and 44 (33%) had at least one reported health condition, resulting in a total of 70 reported conditions with a median of 1 condition/dog (min=1, max=4).

The median current age of all healthy dogs with a reported age (N=89) was 4 years and 3 months (min=4 months, max=10 years and 10 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=44) was 6 years and 4 months (min=5 months, max=12 years and 6 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=66) was 3 years and 3 months (min= 2 months, max= 10 years and 6 months, Figure 4). Table 3 shows the disease conditions for the Borzoi breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 133 the Borzoi breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	45	31	76 (57%)
Male	53	4	57 (43%)
Totals	98 (74%)	35 (26%)	133 (100%)

Significantly more females were neutered (P<0.0001).

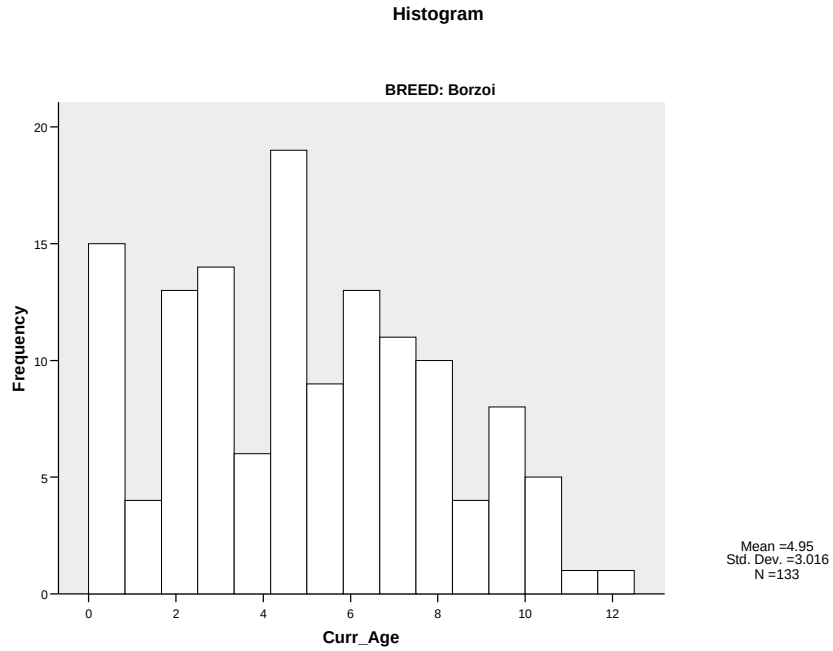


Figure 3. Histogram showing frequency of current age in years for the 133 live the Borzoi breed with age reported.

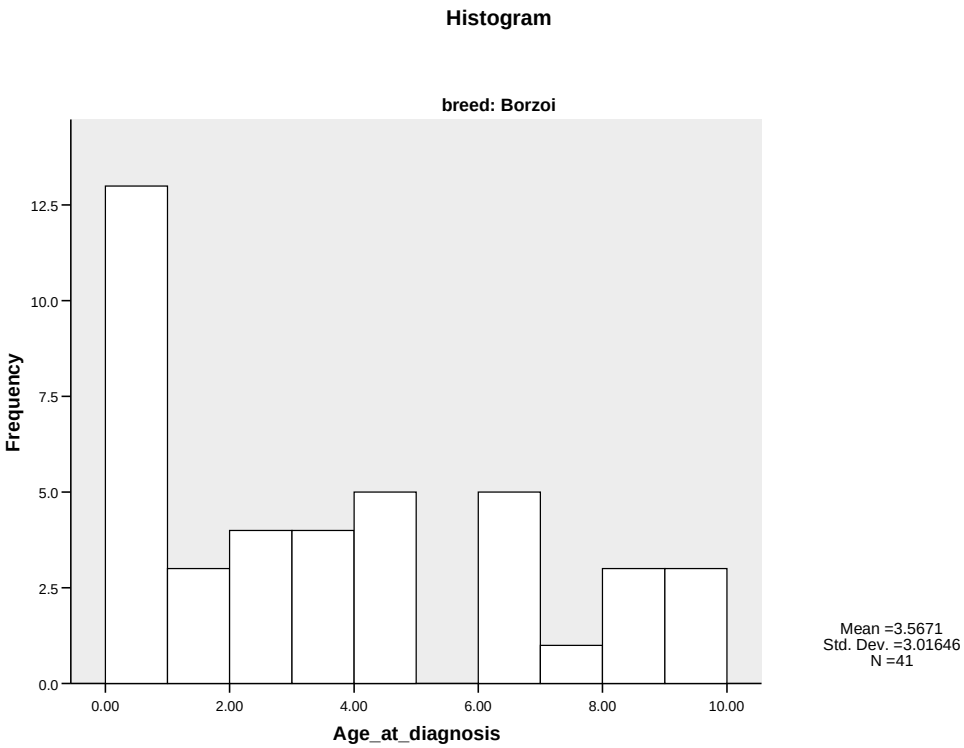


Figure 4. Histogram showing frequency of age at diagnosis for the 41 the Borzoi breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

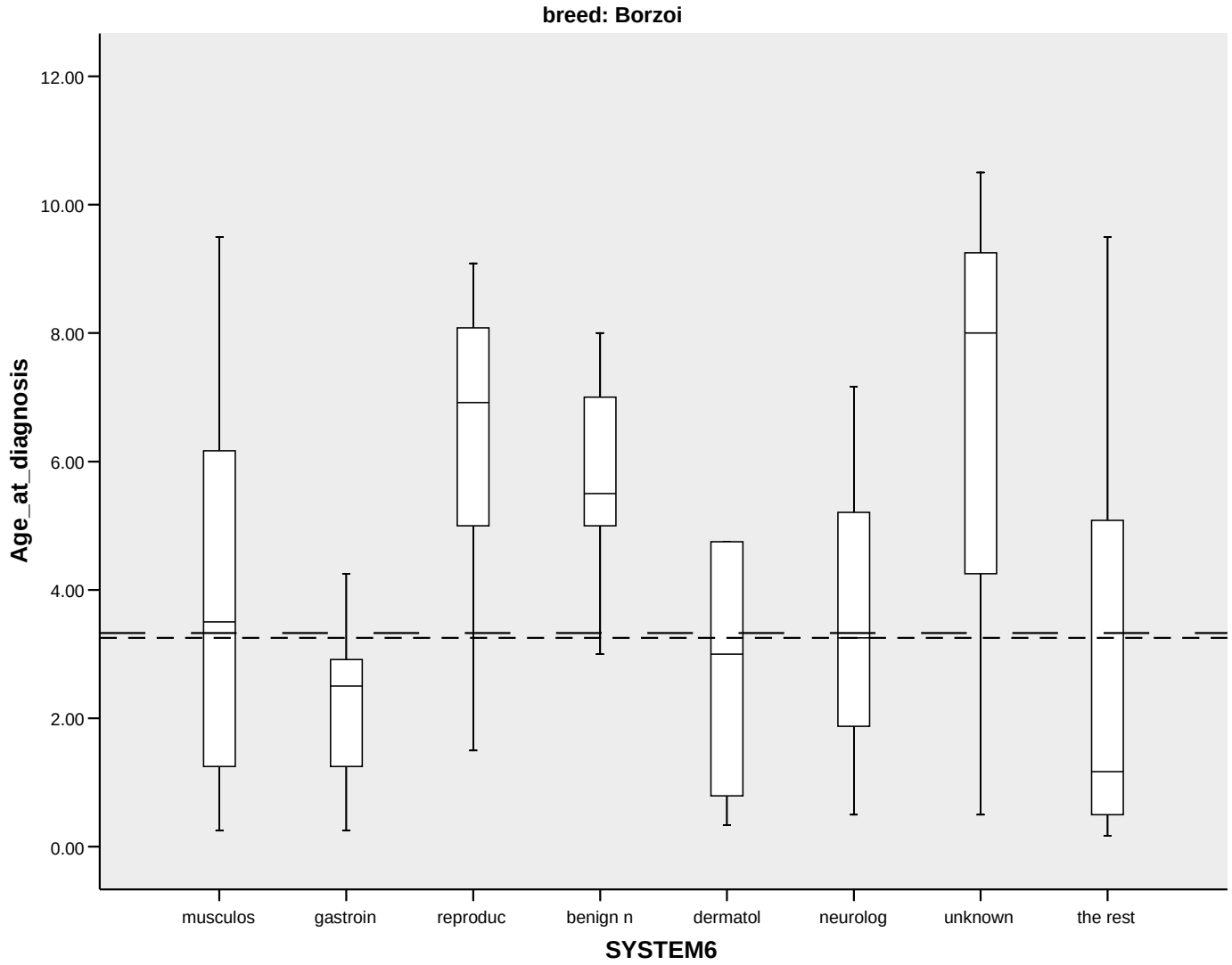


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Borzoi breed (N=66 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Borzoi breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Borzoi breed.

		All conditions		Prevalence	
Disease condition		N	%	%	Most common specific conditions in descending order
1	Musculoskeletal	12	17.1	7.14	Arthritis (unspecified > hindlimb > other); hypertrophic osteodystrophy; OCD
2	Gastrointestinal	11	15.7	4.56	GDV; colitis; chronic gastroenteritis; pancreatitis
3	Reproductive	10	14.3	3.77	Pyometra; uterine inertia; infertility; prostatomegaly
4	Benign neoplasia	5	7.1	2.78	Lipoma; histiocytoma (skin)
5	Dermatologic	5	7.1	2.58	Dermatitis; alopecia
6	Immune mediated	5	7.1	2.18	Gluten-sensitive enteropathy; food hypersensitivity
7	Unknown	4	5.7	1.79	Undiagnosed illness
8	Aural	3	4.3	1.39	Otitis externa
9	Cardiac	3	4.3	1.39	Heart murmur (unspecified); heart rhythm disorder
10	Endocrine	3	4.3	1.19	Hypothyroidism
11	Neurologic	3	4.3	1.19	Seizures
12	Anal gland	2	2.9	0.99	Anal sacculitis
13	Cancer	2	2.9	0.79	Unspecified
14	Respiratory	1	1.4	0.60	Asthma
15	Urologic	1	1.4	0.60	Chronic kidney failure
	Total	70	100.0	35.12	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for Boston Terriers

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Boston Terriers

A total of 110 forms were sent out and 25 were returned, representing 65 live dogs. This breed had a 22.7 % response rate (25/110) and it represented 0.18% of all returns (25/13,741).

Mortality data

A total of 42 deaths were reported and this represents 0.26 % of all deaths reported in the survey (42/15,881). The median age at death for Boston Terriers was 10 years and 11 months (min = 5 years and 2 months, max = 15 years and 9 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Boston Terriers. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Boston Terriers.

	Cause of death	No. of deaths	% of deaths	Most common specific causes in descending order
1	Old age	12	28.6	Old age
2	Cardiac	8	19.0	Heart disease unspecified; heart attack; heart failure
3	Cancer	7	16.7	Brain tumour
4	Respiratory	5	11.9	Respiratory failure; unspecified
5	Neurologic	4	9.5	Meningitis; seizures
6	Endocrine	2	4.8	Addison's disease; Cushings or hyperadrenocorticism
7	Collapse	1	2.4	
8	Combinations	1	2.4	
9	Other	1	2.4	Uncodeable
10	Reproductive	1	2.4	Prostatic disease
	Total	42	100.0	

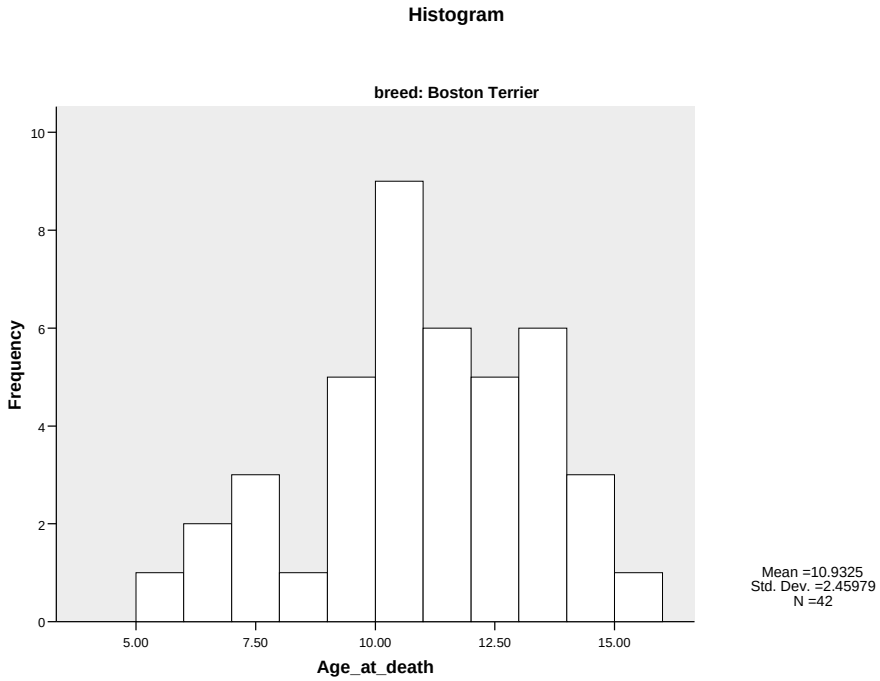


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 42 Boston Terrier deaths with age at death reported.

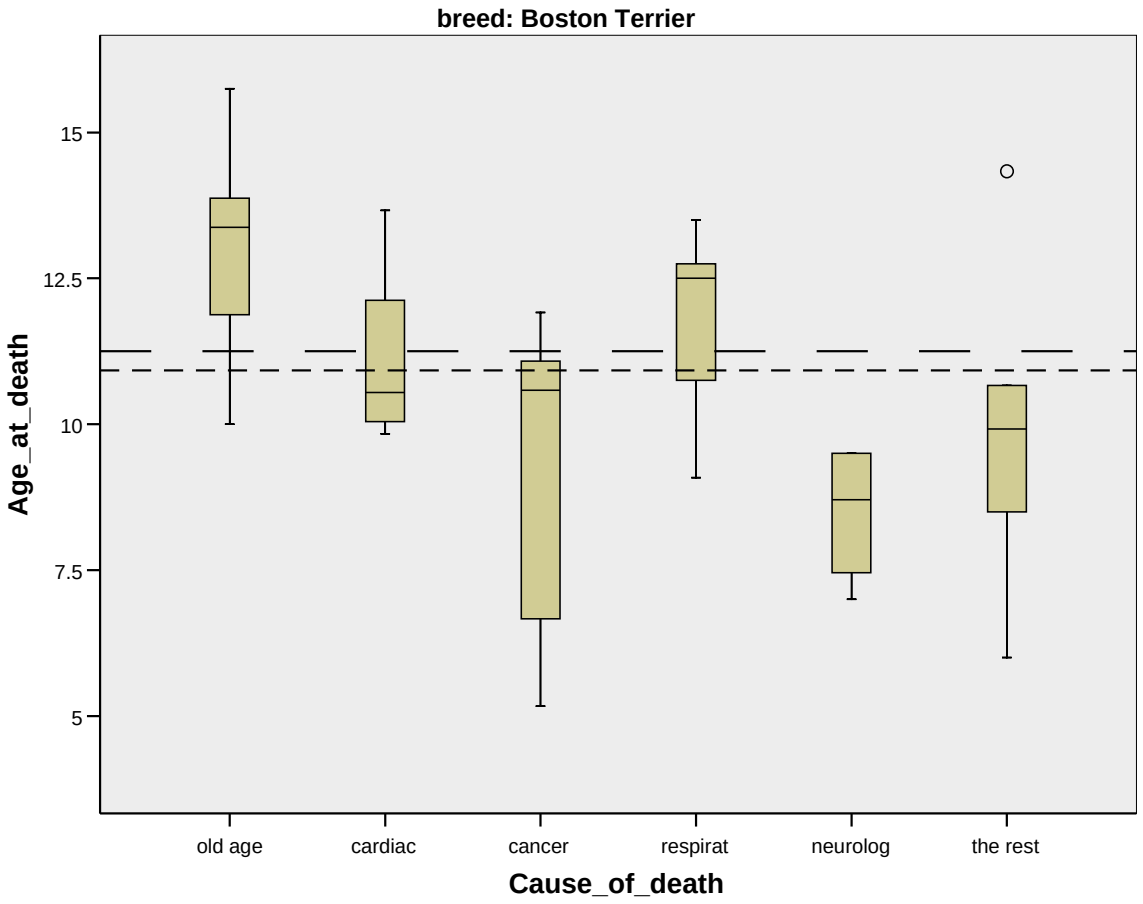


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Boston Terriers (N=42). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Boston Terriers. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 65 live dogs with a reported age was 5 years (min=4 months, max=12 years and 2 months, Figure 3). Health information was reported for 65 live dogs of which 46 (71%) were healthy and 19 (29%) had at least one reported health condition, resulting in a total of 37 reported conditions with a median of 1 condition/dog (min=1, max=4).

The median current age of all healthy dogs with a reported age (N=46) was 3 years and 7 months (min=4 months, max=12 years and 2 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=19) was 5 years and 9 months (min=2 years and 6 months, max=11 years and 8 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=34) was 3 years and 11 months (min= 3 months, max= 11 years and 4 months, Figure 4). Table 3 shows the disease conditions for Boston Terriers. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 65 Boston Terriers with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	30	10	40 (62%)
Male	17	8	25 (38%)
Totals	47 (72%)	18 (28%)	65 (100%)

There was no association between gender and neuter status (P=0.5395).

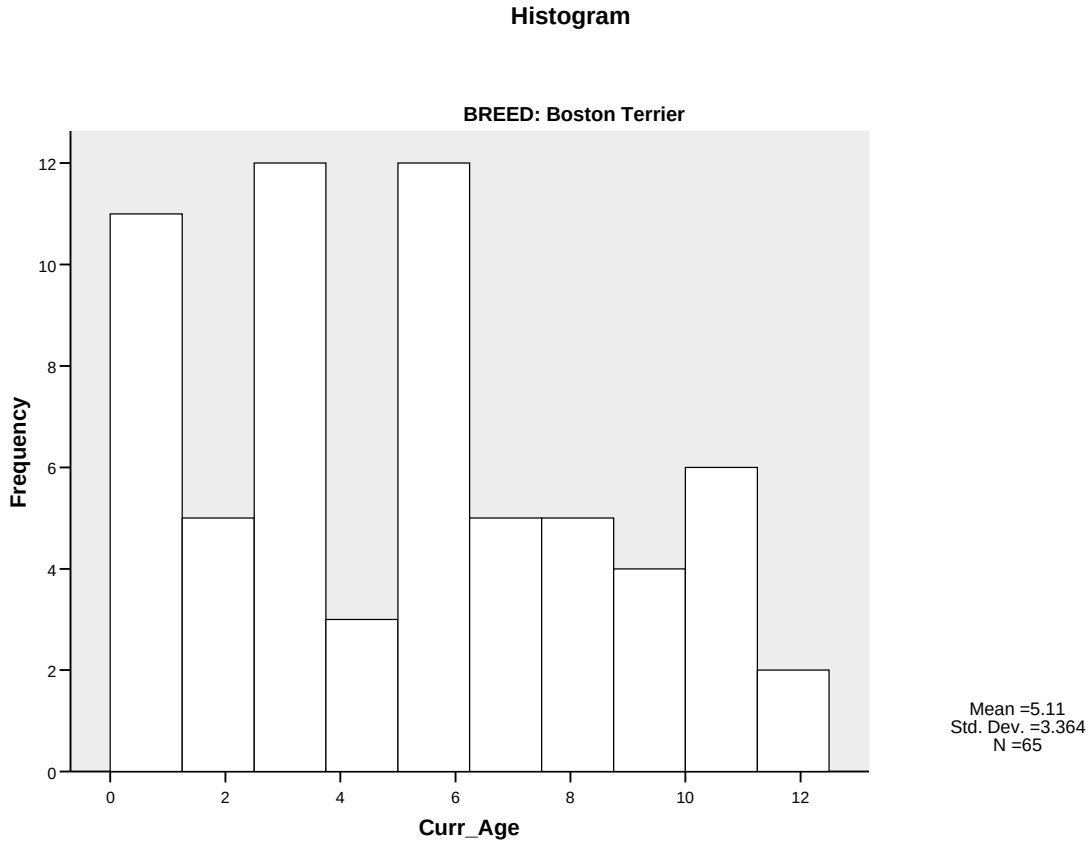


Figure 3. Histogram showing frequency of current age in years for the 65 live Boston Terriers with age reported.

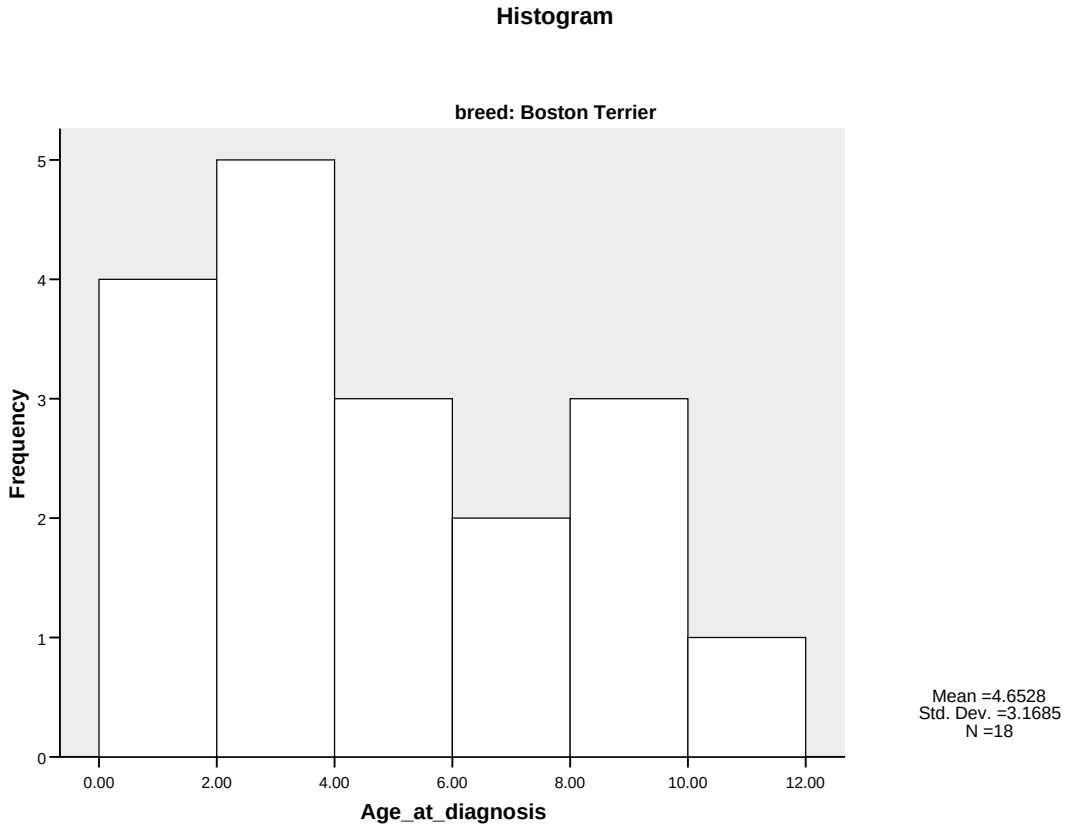


Figure 4. Histogram showing frequency of age at diagnosis for the 18 Boston Terriers with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

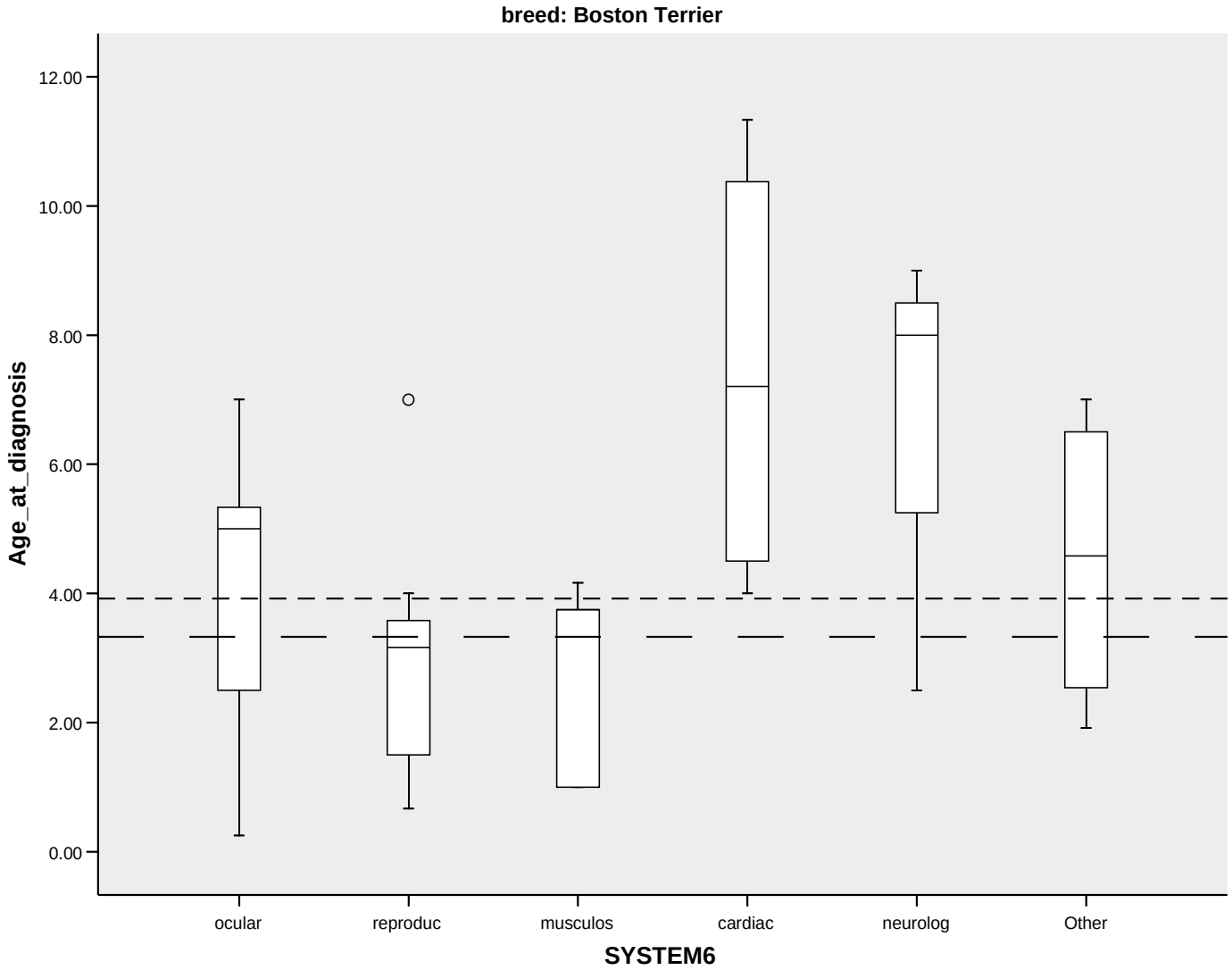


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Boston Terriers (N=34 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Boston Terriers. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Boston Terriers.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Ocular	10	27.0	Cataract (unspecified > congenital); corneal ulcer
2	Reproductive	9	24.3	Dystochia (uterine inertia > physical blockage); false pregnancy; prostatomegaly
3	Musculoskeletal	6	16.2	Arthritis (forelimbs); CLR; patellar luxation
4	Cardiac	4	10.8	Heart murmur (unspecified > Grade 2); collapse
5	Neurologic	3	8.1	Seizures; IVDD
6	Respiratory	3	8.1	Long soft palate
7	Gastrointestinal	1	2.7	Colitis
8	Urologic	1	2.7	Urethral obstruction
	Total	37	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for the Bouvier Des Flandres breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Bouvier Des Flandres breed

A total of 140 forms were sent out and 45 were returned, representing 91 live dogs. This breed had a 32.1 % response rate (45/140) and it represented 0.33% of all returns (45/13,741).

Mortality data

A total of 39 deaths were reported and this represents 0.25 % of all deaths reported in the survey (39/15,881). The median age at death for the Bouvier Des Flandres breed was 11 years and 4 months (min = 9 months, max = 18 years and 4 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Bouvier Des Flandres breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Bouvier Des Flandres breed.

	Cause of death	No. of deaths	% of deaths	Most common specific causes in descending order
1	Cancer	12	30.8	Unspecified; mammary – type unspecified
2	Old age	11	28.2	Old age
3	Cardiac	6	15.4	
4	Combinations	2	5.1	Cancer & heart failure; multiple organ failure & paresis
5	Immune mediated	2	5.1	AIHA; AIHA & thrombocytopaenia (Evan's syndrome)
6	Trauma	2	5.1	Road traffic accident; unspecified
7	Behaviour	1	2.6	Aggression
8	Cerebral vascular	1	2.6	Stroke or cerebral vascular accident
9	Gastrointestinal	1	2.6	Gastric dilatation/volvulus (GDV)
10	Neurologic	1	2.6	Seizures
	Total	39	100.0	

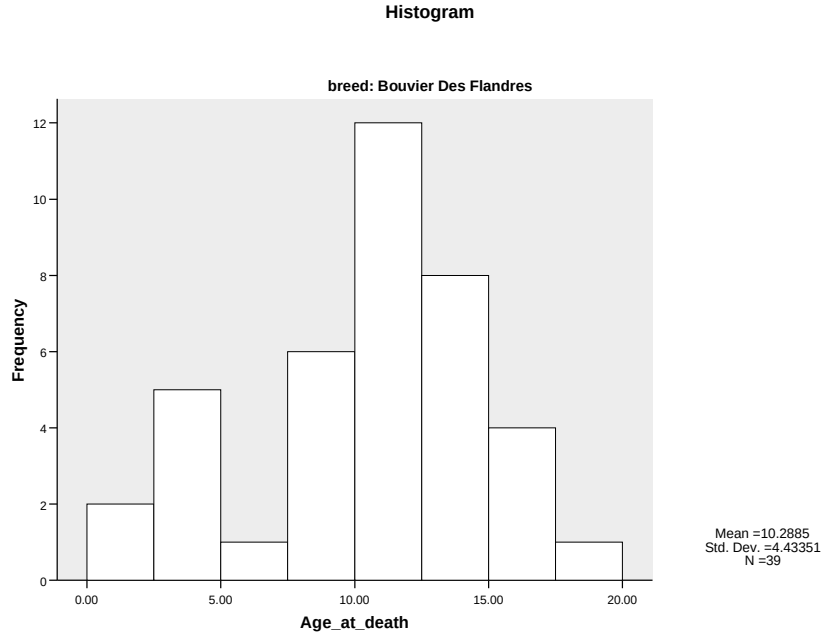


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 39 Bouvier Des Flandres deaths with age at death reported.

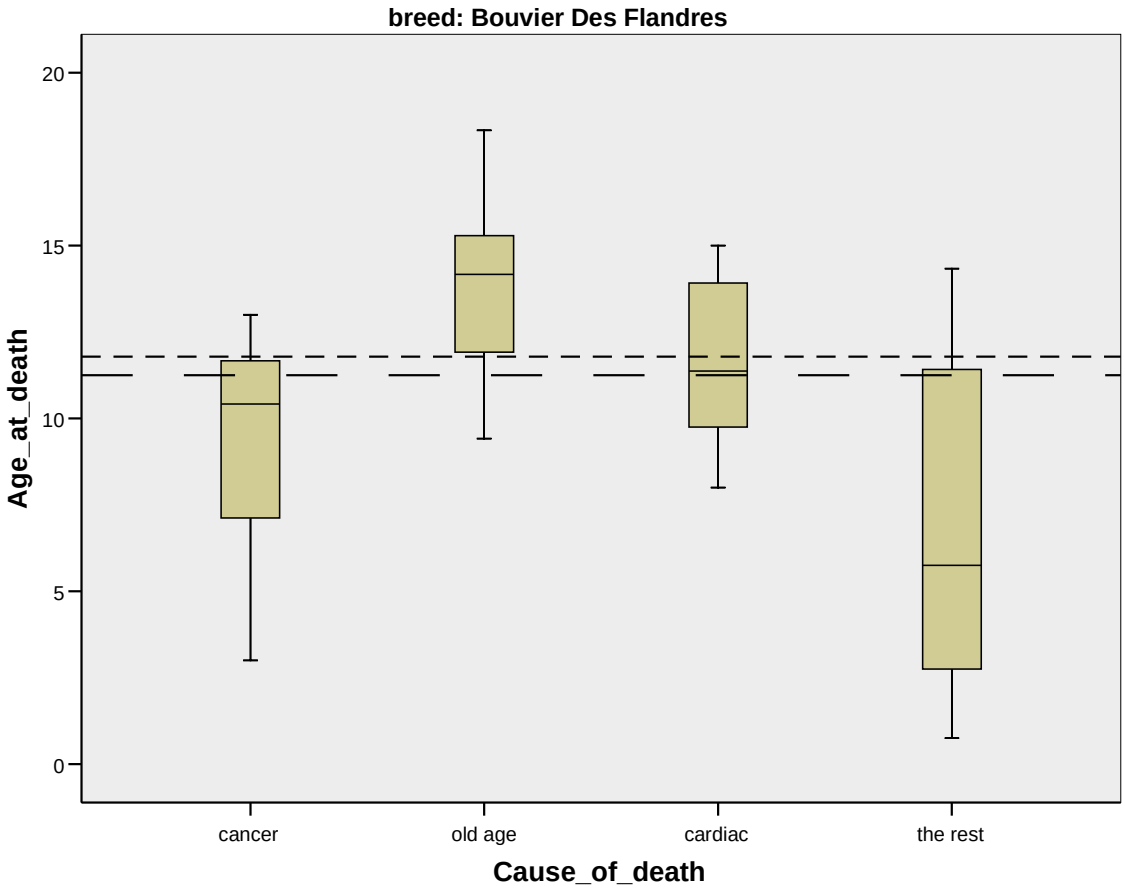


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the Bouvier Des Flandres breed (N=39). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the Bouvier Des Flandres breed. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 91 live dogs with a reported age was 4 years and 4 months (min=5 months, max=18 years and 11 months, Figure 3). Health information was reported for 91 live dogs of which 55 (60%) were healthy and 36 (40%) had at least one reported health condition, resulting in a total of 53 reported conditions with a median of 1 condition/dog (min=1, max=4).

The median current age of all healthy dogs with a reported age (N=55) was 3 years and 3 months (min=5 months, max=13 years and 10 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=36) was 5 years and 5 months (min=8 months, max=18 years and 11 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=53) was 2 years and 1 month (min= 1 month, max= 9 years and 7 months, Figure 4). Table 3 shows the disease conditions for the Bouvier Des Flandres breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for the 91 Bouvier Des Flandres breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	33	23	56 (62%)
Male	26	9	35 (38%)
Totals	59 (65%)	32 (35%)	91 (100%)

There was no association between gender and neuter status (P=0.1355).

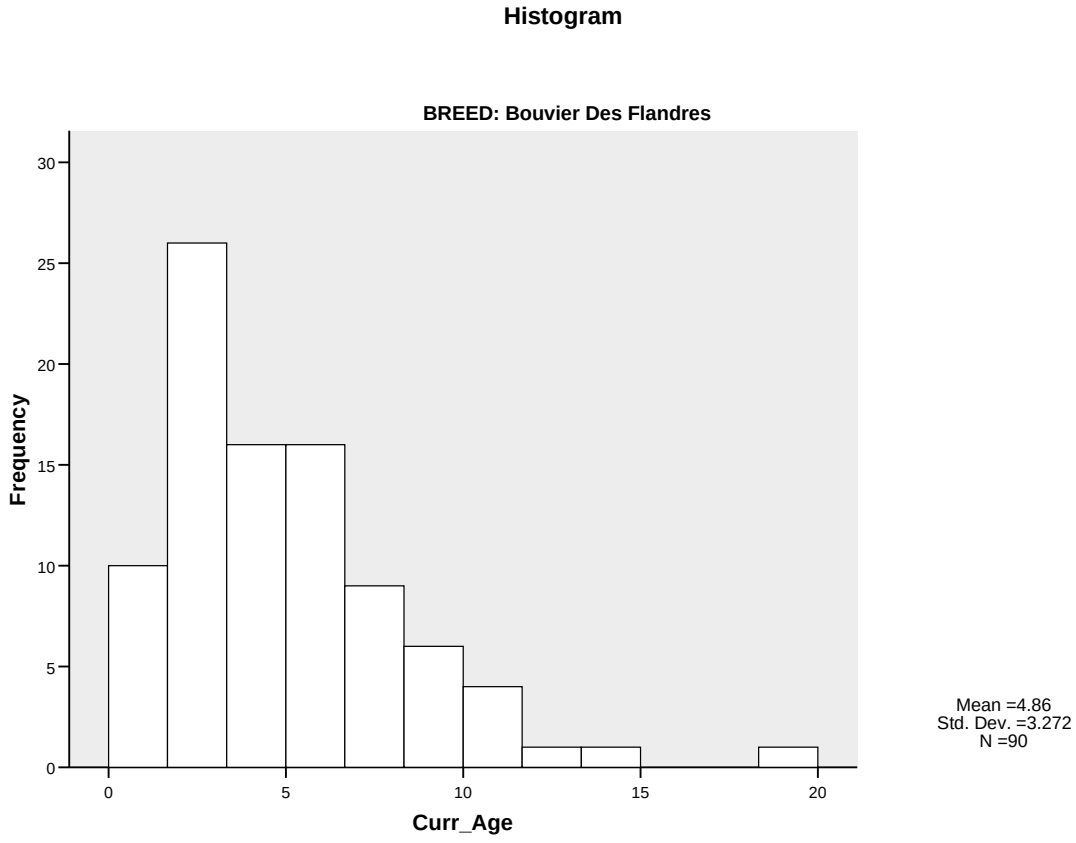


Figure 3. Histogram showing frequency of current age in years for the 90 live the Bouvier Des Flandres breed with age reported.

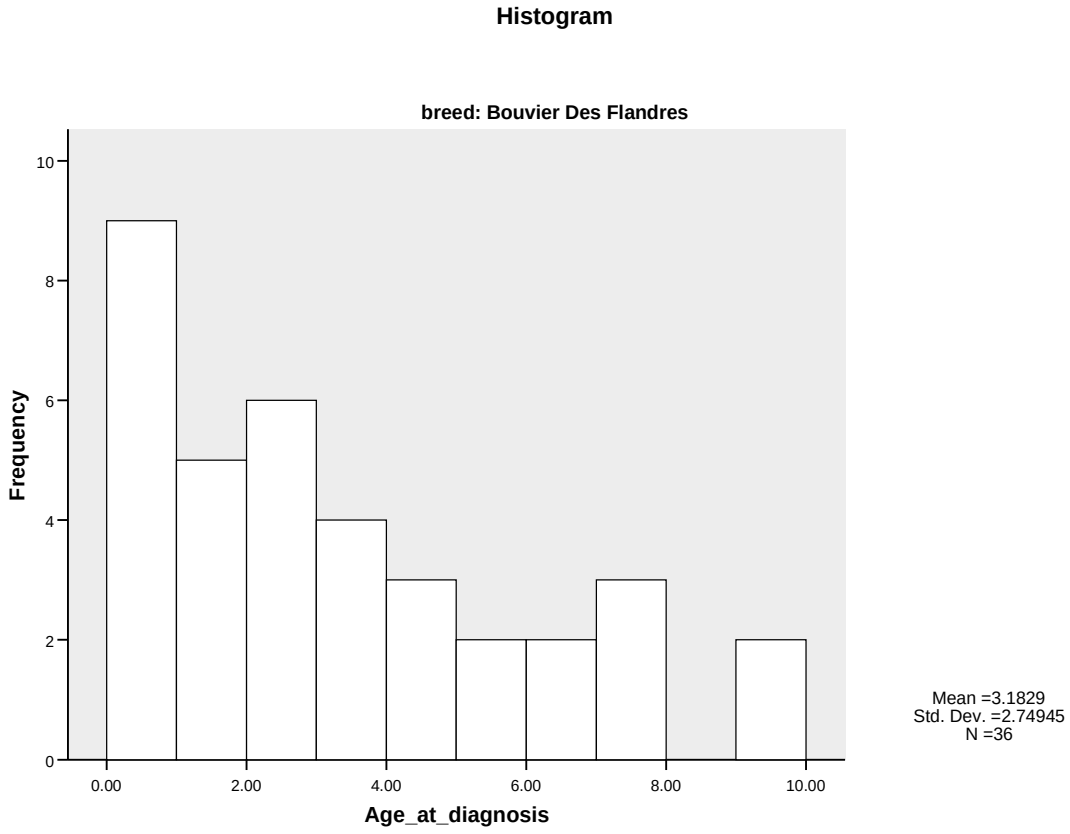


Figure 4. Histogram showing frequency of age at diagnosis for the 36 the Bouvier Des Flandres breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

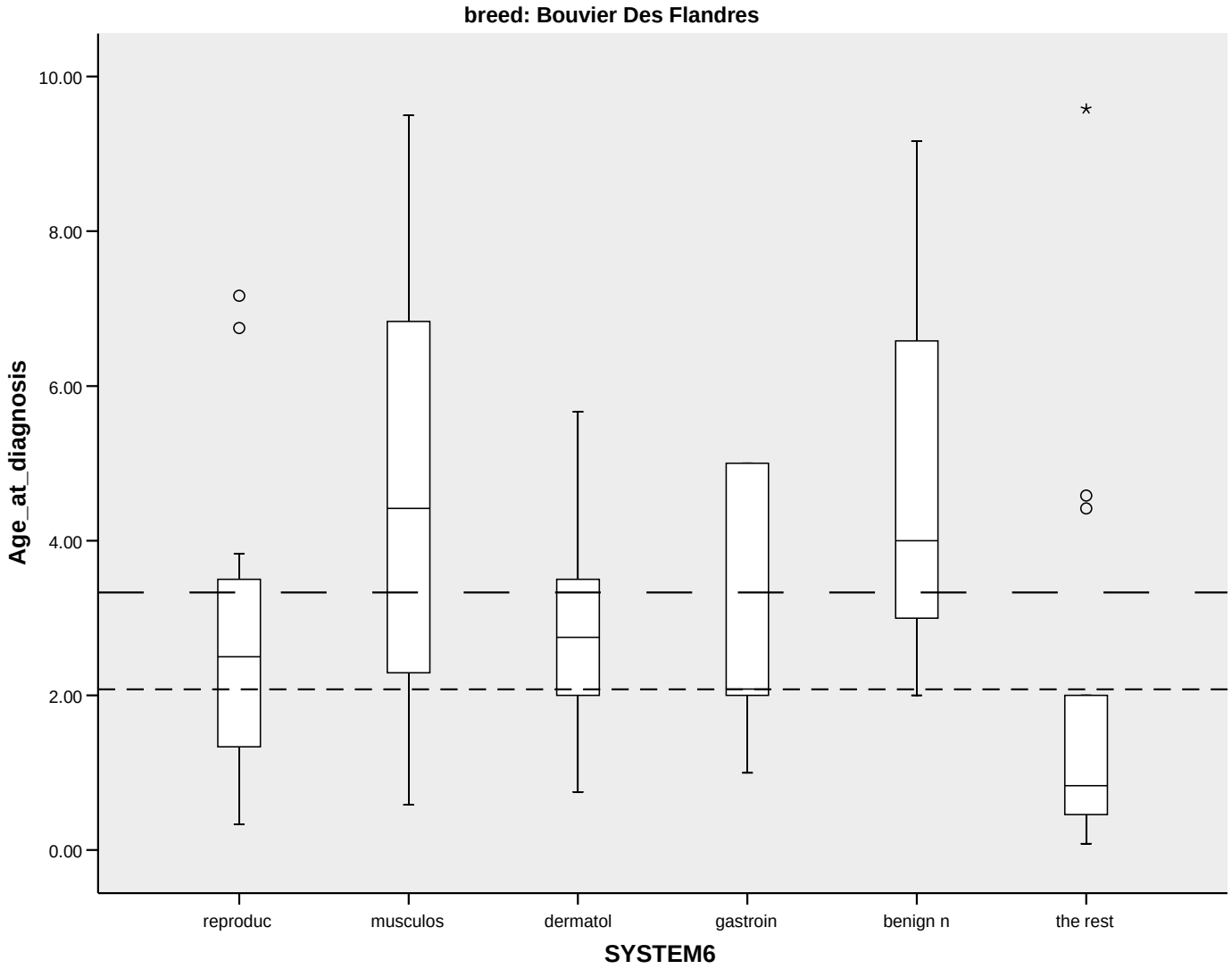


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Bouvier Des Flandres breed (N=53 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Bouvier Des Flandres breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Bouvier Des Flandres breed.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Reproductive	12	22.6	Pyometra; agalactia; false pregnancy; irregular heat cycles
2	Musculoskeletal	11	20.8	Arthritis (hips > other); CHD; cruciate ligament strain; patellar luxation; stiff joints
3	Dermatologic	6	11.3	Dermatitis; pyotraumatic dermatitis; alopecia
4	Gastrointestinal	5	9.4	Colitis; vomiting
5	Ocular	5	9.4	Entropion
6	Benign neoplasia	3	5.7	Unspecified; lipoma
7	Immune mediated	3	5.7	Atopy; food hypersensitivity; gluten-sensitive enteropathy
8	Urologic	3	5.7	Incontinence; cystitis
9	Behaviour	1	1.9	Aggression
10	Cancer	1	1.9	Unspecified
11	Neurologic	1	1.9	Seizures
12	Respiratory	1	1.9	Noisy breathing
13	Other	1	1.9	Uncodeable
	Total	53	100.0	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for Boxers

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Boxers

A total of 450 forms were sent out and 68 were returned, representing 249 live dogs. This breed had a 15.1 % response rate (68/450) and it represented 0.49% of all returns (68/13,741).

Mortality data

A total of 130 deaths were reported and this represents 0.82 % of all deaths reported in the survey (130/15,881). The median age at death for Boxers was 10 years and 3 months (min = 4 months, max = 15 years and 3 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Boxers. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Boxers.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	50	38.5	Brain tumour; lymphoma; unspecified
2	Old age	28	21.5	Old age
3	Cardiac	9	6.9	Heart failure; heart attack; heart disease unspecified
4	Gastrointestinal	9	6.9	GDV; megaoesophagus; pancreatitis
5	Combinations	6	4.6	Kidney & liver failure; multiple organ failure
6	Neurologic	6	4.6	IVDD
7	Cerebral vascular	4	3.1	Stroke or cerebral vascular accident
8	Trauma	3	2.3	Road traffic accident; Spinal injury; unspecified trauma
9	Unknown	3	2.3	
10	Hepatic	2	1.5	Liver failure acute; liver failure chronic or unspecified
11	Behaviour	1	0.8	Aggression
12	Collapse	1	0.8	
13	Died	1	0.8	
14	Endocrine	1	0.8	Cushings or hyperadrenocorticism
15	Musculoskeletal	1	0.8	Arthritis
16	Perioperative	1	0.8	Perioperative or anaesthetic related
17	Reproductive	1	0.8	Prostatic disease
18	Senility	1	0.8	
19	Sudden death	1	0.8	
20	Urologic	1	0.8	Chronic kidney failure chronic
	Total	130	100.0	

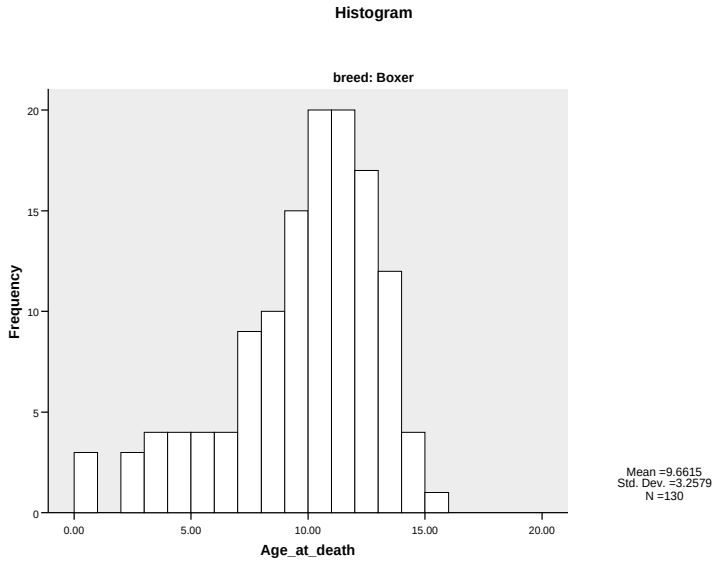


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 130 Boxer deaths with age at death reported.

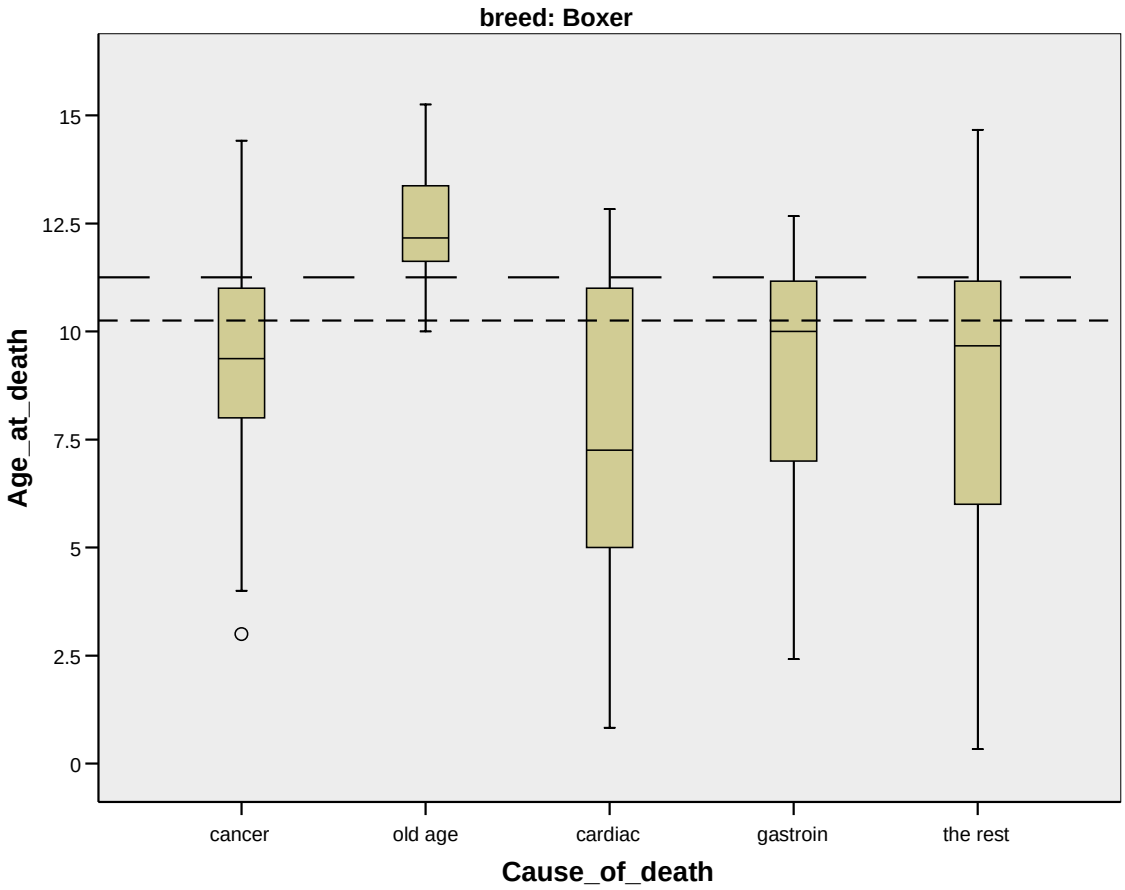


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Boxers (N=130). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Boxers. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 249 live dogs with a reported age was 4 years and 5 months (min=1 month, max=13 years and 1 month, Figure 3). Health information was reported for 249 live dogs of which 144 (58%) were healthy and 105 (42%) had at least one reported health condition, resulting in a total of 218 reported conditions with a median of 2 conditions/dog (min=1, max=7).

The median current age of all healthy dogs with a reported age (N=144) was 3 years (min=1 month, max=11 years and 4 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=105) was 6 years and 8 months (min=3 months, max=13 years and 1 month). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=206) was 3 years (min= 2 months, max= 12 years and 10 months, Figure 4). Table 3 shows the disease conditions for Boxers. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 249 Boxers with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	109	38	147 (59%)
Male	85	17	102 (41%)
Totals	194 (78%)	55 (22%)	249 (100%)

There was no association between gender and neuter status (P=0.0858).

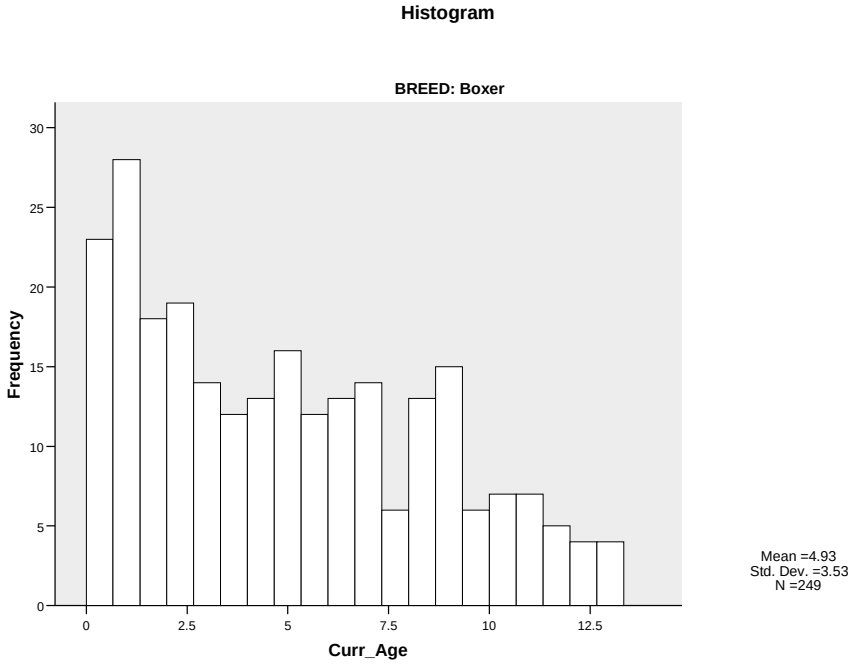


Figure 3. Histogram showing frequency of current age in years for the 249 live Boxers with age reported.

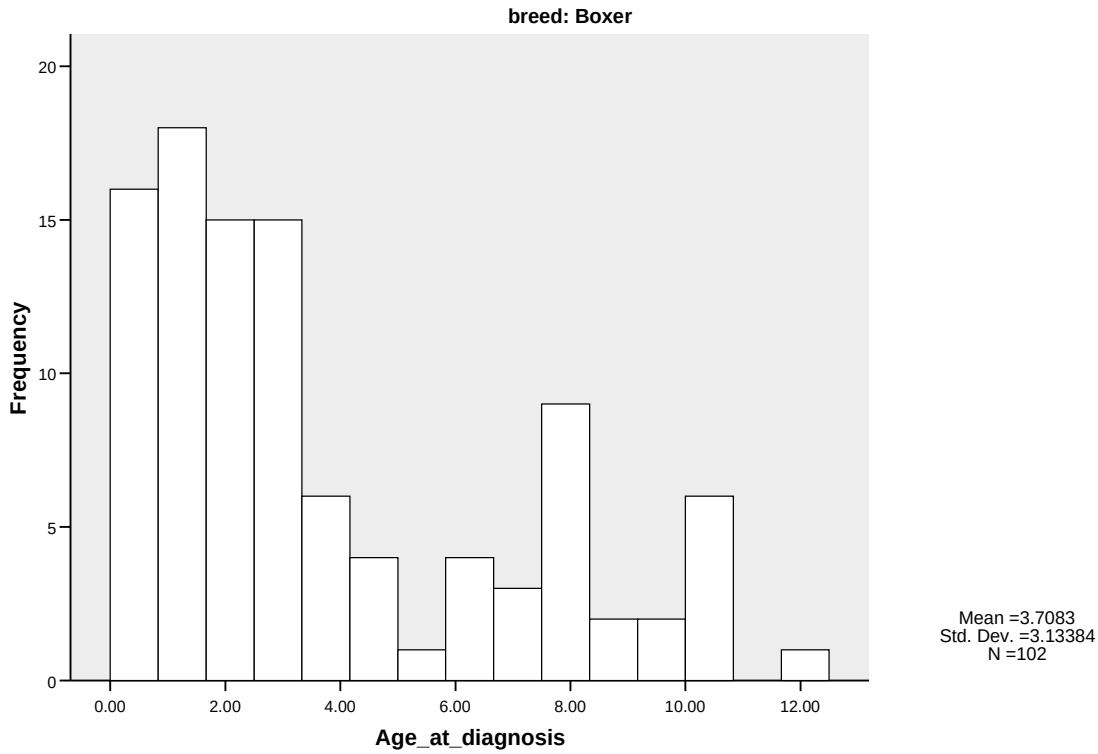


Figure 4. Histogram showing frequency of age at diagnosis for the 102 Boxers with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

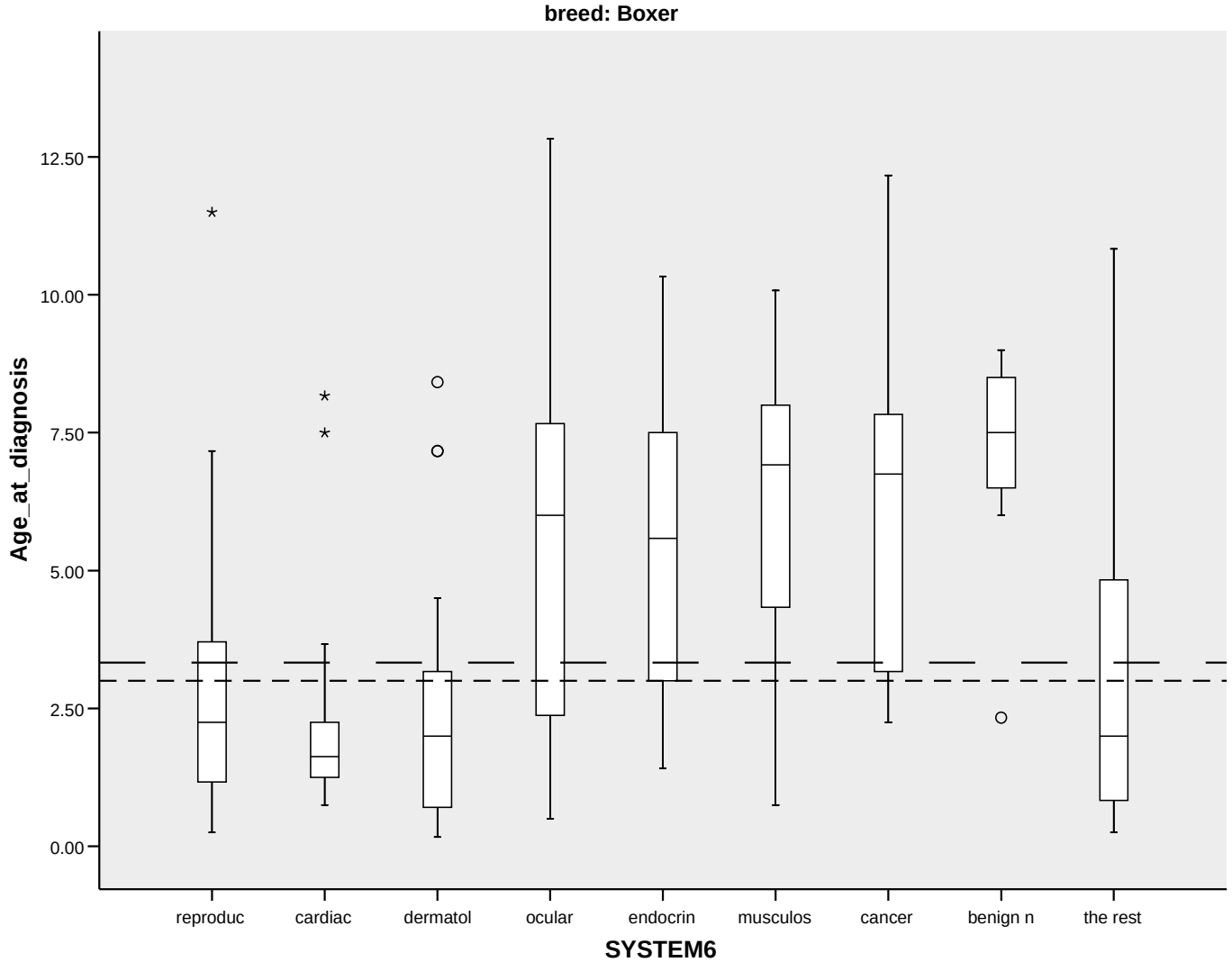


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Boxers (N=105 dogs with 206 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Boxers. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Boxers.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Reproductive	29	13.3	False pregnancy; cryptorchid; dystochia (uterine inertia > physical blockage); infertility
2	Cardiac	26	11.9	Heart murmur (grade 1 > grade 2 > unspecified > grade 4 > rest); aortic stenosis
3	Dermatologic	23	10.6	Mites (cheyletiella > demodex > sarcoptes); dermatitis
4	Ocular	20	9.2	Corneal ulcer; entropion; KCS; ectropion; eversion of the cartilage of the third eyelid
5	Respiratory	19	8.7	Kennel cough; noisy breathing
6	Endocrine	17	7.8	Hypothyroidism; Cushing's disease
7	Musculoskeletal	17	7.8	Arthritis (hindlimb > others); spondylitis; spondylosis; CLR
8	Gastrointestinal	14	6.4	Colitis; diarrhoea; foreign body obstruction; gastroenteritis; malabsorption; pancreatitis
9	Cancer	13	6.0	Unspecified (skin > mammary); carcinoma; sarcoma
10	Benign neoplasia	11	5.0	Lipoma; unspecified; histiocytoma
11	Immune mediated	8	3.7	Atopy; unspecified; food hypersensitivity
12	Urologic	6	2.8	Cystitis
13	Aural	5	2.3	Otitis externa
14	Neurologic	5	2.3	Seizures; IVDD; deafness
15	Dental	2	0.9	Dental deformity other than extra teeth; dental disease
16	Unknown	2	0.9	Undiagnosed illness
17	Anal gland	1	0.5	Anal sacculitis
	Total	218	100.0	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for the Bracco Italiano breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Bracco Italiano breed

A total of 43 forms were sent out and 11 were returned, representing 19 live dogs. This breed had a 25.6 % response rate (11/43) and it represented 0.08% of all returns (11/13,741).

Mortality data

A total of 1 death was reported and this represents 0.01 % of all deaths reported in the survey (1/15,881). The median age at death for the Bracco Italiano breed was 2 years and 8 months (min = 2 years and 8 months, max = 2 years and 8 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Bracco Italiano breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Bracco Italiano breed.

	Cause of death	No. of deaths	% of deaths	Most common specific causes in descending order
1	Urologic	1	100.0	Acute kidney failure
	Total	1	100.0	

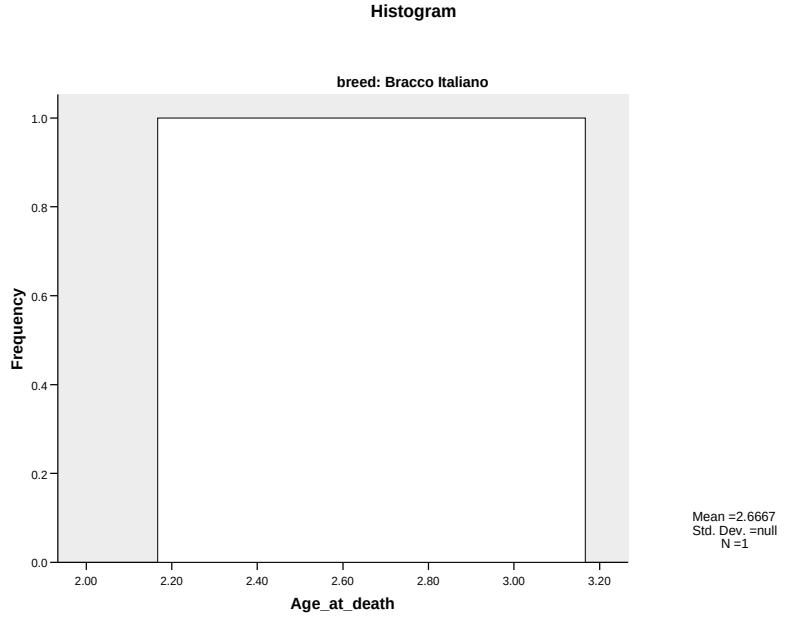


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 1 Bracco Italiano death with age at death reported.

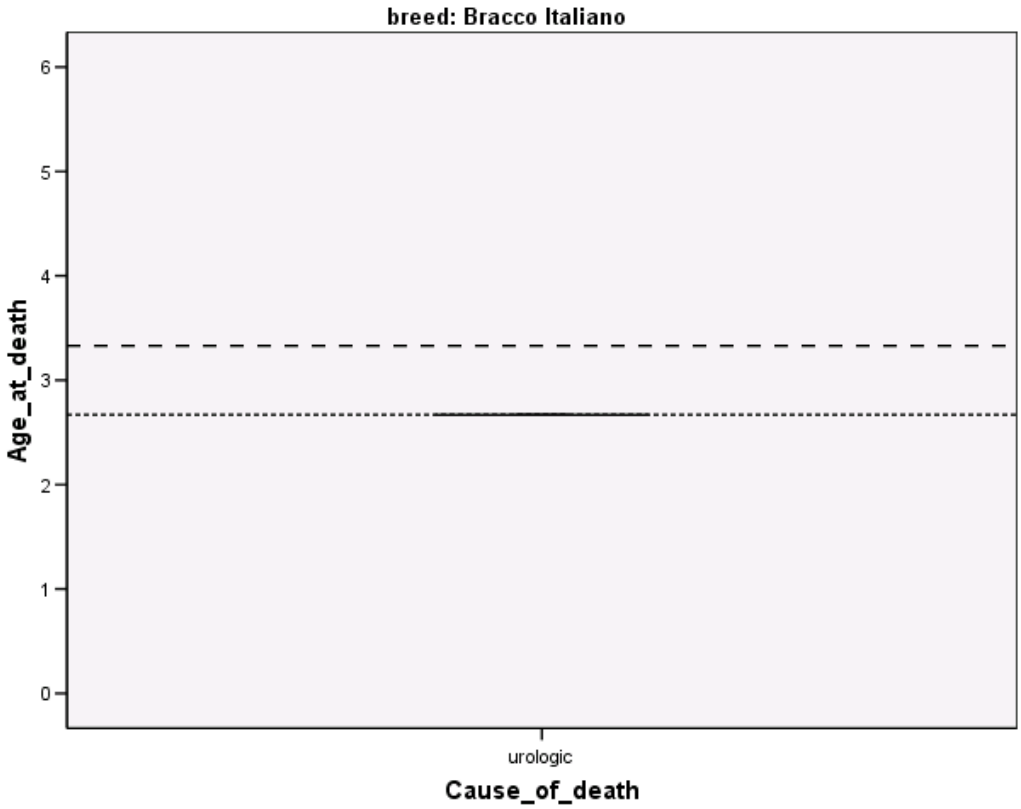


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the Bracco Italiano breed (N=1). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the Bracco Italiano breed. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 19 live dogs with a reported age was 2 years and 6 months (min=8 months, max=7 years and 6 months, Figure 3). Health information was reported for 19 live dogs of which 13 (68%) were healthy and 6 (32%) had at least one reported health condition, resulting in a total of 9 reported conditions with a median of 1 condition/dog (min=1, max=3).

The median current age of all healthy dogs with a reported age (N=13) was 1 year and 3 months (min=10 months, max=7 years and 6 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=6) was 4 years (min=8 months, max=7 years and 6 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=9) was 2 years and 8 months (min= 6 months, max= 7 years and 5 months, Figure 4). Table 3 shows the disease conditions for the Bracco Italiano breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 19 the Bracco Italiano breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	7	2	9 (47%)
Male	9	1	10 (53%)
Totals	16 (84%)	3 (16%)	19 (100%)

There was no association between gender and neuter status (P=0.4657).

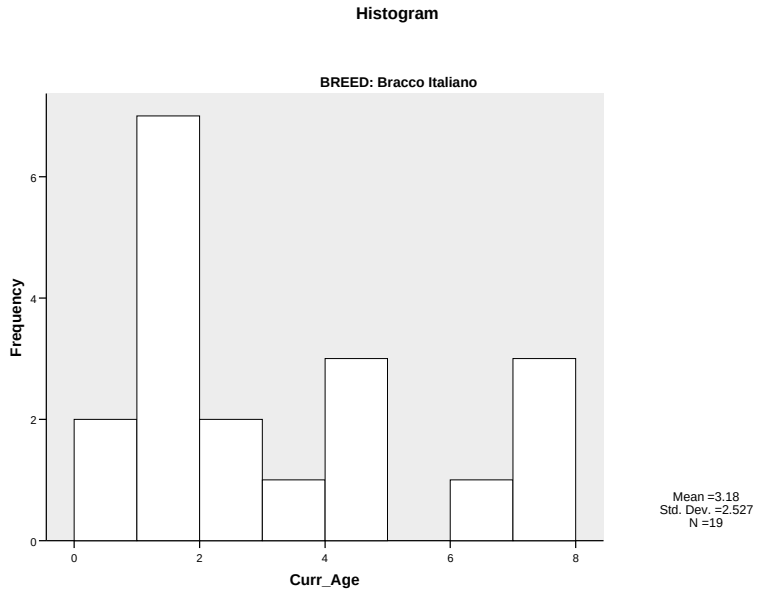


Figure 3. Histogram showing frequency of current age in years for the 19 live dogs of the Bracco Italiano breed with age reported.

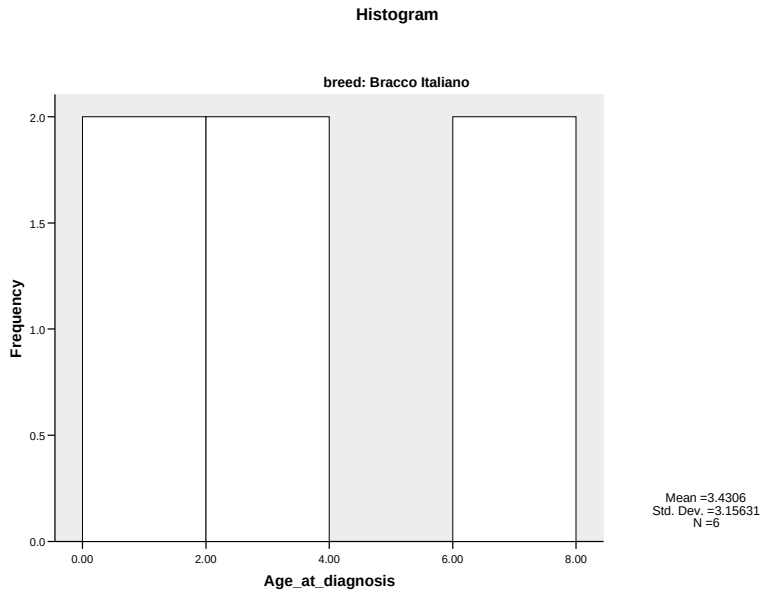


Figure 4. Histogram showing frequency of age at diagnosis for the 6 Bracco Italiano breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

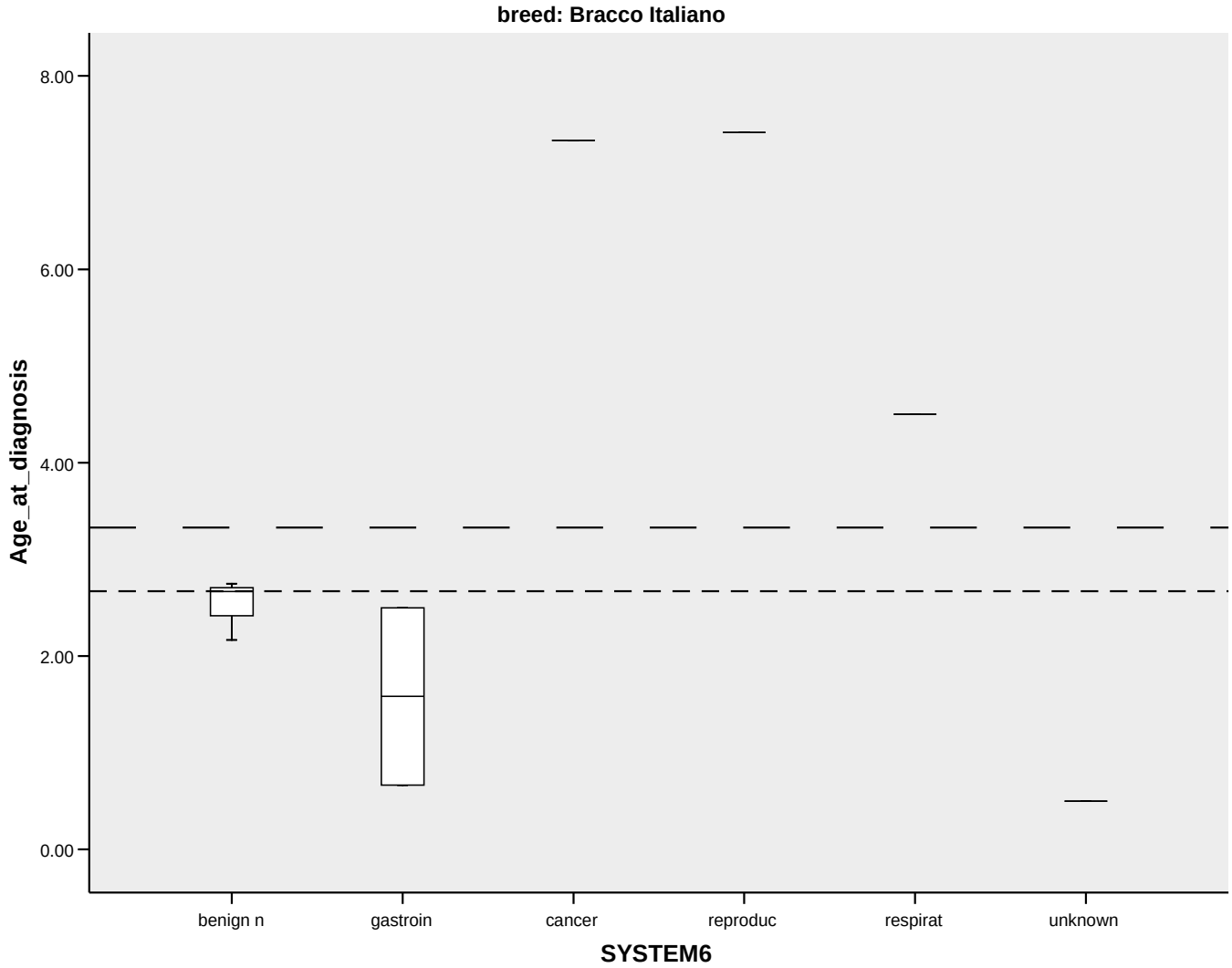


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Bracco Italiano breed (N=9 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Bracco Italiano breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Bracco Italiano breed.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Benign neoplasia	3	33.3	Histiocytoma; haemangioma; unspecified
2	Gastrointestinal	2	22.2	Gastric dilatation/volvulus (GDV); unspecified
3	Cancer	1	11.1	MCT
4	Reproductive	1	11.1	Prostatic disease
5	Respiratory	1	11.1	Kennel cough
6	Unknown	1	11.1	
	Total	9	100.0	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for Briards

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Briards

A total of 238 forms were sent out and 75 were returned, representing 123 live dogs. This breed had a 31.5 % response rate (75/238) and it represented 0.55% of all returns (75/13,741).

Mortality data

A total of 71 deaths were reported and this represents 0.45 % of all deaths reported in the survey (71/15,881). The median age at death for Briards was 11 years and 2 months (min = 1 year, max = 16 years and 9 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Briards. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Briards.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	27	38.0	Spleen (type unspecified); unspecified;
2	Old age	6	8.5	Old age
3	Cardiac	5	7.0	Heart failure; unspecified cardiomyopathy; cardiomegaly
4	Combinations	4	5.6	Cancer & various; hip dysplasia & various
5	Hepatic	4	5.6	Liver disease unspecified; chronic liver failure
6	Perioperative	4	5.6	
7	Urologic	4	5.6	Kidney failure (chronic > acute)
8	Gastrointestinal	3	4.2	GDV; Parvovirus; megaoesophagus
9	Internal bleeding	3	4.2	
10	Other	3	4.2	Uncodeable
11	Cerebral vascular	2	2.8	Stroke or cerebral vascular accident
12	Neurologic	2	2.8	Seizures; spinal lumbar spondylosis
13	Behaviour	1	1.4	Unspecified
14	Dermatologic	1	1.4	Chronic ear infections
15	Endocrine	1	1.4	Diabetes mellitus
16	Musculoskeletal	1	1.4	Hip dysplasia
	Total	71	100.0	

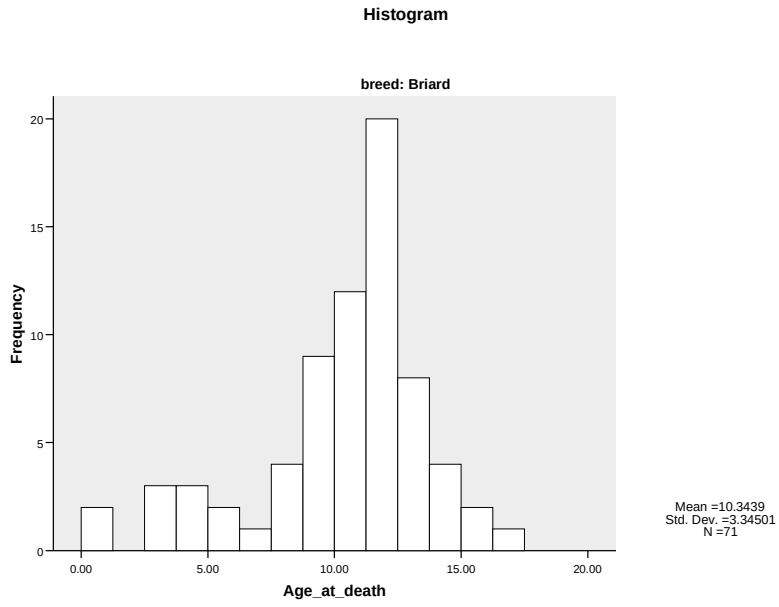


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 71 Briard deaths with age at death reported.

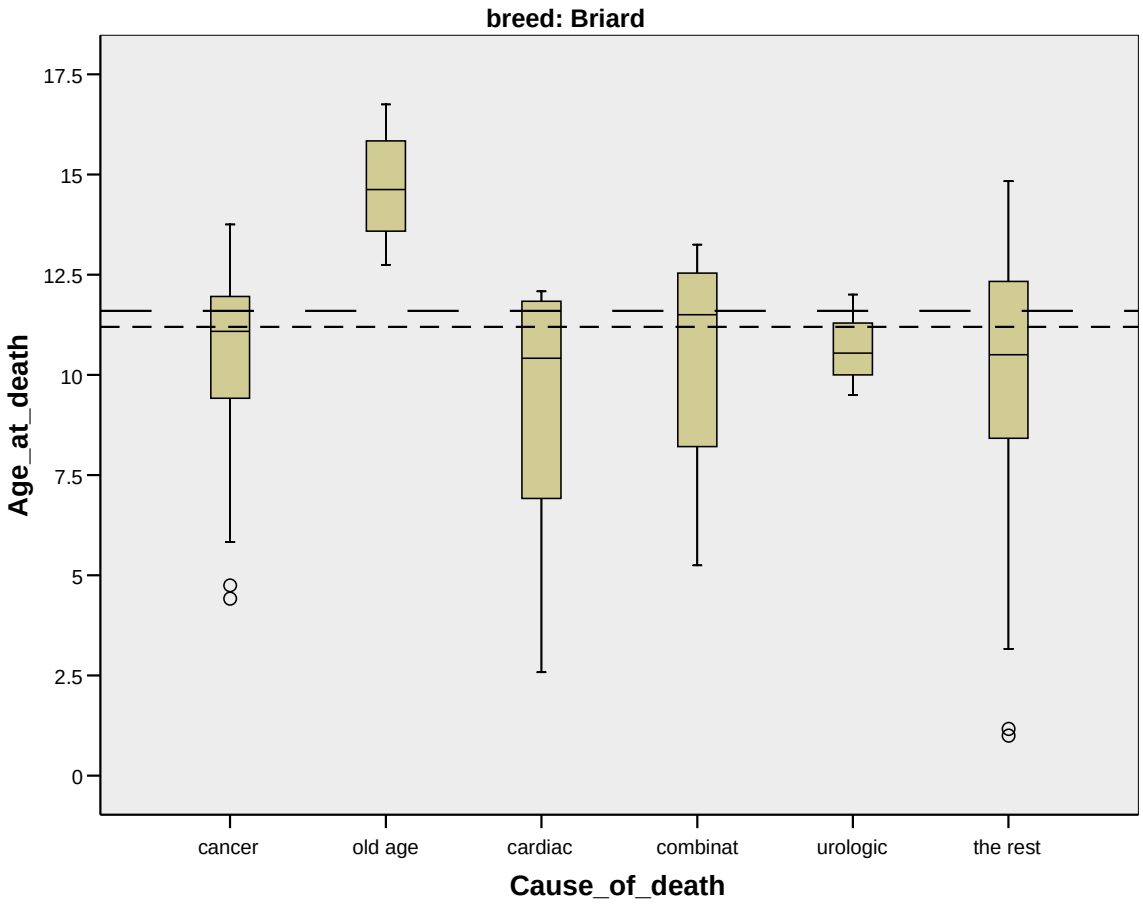


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Briards (N=71). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Briards. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 123 live dogs with a reported age was 4 years and 2 months (min=3 months, max=13 years and 6 months, Figure 3). Health information was reported for 123 live dogs of which 73 (59%) were healthy and 50 (41%) had at least one reported health condition, resulting in a total of 81 reported conditions with a median of 1 condition/dog (min=1, max=6).

The median current age of all healthy dogs with a reported age (N=73) was 2 years and 11 months (min=3 months, max=11 years). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=50) was 6 years and 3 months (min=10 months, max=13 years and 6 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=79) was 2 years and 8 months (min= 2 months, max= 12 years and 6 months, Figure 4). Table 3 shows the disease conditions for Briards. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 123 Briards with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	47	23	70 (57%)
Male	39	14	53 (43%)
Totals	86 (70%)	37 (30%)	123 (100%)

There was no association between gender and neuter status (P=0.4404).

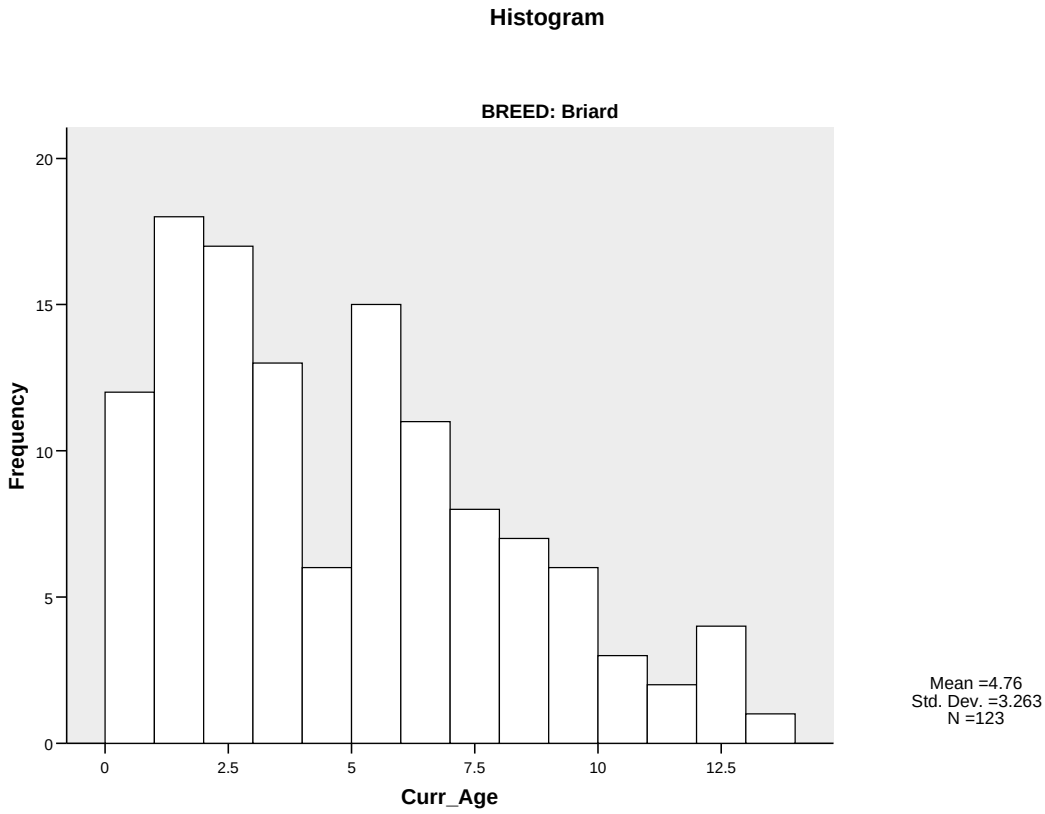


Figure 3. Histogram showing frequency of current age in years for the 123 live Briards with age reported.

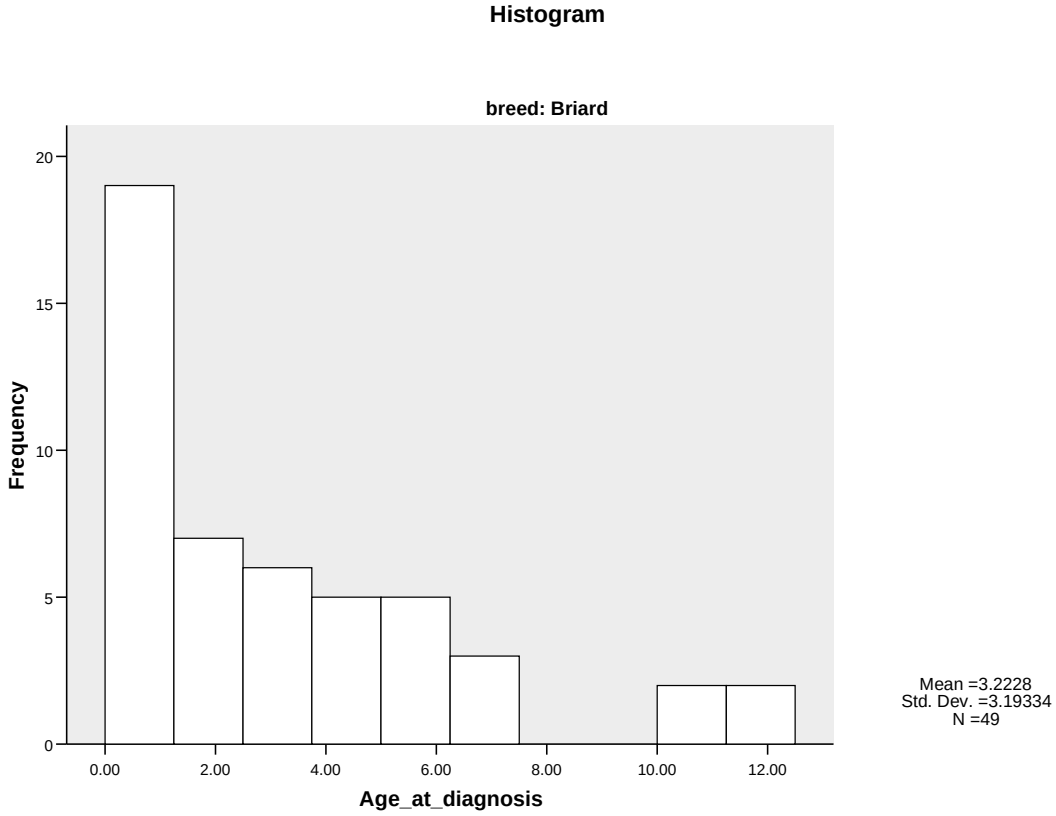


Figure 4. Histogram showing frequency of age at diagnosis for the 49 Briards with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

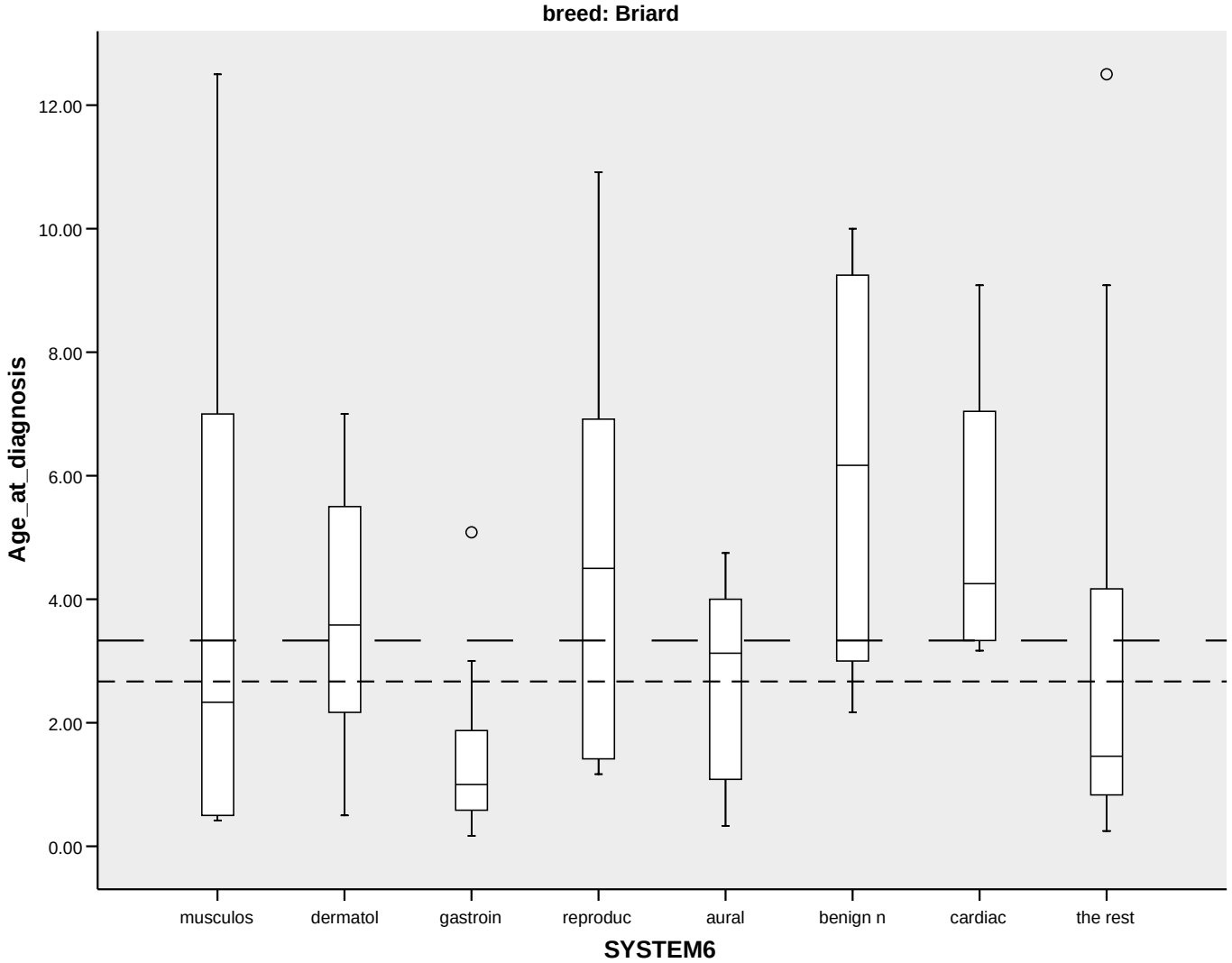


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Briards (N=50 dogs with 79 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Briards. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Briards.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Musculoskeletal	13	16.0	Lameness (forelimbs); arthritis (hindlimbs, hips); CHD
2	Dermatologic	12	14.8	Dermatitis; mites (sarcoptes)
3	Gastrointestinal	11	13.6	Gastroenteritis; intestinal bacterial overgrowth; IBD; colitis; diarrhoea; EPI
4	Reproductive	9	11.1	Infertility; false pregnancy; pyometra; cryptorchid; irregular heat cycles
5	Aural	6	7.4	Otitis externa
6	Immune mediated	5	6.2	Atopy; food hypersensitivity; flea allergy
7	Benign neoplasia	4	4.9	Lipoma; histiocytoma (skin)
8	Cardiac	4	4.9	Heart murmur
9	Urologic	3	3.7	Cystitis; cystouroliths (unspecified); incontinence after spay
10	Anal gland	2	2.5	Anal sacculitis
11	Endocrine	2	2.5	Hypothyroidism
12	Ocular	2	2.5	Eye infection; night blindness
13	Respiratory	2	2.5	Kennel cough
14	Uncode and other	2	2.5	Hypocalcaemia
15	Dental	1	1.2	Dental disease
16	Neurologic	1	1.2	Seizures or fits
17	Trauma	1	1.2	Spinal cord injury
18	Unknown	1	1.2	Undiagnosed illness
	Total	81	100.0	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for British Bulldogs

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

British Bulldogs

A total of 841 forms were sent out and 143 were returned, representing 403 live dogs. This breed had a 17.0 % response rate (143/841) and it represented 1.04% of all returns (143/13,741).

Mortality data

A total of 180 deaths were reported and this represents 1.13 % of all deaths reported in the survey (180/15,881). The median age at death for British Bulldogs was 6 years and 3 months (min = 10 months, max = 14 years and 5 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for British Bulldogs. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for British Bulldogs.

Cause of death		N	%	Most common specific causes in descending order
1	Cardiac	36	20.0	Heart attack; heart failure; heart defect unspecified
2	Cancer	33	18.3	Lymphoma; type unspecified
3	Old age	16	8.9	Old age unspecified; old age natural causes
4	Cerebral vascular	8	4.4	Stroke or cerebral vascular accident
5	Perioperative	8	4.4	
6	Respiratory	8	4.4	Pneumonia; respiratory failure; unspecified
7	Unknown	8	4.4	
8	Hyperthermia	6	3.3	
9	Other	6	3.3	Uncodeable
10	Reproductive	6	3.3	Pyometra; metritis
11	Behaviour	5	2.8	Unspecified behavioural problem; aggression
12	Gastrointestinal	5	2.8	GDV; foreign body obstruction; megaoesophagus
13	Neurologic	5	2.8	Seizures; IVDD
14	Sudden death	4	2.2	
15	Urologic	4	2.2	Kidney failure (chronic > acute)
16	Hepatic	3	1.7	Liver disease unspecified; acute liver failure
17	Musculoskeletal	3	1.7	Arthritis; hip dysplasia; joint pain
18	Collapse	2	1.1	
19	Combinations	2	1.1	Pneumonia & heart failure; heat stroke & heart defect
20	Dermatologic	2	1.1	Chronic ear infections; skin disease
21	Trauma	2	1.1	Unspecified
22	Died	1	0.6	
23	Drowning	1	0.6	
24	Infection	1	0.6	Toxoplasmosis
25	Ocular	1	0.6	Blindness
26	Pining	1	0.6	
27	Poisoning	1	0.6	
28	Septicaemia	1	0.6	
29	Systemic	1	0.6	Allergy to insect bite or sting or snake bite
	Total	180	100.0	

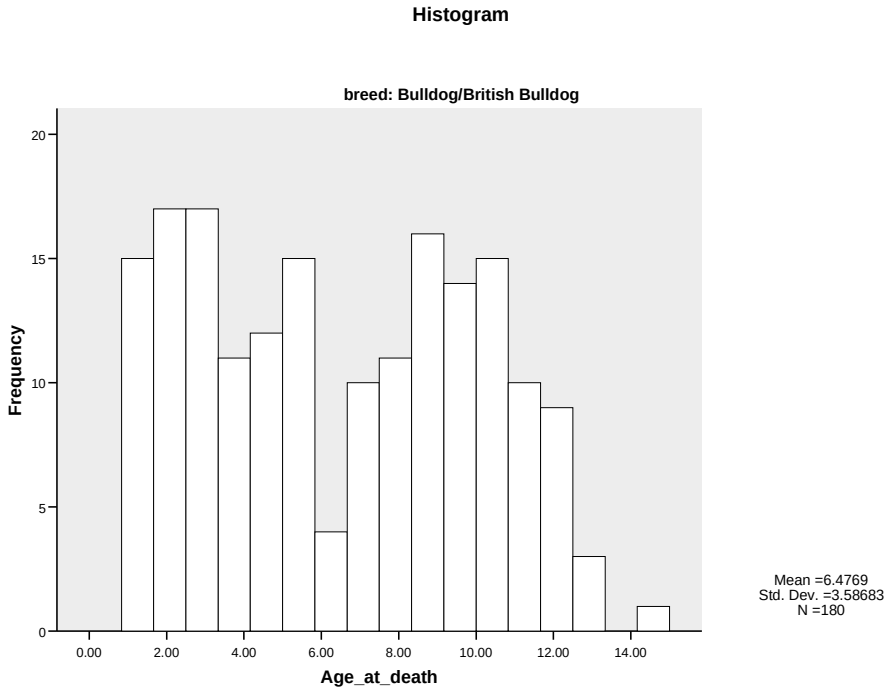


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 180 Bulldog/British Bulldog deaths with age at death reported.

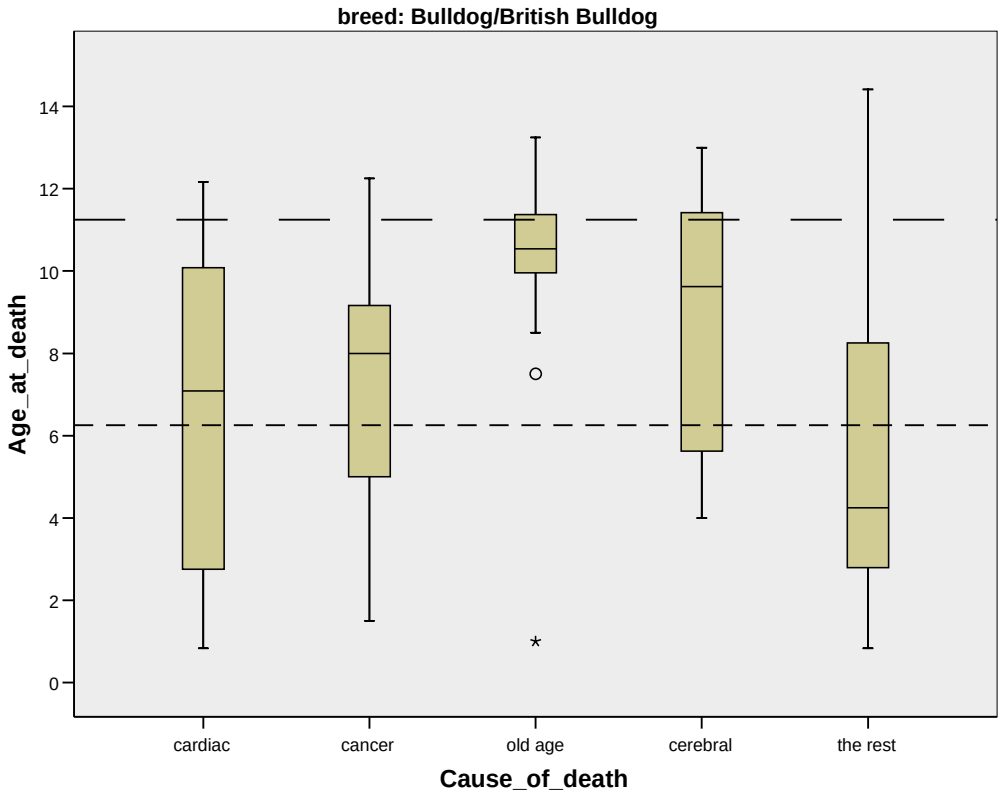


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in British Bulldogs (N=180). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for British Bulldogs. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 403 live dogs with a reported age was 3 years and 1 month (min=1 month, max=13 years and 4 months, Figure 3). Health information was reported for 403 live dogs of which 217 (54%) were healthy and 186 (46%) had at least one reported health condition, resulting in a total of 316 reported conditions with a median of 1 condition/dog (min=1, max=6).

The median current age of all healthy dogs with a reported age (N=217) was 2 years and 3 months (min=1 month, max=11 years and 4 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=184) was 4 years and 2 months (min=3 months, max=13 years and 4 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=294) was 1 year and 4 months (min=1 month, max=11 years and 4 months, Figure 4). Table 3 shows the disease conditions for British Bulldogs. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 403 British Bulldogs with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	230	36	266 (66%)
Male	118	19	137 (34%)
Totals	348 (86%)	55 (14%)	403 (100%)

There was no association between gender and neuter status (P=0.9261).

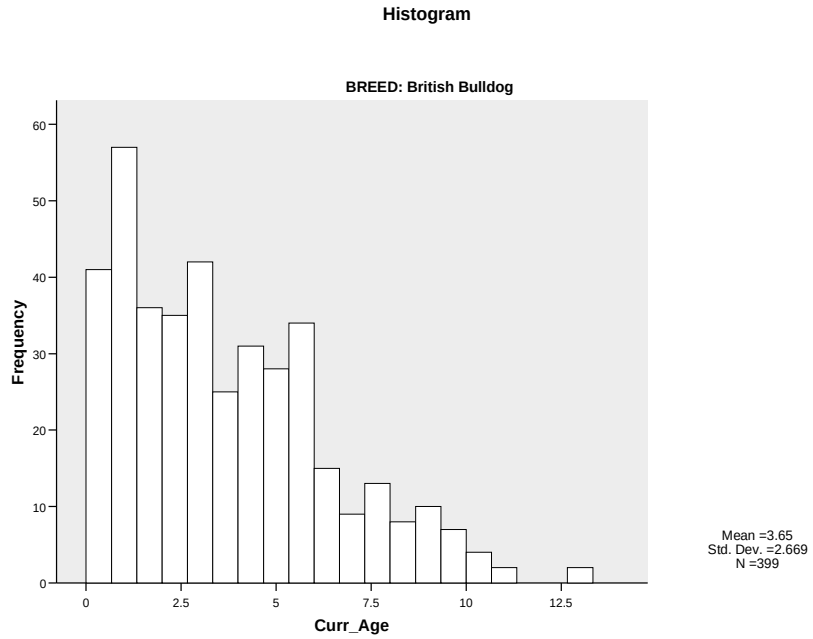


Figure 3. Histogram showing frequency of current age in years for the 399 live British Bulldogs with age reported.

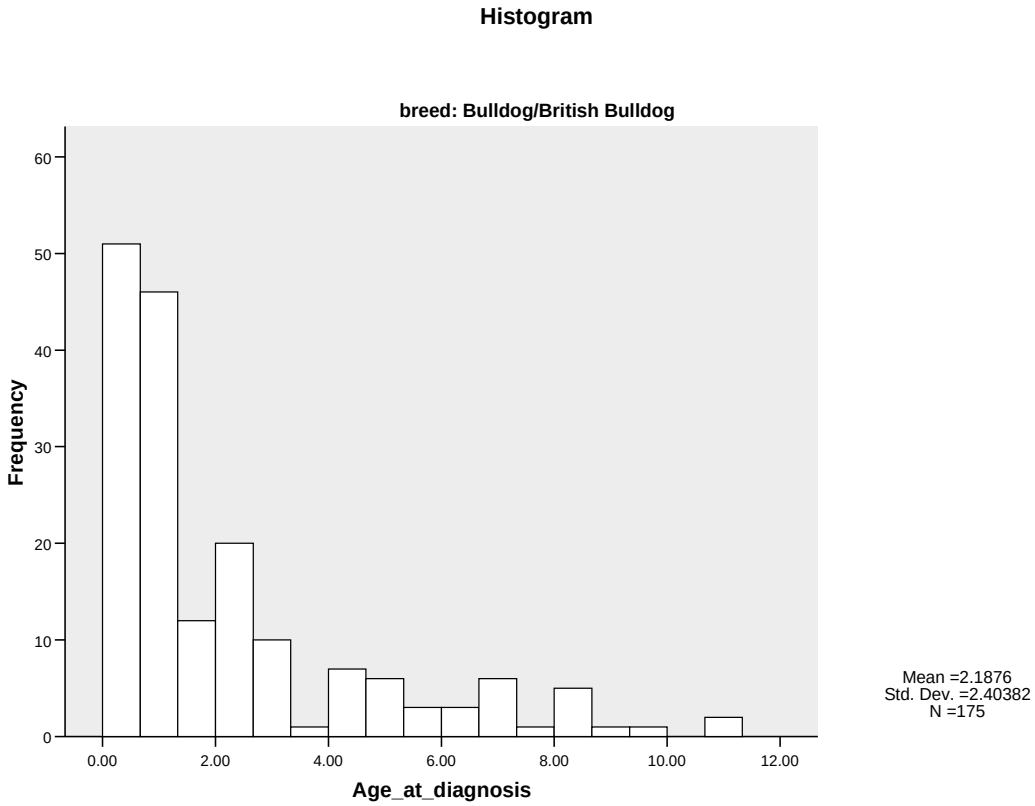


Figure 4. Histogram showing frequency of age at diagnosis for the 175 British Bulldogs with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

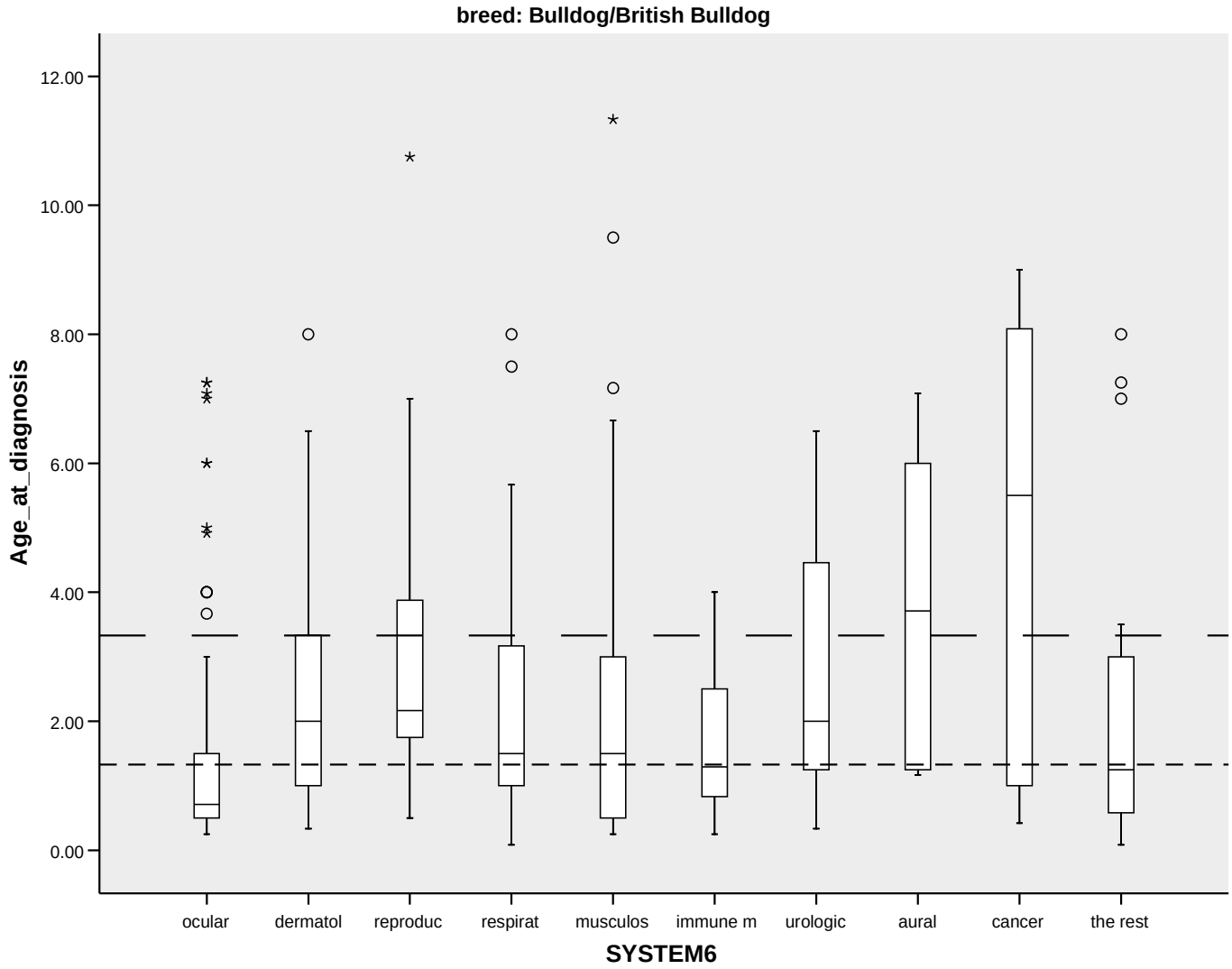


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for British Bulldogs (N=184 dogs with 294 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for British Bulldogs. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for British Bulldogs.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Ocular	100	31.6	Cherry eye; entropion; KCS; corneal ulcer; distichiasis; epiphora; red eye
2	Dermatologic	48	15.2	Alopecia; mites (demodex> sarcoptes); dermatitis; pyotraumatic dermatitis
3	Reproductive	34	10.8	Dystochia (uterine inertia=stuck puppy); infertility; false pregnancy; cryptorchid; pyometra
4	Respiratory	33	10.4	Kennel cough; noisy breathing; rhinitis; long soft palate
5	Musculoskeletal	29	9.2	CLR; arthritis; lameness; CHD; patellar luxation
6	Immune mediated	12	3.8	Flea allergy; atopy; food hypersensitivity
7	Unknown	9	2.8	Undiagnosed illness
8	Cardiac	8	2.5	Heart murmur; collapse; heart rhythm disorder
9	Gastrointestinal	8	2.5	Colitis; regurgitation; vomiting
10	Urologic	7	2.2	Cystitis; cystouroliths (unspecified > struvite)
11	Aural	6	1.9	Otitis externa, ear mites
12	Cancer	6	1.9	Unspecified; lymphoma; sarcoma
13	Neurologic	6	1.9	Seizures; deafness; rage syndrome; unspecified
14	Trauma	6	1.9	Urologic; reproductive; musculoskeletal; neurologic
15	Endocrine	2	0.6	Hypothyroidism
16	Anal gland	1	0.3	Anal sacculitis
17	Behaviour	1	0.3	Unspecified
	Total	316	100.0	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for Brittanys

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Brittanys

A total of 225 forms were sent out and 59 were returned, representing 113 live dogs. This breed had a 26.2 % response rate (59/225) and it represented 0.43% of all returns (59/13,741).

Mortality data

A total of 28 deaths were reported and this represents 0.18 % of all deaths reported in the survey (28/15,881). The median age at death for Brittanys was 12 years and 11 months (min = 8 months, max = 16 years and 1 month) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Brittanys. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Brittanys.

Cause of death		N	%	Most common specific causes in descending order
1	Old age	6	21.4	Old age
2	Cancer	5	17.9	Unspecified; lymphoma
3	Cerebral vascular	3	10.7	Stroke or cerebral vascular accident
4	Combinations	3	10.7	
5	Neurologic	2	7.1	Seizures
6	Trauma	2	7.1	Road traffic accident
7	Behaviour	1	3.6	Aggression
8	Cardiac	1	3.6	Heart failure
9	Endocrine	1	3.6	Cushings or hyperadrenocorticism
10	Hepatic	1	3.6	Acute liver failure
11	Ocular	1	3.6	Blind
12	Other	1	3.6	Uncodeable
13	Unknown	1	3.6	
	Total	28	100.0	

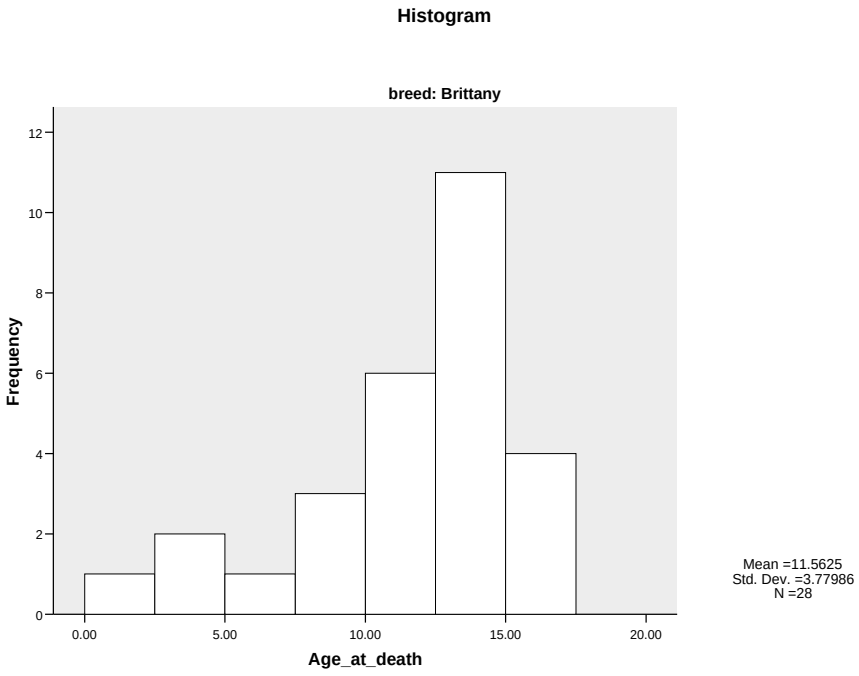


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 28 Brittany deaths with age at death reported.

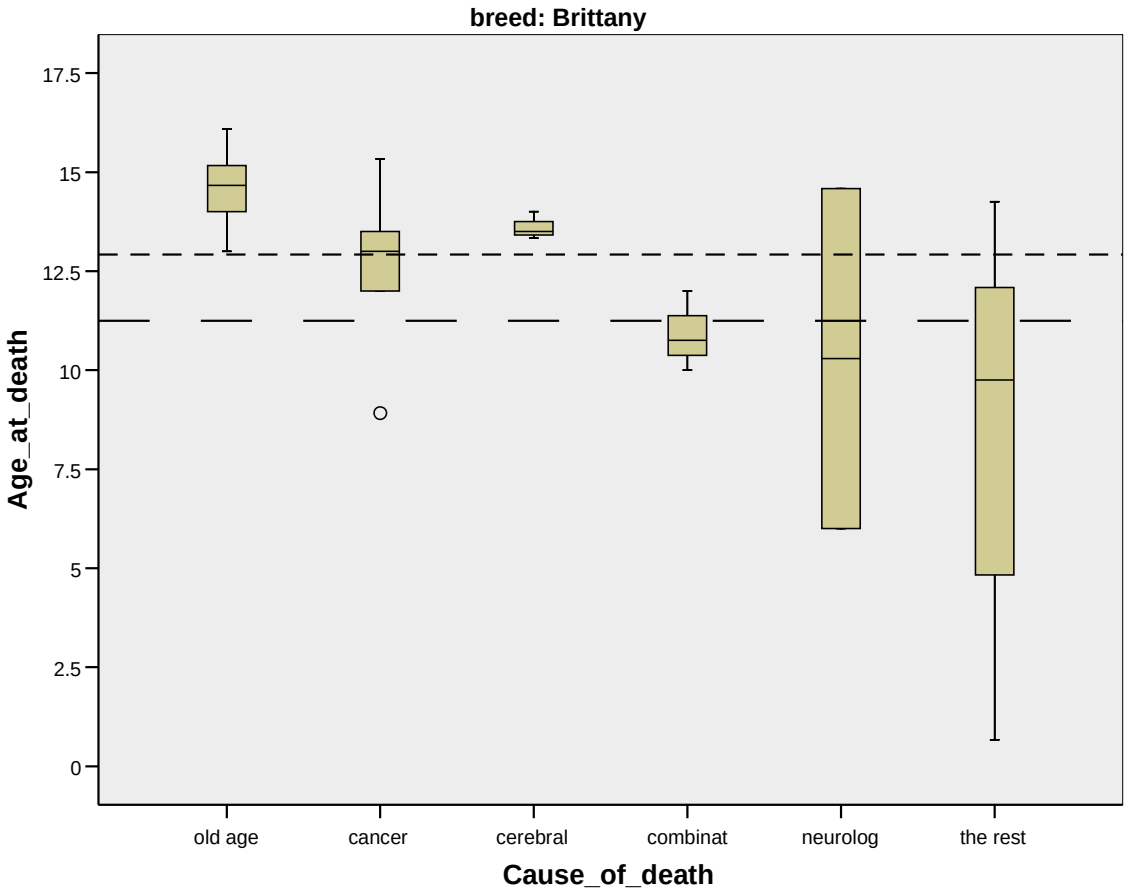


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Brittanys (N=28). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Brittanys. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 113 live dogs with a reported age was 5 years and 10 months (min=2 months, max=16 years and 4 months, Figure 3). Health information was reported for 113 live dogs of which 74 (65%) were healthy and 39 (35%) had at least one reported health condition, resulting in a total of 51 reported conditions with a median of 1 condition/dog (min=1, max=3).

The median current age of all healthy dogs with a reported age (N=74) was 5 years and 1 month (min=2 months, max=16 years and 4 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=38) was 7 years and 6 months (min=8 months, max=13 years and 2 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=51) was 2 years and 4 months (min= 2 months, max= 10 years, Figure 4). Table 3 shows the disease conditions for Brittanys. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 113 Brittanys with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	39	31	70 (62%)
Male	31	12	43 (38%)
Totals	70 (62%)	43 (38%)	113 (100%)

There was no association between gender and neuter status (P=0.0817).

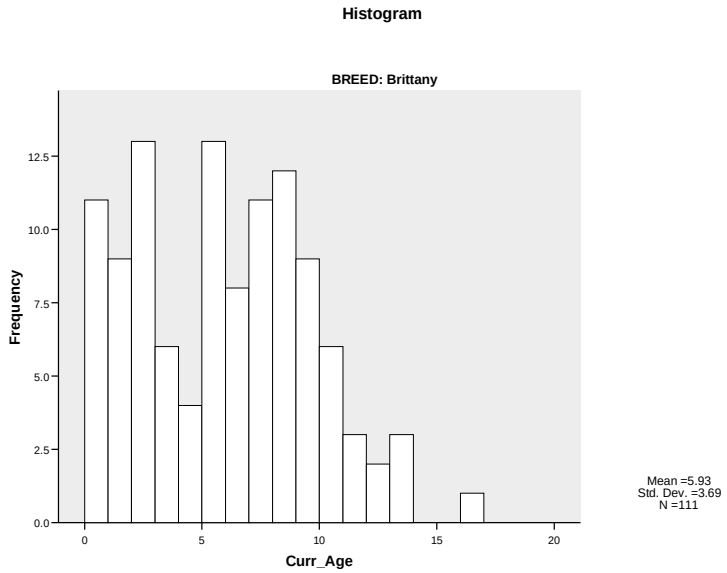


Figure 3. Histogram showing frequency of current age in years for the 111 live Brittanys with age reported.

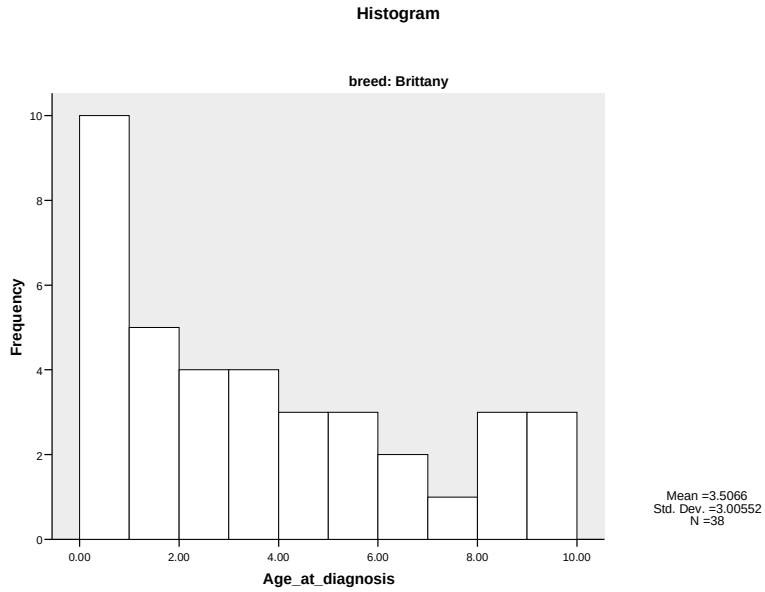


Figure 4. Histogram showing frequency of age at diagnosis for the 38 Brittanys with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

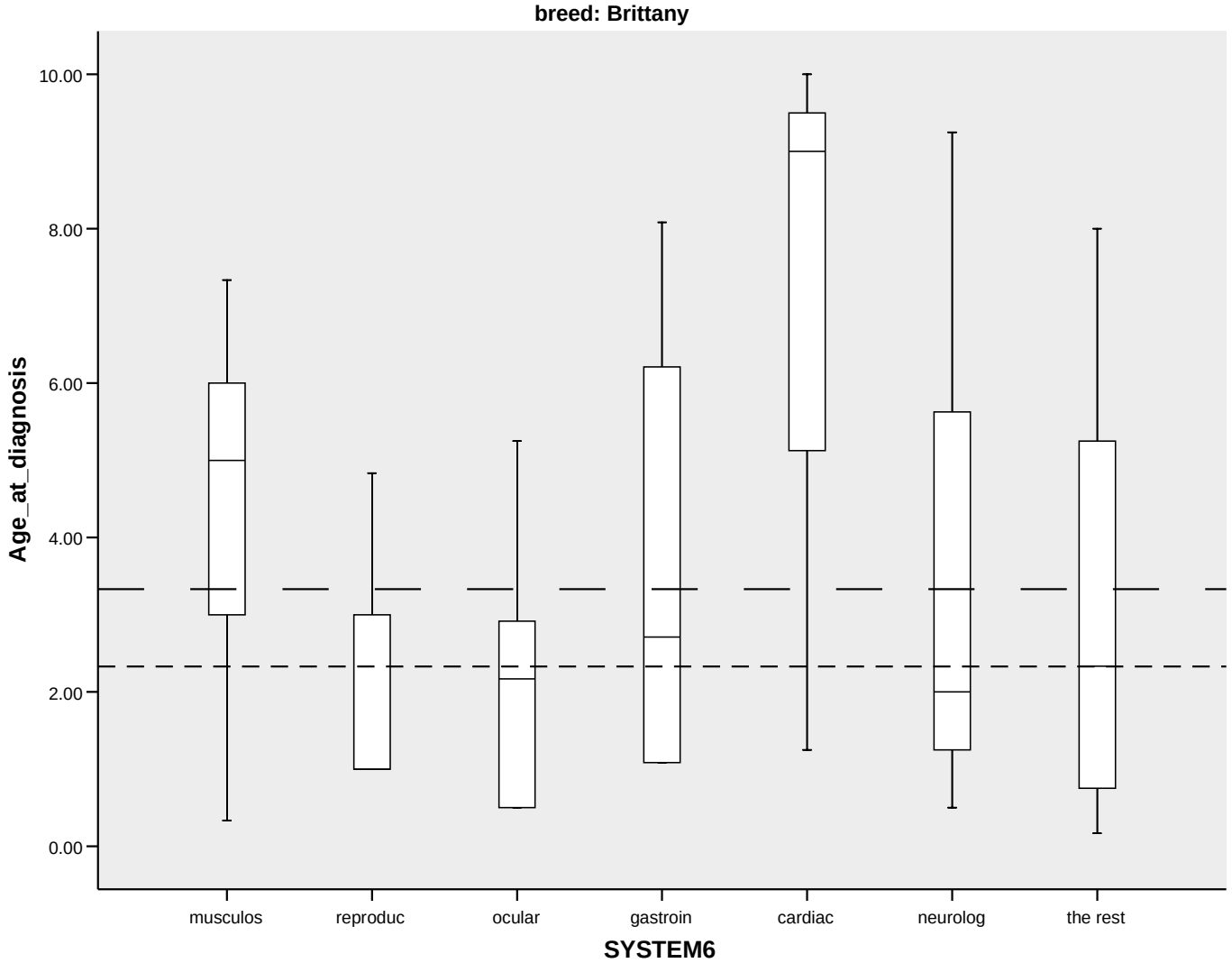


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Brittanys (N=38 dogs with 51 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Brittanys. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Brittanys.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Musculoskeletal	9	17.6	Patellar luxation; CHD; arthritis (carpus, unspecified); CLR; ligament injury
2	Reproductive	9	17.6	False pregnancy; eclampsia; uterine inertia; mastitis; pyometra; spontaneous abortion
3	Ocular	6	11.8	Cherry eye; epiphora; blindness; keratitis (unspecified)
4	Gastrointestinal	4	7.8	Diarrhoea; foreign body obstruction; blocked salivary gland; weight loss
5	Cardiac	3	5.9	Heart murmur
6	Immune mediated	3	5.9	Gluten-sensitive enteropathy; flea allergy; unspecified
7	Neurologic	3	5.9	Seizures; meningitis
8	Dermatologic	2	3.9	Dermatitis; ear mites; recurrent pyoderma
9	Respiratory	2	3.9	Long soft palate; pneumonia
10	Trauma	2	3.9	Ocular; musculoskeletal
11	Urologic	2	3.9	Incontinence (unspecified; after spay)
12	Anal gland	1	2.0	Anal sacculitis
13	Aural	1	2.0	Otitis externa
14	Behaviour	1	2.0	Unspecified
15	Cancer	1	2.0	Type unspecified (mammary)
16	Dental	1	2.0	Retained puppy teeth
17	Unknown	1	2.0	Undiagnosed illness
	Total	51	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for Bull Terriers

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Bull Terriers

A total of 864 forms were sent out and 156 were returned, representing 293 live dogs. This breed had an 18.1 % response rate (156/864) and it represented 1.14% of all returns (156/13,741).

Mortality data

A total of 209 deaths were reported and this represents 1.32 % of all deaths reported in the survey (209/15,881). The median age at death for Bull Terriers was 10 years (min = 6 months, max = 18 years and 6 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Bull Terriers. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Bull Terriers.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	48	23.0	Unspecified; mammary (type unspecified); lymphoma
2	Urologic	31	14.8	Kidney failure (chronic>acute); juvenile nephropathy
3	Cardiac	30	14.4	Heart failure; heart defect unspecified; heart attack
4	Old age	27	12.9	Old age
5	Other	11	5.3	Uncodeable
6	Combinations	7	3.3	
7	Behaviour	6	2.9	Aggression; unspecified
8	Unknown	6	2.9	Undiagnosed illness
9	Perioperative	5	2.4	
10	Gastrointestinal	4	1.9	Campylobacter; pancreatitis; perforated stomach ulcer
11	Neurologic	4	1.9	Seizures; deafness
12	Trauma	4	1.9	Road traffic accident; unspecified
13	Cerebral vascular	3	1.4	Stroke or cerebral vascular accident
14	Dermatologic	3	1.4	Unspecified; chronic skin infections
15	Endocrine	3	1.4	Addisons disease; Cushings disease; diabetes mellitus
16	Hepatic	3	1.4	Liver failure (chronic>acute)
17	Musculoskeletal	3	1.4	Arthritis; fractured hip
18	Sudden death	3	1.4	
19	Immune mediated	2	1.0	Unspecified
20	Poisoning	2	1.0	
21	Respiratory	2	1.0	Choked; pneumonia
22	Collapse	1	0.5	
23	Died	1	0.5	
	Total	209	100.0	

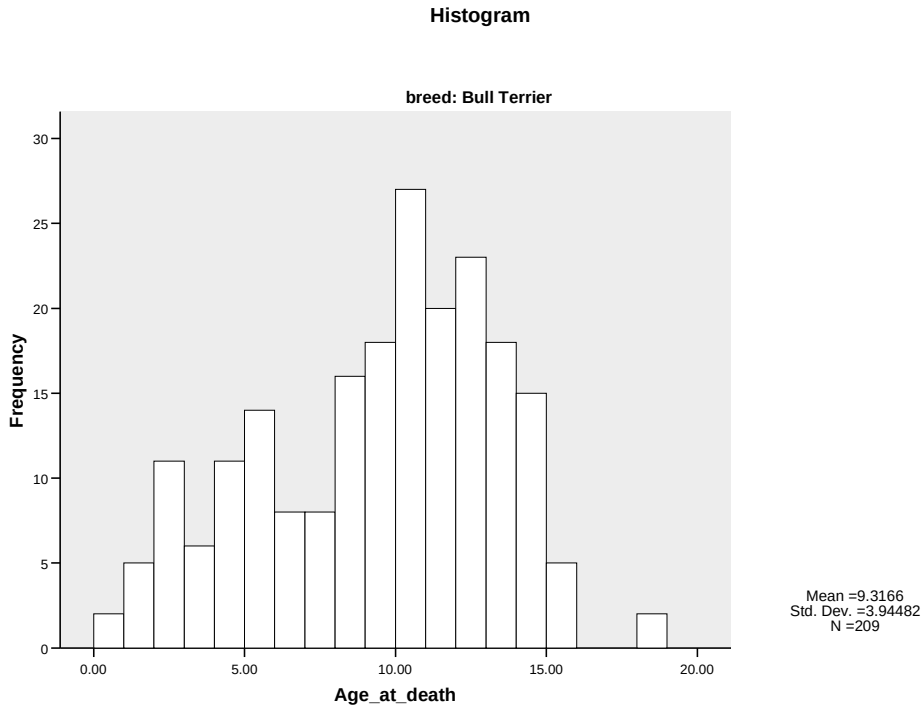


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 209 Bull Terrier deaths with age at death reported.

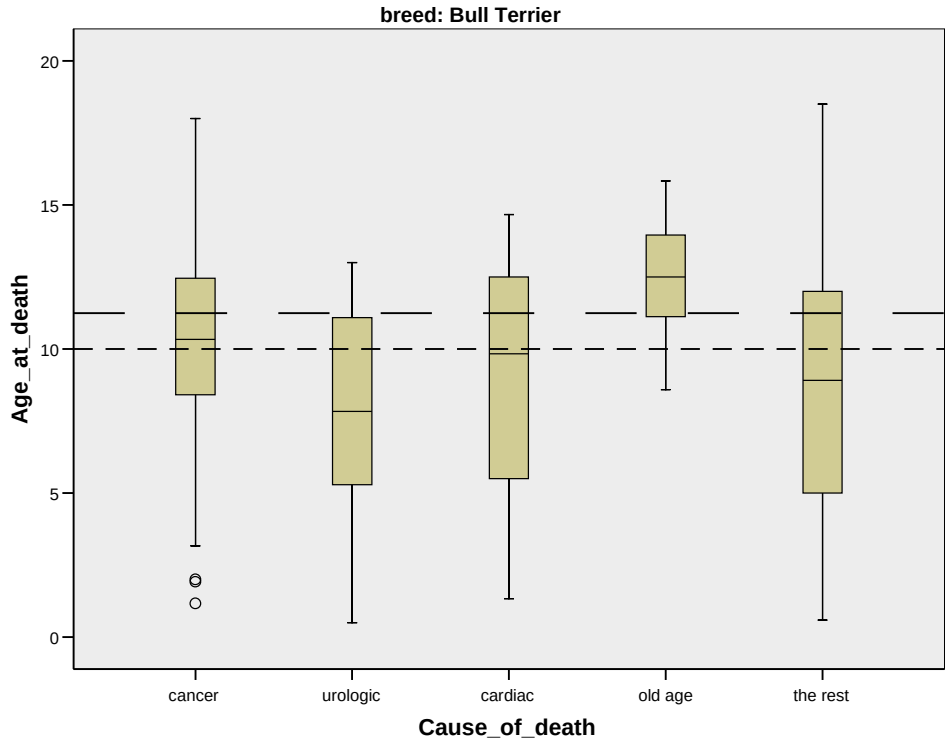


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Bull Terriers (N=209). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Bull Terriers. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 292 live dogs with a reported age was 3 years and 11 months (min=2 months, max=16 years and 3 months, Figure 3). Health information was reported for 293 live dogs of which 167 (57%) were healthy and 126 (43%) had at least one reported health condition, resulting in a total of 229 reported conditions with a median of 1 condition/dog (min=1, max=8).

The median current age of all healthy dogs with a reported age (N=167) was 2 years and 11 months (min=2 months, max=16 years and 3 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=125) was 6 years and 5 months (min=4 months, max=13 years and 5 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=224) was 3 years (min= 2 months, max= 12 years and 2 months, Figure 4). Table 3 shows the disease conditions for Bull Terriers. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 285 Bull Terriers with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	129	63	192 (67%)
Male	68	25	93 (33%)
Totals	197 (69%)	88 (31%)	285 (100%)

There was no association between gender and neuter status (P=0.3096).

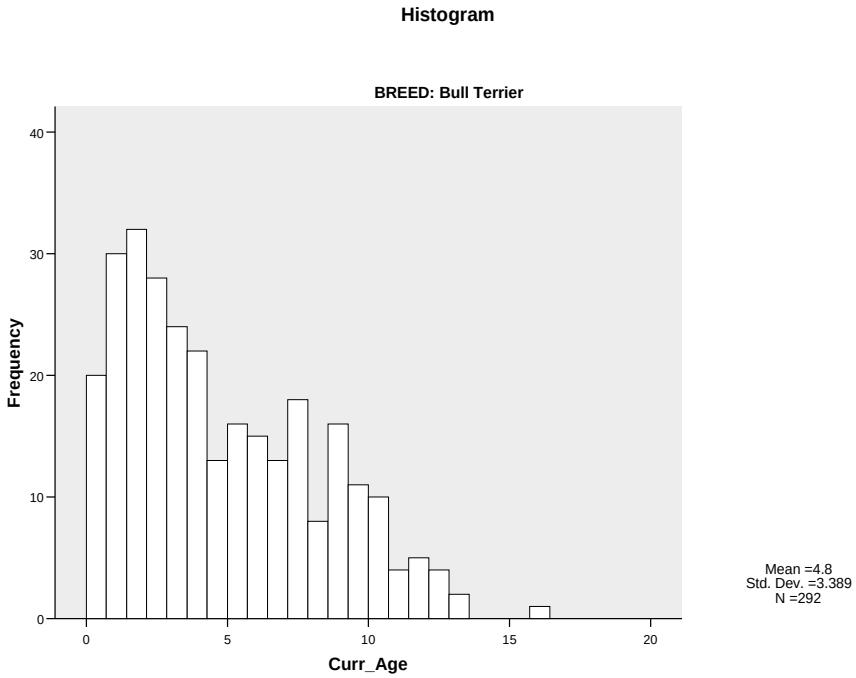


Figure 3. Histogram showing frequency of current age in years for the 292 live Bull Terriers with age reported.

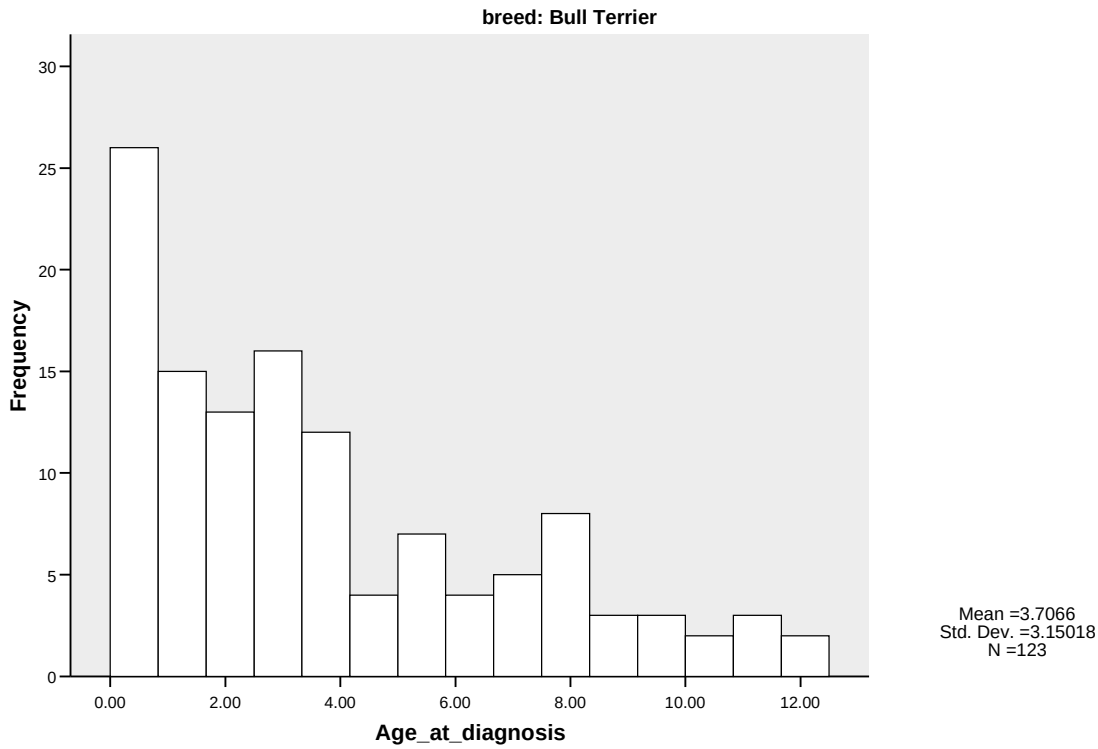


Figure 4. Histogram showing frequency of age at diagnosis for the 123 Bull Terriers with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

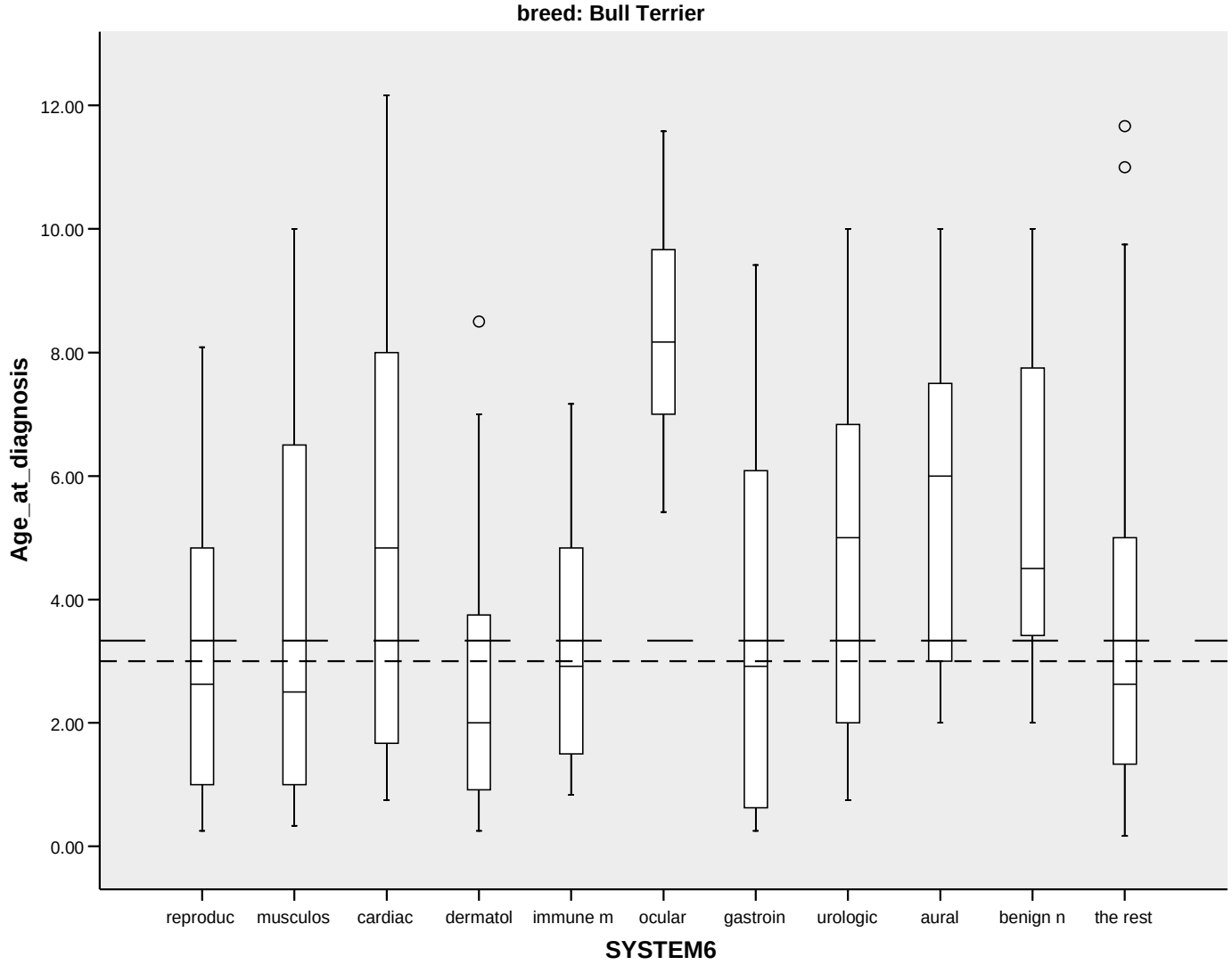


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Bull Terriers (N=125 dogs with 224 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Bull Terriers. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Bull Terriers.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Reproductive	35	15.3	Dystochia (uterine inertia > physical blockage); false pregnancy; pyometra
2	Musculoskeletal	33	14.4	Arthritis; patellar luxation; prognathism; CLR; stiff joints
3	Cardiac	25	10.9	Heart murmur (unspecified >grade 2 = grade 1 > other); aortic stenosis; cardiomegaly; MVD
4	Dermatologic	23	10.0	Dermatitis; recurrent pyoderma; mites (demodex);
5	Immune mediated	19	8.3	Atopy; unspecified; dust mites; immune-mediated skin disease (unspecified)
6	Ocular	15	6.6	KCS; cataracts; glaucoma; blindness; conjunctivitis; red eye
7	Gastrointestinal	12	5.2	Colitis; IBD; regurgitation; GDV; diarrhoea; foreign body obstruction; pancreatitis; vomiting
8	Urologic	10	4.4	Cystitis; incontinence (unspecified > after spay); bladder stones (struvite)
9	Aural	9	3.9	Otitis externa; aural haematoma; ear mites
10	Neurologic	9	3.9	Deafness; seizures
11	Benign neoplasia	8	3.5	Lipoma; histiocytoma; unspecified
12	Respiratory	7	3.1	Noisy breathing; bronchitis; kennel cough; rhinitis
13	Endocrine	5	2.2	Hypothyroidism; Addison’s disease
14	Unknown	5	2.2	Undiagnosed illness
15	Trauma	4	1.7	Hindlimb; dermatologic; spinal
16	Behaviour	3	1.3	Unspecified
17	Cancer	2	0.9	Unspecified
18	Hepatic	2	0.9	Hepatitis; ascites
19	Anal gland	1	0.4	Anal sacculitis
20	Dental	1	0.4	Dental disease
21	Other	1	0.4	Uncodeable
	Total	229	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for Bullmastiffs

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Bullmastiffs

A total of 491 forms were sent out and 80 were returned, representing 140 live dogs. This breed had a 16.3 % response rate (80/491) and it represented 0.58% of all returns (80/13,741).

Mortality data

A total of 96 deaths were reported and this represents 0.60 % of all deaths reported in the survey (96/15,881). The median age at death for Bullmastiffs was 7 years and 6 months (min = 1 year and 4 months, max = 13 years and 6 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Bullmastiffs. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Bullmastiffs.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	36	37.5	Lymphoma; lung (type unspecified)
2	Gastrointestinal	8	8.3	Gastric dilatation/volvulus (GDV)
3	Cardiac	6	6.3	Heart defect unspecified; heart failure; cardiomegaly
4	Perioperative	5	5.2	
5	Urologic	5	5.2	Kidney failure (chronic or unspecified|); cystitis
6	Endocrine	4	4.2	Cushings; diabetes mellitus
7	Old age	4	4.2	Old age
8	Behaviour	3	3.1	Aggression
9	Musculoskeletal	3	3.1	Arthritis
10	Neurologic	3	3.1	Seizures; cerebellar abiotrophy
11	Other	3	3.1	Uncodeable
12	Sudden death	3	3.1	
13	Combinations	2	2.1	Arthritis & epilepsy; Cushings & cancer (mammary)
14	Immune mediated	2	2.1	Unspecified
15	Reproductive	2	2.1	Pyometra
16	Collapse	1	1.0	
17	Hepatic	1	1.0	Liver failure (chronic, unspecified)
18	Senility	1	1.0	
19	Septicaemia	1	1.0	
20	Systemic	1	1.0	Allergy to insect bite or sting or snake bite
21	Trauma	1	1.0	Road traffic accident
22	Unknown	1	1.0	
	Total	96	100.0	

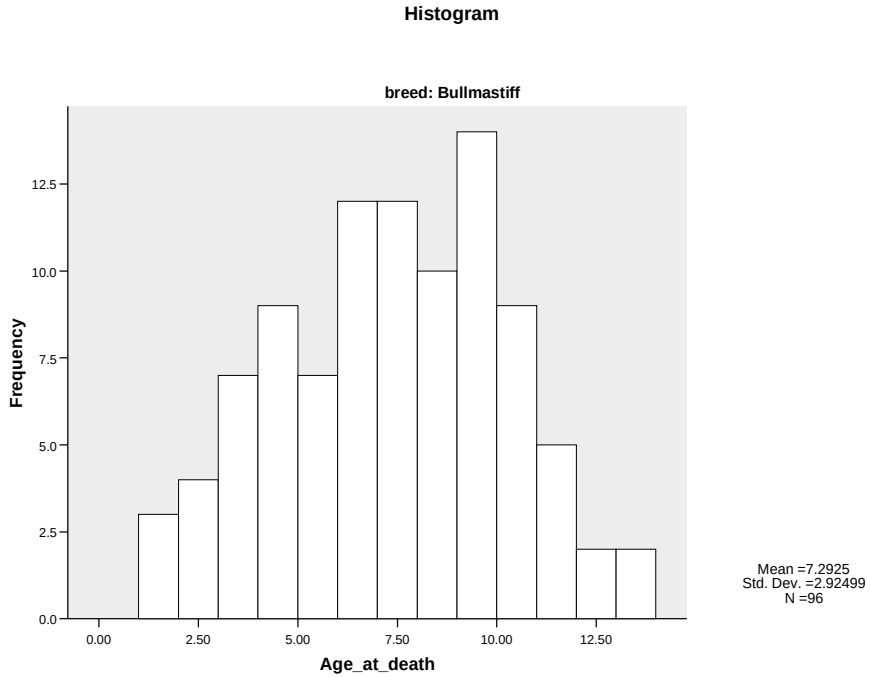


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 96 Bullmastiff deaths with age at death reported.

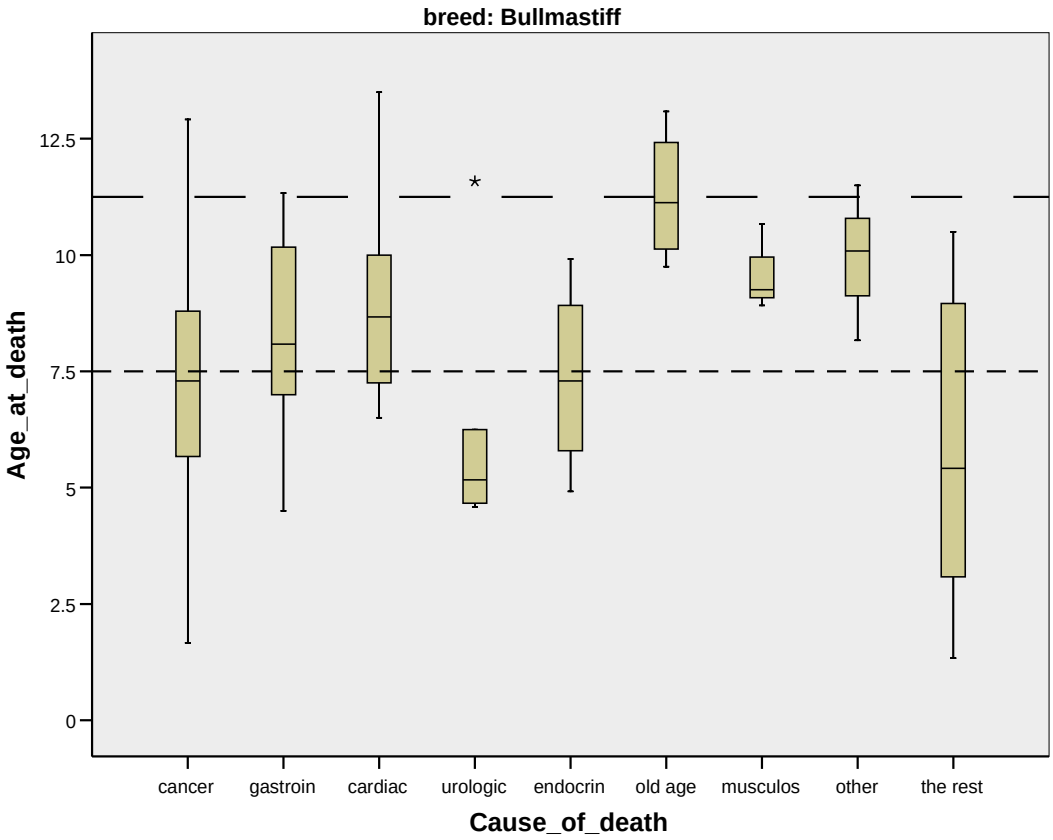


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Bullmastiffs (N=96). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Bullmastiffs. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 140 live dogs with a reported age was 4 years and 3 months (min=1 month, max=10 years and 10 months, Figure 3). Health information was reported for 140 live dogs of which 66 (47%) were healthy and 74 (53%) had at least one reported health condition, resulting in a total of 125 reported conditions with a median of 1 condition/dog (min=1, max=6).

The median current age of all healthy dogs with a reported age (N=66) was 3 years and 1 month (min=1 month, max=8 years and 7 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=74) was 5 years (min=7 months, max=10 years and 10 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=122) was 2 years and 10 months (min= 2 months, max= 10 years and 6 months, Figure 4). Table 3 shows the disease conditions for Bullmastiffs. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 139 Bullmastiffs with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	50	35	85 (61%)
Male	45	9	54 (39%)
Totals	95 (68%)	44 (32%)	139 (100%)

Significantly more females were neutered (P=0.0025).

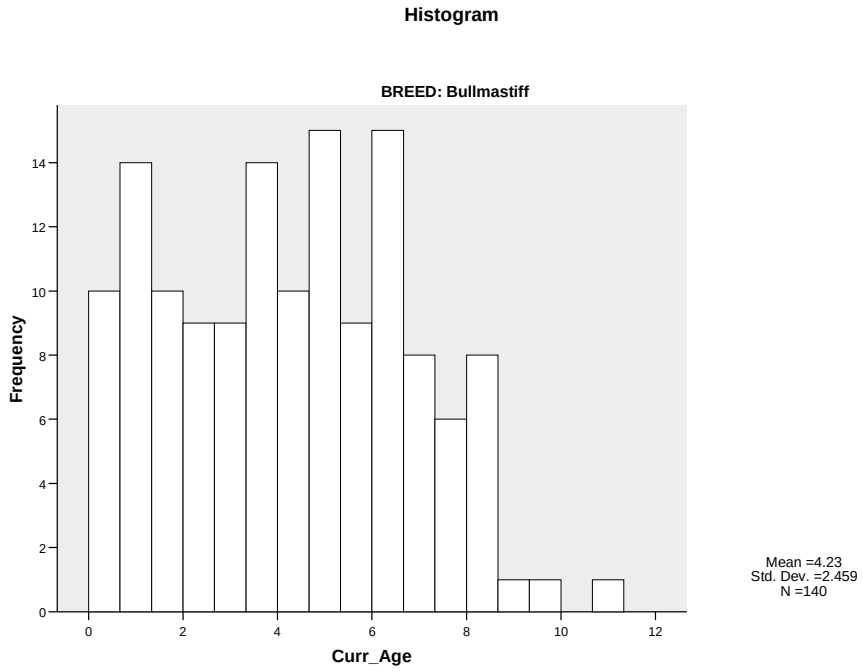


Figure 3. Histogram showing frequency of current age in years for the 140 live Bullmastiffs with age reported.

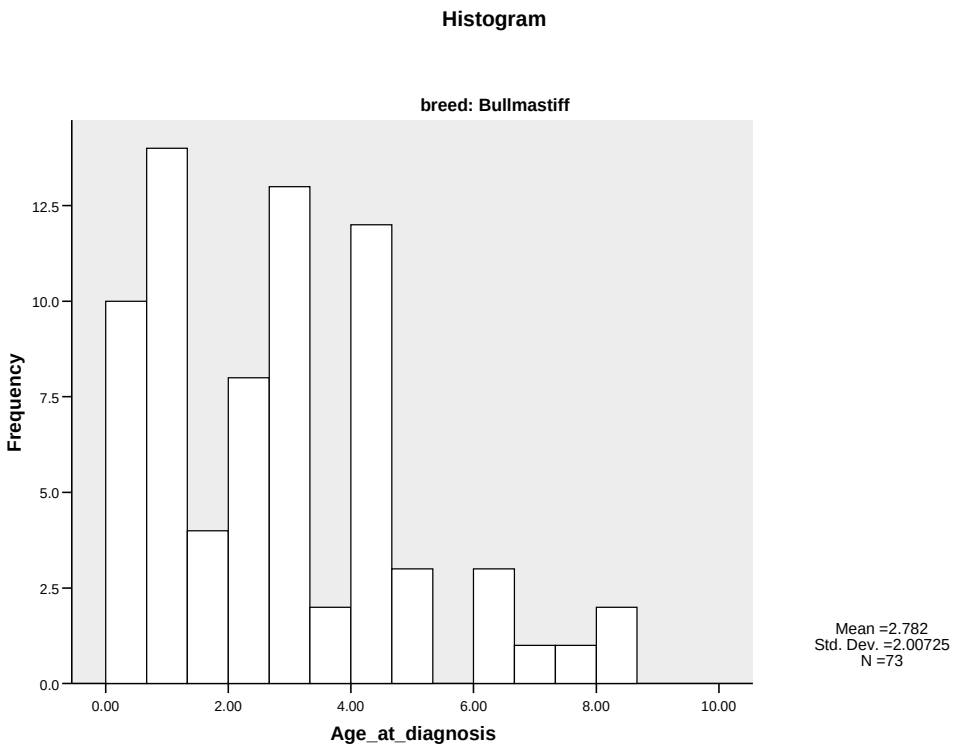
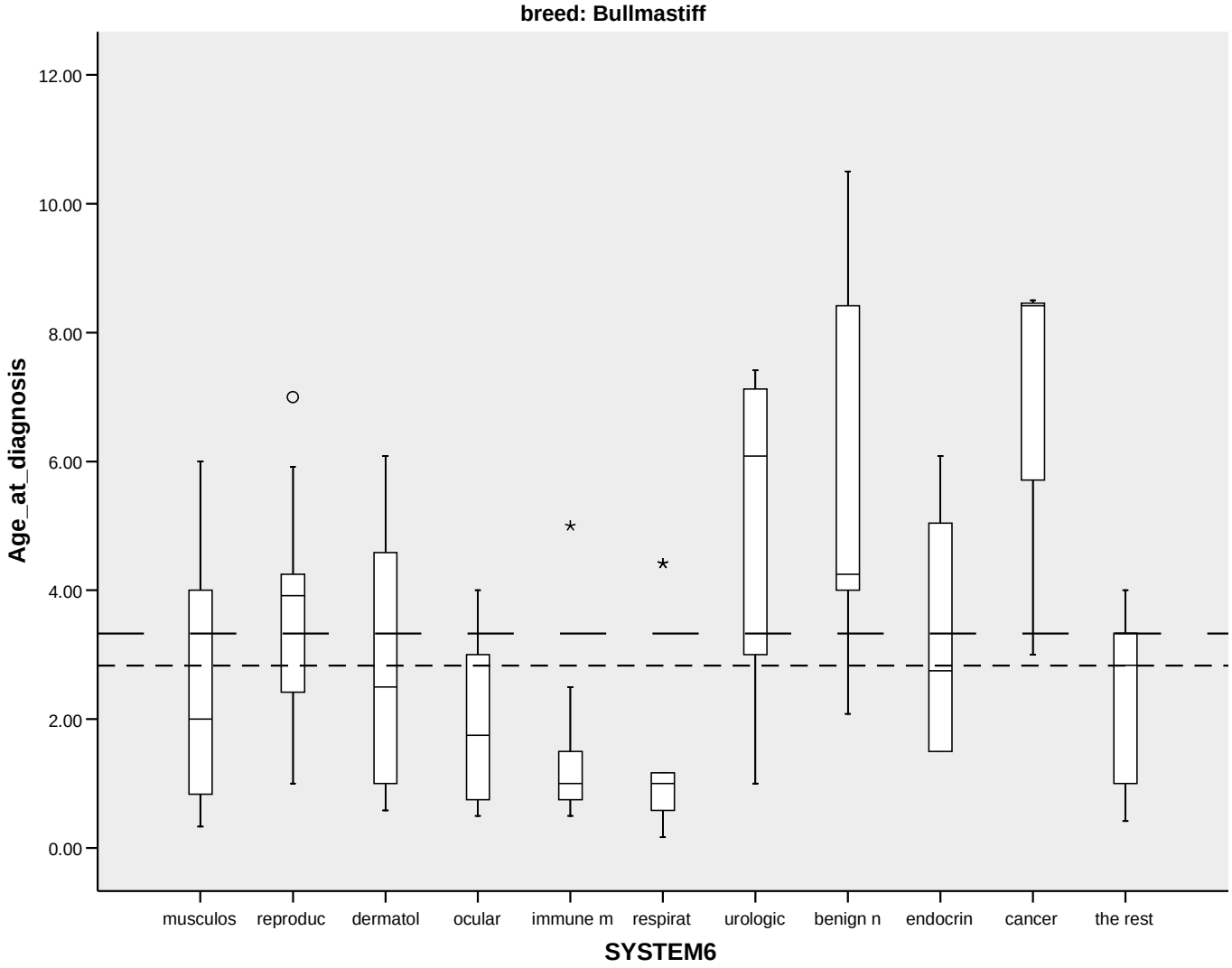


Figure 4. Histogram showing frequency of age at diagnosis for the 73 Bullmastiffs with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.



episode.

Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Bullmastiffs (N=74 dogs with 122 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Bullmastiffs. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Bullmastiffs.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Musculoskeletal	25	20.0	Arthritis (limbs>rest); CLR; OCD (elbow>rest); CHD
2	Reproductive	21	16.8	Pyometra; dystochia (uterine inertia); irregular heat cycles; false pregnancy
3	Dermatologic	14	11.2	Pyotraumatic dermatitis; mites (demodex); alopecia; other (unspecified)
4	Ocular	10	8.0	Entropion; blindness; blocked tear duct; conjunctivitis; KCS; distichiasis; red eye; trichiasis
5	Immune mediated	9	7.2	Food hypersensitivity; flea allergy; gluten-sensitive enteropathy; dust mite allergy
6	Respiratory	9	7.2	Kennel cough; long soft palate; respiratory infection (unspecified)
7	Urologic	7	5.6	Cystitis; incontinence (unspecified=after spay)
8	Benign neoplasia	6	4.8	Lipoma
9	Aural	5	4.0	Otitis externa; excessive ear wax; ear mites
10	Endocrine	4	3.2	Hypothyroidism; weight loss (unspecified)
11	Cancer	3	2.4	Unspecified
12	Cardiac	3	2.4	Heart murmur (unspecified)
13	Gastrointestinal	3	2.4	Colitis; foreign body obstruction; vomiting
14	Unknown	3	2.4	Undiagnosed illness
15	Trauma	2	1.6	Hindlimb; spinal cord
16	Neurologic	1	0.8	Unspecified
	Total	125	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for Cairn Terriers

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Cairn Terriers

A total of 397 forms were sent out and 96 were returned, representing 284 live dogs. This breed had a 24.2 % response rate (96/397) and it represented 0.70% of all returns (96/13,741).

Mortality data

A total of 124 deaths were reported and this represents 0.78 % of all deaths reported in the survey (124/15,881). The median age at death for Cairn Terriers was 14 years (min = 3 months, max = 18 years and 4 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Cairn Terriers. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Cairn Terriers.

Cause of death		N	%	Most common specific causes in descending order
1	Old age	35	28.2	Old age
2	Cancer	24	19.4	Liver (type unspecified); stomach (type unspecified)
3	Cardiac	11	8.9	Heart failure; heart defect unspecified
4	Urologic	10	8.1	Kidney failure (chronic or unspecified)
5	Hepatic	7	5.6	Liver failure (chronic or unspecified)
6	Cerebral vascular	5	4.0	Stroke or cerebral vascular accident
7	Combinations	4	3.2	Various cardiac conditions & liver or kidney failure
8	Neurologic	4	3.2	Seizures; IVDD
9	Endocrine	3	2.4	Cushings; diabetes mellitus
10	Reproductive	3	2.4	Pyometra
11	Trauma	3	2.4	Road traffic accident
12	Unknown	3	2.4	
13	Gastrointestinal	2	1.6	Unspecified
14	Sudden death	2	1.6	
15	Collapse	1	0.8	
16	Immune mediated	1	0.8	SCID
17	Musculoskeletal	1	0.8	Arthritis
18	Other	1	0.8	Uncodeable
19	Pining	1	0.8	
20	Poisoning	1	0.8	
21	Senility	1	0.8	
22	Systemic	1	0.8	Allergy to insect bite or sting or snake bite
	Total	124	100.0	

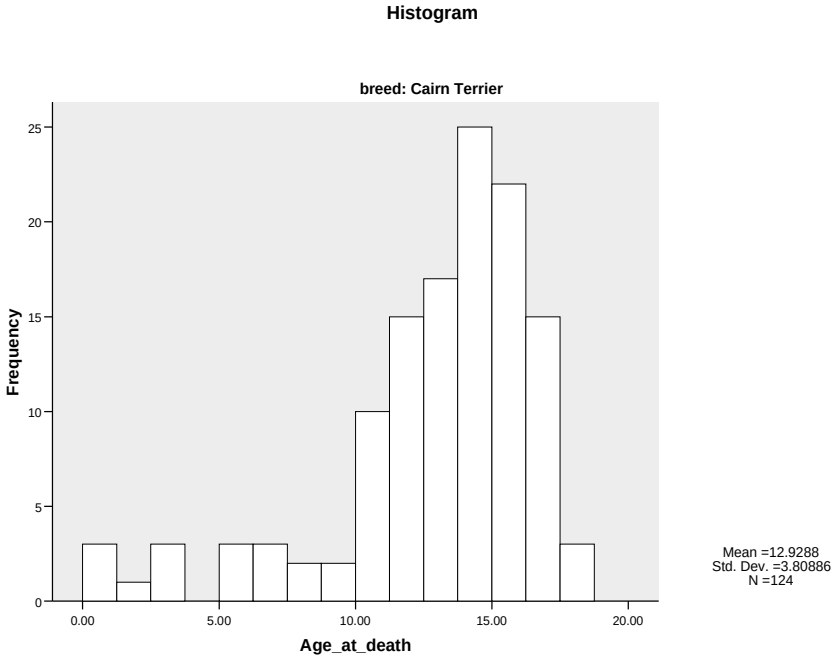


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 124 Cairn Terrier deaths with age at death reported.

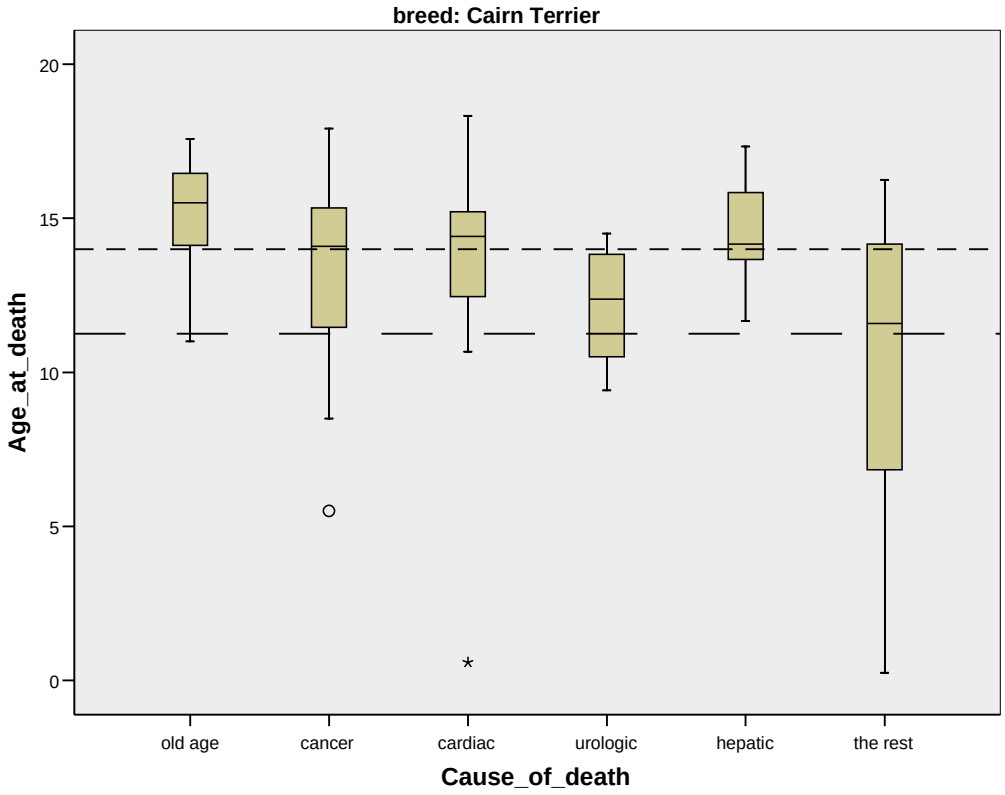


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Cairn Terriers (N=124). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Cairn Terriers. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 274 live dogs with a reported age was 4 years and 10 months (min=4 months, max=17 years and 6 months, Figure 3). Health information was reported for 284 live dogs of which 196 (69%) were healthy and 88 (31%) had at least one reported health condition, resulting in a total of 125 reported conditions with a median of 1 condition/dog (min=1, max=6).

The median current age of all healthy dogs with a reported age (N=196) was 4 years and 2 months (min=4 months, max=16 years and 9 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=87) was 8 years (min=10 months, max=17 years and 6 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=117) was 4 years and 4 months (min= 2 months, max= 16 years and 6 months, Figure 4). Table 3 shows the disease conditions for Cairn Terriers. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 283 Cairn Terriers with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	130	55	185 (65%)
Male	80	18	98 (35%)
Totals	210 (74%)	73 (26%)	283 (100%)

Significantly more females were neutered (P=0.0376).

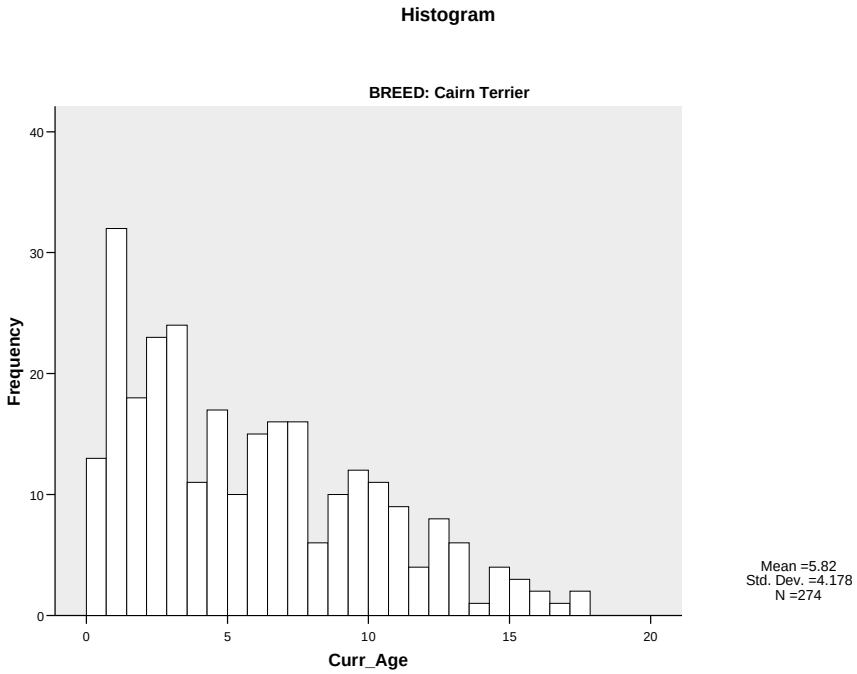


Figure 3. Histogram showing frequency of current age in years for the 274 live Cairn Terriers with age reported.

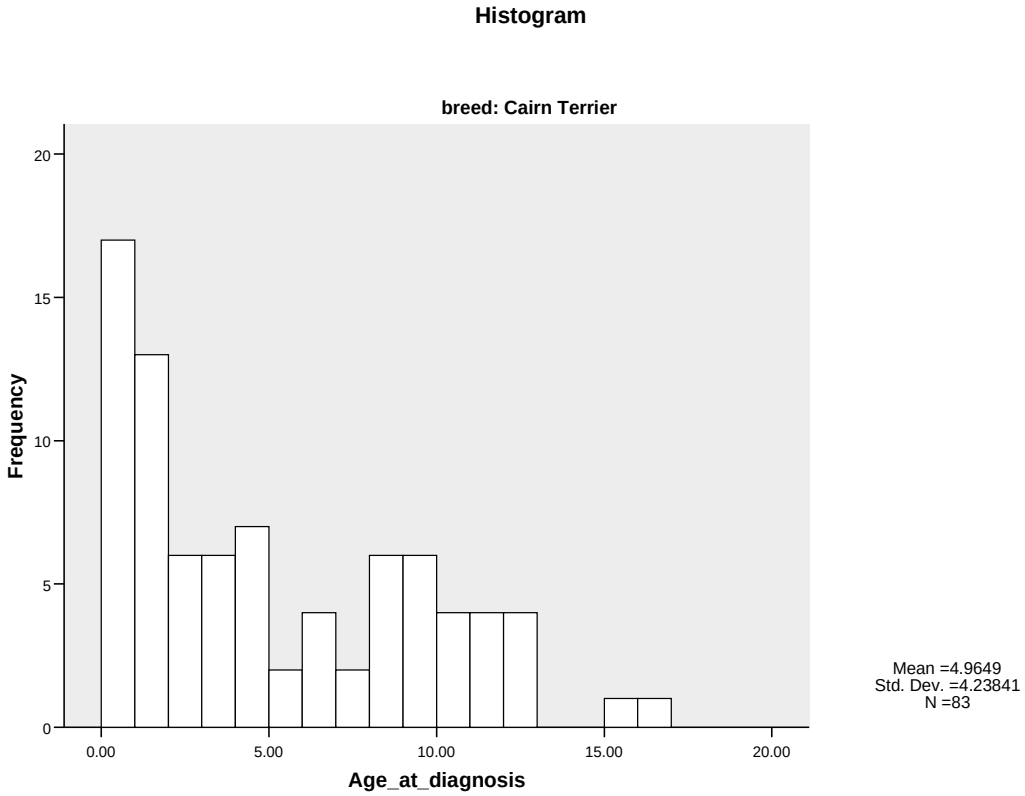


Figure 4. Histogram showing frequency of age at diagnosis for the 83 Cairn Terriers with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

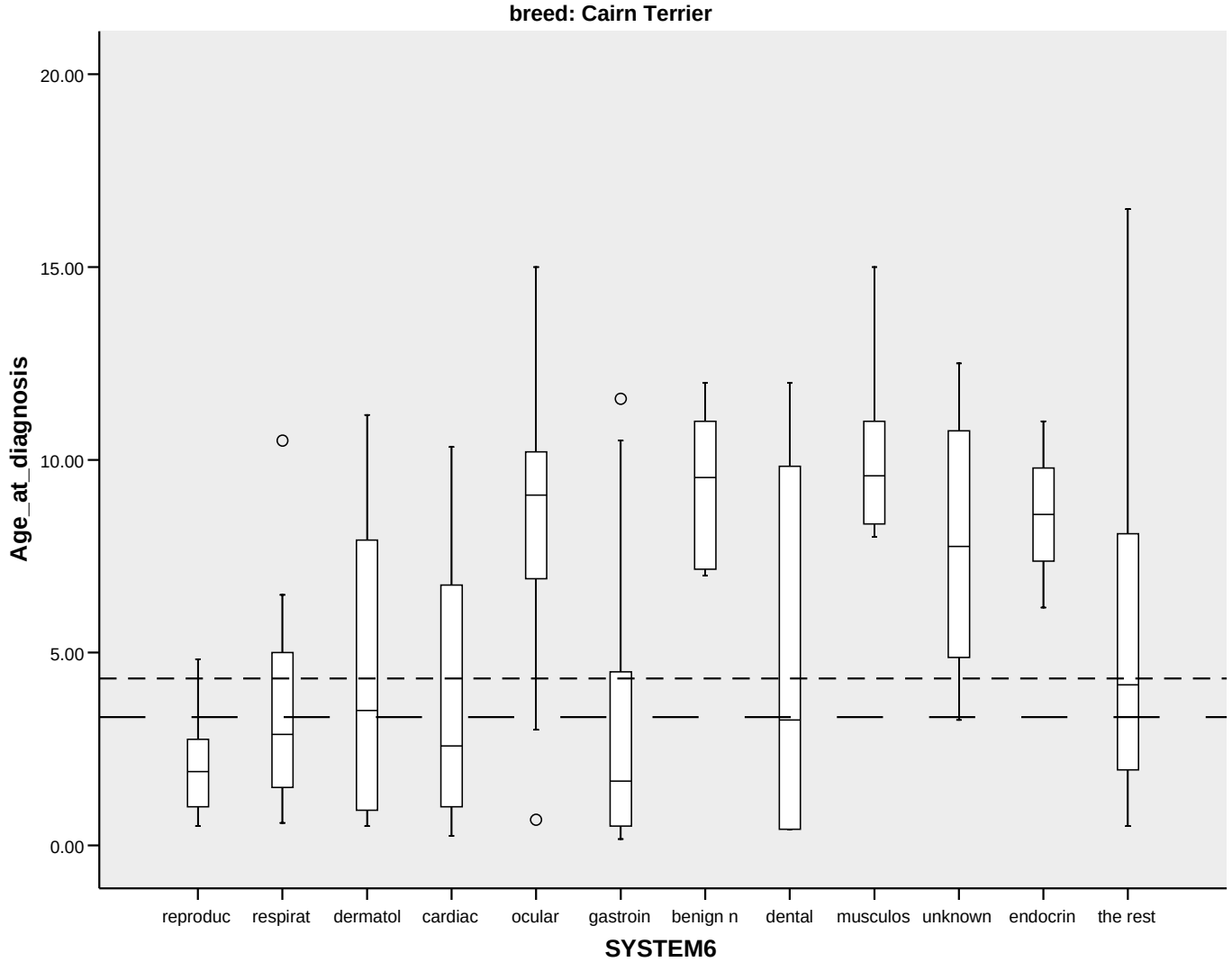


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Cairn Terriers (N=87 dogs with 117 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Cairn Terriers. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Cairn Terriers.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Reproductive	18	14.4	Infertility; false pregnancy; cryptorchid; agalactia; eclipse; mastitis; pyometra
2	Respiratory	16	12.8	Kennel cough; noisy breathing
3	Dermatologic	13	10.4	Dermatitis; alopecia; pyotraumatic dermatitis; puppy pyoderma; ringworm; seborrhoea
4	Cardiac	12	9.6	Heart murmur (unspecified>grade 3); hypertrophic cardiomyopathy; cardiomegaly
5	Ocular	11	8.8	KCS; cataracts; blindness; epiphora; progressive retinal atrophy (PRA); red eye
6	Gastrointestinal	9	7.2	Vomiting; diarrhoea; colitis; unspecified infection
7	Benign neoplasia	6	4.8	Lipoma; unspecified (mammary)
8	Dental	6	4.8	Dental disease; retained puppy teeth
9	Immune mediated	6	4.8	Atopy; food hypersensitivity; other (unspecified)
10	Musculoskeletal	6	4.8	Arthritis; stiff joints; CLR
11	Cancer	4	3.2	Unspecified (mammary); carcinoma (stomach; teat)
12	Unknown	4	3.2	Undiagnosed illness
13	Aural	3	2.4	Otitis externa; aural haematoma
14	Endocrine	3	2.4	Addison’s disease; Cushing’s disease; diabetes insipidus
15	Hepatic	2	1.6	Hepatitis; PSS
16	Urologic	2	1.6	Cystitis; cystouroliths (unspecified)
17	Behaviour	1	0.8	Unspecified
18	Haematopoietic	1	0.8	Anaemia (unspecified)
19	Neurologic	1	0.8	Seizures
20	Trauma	1	0.8	Ocular
	Total	125	100.0	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey For Canaan Dogs

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Canaan Dogs

A total of 35 forms were sent out and 15 were returned, representing 34 live dogs. This breed had a 42.9 % response rate (15/35) and it represented 0.11% of all returns (15/13,741).

Mortality data

A total of 2 deaths were reported and this represents 0.01 % of all deaths reported in the survey (2/15,881). The median age at death for Canaan Dogs was 14 years and 8 months (min = 13 years and 1 month, max = 16 years and 2 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Canaan Dogs. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Canaan Dogs.

	Cause of death	No. of deaths	% of deaths	Most common specific causes in descending order
1	Cancer	1	50.0	
2	Old age	1	50.0	
	Total	2	100.0	

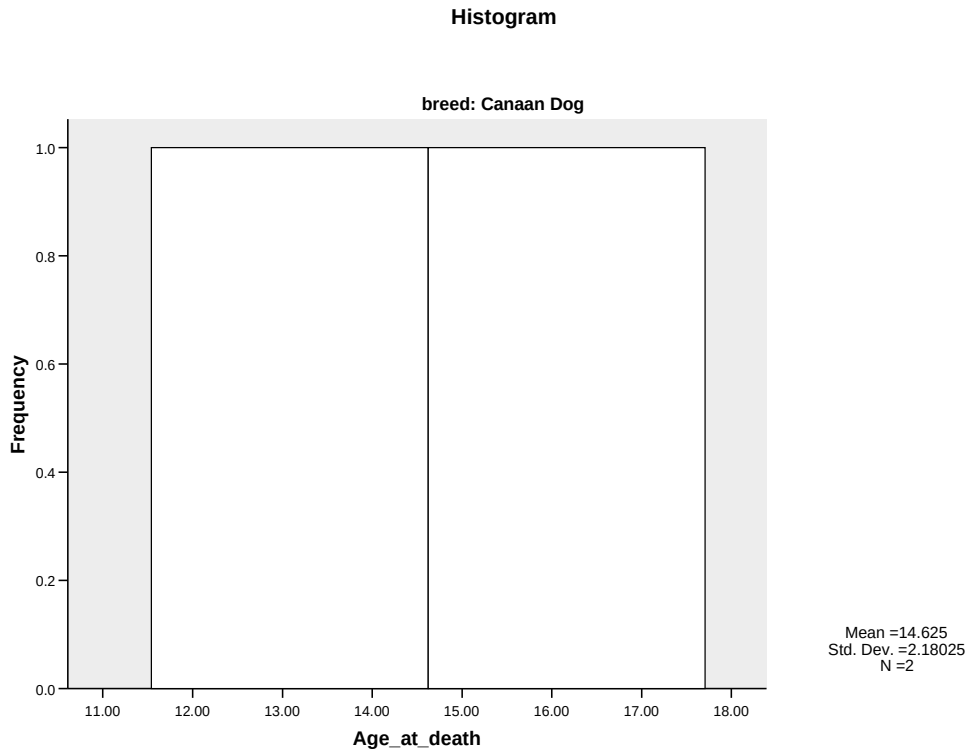


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 2 Canaan Dog deaths with age at death reported.

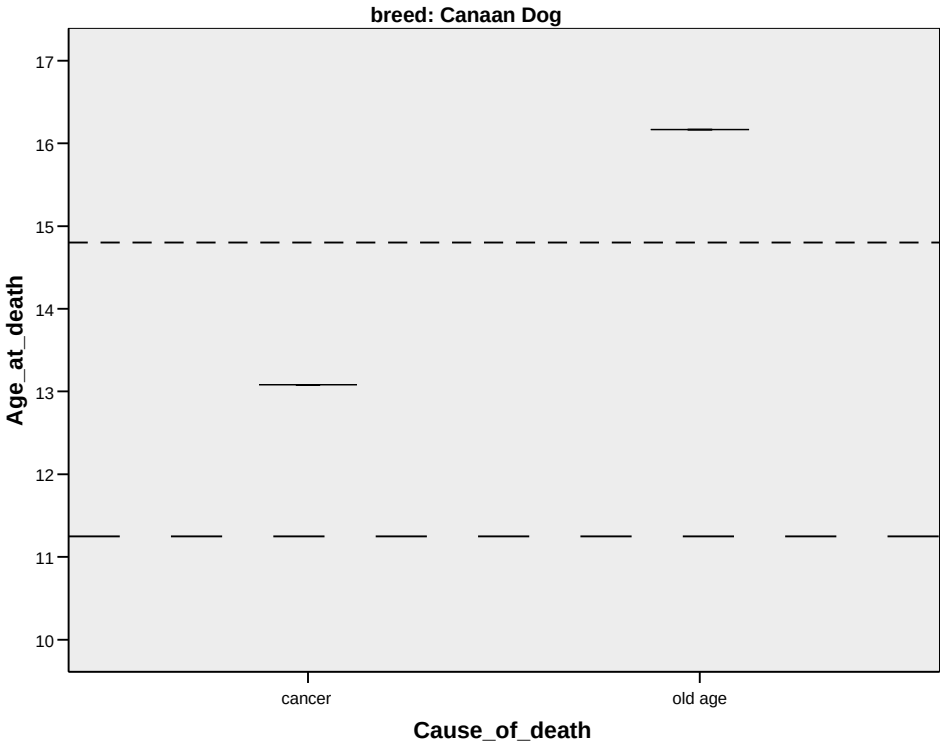


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Canaan Dogs (N=2). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Canaan Dogs. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 34 live dogs with a reported age was 3 years and 2 months (min=5 months, max=12 years and 8 months, Figure 3). Health information was reported for 34 live dogs of which 27 (79%) were healthy and 7 (21%) had at least one reported health condition, resulting in a total of 16 reported conditions with a median of 2 conditions/dog (min=1, max=4).

The median current age of all healthy dogs with a reported age (N=27) was 3 years and 1 month (min=5 months, max=10 years and 4 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=7) was 7 years and 6 months (min=1 year and 11 months, max=12 years and 8 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=16) was 4 years and 7 months (min= 6 months, max= 10 years and 7 months, Figure 4). Table 3 shows the disease conditions for Canaan Dogs. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 33 Canaan Dogs with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	13	3	16 (48%)
Male	12	5	17 (52%)
Totals	25 (76%)	8 (24%)	33 (100%)

There was no association between gender and neuter status (P=0.4751).

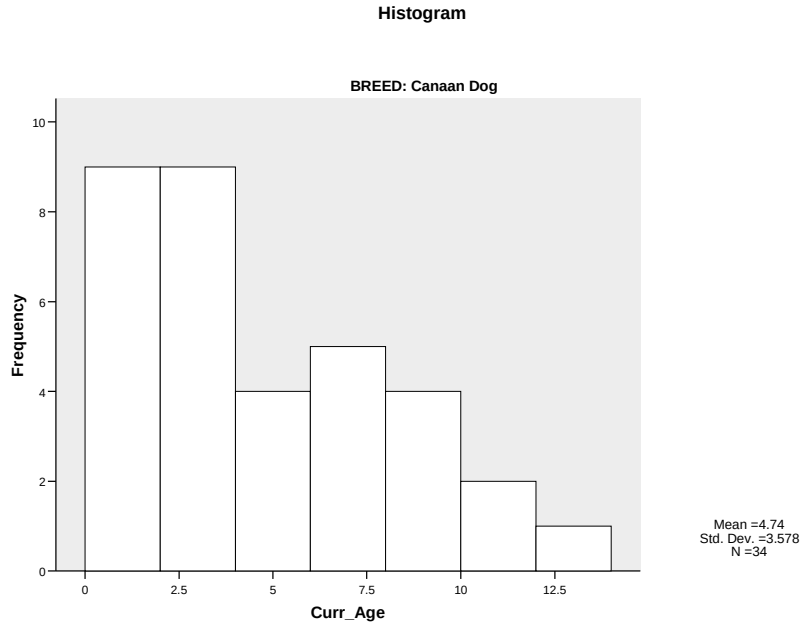


Figure 3. Histogram showing frequency of current age in years for the 34 live Canaan Dogs with age reported.

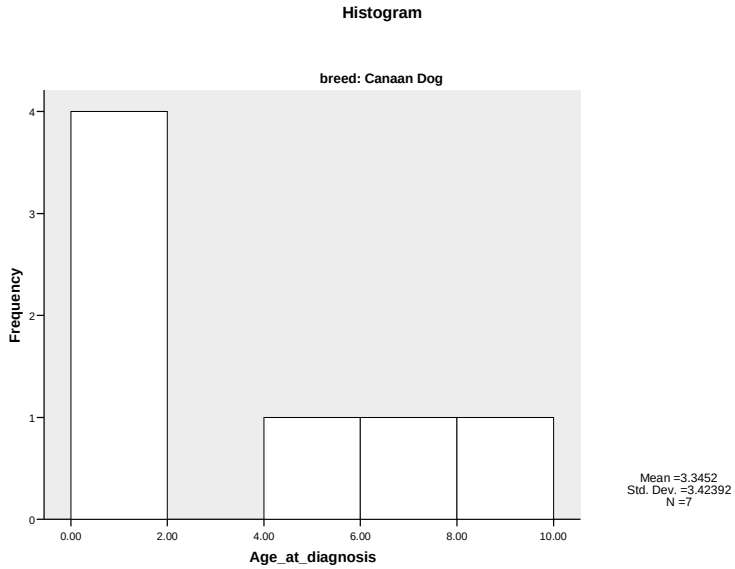


Figure 4. Histogram showing frequency of age at diagnosis for the 7 Canaan Dogs with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

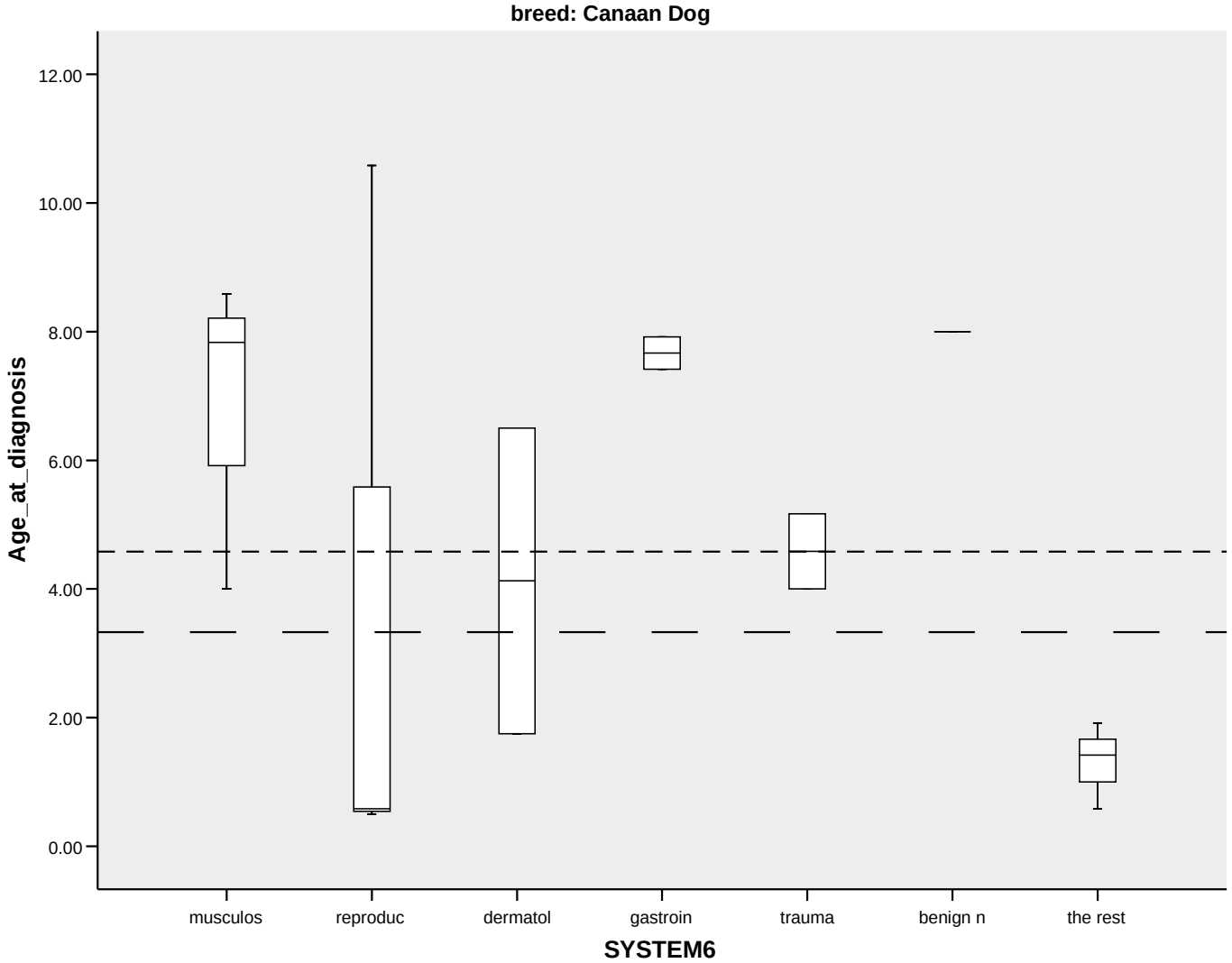


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Canaan Dogs (N=16 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Canaan Dogs. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Canaan Dogs.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Musculoskeletal	3	18.8	Arthritis; hip dysplasia (CHD)
2	Reproductive	3	18.8	Cryptorchid; pyometra
3	Dermatologic	2	12.5	Recurrent pyoderma; mites (sarcoptes)
4	Gastrointestinal	2	12.5	Foreign body obstruction; infection (unspecified)
5	Trauma	2	12.5	Hindlimb; other (unspecified)
6	Unknown	2	12.5	Undiagnosed illness
7	Benign neoplasia	1	6.3	Lipoma
8	Respiratory	1	6.3	Kennel cough
	Total	16	100.0	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for Cavalier King Charles Spaniels

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Cavalier King Charles Spaniels

A total of 1150 forms were sent out and 306 were returned, representing 1253 live dogs. This breed had a 26.6 % response rate (306/1150) and it represented 2.23% of all returns (306/13,741).

Mortality data

A total of 682 deaths were reported and this represents 4.29 % of all deaths reported in the survey (682/15,881). The median age at death for Cavalier King Charles Spaniels was 11 years and 5 months (min = 2 months, max = 18 years and 6 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Cavalier King Charles Spaniels. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Cavalier King Charles Spaniels.

Cause of death		N	%	Most common specific causes in descending order
1	Cardiac	292	42.8	Heart failure; MVD; heart disease unspecified
2	Cancer	84	12.3	Unspecified; throat (type unspecified); brain tumour
3	Old age	83	12.2	Old age
4	Combinations	43	6.3	
5	Urologic	31	4.5	Kidney failure; proliferative glomerulopathy; amyloidosis
6	Cerebral vascular	23	3.4	Stroke or cerebral vascular accident
7	Neurologic	19	2.8	Seizures; syringomyelia; IVDD
8	Hepatic	15	2.2	Liver failure chronic; unspecified
9	Other	15	2.2	Weakness or paresis
10	Unknown	15	2.2	
11	Reproductive	9	1.3	Pyometra; eclampsia
12	Gastrointestinal	6	0.9	Pancreatitis; colitis; haemorrhagic diarrhoea
13	Sudden death	6	0.9	
14	Trauma	6	0.9	Road traffic accident
15	Immune mediated	5	0.7	Unspecified; haemolytic anaemia
16	Collapse	4	0.6	
17	Endocrine	4	0.6	Cushings; Addisons
18	Perioperative	4	0.6	
19	Respiratory	3	0.4	Choked; respiratory failure; unspecified
20	Senility	3	0.4	
21	Portosystemic shunt (PSS)	2	0.3	
22	Musculoskeletal	2	0.3	Arthritis
23	Septicaemia	2	0.3	
24	Systemic	2	0.3	Allergy to insect bite or sting or snake bite
25	Cardiovascular	1	0.1	Unspecified
26	Infection	1	0.1	
27	Ocular	1	0.1	Blindness
28	Poisoning	1	0.1	
	Total	682	100.0	

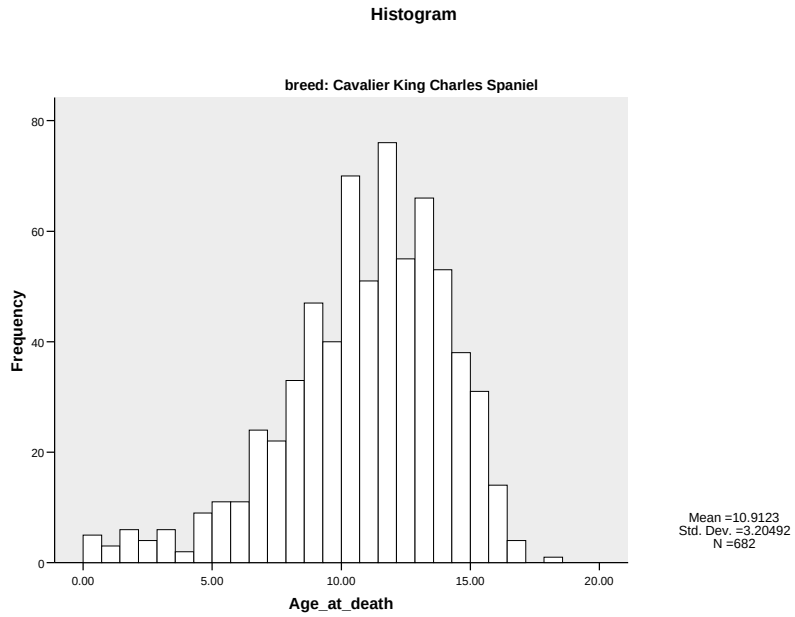


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 682 Cavalier King Charles Spaniel deaths with age at death reported.

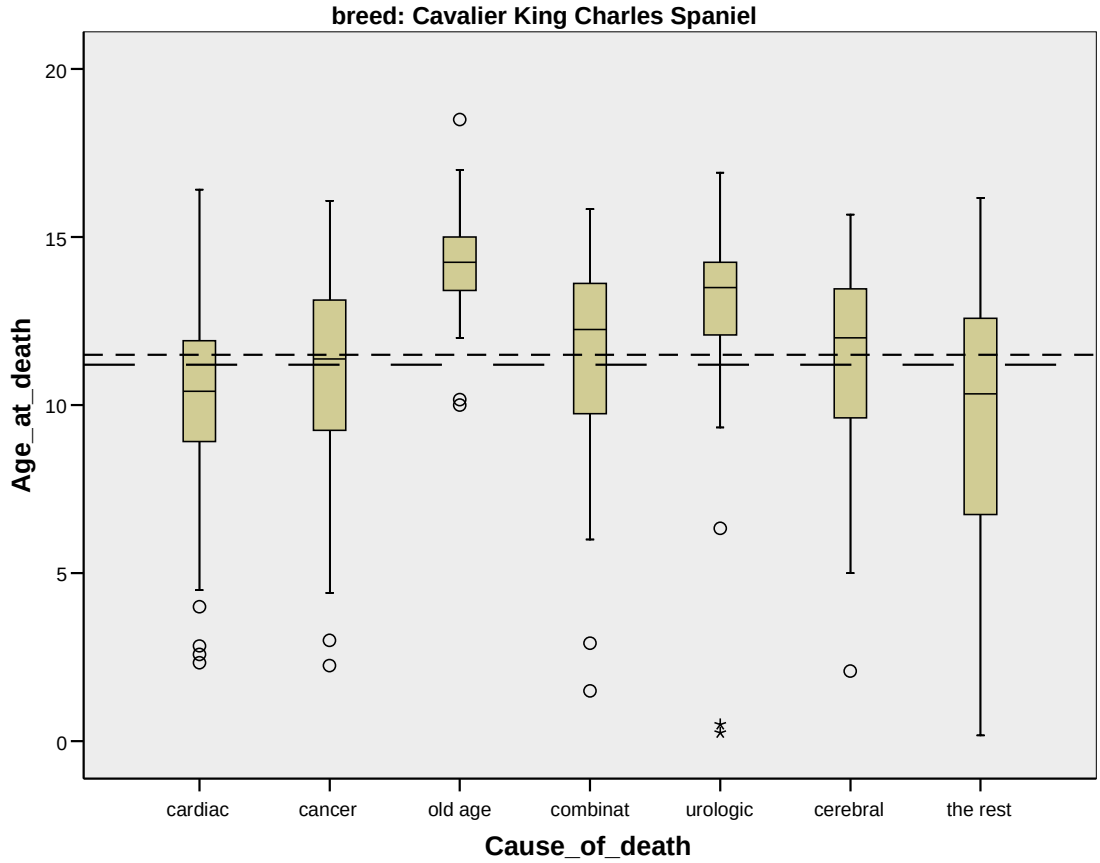


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Cavalier King Charles Spaniels (N=682). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Cavalier King Charles Spaniels. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 1242 live dogs with a reported age was 5 years and 2 months (min=1 month, max=17 years, Figure 3). Health information was reported for 1253 live dogs of which 750 (60%) were healthy and 503 (40%) had at least one reported health condition, resulting in a total of 853 reported conditions with a median of 1 condition/dog (min=1, max=8).

The median current age of all healthy dogs with a reported age (N=750) was 3 years and 6 months (min=1 month, max=15 years and 8 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=502) was 7 years and 5 months (min=6 months, max=17 years). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=817) was 5 years (min= 1 month, max= 14 years and 1 month, Figure 4). Table 3 shows the disease conditions for Cavalier King Charles Spaniels. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 1246 Cavalier King Charles Spaniels with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	652	235	887 (71%)
Male	276	83	359 (29%)
Totals	928 (74%)	318 (26%)	1246 (100%)

There was no association between gender and neuter status (P=0.2160).

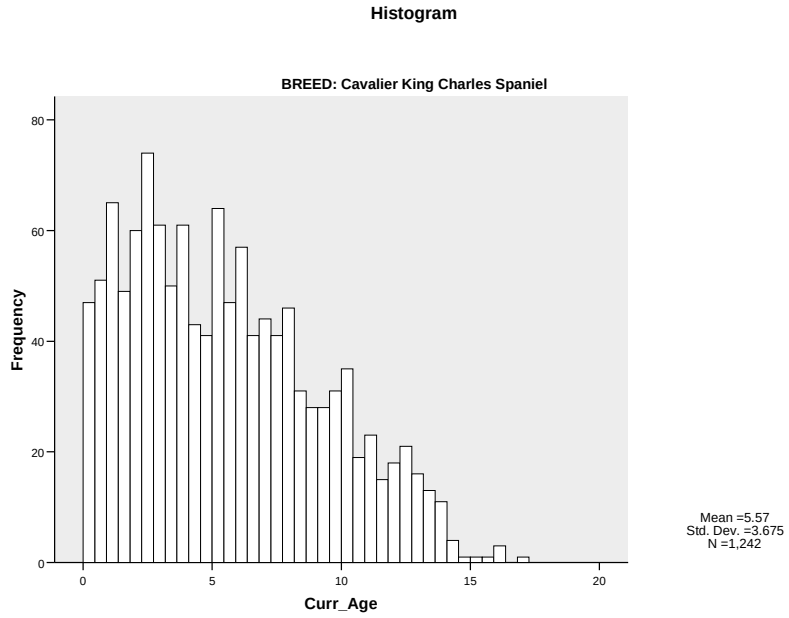


Figure 3. Histogram showing frequency of current age in years for the 1242 live Cavalier King Charles Spaniels with age reported.

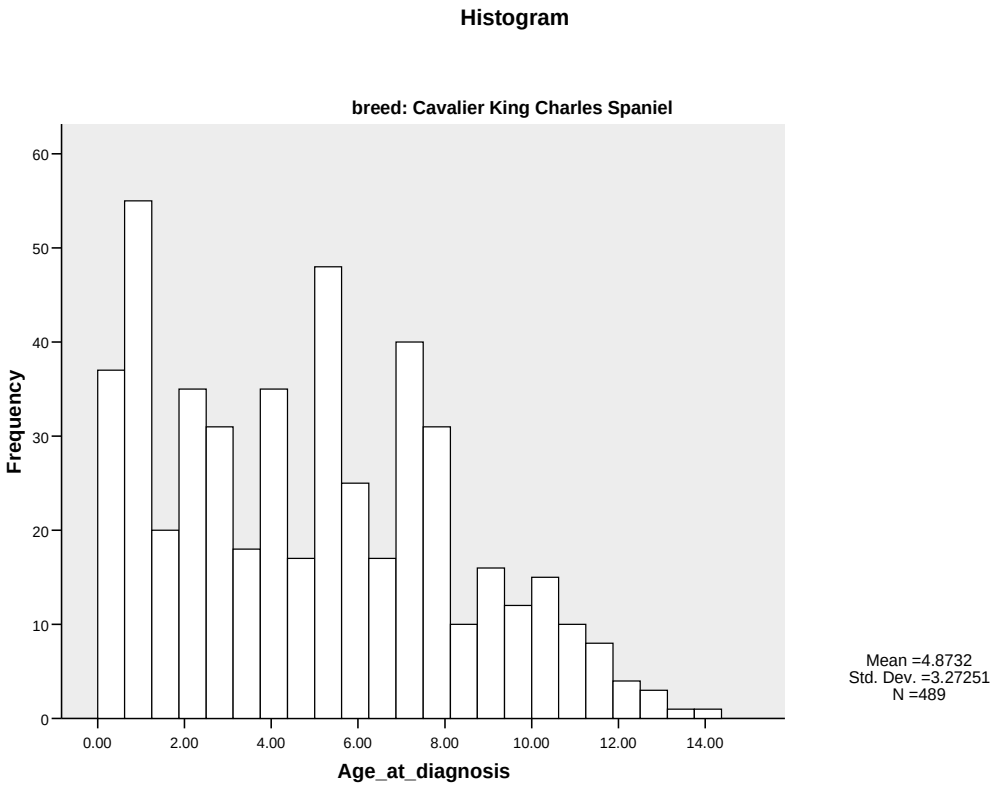


Figure 4. Histogram showing frequency of age at diagnosis for the 489 Cavalier King Charles Spaniels with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

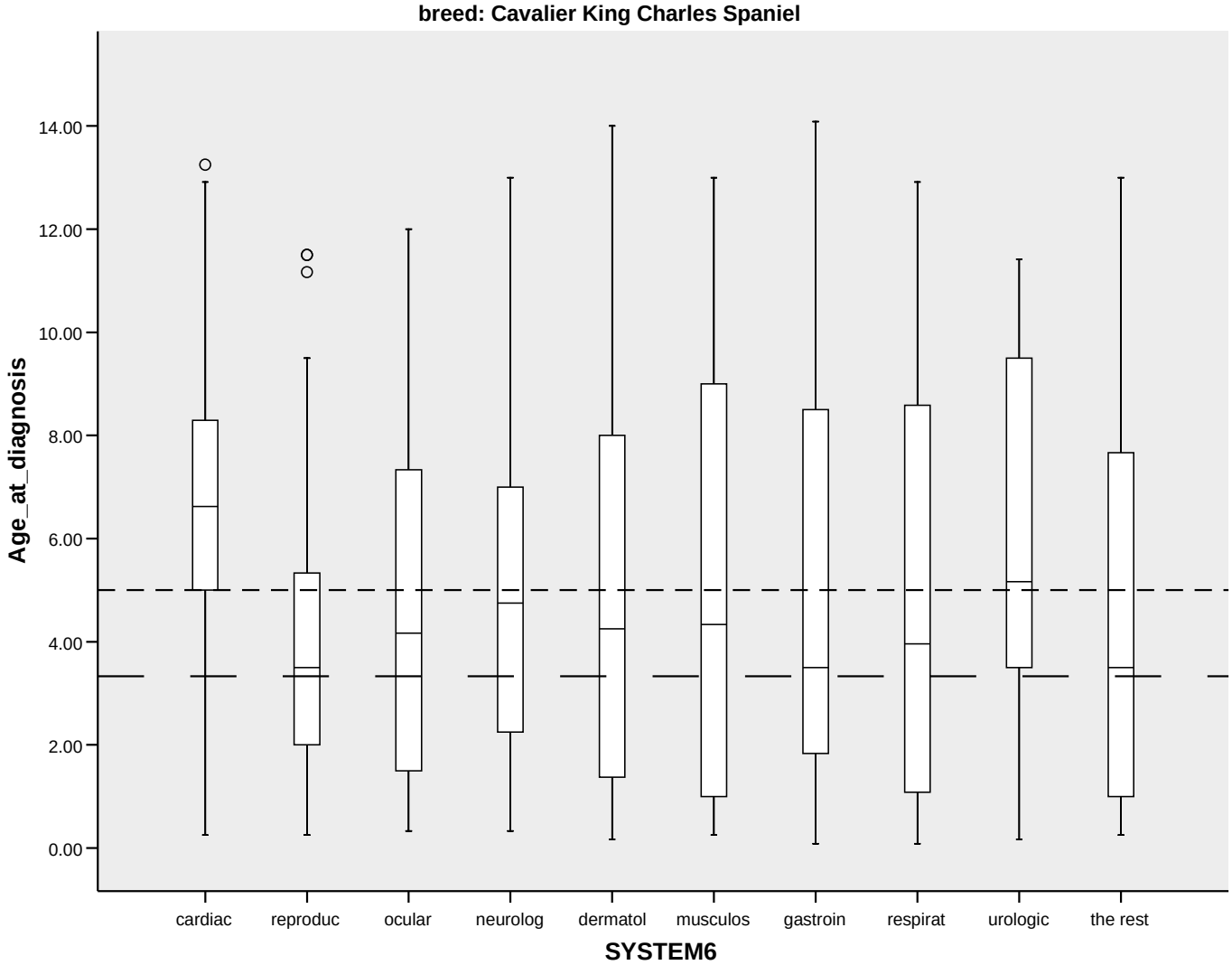


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Cavalier King Charles Spaniels (N=502 dogs with 817 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Cavalier King Charles Spaniels. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Cavalier King Charles Spaniels.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Cardiac	212	24.9	Heart murmur (unspecified>grades 1,3>gr2>rest); MVD; CHF
2	Reproductive	128	15.0	Pyometra; dystochia (uterine inertia>stuck puppy); false pregnancy; infertility; cryptorchid
3	Ocular	93	10.9	KCS; epiphora; corneal ulcer; MRD; conjunctivitis; cataracts
4	Neurologic	67	7.9	Deafness; seizures or fits; syringomyelia; IVDD; vestibular disease
5	Dermatologic	53	6.2	Mites (sarcoptes>cheyletiella); dermatitis; fading nose pigment
6	Musculoskeletal	50	5.9	Arthritis (hindlimb>rest); patellar luxation; CHD; stiff joints
7	Gastrointestinal	44	5.2	Colitis; pancreatitis; vomiting; diarrhoea; IBD; EPI; foreign body obstruction
8	Respiratory	35	4.1	Kennel cough; noisy breathing; long soft palate; snoring
9	Dental	32	3.8	Retained puppy teeth; dental disease
10	Urologic	29	3.4	Cystitis; haematuria; cystouroliths (unspecified>calcium oxalate)
11	Aural	21	2.5	Otitis externa; excessive ear wax; ear mites
12	Unknown	16	1.9	Undiagnosed illness
13	Immune mediated	13	1.5	Atopy; flea allergy; food allergy; gluten-sensitive enteropathy; AIHA
14	Endocrine	12	1.4	Hypothyroidism; diabetes mellitus; Cushing's disease; acromegaly; hyperthyrodism
15	Trauma	11	1.3	Unspecified; ocular; spine; forelimb
16	Anal gland	10	1.2	Anal sacculitis
17	Benign neoplasia	9	1.1	Lipoma; adenoma (mammary); unspecified (spleen)
18	Cancer	7	0.8	Type unspecified; carcinoma; melanoma
19	Uncode and other	4	0.5	Inguinal hernia; poisoning (other than food); senility
20	Cerebrovascular	3	0.4	Stroke or cerebral vascular accident
21	Hepatic	2	0.2	Ascites or fluid in abdomen
22	Behaviour	1	0.1	Unspecified
23	Cardiopulmonary	1	0.1	Chronic coughing
	Total	853	100.0	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for Cesky Terriers

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Cesky Terriers

A total of 65 forms were sent out and 13 were returned, representing 22 live dogs. This breed had a 20.0 % response rate (13/65) and it represented 0.09% of all returns (13/13,741).

Mortality data

A total of 9 deaths were reported and this represents 0.06 % of all deaths reported in the survey (9/15,881). The median age at death for Cesky Terriers was 8 years and 5 months (min = 5 years and 7 months, max = 12 years and 8 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Cesky Terriers. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Cesky Terriers.

	Cause of death	No. of deaths	% of deaths	Most common specific causes in descending order
1	Cancer	6	66.7	Lymphoma; liver (type unspecified); nasal (type unspecified)
2	Urologic	2	22.2	Chronic kidney failure
3	Neurologic	1	11.1	IVDD
	Total	9	100.0	

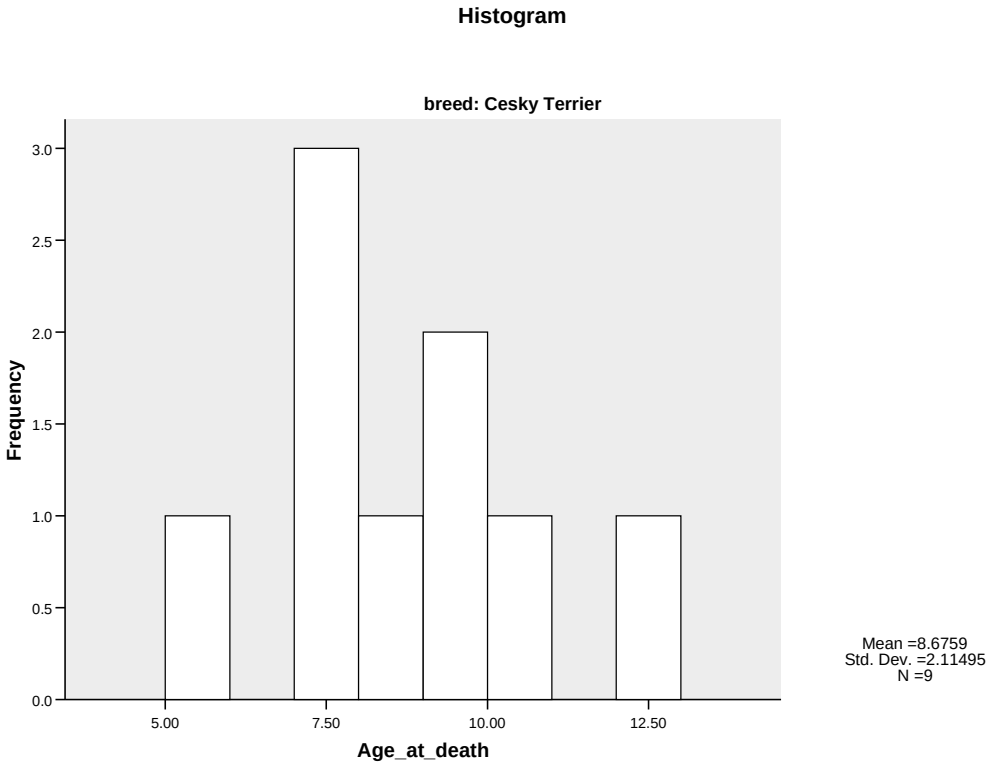


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 9 Cesky Terrier deaths with age at death reported.

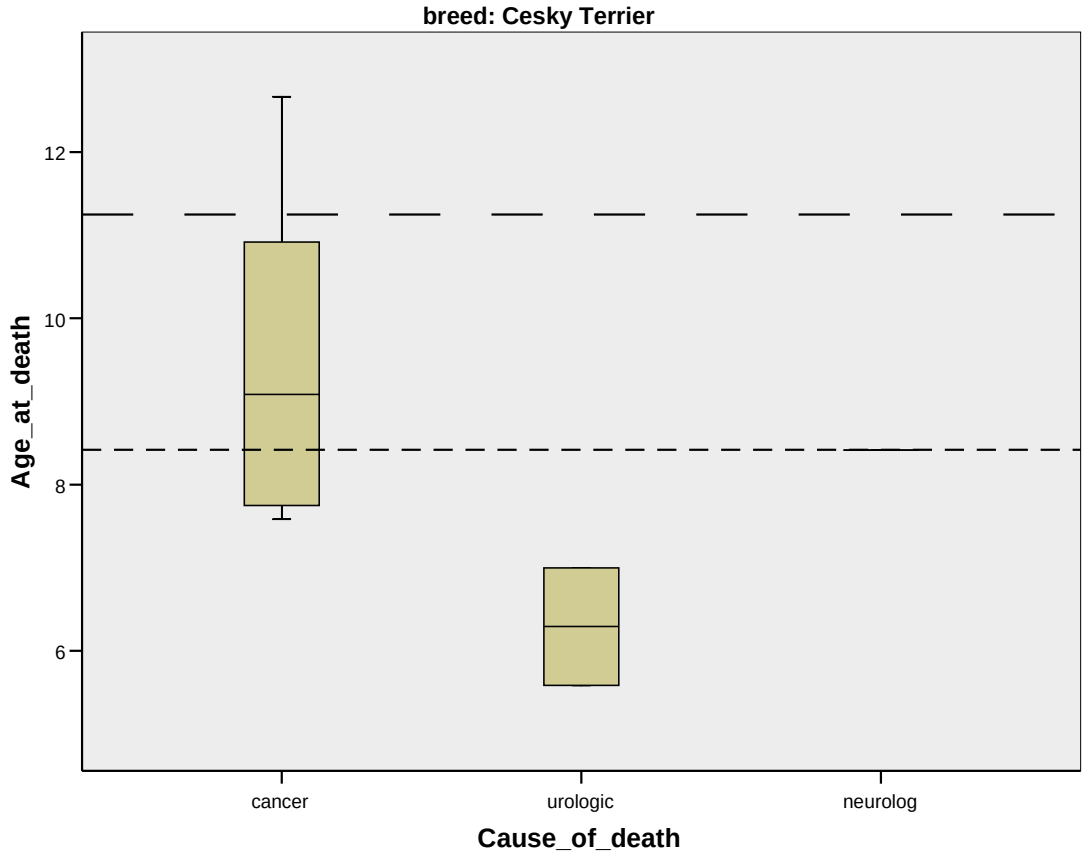


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Cesky Terriers (N=9). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Cesky Terriers. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 22 live dogs with a reported age was 5 years and 4 months (min=4 months, max=12 years, Figure 3). Health information was reported for 22 live dogs of which 12 (55%) were healthy and 10 (45%) had at least one reported health condition, resulting in a total of 14 reported conditions with a median of 1 condition/dog (min=1, max=3).

The median current age of all healthy dogs with a reported age (N=12) was 3 years and 8 months (min=4 months, max=8 years and 2 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=10) was 6 years and 2 months (min=1 year and 8 months, max=12 years). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=13) was 4 years (min= 5 months, max= 10 years and 8 months, Figure 4). Table 3 shows the disease conditions for Cesky Terriers. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 22 Cesky Terriers with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	9	4	13 (59%)
Male	8	1	9 (41%)
Totals	17 (77%)	5 (23%)	22 (100%)

There was no association between gender and neuter status (P=0.2794).

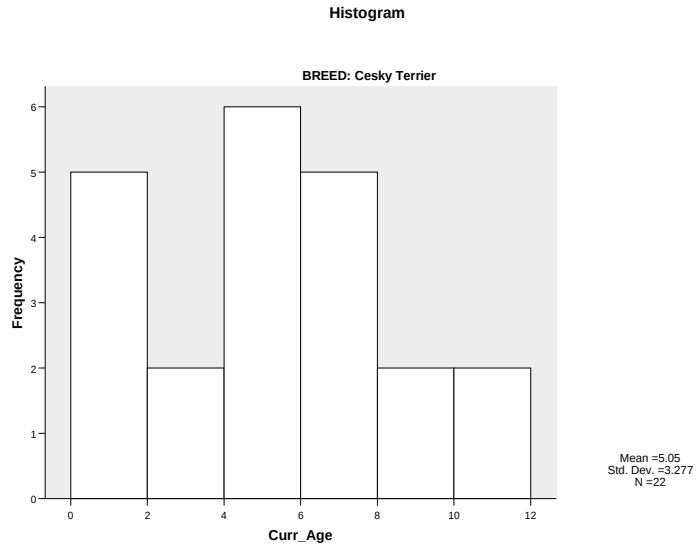


Figure 3. Histogram showing frequency of current age in years for the 22 live Cesky Terriers with age reported.

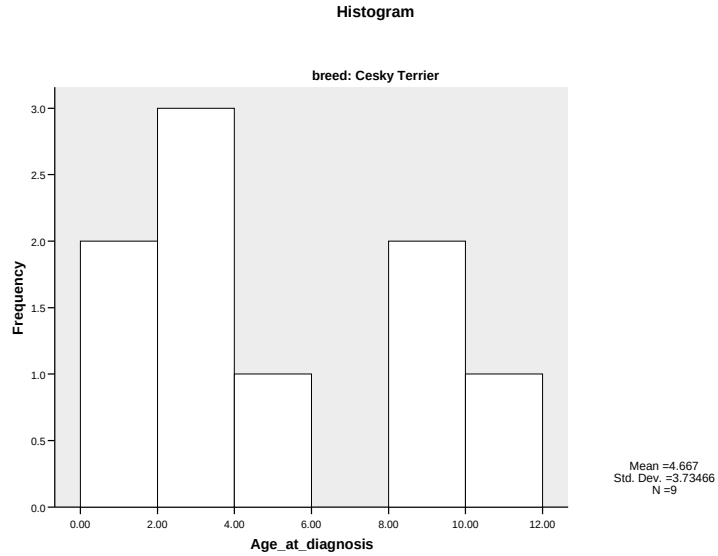


Figure 4. Histogram showing frequency of age at diagnosis for the 9 Cesky Terriers with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

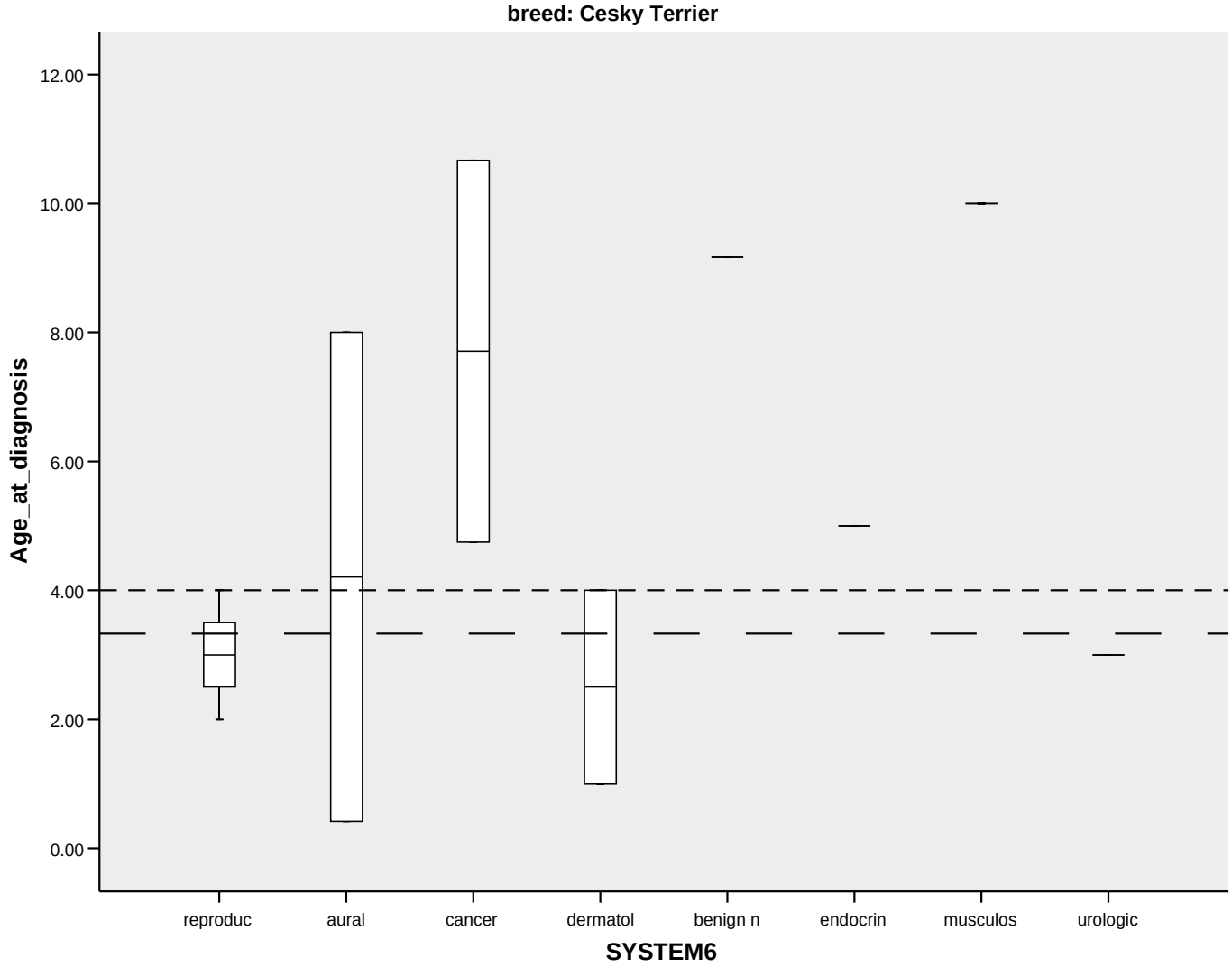


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Cesky Terriers (N=13 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Cesky Terriers. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Cesky Terriers.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Reproductive	4	28.6	Puppies with problems or defects; infertility; irregular heat cycles
2	Aural	2	14.3	Otitis externa
3	Cancer	2	14.3	Unspecified
4	Dermatologic	2	14.3	Alopecia; pyotraumatic dermatitis
5	Benign neoplasia	1	7.1	Unspecified
6	Endocrine	1	7.1	Unspecified
7	Musculoskeletal	1	7.1	Stiff joints
8	Urologic	1	7.1	Cystitis
	Total	14	100.0	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for Chesapeake Bay Retrievers

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Chesapeake Bay Retrievers

A total of 277 forms were sent out and 58 were returned, representing 120 live dogs. This breed had a 20.9 % response rate (58/277) and it represented 0.42% of all returns (58/13,741).

Mortality data

A total of 45 deaths were reported and this represents 0.28 % of all deaths reported in the survey (45/15,881). The median age at death for Chesapeake Bay Retrievers was 10 years and 9 months (min = 9 months, max = 15 years and 8 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Chesapeake Bay Retrievers. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Chesapeake Bay Retrievers.

Cause of death		N	%	Most common specific causes in descending order
1	Old age	10	22.2	Old age
2	Cancer	6	13.3	Brain tumour; bowel (type unspecified)
3	Trauma	5	11.1	Road traffic accident; unspecified
4	Cerebral vascular	4	8.9	Stroke or cerebral vascular accident
5	Behaviour	3	6.7	Aggression; unspecified
6	Endocrine	3	6.7	Diabetes mellitus
7	Neurologic	3	6.7	Seizures; spinal cord disease unspecified
8	Cardiac	2	4.4	Heart failure
9	Gastrointestinal	2	4.4	Gastric dilatation/volvulus (GDV)
10	Infection	2	4.4	Toxoplasmosis
11	Collapse	1	2.2	
12	Combinations	1	2.2	Aggression & lymphosarcoma & toxoplasmosis
13	Other	1	2.2	Uncodeable
14	Poisoning	1	2.2	
15	Urologic	1	2.2	Chronic kidney failure
	Total	45	100.0	

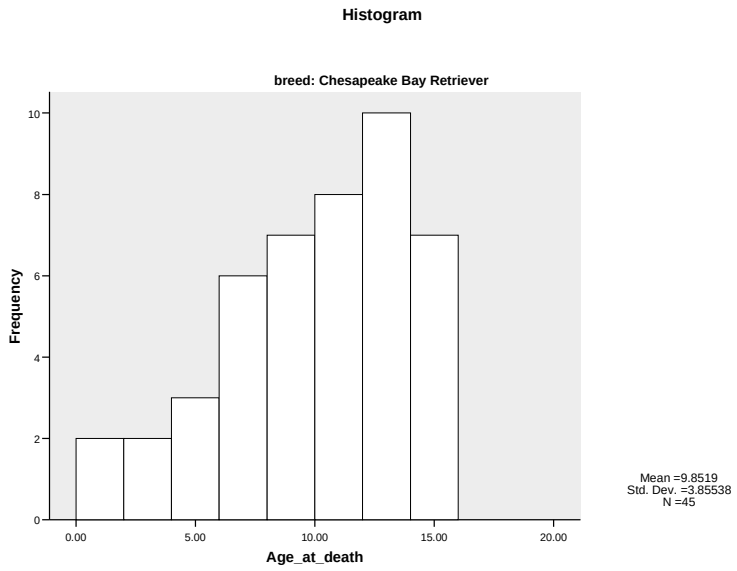


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 45 Chesapeake Bay Retriever deaths with age at death reported.

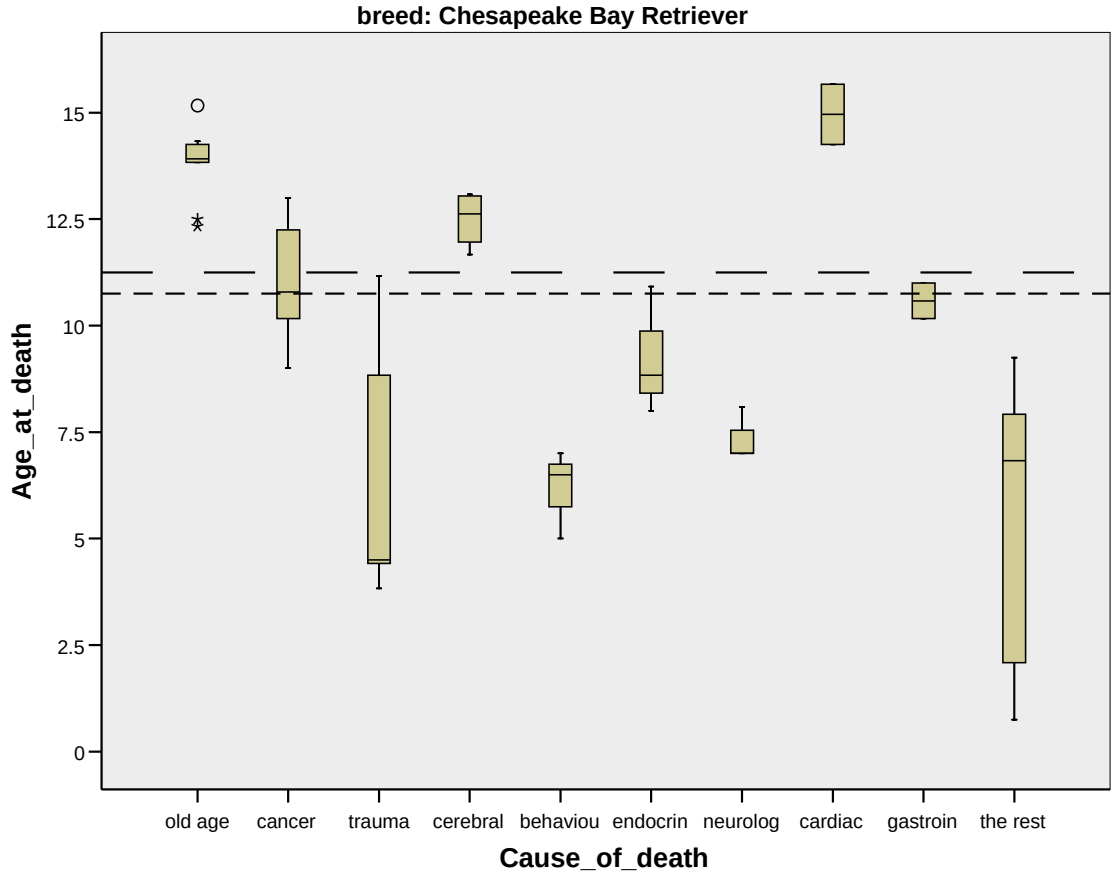


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Chesapeake Bay Retrievers (N=45). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Chesapeake Bay Retrievers. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 120 live dogs with a reported age was 3 years and 8 months (min=2 months, max=11 years and 11 months, Figure 3). Health information was reported for 120 live dogs of which 79 (66%) were healthy and 41 (34%) had at least one reported health condition, resulting in a total of 72 reported conditions with a median of 1 condition/dog (min=1, max=6).

The median current age of all healthy dogs with a reported age (N=79) was 3 years (min=2 months, max=11 years and 11 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=40) was 6 years and 2 months (min=7 months, max=11 years). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=67) was 3 years and 6 months (min= 2 months, max= 11 years, Figure 4). Table 3 shows the disease conditions for Chesapeake Bay Retrievers. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 120 Chesapeake Bay Retrievers with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	51	22	73 (61%)
Male	34	13	47 (39%)
Totals	85 (71%)	35 (29%)	120 (100%)

There was no association between gender and neuter status (P=0.7707).

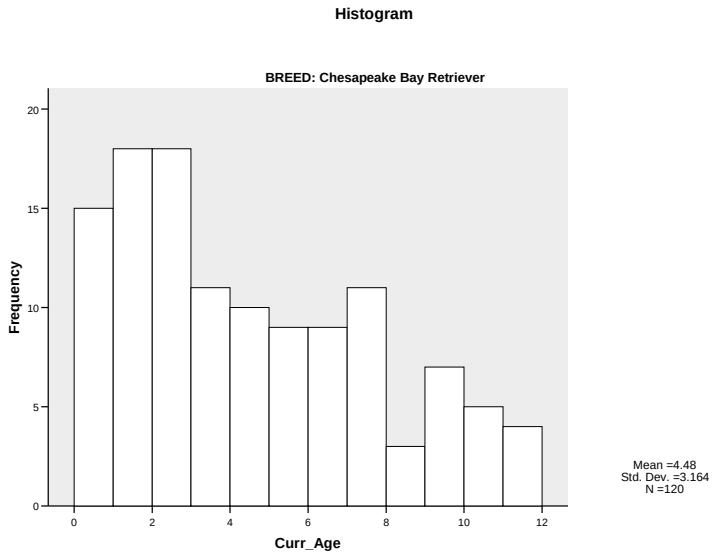


Figure 3. Histogram showing frequency of current age in years for the 120 live Chesapeake Bay Retrievers with age reported.

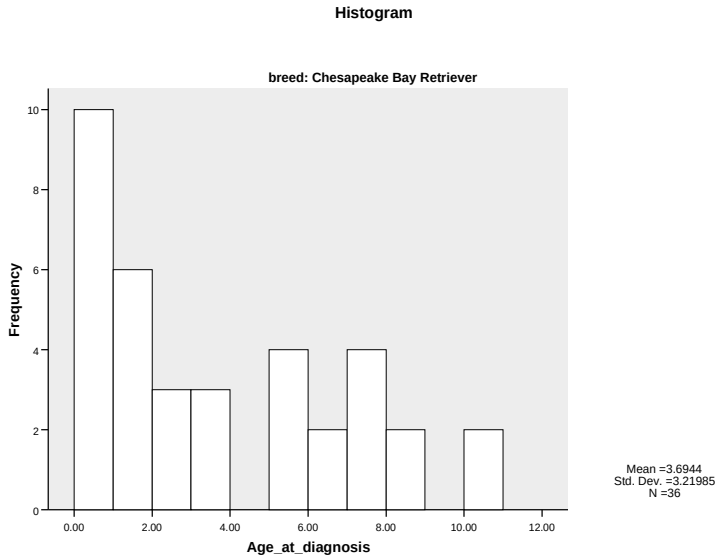


Figure 4. Histogram showing frequency of age at diagnosis for the 36 Chesapeake Bay Retrievers with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

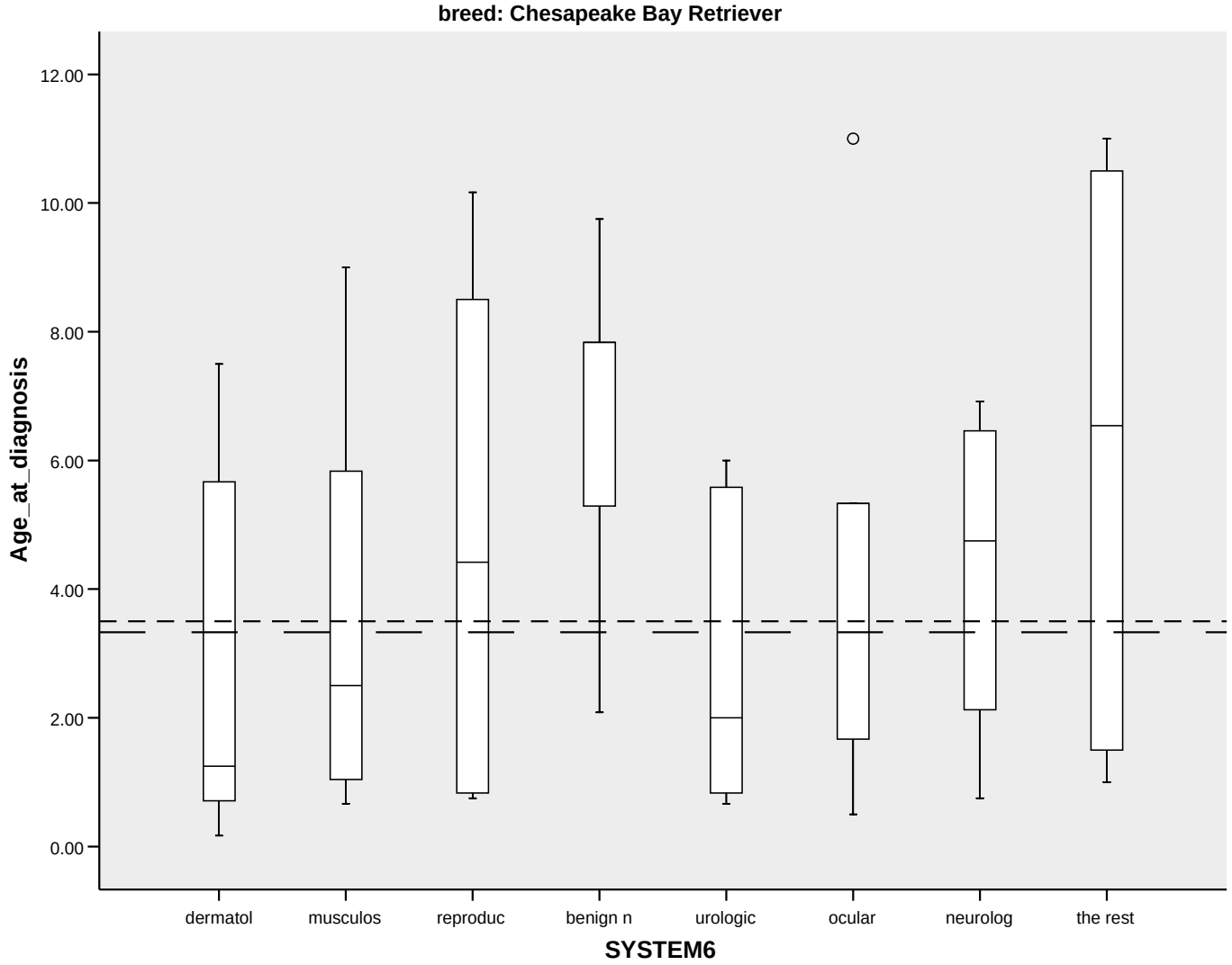


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Chesapeake Bay Retrievers (N=40 dogs with 67 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Chesapeake Bay Retrievers. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Chesapeake Bay Retrievers.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Dermatologic	16	22.2	Dermatitis; pyotraumatic dermatitis; calcinosis circumscripta; mites (cheyletiella)
2	Musculoskeletal	16	22.2	Arthritis (hindlimbs); CLR; CHD
3	Reproductive	8	11.1	Pyometra; infertility; irregular heat cycles; mastitis; prolapsed uterus
4	Benign neoplasia	7	9.7	Lipoma; unspecified; histiocytoma
5	Urologic	7	9.7	Cystitis; incontinence; acute kidney failure
6	Ocular	5	6.9	Cataracts; distichiasis; generalized PRA (night blindness); epiphora
7	Neurologic	4	5.6	Seizures; IVDD (cervical)
8	Aural	3	4.2	Otitis externa; excessive ear wax
9	Respiratory	2	2.8	Kennel cough
10	Trauma	2	2.8	Forelimb
11	Endocrine	1	1.4	Hypothyroidism
12	Gastrointestinal	1	1.4	Colitis
	Total	72	100.0	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for the Chinese Crested breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Chinese Crested breed

A total of 68 forms were sent out and 13 were returned, representing 76 live dogs. This breed had a 19.1 % response rate (13/68) and it represented 0.09% of all returns (13/13,741).

Mortality data

A total of 14 deaths were reported and this represents 0.09 % of all deaths reported in the survey (14/15,881). The median age at death for the Chinese Crested breed was 10 years and 1 month (min = 4 years and 10 months, max = 16 years and 2 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Chinese Crested breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Chinese Crested breed.

	Cause of death	No. of deaths	% of deaths	Most common specific causes in descending order
1	Cardiac	6	42.9	Heart failure; heart disease unspecified; heart attack
2	Urologic	2	14.3	Chronic kidney failure
3	Cerebral vascular	1	7.1	Stroke or cerebral vascular accident
4	Old age	1	7.1	Old age
5	Poisoning	1	7.1	
6	Reproductive	1	7.1	Pyometra
7	Sudden death	1	7.1	
8	Unknown	1	7.1	
	Total	14	100.0	

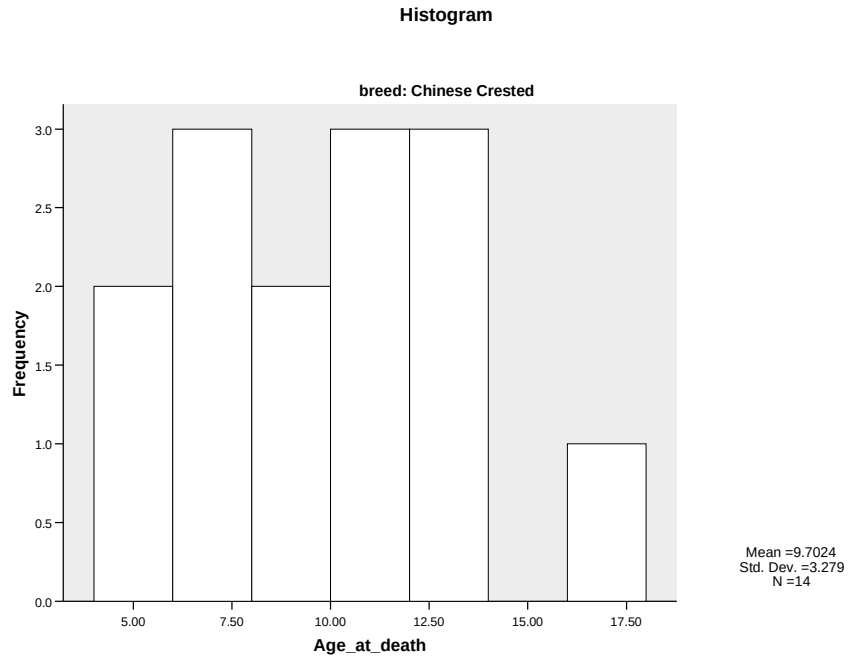


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 14 Chinese Crested deaths with age at death reported.

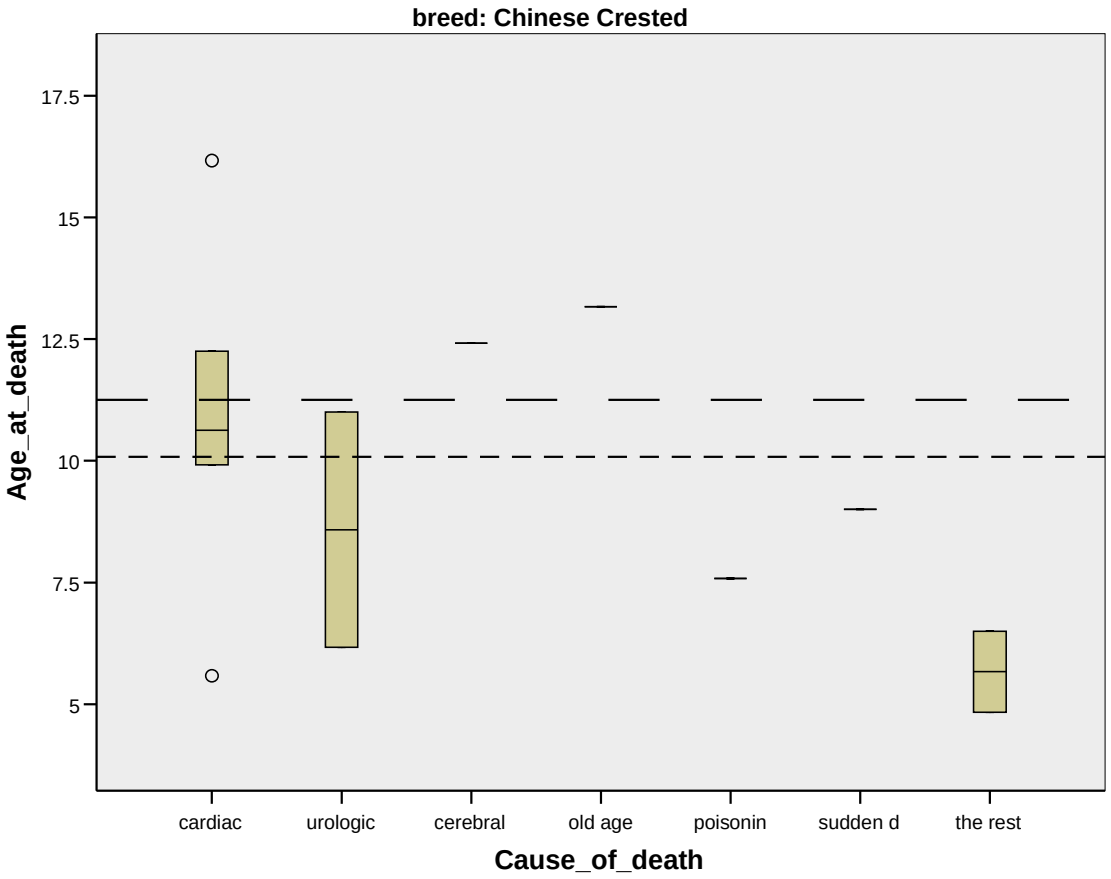


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the Chinese Crested breed (N=14). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the Chinese Crested breed. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 76 live dogs with a reported age was 4 years and 0 months (min=3 months, max=14 years and 8 months, Figure 3). Health information was reported for 76 live dogs of which 52 (68%) were healthy and 24 (32%) had at least one reported health condition, resulting in a total of 30 reported conditions with a median of 1 condition/dog (min=1, max=2).

The median current age of all healthy dogs with a reported age (N=52) was 3 years and 4 months (min=3 months, max=14 years and 8 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=24) was 6 years and 9 months (min=5 months, max=14 years). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=29) was 2 years and 6 months (min= 4 months, max= 10 years, Figure 4). Table 3 shows the disease conditions for the Chinese Crested breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 76 the Chinese Crested breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	40	8	48 (63%)
Male	24	4	28 (37%)
Totals	64 (84%)	12 (16%)	76 (100%)

There was no association between gender and neuter status (P=0.7836).

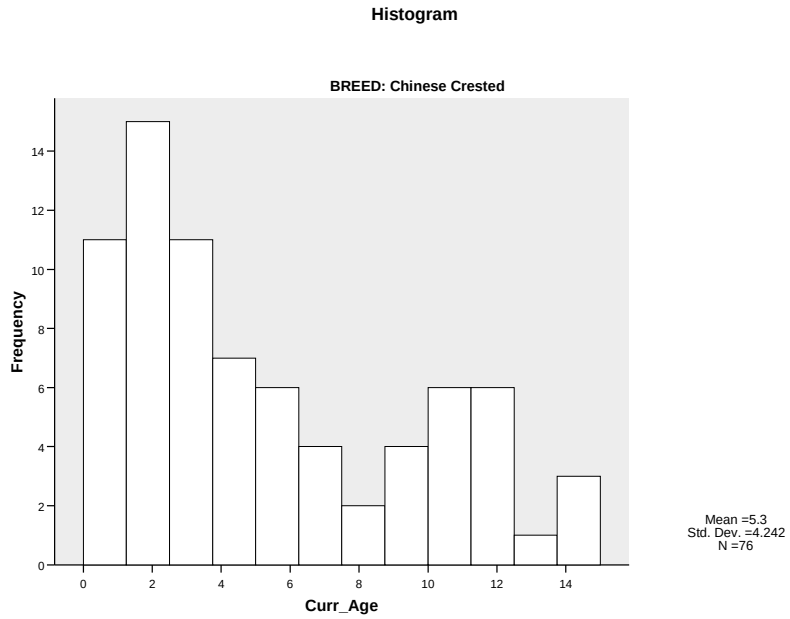


Figure 3. Histogram showing frequency of current age in years for the 76 live Chinese Crested breed with age reported.

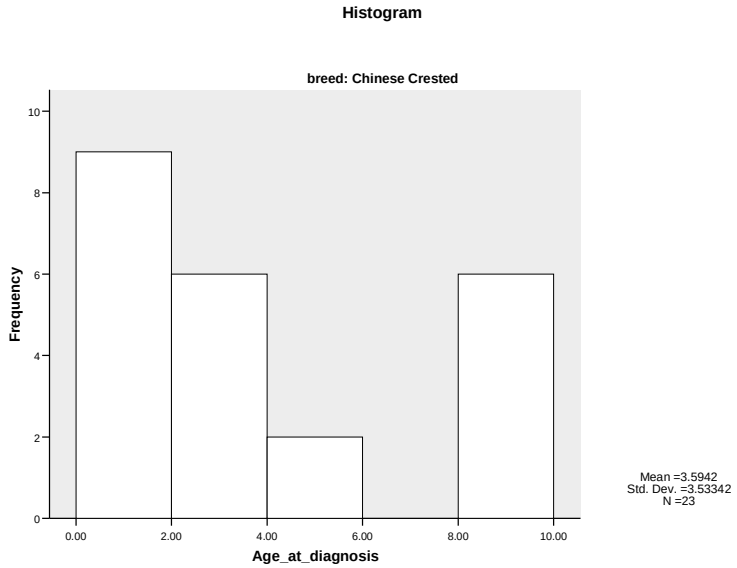


Figure 4. Histogram showing frequency of age at diagnosis for the 23 Chinese Crested breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

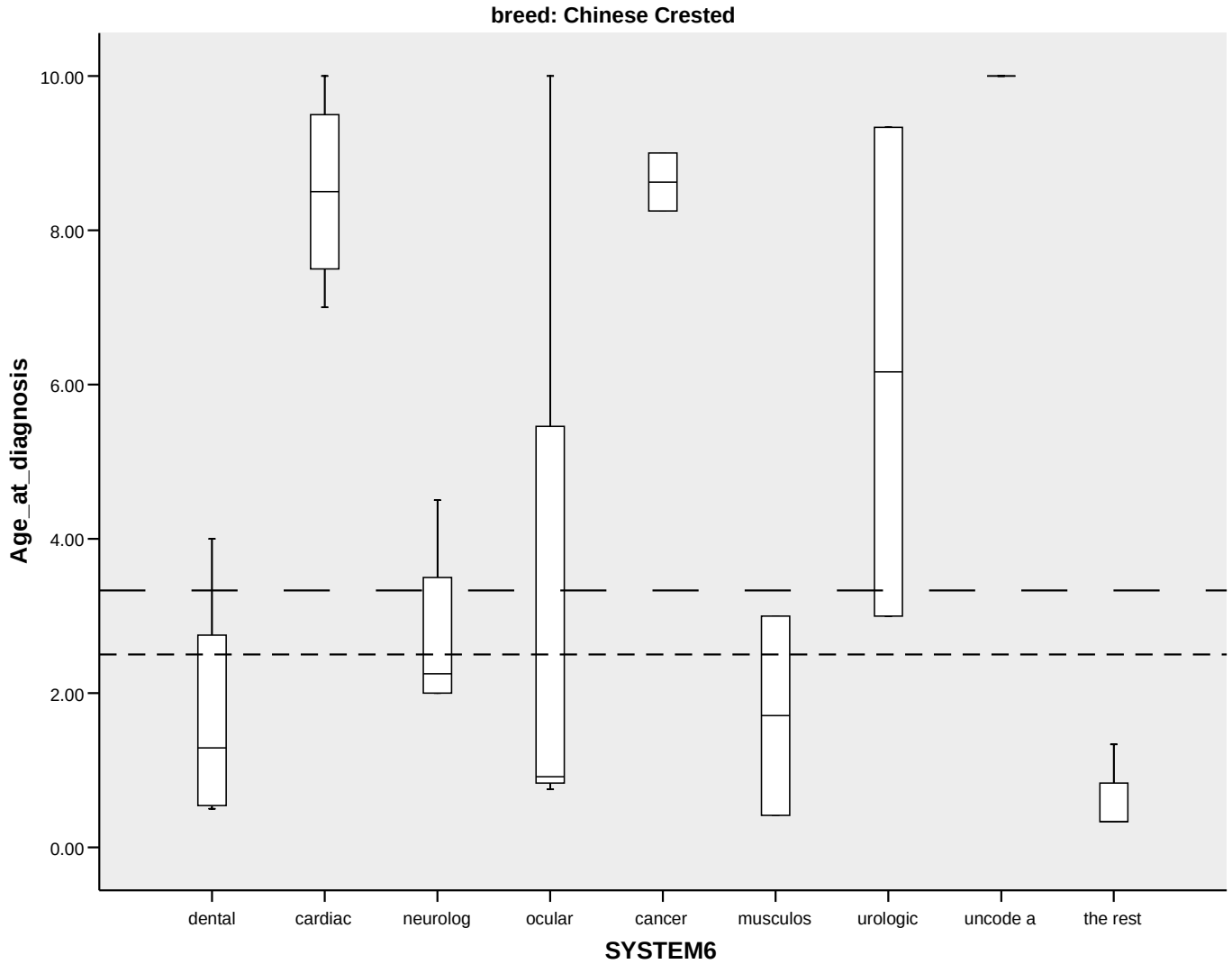


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Chinese Crested breed (N=29 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Chinese Crested breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Chinese Crested breed.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Dental	8	26.7	Dental disease; retained puppy teeth
2	Cardiac	4	13.3	Heart murmur
3	Neurologic	4	13.3	Seizures; IVDD
4	Gastrointestinal	3	10.0	Colitis; diarrhoea
5	Ocular	3	10.0	Blepharitis; KCS; glaucoma
6	Cancer	2	6.7	Type unspecified (mammary)
7	Musculoskeletal	2	6.7	Patellar luxation; prognathism
8	Urologic	2	6.7	Cystitis; cystouroliths (unspecified)
9	Dermatologic	1	3.3	Mites (demodex)
10	Uncode and other	1	3.3	Perianal hernia
	Total	30	100.0	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for English Cocker Spaniels

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

English Cocker Spaniels

A total of 1000 forms were sent out and 206 were returned, representing 814 live dogs. This breed had a 20.6% response rate (206/1000) and it represented 1.50% of all returns (206/13,741).

Mortality data

A total of 289 deaths were reported and this represents 1.82% of all deaths reported in the survey (289/15,881). The median age at death for English Cocker Spaniels was 11 years and 2 months (min = 5 months, max = 17 years and 3 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for English Cocker Spaniels. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for English Cocker Spaniels.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	85	29.4	Mammary (type unspecified) unspecified; carcinoma
2	Old age	50	17.3	Old age
3	Cardiac	27	9.3	Heart failure; heart attack; defect unspecified; cardiomegaly
4	Combinations	19	6.6	
5	Urologic	15	5.2	Kidney failure; incontinence; familial nephropathy
6	Reproductive	10	3.5	Pyometra; prostatic disease; gangrenous mastitis
7	Unknown	10	3.5	
8	Neurologic	9	3.1	Seizures; spinal disease unspecified; IVDD
9	Cerebral vascular	7	2.4	Stroke or cerebral vascular accident
10	Immune mediated	7	2.4	AIHA; unspecified; thrombocytopaenia
11	Other	7	2.4	Smoke inhalation from fire
12	Endocrine	6	2.1	Cushings; Addisons; diabetes mellitus
13	Hepatic	6	2.1	Chronic liver failure; liver disease
14	Behaviour	5	1.7	Aggression; unspecified
15	Internal bleeding	5	1.7	
16	Respiratory	4	1.4	Unspecified; bronchitis; choked
17	Trauma	4	1.4	Attacked by dog; road traffic accident; spinal injury; unspecified
18	Gastrointestinal	3	1.0	Colitis; pancreatitis; unspecified
19	Perioperative	3	1.0	
20	Collapse	2	0.7	
21	Musculoskeletal	2	0.7	Arthritis
22	Died	1	0.3	
23	Hyperthermia	1	0.3	
24	Infection	1	0.3	Pseudomonas
	Total	289	100.0	

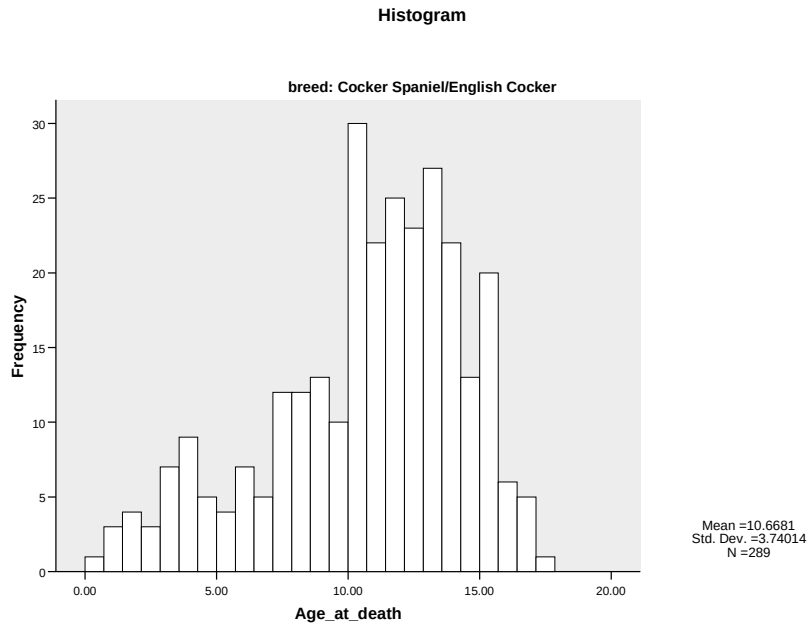


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 289 English Cocker Spaniel deaths with age at death reported.

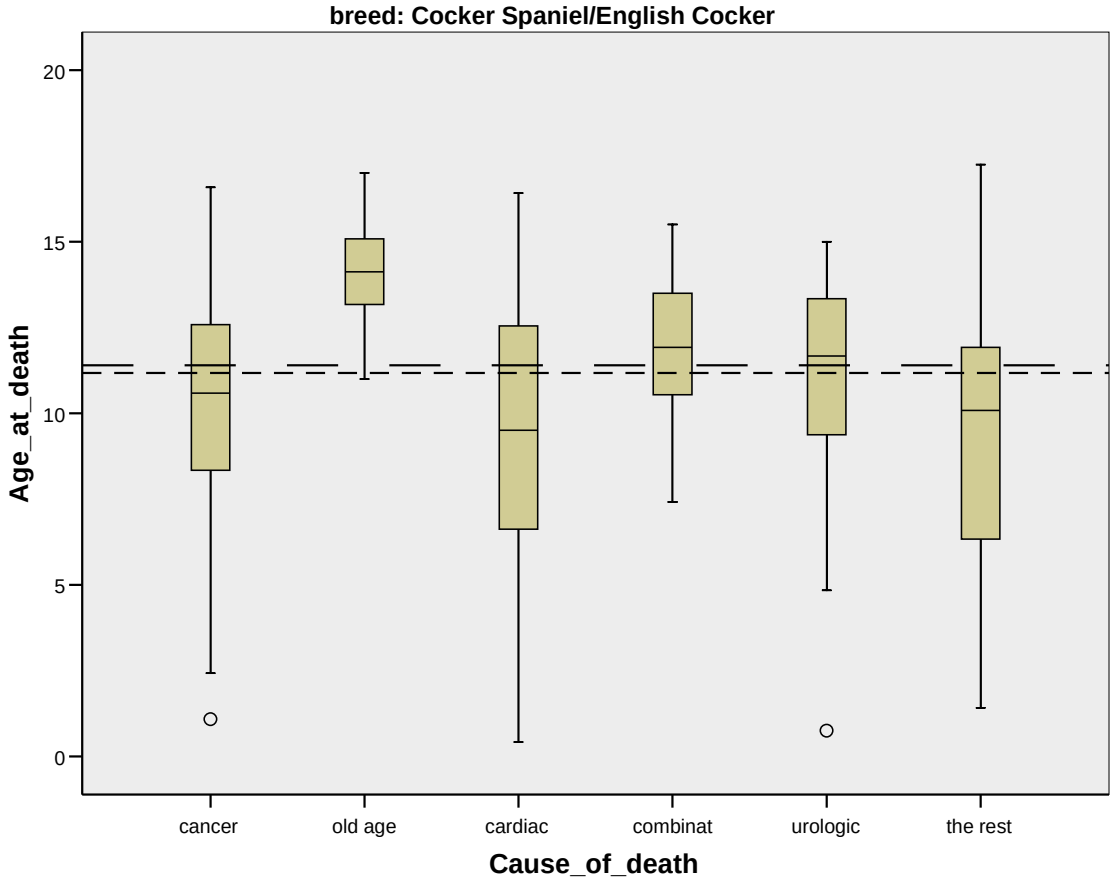


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in English Cocker Spaniels (N=289). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for English Cocker Spaniels. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 814 live dogs with a reported age was 4 years (min=1 month, max=15 years and 6 months, Figure 3). Health information was reported for 814 live dogs of which 580 (71%) were healthy and 234 (29%) had at least one reported health condition, resulting in a total of 390 reported conditions with a median of 1 condition/dog (min=1, max=10).

The median current age of all healthy dogs with a reported age (N=580) was 3 years and 2 months (min=1 month, max=14 years and 6 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=234) was 7 years and 1 month (min=2 months, max=15 years and 6 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=372) was 4 years (min= 1 month, max= 15 years and 1 month, Figure 4). Table 3 shows the disease conditions for English Cocker Spaniels. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 792 English Cocker Spaniels with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	444	107	551 (70%)
Male	206	35	241 (30%)
Totals	650 (82%)	142 (18%)	792 (100%)

There was no association between gender and neuter status (P=0.0984).

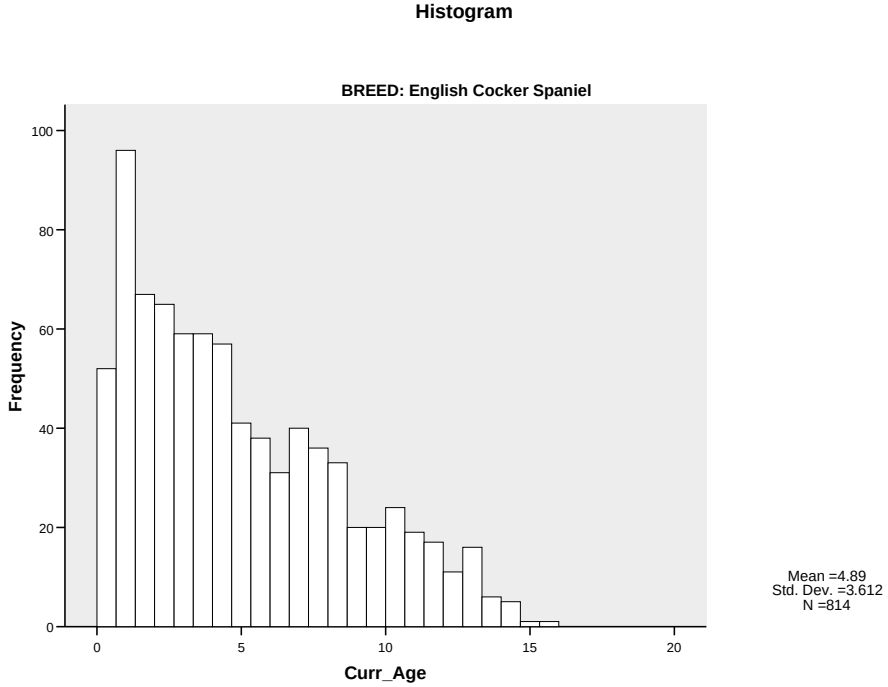


Figure 3. Histogram showing frequency of current age in years for the 814 live English Cocker Spaniels with age reported.

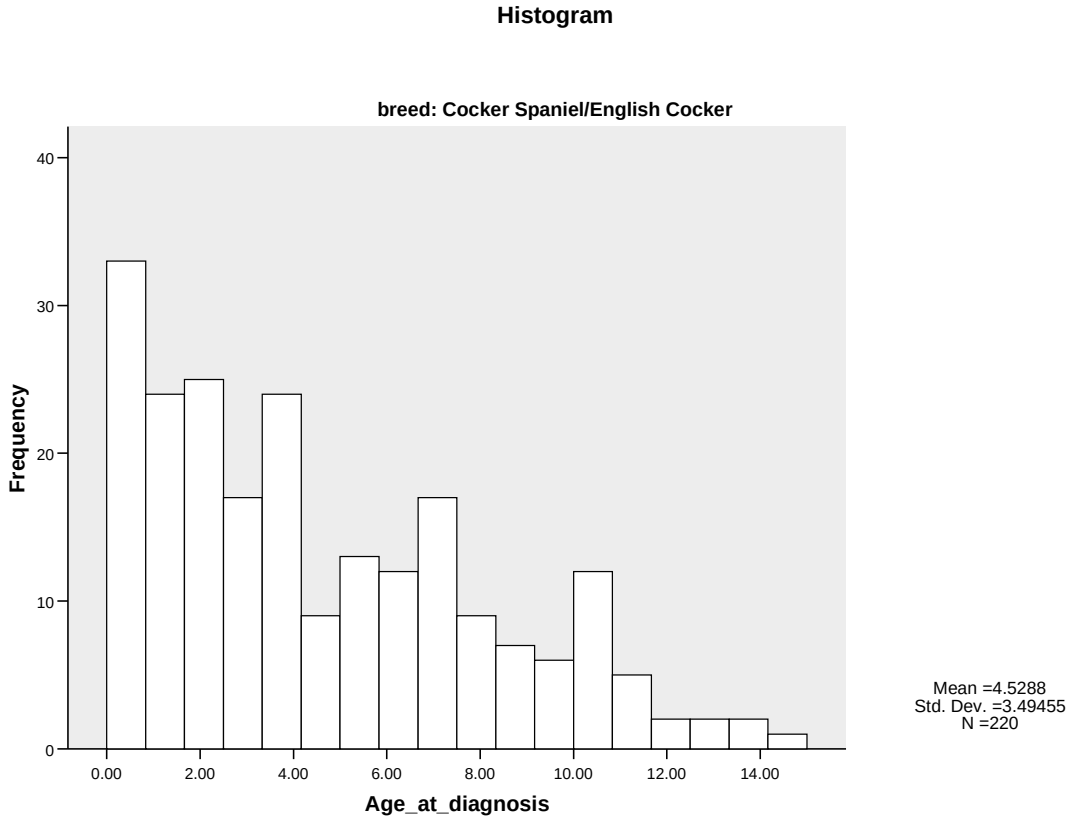


Figure 4. Histogram showing frequency of age at diagnosis for the 220 English Cocker Spaniels with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

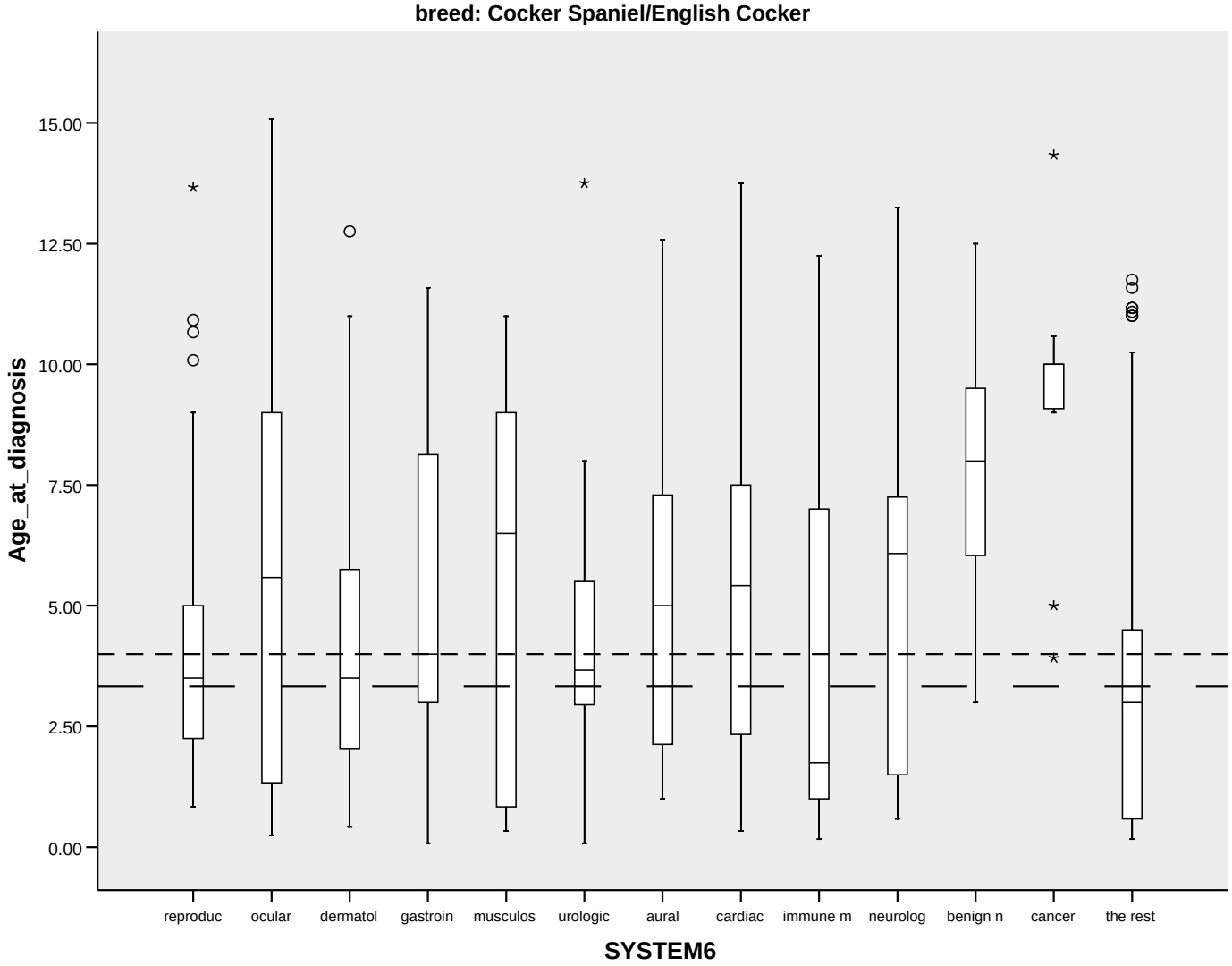


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for English Cocker Spaniels (N=234 dogs with 372 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for English Cocker Spaniels. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for English Cocker Spaniels.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Reproductive	81	20.8	Pyometra; dystochia (uterine inertia>physical blockage); infertility; false pregnancy
2	Ocular	62	15.9	KCS; cataracts; conjunctivitis; distichiasis; blocked tear duct; entropion
3	Dermatologic	34	8.7	Mites (sarcoptes>unspecified>demodex); dermatitis; alopecia
4	Gastrointestinal	28	7.2	Pancreatitis; diarrhoea; colitis; foreign body obstruction; gastroenteritis (chronic, unspecified)
5	Musculoskeletal	23	5.9	Arthritis (hindlimb>shoulders>forelimb=hip); CHD; spondylitis; jaw deformities
6	Urologic	20	5.1	Cystouroliths (struvite>calcium oxalate); cystitis; incontinence (unspecified>after spay)
7	Aural	19	4.9	Otitis externa; ear mites; excessive ear wax
8	Respiratory	18	4.6	Kennel cough; noisy breathing; bronchitis; long soft palate; rhinitis
9	Cardiac	16	4.1	Heart murmur (grade1, unspecified); cardiomegaly; dilated cardiomyopathy
10	Immune mediated	15	3.8	Flea allergy; gluten-sensitive enteropathy; atopy; AIHA; thrombocytopaenia; MMM
11	Neurologic	14	3.6	Seizures; deafness; IVDD
12	Benign neoplasia	11	2.8	Lipoma; histiocytoma; unspecified
13	Cancer	11	2.8	Unspecified (skin>mammary=testicle); carcinoma (toe); brain tumour
14	Trauma	9	2.3	Liver; skin; cornea; forelimb; hindlimb; spinal cord; spine
15	Unknown	8	2.1	Undiagnosed illness
16	Endocrine	6	1.5	Diabetes mellitus; hypothyroidism; diabetes insipidus; hyperthyroidism
17	Other	5	1.3	Uncodeable
18	Dental	4	1.0	Dental disease; retained puppy teeth
19	Hepatic	4	1.0	Portosystemic shunt (PSS); hepatitis
20	Cerebrovascular	2	0.5	Stroke or cerebral vascular accident
	Total	390	100.0	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for Curly Coated Retrievers

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Curly Coated Retrievers

A total of 100 forms were sent out and 35 were returned, representing 81 live dogs. This breed had a 35.0% response rate (35/100) and it represented 0.25% of all returns (35/13,741).

Mortality data

A total of 40 deaths were reported and this represents 0.25% of all deaths reported in the survey (40/15,881). The median age at death for Curly Coated Retrievers was 10 years and 9 months (min = 11 months, max = 15 years) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Curly Coated Retrievers. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Curly Coated Retrievers.

	Cause of death	No. of deaths	% of deaths	Most common specific causes in descending order
1	Cancer	12	30.0	Brain tumour; unspecified; lymphoma; leukaemia
2	Old age	7	17.5	Old age
3	Other	6	15.0	Uncodeable
4	Gastrointestinal	5	12.5	Gastric dilatation/volvulus (GDV); intussusception; pancreatitis
5	Neurologic	4	10.0	Spinal disease unspecified;seizures
6	Cardiac	2	5.0	Heart attack; heart failure
7	Cerebral vascular	1	2.5	Stroke or cerebral vascular accident
8	Infection	1	2.5	Unspecified
9	Trauma	1	2.5	Road traffic accident
10	Urologic	1	2.5	Kidney failure
	Total	40	100.0	

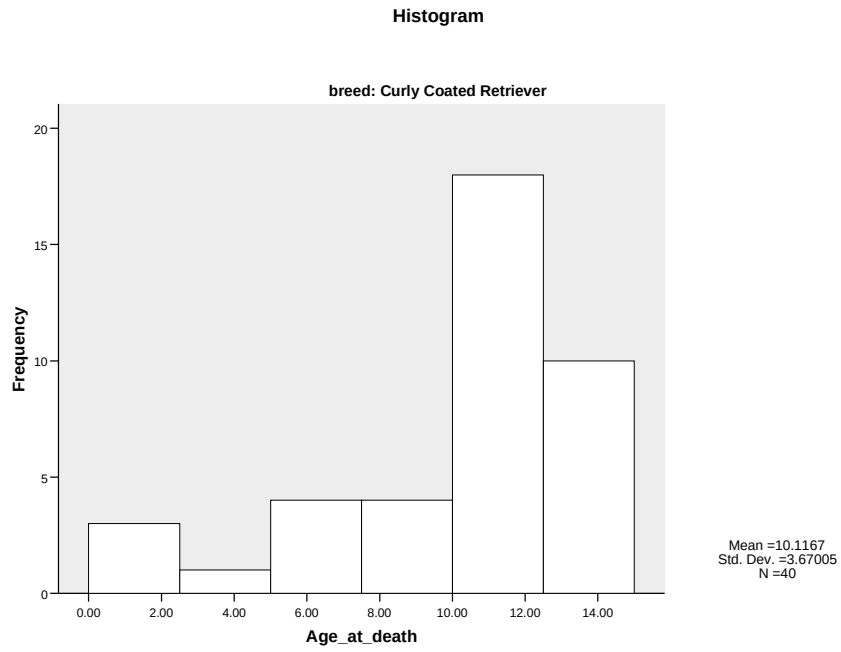


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 40 Curly Coated Retriever deaths with age at death reported.

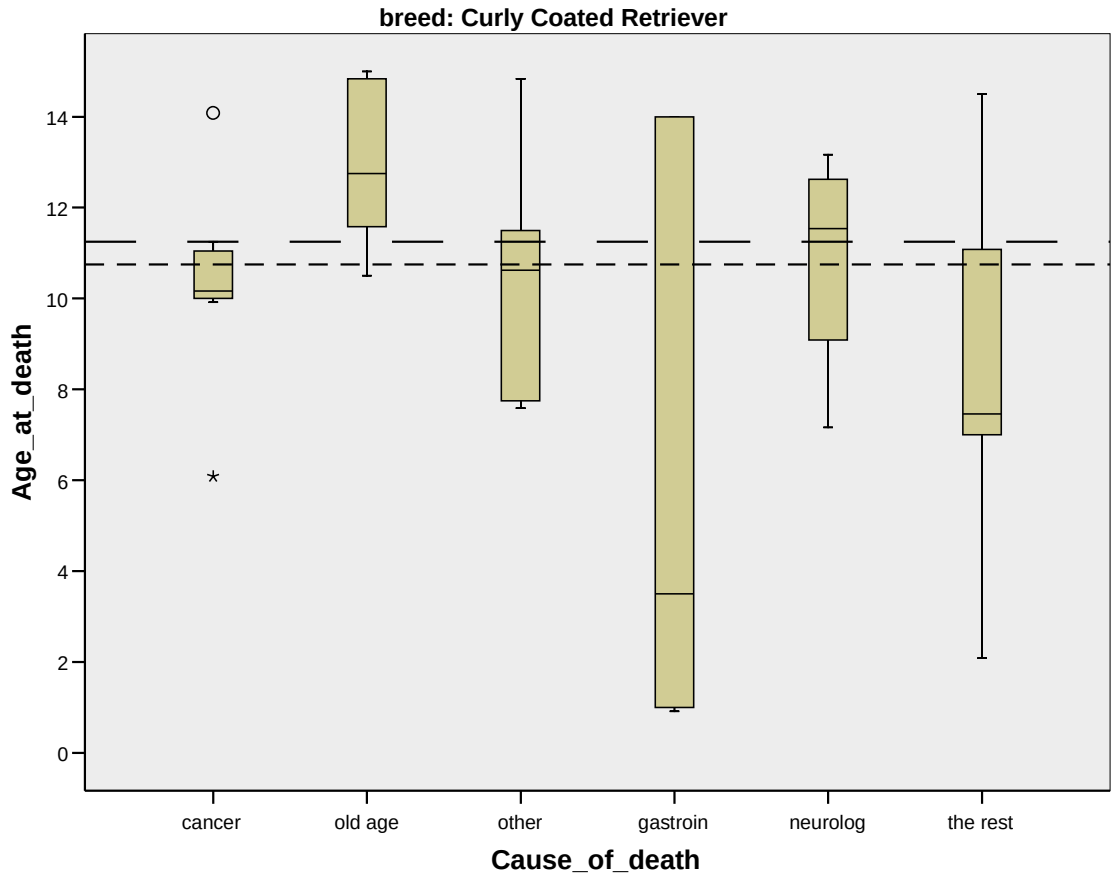


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Curly Coated Retrievers (N=40). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Curly Coated Retrievers. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 81 live dogs with a reported age was 4 years and 5 months (min=3 months, max=11 years and 10 months, Figure 3). Health information was reported for 81 live dogs of which 60 (74%) were healthy and 21 (26%) had at least one reported health condition, resulting in a total of 33 reported conditions with a median of 1 condition/dog (min=1, max=5).

The median current age of all healthy dogs with a reported age (N=60) was 3 years and 5 months (min=3 months, max=10 years and 6 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=21) was 6 years and 2 months (min=8 months, max=11 years and 10 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=33) was 3 years and 1 month (min= 2 months, max= 11 years and 6 months, Figure 4). Table 3 shows the disease conditions for Curly Coated Retrievers. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 81 Curly Coated Retrievers with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	33	9	42 (52%)
Male	31	8	39 (48%)
Totals	64 (79%)	17 (21%)	81 (100%)

There was no association between gender and neuter status (P=0.9195).

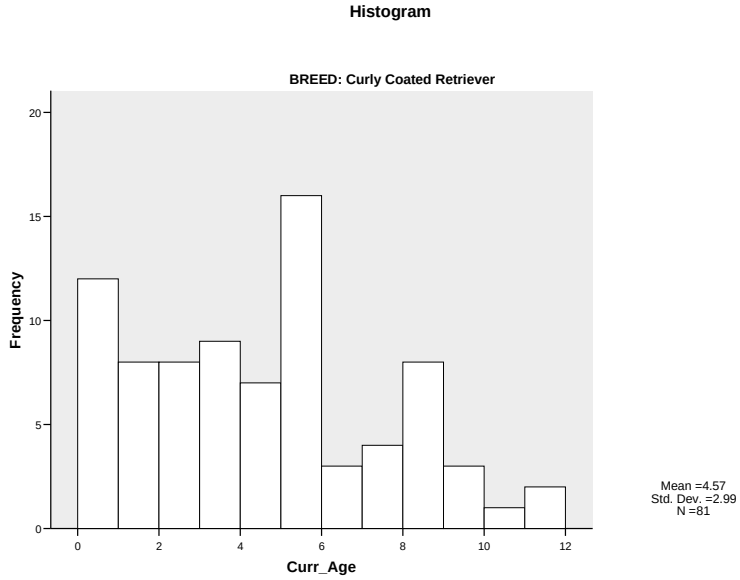


Figure 3. Histogram showing frequency of current age in years for the 81 live Curly Coated Retrievers with age reported.

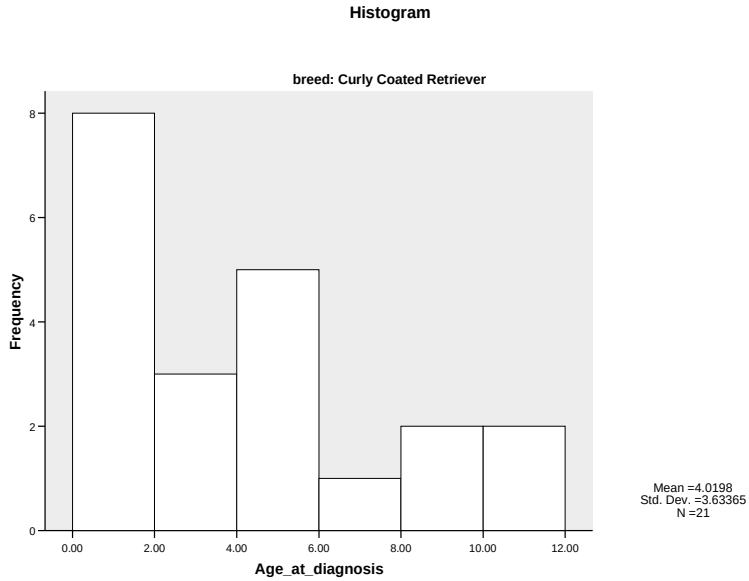


Figure 4. Histogram showing frequency of age at diagnosis for the 21 Curly Coated Retrievers with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

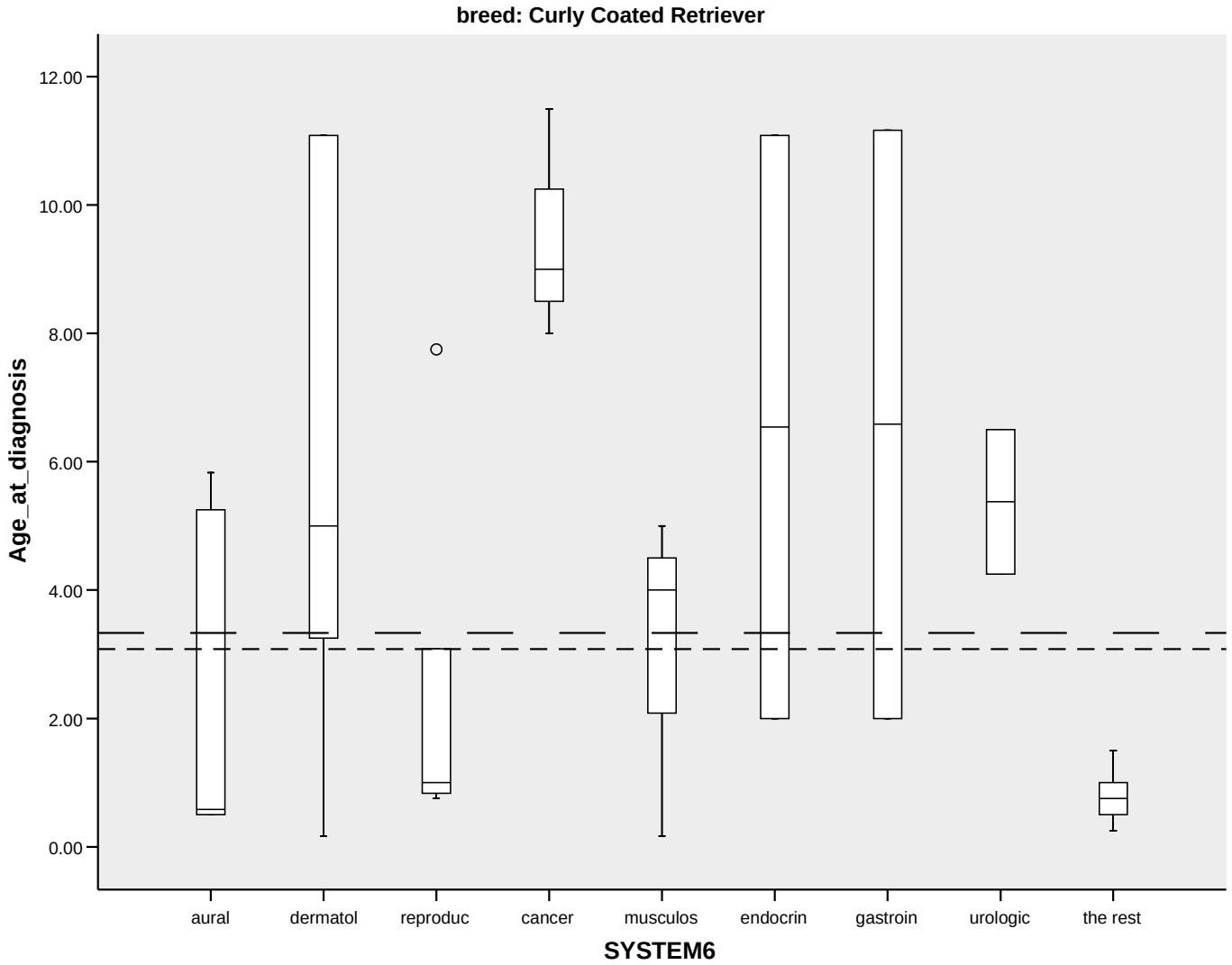


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Curly Coated Retrievers (N=33 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Curly Coated Retrievers. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Curly Coated Retrievers.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Aural	5	15.2	Otitis externa
2	Dermatologic	5	15.2	Alopecia; mites (demodex)
3	Reproductive	5	15.2	Vaginitis; false pregnancy; infertility; pyometra
4	Cancer	3	9.1	Unspecified; mast cell tumour (MCT) (leg)
5	Musculoskeletal	3	9.1	Hip dysplasia (CHD); stiff joints; prognathism
6	Endocrine	2	6.1	Cushing's disease; hypothyroidism
7	Gastrointestinal	2	6.1	Gastric dilatation/volvulus (GDV); vomiting
8	Ocular	2	6.1	Entropion; distichiasis
9	Urologic	2	6.1	Cystitis; incontinence (after spay)
10	Cardiac	1	3.0	Mitral valve disease (MVD)
11	Immune mediated	1	3.0	Atopy
12	Neurologic	1	3.0	Seizures
13	Unknown	1	3.0	Undiagnosed illness
	Total	33	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for Dachshunds

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Dachshunds

A total of 810 forms were sent out and 155 were returned, representing 509 live dogs. This breed had a 19.1% response rate (155/810) and it represented 1.13% of all returns (155/13,741).

Mortality data

A total of 245 deaths were reported and this represents 1.54% of all deaths reported in the survey (245/15,881). The median age at death for Dachshunds was 12 years and 8 months (min = 4 months, max = 19 years) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Dachshunds. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Dachshunds.

Cause of death		N	%	Most common specific causes in descending order
1	Old age	53	21.6	Old age
2	Cancer	41	16.7	Unspecified; mammary; lung (both type unspecified)
3	Cardiac	35	14.3	Heart failure; disease unspecified; heart failure
4	Neurologic	27	11.0	IVDD; seizures; unspecified spinal disease
5	Combinations	14	5.7	
6	Urologic	12	4.9	Kidney failure (chronic>acute); incontinence
7	Endocrine	10	4.1	Diabetes mellitus; Cushings
8	Cerebral vascular	8	3.3	Stroke or cerebral vascular accident
9	Gastrointestinal	8	3.3	GDV; foreign body; gastroenteritis; HGE
10	Perioperative	6	2.4	
11	Other	5	2.0	Uncodeable
12	Respiratory	5	2.0	Pneumonia; unspecified
13	Trauma	4	1.6	Road traffic accident; unspecified
14	Unknown	4	1.6	
15	Senility	3	1.2	
16	Hepatic	2	0.8	Liver failure
17	Ocular	2	0.8	Blindness
18	Behaviour	1	0.4	Aggression
19	Died	1	0.4	Natural causes
20	Immune mediated	1	0.4	Unspecified
21	Internal bleeding	1	0.4	
22	Musculoskeletal	1	0.4	Arthritis
23	Sudden death	1	0.4	
	Total	245	100.0	

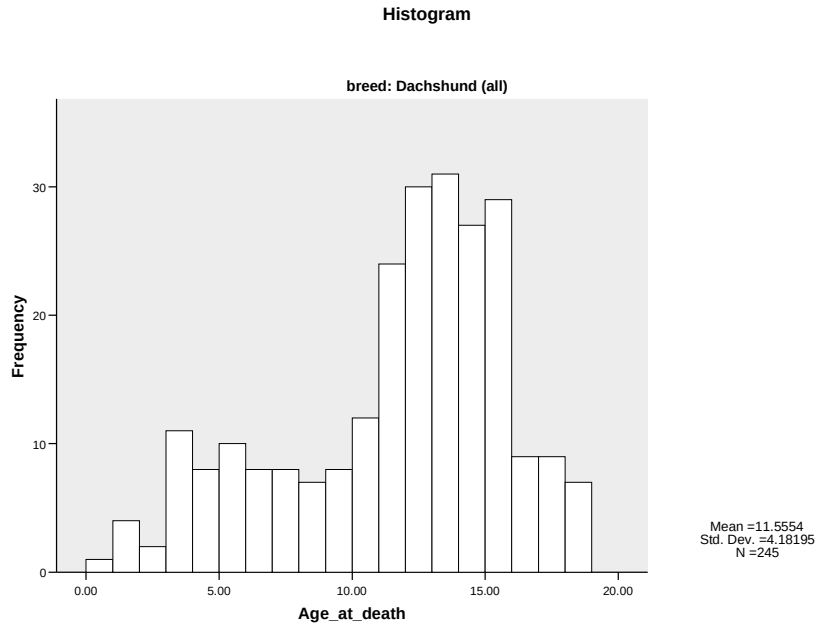


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 245 Dachshund deaths with age at death reported.

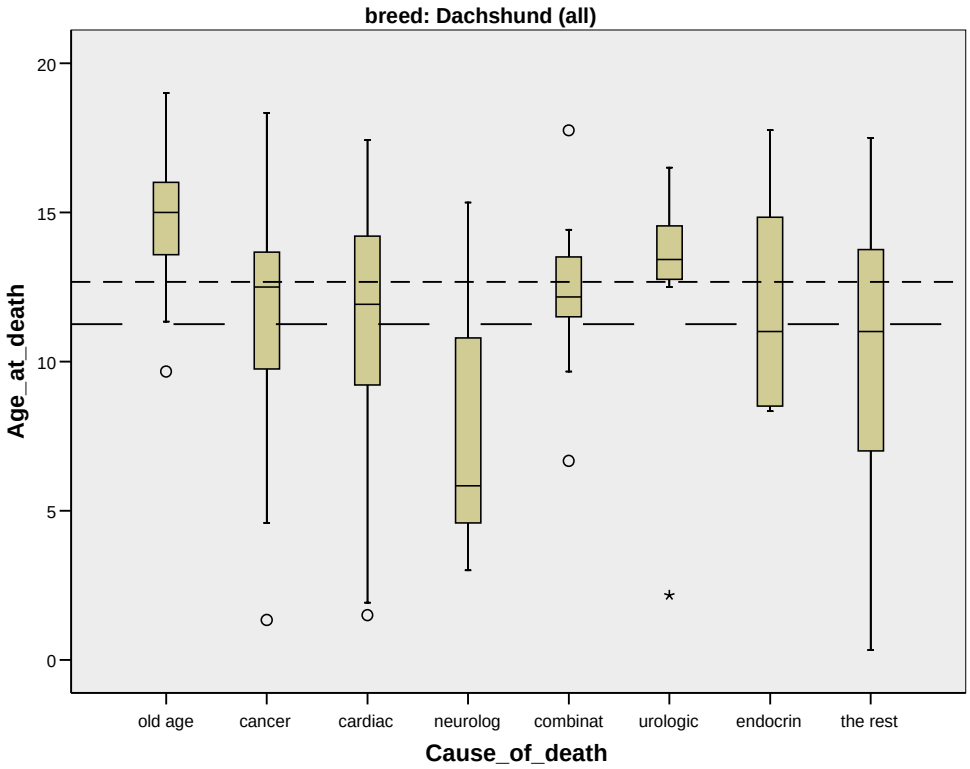


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Dachshunds (N=245). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Dachshunds. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 508 live dogs with a reported age was 4 years and 12 months (min=1 month, max=16 years and 11 months, Figure 3). Health information was reported for 509 live dogs of which 322 (63%) were healthy and 187 (37%) had at least one reported health condition, resulting in a total of 294 reported conditions with a median of 1 condition/dog (min=1, max=7).

The median current age of all healthy dogs with a reported age (N=322) was 3 years and 7 months (min=1 month, max=16 years and 9 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=187) was 7 years and 4 months (min=8 months, max=16 years and 11 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=281) was 4 years (min= 3 months, max= 16 years, Figure 4). Table 3 shows the disease conditions for Dachshunds. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 504 Dachshunds with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	251	95	346 (69%)
Male	124	34	158 (31%)
Totals	375 (74%)	129 (26%)	504 (100%)

There was no association between gender and neuter status (P=0.1565).

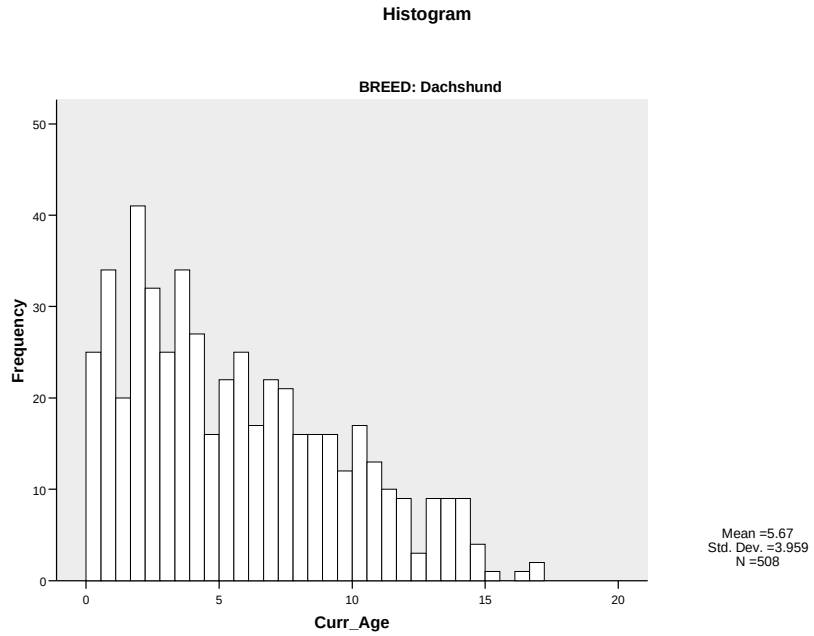


Figure 3. Histogram showing frequency of current age in years for the 508 live Dachshunds with age reported.

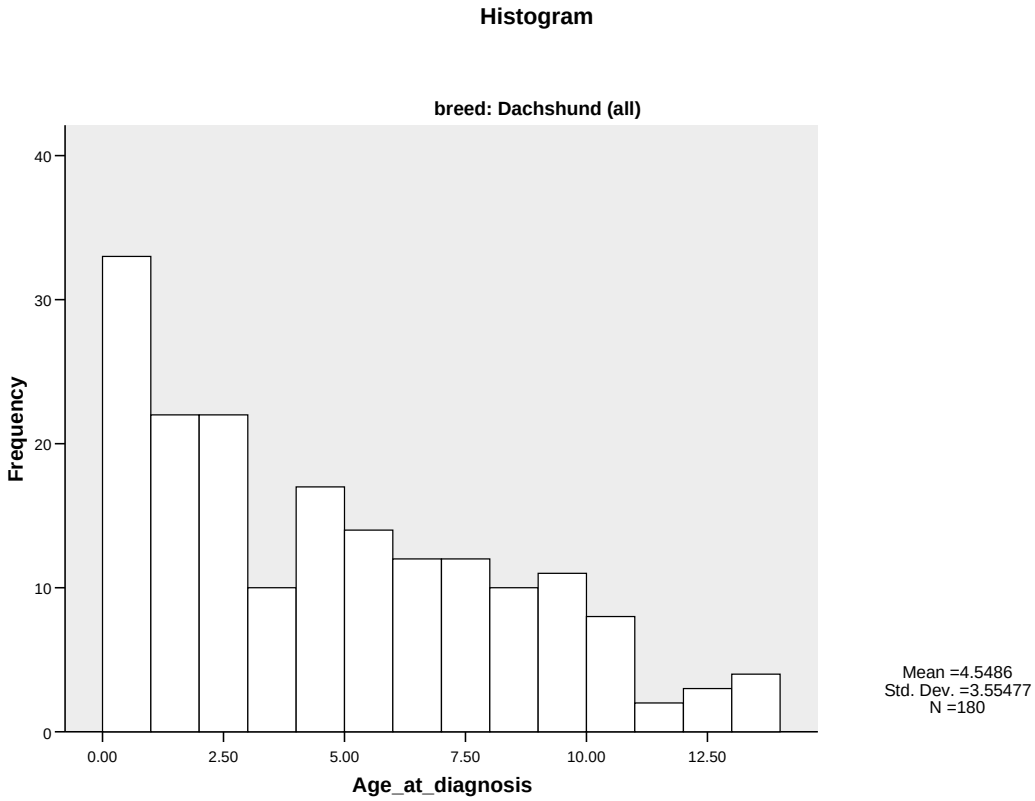


Figure 4. Histogram showing frequency of age at diagnosis for the 180 Dachshunds with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

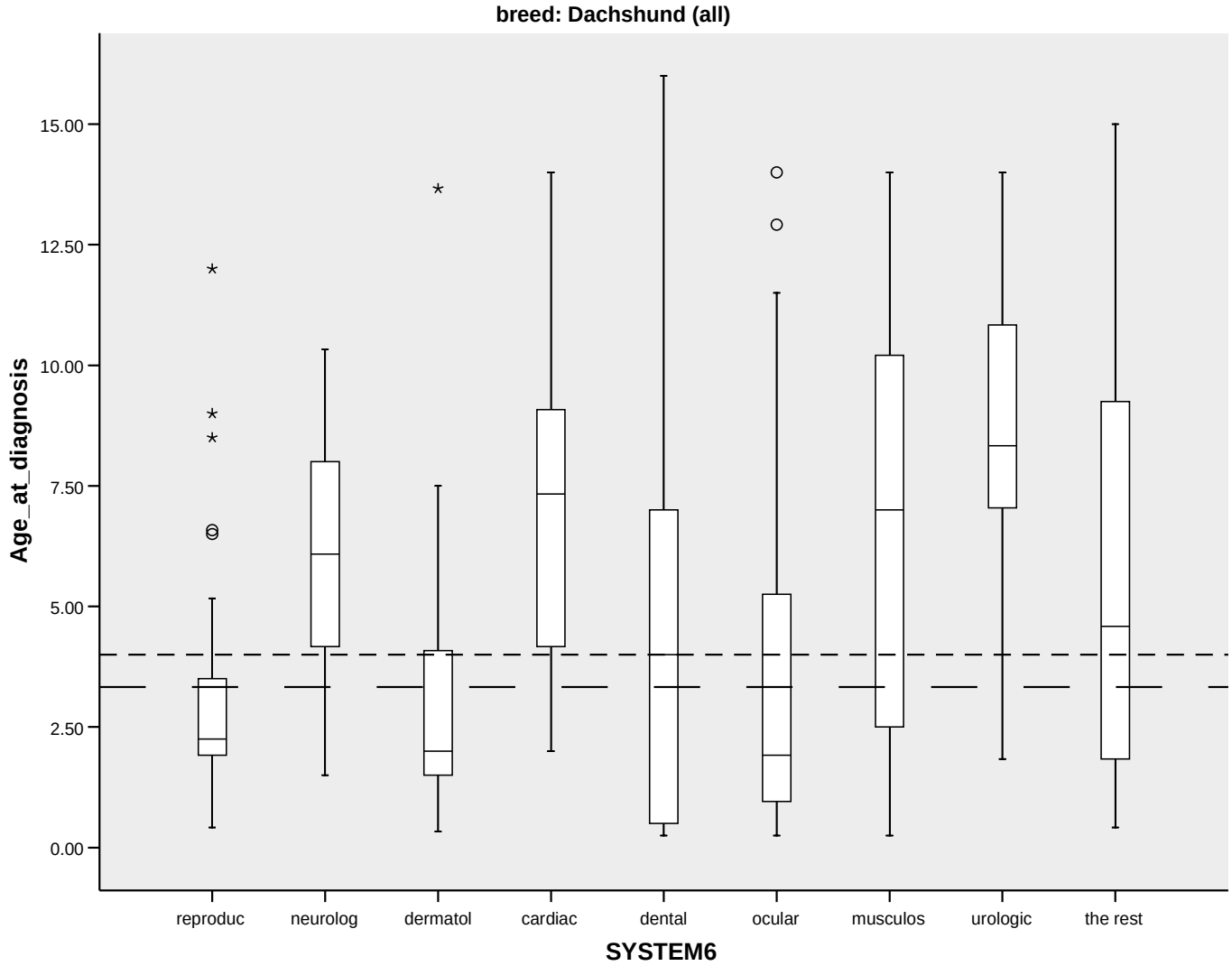


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Dachshunds (N=187 dogs with 281 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Dachshunds. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Dachshunds.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Reproductive	58	19.7	Dystochia (uterine inertia>physical blockage); false pregnancy; eclampsia; infertility
2	Neurologic	35	11.9	IVDD (unspecified>lumbar>thoracic); seizures; glycoproteinosis; deafness
3	Dermatologic	31	10.5	Alopecia; dermatitis; loss of nose pigment; recurrent pyoderma
4	Cardiac	26	8.8	Heart murmur (unspecified>grade 2>other); coughing; MVD; heart rhythm disorder
5	Dental	26	8.8	Dental disease; retained puppy teeth
6	Ocular	24	8.2	Distichiasis; blocked tear duct; cataracts; blindness; epiphora
7	Musculoskeletal	20	6.8	Arthritis; lameness (hindlimb); patellar luxation; stiff joints; compressed vertebrae
8	Respiratory	15	5.1	Kennel cough; upper respiratory tract infection; bronchitis; noisy breathing
9	Urologic	11	3.7	Cystitis; cystouroliths (unspecified); haematuria; incontinence (unspecified)
10	Gastrointestinal	10	3.4	Colitis; diarrhoea; IBD; vomiting; weight loss
11	Endocrine	9	3.1	Diabetes mellitus; Cushing's disease; hypothyroidism; diabetes insipidus
12	Unknown	8	2.7	Undiagnosed illness
13	Immune mediated	6	2.0	Gluten-sensitive enteropathy; flea allergy; atopy
14	Benign neoplasia	4	1.4	Lipoma; histiocytoma
15	Cancer	4	1.4	Unspecified (skin>mammary)
16	Behaviour	2	0.7	Aggression
17	Hepatic	2	0.7	Hepatitis; chronic liver disease
18	Aural	1	0.3	Otitis externa
19	Trauma	1	0.3	Unspecified
20	Other	1	0.3	Uncodeable
	Total	294	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for Dalmatians

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Dalmatians

A total of 686 forms were sent out and 210 were returned, representing 452 live dogs. This breed had a 30.6% response rate (210/686) and it represented 1.53% of all returns (210/13,741).

Mortality data

A total of 199 deaths were reported and this represents 1.25% of all deaths reported in the survey (199/15,881). The median age at death for Dalmatians was 12 years and 6 months (min = 2 months, max = 17 years) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Dalmatians. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Dalmatians.

Cause of death		N	%	Most common specific causes in descending order
1	Old age	54	27.1	Old age & old age combinations
2	Cancer	38	19.1	Liver; unspecified; lymphoma; spine; leukaemia
3	Neurologic	18	9.0	Seizures; IVDD; spondylitis; spinal disease unspecified
4	Cardiac	13	6.5	Attack; failure; cardiomyopathy
5	Gastrointestinal	12	6.0	Gastric dilatation/volvulus (GDV); pancreatitis
6	Other	11	5.5	Weakness or paresis; unspecified
7	Urologic	10	5.0	Kidney failure chronic > acute; incontinence
8	Cerebral vascular	8	4.0	Stroke or cerebral vascular accident
9	Combinations	5	2.5	Senility; incontinence; arthritis; multiple organ failure
10	Hepatic	5	2.5	Liver failure chronic > acute
11	Musculoskeletal	5	2.5	Arthritis
12	Unknown	5	2.5	
13	Perioperative	3	1.5	
14	Trauma	3	1.5	Road traffic accident
15	Behaviour	2	1.0	Aggression
16	Poisoning	2	1.0	
17	Collapse	1	0.5	
18	Died	1	0.5	Natural causes
19	Internal bleeding	1	0.5	
20	Senility	1	0.5	
21	Sudden death	1	0.5	
	Total	199	100.0	

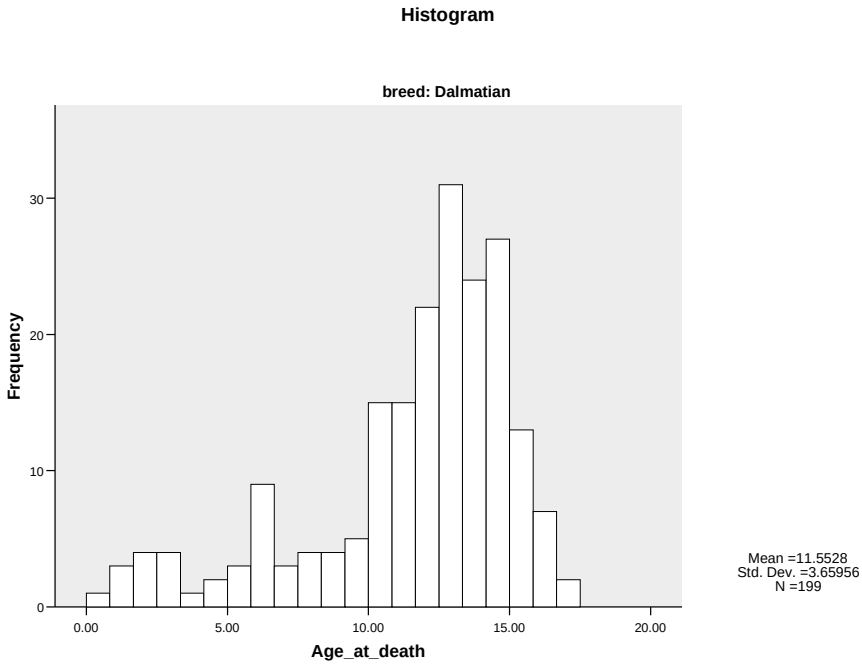


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 199 Dalmatian deaths with age at death reported.

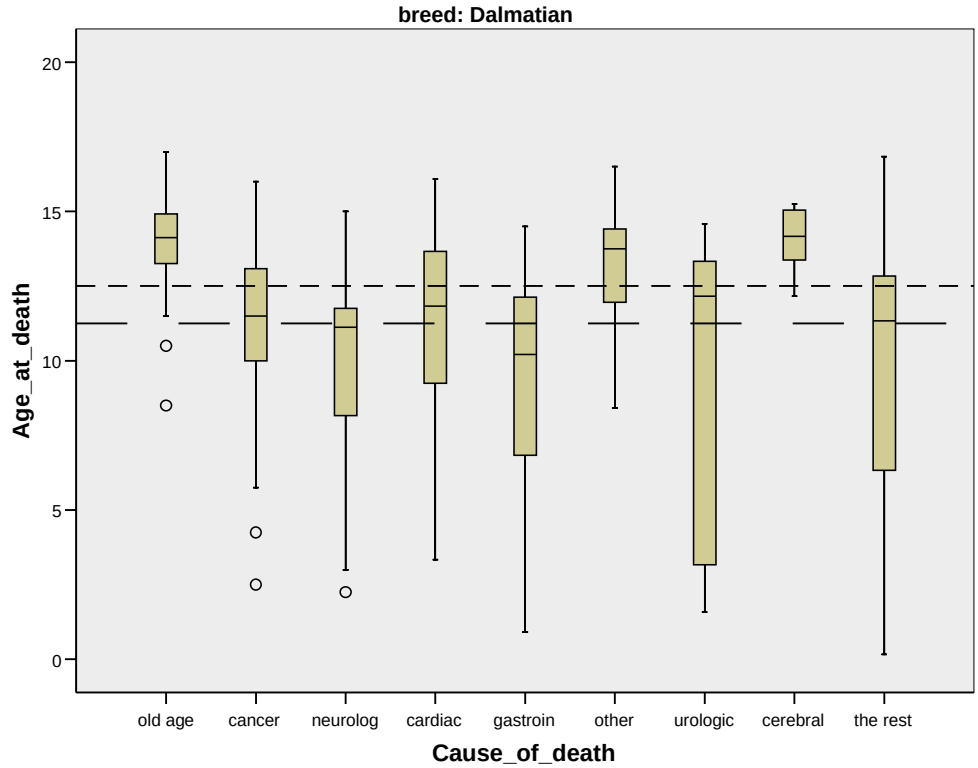


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Dalmatians (N=199). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Dalmatians. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 451 live dogs with a reported age was 6 years (min=2 months, max=15 years and 10 months, Figure 3). Health information was reported for 452 live dogs of which 264 (58%) were healthy and 188 (42%) had at least one reported health condition, resulting in a total of 300 reported conditions with a median of 1 condition/dog (min=1, max=6).

The median current age of all healthy dogs with a reported age (N=264) was 4 years and 6 months (min=2 months, max=15 years and 10 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=188) was 7 years and 9 months (min=7 months, max=15 years). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=292) was 3 years (min= 2 months, max= 14 years, Figure 4). Table 3 shows the disease conditions for Dalmatians. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 443 Dalmatians with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	165	124	289 (65%)
Male	104	50	154 (35%)
Totals	269 (61%)	174 (39%)	443 (100%)

Significantly more females were neutered (P=0.0322).

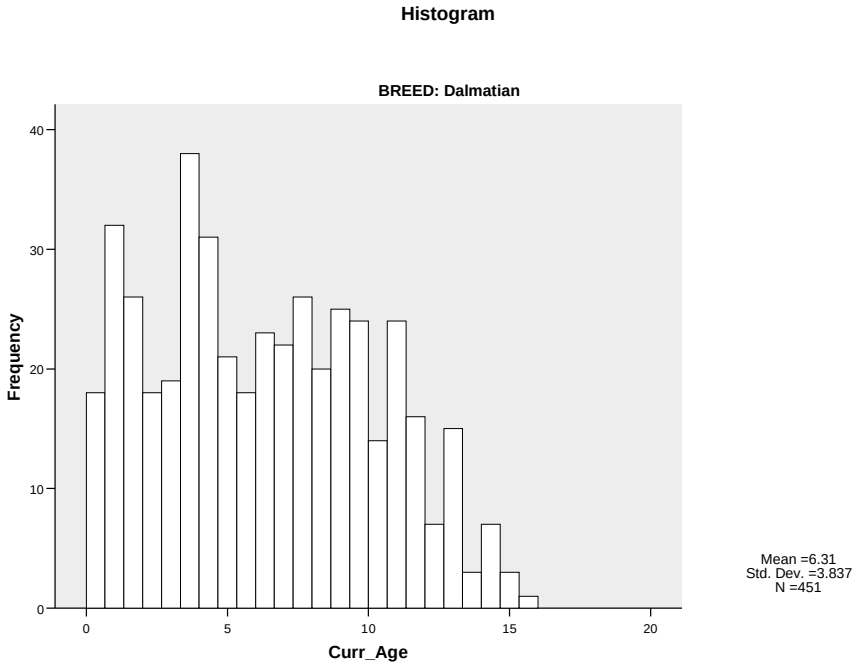


Figure 3. Histogram showing frequency of current age in years for the 451 live Dalmatians with age reported.

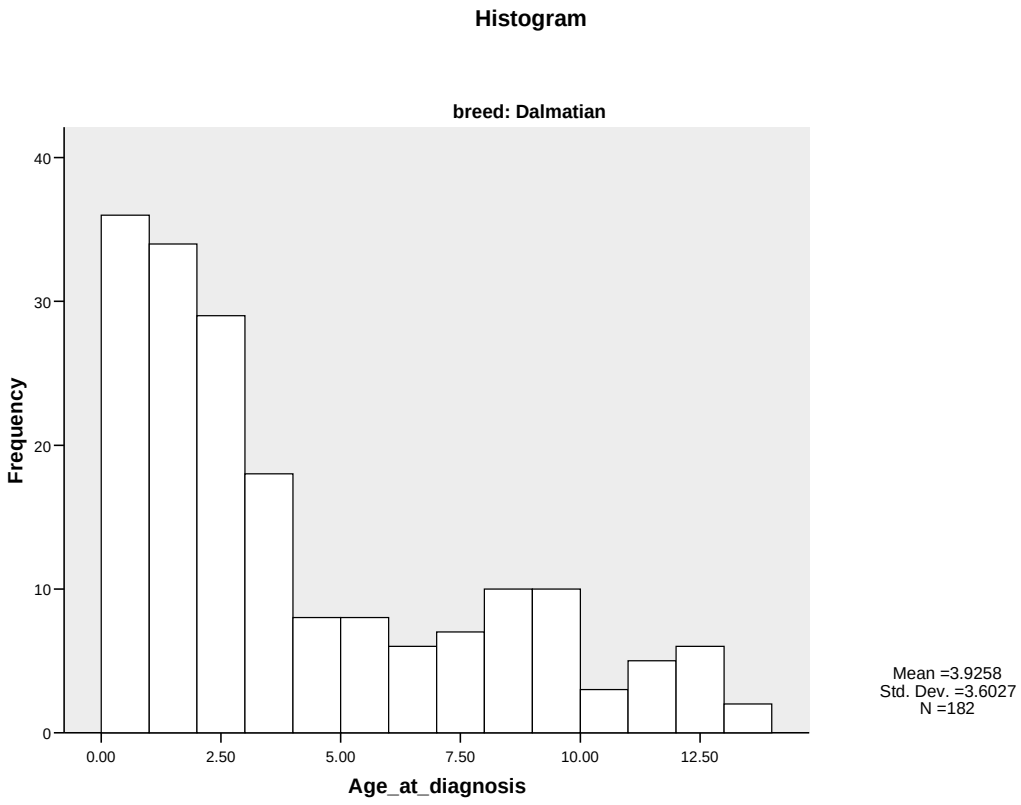


Figure 4. Histogram showing frequency of age at diagnosis for the 182 Dalmatians with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

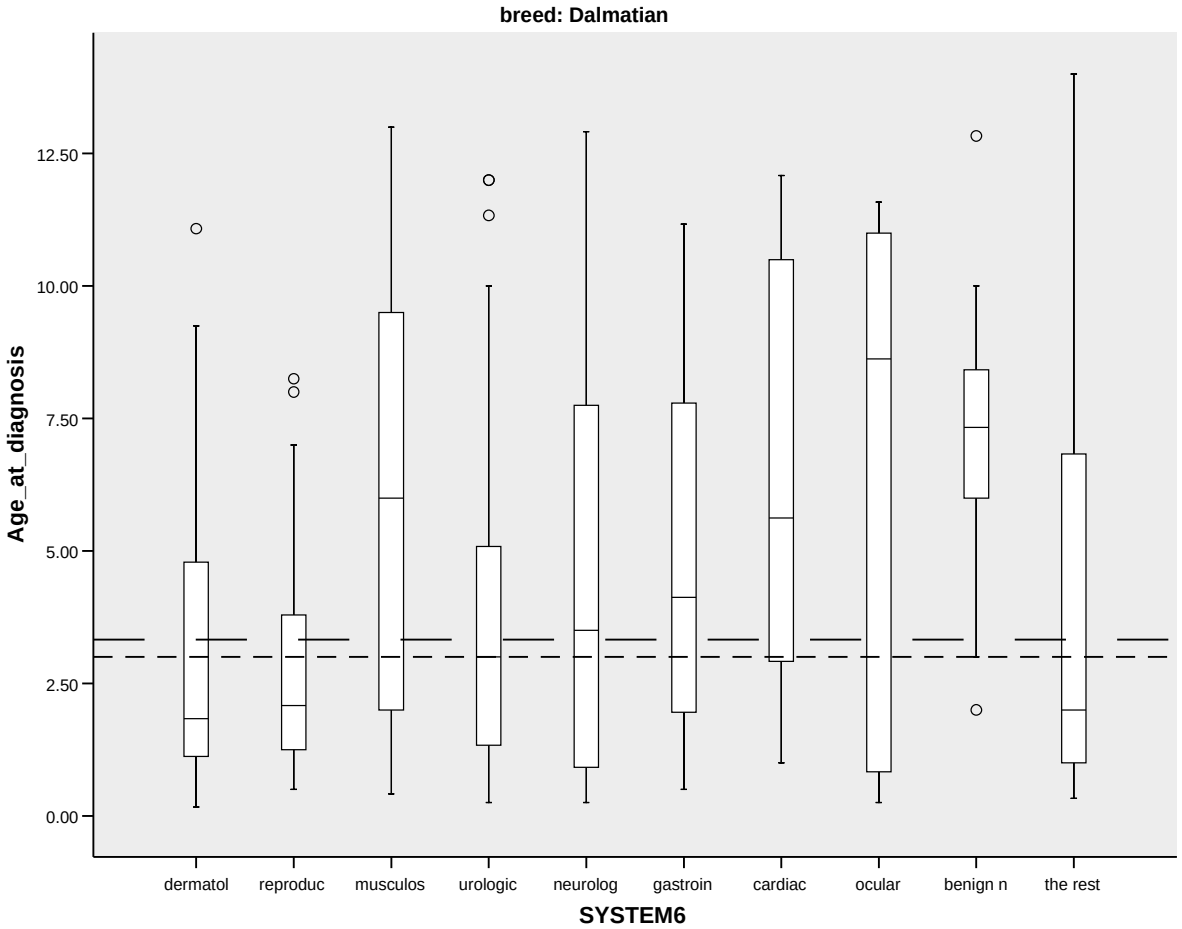


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Dalmatians (N=188 dogs with 292 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Dalmatians. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Dalmatians.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Dermatologic	48	16.0	Superficial folliculitis; mites (sarcoptes>demodex); dermatitis; recurrent pyoderma
2	Reproductive	44	14.7	False pregnancy; infertility; pyometra; irregular heat cycles; cryptorchid
3	Musculoskeletal	34	11.3	Arthritis (forelimb=spine>unspecified or other); spondylitis; lameness (forelimb>other)
4	Urologic	32	10.7	Incontinence (unspecified>after spay); cystouroliths (urate); cystitis
5	Neurologic	22	7.3	Seizures; deafness; IVDD
6	Gastrointestinal	20	6.7	Colitis; diarrhoea; vomiting; GDV
7	Immune mediated	15	5.0	Food hypersensitivity; flea allergy; atopy
8	Cardiac	14	4.7	Heart murmur (unspecified>grade 3=without clinical signs); heart rhythm disorder
9	Ocular	14	4.7	Cataracts; blocked tear duct; epiphora
10	Benign neoplasia	13	4.3	Lipoma; unspecified
11	Aural	11	3.7	Otitis externa
12	Respiratory	6	2.0	Kennel cough; coughing
13	Cancer	5	1.7	Type unspecified (skin=mammary>testicular)
14	Unknown	5	1.7	Undiagnosed illness
15	Dental	4	1.3	Dental disease; retained puppy teeth
16	Uncode and other	4	1.3	Unspecified; polydipsia (undiagnosed)
17	Endocrine	3	1.0	Hypothyroidism
18	Behaviour	2	0.7	Aggression; unspecified
19	Trauma	2	0.7	Hindlimb; spine
20	Anal gland	1	0.3	Anal sacculitis
21	Hepatic	1	0.3	Portosystemic shunt (PSS)
	Total	300	100.0	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for Dandie Dinmont Terriers

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Dandie Dinmont Terriers

A total of 207 forms were sent out and 65 were returned, representing 138 live dogs. This breed had a 31.4% response rate (65/207) and it represented 0.47% of all returns (65/13,741).

Mortality data

A total of 62 deaths were reported and this represents 0.39% of all deaths reported in the survey (62/15,881). The median age at death for Dandie Dinmont Terriers was 12 years and 2 months (min = 4 years, max = 17 years and 9 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Dandie Dinmont Terriers. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Dandie Dinmont Terriers.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	14	22.6	Lymphoma; brain tumour; liver; stomach
2	Endocrine	8	12.9	Cushings disease
3	Old age	7	11.3	Old age
4	Cardiac	6	9.7	Heart failure; heart attack; cardiomegaly
5	Combinations	5	8.1	
6	Behaviour	4	6.5	Aggression; unspecified
7	Ocular	3	4.8	Blindness; glaucoma
8	Reproductive	3	4.8	Pyometra
9	Collapse	2	3.2	
10	Gastrointestinal	2	3.2	Haemorrhagic gastroenteritis; pancreatitis
11	Trauma	2	3.2	Road traffic accident
12	Urologic	2	3.2	Chronic kidney failure; unspecified
13	Cerebral vascular	1	1.6	Stroke or cerebral vascular accident
14	Hepatic	1	1.6	Liver disease unspecified
15	Musculoskeletal	1	1.6	Arthritis
16	Unknown	1	1.6	
	Total	62	100.0	

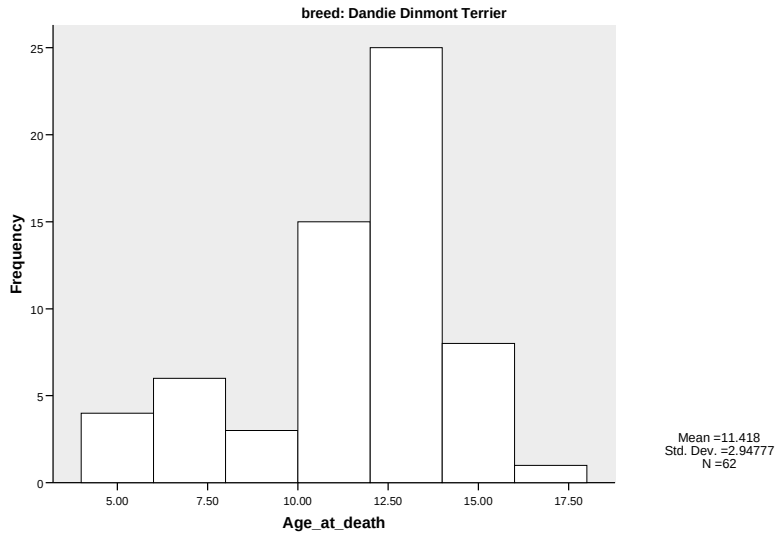


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 62 Dandie Dinmont Terrier deaths with age at death reported.

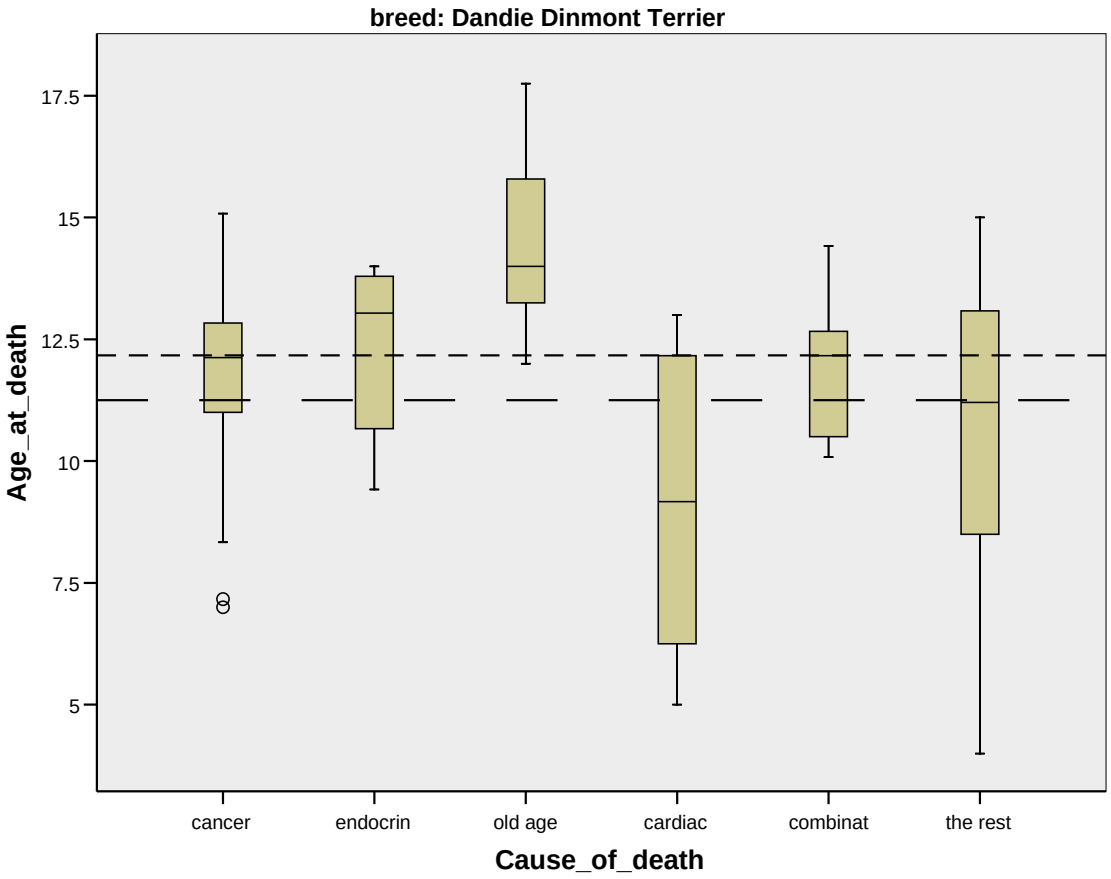


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Dandie Dinmont Terriers (N=62). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Dandie Dinmont Terriers. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 138 live dogs with a reported age was 4 years and 10 months (min=5 months, max=15 years and 5 months, Figure 3). Health information was reported for 138 live dogs of which 83 (60%) were healthy and 55 (40%) had at least one reported health condition, resulting in a total of 104 reported conditions with a median of 2 conditions/dog (min=1, max=5).

The median current age of all healthy dogs with a reported age (N=83) was 3 years and 10 months (min=5 months, max=15 years and 5 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=55) was 6 years and 4 months (min=1 year and 7 months, max=13 years and 11 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=96) was 4 years (min= 1 month, max= 13 years and 4 months, Figure 4). Table 3 shows the disease conditions for Dandie Dinmont Terriers. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 132 Dandie Dinmont Terriers with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	49	33	82 (62%)
Male	35	15	50 (38%)
Totals	84 (64%)	48 (36%)	132 (100%)

There was no association between gender and neuter status (P=0.2353).

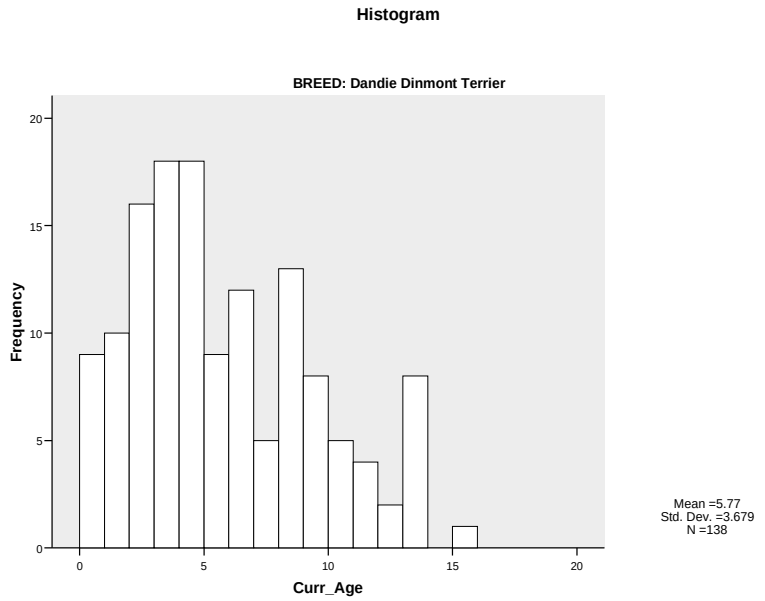


Figure 3. Histogram showing frequency of current age in years for the 138 live Dandie Dinmont Terriers with age reported.

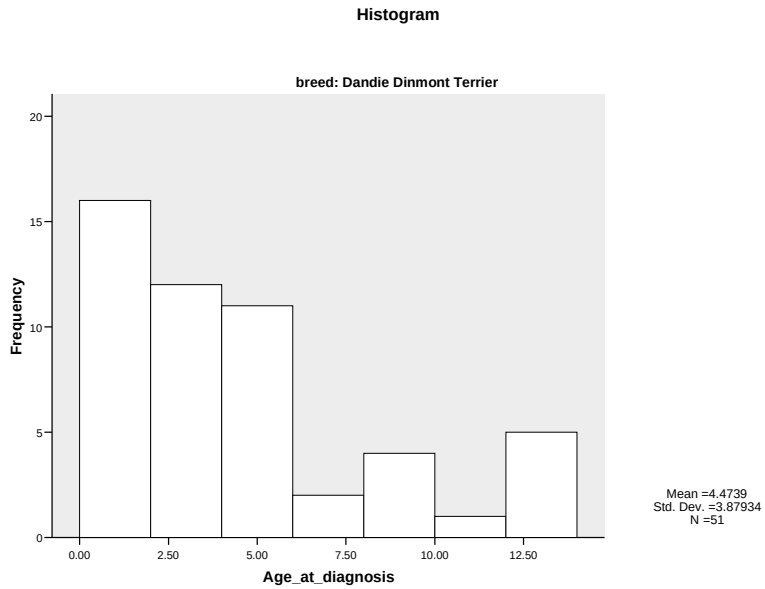


Figure 4. Histogram showing frequency of age at diagnosis for the 51 Dandie Dinmont Terriers with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

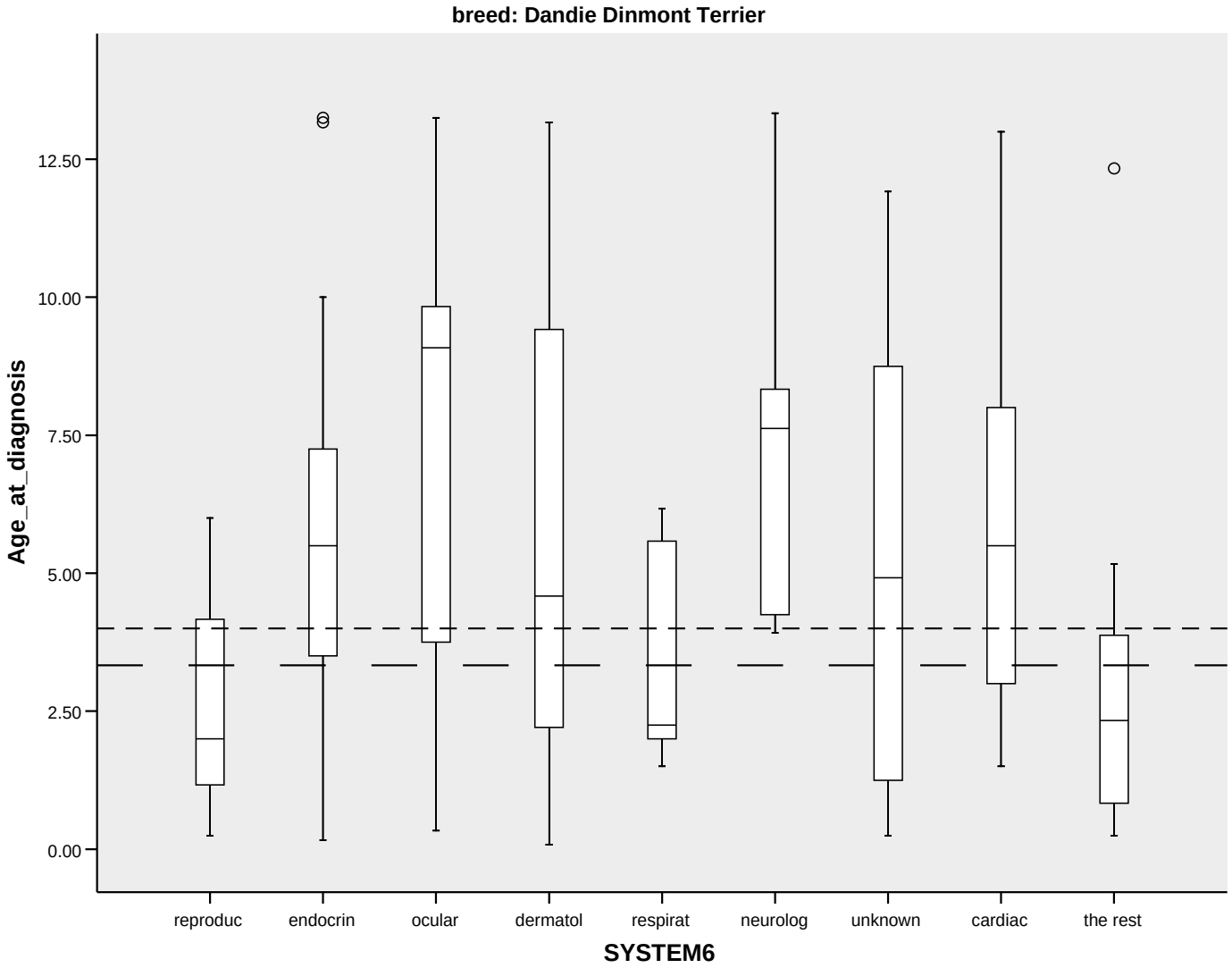


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Dandie Dinmont Terriers (N=55 dogs with 96 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Dandie Dinmont Terriers. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Dandie Dinmont Terriers.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Reproductive	21	20.2	Dystochia (uterine inertia=physical blockage; false pregnancy; pyometra; cryptorchid; infertility
2	Endocrine	16	15.4	Hypothyroidism; Cushing's disease; acromegaly
3	Ocular	13	12.5	Cherry eye; glaucoma; corneal ulcer
4	Dermatologic	7	6.7	Recurrent pyoderma; mites (cheyletiella); alopecia; puppy pyoderma; sebaceous cysts
5	Respiratory	7	6.7	Snoring; long soft palate; coughing; noisy breathing
6	Neurologic	6	5.8	IVDD; seizures; vestibular disease
7	Unknown	6	5.8	Unknown; spine disease unspecified; liver disease undiagnosed
8	Cardiac	5	4.8	Heart rhythm disorder; hear murmur; heart valve condition (unspecified)
9	Gastrointestinal	5	4.8	Colitis; foreign body obstruction; haemorrhagic gastroenteritis; gastroenteritis
10	Immune mediated	4	3.8	Atopy; gluten-sensitive enteropathy; unspecified
11	Musculoskeletal	4	3.8	Cruciate ligament rupture (CLR); hip dysplasia (CHD); osteochondrosis dissecans (OCD); patellar luxation
12	Aural	3	2.9	Otitis externa; excessive ear wax
13	Anal gland	2	1.9	Anal sacculitis
14	Urologic	2	1.9	Cystouroliths (struvite); pyelonephritis
15	Cancer	1	1.0	Unspecified (skin)
16	Cardiopulmonary	1	1.0	Pleural effusion
17	Hepatic	1	1.0	Portosystemic shunt (PSS)
	Total	104	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for Deerhounds

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Deerhounds

A total of 570 forms were sent out and 238 were returned, representing 442 live dogs. This breed had a 41.8% response rate (238/570) and it represented 1.73% of all returns (238/13,741).

Mortality data

A total of 287 deaths were reported and this represents 1.81% of all deaths reported in the survey (287/15,881). The median age at death for Deerhounds was 8 years and 8 months (min = 2 months, max = 16 years and 9 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Deerhounds. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Deerhounds.

Cause of death		N	%	Most common specific causes in descending order
1	Cardiac	70	24.4	Heart failure; cardiomyopathy (unspecified > dilated)
2	Cancer	54	18.8	Bone (type unspecified); brain tumour; osteosarcoma
3	Old age	35	12.2	Old age & old age combinations
4	Gastrointestinal	25	8.7	GDV; colitis; bowel disease unspecified
5	Combinations	15	5.2	Cardiomyopathy; colitis; cancer; pyometra; paresis
6	Other	15	5.2	Uncodeable
7	Perioperative	9	3.1	
8	Cerebral vascular	7	2.4	Stroke or cerebral vascular accident
9	Trauma	7	2.4	Road traffic accident; unspecified
10	Unknown	7	2.4	
11	Hepatic	6	2.1	Chronic liver failure; liver disease unspecified
12	Urologic	6	2.1	Chronic kidney failure; cystitis; incontinence
13	Reproductive	5	1.7	Pyometra; aneurysm post whelping
14	Musculoskeletal	4	1.4	Arthritis; osteomyelitis
15	Neurologic	4	1.4	CDRM; fits; spinal paralysis; spinal disease unspecified
16	Portosystemic shunt (PSS)	3	1.0	
17	Infection	3	1.0	Distemper; leptospirosis; unspecified
18	Poisoning	3	1.0	
19	Septicaemia	2	0.7	
20	Cardiovascular	1	0.3	Portal vein thrombosis
21	Dermatologic	1	0.3	Skin disease unspecified
22	Hyperthermia	1	0.3	
23	Immune mediated	1	0.3	Rheumatoid arthritis
24	Senility	1	0.3	
25	Sudden death	1	0.3	
26	Systemic	1	0.3	Allergy to insect bite or sting or snake bite
	Total	287	100.0	

CDRM= chronic degenerative radiculomyelopathy

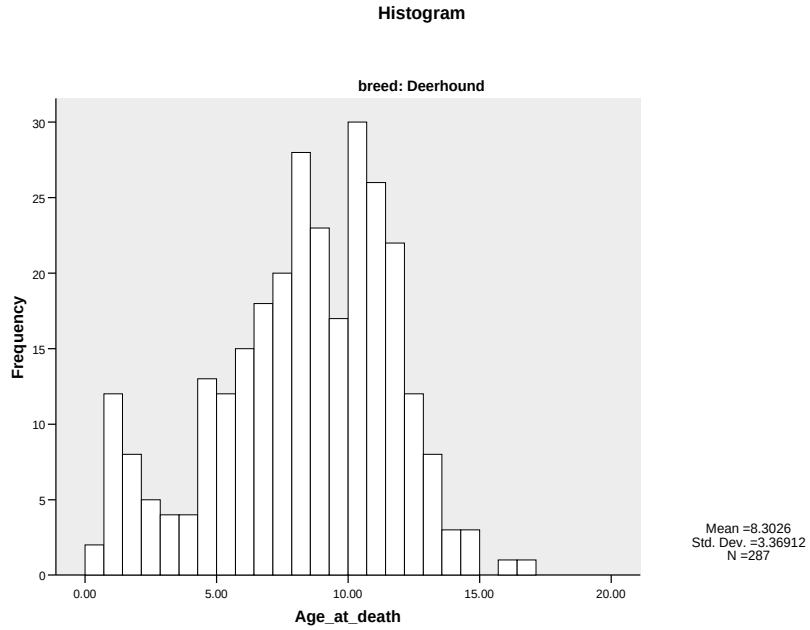


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 287 Deerhound deaths with age at death reported.

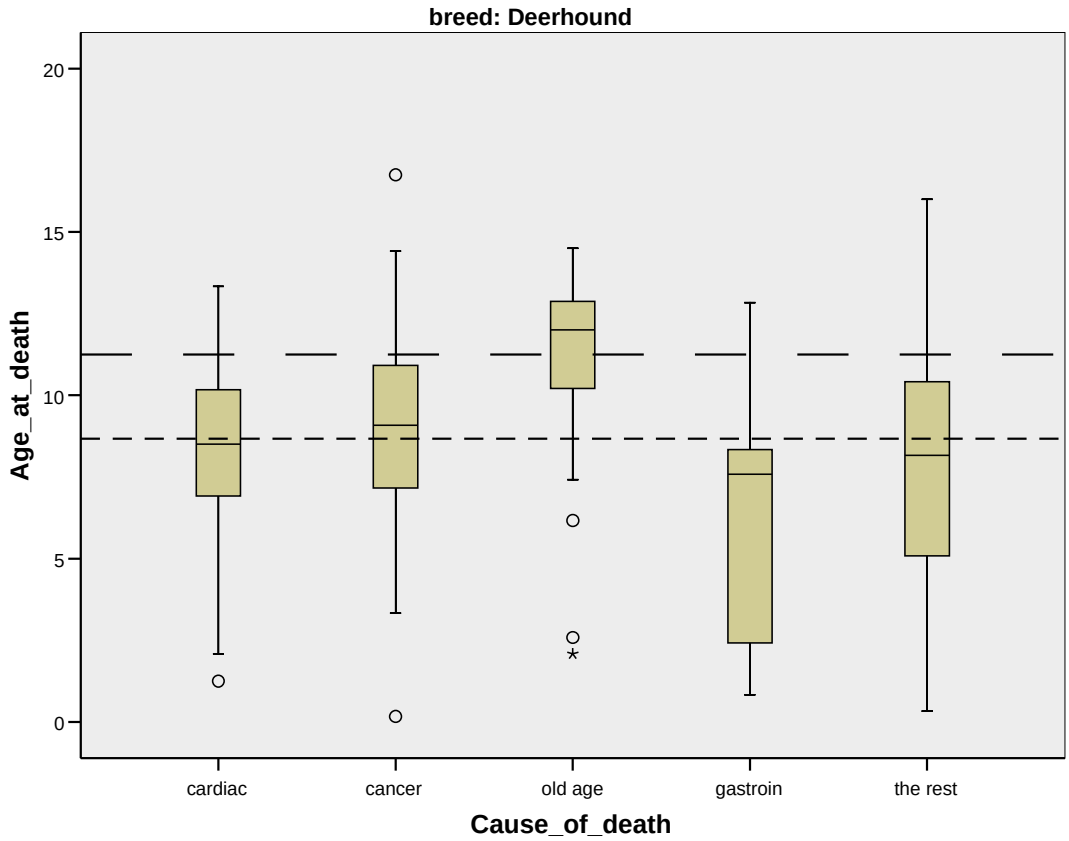


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Deerhounds (N=287). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Deerhounds. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 441 live dogs with a reported age was 4 years and 2 months (min=2 months, max=11 years and 9 months, Figure 3). Health information was reported for 442 live dogs of which 300 (68%) were healthy and 142 (32%) had at least one reported health condition, resulting in a total of 229 reported conditions with a median of 1 condition/dog (min=1, max=7).

The median current age of all healthy dogs with a reported age (N=300) was 3 years and 5 months (min=3 months, max=10 years and 11 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=142) was 5 years and 8 months (min=2 months, max=11 years and 9 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=215) was 3 years and 6 months (min= 3 months, max= 10 years and 9 months, Figure 4). Table 3 shows the disease conditions for Deerhounds. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 440 Deerhounds with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	210	65	275 (63%)
Male	136	29	165 (38%)
Totals	346 (79%)	94 (21%)	440 (100%)

There was no association between gender and neuter status (P=0.1332).

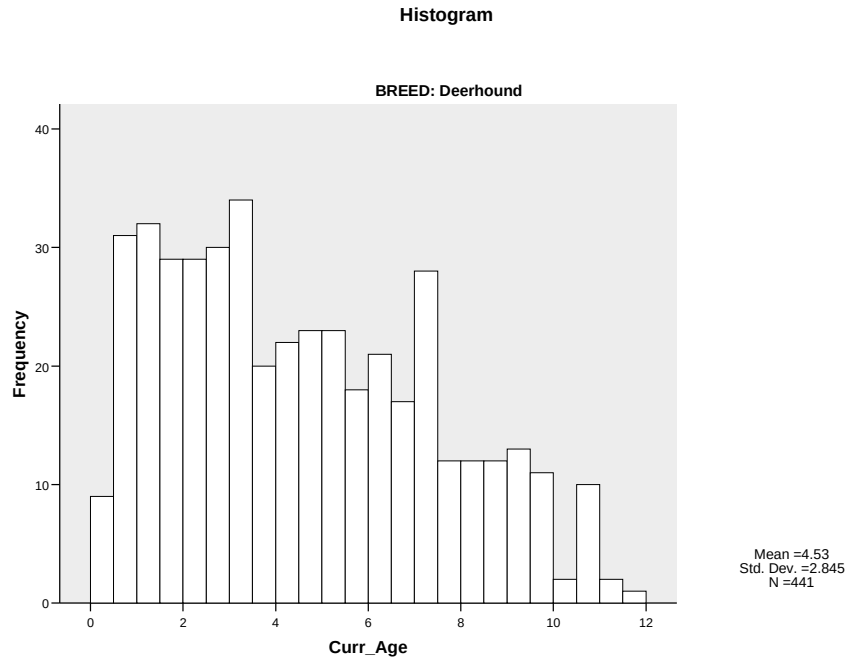


Figure 3. Histogram showing frequency of current age in years for the 441 live Deerhounds with age reported.

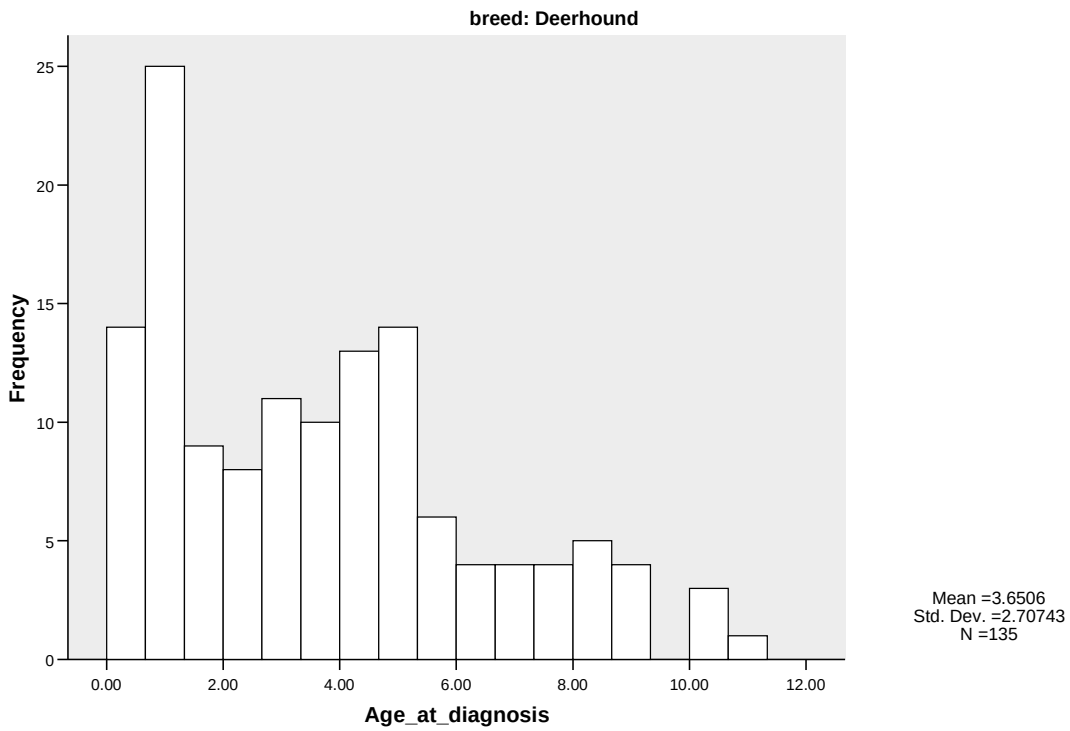


Figure 4. Histogram showing frequency of age at diagnosis for the 135 Deerhounds with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

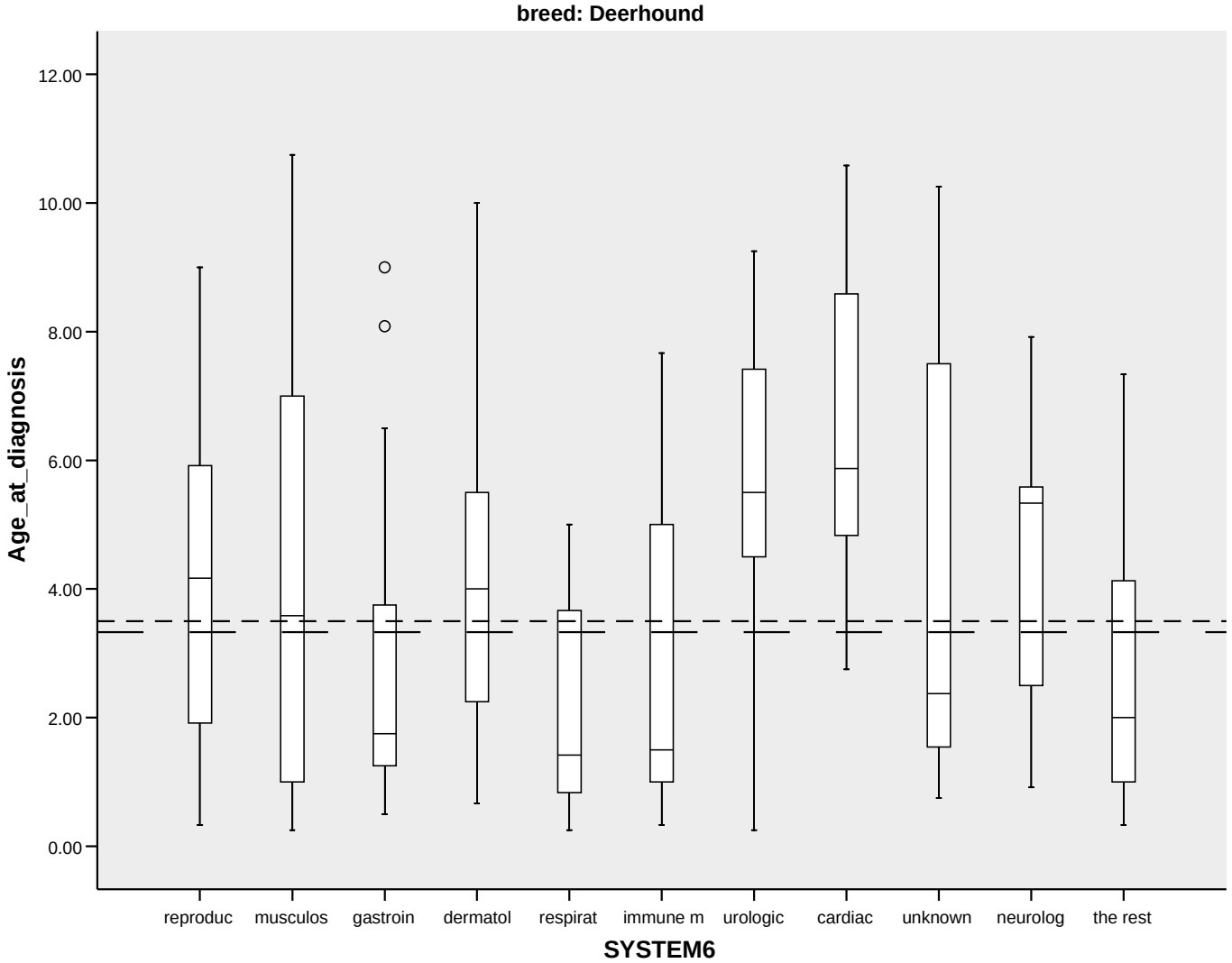


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Deerhounds (N=142 dogs with 215 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Deerhounds. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Deerhounds.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Reproductive	40	17.5	Pyometra; vaginitis; dystochia (uterine inertia>physical blockage); irregular heat cycles
2	Musculoskeletal	34	14.8	Arthritis (hips>rest); OCD (shoulder; hock); CLR; stiff joints
3	Gastrointestinal	30	13.1	GDV; diarrhoea; vomiting; inappetance
4	Dermatologic	23	10.0	Dermatitis; interdigital cysts; sebaceous cysts
5	Respiratory	13	5.7	Kennel cough; constricted nostrils; coughing; pneumonia
6	Immune mediated	12	5.2	Flea allergy; atopy; gluten-sensitive enteropathy; MMM; food allergy; vaccine reaction
7	Ocular	12	5.2	Conjunctivitis; red eye; eyelid abnormality (unspecified); KCS; entropion
8	Urologic	11	4.8	Cystitis; cystouroliths (unspecified=cystine); incontinence (unspecified=after spay)
9	Cardiac	10	4.4	Cardiomyopathy (dilated=unspecified); heart murmur (unspecified); heart rhythm disorder
10	Unknown	10	4.4	Undiagnosed illness
11	Neurologic	9	3.9	Seizures; IVDD (cervical, unspecified); meningitis; granulomatous meningoencephalitis (GME)
12	Uncode and other	6	2.6	Anorexia; splenic torsion; poisoning other than food; enlarged spleen
13	Benign neoplasia	4	1.7	Lipoma; histiocytoma
14	Cancer	4	1.7	Unspecified; haemangiosarcoma (claw); lymphoma; osteosarcoma (hindlimb)
15	Dental	4	1.7	Retained puppy teeth; dental disease
16	Anal gland	2	0.9	Anal sacculitis
17	Aural	1	0.4	Excessive ear wax
18	Behaviour	1	0.4	Unspecified
19	Endocrine	1	0.4	Hypothyroidism
20	Hepatic	1	0.4	Portosystemic shunt (PSS)
21	Trauma	1	0.4	Neurologic
	Total	229	100.0	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for Dobermanns

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Dobermanns

A total of 300 forms were sent out and 58 were returned, representing 129 live dogs. This breed had a 19.3% response rate (58/300) and it represented 0.42% of all returns (58/13,741).

Mortality data

A total of 100 deaths were reported and this represents 0.63% of all deaths reported in the survey (100/15,881). The median age at death for Dobermanns was 10 years and 6 months (min = 1 year and 1 month, max = 16 years and 6 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Dobermanns. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Dobermanns.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	26	26.0	Mammary; lymphoma; lung; carcinoma
2	Old age	22	22.0	Old age & old age combinations
3	Cardiac	15	15.0	Cardiomyopathy unspecified > dilated; heart failure
4	Neurologic	10	10.0	Wobbler's syndrome; spinal disease unspecified
5	Gastrointestinal	5	5.0	GDV; foreign body; parvo virus
6	Combinations	3	3.0	
7	Hepatic	3	3.0	Chronic liver failure; liver disease unspecified
8	Trauma	3	3.0	Road traffic accident; spinal injury unspecified
9	Urologic	3	3.0	Chronic kidney failure; incontinence
10	Collapse	2	2.0	
11	Other	2	2.0	Uncodeable
12	Behaviour	1	1.0	Aggression
13	Musculoskeletal	1	1.0	Arthritis
14	Ocular	1	1.0	Blindness
15	Perioperative	1	1.0	
16	Sudden death	1	1.0	
17	Unknown	1	1.0	
	Total	100	100.0	

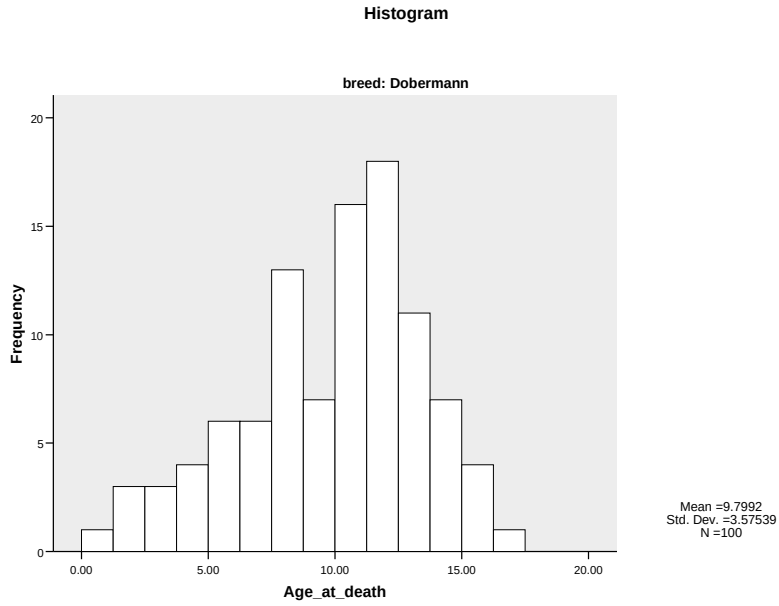


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 100 Dobermann deaths with age at death reported.

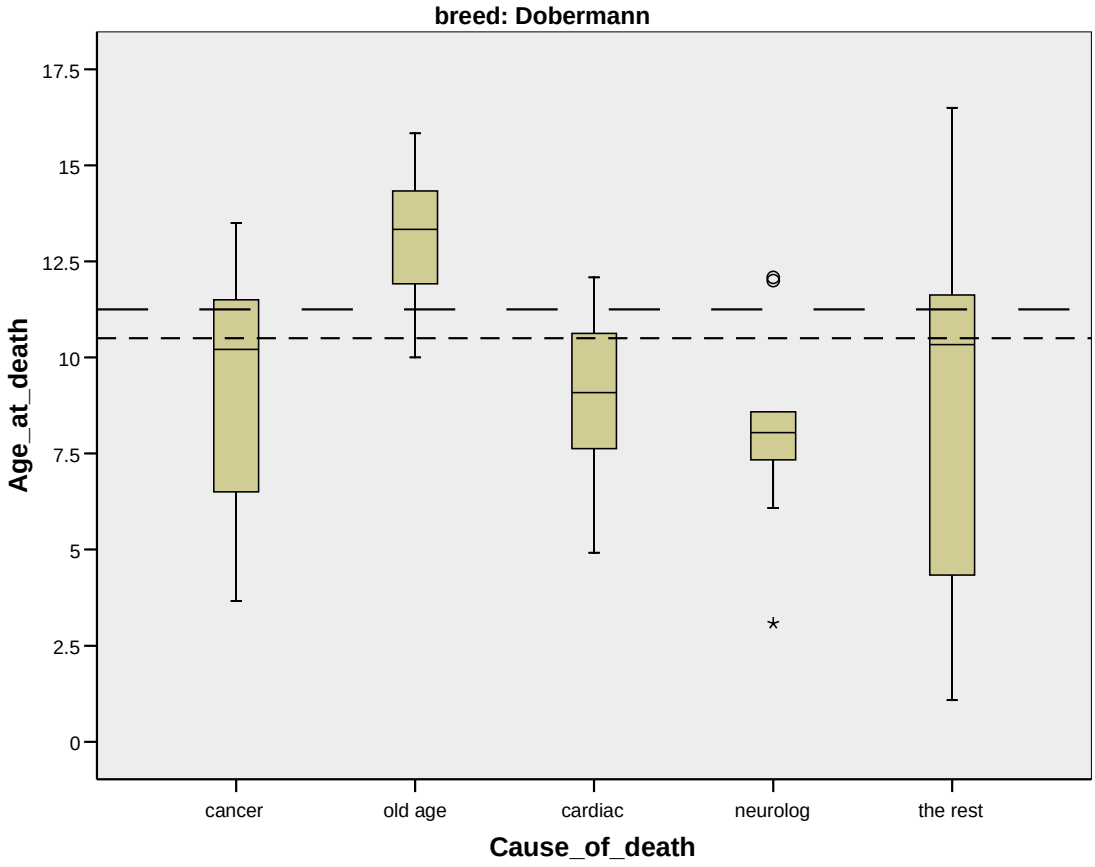


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Dobermanns (N=100). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Dobermanns. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 129 live dogs with a reported age was 4 years and 6 months (min=3 months, max=12 years and 1 month, Figure 3). Health information was reported for 129 live dogs of which 70 (54%) were healthy and 59 (46%) had at least one reported health condition, resulting in a total of 109 reported conditions with a median of 1 condition/dog (min=1, max=9).

The median current age of all healthy dogs with a reported age (N=70) was 2 years and 12 months (min=3 months, max=11 years and 3 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=59) was 6 years and 8 months (min=7 months, max=12 years and 1 month). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=104) was 3 years and 5 months (min= 2 months, max= 11 years and 1 month, Figure 4). Table 3 shows the disease conditions for Dobermanns. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 123 Dobermanns with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	56	33	89 (72%)
Male	28	6	34 (28%)
Totals	84 (68%)	39 (32%)	123 (100%)

Significantly more females were neutered (P=0.0383).

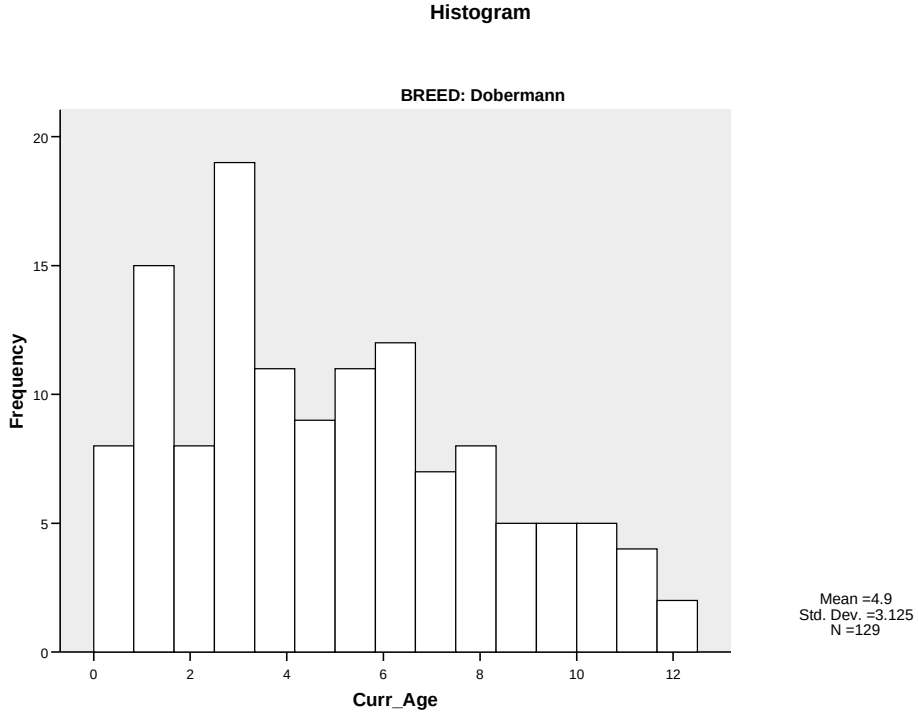


Figure 3. Histogram showing frequency of current age in years for the 129 live Dobermanns with age reported.

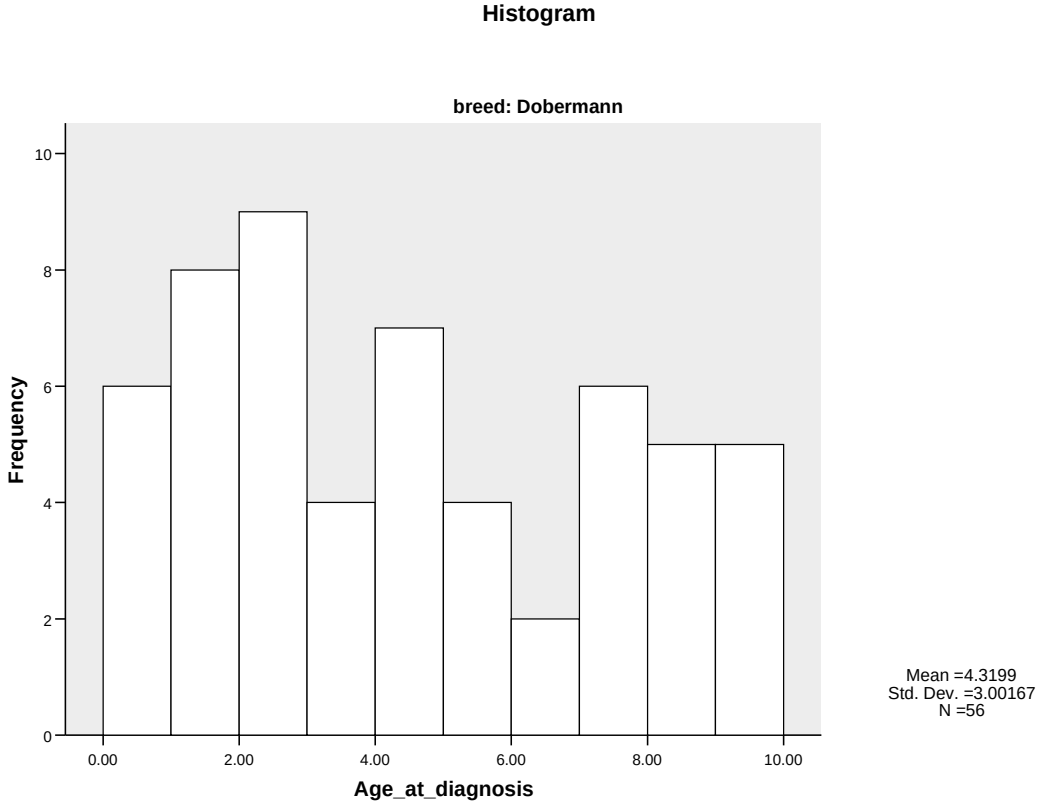


Figure 4. Histogram showing frequency of age at diagnosis for the 56 Dobermanns with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

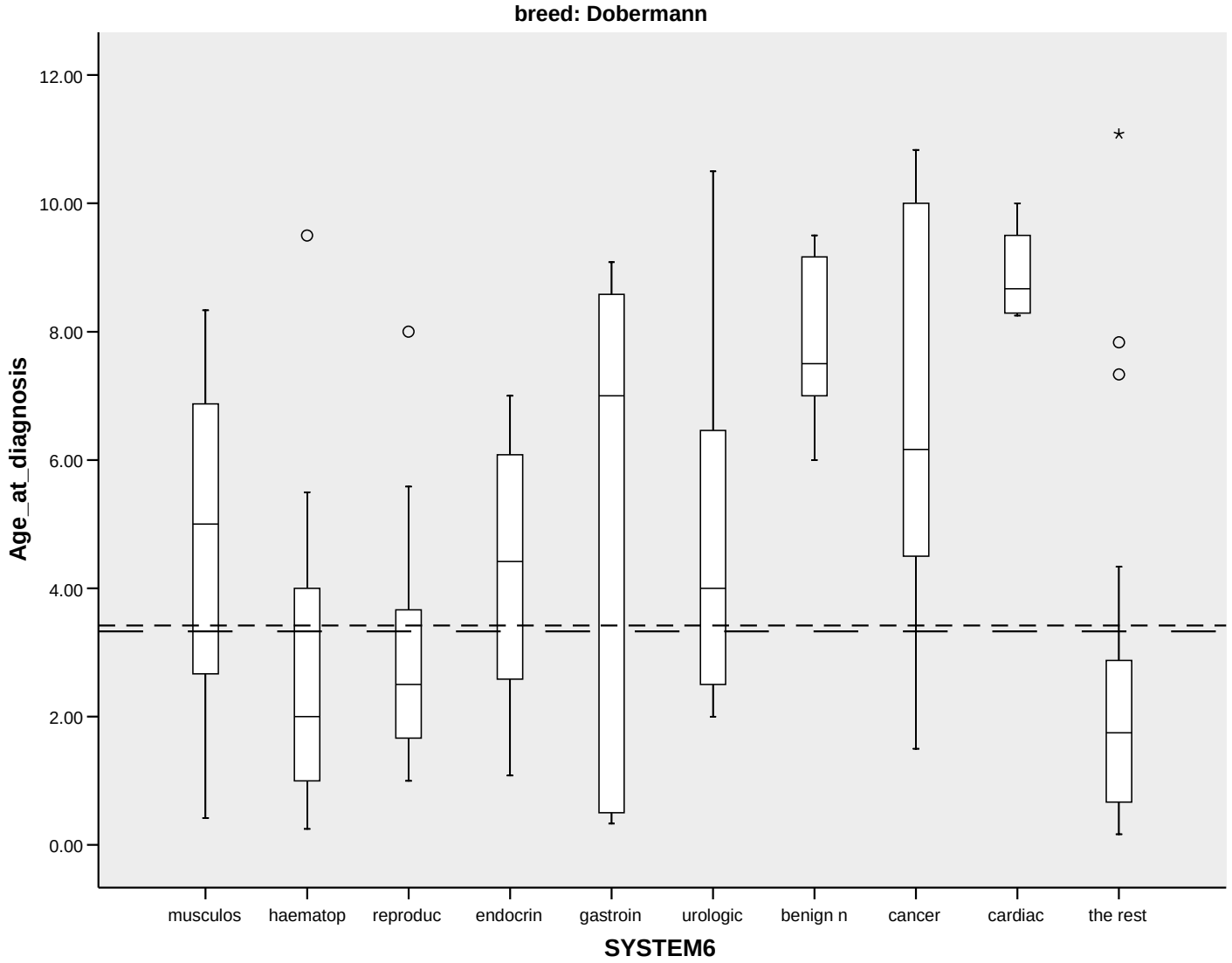


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Dobermanns (N=59 dogs with 104 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Dobermanns. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Dobermanns.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Musculoskeletal	19	17.4	Arthritis; CLR; ligament injury; achilles problem; panosteitis
2	Haematopoietic	13	11.9	Von willebrands disease (VWD); bleeding disorder unspecified
3	Reproductive	12	11.0	False pregnancy; infertility; agalactia; cryptorchid; prostatic cyst
4	Dermatologic	8	7.3	Alopecia; acne; anal furunculosis
5	Endocrine	7	6.4	Hypothyroidism; diabetes insipidus
6	Gastrointestinal	7	6.4	Colitis; GDV; campylobacter; epulis; gastric ulcer; vomiting
7	Urologic	7	6.4	Incontinence (unspecified=OHE); CRF
8	Benign neoplasia	6	5.5	Lipoma
9	Cancer	6	5.5	Unspecified; carcinoma
10	Cardiac	4	3.7	Cardiomyopathy; congestive heart failure (CHF); heart murmur (unspecified)
11	Unknown	4	3.7	Undiagnosed illness
12	Immune mediated	3	2.8	Food hypersensitivity
13	Respiratory	3	2.8	Kennel cough
14	Aural	2	1.8	Aural haematoma; excessive ear wax
15	Neurologic	2	1.8	Wobbler syndrome
16	Ocular	2	1.8	KCS; epiphora
17	Trauma	2	1.8	Neurologic; ocular
18	Behaviour	1	0.9	Unspecified
19	Dental	1	0.9	Retained puppy teeth
	Total	109	100.0	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for the Dogue de Bordeaux breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Dogue de Bordeaux breed

A total of 249 forms were sent out and 41 were returned, representing 71 live dogs. This breed had a 16.5% response rate (41/249) and it represented 0.30% of all returns (41/13,741).

Mortality data

A total of 5 deaths were reported and this represents 0.03% of all deaths reported in the survey (5/15,881). The median age at death for the Dogue de Bordeaux breed was 3 years and 10 months (min = 8 months, max = 16 years) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Dogue de Bordeaux breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Dogue de Bordeaux breed.

	Cause of death	No. of deaths	% of deaths	Most common specific causes in descending order
1	Cancer	1	20.0	Lymphoma
2	Cardiac	1	20.0	Cardiomegaly
3	Hepatic	1	20.0	Chronic liver failure
4	Musculoskeletal	1	20.0	Osteochondrosis dissecans (OCD); hip dysplasia
5	Other	1	20.0	Uncodeable
	Total	5	100.0	

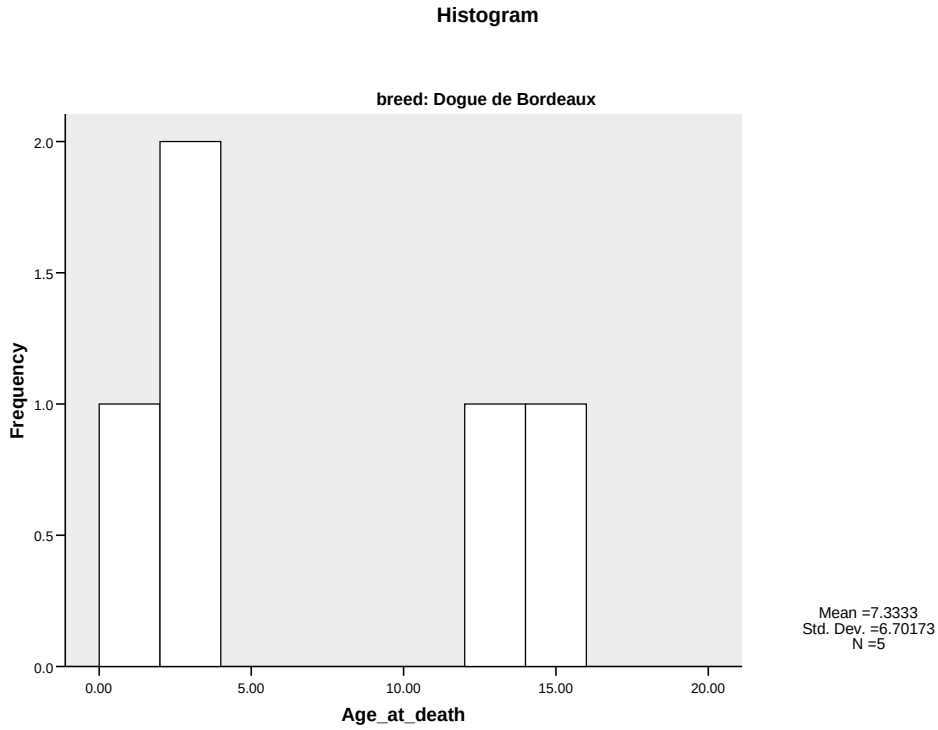


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 5 Dogue de Bordeaux deaths with age at death reported.

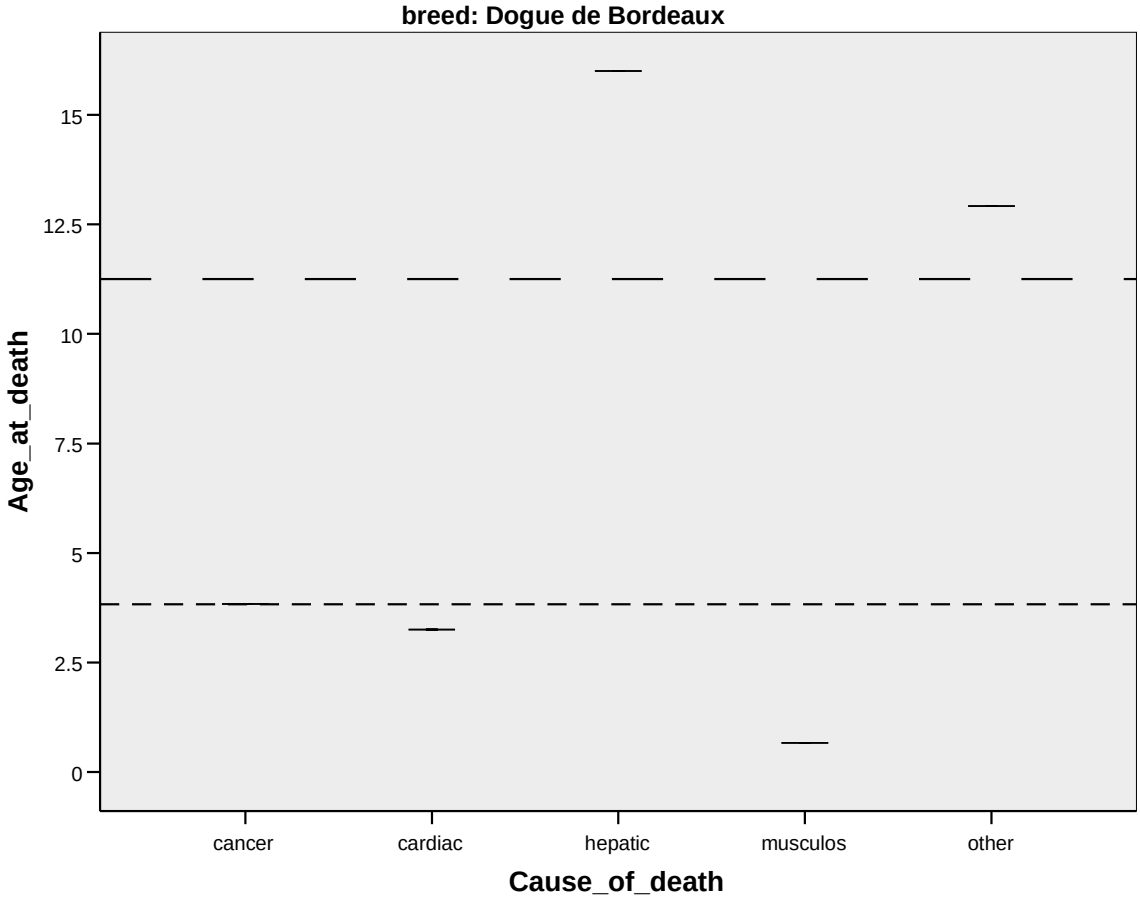


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the Dogue de Bordeaux breed (N=5). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the Dogue de Bordeaux breed. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 71 live dogs with a reported age was 1 year and 9 months (min=3 months, max=13 years and 2 months, Figure 3). Health information was reported for 71 live dogs of which 35 (49%) were healthy and 36 (51%) had at least one reported health condition, resulting in a total of 62 reported conditions with a median of 1 condition/dog (min=1, max=6).

The median current age of all healthy dogs with a reported age (N=35) was 1 year and 9 months (min=3 months, max=13 years and 2 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=36) was 1 year and 10 months (min=6 months, max=8 years and 1 month). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=60) was 9 months (min= 2 months, max= 7 years, Figure 4). Table 3 shows the disease conditions for the Dogue de Bordeaux breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 70 the Dogue de Bordeaux breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	33	6	39 (56%)
Male	25	6	31 (44%)
Totals	58 (83%)	12 (17%)	70 (100%)

There was no association between gender and neuter status (P=0.6615).

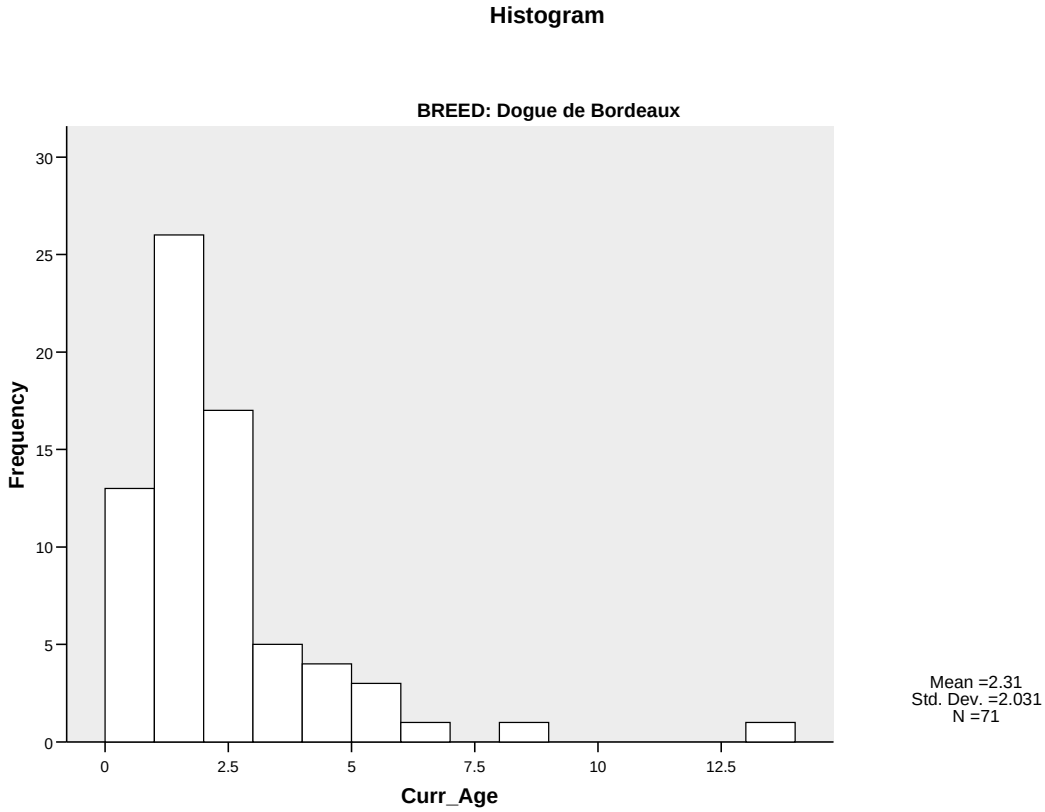


Figure 3. Histogram showing frequency of current age in years for the 71 live Dogue de Bordeaux breed with age reported.

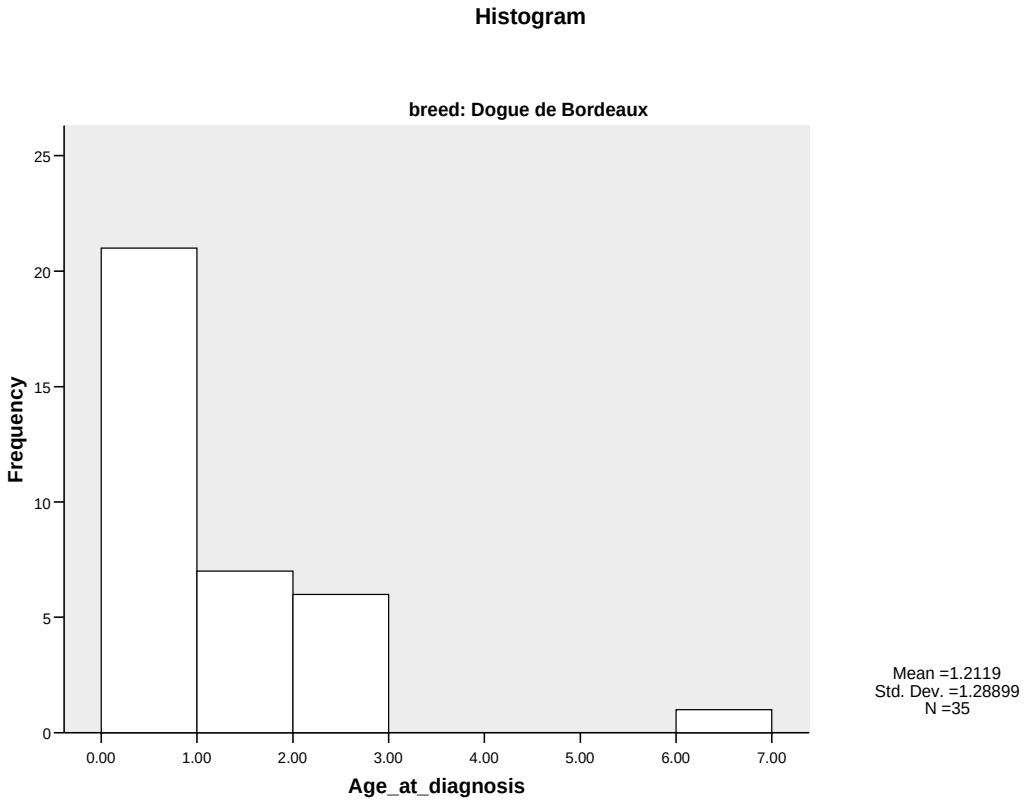


Figure 4. Histogram showing frequency of age at diagnosis for the 35 Dogue de Bordeaux breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

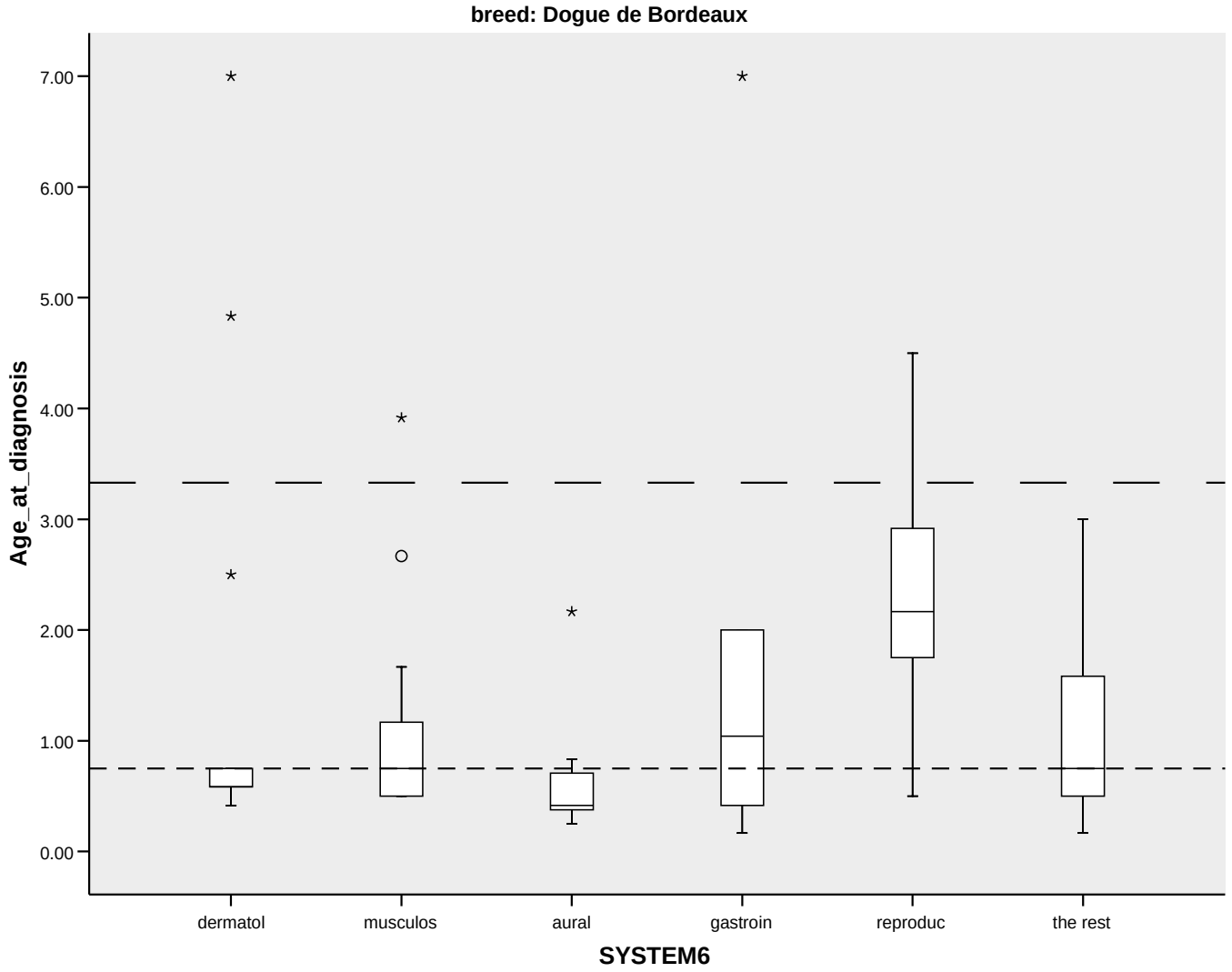


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Dogue de Bordeaux breed (N=60 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Dogue de Bordeaux breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Dogue de Bordeaux breed.

		All conditions		Prevalence	
Disease condition		N	%	%	Most common specific conditions in descending order
1	Dermatologic	14	22.6	7.14	Mites (demodex>sarcoptes); alopecia; acne; puppy pyoderma; dermatitis
2	Musculoskeletal	14	22.6	4.56	CHD; lameness (unspecified); OCD (shoulder; elbow); strain
3	Aural	7	11.3	3.77	Otitis externa
4	Gastrointestinal	6	9.7	2.78	Diarrhoea; GDV; colitis; intussusception; vomiting
5	Reproductive	6	9.7	2.58	False pregnancy; pyometra; uterine inertia; prostatic enlargement
6	Dental	2	3.2	2.18	Defect other than extra teeth
7	Immune mediated	2	3.2	1.79	Atopy; gluten-sensitive enteropathy
8	Neurologic	2	3.2	1.39	Horner's syndrome; seizures or fits
9	Ocular	2	3.2	1.39	Ectropion; persistent papillary membrane (PPM)
10	Respiratory	2	3.2	1.19	Noisy breathing; respiratory infections
11	Anal gland	1	1.6	1.19	Anal sacculitis
12	Benign neoplasia	1	1.6	0.99	Unspecified
13	Cardiac	1	1.6	0.79	Congestive heart failure (CHF)
14	Unknown	1	1.6	0.60	Undiagnosed illness
15	Urologic	1	1.6	0.60	Cystitis
	Total	62	100.0	35.12	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for English Setters

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

English Setters

A total of 952 forms were sent out and 254 were returned, representing 633 live dogs. This breed had a 26.7% response rate (254/952) and it represented 1.85% of all returns (254/13,741).

Mortality data

A total of 384 deaths were reported and this represents 2.42% of all deaths reported in the survey (384/15,881). The median age at death for English Setters was 11 years and 7 months (min = 10 months, max = 20 years) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for English Setters. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for English Setters.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	126	32.8	Mammary; unspecified; brain tumour; liver
2	Old age	72	18.8	Old age & old age combinations
3	Combinations	30	7.8	
4	Cardiac	27	7.0	Heart failure; heart attack; cardiomegaly
5	Urologic	18	4.7	Kidney failure chronic > acute; PLN
6	Neurologic	14	3.6	Seizures; unspecified spinal disease
7	Other	14	3.6	Uncodeable
8	Cerebral vascular	12	3.1	Stroke or cerebral vascular accident
9	Hepatic	10	2.6	Chronic liver failure
10	Gastrointestinal	9	2.3	GDV; pancreatitis; gastroenteritis
11	Endocrine	7	1.8	Diabetes mellitus; Cushings disease
12	Perioperative	7	1.8	
13	Musculoskeletal	6	1.6	Arthritis; cruciate ligament rupture; hip dysplasia
14	Reproductive	5	1.3	Pyometra; prostatomegaly;
15	Trauma	5	1.3	Road traffic accident; unspecified
16	Internal bleeding	4	1.0	
17	Unknown	4	1.0	
18	Poisoning	3	0.8	
19	Respiratory	3	0.8	Respiratory failure; collapsed lung
20	Dermatologic	2	0.5	Chronic ear infections; skin disease unspecified
21	Immune mediated	2	0.5	AIHA; unspecified
22	Collapse	1	0.3	
23	Died	1	0.3	
24	Drowning	1	0.3	
25	Senility	1	0.3	
	Total	384	100.0	

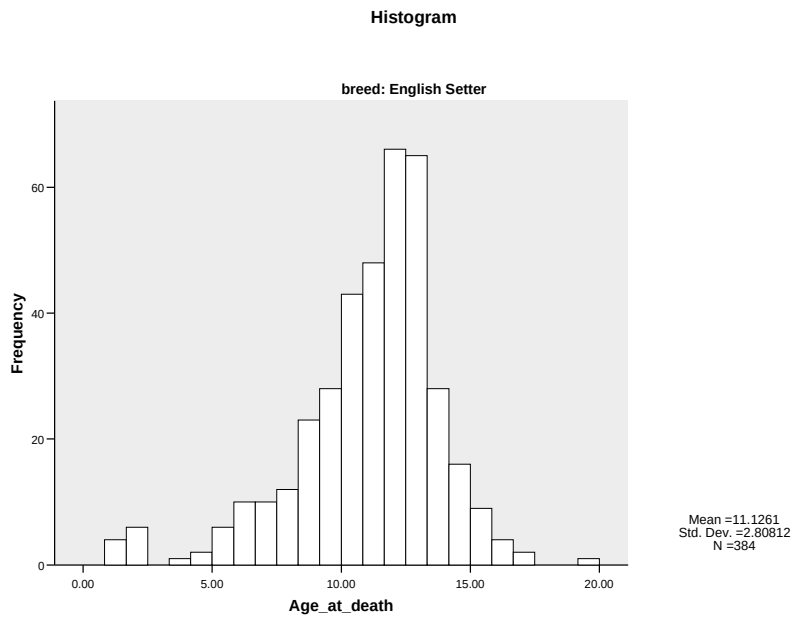


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 384 English Setter deaths with age at death reported.

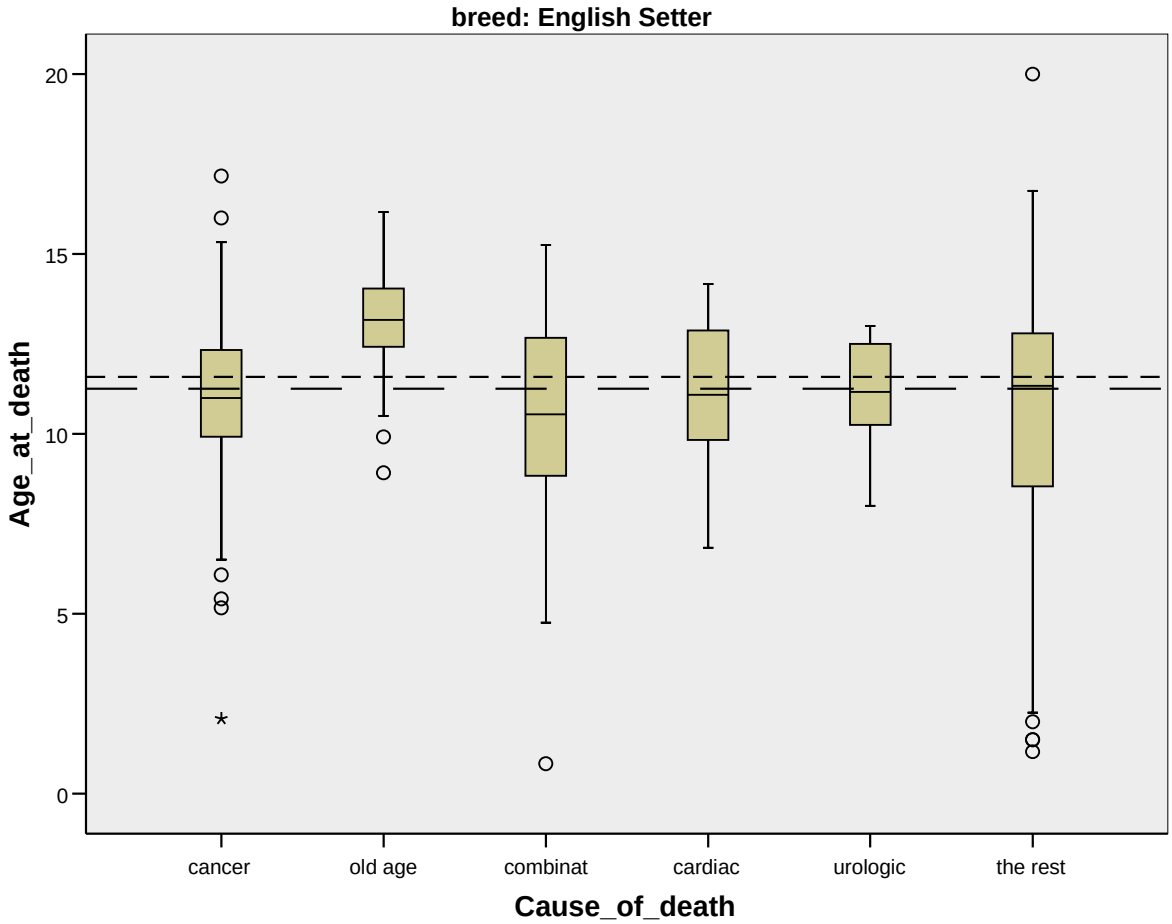


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in English Setters (N=384). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for English Setters. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 632 live dogs with a reported age was 5 years and 6 months (min=1 month, max=18 years, Figure 3). Health information was reported for 633 live dogs of which 328 (52%) were healthy and 305 (48%) had at least one reported health condition, resulting in a total of 571 reported conditions with a median of 1 condition/dog (min=1, max=7).

The median current age of all healthy dogs with a reported age (N=328) was 3 years and 9 months (min=2 months, max=18 years). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=304) was 7 years and 3 months (min=1 month, max=16 years and 11 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=544) was 4 years (min= 1 month, max= 13 years and 4 months, Figure 4). Table 3 shows the disease conditions for English Setters. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 625 English Setters with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	256	110	366 (59%)
Male	221	38	259 (41%)
Totals	477 (76%)	148 (24%)	625 (100%)

Significantly more females were neutered (P=0.0000).

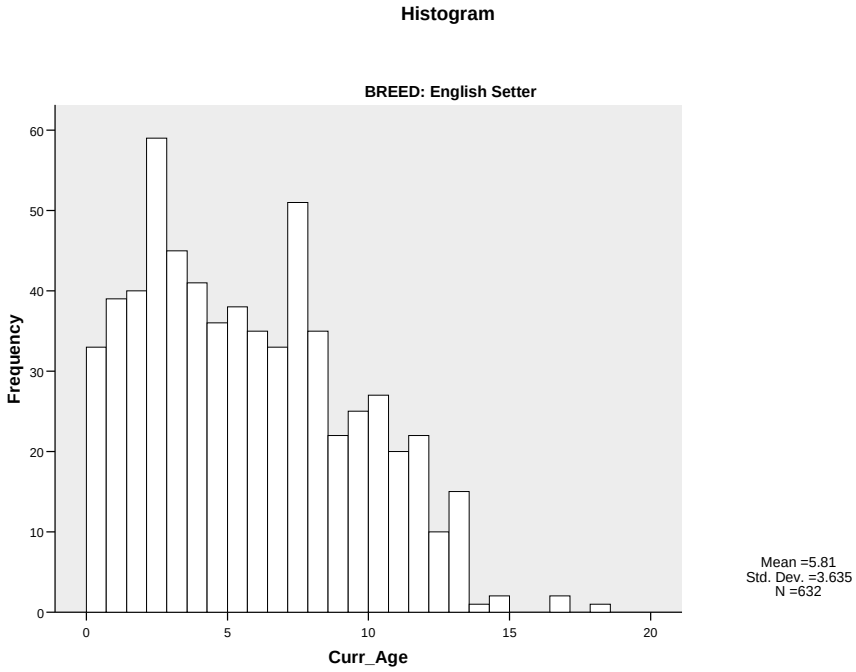


Figure 3. Histogram showing frequency of current age in years for the 632 live English Setters with age reported.

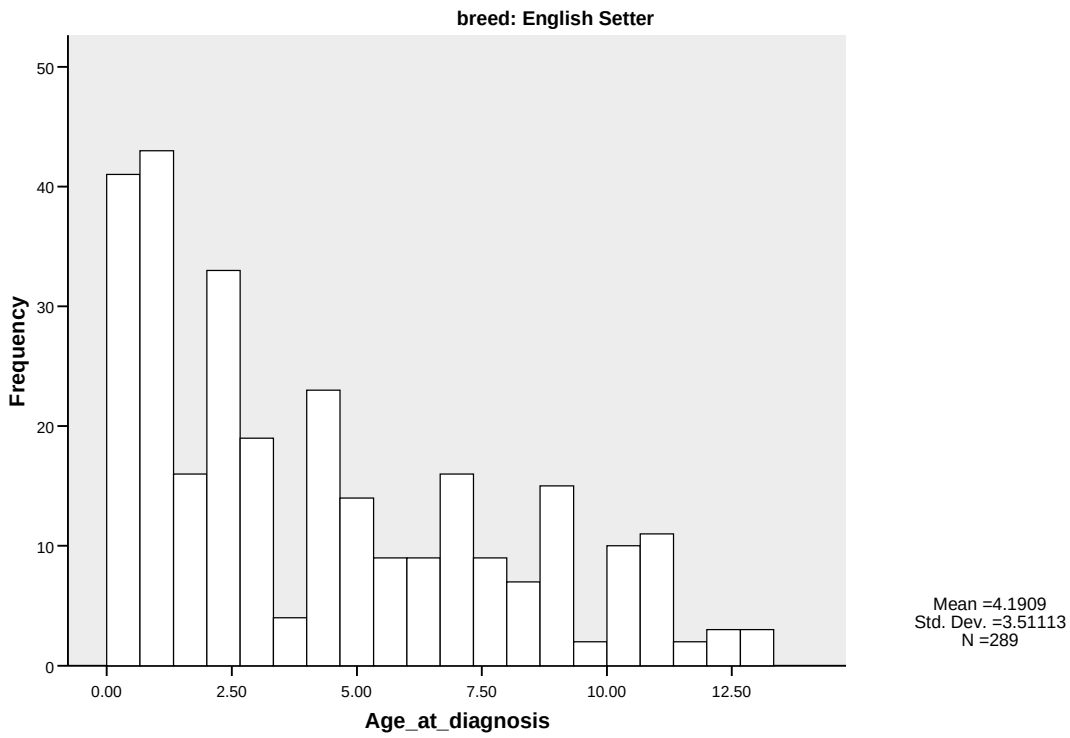


Figure 4. Histogram showing frequency of age at diagnosis for the 289 English Setters with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

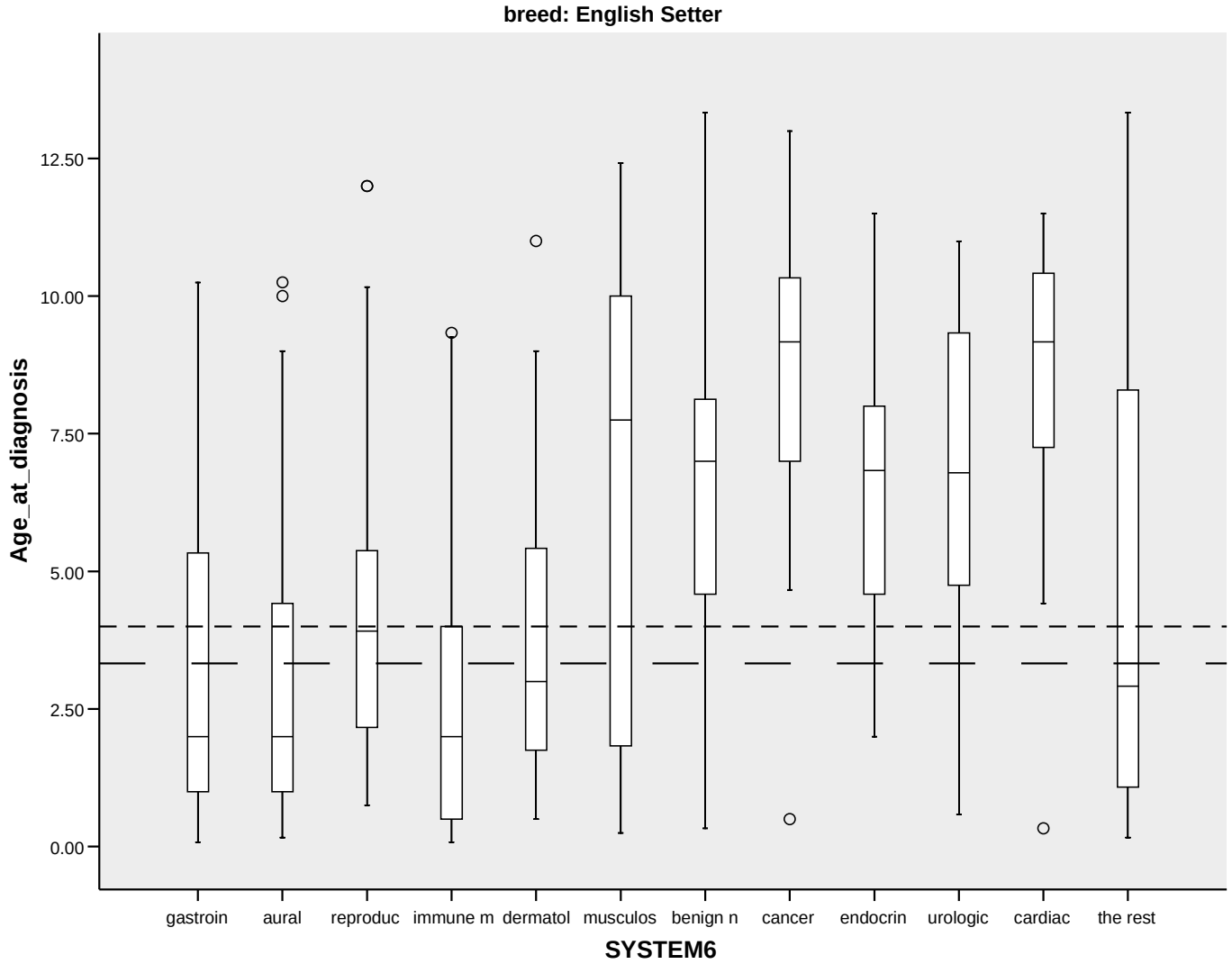


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for English Setters (N=304 dogs with 544 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for English Setters. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for English Setters.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Gastrointestinal	72	12.6	Colitis; diarrhoea (chronic>acute); foreign body obstruction; IBD; pancreatitis; vomiting
2	Aural	65	11.4	Otitis externa; ear mites; excessive ear wax
3	Reproductive	59	10.3	Pyometra; irregular heat cycle; uterine inertia; infertility; false pregnancy
4	Immune mediated	58	10.2	Atopy; unspecified; food hypersensitivity; gluten-sensitive enteropathy; flea allergy
5	Dermatologic	52	9.1	Dermatitis; mites (sarcoptes>demodex); recurrent pyoderma; alopecia
6	Musculoskeletal	46	8.1	Arthritis (hips>unspecified>elbows=stifle>shoulders); CHD; lameness (forelimb)
7	Benign neoplasia	35	6.1	Lipoma; unspecified (mammary; spleen); histiocytoma
8	Respiratory	32	5.6	Kennel cough; noisy breathing
9	Cancer	30	5.3	Unspecified (mammary; testicular); mast cell tumour (MCT)
10	Endocrine	26	4.6	Hypothyroidism
11	Urologic	26	4.6	Cystitis; incontinence; cystouroliths (unspecified; struvite); protein losing enteropathy (PLN)
12	Cardiac	18	3.2	Heart murmur; heart rhythm disorder; atrial fibrillation; dilated cardiomyopathy; MVD
13	Ocular	13	2.3	Cataracts; KCS
14	Unknown	11	1.9	Undiagnosed illness
15	Neurologic	8	1.4	Seizures; deafness; Horner's syndrome; myasthenia gravis; vestibular disease
16	Trauma	6	1.1	Unspecified; urologic; dermatologic
17	Anal gland	4	0.7	Anal sacculitis
18	Other	3	0.5	Malignant hyperthermia; hyperactive; umbilical hernia
19	Behaviour	2	0.4	Unspecified
20	Cerebrovascular	2	0.4	Stroke or cerebral vascular accident
21	Dental	2	0.4	Defect other than extra teeth
22	Hepatic	1	0.2	Hepatitis
	Total	571	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for English Springer Spaniels

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

English Springer Spaniels

A total of 353 forms were sent out and 71 were returned, representing 258 live dogs. This breed had a 20.1% response rate (71/353) and it represented 0.52% of all returns (71/13,741).

Mortality data

A total of 90 deaths were reported and this represents 0.57% of all deaths reported in the survey (90/15,881). The median age at death for English Springer Spaniels was 12 years (min = 1 year and 2 months, max = 19 years and 6 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for English Springer Spaniels. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for English Springer Spaniels.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	24	26.7	Liver (type unspecified); unspecified; lung (type u/s)
2	Old age	16	17.8	Old age & old age combinations
3	Cerebral vascular	6	6.7	Stroke or cerebral vascular accident
4	Cardiac	5	5.6	Heart attack; heart failure; cardiomegaly
5	Endocrine	4	4.4	Diabetes mellitus; Cushings disease
6	Hepatic	4	4.4	Chronic liver failure; liver disease unspecified
7	Urologic	4	4.4	Kidney failure (chronic > acute)
8	Gastrointestinal	3	3.3	GDV; intestinal perforation; pancreatic cyst
9	Unknown	3	3.3	
10	Behaviour	2	2.2	Aggression
11	Combinations	2	2.2	
12	Immune mediated	2	2.2	AIHA; unspecified
13	Musculoskeletal	2	2.2	Arthritis; myopathy
14	Perioperative	2	2.2	
15	Senility	2	2.2	
16	Trauma	2	2.2	Road traffic accident; unspecified
17	Cardiovascular	1	1.1	Unspecified
18	Infection	1	1.1	Leptospirosis
19	Neurologic	1	1.1	Seizures
20	Other	1	1.1	Uncodeable
21	Reproductive	1	1.1	Pyometra
22	Respiratory	1	1.1	Pneumonia
23	Sudden death	1	1.1	
	Total	90	100.0	

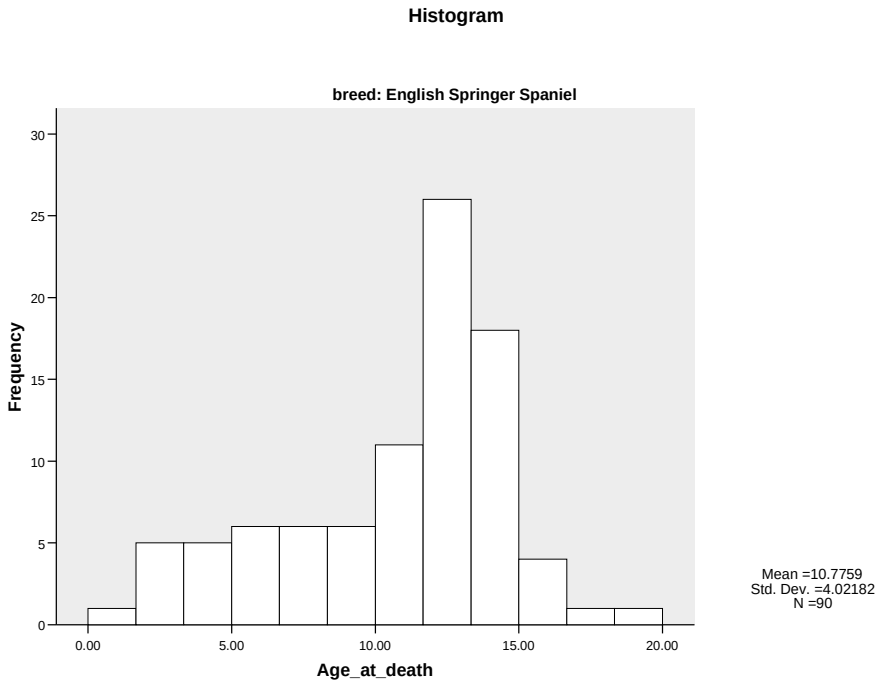


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 90 English Springer Spaniel deaths with age at death reported.

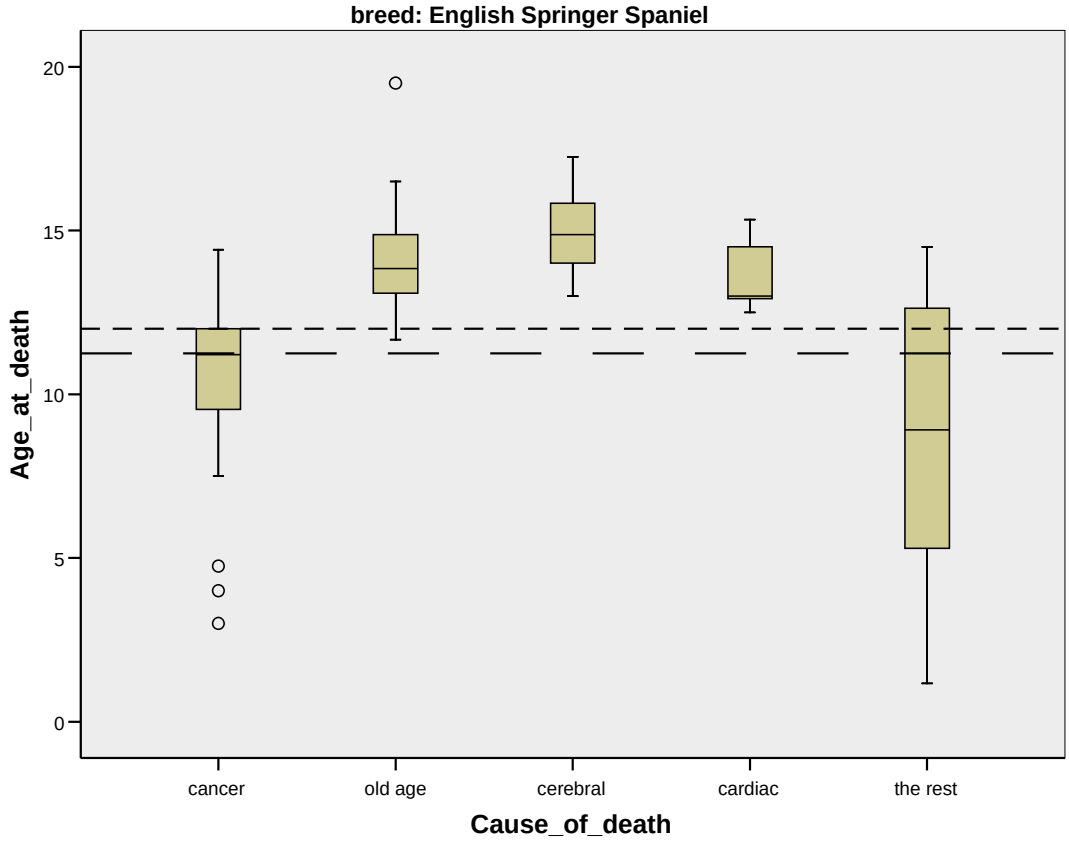


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in English Springer Spaniels (N=90). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for English Springer Spaniels. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 255 live dogs with a reported age was 5 years and 1 month (min=2 months, max=16 years and 10 months, Figure 3). Health information was reported for 258 live dogs of which 168 (65%) were healthy and 90 (35%) had at least one reported health condition, resulting in a total of 146 reported conditions with a median of 1 condition/dog (min=1, max=5).

The median current age of all healthy dogs with a reported age (N=168) was 3 years and 6 months (min=2 months, max=13 years and 9 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=89) was 7 years and 6 months (min=7 months, max=16 years and 10 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=143) was 4 years and 6 months (min= 1 month, max= 14 years and 7 months, Figure 4). Table 3 shows the disease conditions for English Springer Spaniels. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 258 English Springer Spaniels with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	120	43	163 (63%)
Male	87	8	95 (37%)
Totals	207 (80%)	51 (20%)	258 (100%)

Significantly more females were neutered (P=0.0005).

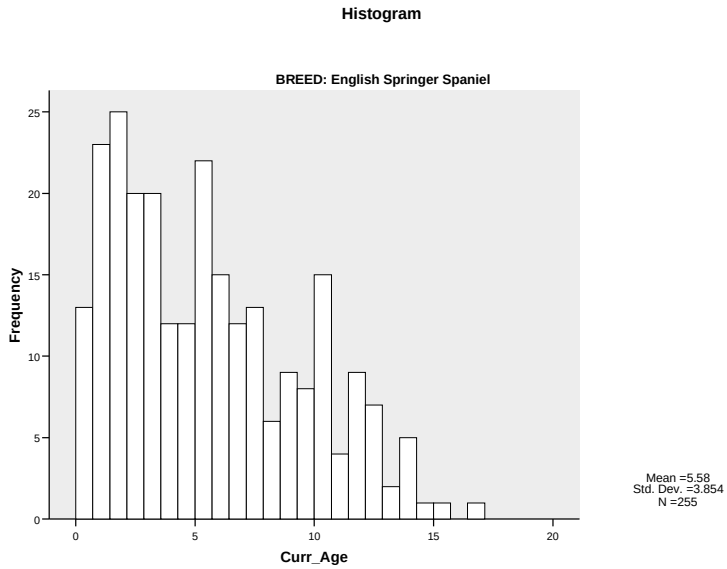


Figure 3. Histogram showing frequency of current age in years for the 255 live English Springer Spaniels with age reported.

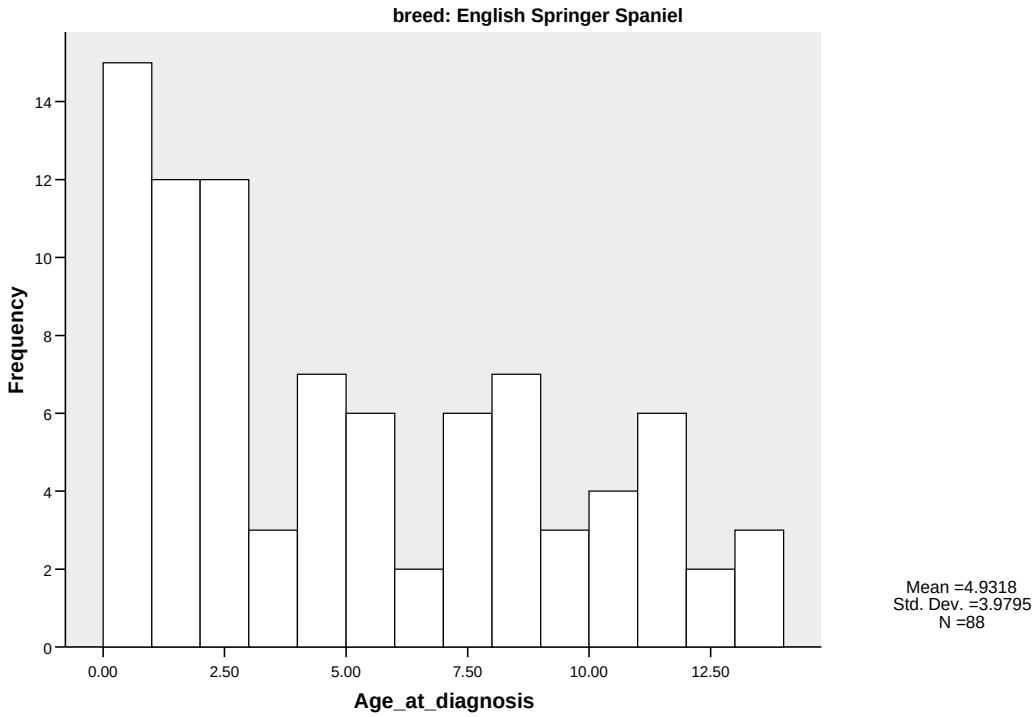


Figure 4. Histogram showing frequency of age at diagnosis for the 88 English Springer Spaniels with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

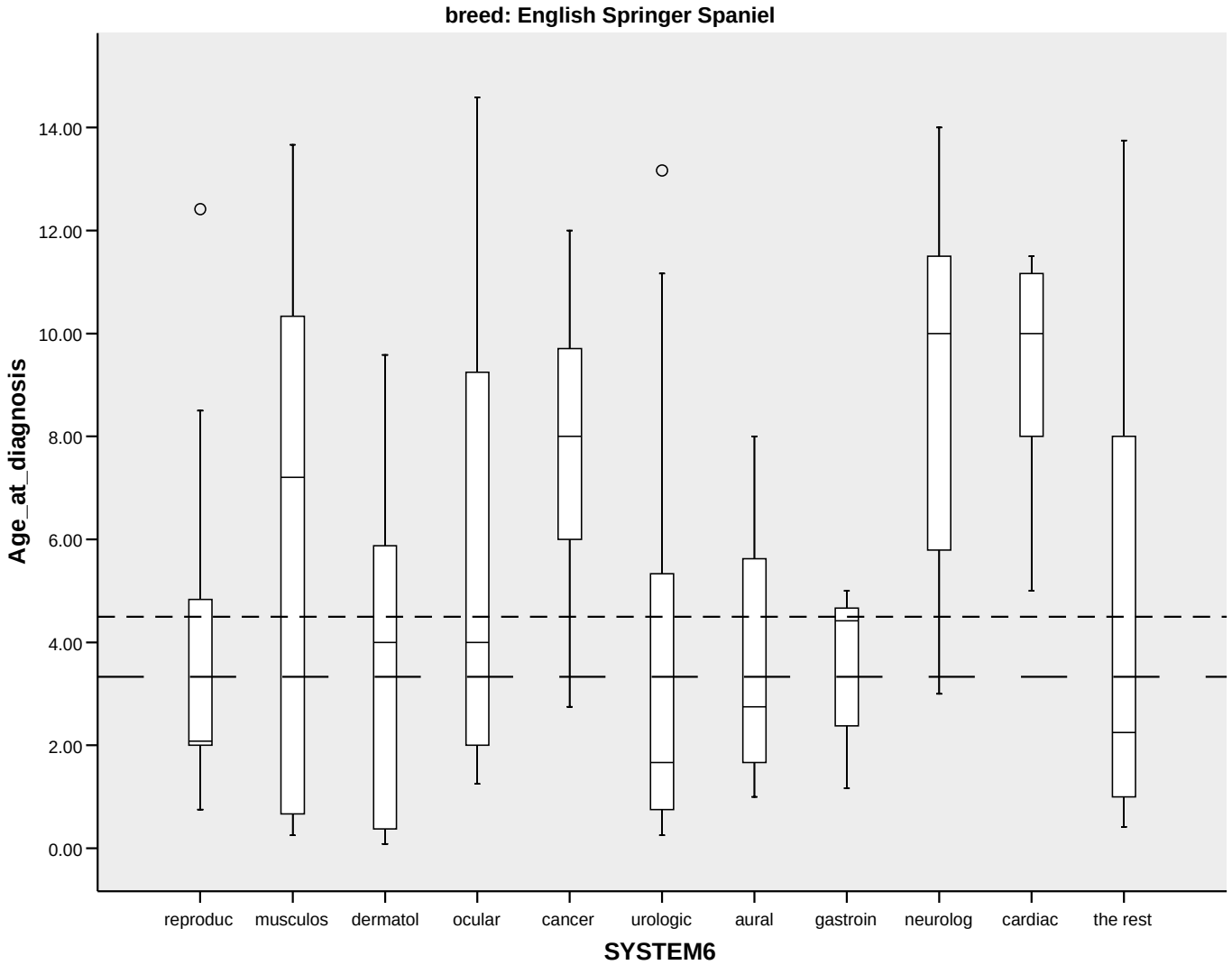


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for English Springer Spaniels (N=89 dogs with 143 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for English Springer Spaniels. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for English Springer Spaniels.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Reproductive	18	12.3	Pyometra; false pregnancy
2	Musculoskeletal	17	11.6	Arthritis (hindlimbs>rest); CLR; OCD (shoulder); fracture
3	Dermatologic	15	10.3	Dermatitis; mites (cheyletiella>sarcoptes); sebaceous cysts; skin infection unspecified
4	Ocular	14	9.6	KCS; blindness; cataracts; distichiasis
5	Cancer	11	7.5	Unspecified (mammary); adenocarcoma; lymphoma; mast cell tumour (MCT)
6	Urologic	10	6.8	Cystitis; incontinence (after spay=unspecified); cystouroliths (struvite)
7	Aural	8	5.5	Otitis externa
8	Gastrointestinal	8	5.5	Colitis; GDV; foreign body obstruction; gastroenteritis; haemorrhagic gastroenteritis
9	Immune mediated	7	4.8	Atopy; flea allergy; gluten-sensitive enteropathy; masticatory muscle myositis (MMM)
10	Neurologic	7	4.8	Deafness; seizures
11	Unknown	6	4.1	Undiagnosed illness
12	Cardiac	5	3.4	Heart murmur; cardiomegaly
13	Endocrine	5	3.4	Hypothyroidism; Addison’s disease
14	Trauma	4	2.7	Ocular; dermatologic; spinal
15	Benign neoplasia	3	2.1	Lipoma
16	Dental	3	2.1	Dental disease; retained puppy teeth
17	Respiratory	3	2.1	Kennel cough; bronchitis
18	Cerebrovascular	1	0.7	Stroke or cerebral vascular accident
19	Uncode and other	1	0.7	Tonsillitis
	Total	146	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for English Toy Terriers

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

English Toy Terriers

A total of 152 forms were sent out and 28 were returned, representing 92 live dogs. This breed had an 18.4% response rate (28/152) and it represented 0.20% of all returns (28/13,741).

Mortality data

A total of 19 deaths were reported and this represents 0.12% of all deaths reported in the survey (19/15,881). The median age at death for English Toy Terriers was 12 years (min = 1 year and 5 months, max = 15 years and 11 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for English Toy Terriers. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for English Toy Terriers.

Cause of death		N	%	Most common specific causes in descending order
1	Old age	6	31.6	Old age
2	Cancer	3	15.8	Unspecified; liver (type unspecified)
3	Cardiac	2	10.5	Cardiomyopathy unspecified; defect unspecified
4	Endocrine	2	10.5	Cushings disease; hypocalcemic tetany
5	Behaviour	1	5.3	Aggression
6	Gastrointestinal	1	5.3	Pancreatitis
7	Poisoning	1	5.3	
8	Reproductive	1	5.3	Pyometra
9	Trauma	1	5.3	Road traffic accident
10	Urologic	1	5.3	Chronic kidney failure
	Total	19	100.0	

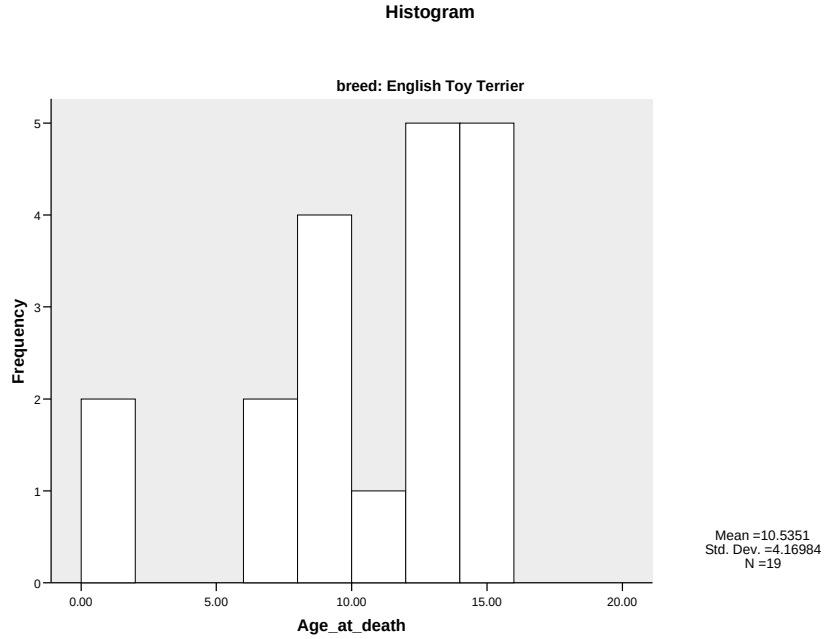


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 19 English Toy Terrier deaths with age at death reported.

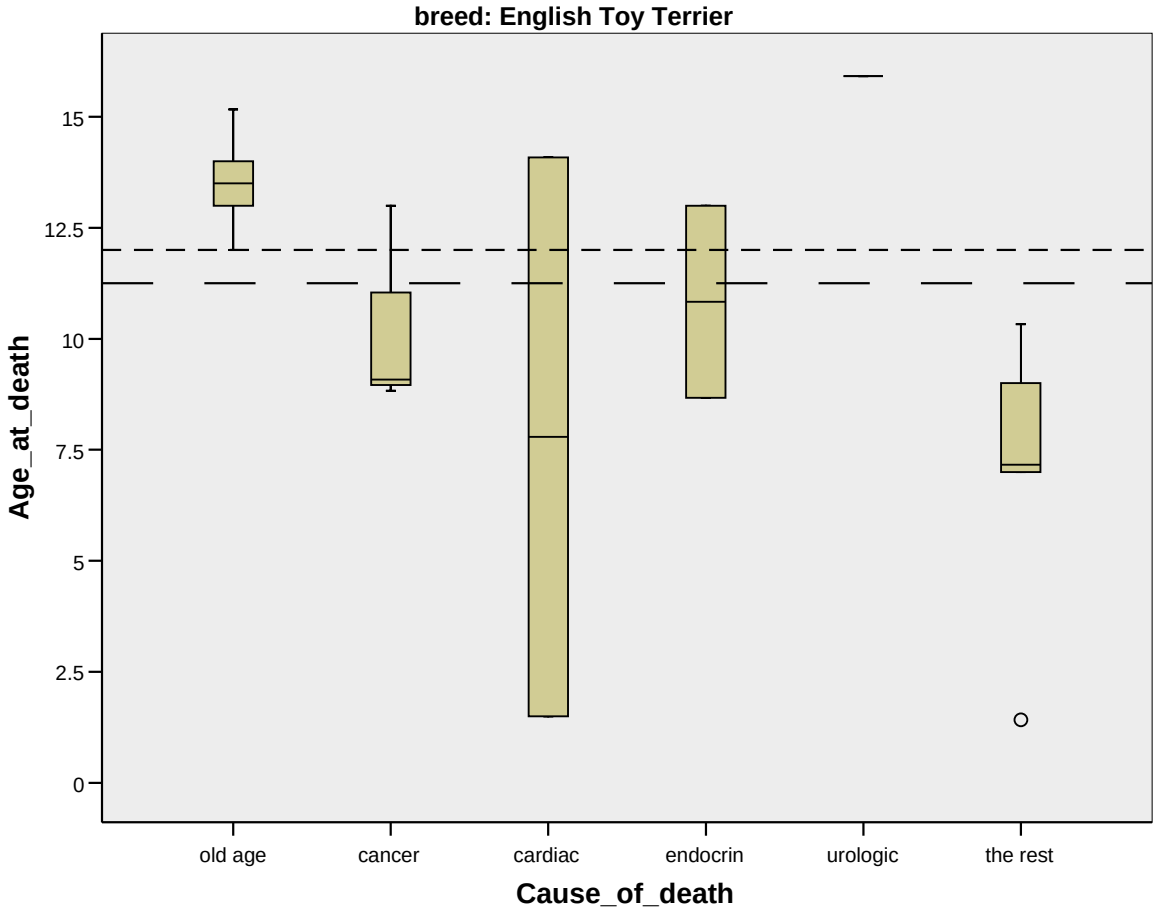


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in English Toy Terriers (N=19). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for English Toy Terriers. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 92 live dogs with a reported age was 4 years and 9 months (min=3 months, max=14 years, Figure 3). Health information was reported for 92 live dogs of which 67 (73%) were healthy and 25 (27%) had at least one reported health condition, resulting in a total of 40 reported conditions with a median of 1 condition/dog (min=1, max=4).

The median current age of all healthy dogs with a reported age (N=67) was 4 years and 2 months (min=3 months, max=14 years). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=25) was 7 years and 8 months (min=1 year and 3 months, max=13 years and 4 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=40) was 4 years and 3 months (min= 3 months, max= 12 years, Figure 4). Table 3 shows the disease conditions for English Toy Terriers. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 92 English Toy Terriers with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	39	17	56 (61%)
Male	26	10	36 (39%)
Totals	65 (71%)	27 (29%)	92 (100%)

There was no association between gender and neuter status (P=0.7909).

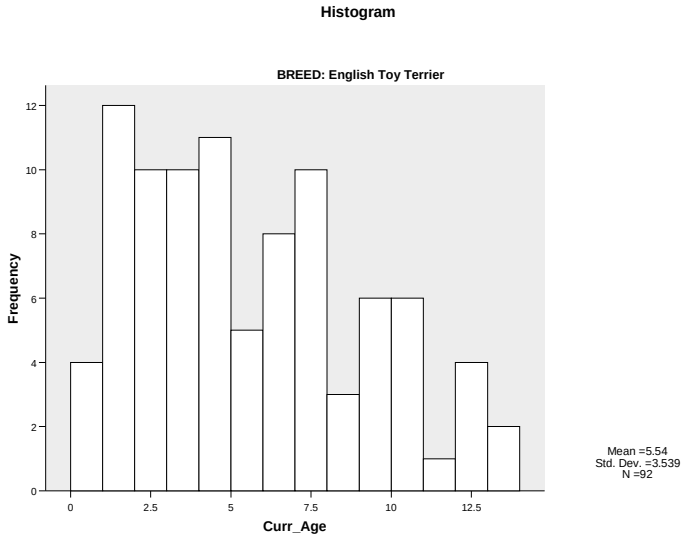


Figure 3. Histogram showing frequency of current age in years for the 92 live English Toy Terriers with age reported.

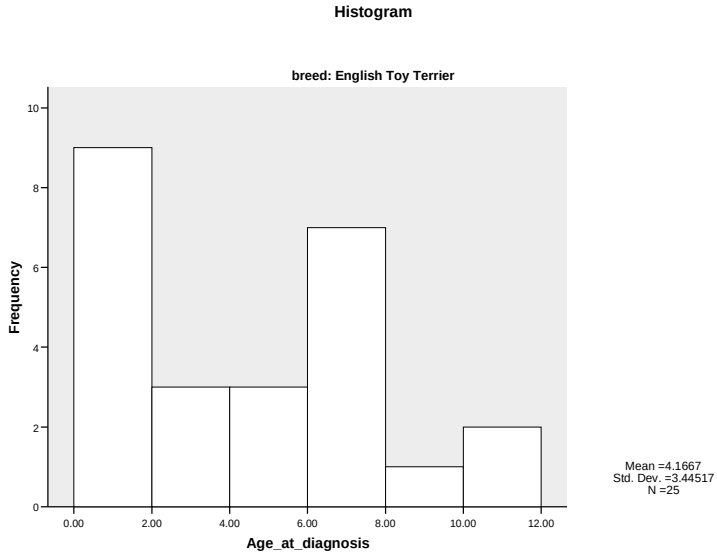


Figure 4. Histogram showing frequency of age at diagnosis for the 25 English Toy Terriers with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

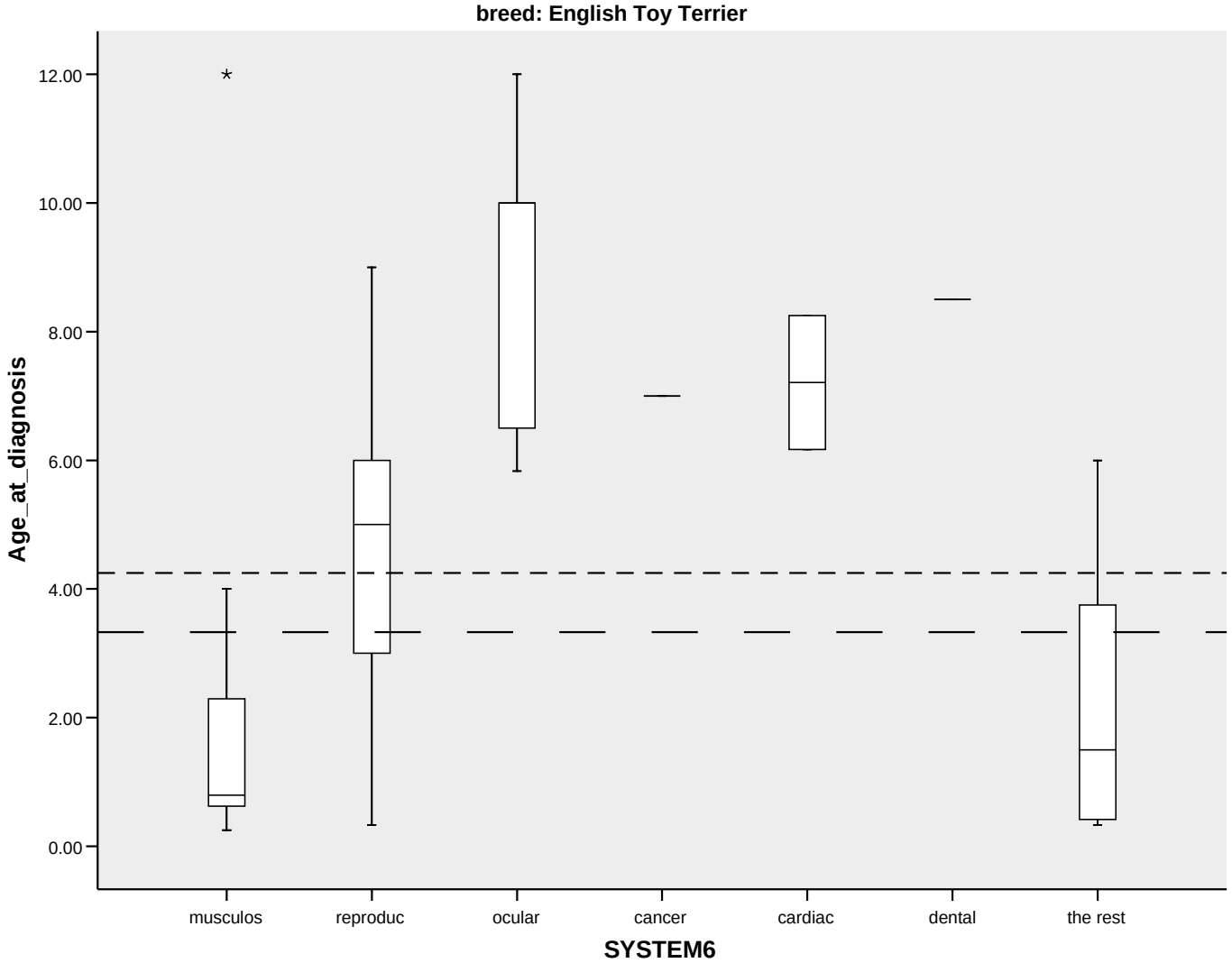


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for English Toy Terriers (N=25 dogs with 40 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for English Toy Terriers. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for English Toy Terriers.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Musculoskeletal	12	30.0	Patellar luxation; fracture (forelimb)
2	Reproductive	9	22.5	Pyometra; cryptorchid; difficulty whelping (unspecified); spontaneous abortion; vaginitis
3	Ocular	5	12.5	Blindness; cataracts
4	Dermatologic	4	10.0	Mites (demodex); alopecia; dermatitis
5	Cancer	3	7.5	Unspecified (tail); mast cell tumour (MCT)
6	Cardiac	2	5.0	Heart murmur; heart rhythm disorder
7	Neurologic	2	5.0	Deafness; seizures
8	Dental	1	2.5	Dental disease
9	Gastrointestinal	1	2.5	Vomiting
10	Immune mediated	1	2.5	Flea allergy
	Total	40	100.0	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for Estrela Mountain Dogs

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Estrela Mountain Dogs

A total of 35 forms were sent out and 14 were returned, representing 23 live dogs. This breed had a 40.0% response rate (14/35) and it represented 0.10% of all returns (14/13,741).

Mortality data

A total of 3 deaths were reported and this represents 0.02% of all deaths reported in the survey (3/15,881). The median age at death for Estrela Mountain Dogs was 9 years and 9 months (min = 9 years and 9 months, max = 12 years and 10 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Estrela Mountains Dog. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Estrela Mountains Dogs.

Cause of death		N	%	Most common specific causes in descending order
1	Combinations	1	33.3	Weakness or paresis and arthritis
2	Old age	1	33.3	Old age
3	Trauma	1	33.3	Road traffic accident
	Total	3	100.0	

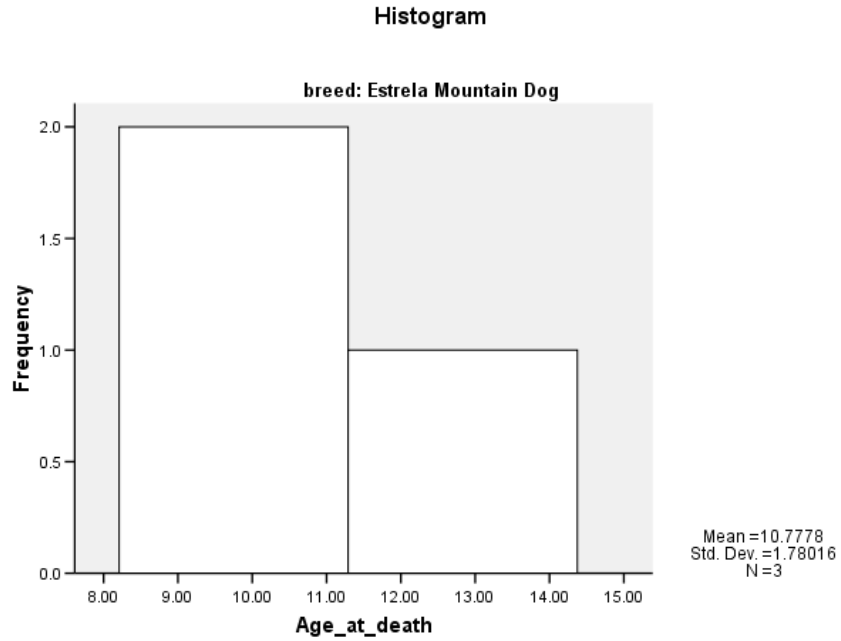


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 3 Estrela Mountain Dog deaths with age at death reported.

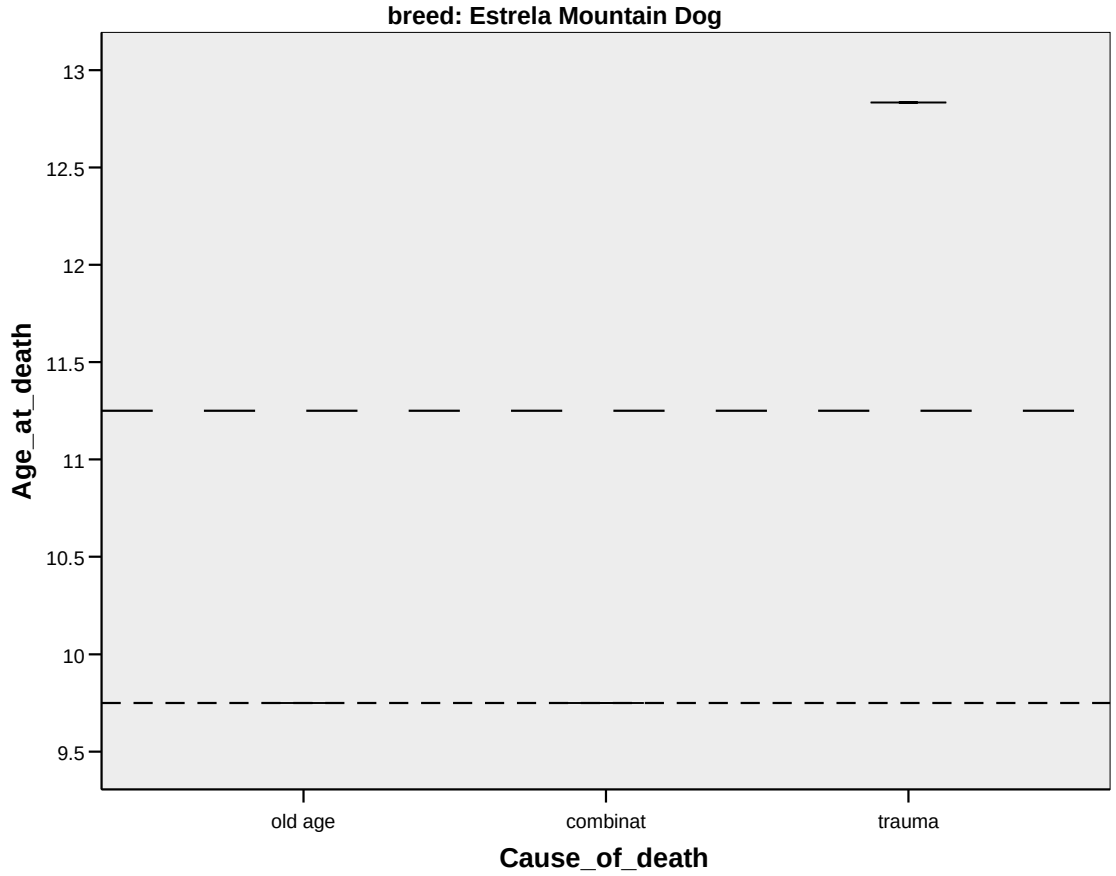


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Estrela Mountain Dogs (N=3). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Estrela Mountain Dogs. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 23 live dogs with a reported age was 2 years and 4 months (min=5 months, max=9 years and 3 months, Figure 3). Health information was reported for 23 live dogs of which 8 (35%) were healthy and 15 (65%) had at least one reported health condition, resulting in a total of 31 reported conditions with a median of 2 conditions/dog (min=1, max=5).

The median current age of all healthy dogs with a reported age (N=8) was 1 year and 12 months (min=1 year and 4 months, max=4 years and 10 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=15) was 4 years and 10 months (min=5 months, max=9 years and 3 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=31) was 1 year and 8 months (min= 2 months, max= 9 years, Figure 4). Table 3 shows the disease conditions for Estrela Mountain Dogs. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 23 Estrela Mountain Dogs with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	9	1	10 (43%)
Male	11	2	13 (57%)
Totals	20 (87%)	3 (13%)	23 (100%)

There was no association between gender and neuter status (P=0.7039).

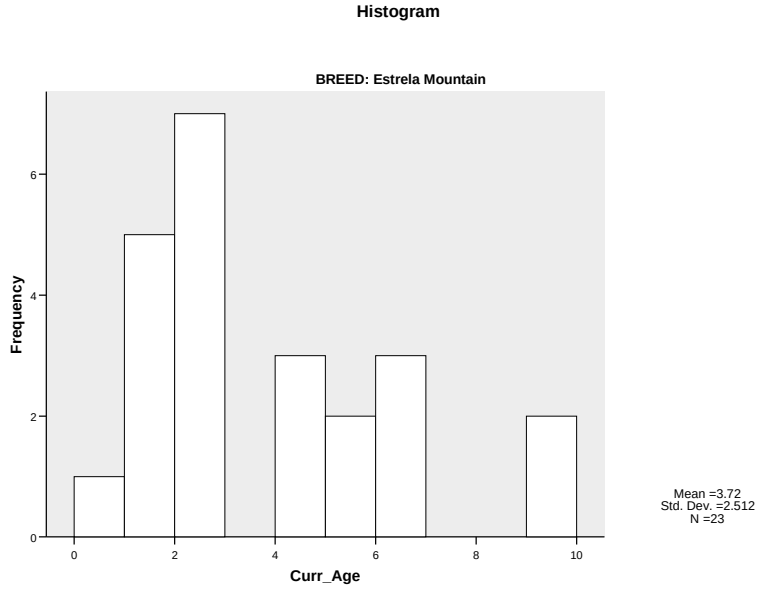


Figure 3. Histogram showing frequency of current age in years for the 23 live Estrela Mountain Dogs with age reported.

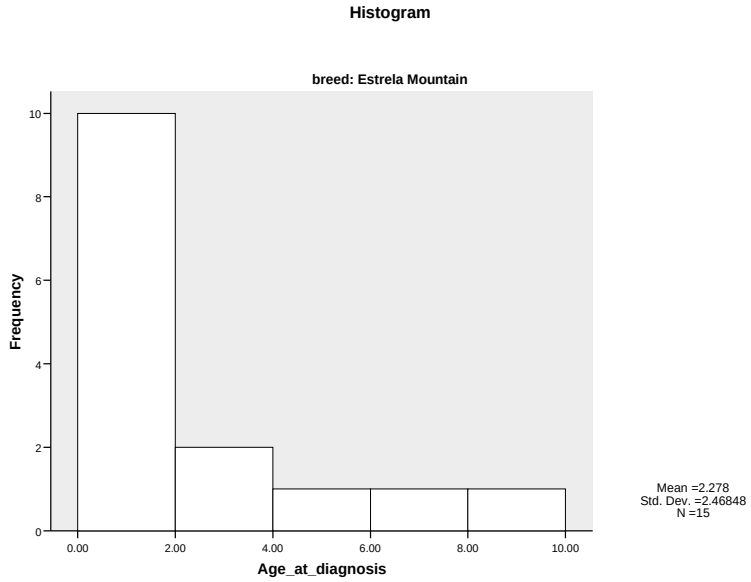


Figure 4. Histogram showing frequency of age at diagnosis for the 15 Estrela Mountain Dogs with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

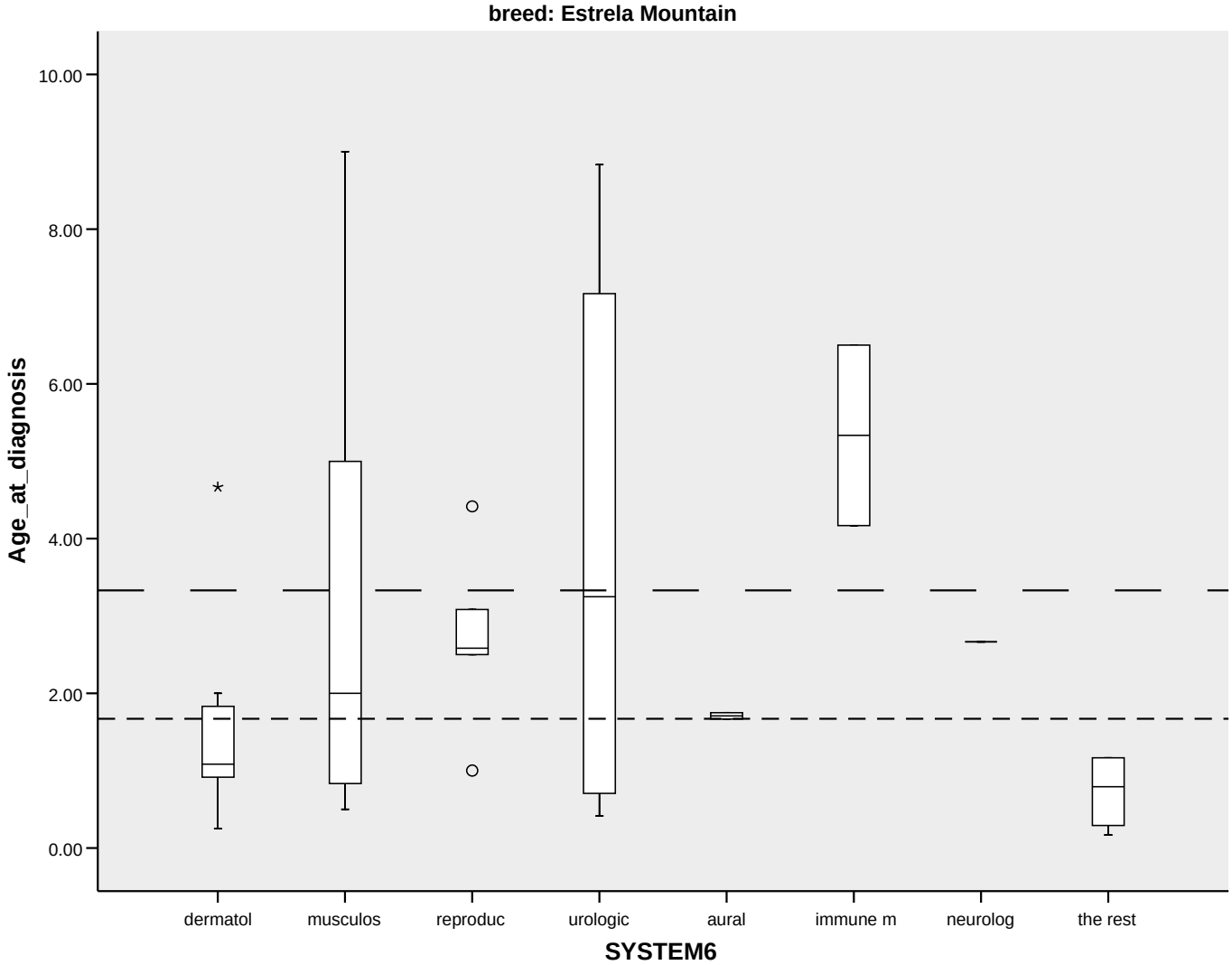


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Estrela Mountain Dogs (N=15 dogs with 31 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Estrela Mountain Dogs. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Estrela Mountain Dogs.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Dermatologic	8	25.8	Pyotraumatic dermatitis; dermatitis; mites (sarcoptes); follicular dysplasia
2	Musculoskeletal	5	16.1	Arthritis; hip dysplasia (CHD); osteochondrosis dissecans (OCD) (elbow); stiff joints; prognathism
3	Reproductive	5	16.1	Dystochia (uterine inertia>physical blockage); irregular heat cycles; silent heat
4	Urologic	4	12.9	Cystitis
5	Aural	2	6.5	Otitis externa
6	Gastrointestinal	2	6.5	Diarrhoea; pancreatitis
7	Immune mediated	2	6.5	Flea allergy
8	Neurologic	1	3.2	Deafness
9	Respiratory	1	3.2	Kennel cough
10	Trauma	1	3.2	Eyelid
	Total	31	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for Field Spaniels

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Field Spaniels

A total of 235 forms were sent out and 56 were returned, representing 131 live dogs. This breed had a 23.8% response rate (56/235) and it represented 0.41% of all returns (56/13,741).

Mortality data

A total of 68 deaths were reported and this represents 0.43% of all deaths reported in the survey (68/15,881). The median age at death for Field Spaniels was 11 years and 8 months (min = 1 year and 3 months, max = 17 years and 3 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Field Spaniels. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Field Spaniels.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	20	29.4	Liver (type unspecified); unspecified; brain tumour
2	Old age	12	17.6	Old age
3	Neurologic	11	16.2	Seizures; spinal paralysis unspecified
4	Cerebral vascular	6	8.8	Stroke or cerebral vascular accident
5	Cardiac	3	4.4	Cardiomegaly; heart attack; cardiomyopathy
6	Combinations	3	4.4	
7	Hepatic	3	4.4	Liver failure acute > chronic
8	Reproductive	2	2.9	Prostatic disease; pyometra
9	Urologic	2	2.9	Acute kidney failure
10	Behaviour	1	1.5	Unspecified
11	Endocrine	1	1.5	Cushings disease
12	Gastrointestinal	1	1.5	Pancreatitis
13	Immune mediated	1	1.5	Thrombocytopaenia
14	Musculoskeletal	1	1.5	Arthritis
15	Perioperative	1	1.5	
	Total	68	100.0	

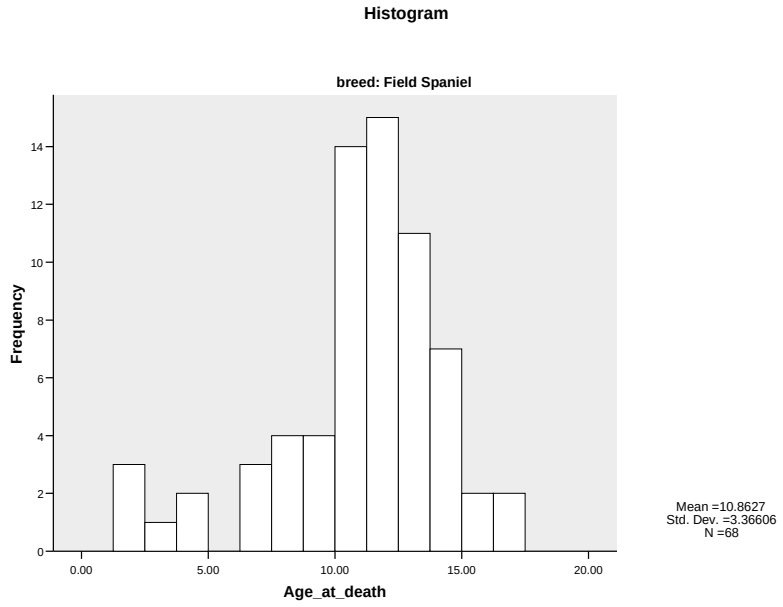


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 68 Field Spaniel deaths with age at death reported.

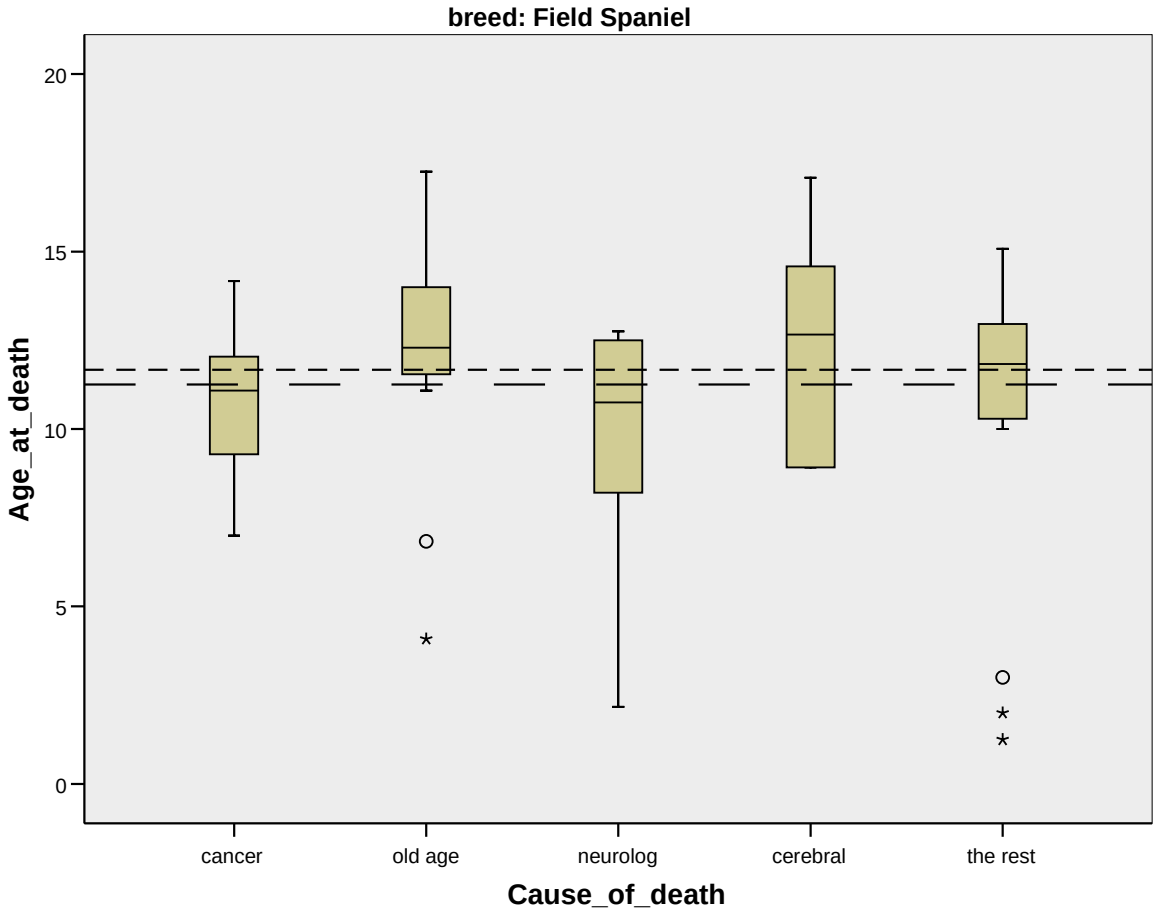


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Field Spaniels (N=68). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Field Spaniels. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 131 live dogs with a reported age was 5 years and 10 months (min=3 months, max=14 years and 4 months, Figure 3). Health information was reported for 131 live dogs of which 62 (47%) were healthy and 69 (53%) had at least one reported health condition, resulting in a total of 143 reported conditions with a median of 2 conditions/dog (min=1, max=6).

The median current age of all healthy dogs with a reported age (N=62) was 4 years and 9 months (min=3 months, max=12 years and 8 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=69) was 6 years and 11 months (min=5 months, max=14 years and 4 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=139) was 3 years and 4 months (min= 2 months, max= 13 years, Figure 4). Table 3 shows the disease conditions for Field Spaniels. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 123 Field Spaniels with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	31	38	69 (56%)
Male	43	11	54 (44%)
Totals	74 (60%)	49 (40%)	123 (100%)

Significantly more females were neutered (P=0.0001).

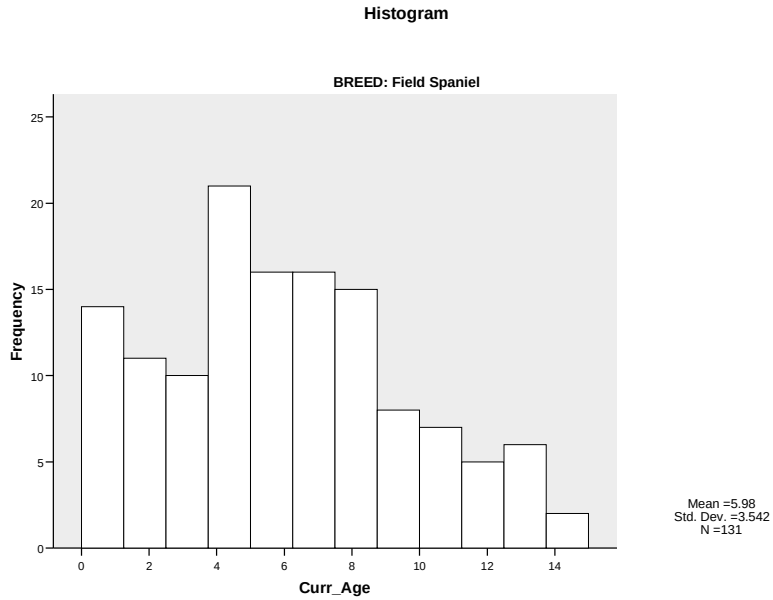


Figure 3. Histogram showing frequency of current age in years for the 131 live Field Spaniels with age reported.

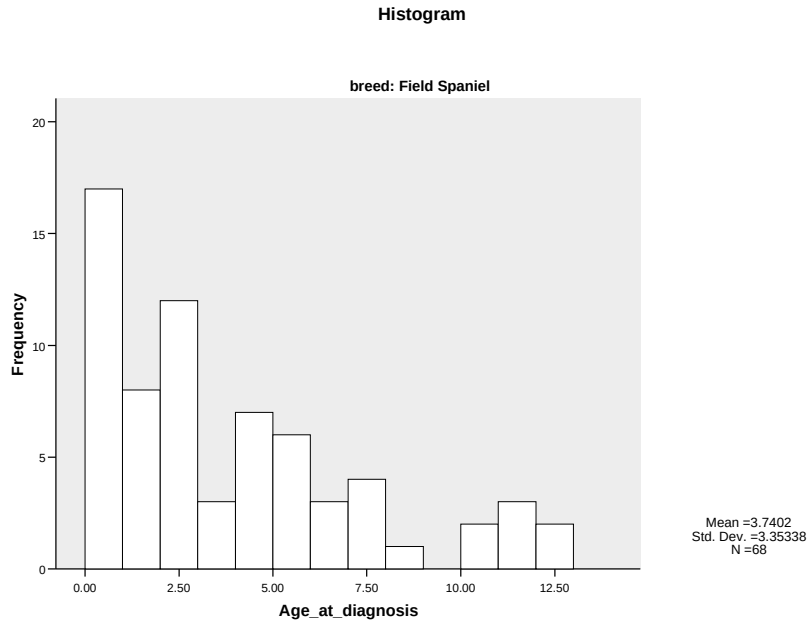


Figure 4. Histogram showing frequency of age at diagnosis for the 68 Field Spaniels with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

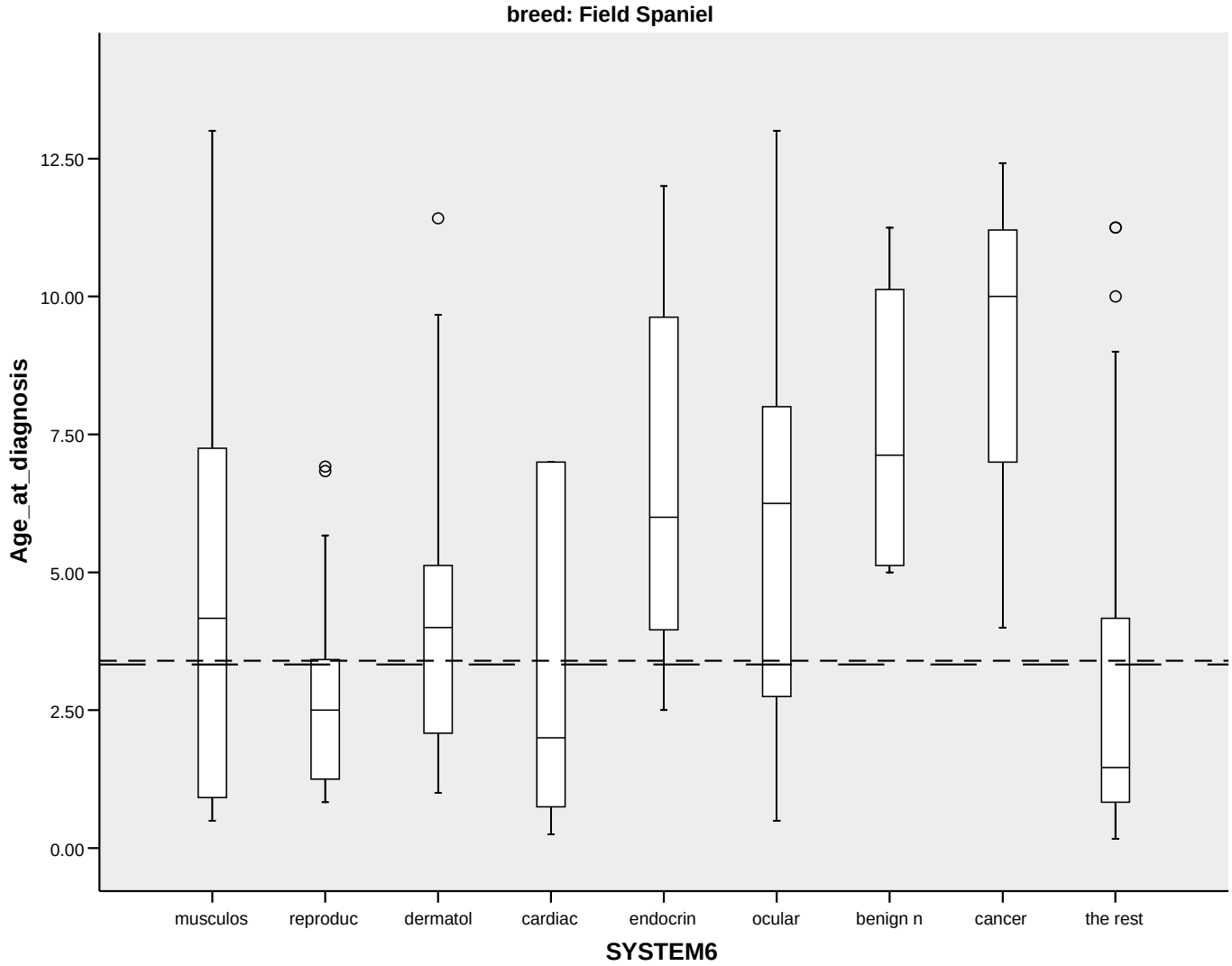


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Field Spaniels (N=69 dogs with 139 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Field Spaniels. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Field Spaniels.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Musculoskeletal	30	21.0	Arthritis (hindlimb>unspecified>rest); CLR; CHD; patellar luxation
2	Reproductive	30	21.0	False pregnancy; infertility; pyometra; cryptorchid; uterine inertia; metritis
3	Dermatologic	13	9.1	Dermatitis; alopecia; pyotraumatic dermatitis
4	Cardiac	8	5.6	Heart murmur (grade 1>rest); cardiomegaly; heart rhythm disorder
5	Immune mediated	8	5.6	Flea allergy; AIHA; gluten-sensitive enteropathy; food hypersensitivity
6	Endocrine	7	4.9	Hypothyroidism
7	Ocular	7	4.9	Cataracts; KCS; epiphora; red eye
8	Dental	6	4.2	Defect other than extra teeth; retained puppy teeth; missing teeth
9	Gastrointestinal	5	3.5	Colitis; haemorrhagic; pancreatitis
10	Benign neoplasia	4	2.8	Lipoma
11	Cancer	4	2.8	Unspecified (mammary); carcinoma (mammary; anal gland)
12	Respiratory	4	2.8	Kennel cough; bronchitis; noisy breathing
13	Aural	3	2.1	Otitis externa
14	Neurologic	3	2.1	Deafness; IVDD; facial paralysis
15	Urologic	3	2.1	Cystitis; cystouroliths (unspecified)
16	Anal gland	2	1.4	Anal sacculitis
17	Unknown	2	1.4	Undiagnosed illness
18	Behaviour	1	0.7	Unspecified
19	Haematopoietic	1	0.7	Haemophilia A
20	Trauma	1	0.7	Musculoskeletal
21	Other	1	0.7	Uncodeable
	Total	143	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for Finnish Lapphunds

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Finnish Lapphunds

A total of 180 forms were sent out and 28 were returned, representing 48 live dogs. This breed had a 15.6% response rate (28/180) and it represented 0.20% of all returns (28/13,741).

Mortality data

A total of 5 deaths were reported and this represents 0.03% of all deaths reported in the survey (5/15,881). The median age at death for Finnish Lapphunds was 7 years and 4 months (min = 8 months, max = 10 years and 3 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Finnish Lapphunds. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Finnish Lapphunds.

Cause of death		N	%	Most common specific causes in descending order
1	Ocular	2	40.0	Progressive retinal atrophy (PRA); blindness
2	Cancer	1	20.0	Liver (type unspecified)
3	Cardiac	1	20.0	Heart failure
4	Gastrointestinal	1	20.0	Parvovirus
	Total	5	100.0	

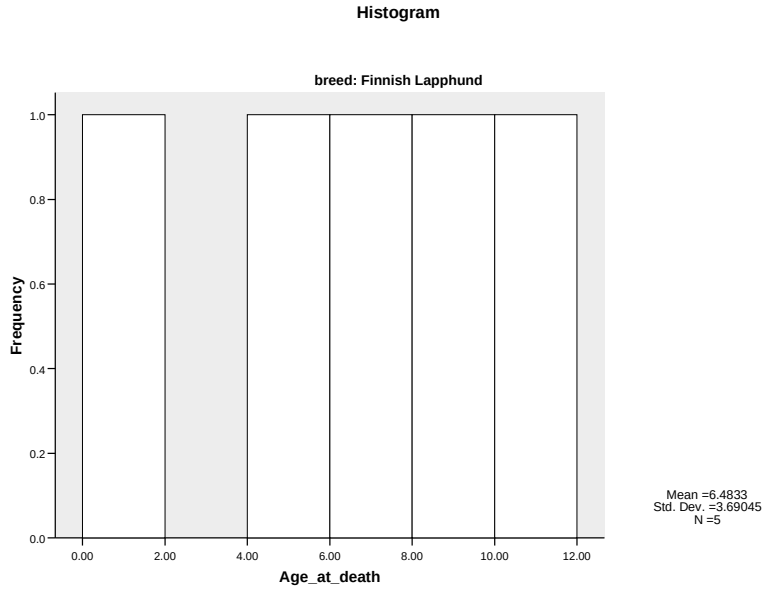


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 5 Finnish Lapphund deaths with age at death reported.

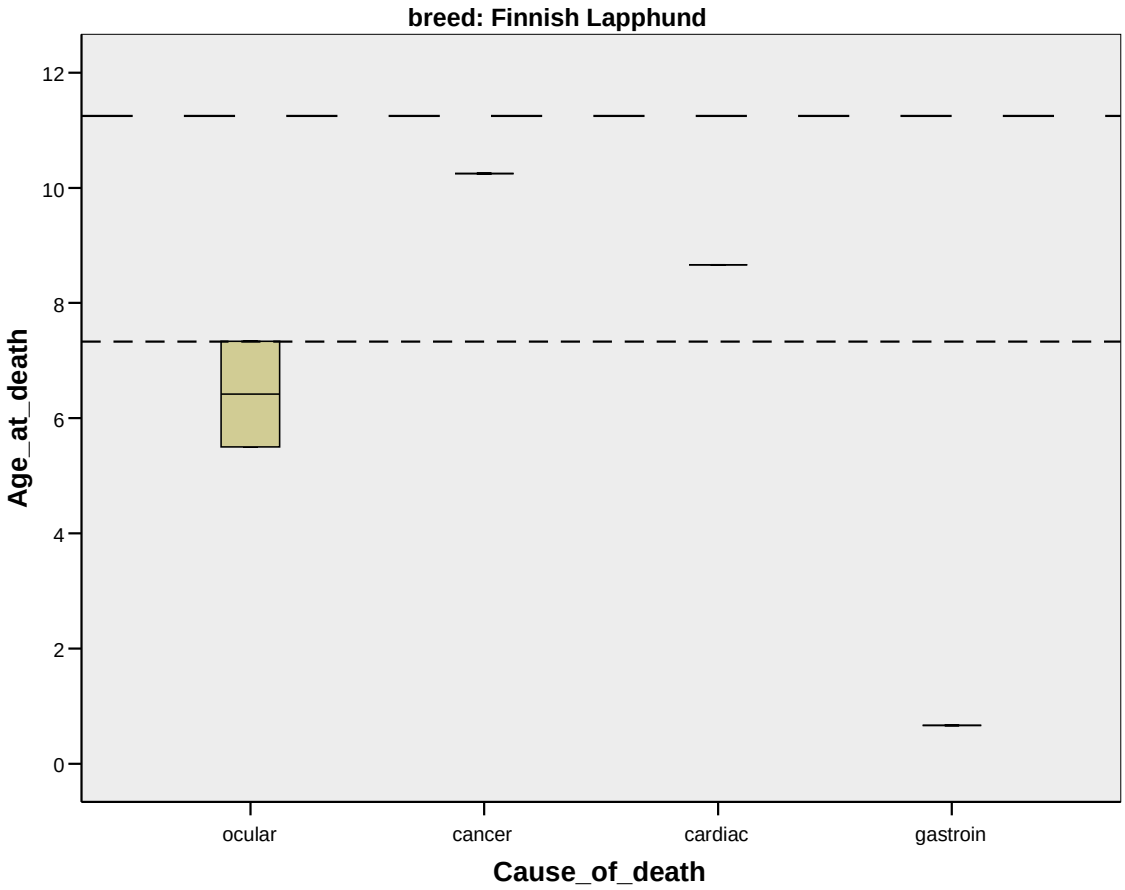


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Finnish Lapphunds (N=5). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Finnish Lapphunds. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 48 live dogs with a reported age was 3 years and 9 months (min=3 months, max=11 years and 5 months, Figure 3). Health information was reported for 48 live dogs of which 37 (77%) were healthy and 11 (23%) had at least one reported health condition, resulting in a total of 15 reported conditions with a median of 1 condition/dog (min=1, max=3).

The median current age of all healthy dogs with a reported age (N=37) was 2 years and 8 months (min=3 months, max=10 years and 9 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=11) was 5 years and 6 months (min=1 year and 5 months, max=11 years and 5 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=14) was 2 years and 6 months (min= 1 year and 4 months, max= 6 years and 9 months, Figure 4). Table 3 shows the disease conditions for Finnish Lapphunds. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 47 Finnish Lapphunds with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	17	7	24 (51%)
Male	17	6	23 (49%)
Totals	34 (72%)	13 (28%)	47 (100%)

There was no association between gender and neuter status (P=0.8135).

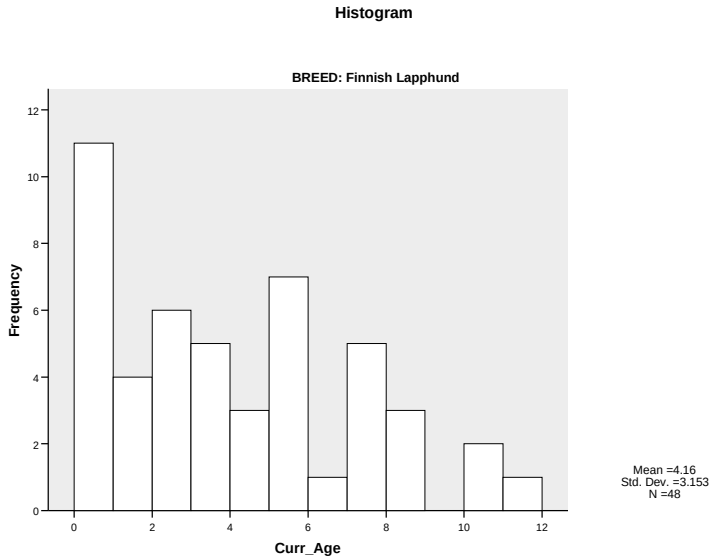


Figure 3. Histogram showing frequency of current age in years for the 48 live Finnish Lapphunds with age reported.

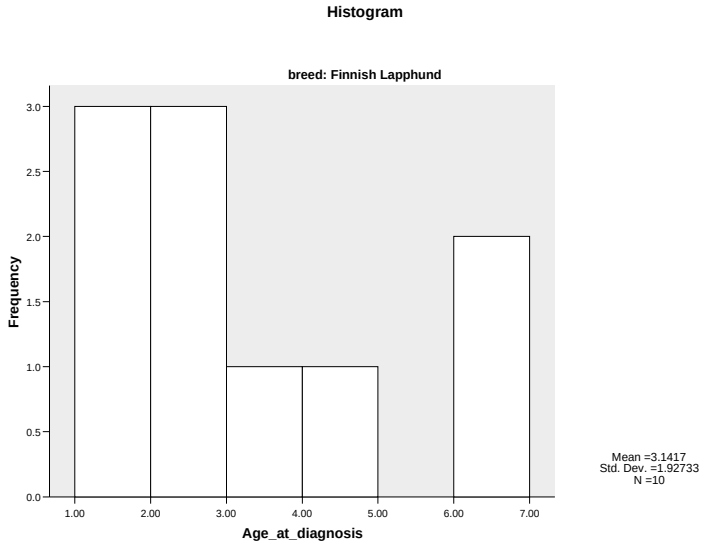


Figure 4. Histogram showing frequency of age at diagnosis for the 10 Finnish Lapphunds with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

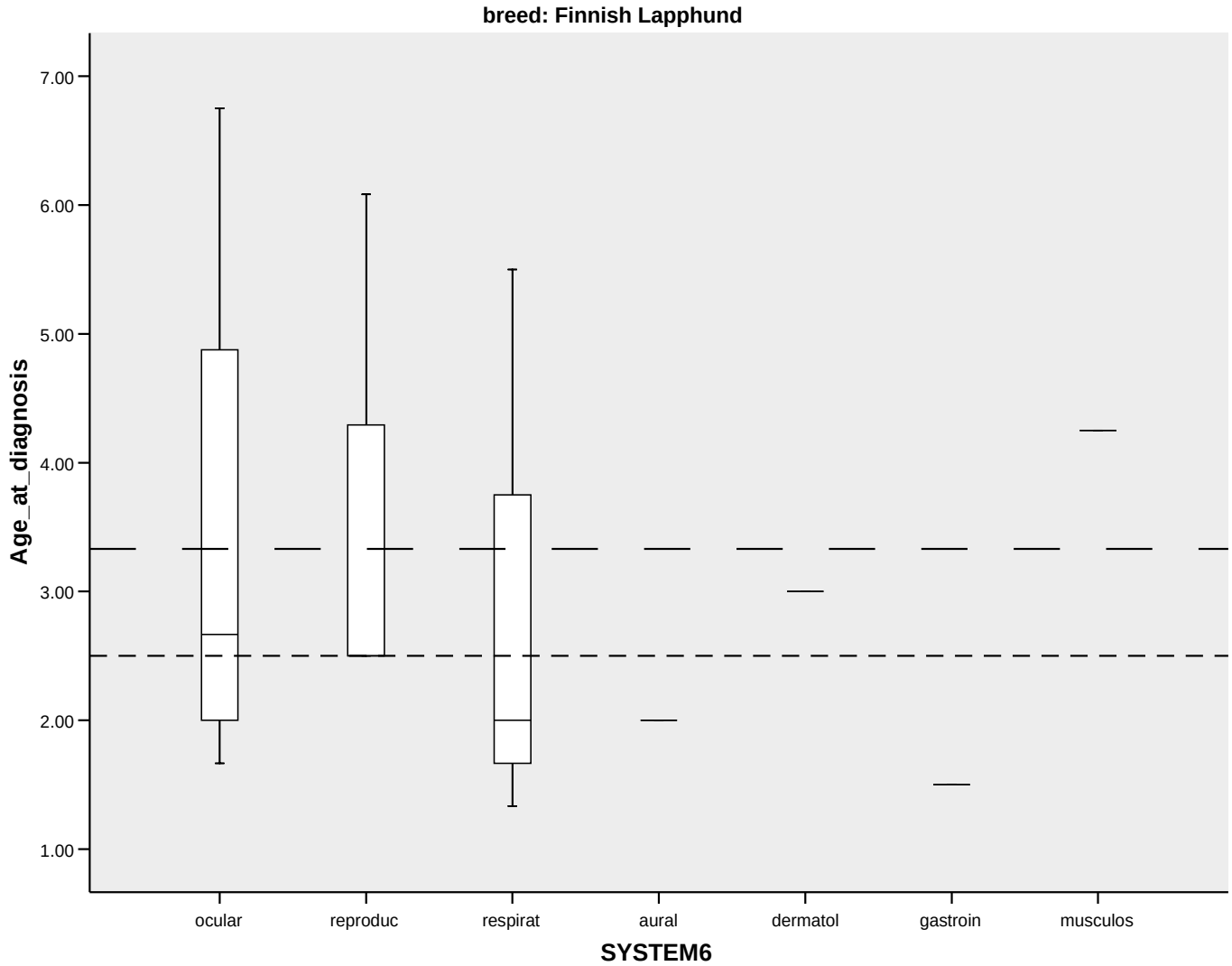


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Finnish Lapphunds (N=11 dogs with 14 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Finnish Lapphunds. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Finnish Lapphunds.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Ocular	4	26.7	Cataracts; persistent papillary membrane (PMM); PRA; corneal ulcer
2	Reproductive	3	20.0	Infertility; irregular heat cycles
3	Respiratory	3	20.0	Kennel cough; coughing
4	Aural	1	6.7	Otitis externa
5	Dermatologic	1	6.7	Dermatitis
6	Gastrointestinal	1	6.7	Loss of appetite
7	Musculoskeletal	1	6.7	Lameness (hindlimbs)
8	Other	1	6.7	Uncodeable
	Total	15	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for the Finnish Spitz breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Finnish Spitz breed

A total of 133 forms were sent out and 51 were returned, representing 98 live dogs. This breed had a 38.3% response rate (51/133) and it represented 0.37% of all returns (51/13,741).

Mortality data

A total of 42 deaths were reported and this represents 0.26% of all deaths reported in the survey (42/15,881). The median age at death for the Finnish Spitz breed was 11 years and 2 months (min = 1 year and 6 months, max = 15 years and 11 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Finnish Spitz breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Finnish Spitz breed.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	9	21.4	Lymphoma; mammary (carcinoma & unspecified)
2	Endocrine	4	9.5	Diabetes mellitus; Cushings disease
3	Old age	4	9.5	Old age
4	Respiratory	4	9.5	Laryngeal paralysis
5	Cardiac	3	7.1	Heart failure; cardiomegaly
6	Cerebral vascular	3	7.1	Stroke or cerebral vascular accident
7	Combinations	3	7.1	
8	Urologic	3	7.1	Kidney failure (acute > chronic)
9	Gastrointestinal	2	4.8	Gastroenteritis; pancreatitis
10	Hepatic	2	4.8	Liver failure
11	Collapse	1	2.4	
12	Immune mediated	1	2.4	Haemolytic anaemia
13	Perioperative	1	2.4	
14	Poisoning	1	2.4	
15	Unknown	1	2.4	
	Total	42	100.0	

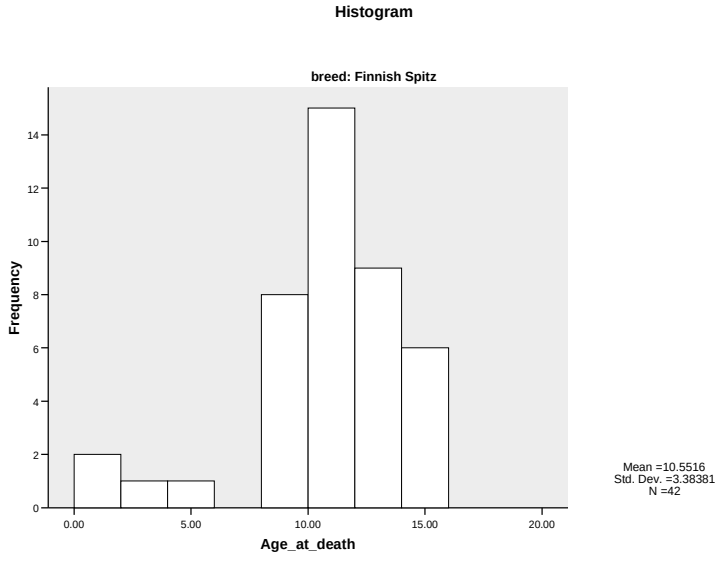


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 42 Finnish Spitz deaths with age at death reported.

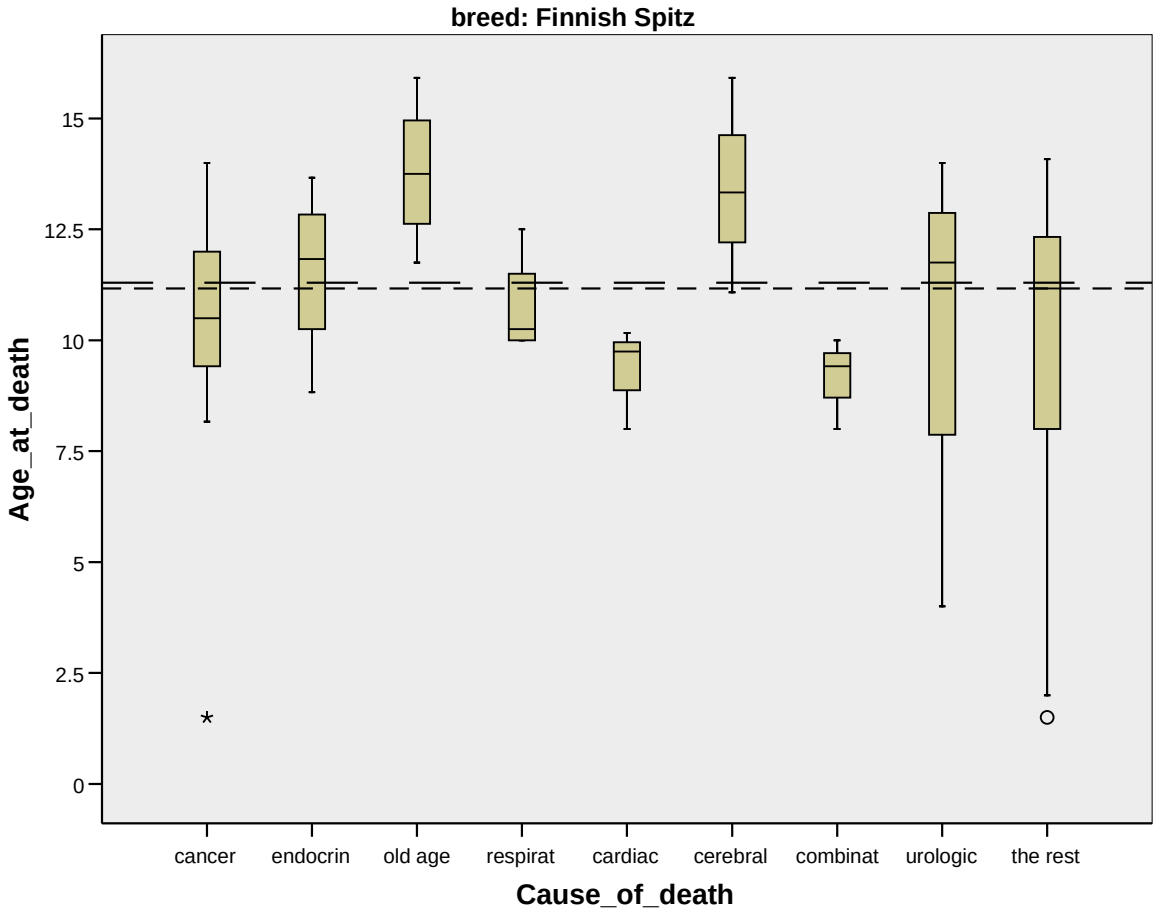


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the Finnish Spitz breed (N=42). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the Finnish Spitz breed. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 98 live dogs with a reported age was 6 years and 1 month (min=6 months, max=14 years and 5 months, Figure 3). Health information was reported for 98 live dogs of which 68 (69%) were healthy and 30 (31%) had at least one reported health condition, resulting in a total of 36 reported conditions with a median of 1 condition/dog (min=1, max=3).

The median current age of all healthy dogs with a reported age (N=68) was 5 years and 1 month (min=6 months, max=13 years and 8 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=30) was 8 years and 5 months (min=8 months, max=14 years and 5 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=33) was 4 years and 2 months (min= 2 months, max= 13 years and 2 months, Figure 4). Table 3 shows the disease conditions for the Finnish Spitz breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 98 the Finnish Spitz breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	36	26	62 (63%)
Male	25	11	36 (37%)
Totals	61 (62%)	37 (38%)	98 (100%)

There was no association between gender and neuter status (P=0.2626).

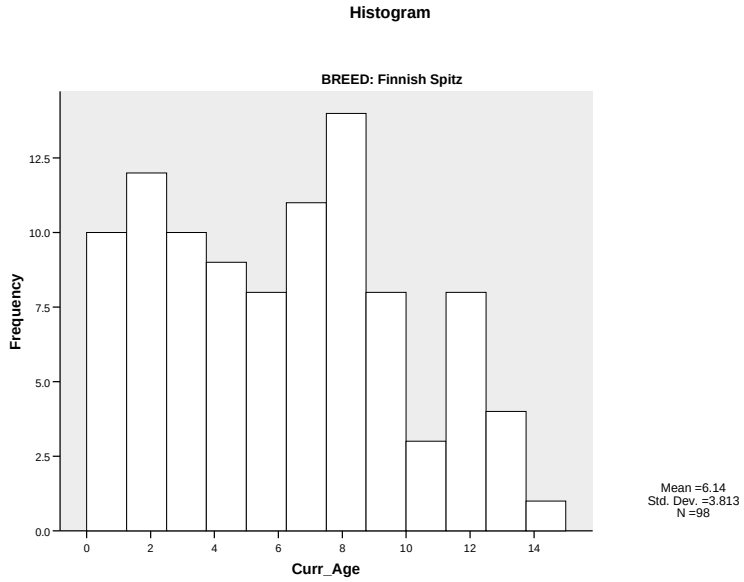


Figure 3. Histogram showing frequency of current age in years for the 98 live Finnish Spitz breed with age reported.

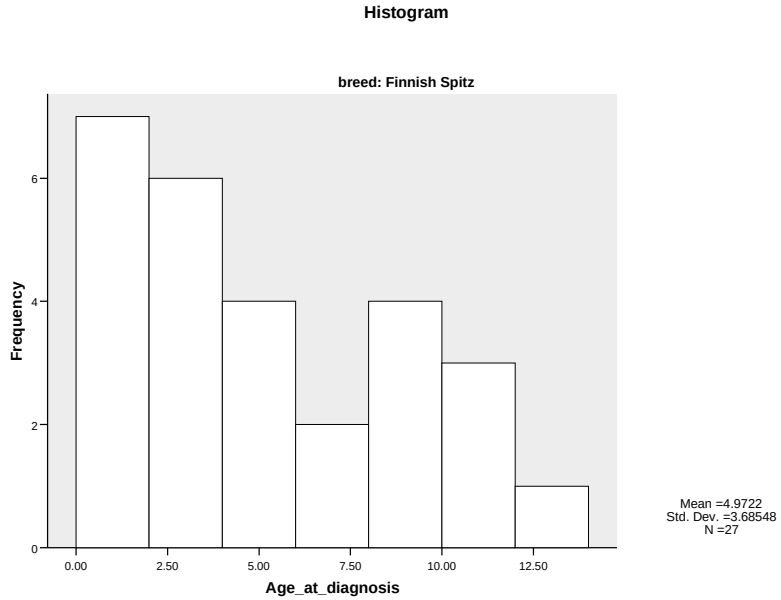


Figure 4. Histogram showing frequency of age at diagnosis for the 27 Finnish Spitz breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

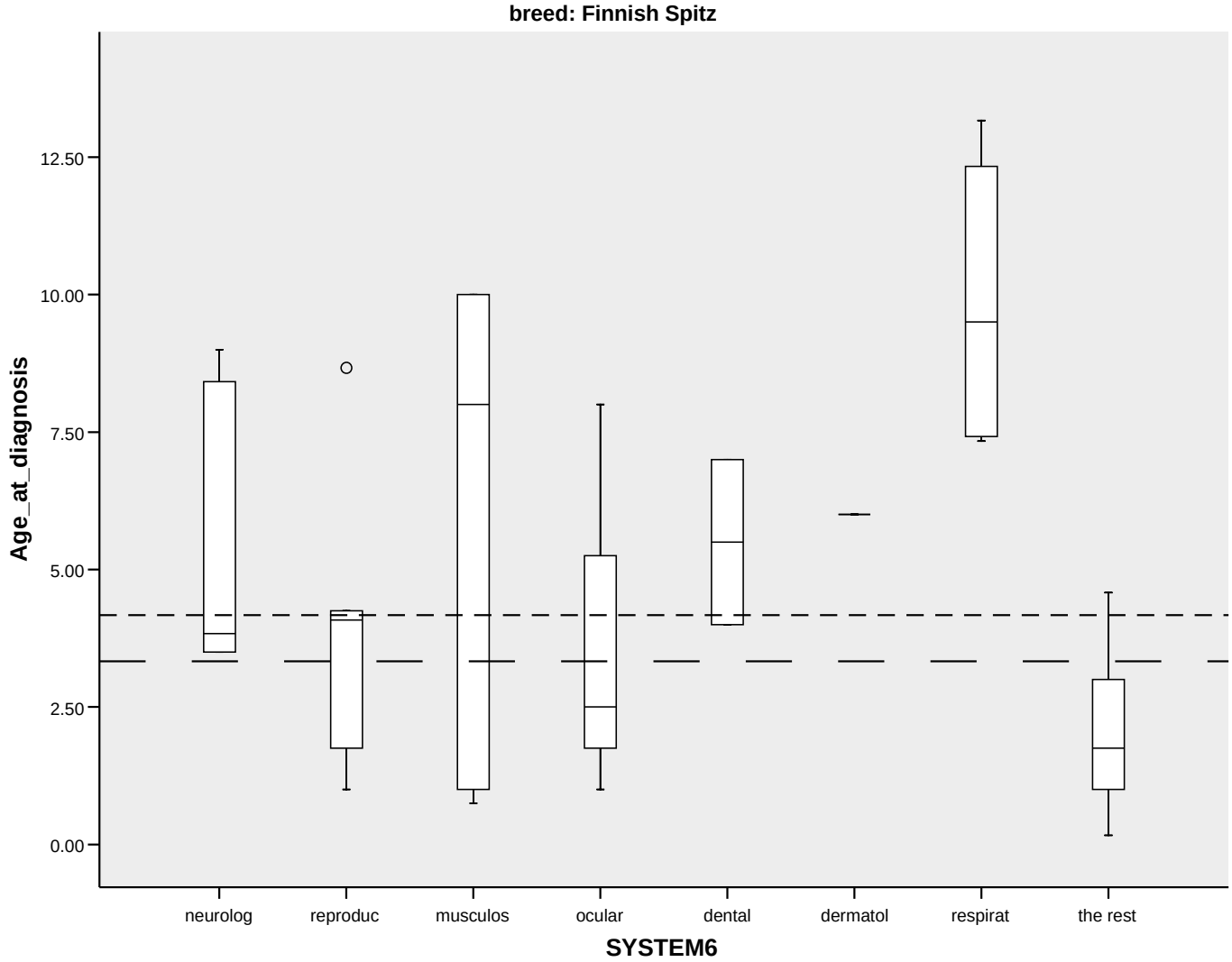


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Finnish Spitz breed (N=30 dogs with 33 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Finnish Spitz breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Finnish Spitz breed.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Neurologic	6	16.7	Seizures; IVDD
2	Reproductive	6	16.7	False pregnancy; pyometra; spontaneous abortion; stuck puppy
3	Musculoskeletal	5	13.9	Patellar luxation; arthritis (hindlimb); muscular dystrophy; stiff joints
4	Gastrointestinal	4	11.1	Vomiting & diarrhoea; diarrhoea; vomiting
5	Respiratory	4	11.1	Kennel cough; laryngeal paralysis
6	Ocular	3	8.3	Cataracts; epiphora
7	Cardiac	2	5.6	Heart murmur
8	Dental	2	5.6	Dental disease
9	Dermatologic	1	2.8	Sebaceous adenitis
10	Hepatic	1	2.8	Hepatitis
11	Other	1	2.8	Uncodeable
12	Urologic	1	2.8	Haematuria
	Total	36	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for Flatcoated Retrievers

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Flatcoated Retrievers

A total of 1556 forms were sent out and 472 were returned, representing 926 live dogs. This breed had a 30.3% response rate (472/1556) and it represented 3.43% of all returns (472/13,741).

Mortality data

A total of 610 deaths were reported and this represents 3.84% of all deaths reported in the survey (610/15,881). The median age at death for Flatcoated Retrievers was 9 years and 10 months (min = 4 months, max = 16 years and 11 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Flatcoated Retrievers. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Flatcoated Retrievers.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	331	54.3	Unspecified type (liver,spleen, unspecified)
2	Old age	54	8.9	Old age
3	Cardiac	38	6.2	Heart failure; heart attack; cardiomegaly
4	Gastrointestinal	36	5.9	GDV; foreign body; megaoesophagus
5	Combinations	18	3.0	
6	Other	17	2.8	Uncodeable
7	Trauma	15	2.5	Road traffic accident; unspecified
8	Immune mediated	13	2.1	Unspecified; AIHA
9	Neurologic	11	1.8	Seizures; IVDD
10	Cerebral vascular	9	1.5	Stroke or cerebral vascular accident
11	Unknown	9	1.5	
12	Endocrine	8	1.3	Cushings; Addisons; diabetes mellitus
13	Hepatic	8	1.3	Chronic liver failure; unspecified
14	Musculoskeletal	8	1.3	Arthritis
15	Urologic	8	1.3	Chronic kidney failure; juvenile nephropathy
16	Perioperative	6	1.0	
17	Collapse	3	0.5	
18	Infection	3	0.5	Leptospirosis; viral infection
19	Internal bleeding	3	0.5	
20	Reproductive	3	0.5	Pyometra; prostatic disease
21	Respiratory	3	0.5	Laryngeal paralysis; respiratory failure
22	Sudden death	2	0.3	
23	Portosystemic shunt (PSS)	1	0.2	
24	Behaviour	1	0.2	Aggression
25	Dermatologic	1	0.2	Chronic otitis
26	Died	1	0.2	
	Total	610	100.0	

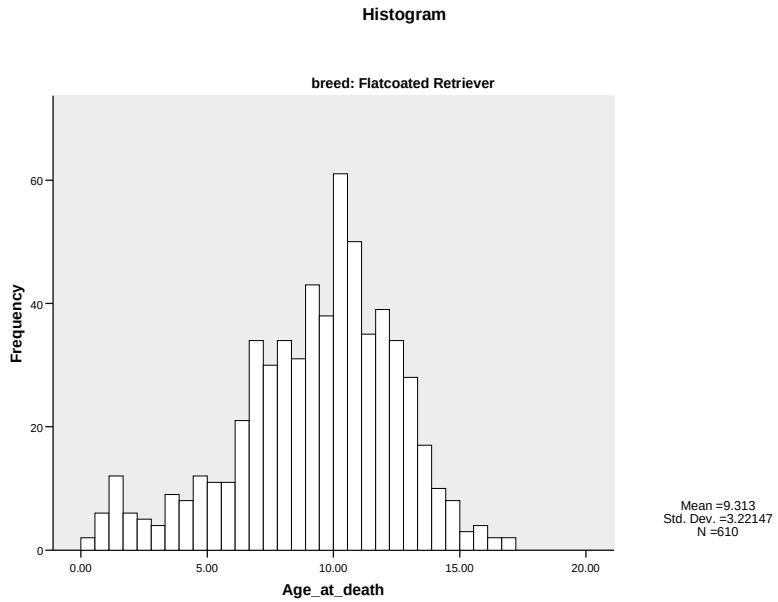


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 610 Flatcoated Retriever deaths with age at death reported.

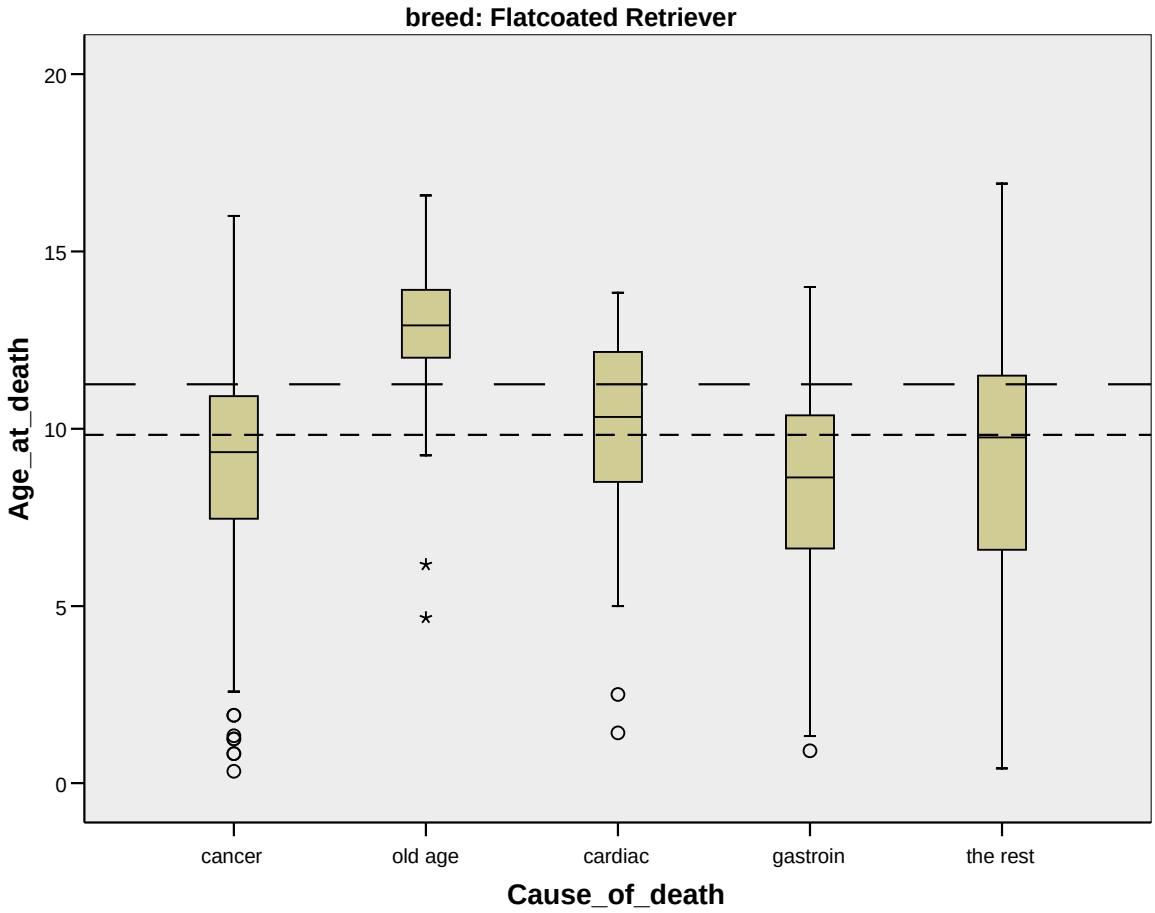


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Flatcoated Retrievers (N=610). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Flatcoated Retrievers. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 926 live dogs with a reported age was 5 years (min=2 months, max=14 years and 10 months, Figure 3). Health information was reported for 926 live dogs of which 549 (59%) were healthy and 377 (41%) had at least one reported health condition, resulting in a total of 666 reported conditions with a median of 1 condition/dog (min=1, max=9).

The median current age of all healthy dogs with a reported age (N=549) was 3 years and 11 months (min=2 months, max=13 years and 11 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=377) was 6 years and 9 months (min=10 months, max=14 years and 10 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=649) was 3 years and 8 months (min= 1 month, max= 12 years and 9 months, Figure 4). Table 3 shows the disease conditions for Flatcoated Retrievers. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 915 Flatcoated Retrievers with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	370	193	563 (62%)
Male	252	100	352 (38%)
Totals	622 (68%)	293 (32%)	915 (100%)

There was no association between gender and neuter status (P=0.0640).

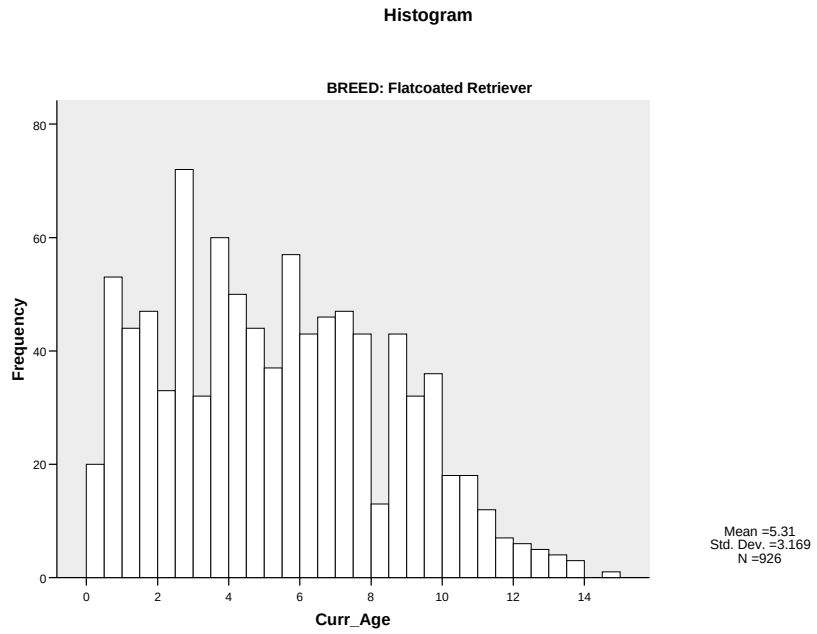


Figure 3. Histogram showing frequency of current age in years for the 926 live Flatcoated Retrievers with age reported.

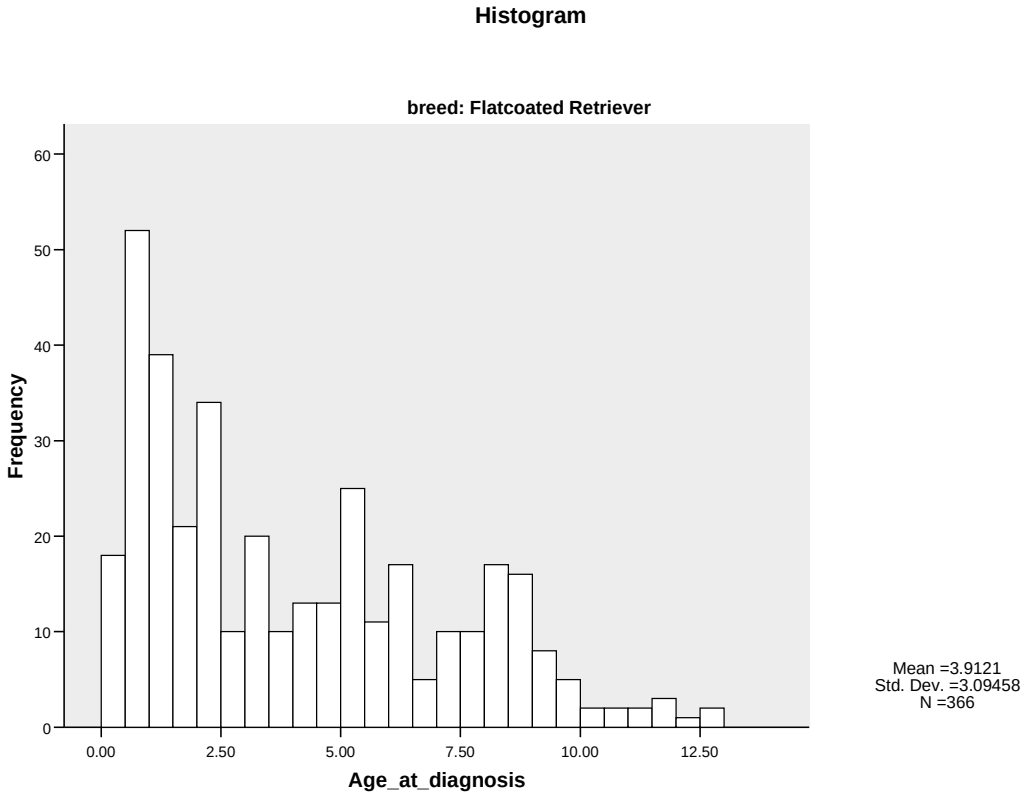


Figure 4. Histogram showing frequency of age at diagnosis for the 366 Flatcoated Retrievers with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

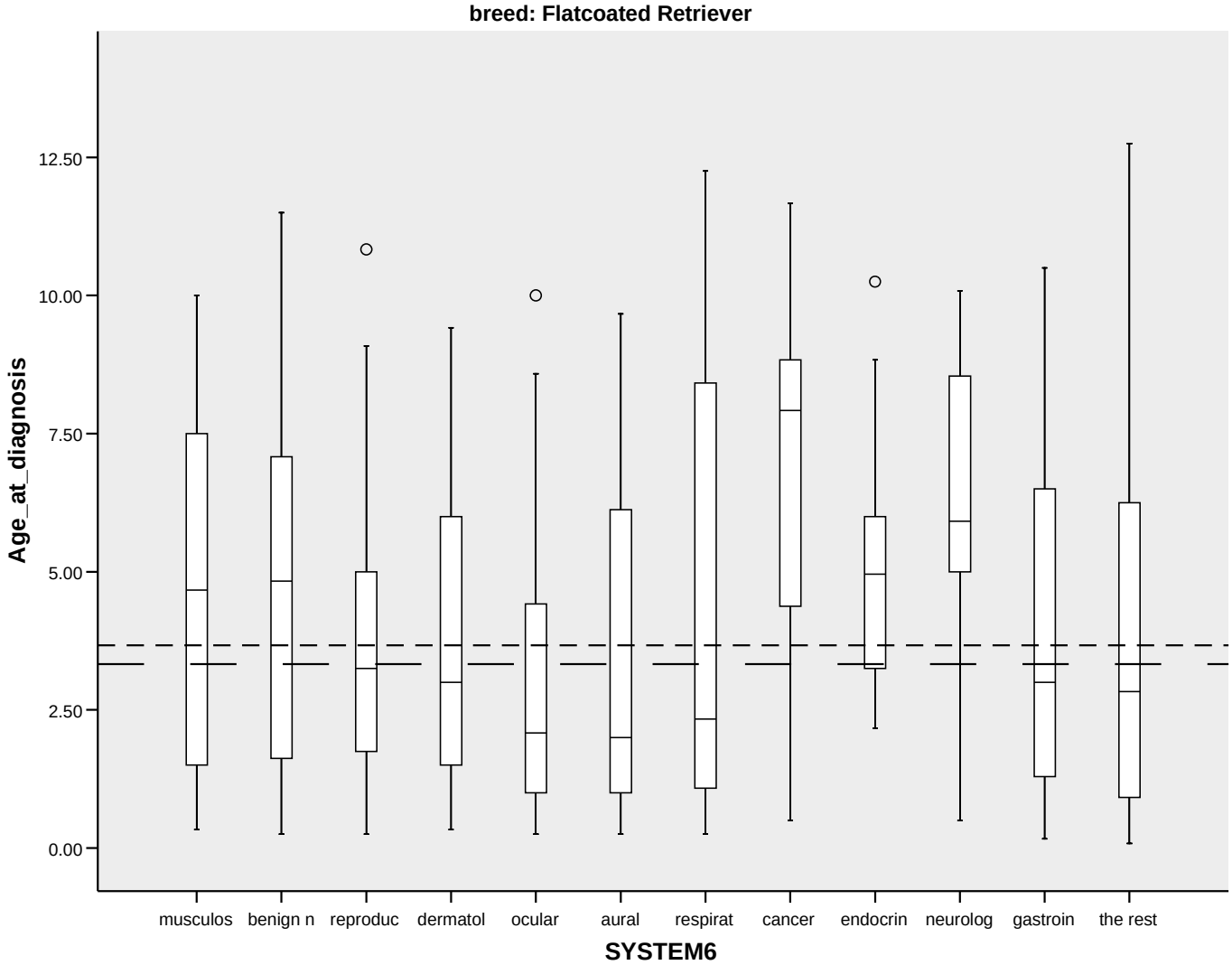


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Flatcoated Retrievers (N=377 dogs with 649 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Flatcoated Retrievers. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Flatcoated Retrievers.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Musculoskeletal	102	15.3	Arthritis; patellar luxation; lameness (forelimb>hindlimb); CLR; CHD; spondylitis
2	Benign neoplasia	87	13.1	Lipoma; histiocytoma; cysts; adenoma; fibroma; granuloma; unspecified
3	Reproductive	80	12.0	False pregnancy; pyometra; irregular heat cycles; dystochia (physical blockage>uterine inertia)
4	Dermatologic	65	9.8	Dermatitis; mites (cheyletiella>sarcoptes>demodex); alopecia; sebaceous cysts
5	Gastrointestinal	55	8.3	Gastric dilatation/volvulus (GDV); colitis; foreign body obstruction; pancreatitis
6	Ocular	52	7.8	Distichiasis; goniodysgenesis; entropion; red eye; conjunctivitis; glaucoma
7	Aural	33	5.0	Otitis externa
8	Respiratory	33	5.0	Kennel cough; laryngeal paralysis; coughing; pneumonia
9	Cancer	29	4.4	Unspecified; sarcoma; squamous cell carcinoma (SCC)
10	Endocrine	24	3.6	Hypothyroidism; diabetes insipidus
11	Immune mediated	21	3.2	Flea allergy; food hypersensitivity; atopy; gluten-sensitive enteropathy; dust mite allergy
12	Neurologic	15	2.3	Seizures; deafness; meningitis; sacroiliac disorder; vestibular disease
13	Urologic	13	2.0	Cystitis; incontinence
14	Dental	12	1.8	Retained puppy teeth; dental disease; extra teeth; other dental deformity
15	Trauma	11	1.7	Hindlimb; forelimb; reproductive; dermatalogic; spine
16	Unknown	10	1.5	Undiagnosed illness
17	Other	8	1.2	Uncodeable
18	Cardiac	7	1.1	Heart murmur; pulmonic stenosis
19	Anal gland	4	0.6	Anal sacculitis
20	Haematopoietic	3	0.5	Anaemia (unspecified); platelet disorder (unspecified)
21	Cerebrovascular	1	0.2	Stroke or cerebral vascular accident
22	Hepatic	1	0.2	Unspecified
	Total	666	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for Fox Terriers

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Fox Terriers

A total of 239 forms were sent out and 45 were returned, representing 115 live dogs. This breed had an 18.8% response rate (45/239) and it represented 0.33% of all returns (45/13,741).

Mortality data

A total of 44 deaths were reported and this represents 0.28% of all deaths reported in the survey (44/15,881). The median age at death for Fox Terriers was 13 years and 2 months (min = 10 months, max = 17 years and 3 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Fox Terriers. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Fox Terriers.

Cause of death		N	%	Most common specific causes in descending order
1	Old age	14	31.8	Old age & age combinations
2	Cancer	10	22.7	Type unspecified (bladder, lung)
3	Trauma	5	11.4	Road traffic accident; attacked by dog
4	Cardiac	3	6.8	Heart failure; heart attack
5	Urologic	3	6.8	Chronic kidney failure
6	Cerebral vascular	2	4.5	Stroke or cerebral vascular accident
7	Combinations	2	4.5	
8	Endocrine	2	4.5	Cushings disease
9	Gastrointestinal	1	2.3	Colitis
10	Hepatic	1	2.3	Unspecified
11	Immune mediated	1	2.3	AIHA
	Total	44	100.0	

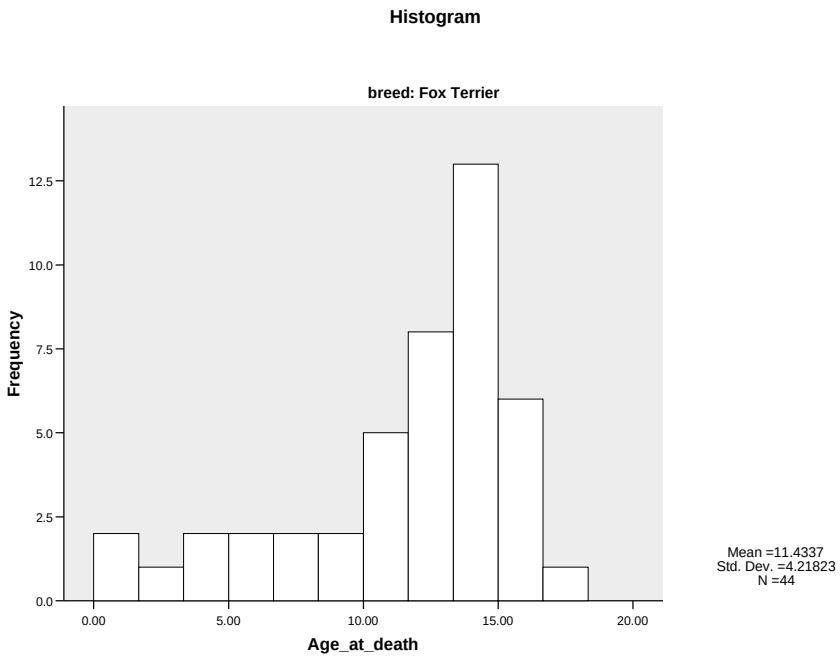


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 44 Fox Terrier deaths with age at death reported.

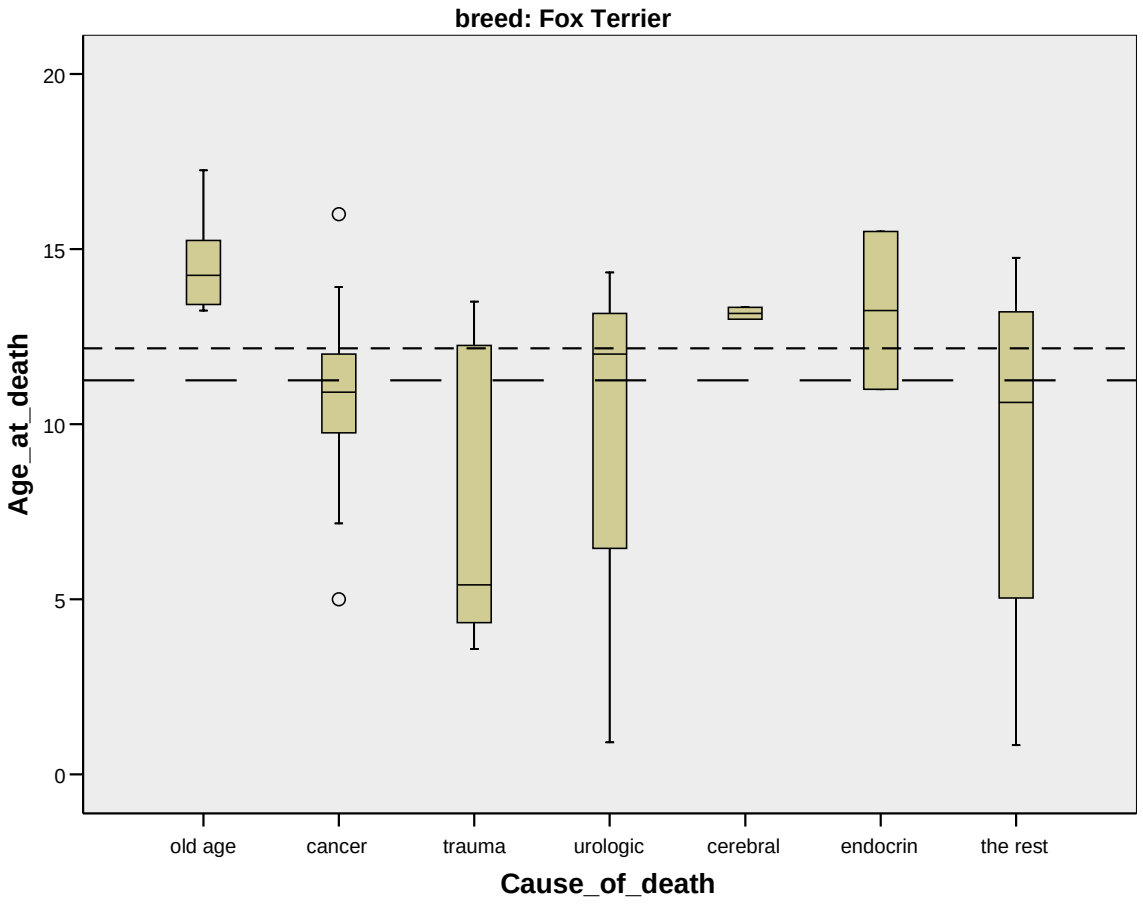


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Fox Terriers (N=44). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Fox Terriers. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 115 live dogs with a reported age was 3 years and 10 months (min=1 month, max=15 years and 2 months, Figure 3). Health information was reported for 115 live dogs of which 77 (67%) were healthy and 38 (33%) had at least one reported health condition, resulting in a total of 53 reported conditions with a median of 1 condition/dog (min=1, max=4).

The median current age of all healthy dogs with a reported age (N=77) was 3 years (min=1 month, max=14 years and 3 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=38) was 6 years and 3 months (min=1 year, max=15 years and 2 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=51) was 3 years and 6 months (min= 6 months, max= 14 years, Figure 4). Table 3 shows the disease conditions for Fox Terriers. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 112 Fox Terriers with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	58	9	67 (60%)
Male	36	9	45 (40%)
Totals	94 (84%)	18 (16%)	112 (100%)

There was no association between gender and neuter status (P=0.3535).

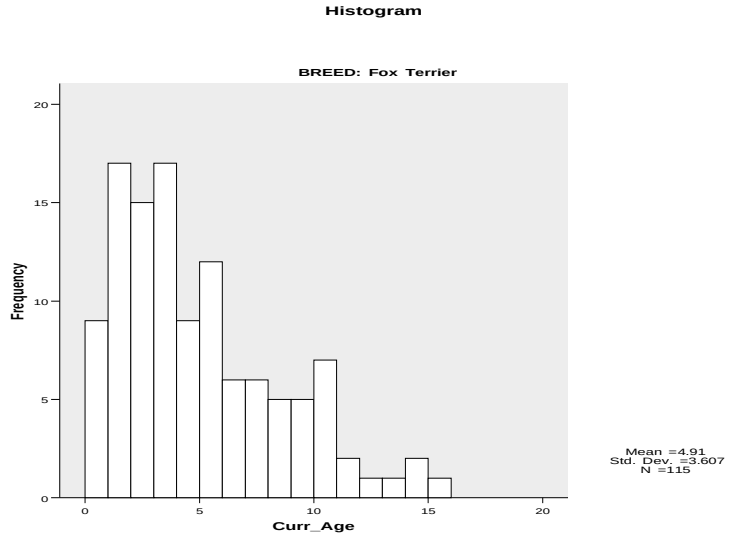


Figure 3. Histogram showing frequency of current age in years for the 115 live Fox Terriers with age reported.

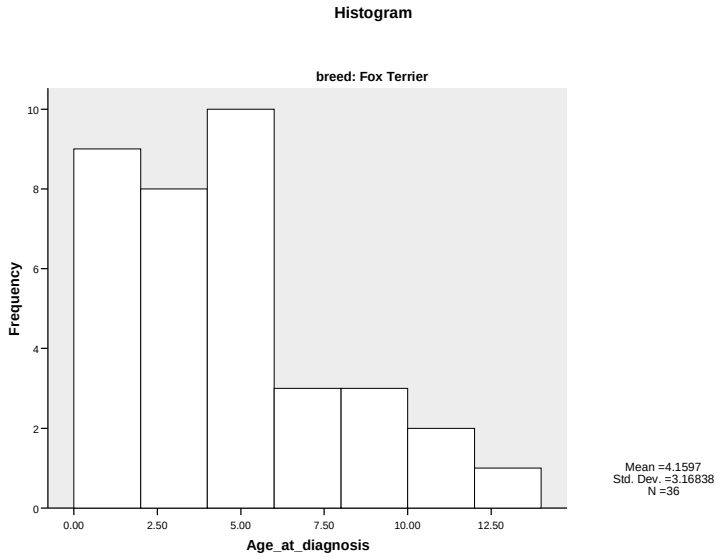


Figure 4. Histogram showing frequency of age at diagnosis for the 36 Fox Terriers with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

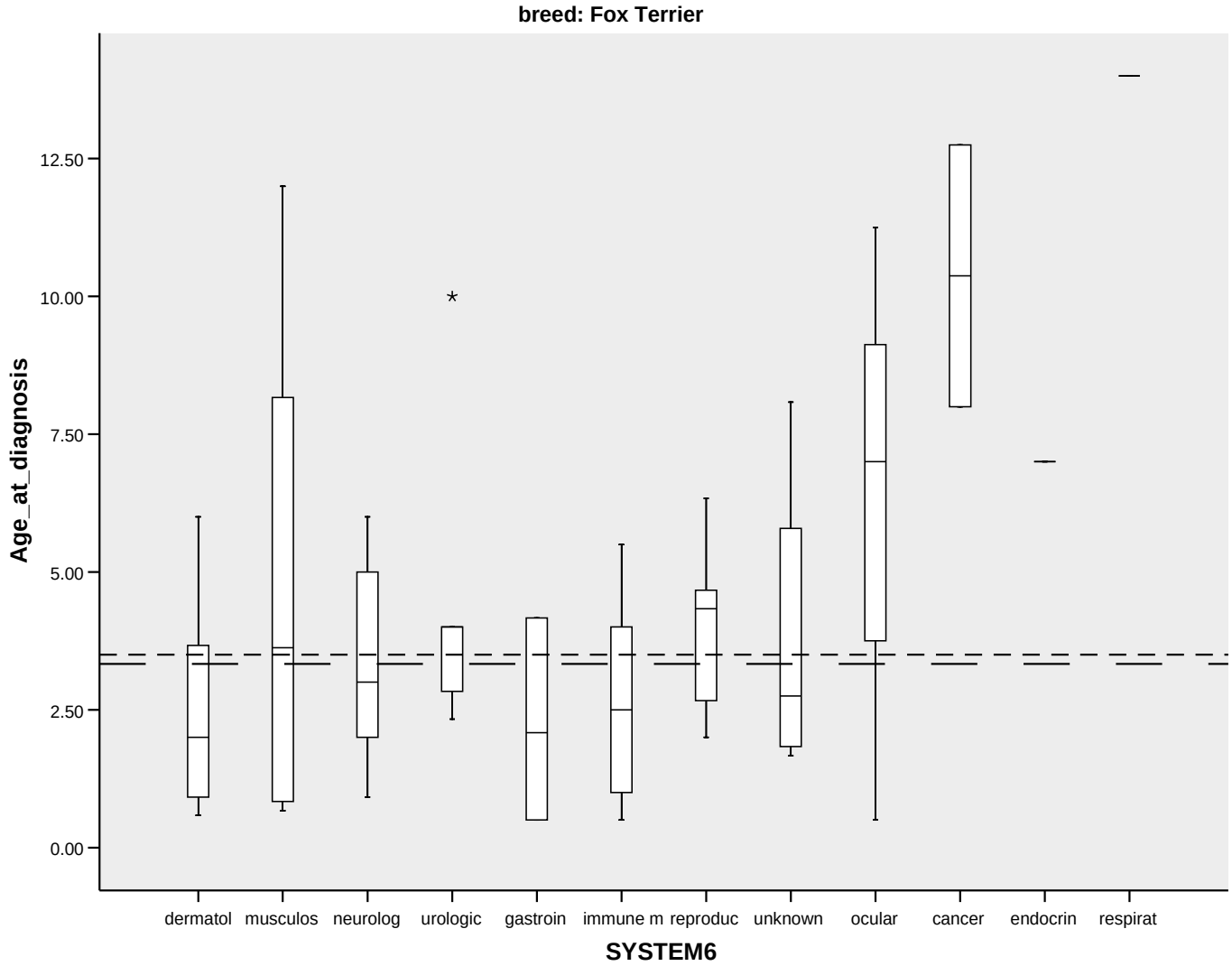


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Fox Terriers (N=38 dogs with 51 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Fox Terriers. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Fox Terriers.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Dermatologic	7	13.2	Dermatitis; recurrent pyoderma
2	Musculoskeletal	6	11.3	Avascular necrosis FH; arthritis (hips); CLR; patellar luxation
3	Neurologic	6	11.3	Seizures; deafness; IVDD (thoracic)
4	Urologic	6	11.3	Cystitis; haematuria; urethral obstruction
5	Gastrointestinal	5	9.4	Pancreatitis; colitis; diarrhoea; haemorrhagic gastroenteritis
6	Immune mediated	5	9.4	Unspecified allergy; atopy
7	Reproductive	5	9.4	Dystochia (physical blockage); false pregnancy; pyometra
8	Unknown	4	7.5	Undiagnosed illness
9	Ocular	3	5.7	Conjunctivitis; KCS; corneal ulcer
10	Cancer	2	3.8	Type unspecified (mammary; testicular)
11	Other	2	3.8	Uncodeable
12	Endocrine	1	1.9	Diabetes insipidus
13	Respiratory	1	1.9	Bronchitis
	Total	53	100.0	

Avascular necrosis FH=femoral head or Legg Calve Perthes disease

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for French Bulldogs

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

French Bulldogs

A total of 334 forms were sent out and 72 were returned, representing 154 live dogs. This breed had a 21.6% response rate (72/334) and it represented 0.52% of all returns (72/13,741).

Mortality data

A total of 71 deaths were reported and this represents 0.45% of all deaths reported in the survey (71/15,881). The median age at death for French Bulldogs was 9 years (min = 5 months, max = 14 years and 8 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for French Bulldogs. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for French Bulldogs.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	27	38.0	Brain tumour; lymphoma; type unspecified (liver)
2	Neurologic	12	16.9	Seizures; cauda equine syndrome
3	Old age	6	8.5	Old age & age combinations
4	Respiratory	5	7.0	Tracheal collapse; congenital tracheal hypoplasia
5	Musculoskeletal	3	4.2	Arthritis
6	Combinations	2	2.8	
7	Endocrine	2	2.8	Cushings or hyperadrenocorticism
8	Gastrointestinal	2	2.8	Gastric dilatation/volvulus (GDV); colitis
9	Unknown	2	2.8	
10	Behaviour	1	1.4	Unspecified
11	Cardiac	1	1.4	Heart attack
12	Cerebral vascular	1	1.4	Stroke or cerebral vascular accident
13	Collapse	1	1.4	
14	Infection	1	1.4	Viral infection unspecified
15	Other	1	1.4	Uncodeable
16	Perioperative	1	1.4	
17	Pining	1	1.4	
18	Systemic	1	1.4	Allergy or insect bite or sting or snake bite
19	Urologic	1	1.4	Chronic kidney failure
	Total	71	100.0	

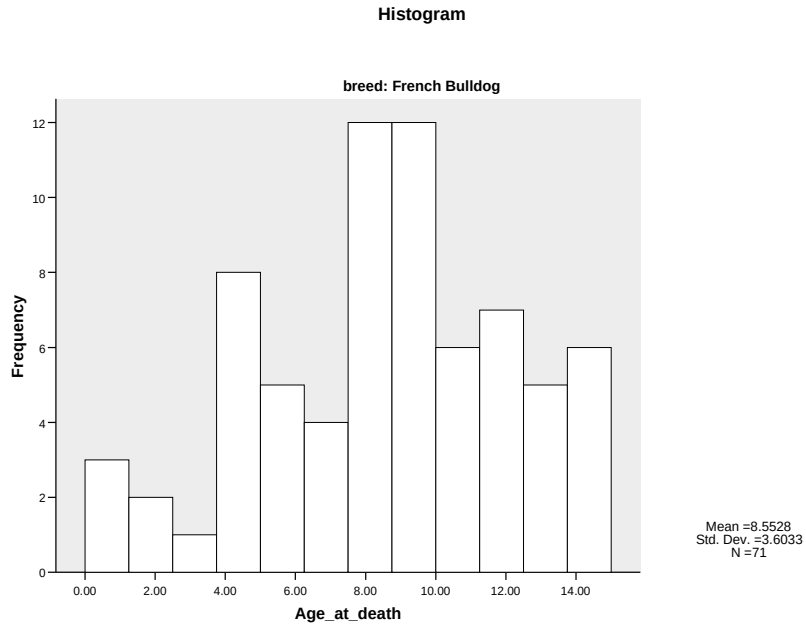


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 71 French Bulldog deaths with age at death reported.

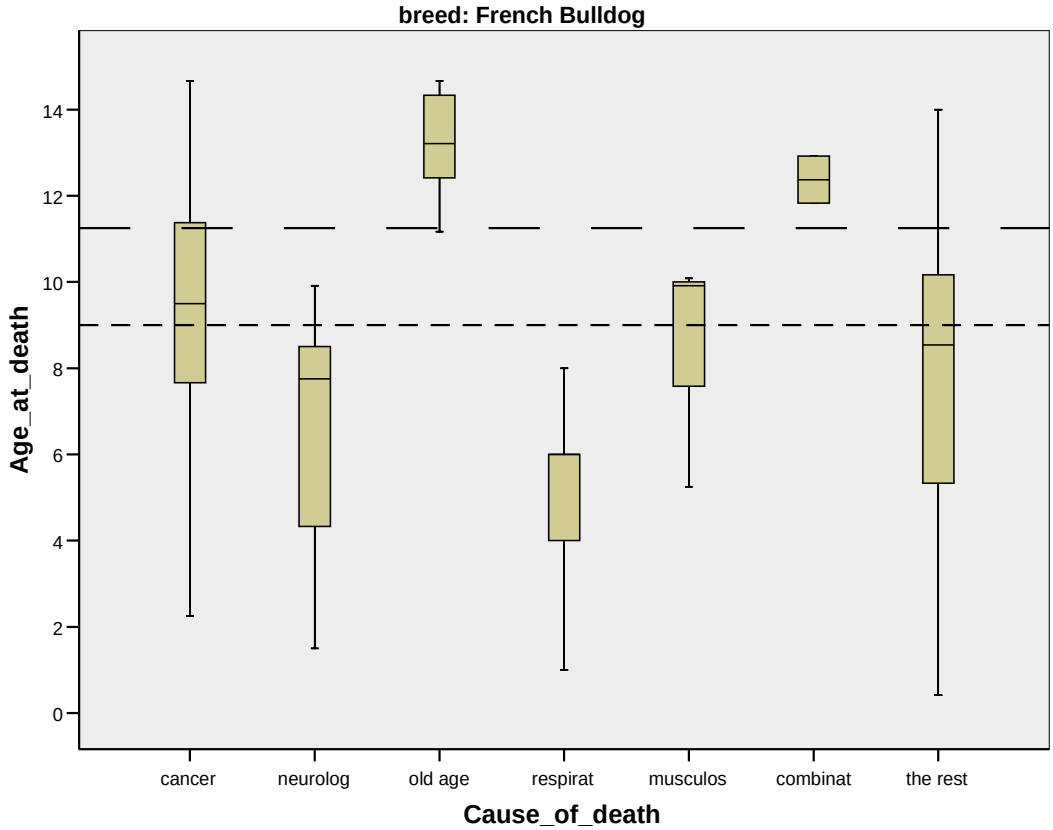


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in French Bulldogs (N=71). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for French Bulldogs. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 154 live dogs with a reported age was 4 years and 5 months (min=3 months, max=12 years and 8 months, Figure 3). Health information was reported for 154 live dogs of which 73 (47%) were healthy and 81 (53%) had at least one reported health condition, resulting in a total of 130 reported conditions with a median of 1 condition/dog (min=1, max=4).

The median current age of all healthy dogs with a reported age (N=73) was 3 years and 6 months (min=3 months, max=11 years and 10 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=81) was 5 years and 5 months (min=7 months, max=12 years and 8 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=127) was 3 years (min= 2 months, max= 12 years, Figure 4). Table 3 shows the disease conditions for French Bulldogs. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 153 French Bulldogs with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	67	23	90 (59%)
Male	42	21	63 (41%)
Totals	109 (71%)	44 (29%)	153 (100%)

There was no association between gender and neuter status (P=0.2955).

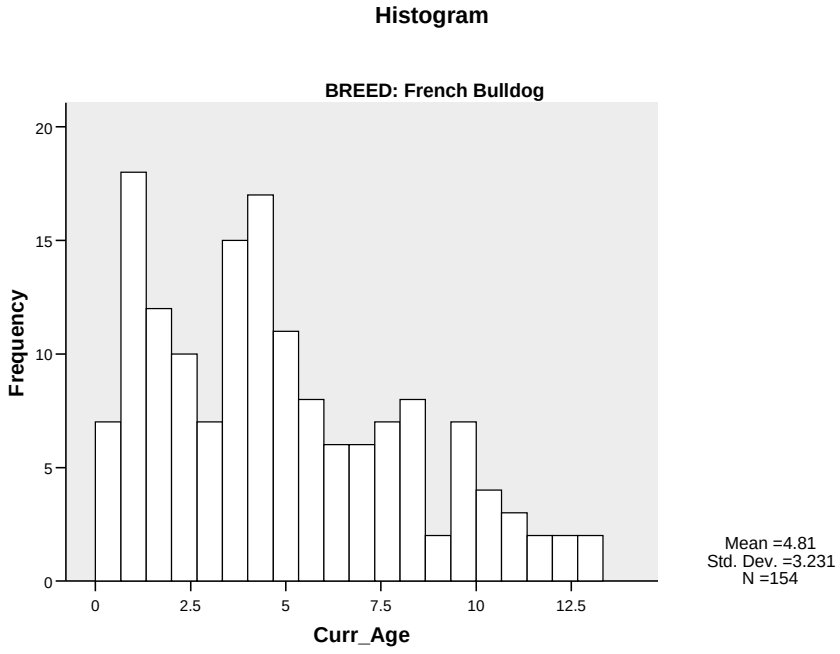


Figure 3. Histogram showing frequency of current age in years for the 154 live French Bulldogs with age reported.

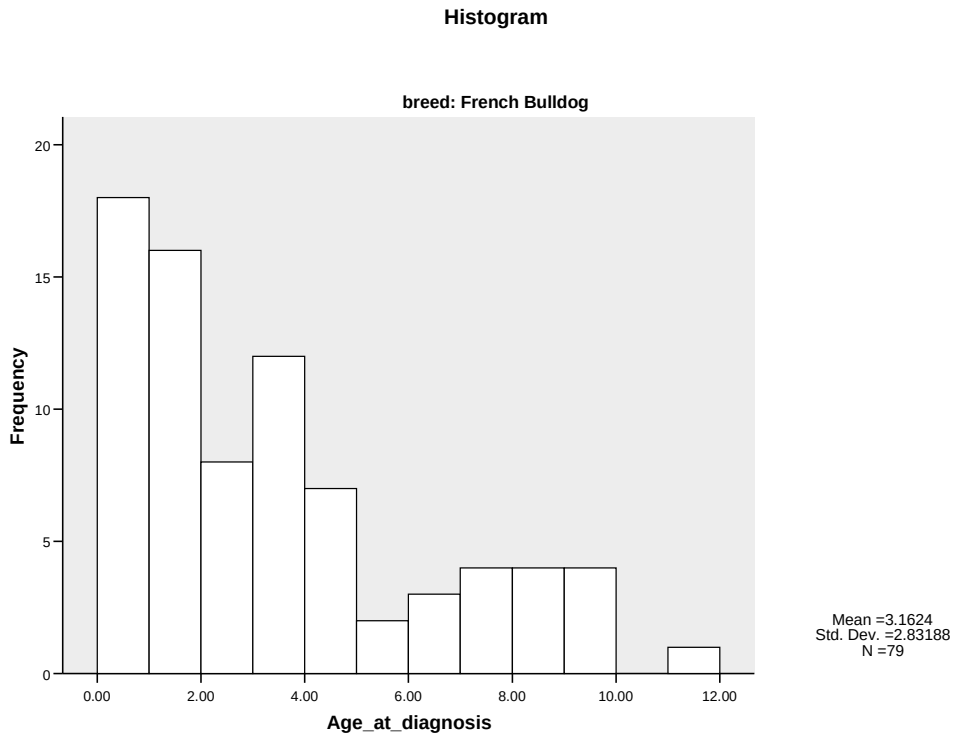


Figure 4. Histogram showing frequency of age at diagnosis for the 79 French Bulldogs with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

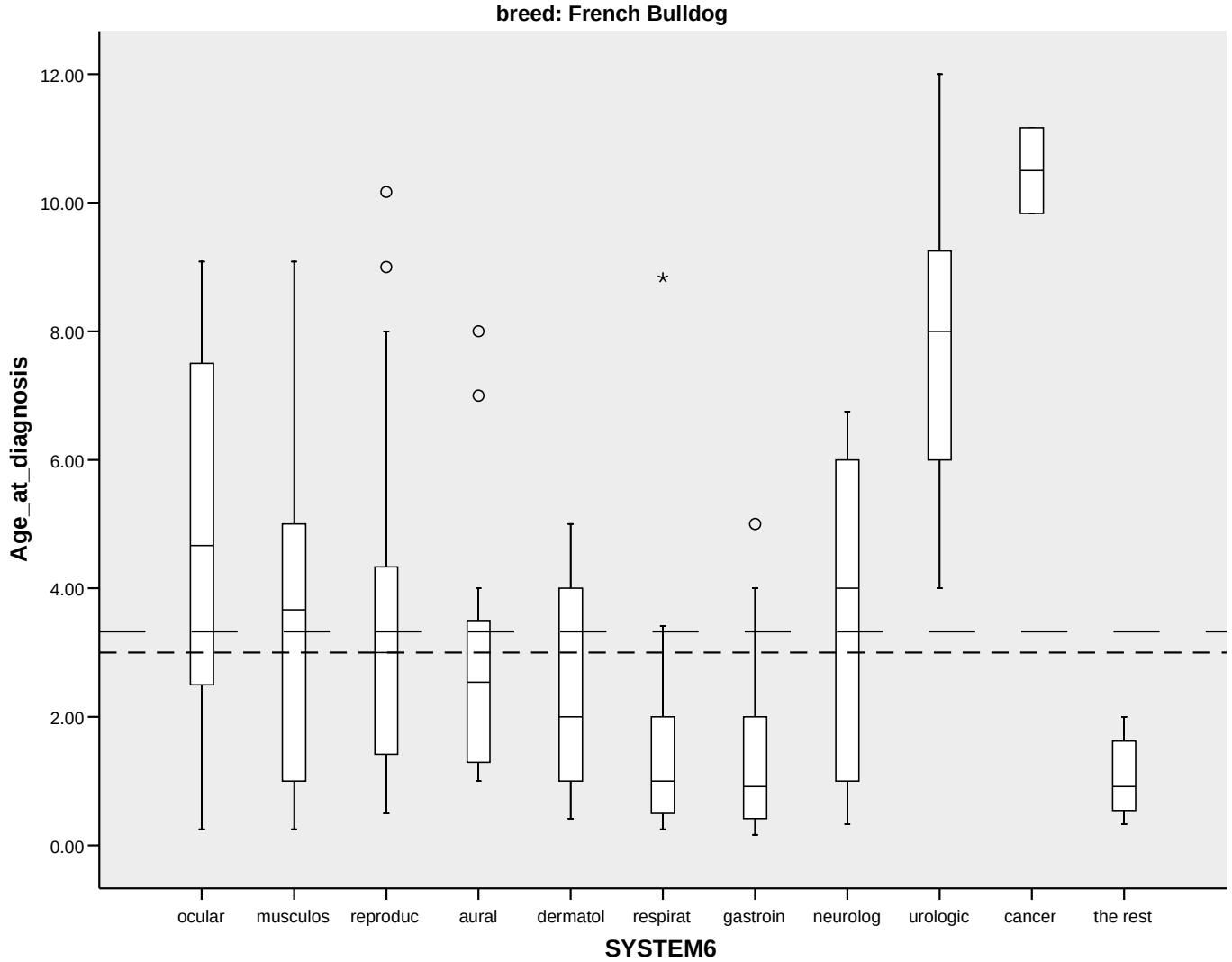


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for French Bulldogs (N=81 dogs with 127 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for French Bulldogs. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for French Bulldogs.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Ocular	27	20.8	Corneal ulcer; KCS; cataracts; conjunctivitis; cherry eye; entropion; epiphora; PRA
2	Musculoskeletal	23	17.7	Patellar luxation; prognathism; hemivertebra; spondylitis
3	Reproductive	18	13.8	Dystochia (physical blockage>uterine inertia); pyometra; cryptorchid; irregular heat cycles
4	Aural	12	9.2	Otitis externa; aural haematoma
5	Dermatologic	10	7.7	Mites (demodex>cheyletiella=sarcoptes); dermatitis
6	Respiratory	10	7.7	BOAS; noisy breathing; kennel cough; long soft palate
7	Gastrointestinal	9	6.9	Colitis; regurgitation; IBD; pyloric stenosis; vomiting & diarrhoea
8	Neurologic	5	3.8	Seizures; IVDD (cervical, unspecified); cauda equine syndrome
9	Urologic	5	3.8	Incontinence; cystouroliths (struvite; unspecified); kidney failure
10	Immune mediated	3	2.3	Allergy (unspecified); dust mite allergy; flea allergy
11	Cancer	2	1.5	Carcinoma (small intestine); unspecified
12	Unknown	2	1.5	Undiagnosed illness
13	Anal gland	1	0.8	Anal sacculitis
14	Benign neoplasia	1	0.8	Lipoma
15	Cardiac	1	0.8	Heart murmur
16	Other	1	0.8	Uncodeable
	Total	130	100.0	

BOAS=brachycephalic obstructive airway syndrome

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for German Longhaired Pointers

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

German Longhaired Pointers

A total of 42 forms were sent out and 12 were returned, representing 21 live dogs. This breed had a 28.6% response rate (12/42) and it represented 0.09% of all returns (12/13,741).

Mortality data

A total of 2 deaths were reported and this represents 0.01% of all deaths reported in the survey (2/15,881). The median age at death for German Longhaired Pointers was 10 years and 6 months (min = 8 years, max = 13 years) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for German Longhaired Pointers. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for German Longhaired Pointers.

Cause of death		N	%	Most common specific causes in descending order
1	Gastrointestinal	1	50.0	Gastric dilatation/volvulus (GDV)
2	Respiratory	1	50.0	Pneumonia
	Total	2	100.0	

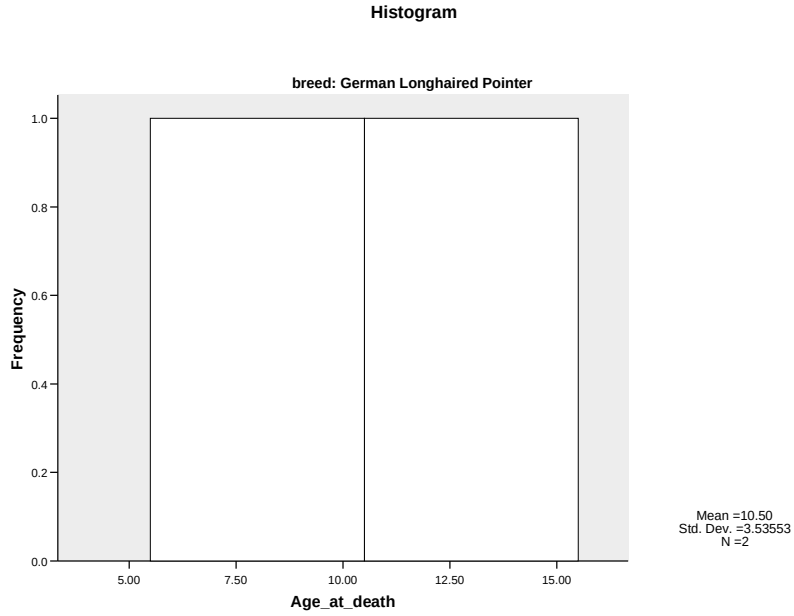


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 2 German Longhaired Pointer deaths with age at death reported.

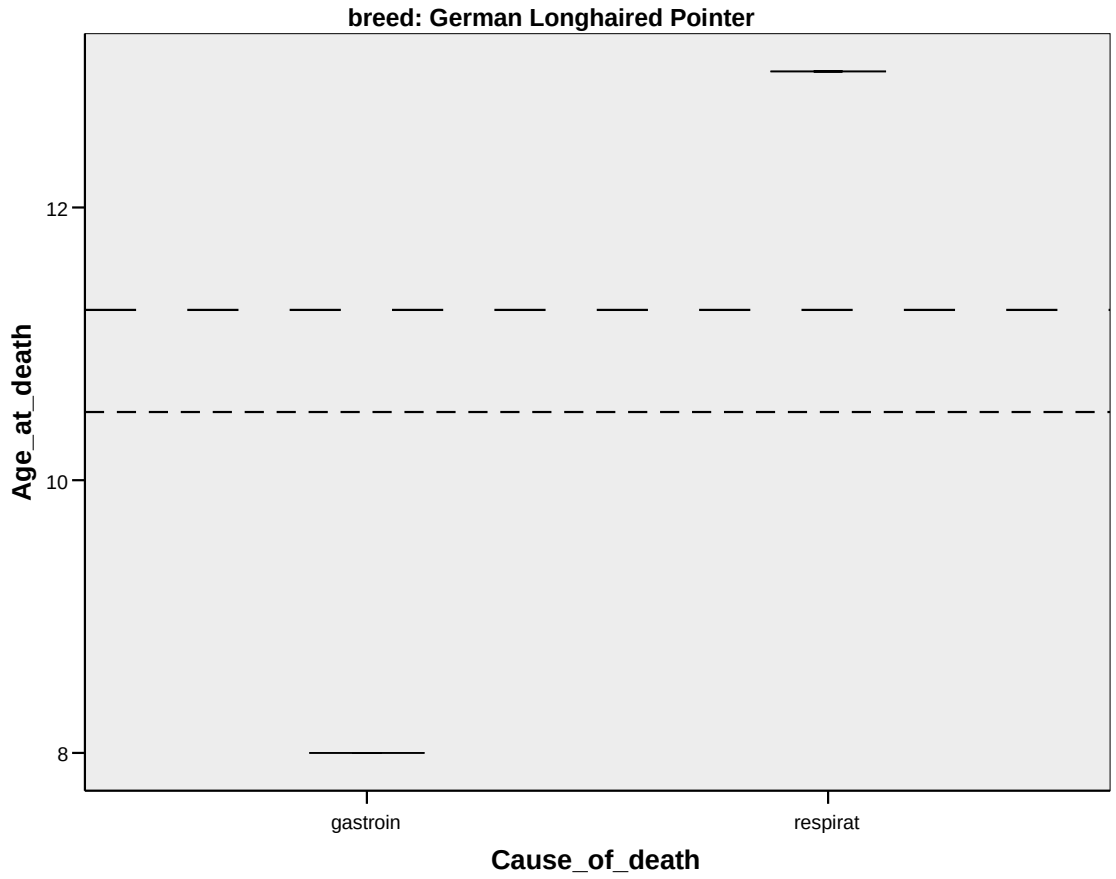


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in German Longhaired Pointers (N=2). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for German Longhaired Pointers. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 21 live dogs with a reported age was 4 years and 10 months (min=4 months, max=9 years and 11 months, Figure 3). Health information was reported for 21 live dogs of which 17 (81%) were healthy and 4 (19%) had at least one reported health condition, resulting in a total of 4 reported conditions with a median of 1 condition/dog (min=1, max=1).

The median current age of all healthy dogs with a reported age (N=17) was 4 years and 10 months (min=4 months, max=9 years and 11 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=4) was 4 years and 5 months (min=1 year, max=9 years and 11 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=4) was 2 years and 11 months (min= 10 months, max= 6 years and 6 months, Figure 4). Table 3 shows the disease conditions for German Longhaired Pointers. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 21 German Longhaired Pointers with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	11	1	12 (57%)
Male	9	0	9 (43%)
Totals	20 (95%)	1 (5%)	21 (100%)

There was no association between gender and neuter status (P=0.3749).

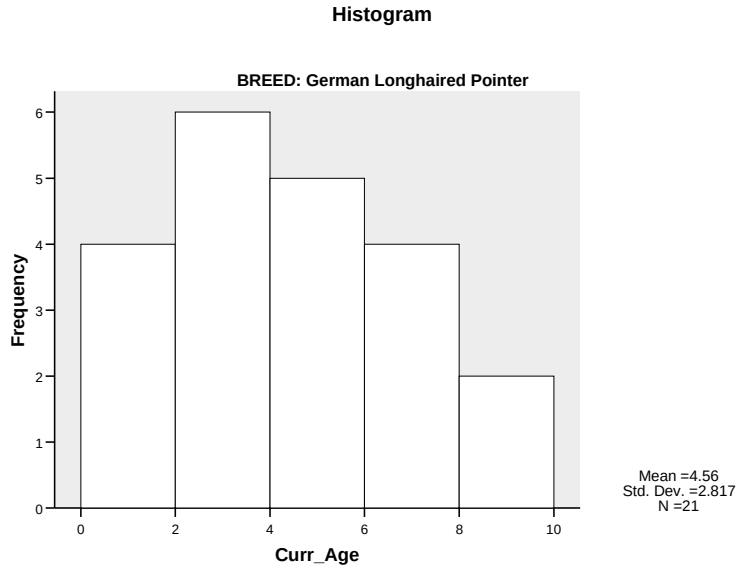


Figure 3. Histogram showing frequency of current age in years for the 21 live German Longhaired Pointers with age reported.

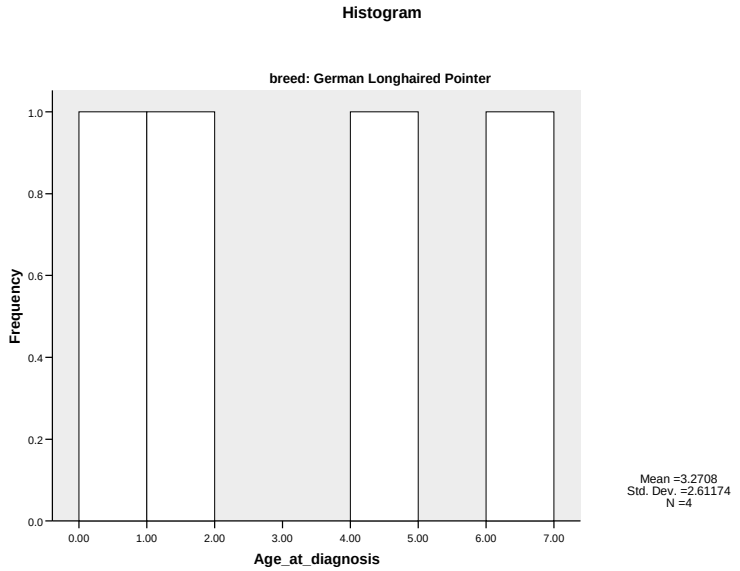


Figure 4. Histogram showing frequency of age at diagnosis for the 4 German Longhaired Pointers with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

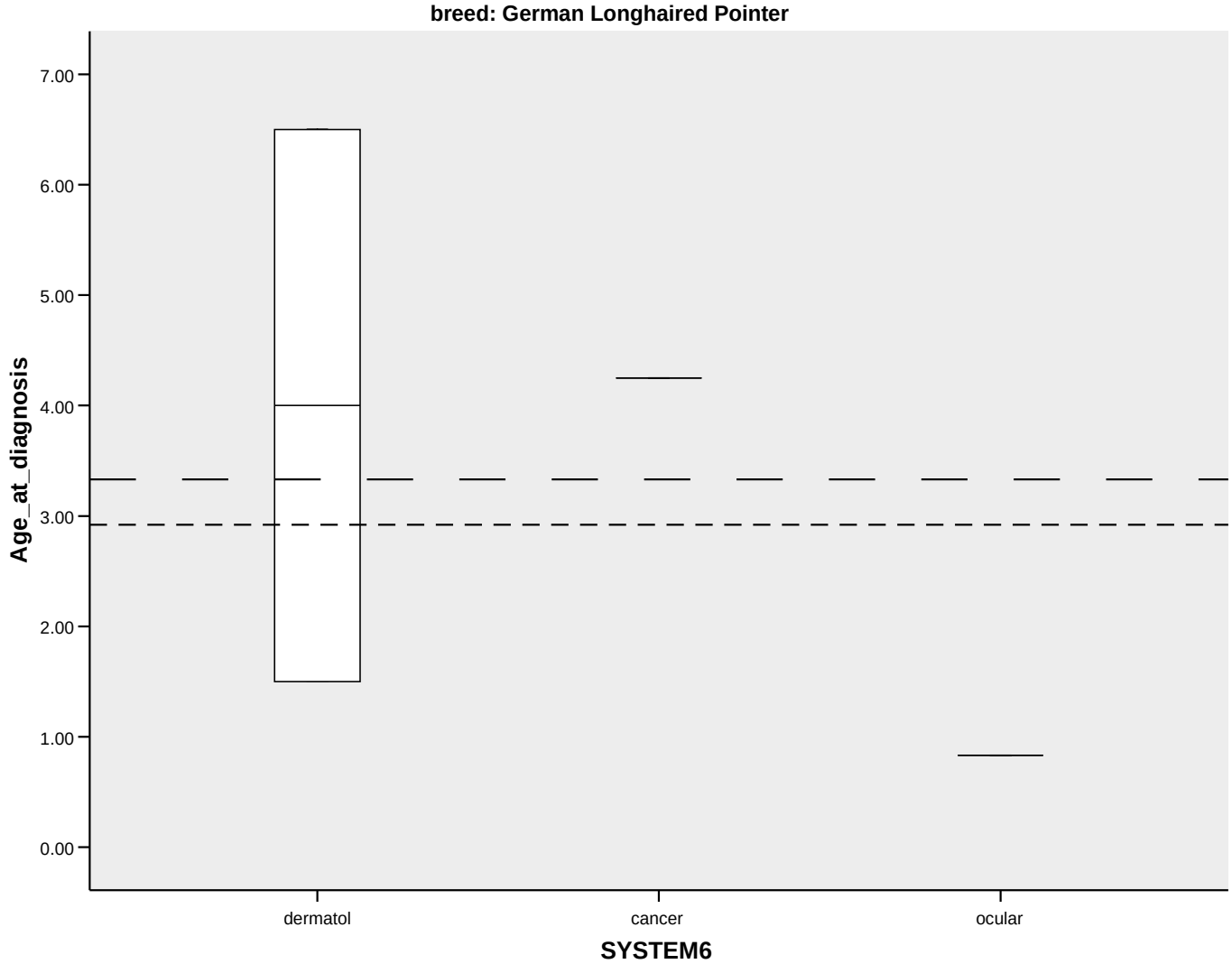


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for German Longhaired Pointers (N=4 dogs with 4 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for German Longhaired Pointers. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for German Longhaired Pointers.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Dermatologic	2	50.0	Pyotraumatic dermatitis (hot spot)
2	Cancer	1	25.0	Sarcoma (shoulder)
3	Ocular	1	25.0	Ectopic cilia
	Total	4	100.0	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for German Pinschers

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

German Pinschers

A total of 55 forms were sent out and 24 were returned, representing 48 live dogs. This breed had a 43.6% response rate (24/55) and it represented 0.17% of all returns (24/13,741).

Mortality data

A total of 24 deaths were reported and this represents 0.15% of all deaths reported in the survey (24/15,881). The median age at death for German Pinschers was 11 years and 5 months (min = 5 years and 11 months, max = 17 years and 11 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for German Pinschers. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for German Pinschers.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	7	29.2	Unspecified; brain tumour; SCC; MCT
2	Old age	5	20.8	Old age & age combinations
3	Cardiac	3	12.5	Heart attack; heart disease unspecified
4	Other	2	8.3	Euthanasia other (unspecified)
5	Behaviour	1	4.2	Aggression
6	Combinations	1	4.2	Liver disease & kidney failure
7	Hepatic	1	4.2	Chronic liver failure
8	Respiratory	1	4.2	Pneumonia
9	Trauma	1	4.2	Unspecified trauma
10	Unknown	1	4.2	
11	Urologic	1	4.2	Chronic kidney failure
	Total	24	100.0	

SCC=squamous cell carcinoma; MCT=mast cell tumour

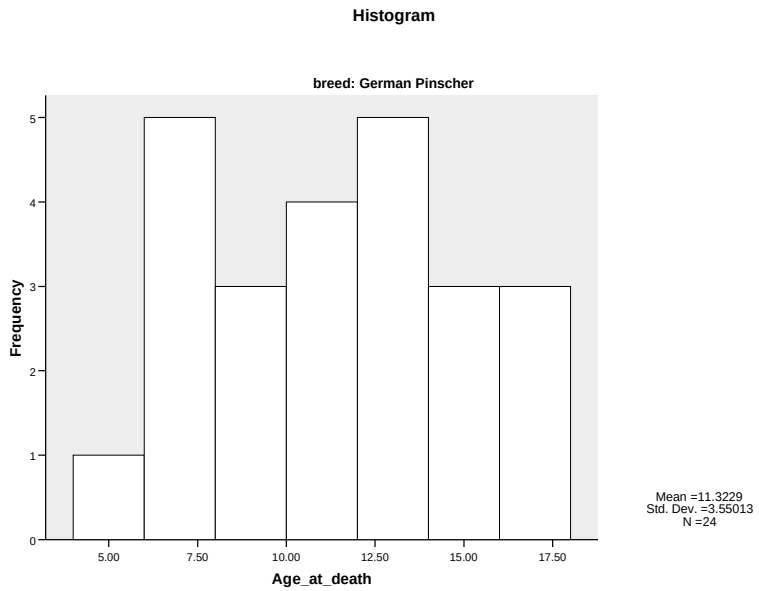


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 24 German Pinscher deaths with age at death reported.

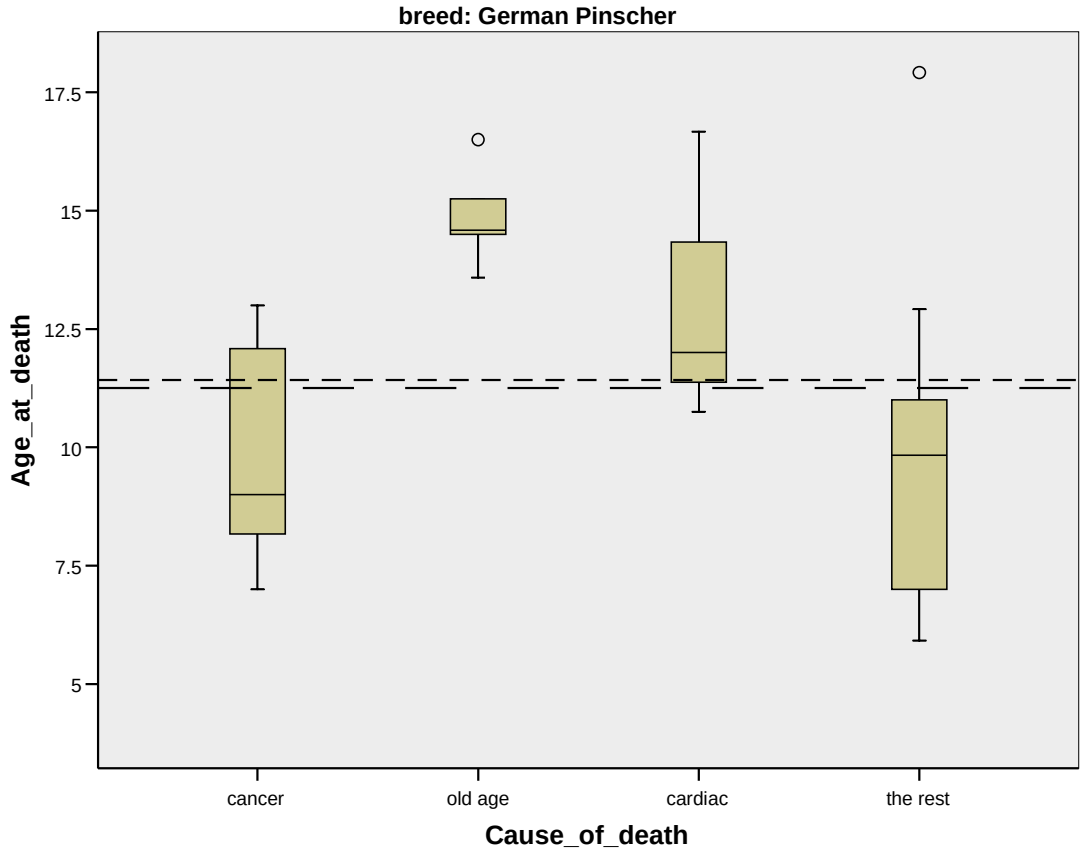


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in German Pinschers (N=24). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for German Pinschers. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 48 live dogs with a reported age was 4 years and 2 months (min=5 months, max=12 years and 9 months, Figure 3). Health information was reported for 48 live dogs of which 28 (58%) were healthy and 20 (42%) had at least one reported health condition, resulting in a total of 31 reported conditions with a median of 1.5 conditions/dog (min=1, max=3).

The median current age of all healthy dogs with a reported age (N=28) was 3 years and 2 months (min=5 months, max=12 years). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=20) was 4 years and 8 months (min=6 months, max=12 years and 9 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=30) was 1 year and 2 months (min= 3 months, max= 12 years, Figure 4). Table 3 shows the disease conditions for German Pinschers. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 48 German Pinschers with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	26	12	38 (79%)
Male	9	1	10 (21%)
Totals	35 (73%)	13 (27%)	48 (100%)

There was no association between gender and neuter status (P=0.1719).

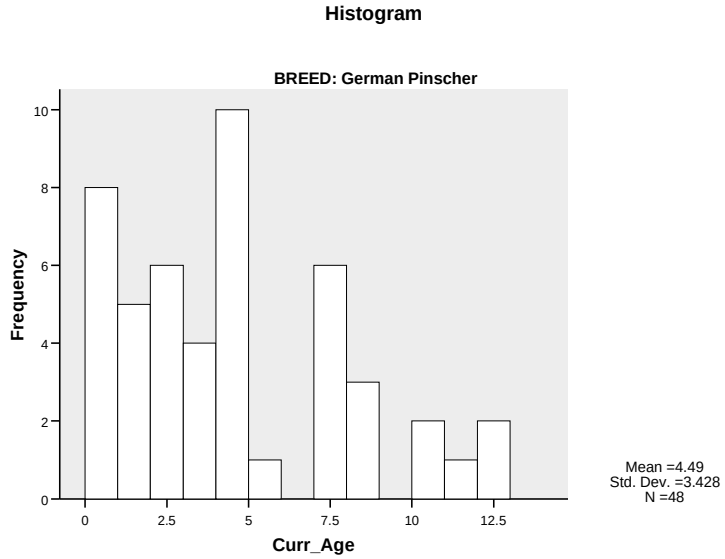


Figure 3. Histogram showing frequency of current age in years for the 48 live German Pinschers with age reported.

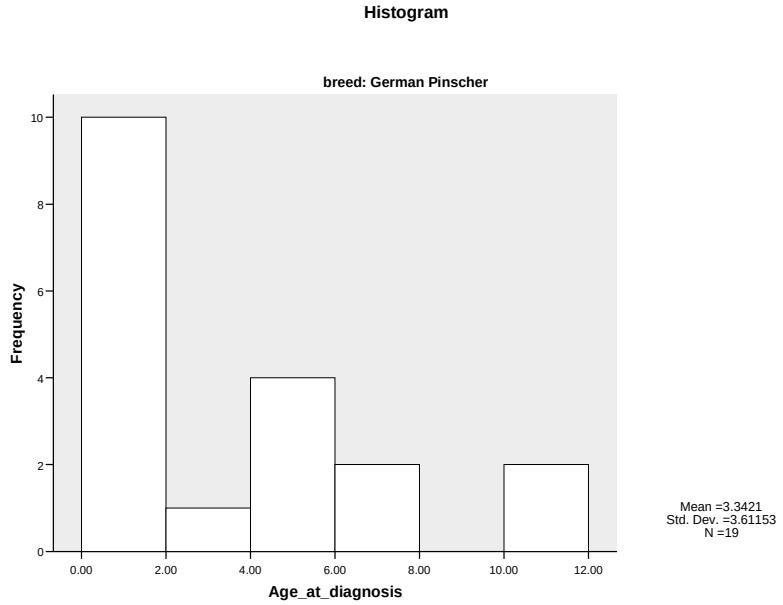


Figure 4. Histogram showing frequency of age at diagnosis for the 19 German Pinschers with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

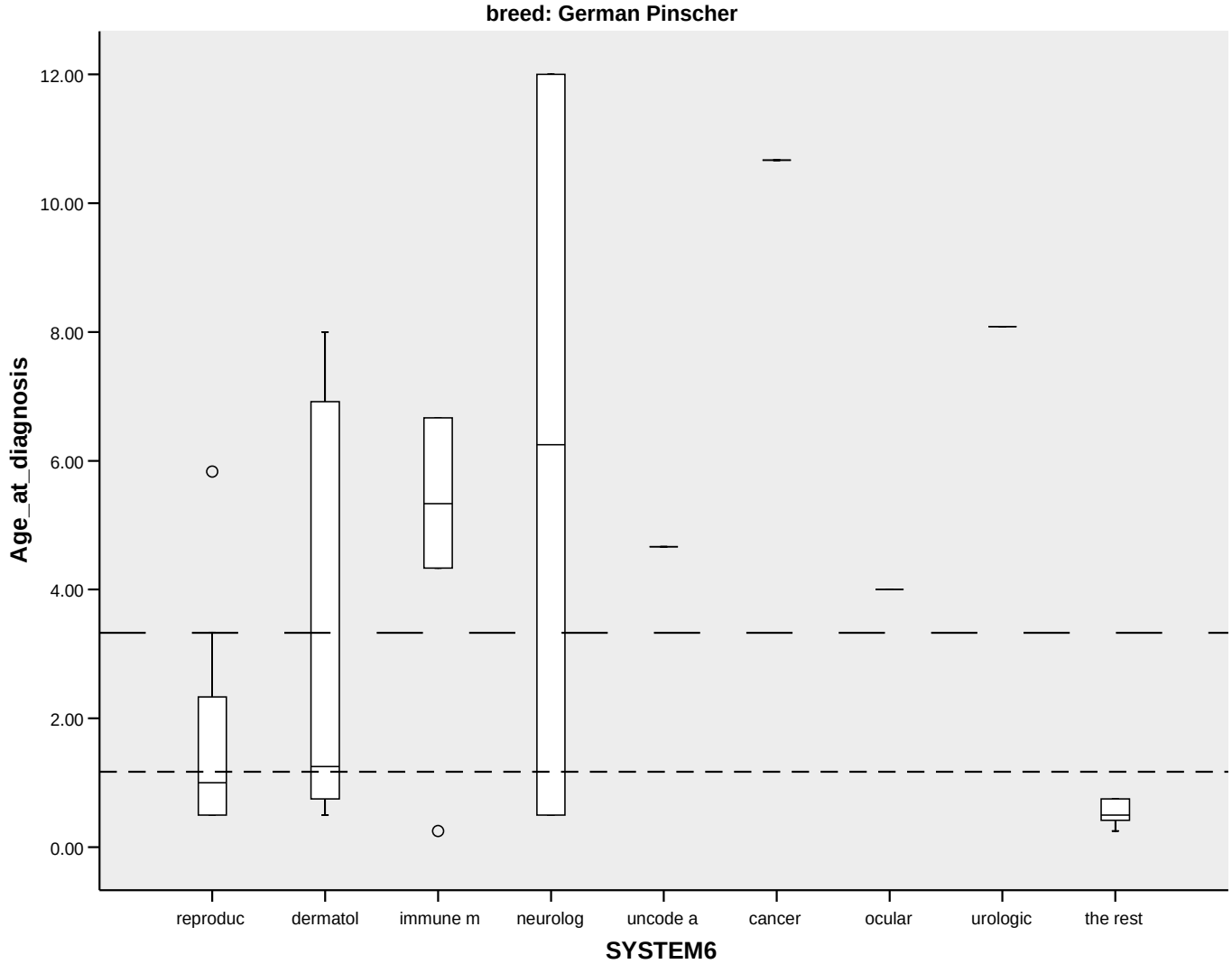


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for German Pinschers (N=20 dogs with 30 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for German Pinschers. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for German Pinschers.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Reproductive	7	22.6	False pregnancy; infertility; polycystic ovaries
2	Dermatologic	5	16.1	Dermatitis; loss of nose pigment; unspecified
3	Immune mediated	5	16.1	Flea allergy; immune mediated skin disease unspecified
4	Unknown	3	9.7	Undiagnosed illness
5	Musculoskeletal	2	6.5	Brachygnathism
6	Neurologic	2	6.5	Deafness; seizures
7	Other	2	6.5	Uncodeable
8	Cancer	1	3.2	Type unspecified (mammary)
9	Dental	1	3.2	Retained puppy teeth
10	Gastrointestinal	1	3.2	Colitis
11	Ocular	1	3.2	Epiphora
12	Urologic	1	3.2	Incontinence
	Total	31	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for German Shorthaired Pointers

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

German Shorthaired Pointers

A total of 680 forms were sent out and 192 were returned, representing 421 live dogs. This breed had a 28.2% response rate (192/680) and it represented 1.40% of all returns (192/13,741).

Mortality data

A total of 159 deaths were reported and this represents 1.00% of all deaths reported in the survey (159/15,881). The median age at death for German Shorthaired Pointers was 12 years (min = 11 months, max = 17 years) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for German Shorthaired Pointers. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for German Shorthaired Pointers.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	47	29.6	Type unspecified (liver, mammary)
2	Old age	30	18.9	Old age
3	Neurologic	11	6.9	Seizures; unspecified spinal disease
4	Cerebral vascular	9	5.7	Stroke or cerebral vascular accident
5	Trauma	8	5.0	Road traffic accident; unspecified
6	Combinations	7	4.4	
7	Cardiac	6	3.8	Heart attack; heart failure; cardiomegaly
8	Musculoskeletal	6	3.8	Arthritis; hip dysplasia; osteodystrophy
9	Unknown	6	3.8	
10	Hepatic	5	3.1	Chronic liver failure; liver disease unspecified
11	Other	5	3.1	Uncodeable
12	Poisoning	4	2.5	
13	Behaviour	3	1.9	Aggression
14	Endocrine	3	1.9	Addisons disease; Cushings disease; diabetes
15	Immune mediated	3	1.9	Unspecified
16	Infection	2	1.3	Lyme disease; clostridial infection
17	Respiratory	2	1.3	Pneumonia; respiratory failure
18	Gastrointestinal	1	0.6	Gastric dilatation/volvulus (GDV)
19	Urologic	1	0.6	Chronic kidney failure
	Total	159	100.0	

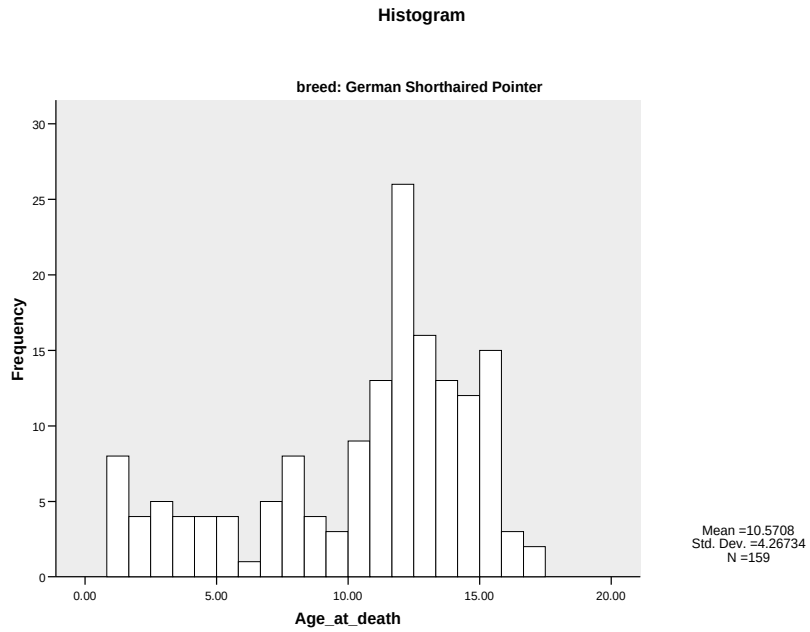


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 159 German Shorthaired Pointer deaths with age at death reported.

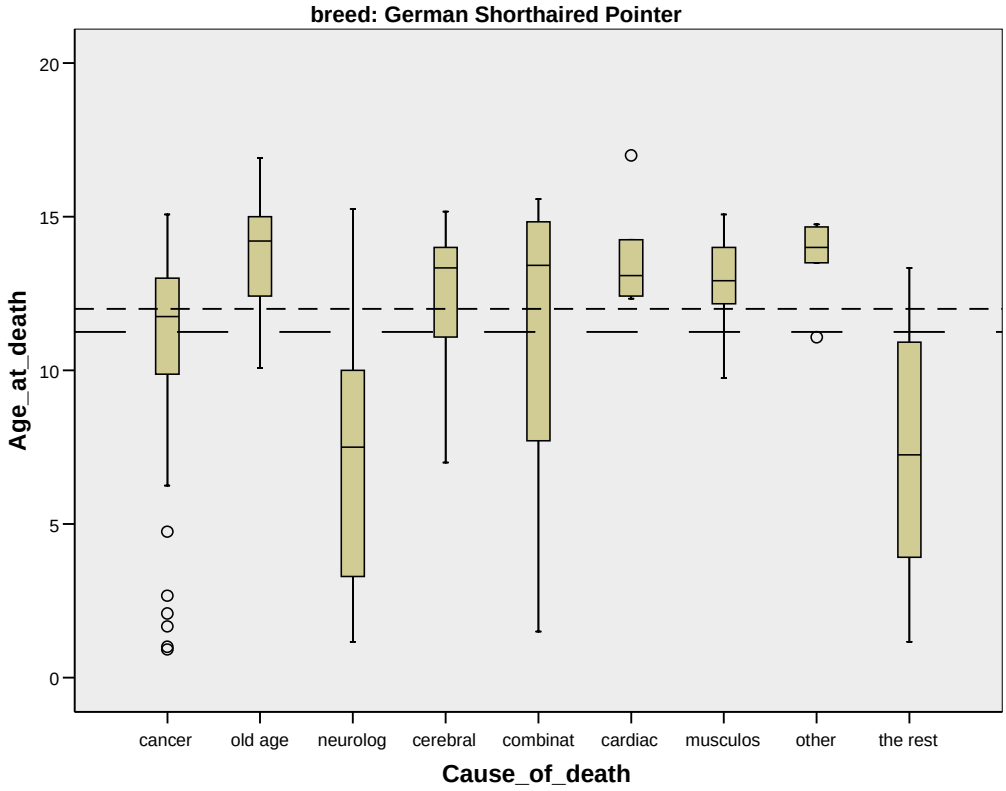


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in German Shorthaired Pointers (N=159). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for German Shorthaired Pointers. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 420 live dogs with a reported age was 5 years (min=3 months, max=16 years and 1 month, Figure 3). Health information was reported for 421 live dogs of which 270 (64%) were healthy and 151 (36%) had at least one reported health condition, resulting in a total of 254 reported conditions with a median of 1 condition/dog (min=1, max=10).

The median current age of all healthy dogs with a reported age (N=270) was 3 years and 9 months (min=3 months, max=15 years). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=150) was 7 years and 10 months (min=7 months, max=16 years and 1 month). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=251) was 3 years and 10 months (min= 2 months, max= 15 years and 6 months, Figure 4). Table 3 shows the disease conditions for German Shorthaired Pointers. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 414 German Shorthaired Pointers with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	174	94	268 (65%)
Male	117	29	146 (35%)
Totals	291 (70%)	123 (30%)	414 (100%)

Significantly more females were neutered (P=0.0012).

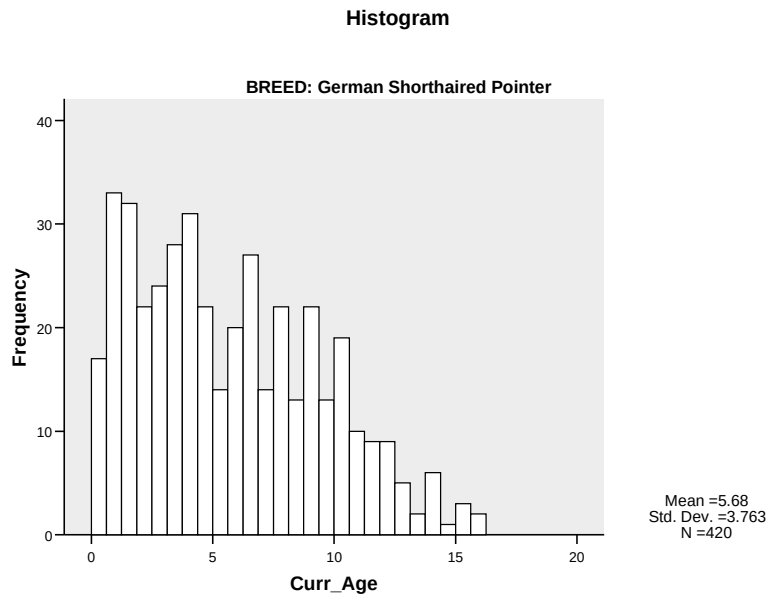


Figure 3. Histogram showing frequency of current age in years for the 420 live German Shorthaired Pointers with age reported.

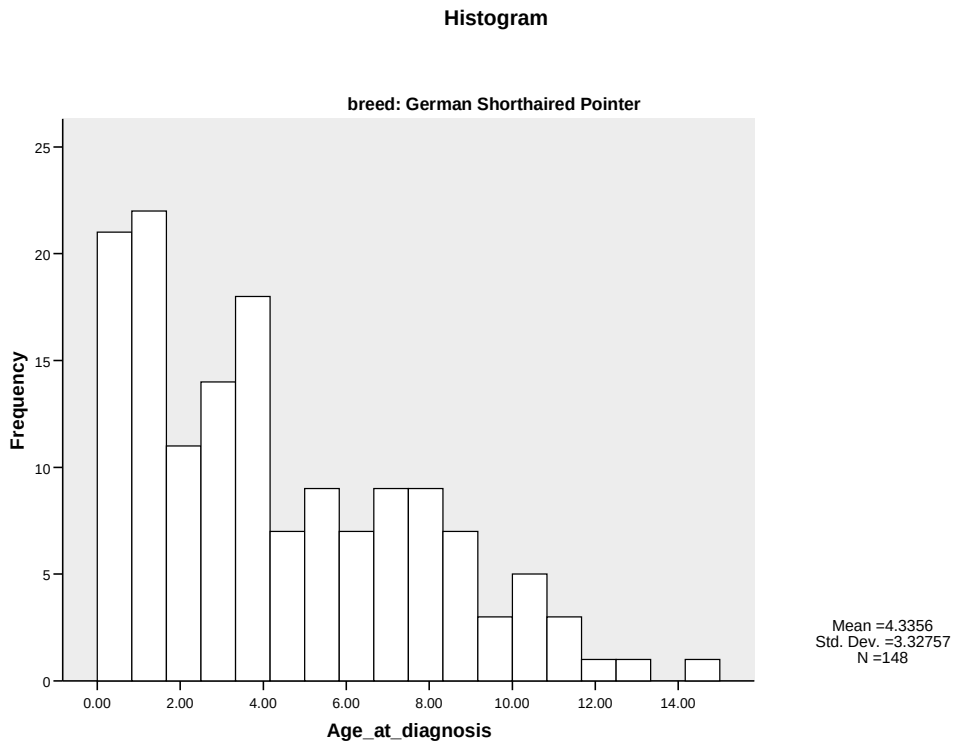


Figure 4. Histogram showing frequency of age at diagnosis for the 148 German Shorthaired Pointers with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

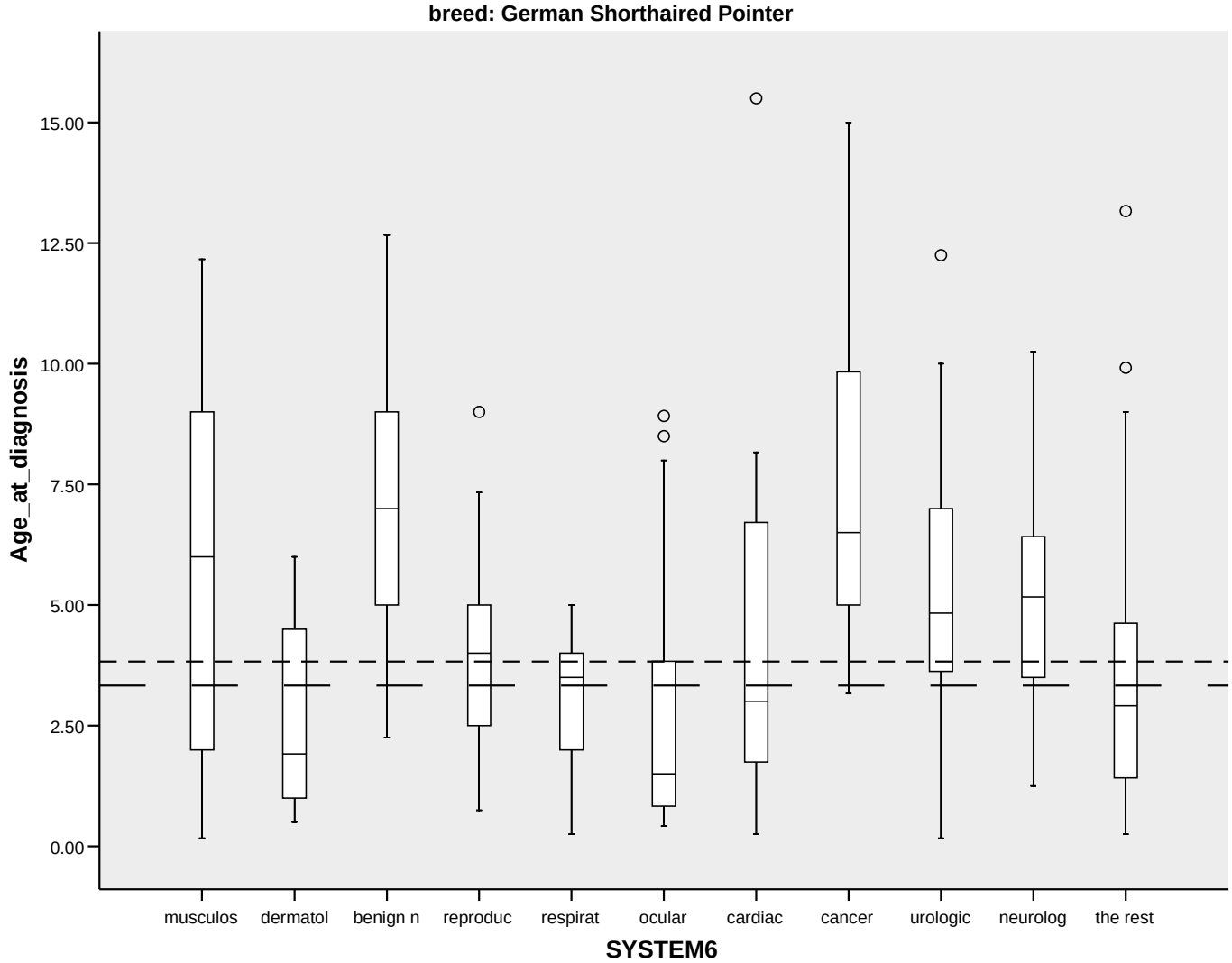


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for German Shorthaired Pointers (N=150 dogs with 251 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for German Shorthaired Pointers. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for German Shorthaired Pointers.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Musculoskeletal	37	14.6	Arthritis (shoulder>hips>rest); lameness (forelimb); CHD; CLR; fracture; OCD; tendon injury
2	Dermatologic	28	11.0	Dermatitis; mites (demodex=sarcoptes>unspecified); sebaceous cysts; alopecia
3	Benign neoplasia	26	10.2	Lipoma; haemangioma; subcutaneous cysts
4	Reproductive	23	9.1	Dystochia (physical blockage>uterine inertia); irregular heat cycles; pyometra
5	Respiratory	17	6.7	Kennel cough; asthma; bronchitis
6	Ocular	16	6.3	Entropion; conjunctivitis; red eye; blocked tear ducts; cataracts; cherry eye; KCS
7	Cardiac	15	5.9	Heart murmur; aortic stenosis; congenital heart defect; heart rhythm disorder
8	Cancer	14	5.5	Type unspecified (mammary, shoulder; carcinoma (vulva); brain tumour
9	Gastrointestinal	13	5.1	GDV; pancreatitis; weight loss; campylobacter; colitis; E Coli infection; IBD; PLE
10	Trauma	12	4.7	Tail>forelimb=other>cornea; hindlimb; skin; spine; spinal cord
11	Immune mediated	11	4.3	Atopy; gluten-sensitive enteropathy; flea allergy; food hypersensitivity; MMM
12	Urologic	11	4.3	Incontinence (unspecified>after spay); cystitis; cystouroliths (unspecified); haematuria
13	Neurologic	9	3.5	Seizures; collapse (unspecified); epilepsy; vestibular disease
14	Other	9	3.5	Uncodeable
15	Unknown	4	1.6	Undiagnosed illness
16	Endocrine	3	1.2	Addison’s disease; hypothyroidism
17	Aural	2	0.8	Otitis externa; ear mites
18	Dental	2	0.8	Retained puppy teeth
19	Anal gland	1	0.4	Anal sacculitis
20	Cerebrovascular	1	0.4	Stroke or cerebral vascular accident
	Total	254	100.0	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for the German Spitz breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The German Spitz breed

A total of 165 forms were sent out and 55 were returned, representing 230 live dogs. This breed had a 33.3% response rate (55/165) and it represented 0.40% of all returns (55/13,741).

Mortality data

A total of 43 deaths were reported and this represents 0.27% of all deaths reported in the survey (43/15,881). The median age at death for the German Spitz breed was 11 years and 4 months (min = 1 year and 1 month, max = 16 years and 4 months) and this was similar to the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the German Spitz breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the German Spitz breed.

Cause of death		N	%	Most common specific causes in descending order
1	Old age	10	23.3	Old age
2	Cancer	7	16.3	Type unspecified mammary, unspecified); SCC
3	Cardiac	6	14.0	Heart failure; cardiomegaly; heart attack
4	Neurologic	6	14.0	Seizures
5	Combinations	3	7.0	
6	Endocrine	2	4.7	Addison's disease
7	Gastrointestinal	2	4.7	Haemorrhagic gastroenteritis (HGE); vomiting
8	Other	2	4.7	Pleural effusion
9	Cerebral vascular	1	2.3	Cerebral vascular accident
10	Ocular	1	2.3	Blindness
11	Perioperative	1	2.3	
12	Trauma	1	2.3	Road traffic accident
13	Unknown	1	2.3	
	Total	43	100.0	

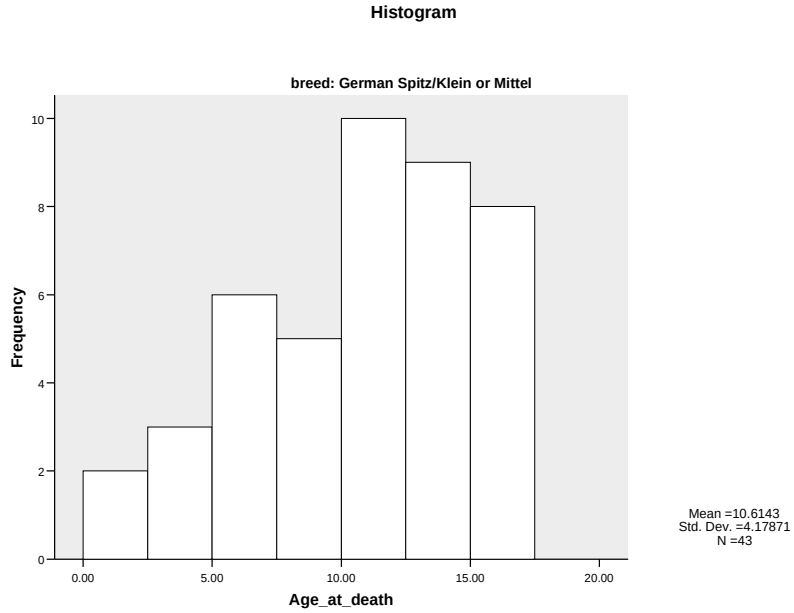


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 43 German Spitz deaths with age at death reported.

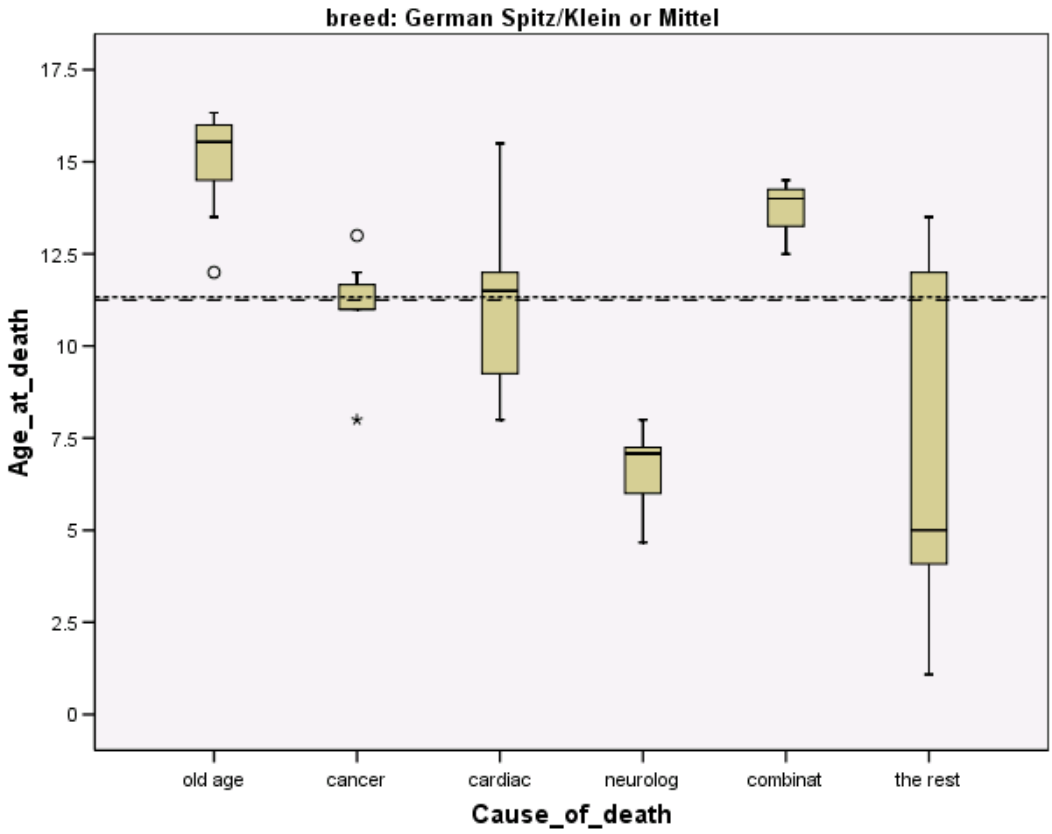


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the German Spitz breed (N=43). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the German Spitz breed. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 230 live dogs with a reported age was 4 years and 6 months (min=3 months, max=17 years, Figure 3). Health information was reported for 230 live dogs of which 134 (58%) were healthy and 96 (42%) had at least one reported health condition, resulting in a total of 139 reported conditions with a median of 1 condition/dog (min=1, max=6).

The median current age of all healthy dogs with a reported age (N=134) was 4 years and 0 months (min=3 months, max=15 years). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=96) was 5 years and 8 months (min=5 months, max=17 years). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=137) was 1 year and 6 months (min= 2 months, max= 14 years, Figure 4). Table 3 shows the disease conditions for the German Spitz breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 228 the German Spitz breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	101	38	139 (61%)
Male	79	10	89 (39%)
Totals	180 (79%)	48 (21%)	228 (100%)

Significantly more females were neutered (P=0.0036).

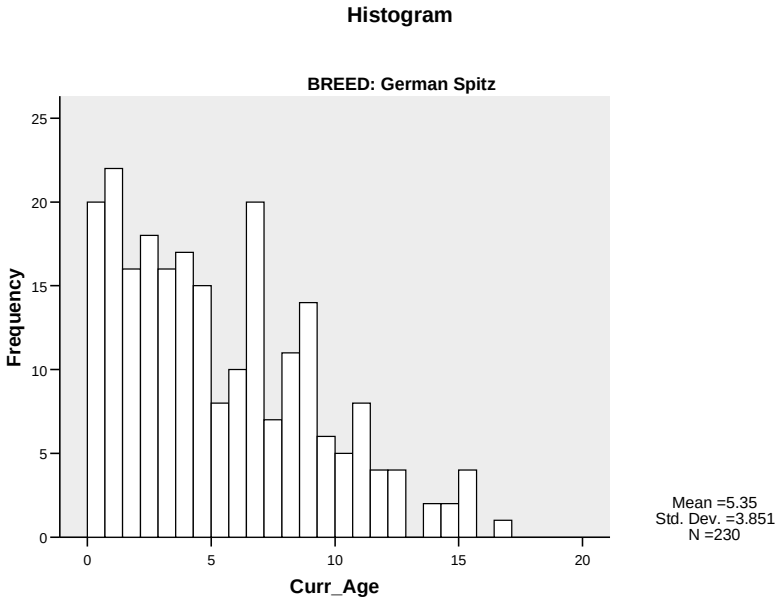


Figure 3. Histogram showing frequency of current age in years for the 230 live German Spitz breed with age reported.

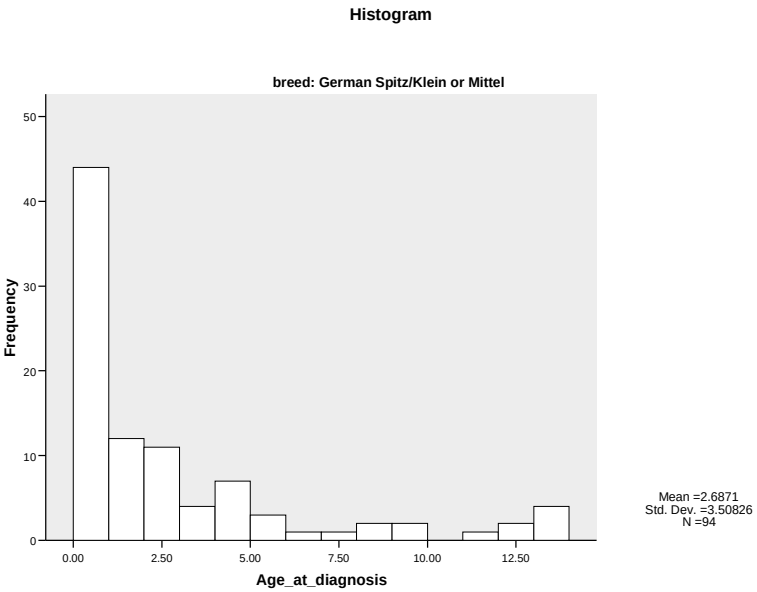


Figure 4. Histogram showing frequency of age at diagnosis for the 94 German Spitz breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

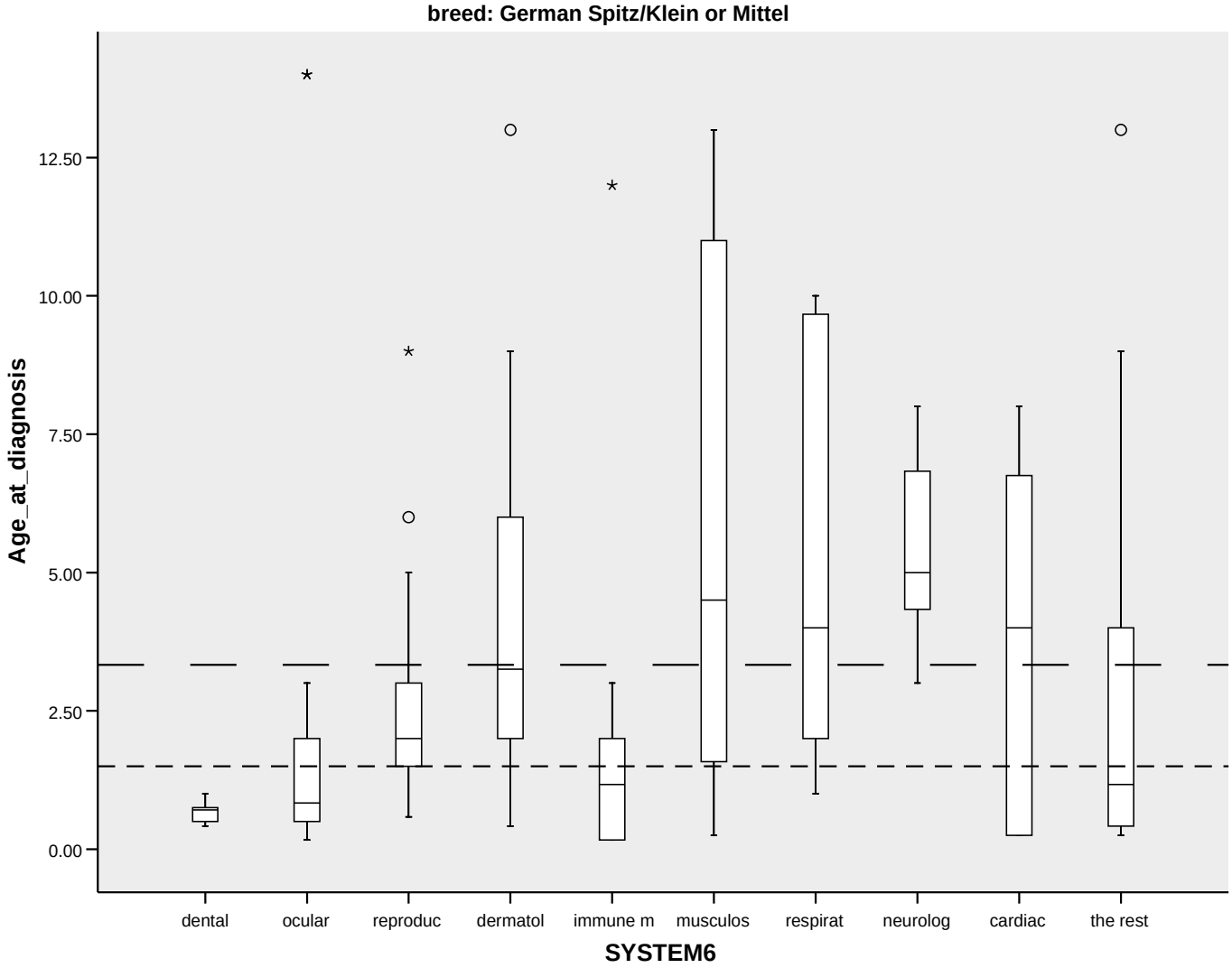


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the German Spitz breed (N=96 dogs with 137 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the German Spitz breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the German Spitz breed.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Dental	26	18.7	Retained puppy teeth; defect other than extra teeth
2	Ocular	20	14.4	Epiphora; blindness; entropion; red eye
3	Reproductive	17	12.2	Dystochia (uterine inertia>physical blockage); spontaneous abortion; cryptorchid; infertility
4	Dermatologic	15	10.8	Mites (cheyletiella); alopecia; pyotraumatic dermatitis; dermatitis
5	Immune mediated	13	9.4	Gluten-sensitive enteropathy; flea allergy; allergy unspecified
6	Gastrointestinal	11	7.9	Campylobacter; colitis; IBD; tapeworm; vomiting & diarrhoea; weight loss
7	Musculoskeletal	10	7.2	Arthritis (hindlimbs); lameness (hindlimbs); patellar luxation
8	Respiratory	9	6.5	Noisy breathing; coughing; kennel cough; bronchitis; tracheal collapse
9	Neurologic	7	5.0	Seizures
10	Cardiac	5	3.6	Heart murmur (unspecified); slow heart rate
11	Endocrine	2	1.4	Diabetes mellitus; hypothyroidism
12	Aural	1	0.7	Otitis externa
13	Benign neoplasia	1	0.7	Lipoma
14	Trauma	1	0.7	Unspecified
15	Urologic	1	0.7	Cystitis
	Total	139	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for German Wirehaired Pointers

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

German Wirehaired Pointers

A total of 270 forms were sent out and 66 were returned, representing 107 live dogs. This breed had a 113.8 % response rate (66/270) and it represented 0.48% of all returns (66/13,741).

Mortality data

A total of 41 deaths were reported and this represents 0.26 % of all deaths reported in the survey (41/15,881). The median age at death for German Wirehaired Pointers was 10 years (min = 11 months, max = 15 years and 7 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for German Wirehaired Pointers. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for German Wirehaired Pointers.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	10	24.4	Type unspecified (liver, unspecified)
2	Old age	8	19.5	Old age
3	Behaviour	4	9.8	Aggression; unspecified behavioural problem
4	Musculoskeletal	4	9.8	Arthritis; hip dysplasia
5	Trauma	4	9.8	Road traffic accident; unspecified
6	Combinations	3	7.3	
7	Cerebral vascular	2	4.9	Stroke or cerebral vascular accident
8	Cardiac	1	2.4	Unspecified heart defect
9	Gastrointestinal	1	2.4	Gastric dilatation/volvulus (GDV)
10	Neurologic	1	2.4	Seizures
11	Other	1	2.4	Uncodeable
12	Unknown	1	2.4	
13	Urologic	1	2.4	Chronic kidney failure
	Total	41	100.0	

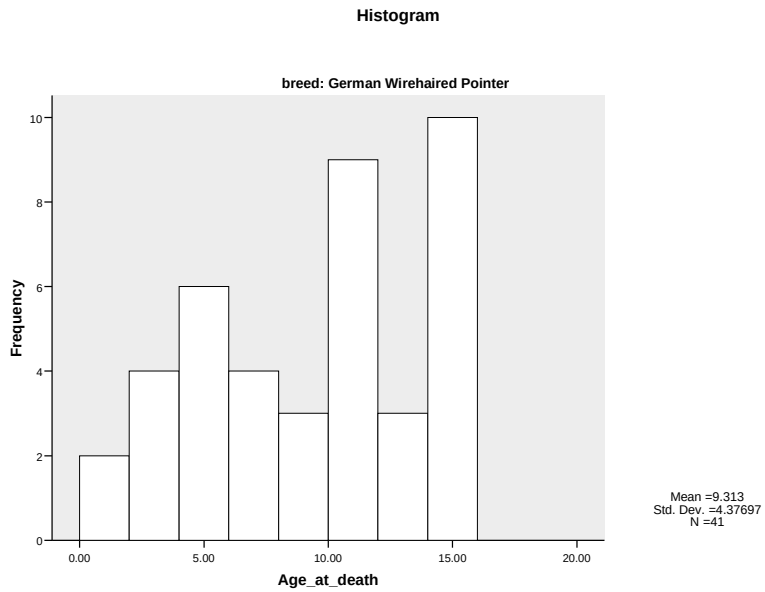


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 41 German Wirehaired Pointer deaths with age at death reported.

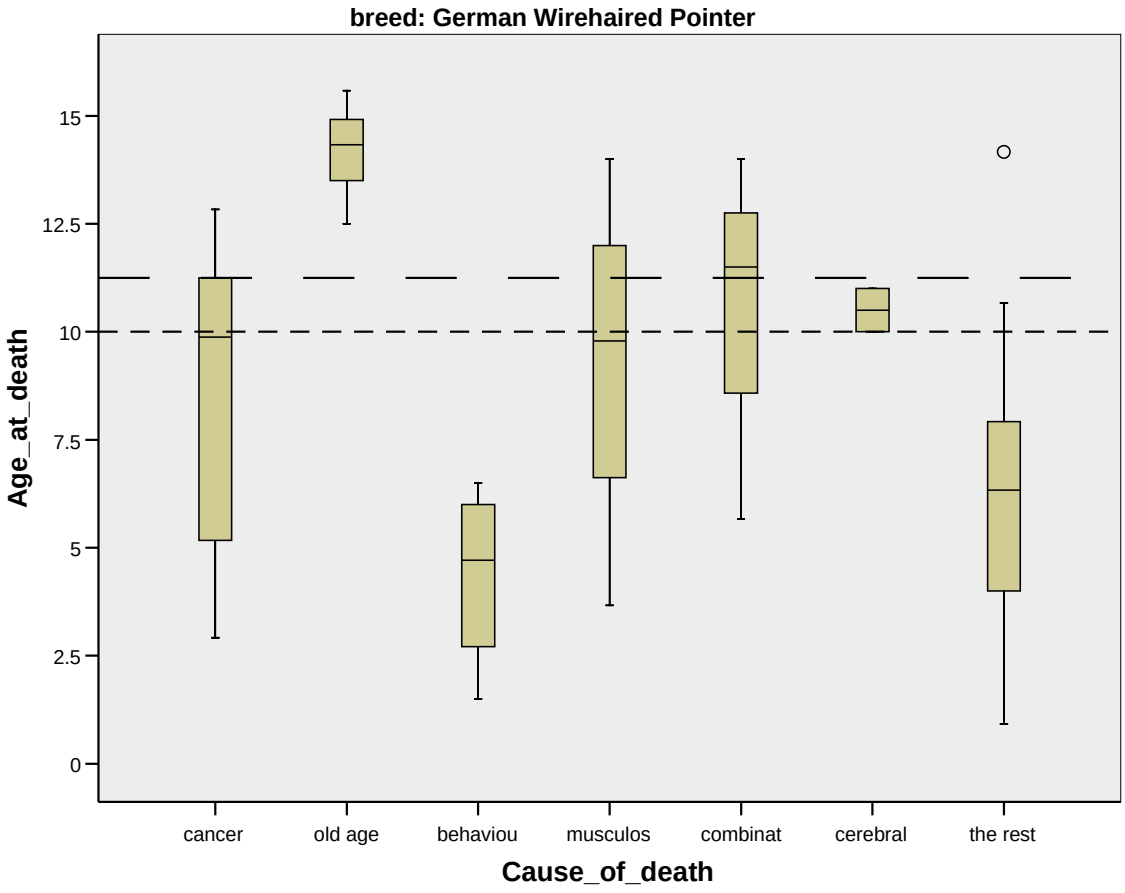


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in German Wirehaired Pointers (N=41). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for German Wirehaired Pointers. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 107 live dogs with a reported age was 4 years and 5 months (min=2 months, max=13 years and 6 months, Figure 3). Health information was reported for 107 live dogs of which 73 (68%) were healthy and 34 (32%) had at least one reported health condition, resulting in a total of 56 reported conditions with a median of 1 condition/dog (min=1, max=5).

The median current age of all healthy dogs with a reported age (N=73) was 3 years and 4 months (min=2 months, max=13 years and 6 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=34) was 6 years (min=5 months, max=13 years and 4 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=55) was 3 years (min= 2 months, max= 13 years and 4 months, Figure 4). Table 3 shows the disease conditions for German Wirehaired Pointers. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 106 German Wirehaired Pointers with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	39	20	59 (56%)
Male	34	13	47 (44%)
Totals	73 (69%)	33 (31%)	106 (100%)

There was no association between gender and neuter status (P=0.4907).

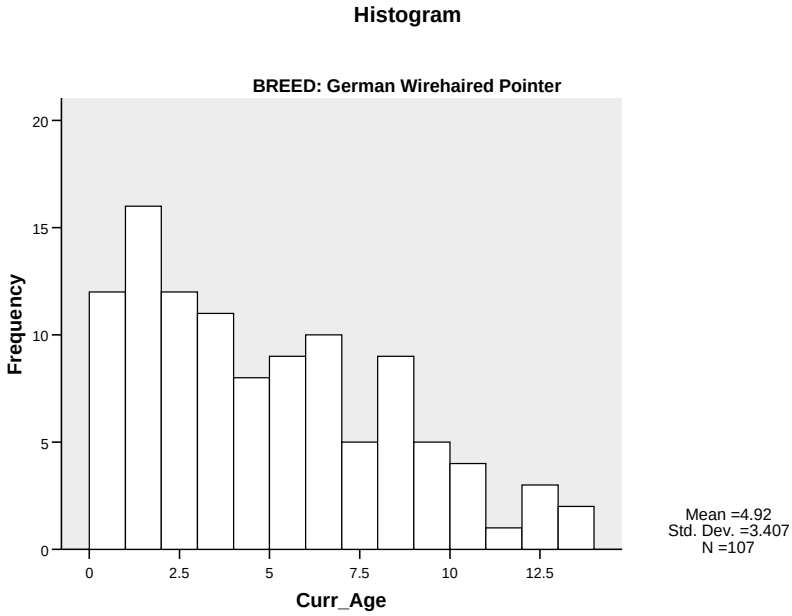


Figure 3. Histogram showing frequency of current age in years for the 107 live German Wirehaired Pointers with age reported.

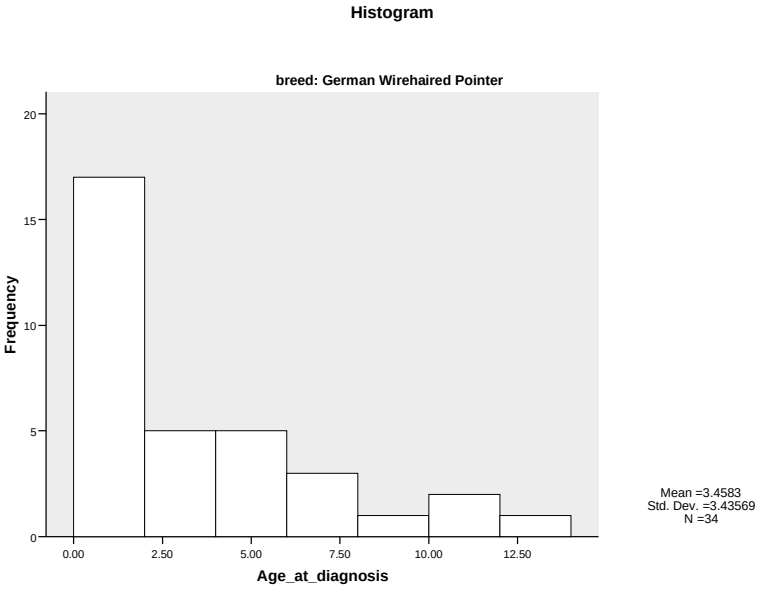


Figure 4. Histogram showing frequency of age at diagnosis for the 34 German Wirehaired Pointers with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

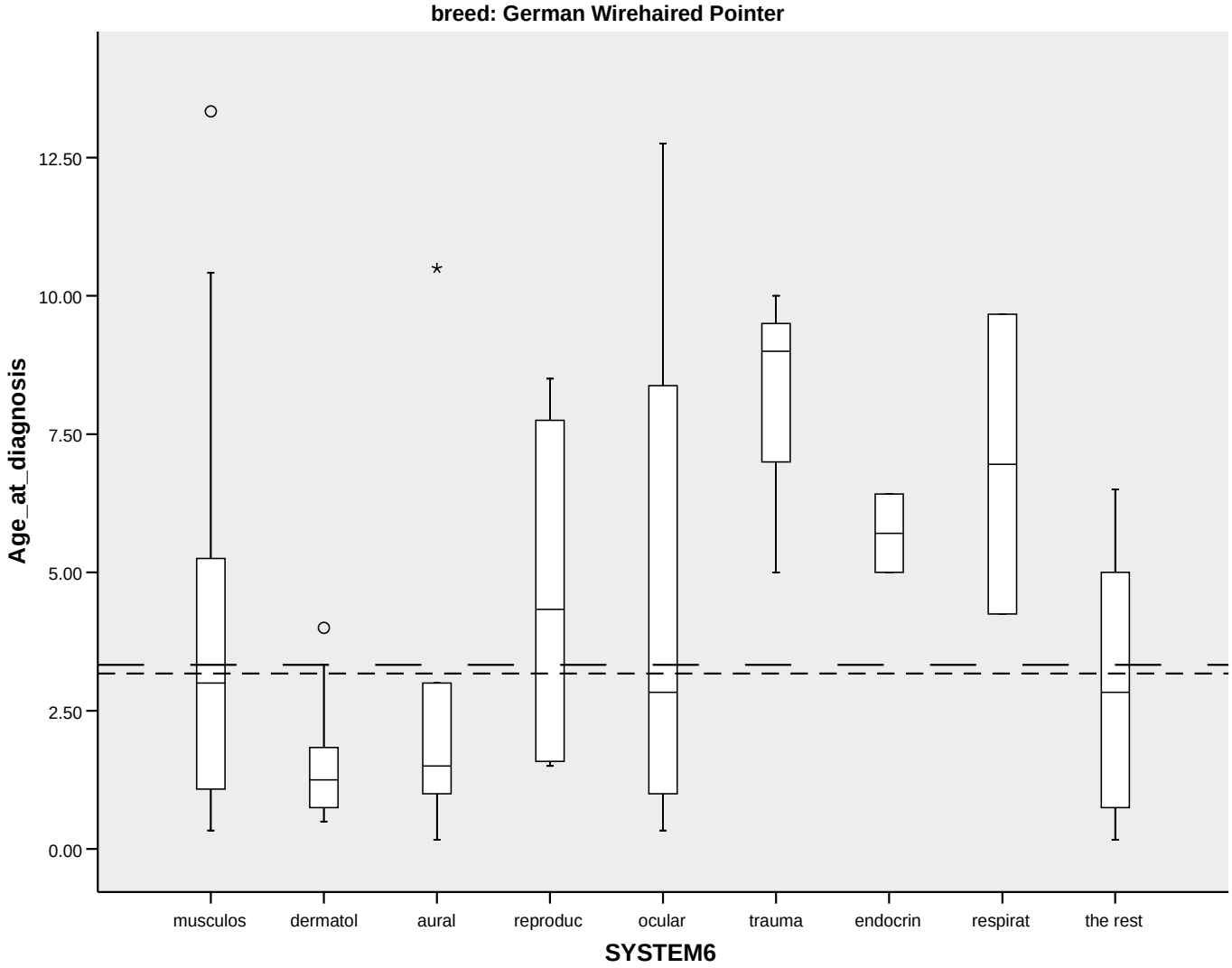


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for German Wirehaired Pointers (N=34 dogs with 55 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for German Wirehaired Pointers. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for German Wirehaired Pointers.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Musculoskeletal	12	21.4	CLR; panosteitis; spondylosis; arthritis (carpus; spine)
2	Dermatologic	9	16.1	Alopecia; mites (unspecified>sarcoptes); puppy pyoderma; dermatitis
3	Aural	5	8.9	Otitis externa; aural haematoma
4	Reproductive	5	8.9	False pregnancy; infertility; pyometra
5	Ocular	4	7.1	Entropion; epiphora; red eye; eyelid abnormality (other)
6	Immune mediated	3	5.4	Gluten-sensitive enteropathy; reaction to vaccine; unspecified
7	Trauma	3	5.4	Skin; spine
8	Endocrine	2	3.6	Hypothyroidism
9	Gastrointestinal	2	3.6	Gastroenteritis; vomiting
10	Neurologic	2	3.6	Seizures
11	Respiratory	2	3.6	Kennel cough
12	Unknown	2	3.6	Undiagnosed illness
13	Urologic	2	3.6	Cystinuria; incontinence
14	Benign neoplasia	1	1.8	Lipoma
15	Dental	1	1.8	Defect other than extra teeth
16	Haematopoietic	1	1.8	Unspecified
	Total	56	100.0	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for Giant Schnauzers

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Giant Schnauzers

A total of 190 forms were sent out and 69 were returned, representing 113 live dogs. This breed had a 36.3% response rate (69/190) and it represented 0.50% of all returns (69/13,741).

Mortality data

A total of 39 deaths were reported and this represents 0.25% of all deaths reported in the survey (39/15,881). The median age at death for Giant Schnauzers was 10 years (min = 8 months, max = 16 years and 11 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Giant Schnauzers. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Giant Schnauzers.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	16	41.0	Lymphoma; type unspecified (liver, unspecified)
2	Cardiac	6	15.4	Heart attack; heart failure; heart disease unspecified
3	Cerebral vascular	4	10.3	Stroke or cerebral vascular accident
4	Old age	4	10.3	Old age
5	Immune mediated	2	5.1	Thrombocytopaenia; unspecified
6	Died	1	2.6	
7	Gastrointestinal	1	2.6	Pancreatitis
8	Infection	1	2.6	Bacterial (unspecified)
9	Neurologic	1	2.6	Paralysis of limbs or spinal paralysis
10	Other	1	2.6	Uncodeable
11	Systemic	1	2.6	Allergy or insect bite or sting or snake bite
12	Urologic	1	2.6	Chronic kidney failure
	Total	39	100.0	

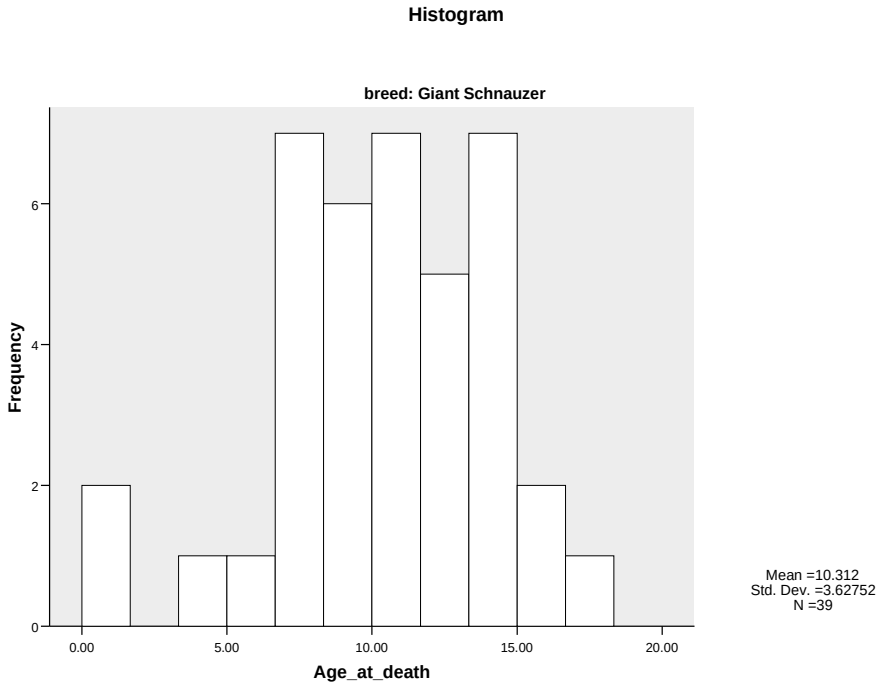


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 39 Giant Schnauzer deaths with age at death reported.

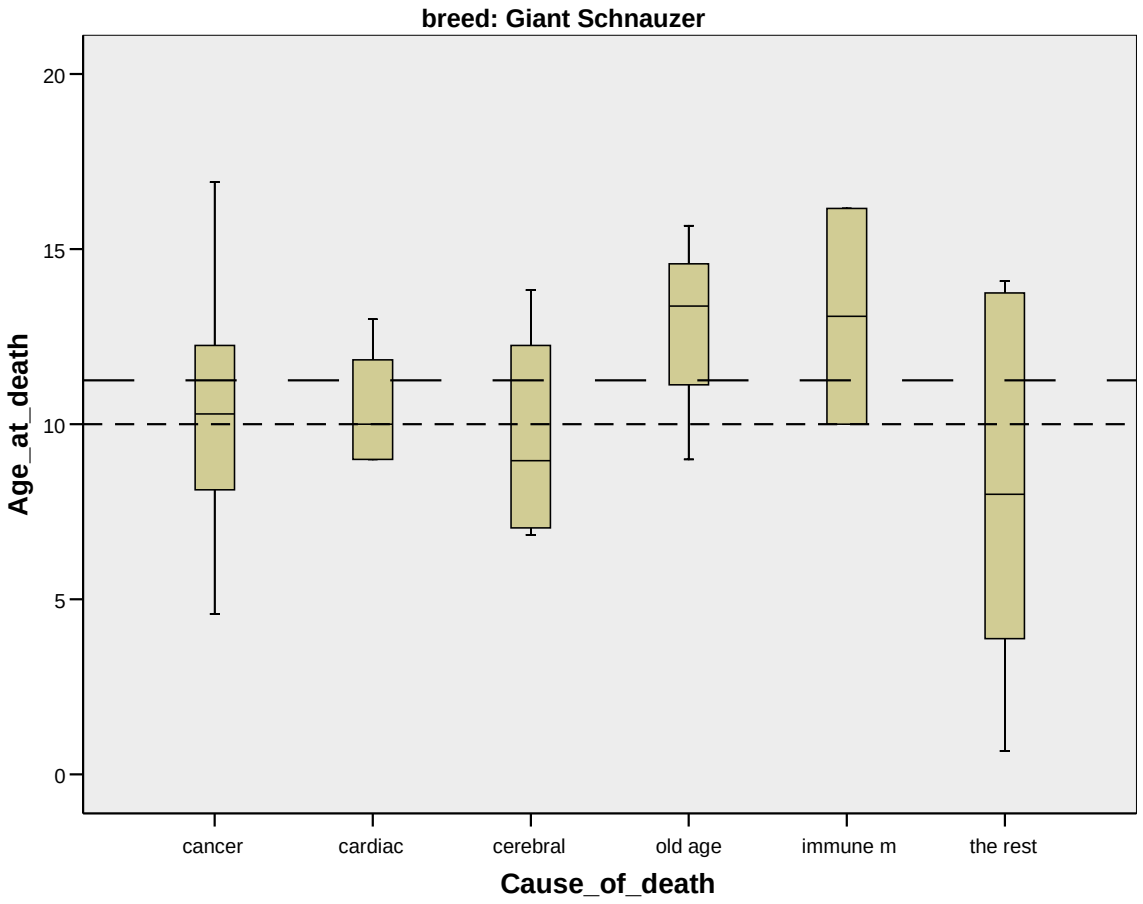


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Giant Schnauzers (N=39). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Giant Schnauzers. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 113 live dogs with a reported age was 4 years and 11 months (min=4 months, max=15 years and 5 months, Figure 3). Health information was reported for 113 live dogs of which 63 (56%) were healthy and 50 (44%) had at least one reported health condition, resulting in a total of 103 reported conditions with a median of 1 condition/dog (min=1, max=5).

The median current age of all healthy dogs with a reported age (N=63) was 3 years and 6 months (min=4 months, max=10 years and 6 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=50) was 6 years and 9 months (min=6 months, max=15 years and 5 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=99) was 4 years and 6 months (min= 2 months, max= 14 years and 11 months, Figure 4). Table 3 shows the disease conditions for Giant Schnauzers. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 113 Giant Schnauzers with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	38	36	74 (65%)
Male	22	17	39 (35%)
Totals	60 (53%)	53 (47%)	113 (100%)

There was no association between gender and neuter status (P=0.6084).

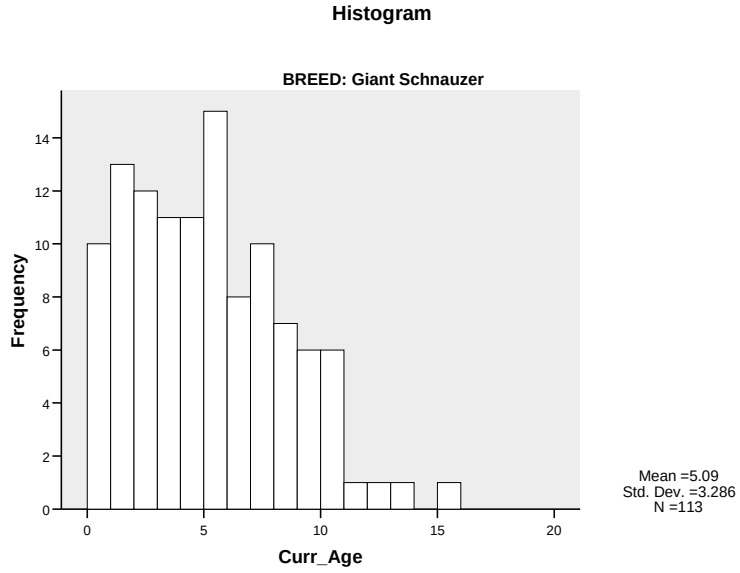


Figure 3. Histogram showing frequency of current age in years for the 113 live Giant Schnauzers with age reported.

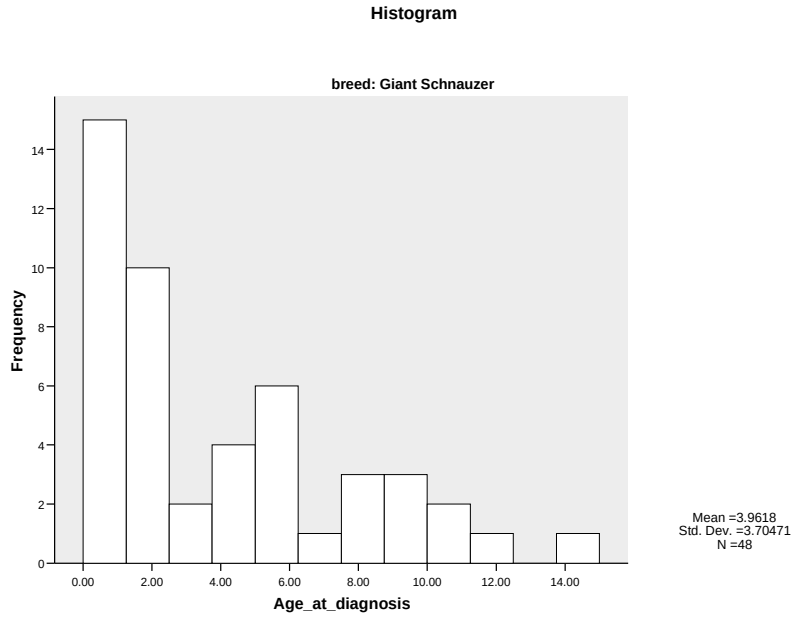


Figure 4. Histogram showing frequency of age at diagnosis for the 48 Giant Schnauzers with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

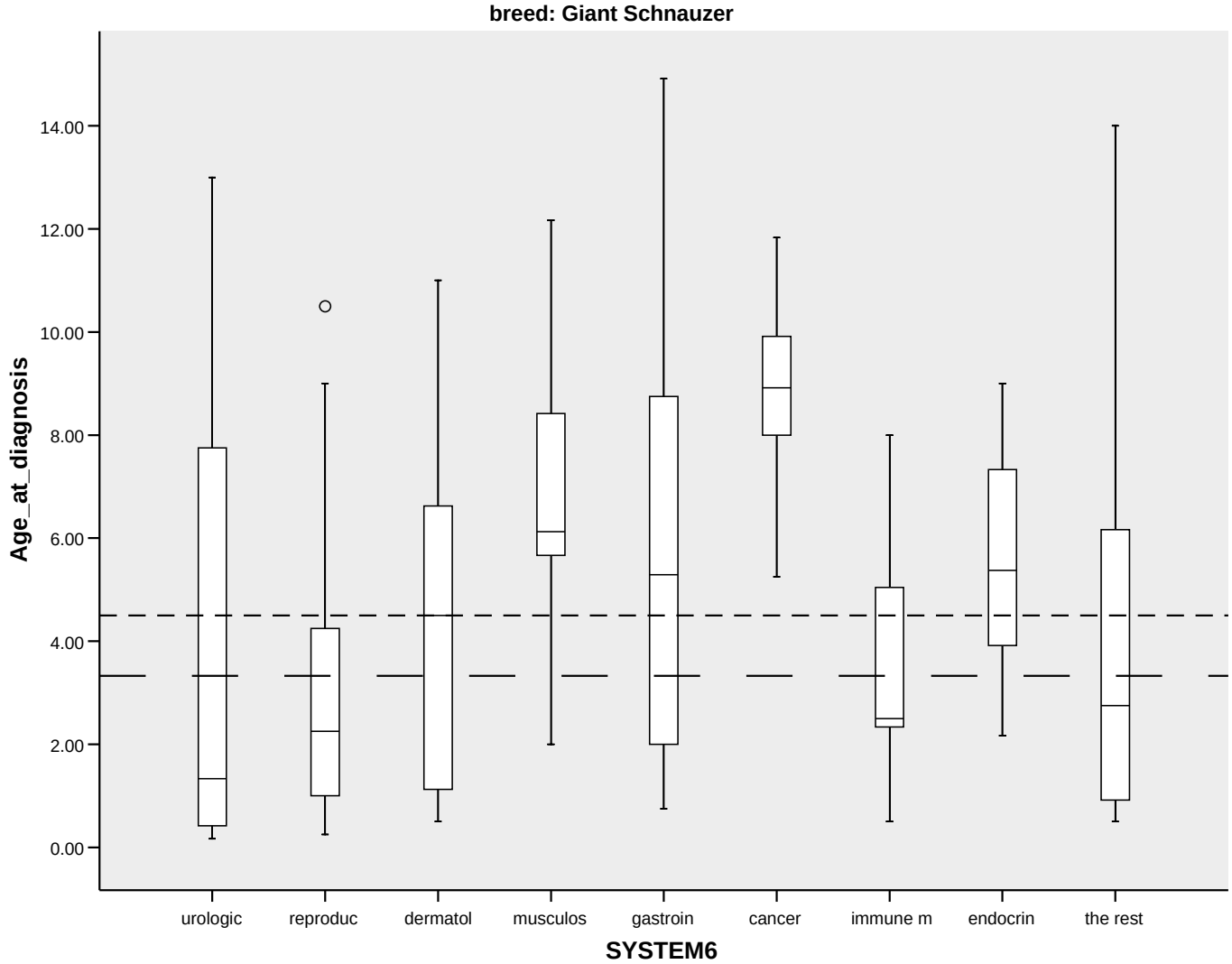


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Giant Schnauzers (N=50 dogs with 99 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Giant Schnauzers. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Giant Schnauzers.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Urologic	13	12.6	Incontinence (unspecified>OHE); cystitis
2	Reproductive	12	11.7	False pregnancy; pyometra; cryptorchid
3	Dermatologic	11	10.7	Dermatitis; mites (demodex); paronchya; alopecia
4	Musculoskeletal	11	10.7	Arthritis (hips>hindlimb); CLR; CHD; spondylosis
5	Gastrointestinal	10	9.7	GDV; diarrhoea; campylobacter; colitis; gastric ulcer; IBD; pancreatitis
6	Cancer	7	6.8	Type unspecified (skin, liver, mammary); mast cell tumour
7	Immune mediated	7	6.8	Gluten-sensitive enteropathy; food hypersensitivity; atopy; DLE
8	Endocrine	6	5.8	Hypothyroidism
9	Ocular	5	4.9	Other (unspecified); cataracts; conjunctivitis; KCS
10	Behaviour	4	3.9	Unspecified; aggression
11	Aural	3	2.9	Otitis externa; ear mites; excessive ear wax
12	Neurologic	3	2.9	Seizures
13	Respiratory	3	2.9	Bronchitis; kennel cough; noisy breathing
14	Benign neoplasia	2	1.9	Lipoma
15	Uncode and other	2	1.9	Uncodeable
16	Cardiac	1	1.0	Heart rhythm disorder
17	Dental	1	1.0	Retained puppy teeth
18	Haematopoietic	1	1.0	Hypereosinophilic syndrome
19	Unknown	1	1.0	
	Total	103	100.0	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for Glen of Imaal Terriers

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Glen of Imaal Terriers

A total of 93 forms were sent out and 35 were returned, representing 55 live dogs. This breed had a 37.6% response rate (35/93) and it represented 0.25% of all returns (35/13,741).

Mortality data

A total of 6 deaths were reported and this represents 0.04% of all deaths reported in the survey (6/15,881). The median age at death for Glen of Imaal Terriers was 10 years and 5 months (min = 7 years and 9 months, max = 14 years and 6 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Glen of Imaal Terriers. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Glen of Imaal Terriers.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	2	33.3	Lymphoma; type unspecified (liver)
2	Combinations	2	33.3	Cushings disease & liver cancer; liver & kidney failure
3	Cardiac	1	16.7	Heart failure
4	Old age	1	16.7	Old age
	Total	6	100.0	

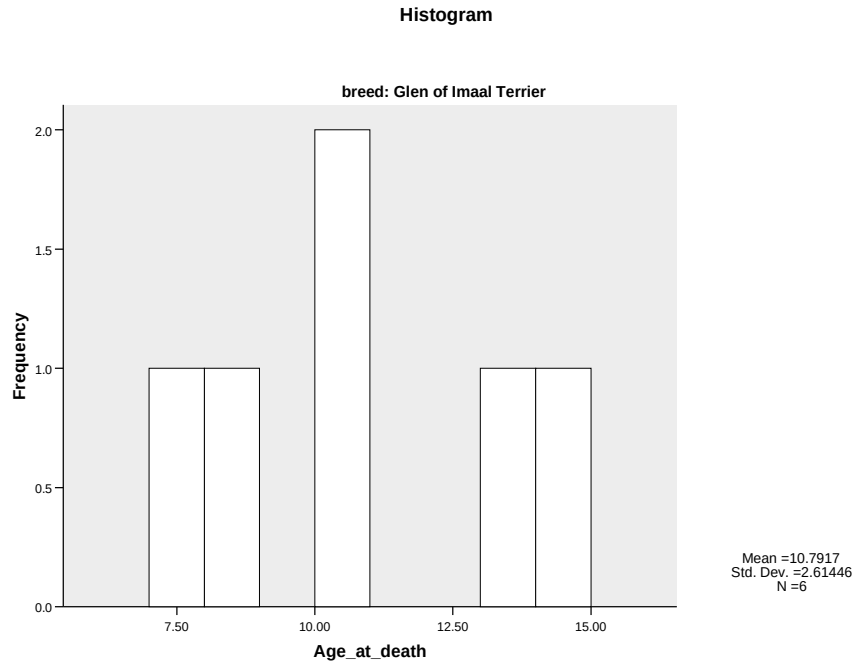


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 6 Glen of Imaal Terrier deaths with age at death reported.

Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Glen of Imaal Terriers (N=6). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Glen of Imaal Terriers. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 55 live dogs with a reported age was 4 years and 10 months (min=11 months, max=14 years and 4 months, Figure 3). Health information was reported for 55 live dogs of which 33 (60%) were healthy and 22 (40%) had at least one reported health condition, resulting in a total of 32 reported conditions with a median of 1 condition/dog (min=1, max=3).

The median current age of all healthy dogs with a reported age (N=33) was 4 years and 8 months (min=11 months, max=14 years and 4 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=22) was 4 years and 12 months (min=1 year and 2 months, max=13 years and 1 month). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=32) was 2 years and 2 months (min= 3 months, max= 12 years, Figure 4). Table 3 shows the disease conditions for Glen of Imaal Terriers. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 54 Glen of Imaal Terriers with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	15	11	26 (48%)
Male	18	10	28 (52%)
Totals	33 (61%)	21 (39%)	54 (100%)

There was no association between gender and neuter status (P=0.6195).

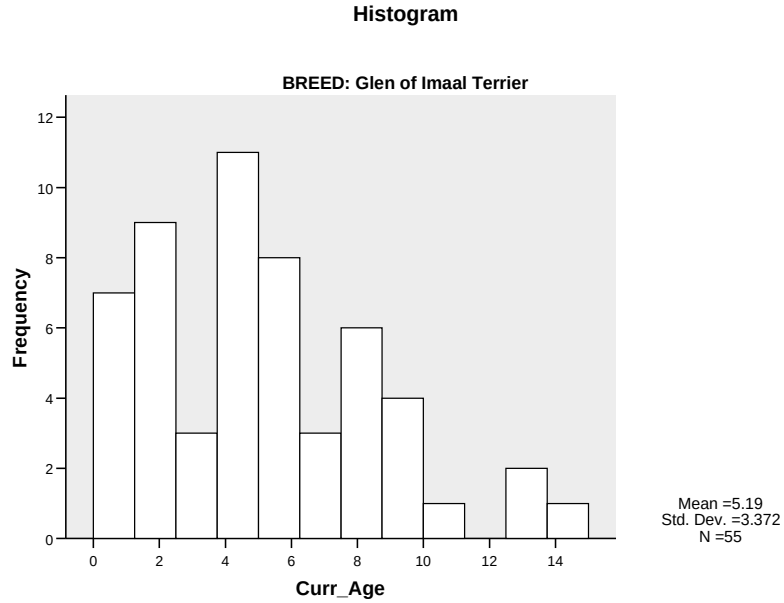


Figure 3. Histogram showing frequency of current age in years for the 55 live Glen of Imaal Terriers with age reported.

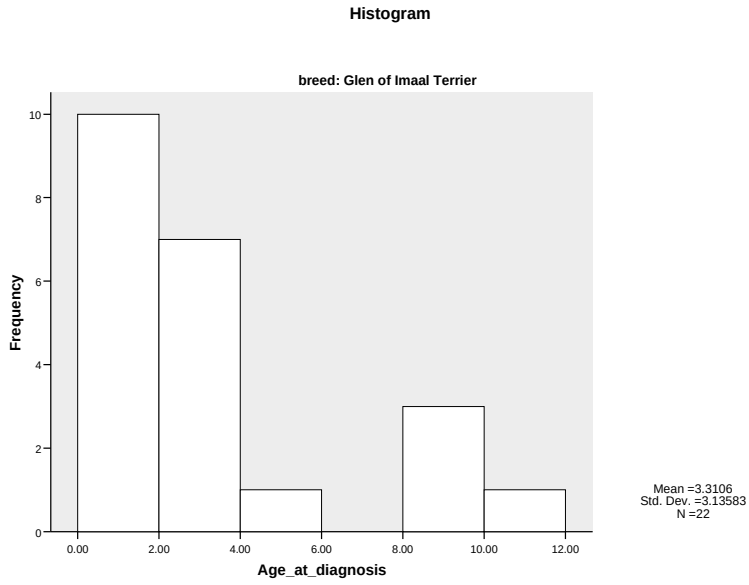


Figure 4. Histogram showing frequency of age at diagnosis for the 22 Glen of Imaal Terriers with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

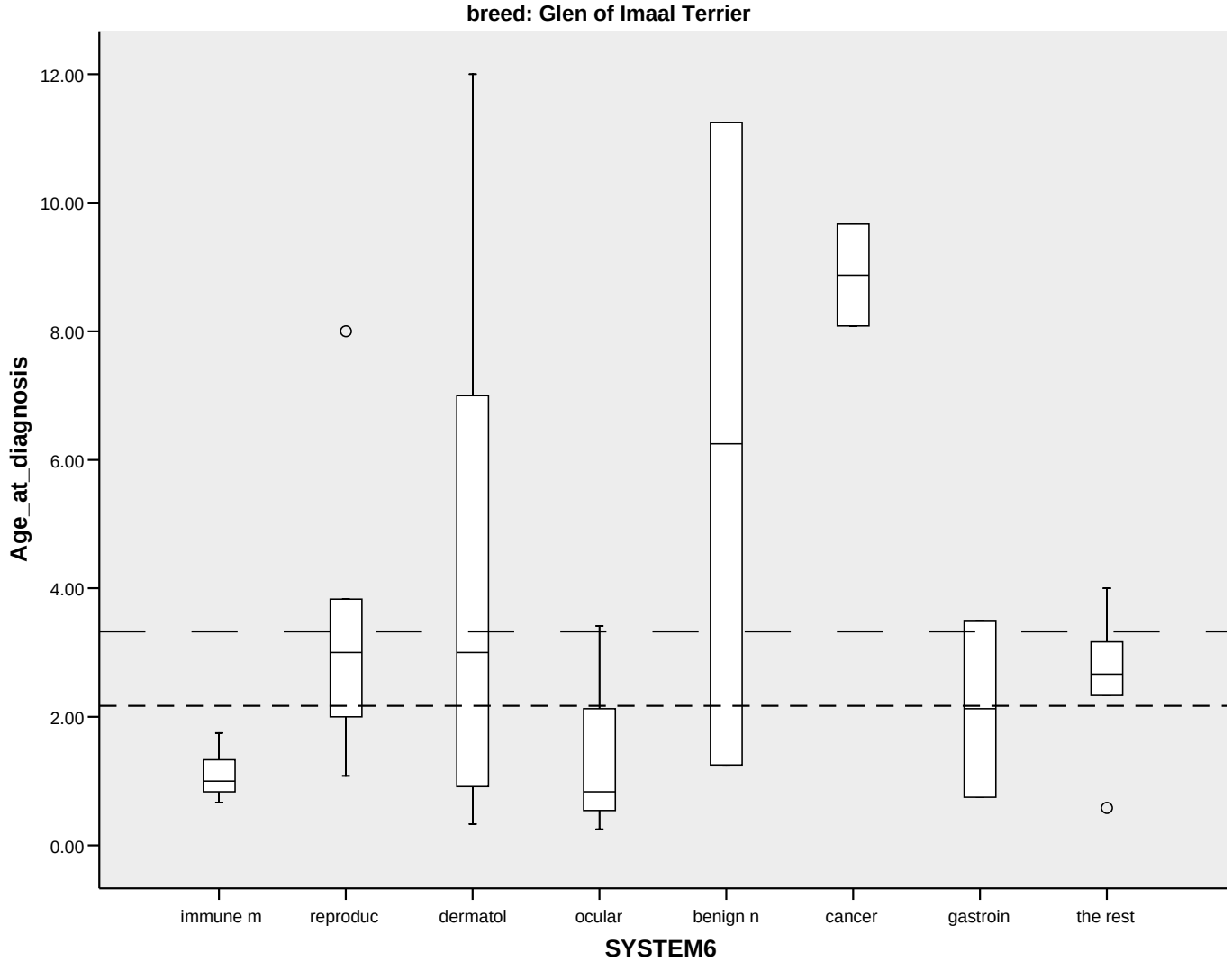


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Glen of Imaal Terriers (N=22 dogs with 32 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Glen of Imaal Terriers. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Glen of Imaal Terriers.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Immune mediated	7	21.9	Atopy; food hypersensitivity; dust mite allergy
2	Reproductive	6	18.8	False pregnancy; infertility; prostatomegaly; dystochia (physical blockage)
3	Dermatologic	5	15.6	Dermatitis; pyotraumatic dermatitis; recurrent pyoderma
4	Ocular	3	9.4	Entropion; progressive retinal atrophy (PRA); unspecified
5	Benign neoplasia	2	6.3	Lipoma, mammary cysts
6	Cancer	2	6.3	Carcinoma (unspecified); squamous cell carcinoma (SCC) (oral)
7	Gastrointestinal	2	6.3	Colitis; foreign body obstruction
8	Musculoskeletal	2	6.3	Lameness (hindlimb; unspecified)
9	Aural	1	3.1	Otitis externa; ear mites
10	Cardiac	1	3.1	Aortic stenosis
11	Urologic	1	3.1	Cystitis
	Total	32	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for Golden Retrievers

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Golden Retrievers

A total of 3282 forms were sent out and 538 were returned, representing 1717 live dogs. This breed had a 16.4% response rate (538/3282) and it represented 3.92% of all returns (538/13,741).

Mortality data

A total of 927 deaths were reported and this represents 5.84% of all deaths reported in the survey (927/15,881). The median age at death for Golden Retrievers was 12 years and 3 months (min = 5 months, max = 17 years and 3 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Golden Retrievers. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Golden Retrievers.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	360	38.8	Type unspecified (liver, bone, unspecified)
2	Old age	172	18.6	Old age
3	Cerebral vascular	55	5.9	Stroke or cerebral vascular accident
4	Cardiac	50	5.4	Heart failure; heart attack; defect unspecified
5	Combinations	37	4.0	
6	Urologic	36	3.9	Kidney failure (chronic > acute); kidney stones
7	Other	34	3.7	Uncodeable
8	Neurologic	32	3.5	Seizures; CDRM; spondylitis; spinal disease (unspec.)
9	Musculoskeletal	19	2.0	Arthritis; hip dysplasia; OCD (elbow)
10	Hepatic	16	1.7	Liver failure (chronic > acute); liver disease (unspec.)
11	Gastrointestinal	15	1.6	GDV; megaoesophagus; pancreatitis
12	Perioperative	15	1.6	
13	Unknown	14	1.5	
14	Trauma	11	1.2	Road traffic accident; unspecified; spinal injury
15	Behaviour	8	0.9	Aggression; unspecified
16	Reproductive	8	0.9	Pyometra; ruptured uterus
17	Endocrine	6	0.6	Diabetes mellitus; Addisons disease; Cushings disease
18	Internal bleeding	5	0.5	
19	Sudden death	5	0.5	
20	Collapse	4	0.4	
21	Infection	4	0.4	Leptospirosis; bacterial (unspec.); viral (unspec.)
22	Poisoning	4	0.4	
23	Respiratory	4	0.4	Unspecified
24	Senility	4	0.4	
25	Cardiovascular	2	0.2	Unspecified
26	Immune mediated	2	0.2	Thrombocytopaenia; unspecified
27	Ocular	2	0.2	Glaucoma; uveitis
28	Portosystemic shunt (PSS)	1	0.1	
29	Septicaemia	1	0.1	
30	Systemic	1	0.1	Allergy or insect bite or sting or snake bite
	Total	927	100.0	

CDRM=chronic degenerative radiculomyelopathy

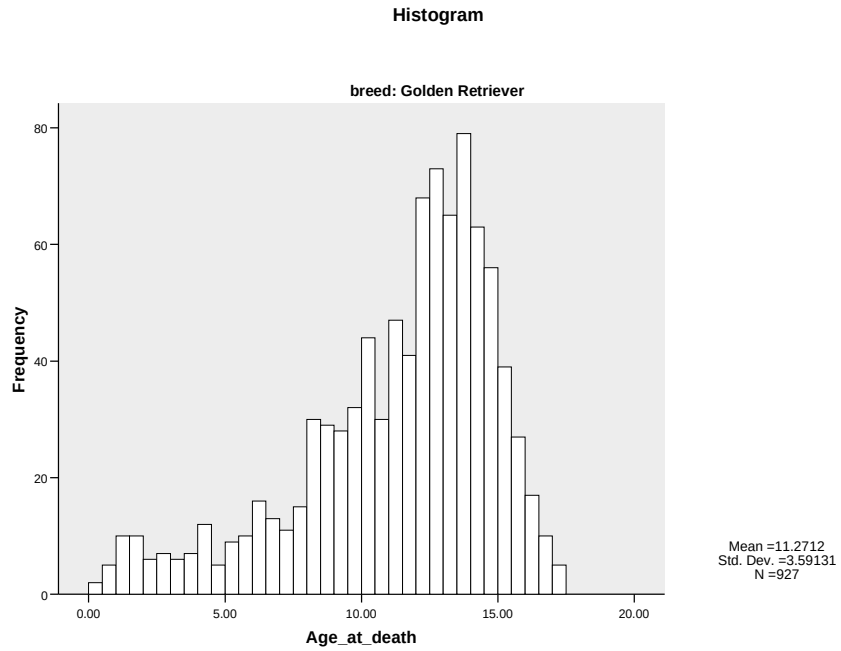


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 927 Golden Retriever deaths with age at death reported.

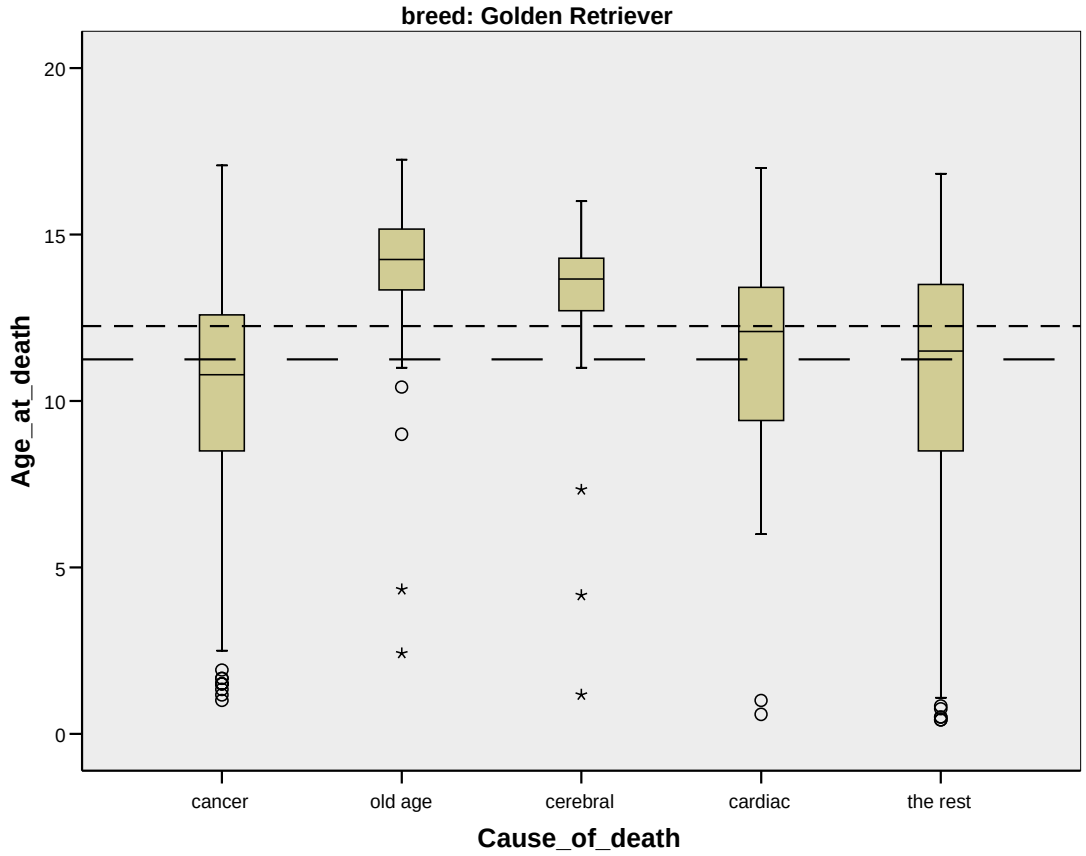


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Golden Retrievers (N=927). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Golden Retrievers. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 1706 live dogs with a reported age was 5 years and 9 months (min=2 months, max=16 years and 6 months, Figure 3). Health information was reported for 1717 live dogs of which 1062 (62%) were healthy and 655 (38%) had at least one reported health condition, resulting in a total of 1087 reported conditions with a median of 1 condition/dog (min=1, max=8).

The median current age of all healthy dogs with a reported age (N=1062) was 4 years and 6 months (min=2 months, max=16 years). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=637) was 7 years and 11 months (min=6 months, max=16 years and 6 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=1052) was 4 years (min= 2 months, max= 15 years, Figure 4). Table 3 shows the disease conditions for Golden Retrievers. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 1697 Golden Retrievers with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	816	342	1158 (68%)
Male	450	89	539 (32%)
Totals	1266 (75%)	431 (25%)	1697 (100%)

Significantly more females were neutered (P<0.0001).

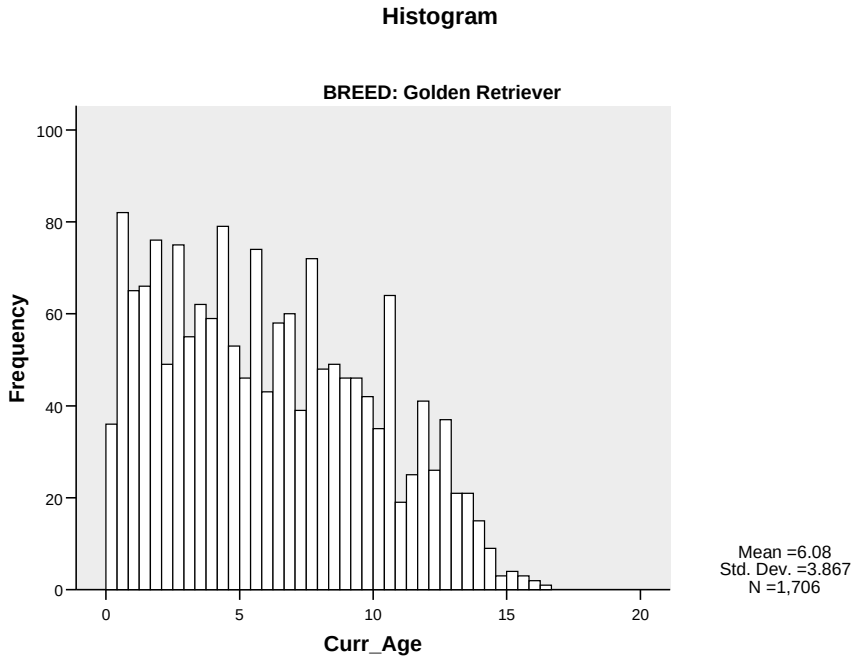


Figure 3. Histogram showing frequency of current age in years for the 1706 live Golden Retrievers with age reported.

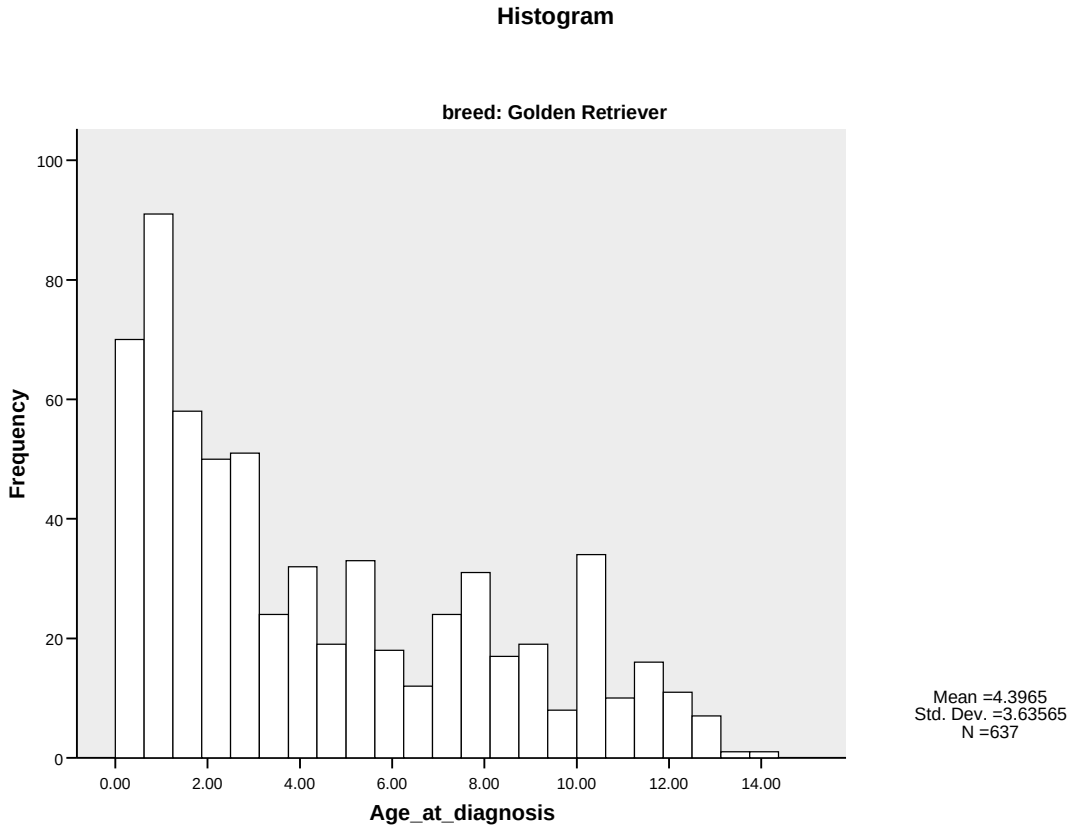


Figure 4. Histogram showing frequency of age at diagnosis for the 637 Golden Retrievers with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

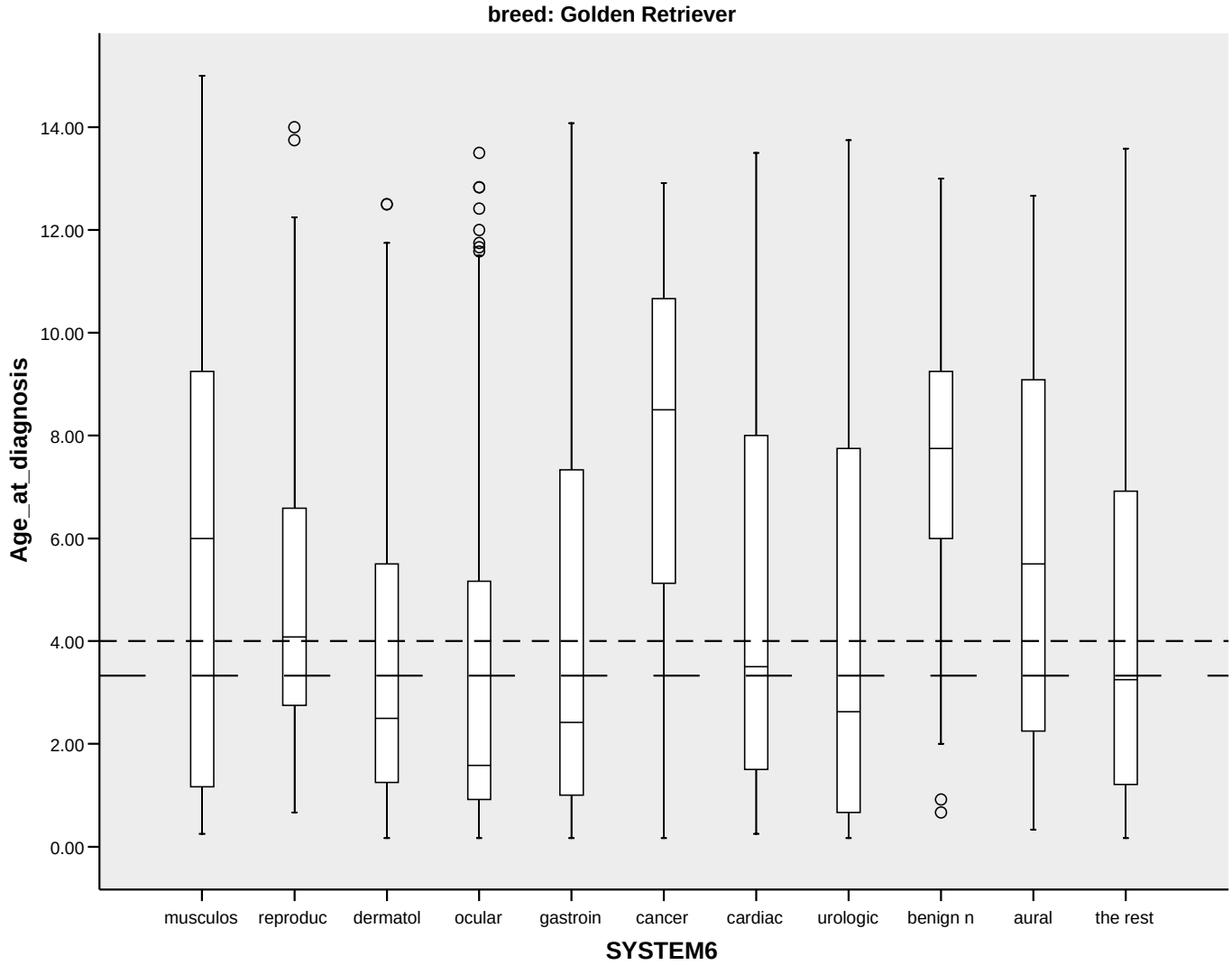


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Golden Retrievers (N=637 dogs with 1052 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Golden Retrievers. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Golden Retrievers.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Musculoskeletal	193	17.8	Arthritis (unspecified>elbows>hindlimb>rest); CLR; CHD; OCD (elbow>rest); spondylitis
2	Reproductive	155	14.3	Pyometra; dystochia (uterine inertia>stuck puppy); false pregnancy; infertility
3	Dermatologic	136	12.5	Pyotraumatic dermatitis; fading nose pigment; dermatitis
4	Ocular	90	8.3	Cataracts; entropion; MRD; blocked tear duct; epiphora; congenital cataracts; glaucoma
5	Gastrointestinal	74	6.8	Colitis; diarrhoea; foreign body obstruction; IBD; gastric dilatation/volvulus (GDV)
6	Cancer	56	5.2	Type unspecified (skin, mammary); MCT (various); lymphoma; adenocarcinoma
7	Respiratory	51	4.7	Kennel cough; laryngeal paralysis; rhinitis; pneumonia
8	Cardiac	50	4.6	Heart murmur (unspecified>grade2>grade1>rest); aortic stenosis; heart rhythm disorder
9	Urologic	47	4.3	Cystitis; incontinence (unspecified>OHE); cystouroliths (unspecified)
10	Benign neoplasia	42	3.9	Lipoma; type unspecified (mammary); histiocytoma; adenoma (perianal)
11	Immune mediated	39	3.6	Atopy; gluten-sensitive enteropathy; food hypersensitivity; other allergy (unspecified);
12	Aural	37	3.4	Otitis externa; aural haematoma; otitis interna
13	Endocrine	30	2.8	Hypothyroidism; Cushing's disease; hyperthyroidism; hypoparathyroidism; weight loss
14	Neurologic	21	1.9	Seizures; CDRM; IVDD (unspecified; lumbar); neuropathy
15	Unknown	21	1.9	Unknown; undiagnosed liver disease
16	Trauma	15	1.4	Hindlimb; forelimb; other (unspecified)
17	Dental	12	1.1	Retained puppy teeth; dental disease; defect other than extra teeth
18	Uncode and other	7	0.6	Uncodeable
19	Anal gland	4	0.4	Anal sacculitis
20	Cerebrovascular	4	0.4	Stroke or cerebral vascular accident
21	Hepatic	2	0.2	Hepatitis; PSS
22	Behaviour	1	0.1	Unspecified
	Total	1087	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for Gordon Setters

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Gordon Setters

A total of 545 forms were sent out and 126 were returned, representing 293 live dogs. This breed had a 23.1% response rate (126/545) and it represented 0.92% of all returns (126/13,741).

Mortality data

A total of 157 deaths were reported and this represents 0.99% of all deaths reported in the survey (157/15,881). The median age at death for Gordon Setters was 11 years and 1 month (min = 4 months, max = 16 years and 3 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Gordon Setters. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Gordon Setters.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	46	29.3	Type unspecified (lung, unspecified); lymphoma;
2	Old age	26	16.6	Old age
3	Cardiac	23	14.6	Heart failure; cardiomegaly
4	Combinations	9	5.7	
5	Musculoskeletal	7	4.5	Hip dysplasia; arthritis
6	Urologic	7	4.5	Kidney failure; incontinence; kidney amyloidosis
7	Cerebral vascular	6	3.8	Stroke or cerebral vascular accident
8	Neurologic	6	3.8	Seizures; spinal disease unspecified
9	Trauma	5	3.2	Road traffic accident; unspecified
10	Behaviour	4	2.5	Aggression; behavioural problem unspecified
11	Gastrointestinal	3	1.9	Gastric dilatation/volvulus; IBD
12	Other	3	1.9	Uncodeable
13	Perioperative	2	1.3	
14	Endocrine	1	0.6	Diabetes mellitus
15	Hepatic	1	0.6	Liver disease unspecified
16	Immune mediated	1	0.6	Unspecified
17	Pining	1	0.6	
18	Poisoning	1	0.6	
19	Respiratory	1	0.6	Laryngeal paralysis
20	Septicaemia	1	0.6	
21	Sudden death	1	0.6	
22	Systemic	1	0.6	Allergy or insect bite or sting or snake bite
23	Unknown	1	0.6	
	Total	157	100.0	

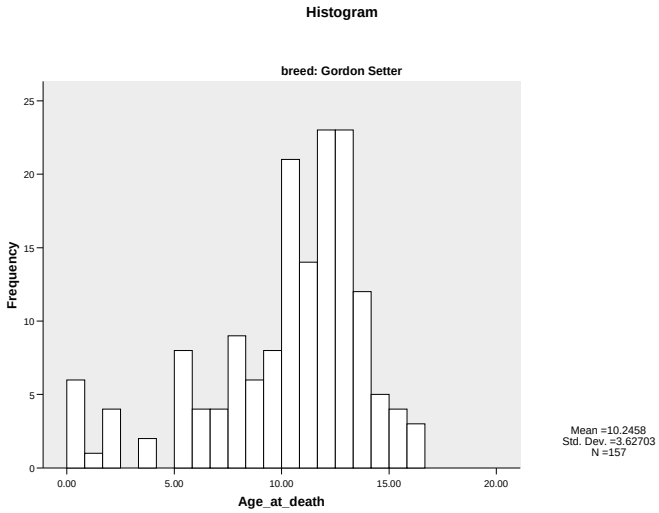


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 157 Gordon Setter deaths with age at death reported.

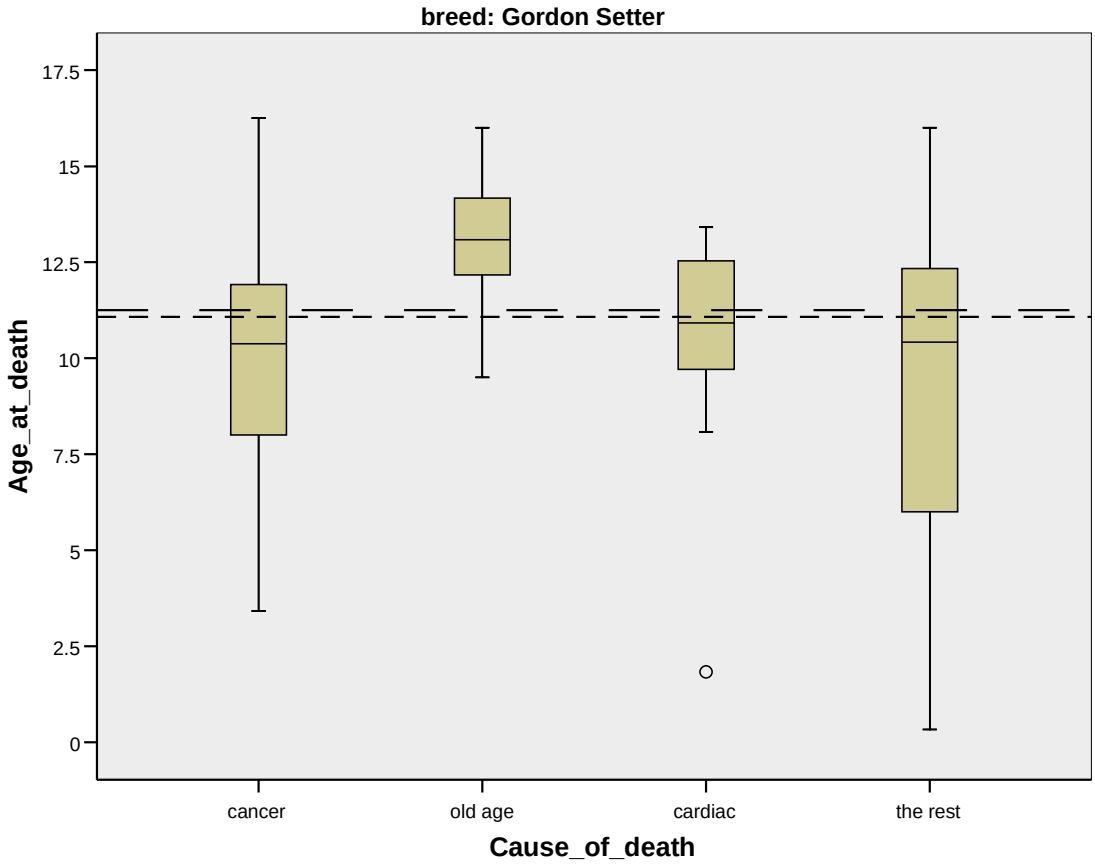


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Gordon Setters (N=157). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Gordon Setters. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 293 live dogs with a reported age was 5 years and 4 months (min=1 month, max=14 years and 2 months, Figure 3). Health information was reported for 293 live dogs of which 155 (53%) were healthy and 138 (47%) had at least one reported health condition, resulting in a total of 245 reported conditions with a median of 1 condition/dog (min=1, max=7).

The median current age of all healthy dogs with a reported age (N=155) was 4 years (min=1 month, max=13 years and 10 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=136) was 7 years (min=6 months, max=14 years and 2 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=238) was 3 years and 9 months (min= 2 months, max= 13 years, Figure 4). Table 3 shows the disease conditions for Gordon Setters. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 292 Gordon Setters with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	111	71	182 (62%)
Male	93	17	110 (38%)
Totals	204 (70%)	88 (30%)	292 (100%)

Significantly more females were neutered (P<0.0001).

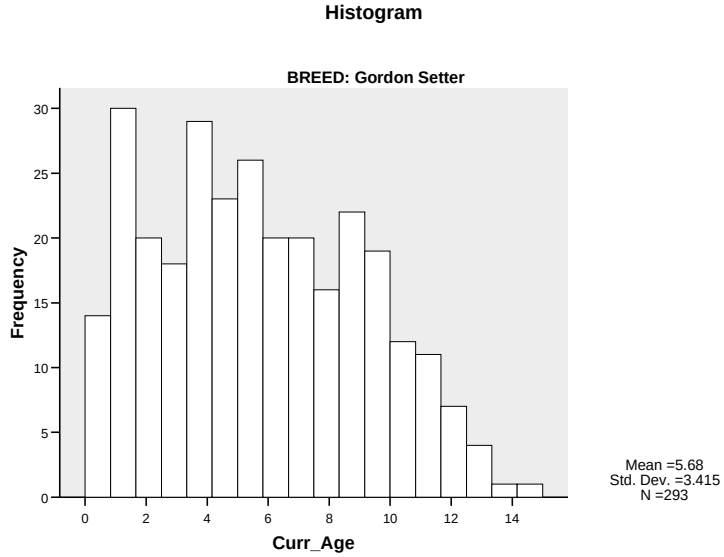


Figure 3. Histogram showing frequency of current age in years for the 293 live Gordon Setters with age reported.

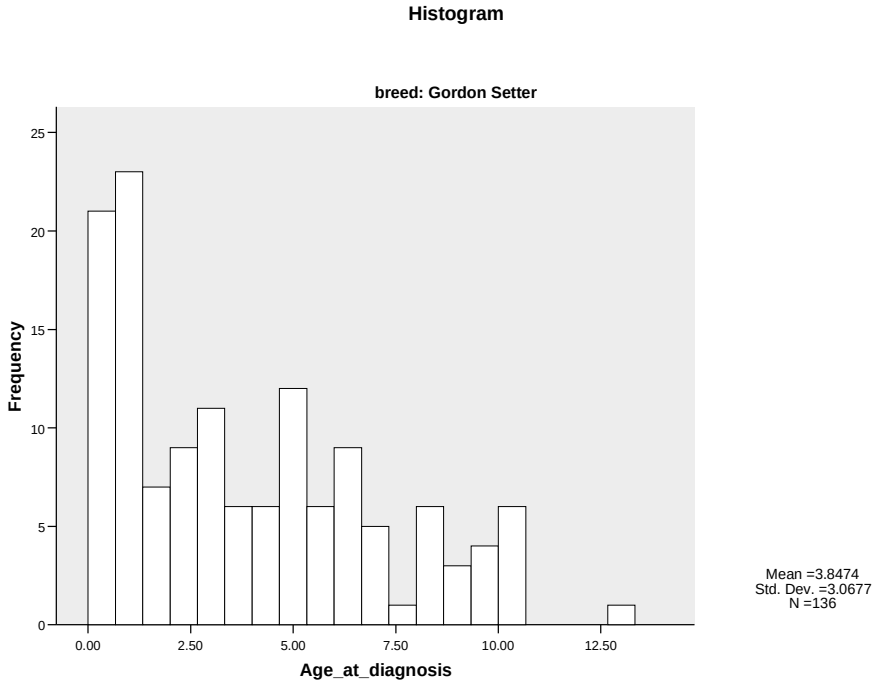


Figure 4. Histogram showing frequency of age at diagnosis for the 136 Gordon Setters with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

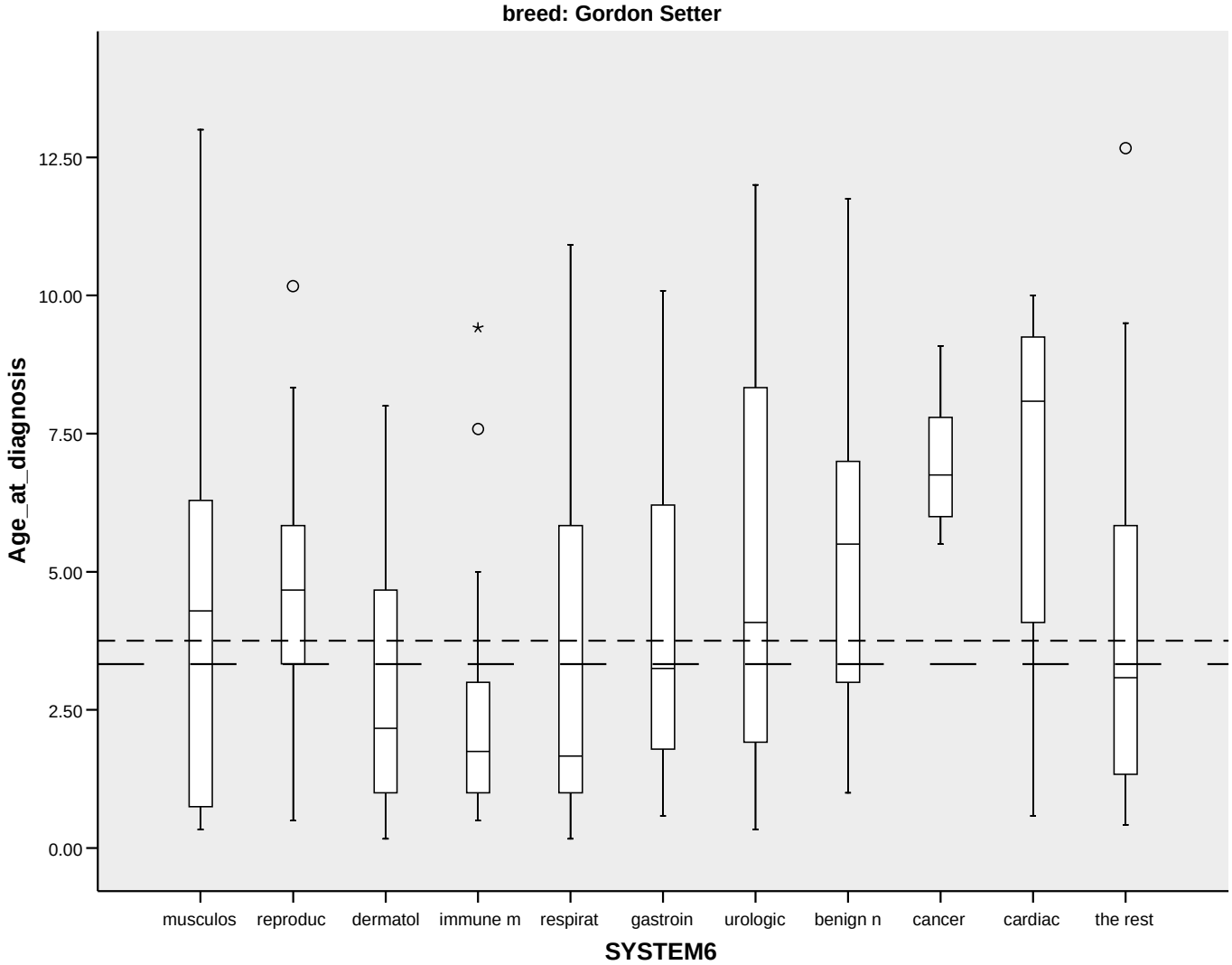


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Gordon Setters (N=136 dogs with 238 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Gordon Setters. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Gordon Setters.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Musculoskeletal	49	20.0	Arthritis (hips>stifle>rest); OCD (elbow>shoulder); CHD; CLR
2	Reproductive	29	11.8	Pyometra; false pregnancy; prostatomegaly
3	Dermatologic	22	9.0	Dermatitis; mites (sarcoptes>demodex); sebaceous cysts
4	Immune mediated	22	9.0	Gluten-sensitive enteropathy; food hypersensitivity; atopy; flea allergy
5	Respiratory	19	7.8	Kennel cough; laryngeal paralysis; respiratory tract infections
6	Gastrointestinal	17	6.9	Gastric dilatation/volvulus; colitis; pancreatitis
7	Urologic	14	5.7	Incontinence (unspecified=after spay); cystitis
8	Benign neoplasia	13	5.3	Lipoma; sebaceous cyst
9	Ocular	10	4.1	Cataracts; cherry eye; epiphora
10	Aural	9	3.7	Otitis externa
11	Cancer	8	3.3	Type unspecified (mammary); lipoma; insulinoma; mast cell tumour (MCT)
12	Cardiac	8	3.3	Heart murmur (unspecified); dilated cardiomyopathy; mitral valve disease (MVD)
13	Endocrine	6	2.4	Hypothyroidism; diabetes mellitus
14	Behaviour	5	2.0	Unspecified
15	Neurologic	5	2.0	Seizures; discospondylitis; disc disease & paralysis of limbs; weakness
16	Trauma	3	1.2	Unspecified; hindlimb
17	Dental	2	0.8	Retained puppy teeth
18	Other	2	0.8	Uncodeable
19	Anal gland	1	0.4	Anal sacculitis
20	Unknown	1	0.4	Undiagnosed illness
	Total	245	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for the Grand Bleu de Gascoigne breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Grand Bleu de Gascoigne breed

A total of 21 forms were sent out and 7 were returned, representing 14 live dogs. This breed had a 33.3% response rate (7/21) and it represented 0.05% of all returns (7/13,741).

Mortality data

A total of 6 deaths were reported and this represents 0.04% of all deaths reported in the survey (6/15,881). The median age at death for the Grand Bleu de Gascoigne breed was 4 years and 7 months (min = 2 years and 6 months, max = 10 years and 1 month) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Grand Bleu de Gascoigne breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Grand Bleu de Gascoigne breed.

Cause of death		N	%	Most common specific causes in descending order
1	Gastrointestinal	3	50.0	Gastric dilatation/volvulus (GDV)
2	Cancer	1	16.7	Mesothelioma
3	Neurologic	1	16.7	Spondylitis
4	Respiratory	1	16.7	Pneumonia
	Total	6	100.0	

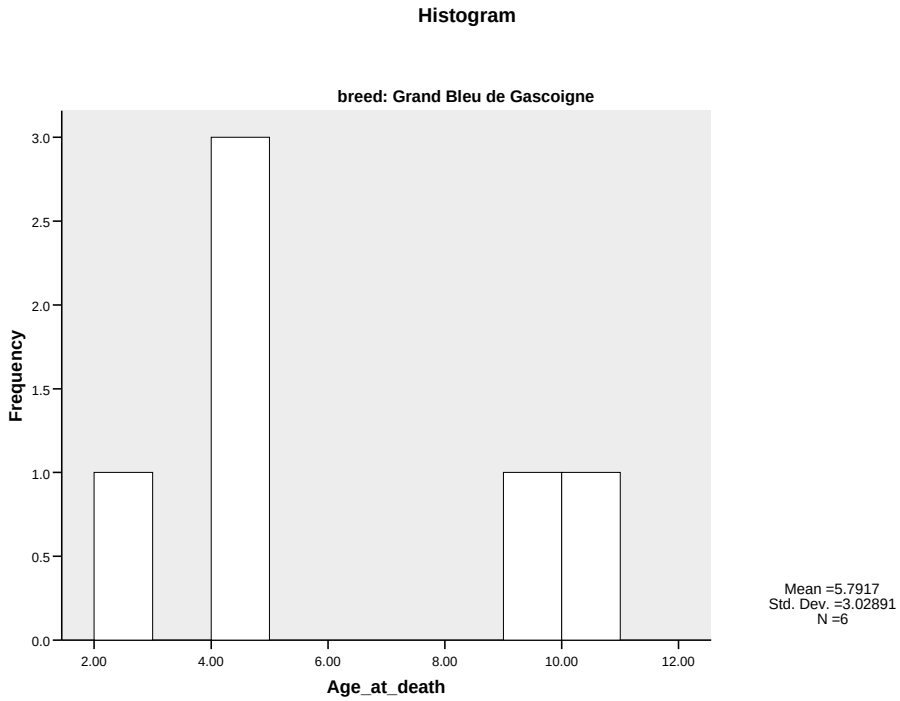


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 6 Grand Bleu de Gascoigne deaths with age at death reported.

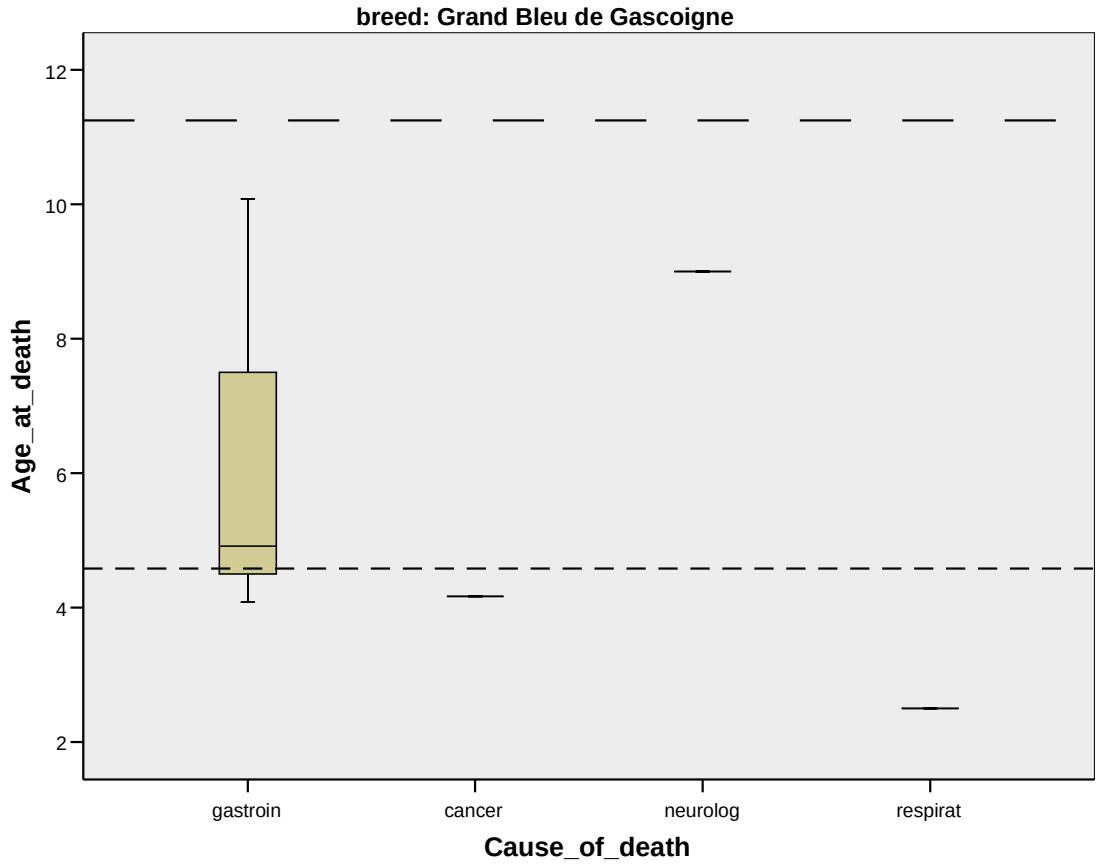


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the Grand Bleu de Gascoigne breed (N=6). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the Grand Bleu de Gascoigne breed. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 14 live dogs with a reported age was 4 years and 7 months (min=3 months, max=7 years, Figure 3). Health information was reported for 14 live dogs of which 9 (64%) were healthy and 5 (36%) had at least one reported health condition, resulting in a total of 10 reported conditions with a median of 2 conditions/dog (min=1, max=3).

The median current age of all healthy dogs with a reported age (N=9) was 4 years (min=3 months, max=7 years). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=5) was 4 years and 7 months (min=3 years and 2 months, max=7 years). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=10) was 1 year and 10 months (min= 8 months, max= 6 years and 11 months, Figure 4). Table 3 shows the disease conditions for the Grand Bleu de Gascoigne breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 14 the Grand Bleu de Gascoigne breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	7	2	9 (64%)
Male	4	1	5 (36%)
Totals	11 (79%)	3 (21%)	14 (100%)

There was no association between gender and neuter status (P=0.9227).

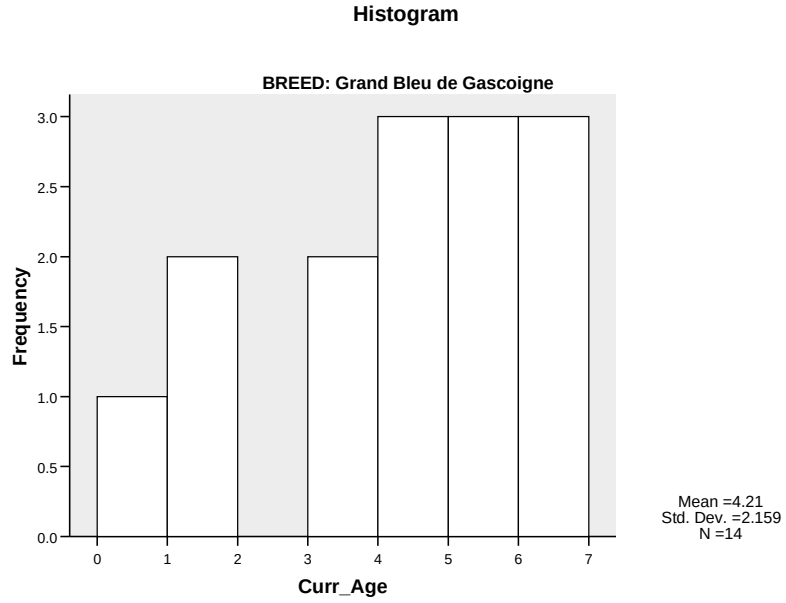


Figure 3. Histogram showing frequency of current age in years for the 14 live the Grand Bleu de Gascoigne breed with age reported.

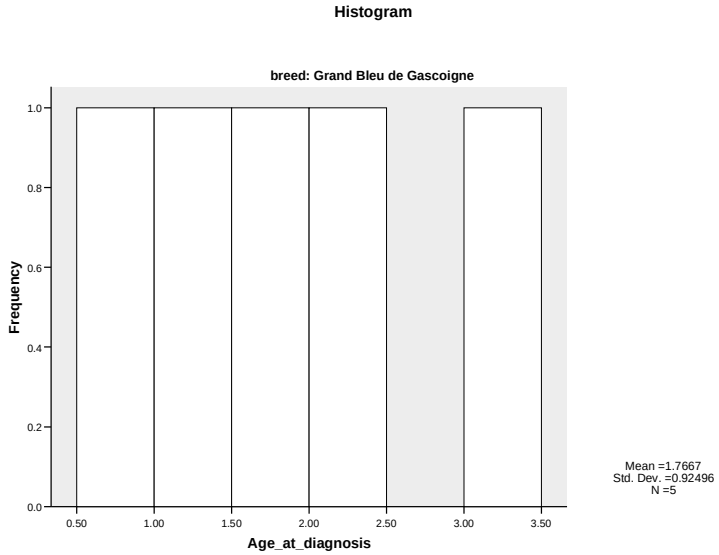


Figure 4. Histogram showing frequency of age at diagnosis for the 5 Grand Bleu de Gascoigne breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

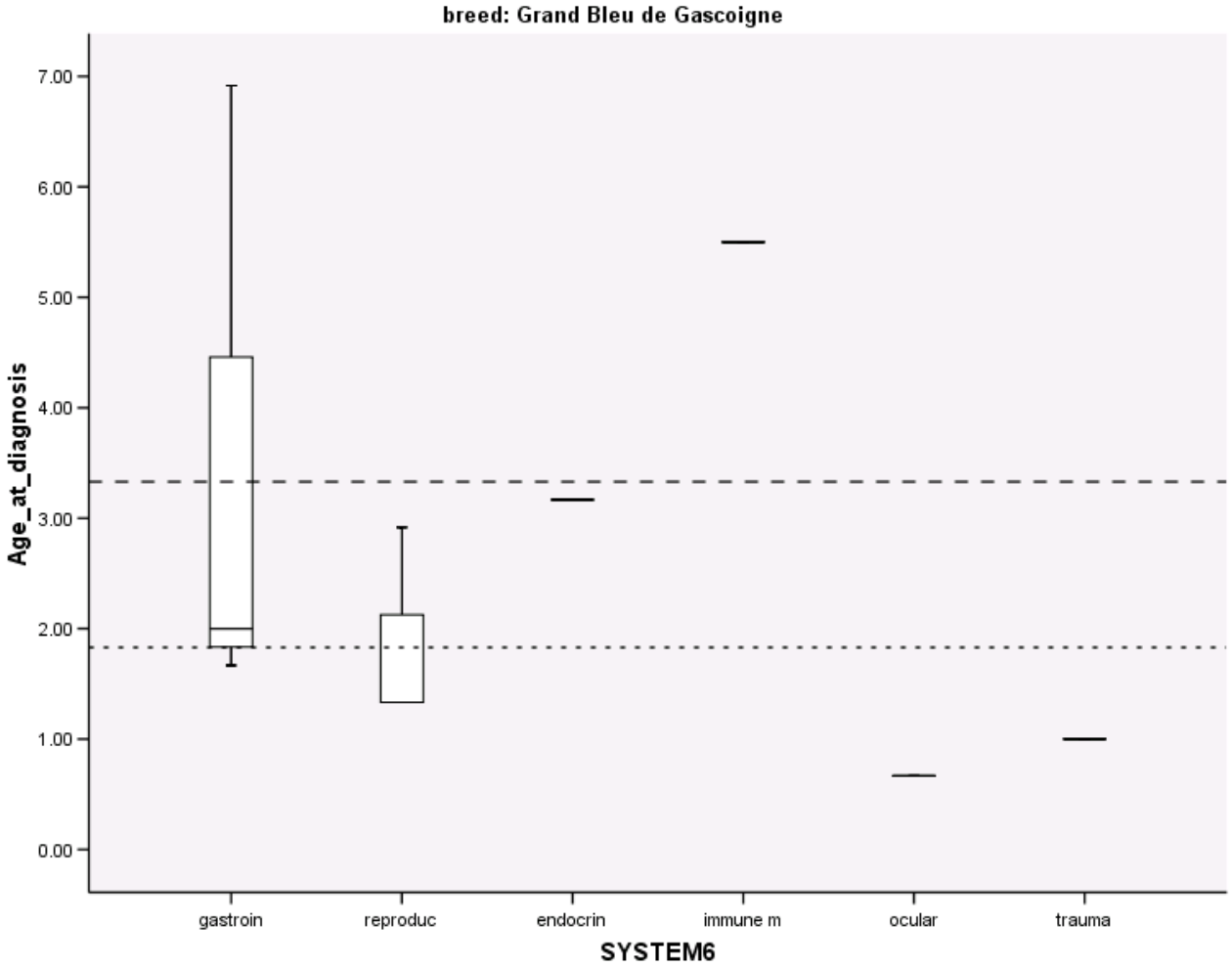


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Grand Bleu de Gascoigne breed (N=5 dogs with 10 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Grand Bleu de Gascoigne breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Grand Bleu de Gascoigne breed.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Gastrointestinal	3	30.0	Gastric dilatation/volvulus (GDV)
2	Reproductive	3	30.0	False pregnancy; pyometra
3	Endocrine	1	10.0	Hypothyroidism
4	Immune mediated	1	10.0	Food allergy
5	Ocular	1	10.0	Cherry eye
6	Trauma	1	10.0	Spine
	Total	10	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for Great Danes

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Great Danes

A total of 360 forms were sent out and 72 were returned, representing 225 live dogs. This breed had a 20.0% response rate (72/360) and it represented 0.52% of all returns (72/13,741).

Mortality data

A total of 171 deaths were reported and this represents 1.08% of all deaths reported in the survey (171/15,881). The median age at death for Great Danes was 6 years and 6 months (min = 4 months, max = 14 years and 2 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Great Danes. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Great Danes.

Cause of death		N	%	Most common specific causes in descending order
1	Gastrointestinal	39	22.8	GDV; megaoesophagus; parvovirus
2	Cardiac	23	13.5	Cardiomyopathy (unspecified>dilated); heart failure
3	Cancer	21	12.3	Osteosarcoma; lymphoma; type unspecified (mammary)
4	Old age	17	9.9	Old age
5	Neurologic	12	7.0	Wobbler's syndrome; central core myopathy
6	Other	10	5.8	Uncodeable
7	Perioperative	6	3.5	
8	Combinations	5	2.9	
9	Behaviour	4	2.3	Aggression
10	Cerebral vascular	4	2.3	Stroke or cerebral vascular accident
11	Trauma	4	2.3	Unspecified; road traffic accident; spinal trauma
12	Unknown	4	2.3	
13	Hepatic	3	1.8	Chronic liver failure
14	Endocrine	2	1.2	Addison's disease; diabetes mellitus
15	Internal bleeding	2	1.2	
16	Musculoskeletal	2	1.2	Arthritis
17	Reproductive	2	1.2	Pyometra; uterine torsion
18	Urologic	2	1.2	Chronic kidney failure; protein-losing nephropathy (PLN)
19	Cardiovascular	1	0.6	Ruptured aorta
20	Dermatologic	1	0.6	Skin disease unspecified
21	Died	1	0.6	Natural causes
22	Infection	1	0.6	Kennel cough
23	Ocular	1	0.6	Blindness
24	Pining	1	0.6	
25	Poisoning	1	0.6	
26	Respiratory	1	0.6	Laryngeal paralysis
27	Septicaemia	1	0.6	
	Total	171	100.0	

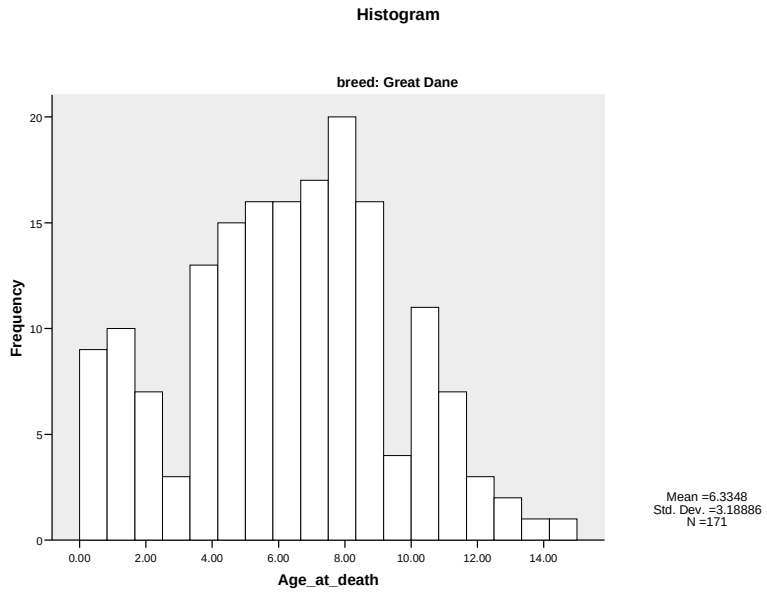


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 171 Great Dane deaths with age at death reported.

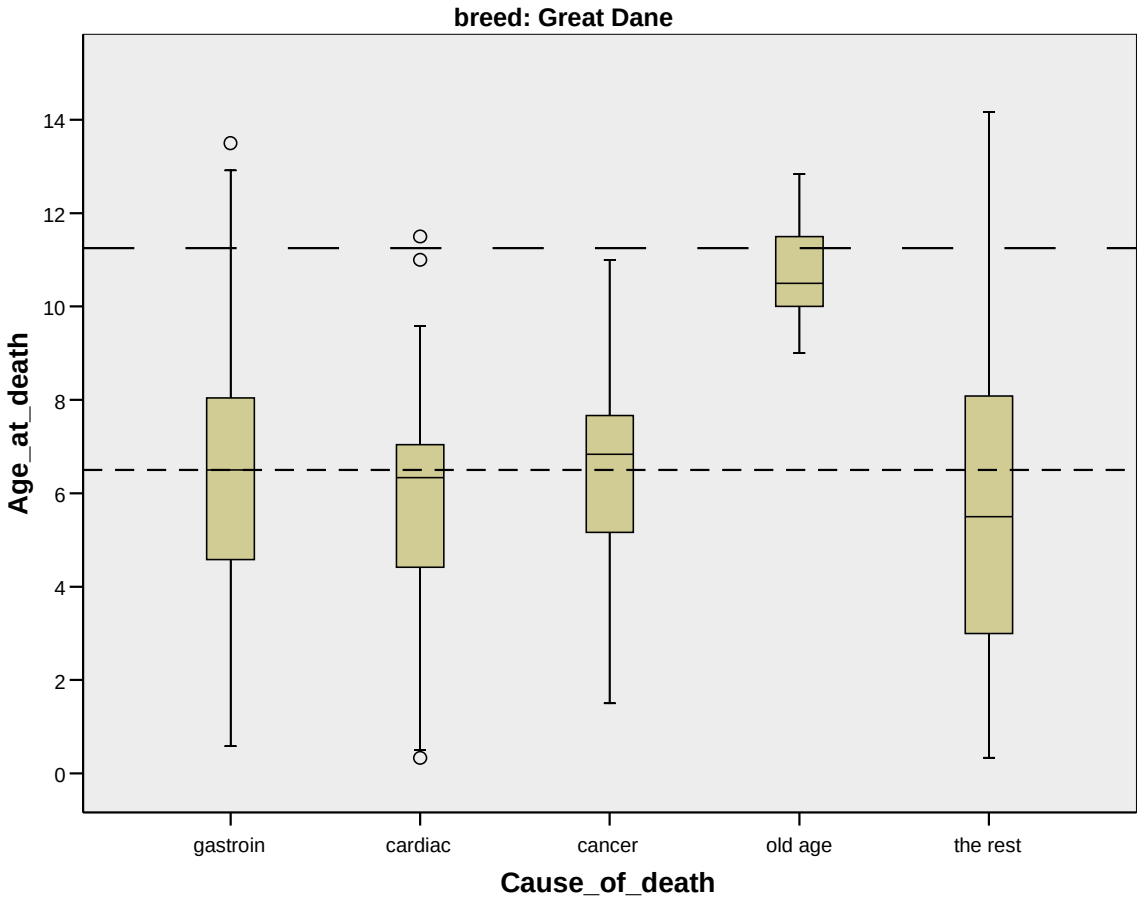


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Great Danes (N=171). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Great Danes. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 225 live dogs with a reported age was 3 years and 9 months (min=2 months, max=18 years and 2 months, Figure 3). Health information was reported for 225 live dogs of which 151 (67%) were healthy and 74 (33%) had at least one reported health condition, resulting in a total of 122 reported conditions with a median of 1 condition/dog (min=1, max=7).

The median current age of all healthy dogs with a reported age (N=151) was 3 years and 5 months (min=2 months, max=18 years and 2 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=74) was 4 years and 9 months (min=8 months, max=11 years and 7 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=121) was 2 years (min= 2 months, max= 10 years and 2 months, Figure 4). Table 3 shows the disease conditions for Great Danes. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 223 Great Danes with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	99	34	133 (60%)
Male	68	22	90 (40%)
Totals	167 (75%)	56 (25%)	223 (100%)

There was no association between gender and neuter status (P=0.8500).

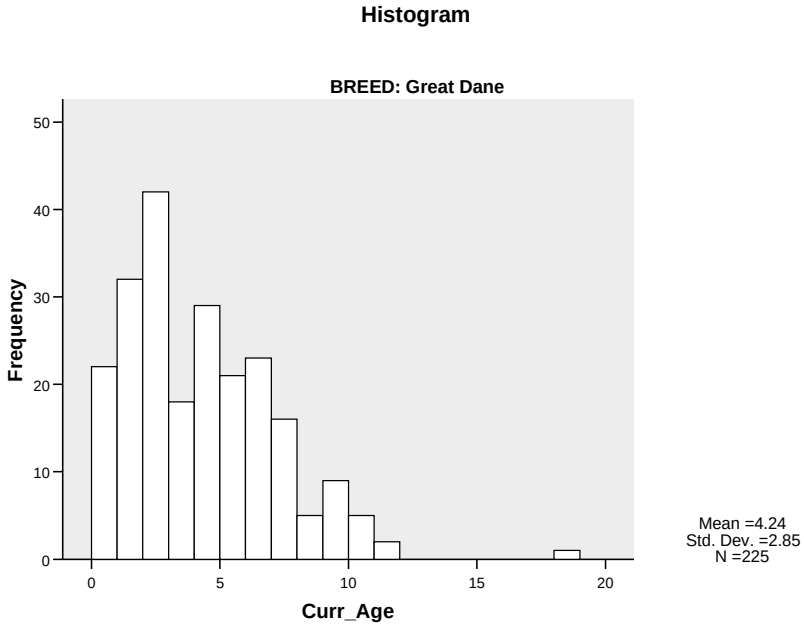


Figure 3. Histogram showing frequency of current age in years for the 225 live Great Danes with age reported.

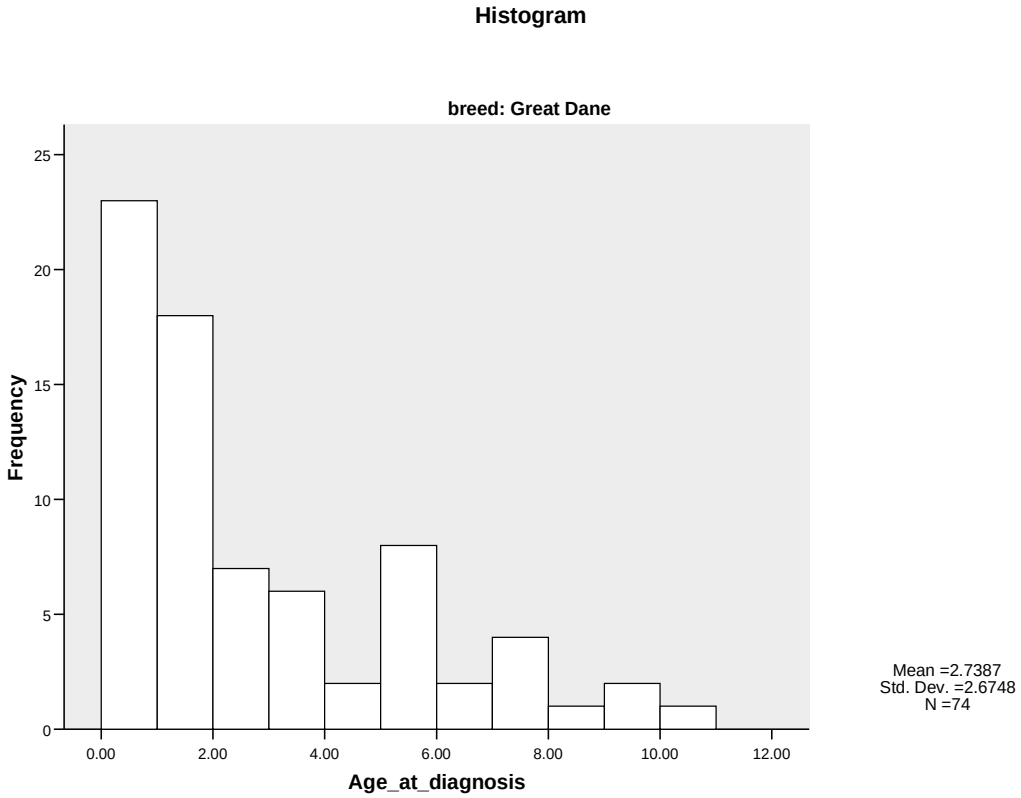


Figure 4. Histogram showing frequency of age at diagnosis for the 74 Great Danes with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

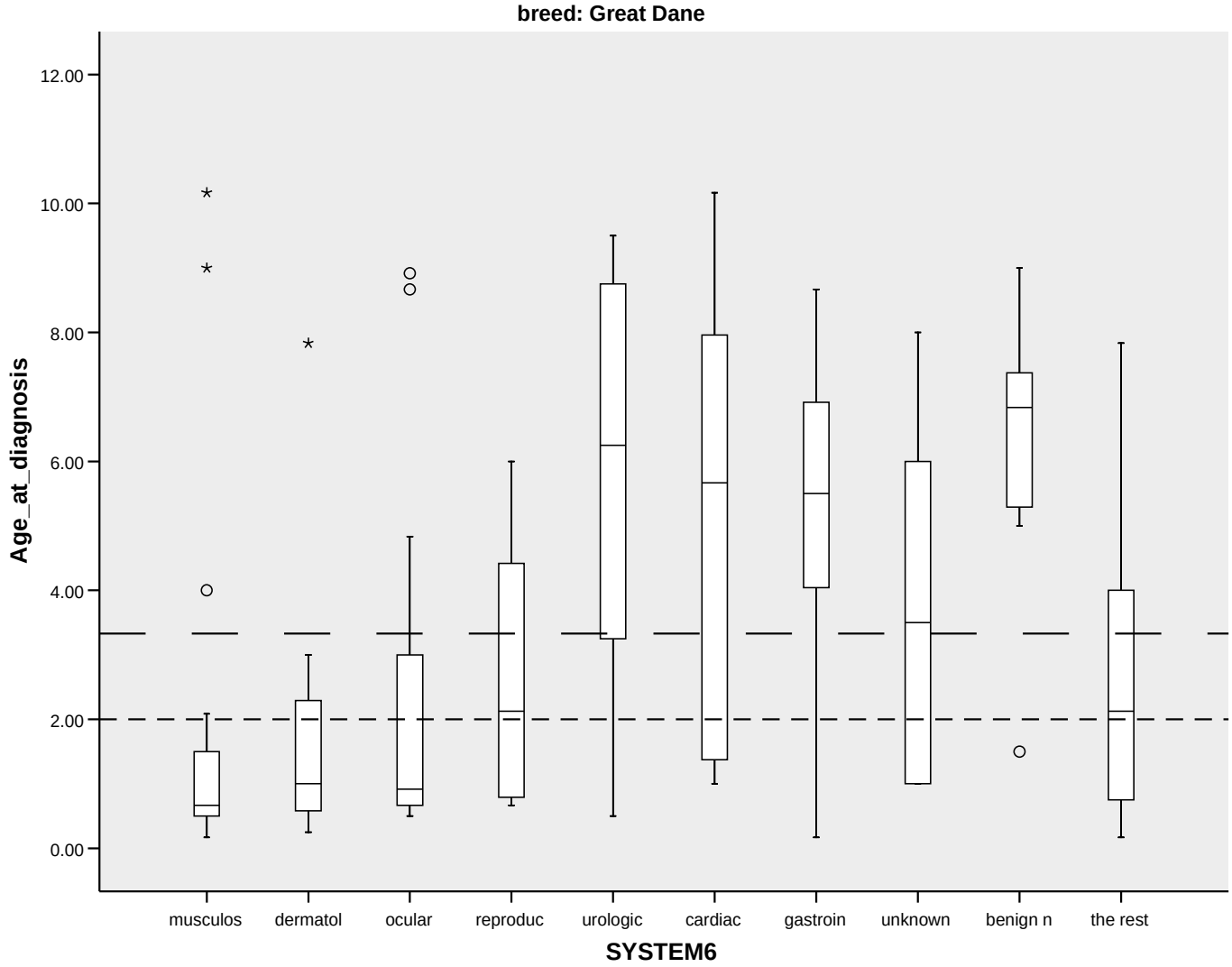


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Great Danes (N=74 dogs with 121 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Great Danes. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Great Danes.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Musculoskeletal	19	15.6	OCD (shoulder=unspecified>elbow; stifle); CHD; arthritis
2	Dermatologic	15	12.3	Dermatitis; mites (cheyletiella>demodex=sarcoptes); recurrent pyoderma
3	Ocular	14	11.5	Cherry eye; entropion; conjunctivitis
4	Reproductive	12	9.8	False pregnancy; pyometra; irregular heat cycles
5	Urologic	8	6.6	Cystitis; incontinence; haematuria
6	Benign neoplasia	7	5.7	Type unspecified; lipoma
7	Cardiac	7	5.7	Heart murmur; cardiomyopathy (unspecified); heart rhythm disorder
8	Gastrointestinal	7	5.7	Gastric dilatation/volvulus (GDV); campylobacter; colitis
9	Neurologic	7	5.7	Wobbler syndrome; deafness; degenerative myelopathy; hydrocephalus
10	Unknown	6	4.9	Undiagnosed illness
11	Respiratory	5	4.1	Kennel cough; noisy breathing
12	Immune mediated	4	3.3	Gluten-sensitive enteropathy; food hypersensitivity; allergy other (unspecified)
13	Cancer	3	2.5	Type unspecified; mast cell tumour (MCT)
14	Aural	2	1.6	Otitis externa
15	Endocrine	2	1.6	Diabetes mellitus; hypothyroidism
16	Dental	1	0.8	Retained puppy teeth
17	Hepatic	1	0.8	Hepatitis
18	Trauma	1	0.8	Forelimb
19	Other	1	0.8	Uncodeable
	Total	122	100.0	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for Greenland Dogs

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Greenland Dogs

A total of 11 forms were sent out and 3 were returned, representing 13 live dogs. This breed had a 27.3% response rate (3/11) and it represented 0.02% of all returns (3/13,741).

Mortality data

A total of 2 deaths were reported and this represents 0.01% of all deaths reported in the survey (2/15,881). The median age at death for Greenland Dogs was 8 years and 5 months (min = 7 years and 6 months, max = 9 years and 5 months) and this was lower than the overall median of 11 years and 3 months. Table 1 shows the causes of death and age at death for Greenland Dogs.

Table 1. Causes of death by organ system/category for Greenland Dogs.

	Cause of death	N	%	Age at death
1	Cancer (bowel, liver – type unspecified)	2	100.0	7 years & 6 months, 9 years & 5 months
	Total	2	100.0	

Morbidity data

The median current age of the 13 live dogs with a reported age was 5 years and 4 months (min=3 years and 5 months, max=16 years and 3 months, Figure 1). Health information was reported for 13 live dogs of which 11 (85%) were healthy and 2 (15%) had at least one reported health condition, resulting in a total of 3 reported conditions with a median of 1.5 conditions/dog (min=1, max=2).

The median current age of all healthy dogs with a reported age (N=11) was 5 years and 4 months (min=3 years and 5 months, max=16 years and 3 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=2) was 10 years and 1 month (min=7 years and 8 months, max=12 years and 6 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=3) was 10 years and 6 months (min= 7 years and 3 months, max= 10 years and 6 months). Table 3 shows the disease conditions and age at diagnosis for Greenland Dogs.

Table 2. Distribution of gender and neuter status for 13 Greenland Dogs with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	4	4	8 (62%)
Male	5	0	5 (38%)
Totals	9 (69%)	4 (31%)	13 (100%)

There was no association between gender and neuter status (P=0.06).

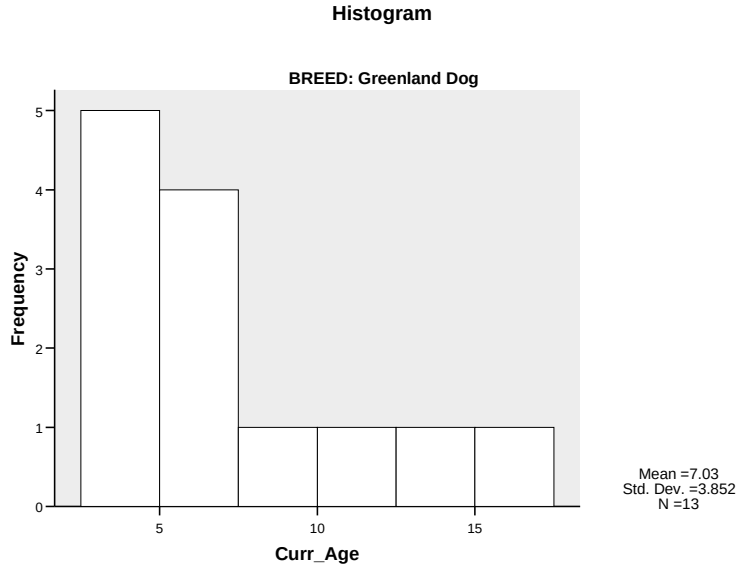


Figure 1. Histogram showing frequency of current age in years for the 13 live Greenland Dogs with age reported.

Table 3. Disease conditions by organ system/category for Greenland Dogs.

		All conditions		
Disease condition		N	%	Age at diagnosis
1	Endocrine – diabetes mellitus	1	33.3	10 years and 6 months
2	Ocular – blindness	1	33.3	10 years and 6 months
3	Reproductive - pyometra	1	33.3	7 years and 3 months
	Total	3	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for Greyhounds

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Greyhounds

A total of 75 forms were sent out and 33 were returned, representing 113 live dogs. This breed had a 44.0% response rate (33/75) and it represented 0.24% of all returns (33/13,741).

Mortality data

A total of 69 deaths were reported and this represents 0.43% of all deaths reported in the survey (69/15,881). The median age at death for Greyhounds was 9 years and 1 month (min = 4 months, max = 14 years and 2 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Greyhounds. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Greyhounds.

Cause of death		N	%	Most common specific causes in descending order
1	Old age	12	17.4	Old age
2	Urologic	11	15.9	Kidney failure chronic > acute
3	Cancer	9	13.0	Unspecified
4	Cardiac	9	13.0	Heart failure; heart attack; defect unspecified
5	Combinations	5	7.2	
6	Trauma	5	7.2	Unspecified; spinal injury
7	Gastrointestinal	4	5.8	GDV; oesophagitis; flaccid oesophagus
8	Other	4	5.8	Uncodeable
9	Neurologic	3	4.3	Meningitis; IVDD
10	Cerebral vascular	2	2.9	Stroke or cerebral vascular accident
11	Behaviour	1	1.4	Aggression
12	Cardiovascular	1	1.4	Embolism
13	Perioperative	1	1.4	
14	Respiratory	1	1.4	Pneumonia
15	Unknown	1	1.4	
	Total	69	100.0	

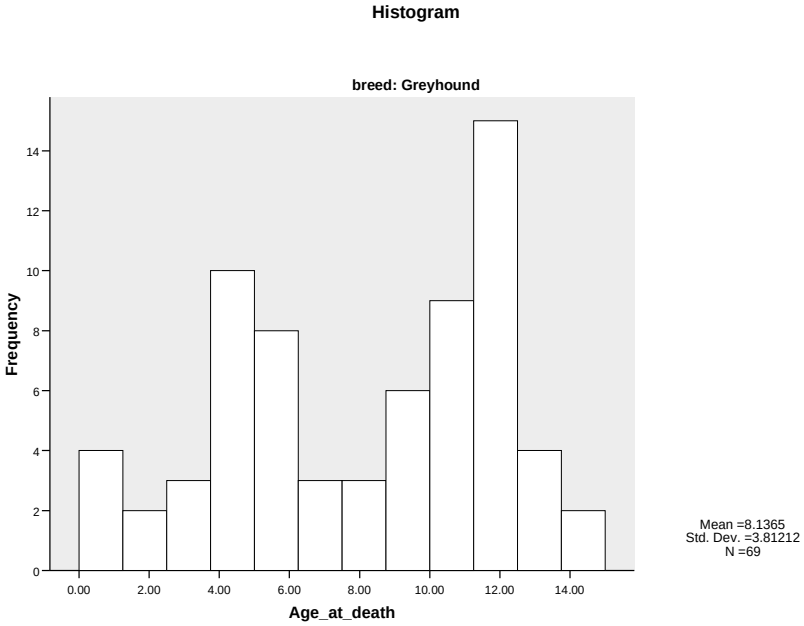


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 69 Greyhound deaths with age at death reported.

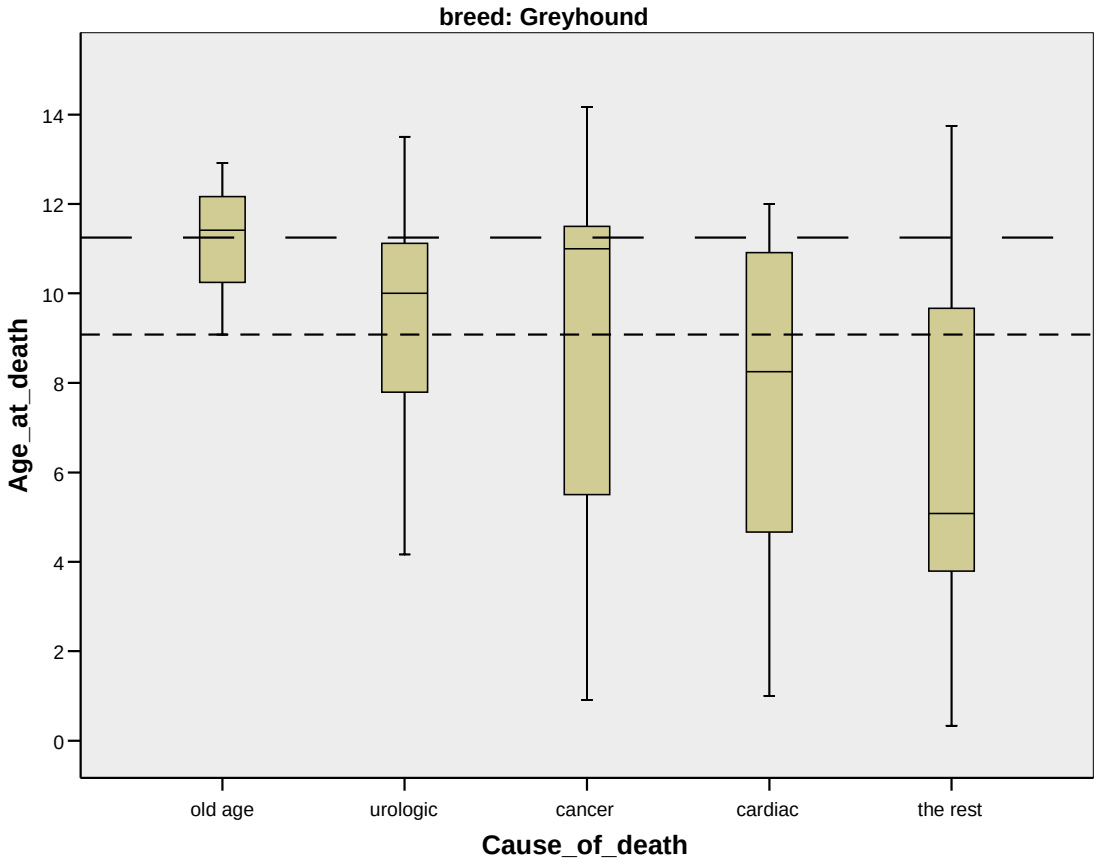


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Greyhounds (N=69). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Greyhounds. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 110 live dogs with a reported age was 5 years and 2 months (min=2 months, max=12 years and 3 months, Figure 3). Health information was reported for 113 live dogs of which 88 (78%) were healthy and 25 (22%) had at least one reported health condition, resulting in a total of 37 reported conditions with a median of 1 condition/dog (min=1, max=4).

The median current age of all healthy dogs with a reported age (N=88) was 3 years and 10 months (min=2 months, max=12 years and 3 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=24) was 6 years (min=8 months, max=11 years and 4 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=35) was 4 years and 3 months (min= 3 months, max= 11 years and 6 months, Figure 4). Table 3 shows the disease conditions for Greyhounds. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 113 Greyhounds with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	52	11	63 (56%)
Male	38	12	50 (44%)
Totals	90 (80%)	23 (20%)	113 (100%)

There was no association between gender and neuter status (P=0.4).

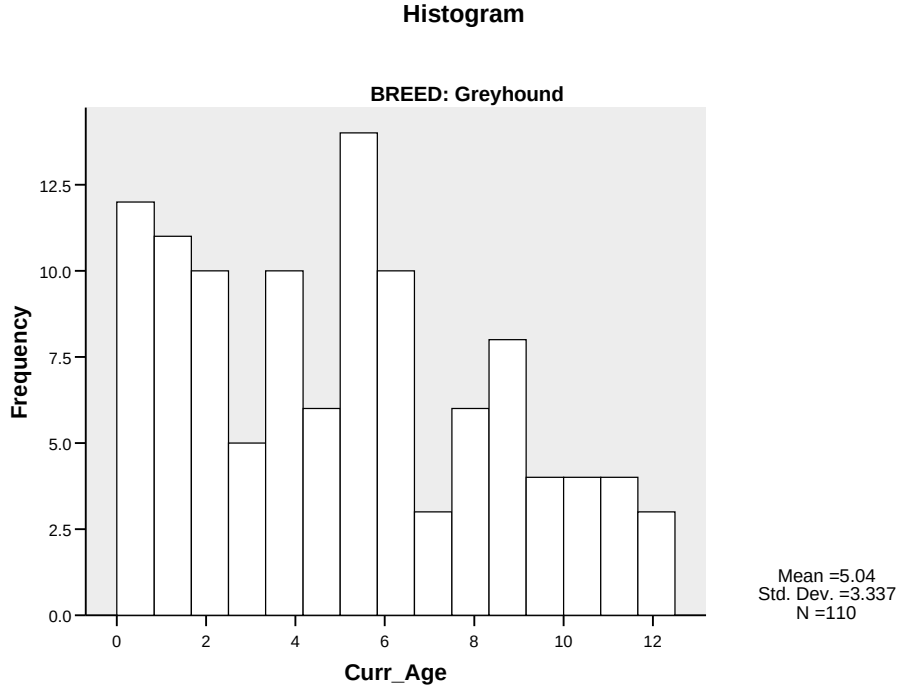


Figure 3. Histogram showing frequency of current age in years for the 110 live Greyhounds with age reported.

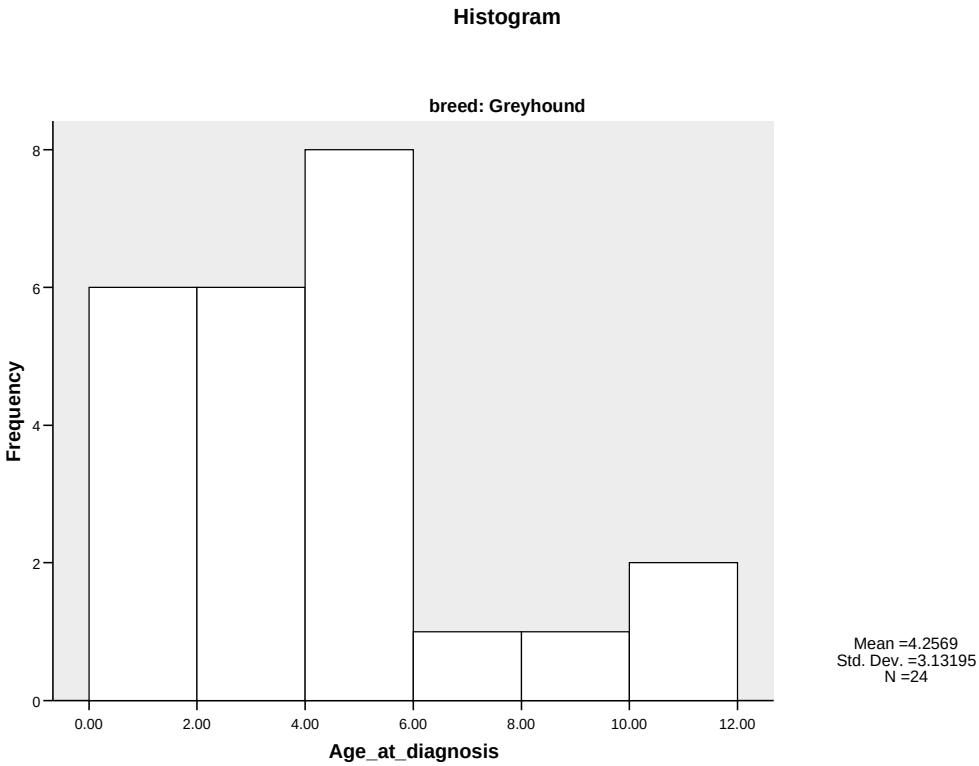


Figure 4. Histogram showing frequency of age at diagnosis for the 24 Greyhounds with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

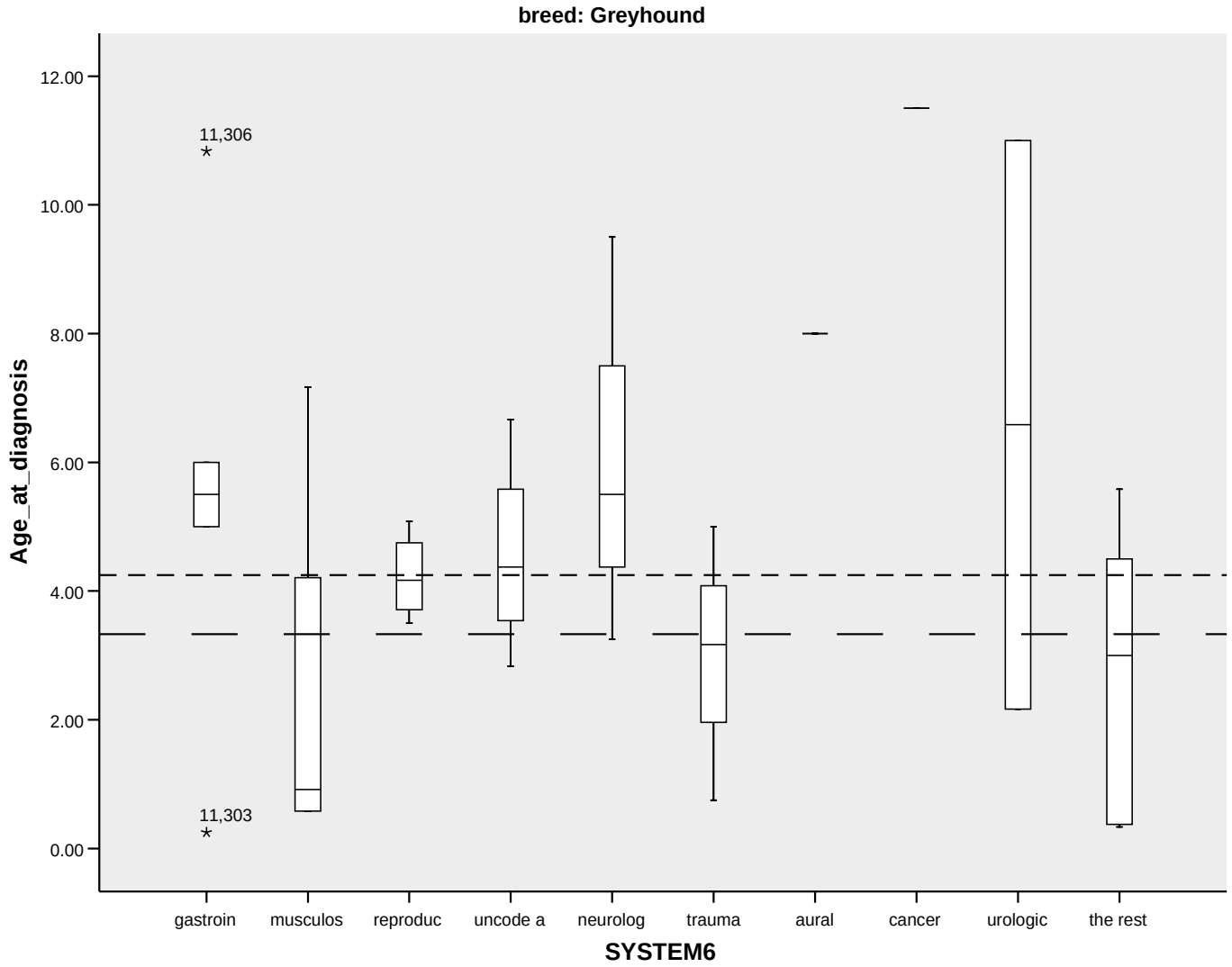


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Greyhounds (N=24 dogs with 35 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Greyhounds. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Greyhounds.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Gastrointestinal	5	13.5	Colitis; gastric dilatation/volvulus (GDV); vomiting
2	Musculoskeletal	4	10.8	Coxofemoral luxation; CHD; unspecified
3	Reproductive	4	10.8	False pregnancy; uterine inertia
4	Uncode and other	4	10.8	Uncodeable
5	Neurologic	3	8.1	IVDD (cervical); sacroiliac disorder; seizures
6	Trauma	3	8.1	Forelimb; spine; other (unspecified)
7	Aural	2	5.4	Otitis externa
8	Cancer	2	5.4	Type unspecified
9	Cardiac	2	5.4	Dilated cardiomyopathy; heart rhythm disorder
10	Immune mediated	2	5.4	Gluten-sensitive enteropathy; food hypersensitivity
11	Unknown	2	5.4	Undiagnosed illness
12	Urologic	2	5.4	Incontinence; kidney disease (unspecified)
13	Dental	1	2.7	Dental disease
14	Ocular	1	2.7	Blocked tear duct
	Total	37	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for the Griffon Bruxellois breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Griffon Bruxellois breed

A total of 207 forms were sent out and 72 were returned, representing 179 live dogs. This breed had a 34.8% response rate (72/207) and it represented 0.52% of all returns (72/13,741).

Mortality data

A total of 71 deaths were reported and this represents 0.45% of all deaths reported in the survey (71/15,881). The median age at death for the Griffon Bruxellois breed was 12 years (min = 5 months, max = 19 years and 9 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Griffon Bruxellois breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Griffon Bruxellois breed.

Cause of death		N	%	Most common specific causes in descending order
1	Cardiac	16	22.5	Heart failure; defect unspecified; disease unspecified
2	Cancer	10	14.1	Unspecified; mammary (type unspecified)
3	Old age	9	12.7	Old age
4	Urologic	7	9.9	Kidney failure (chronic > acute)
5	Combinations	4	5.6	
6	Endocrine	4	5.6	Cushings disease; diabetes mellitus
7	Other	3	4.2	Uncodeable
8	Cerebral vascular	2	2.8	Stroke or cerebral vascular accident
9	Gastrointestinal	2	2.8	Unspecified; haemorrhagic diarrhoea
10	Musculoskeletal	2	2.8	Hip dysplasia; arthritis
11	Neurologic	2	2.8	Meningitis; vestibular disease
12	Reproductive	2	2.8	Pyometra
13	Trauma	2	2.8	Unspecified
14	Drowning	1	1.4	
15	Hepatic	1	1.4	Chronic liver failure
16	Perioperative	1	1.4	
17	Respiratory	1	1.4	Respiratory failure unspecified
18	Senility	1	1.4	
19	Unknown	1	1.4	
	Total	71	100.0	

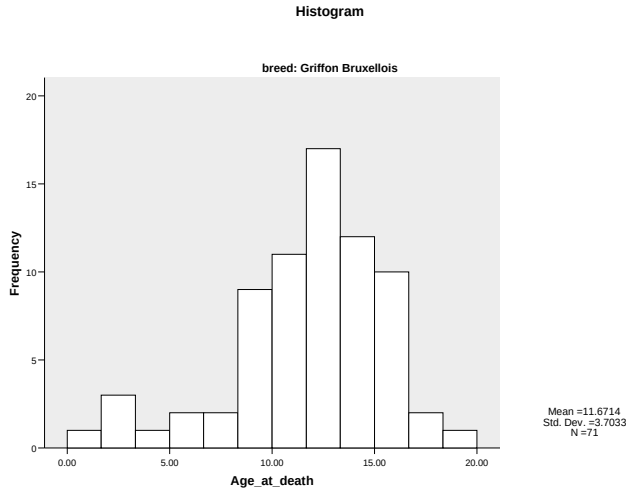


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 71 Griffon Bruxellois deaths with age at death reported.

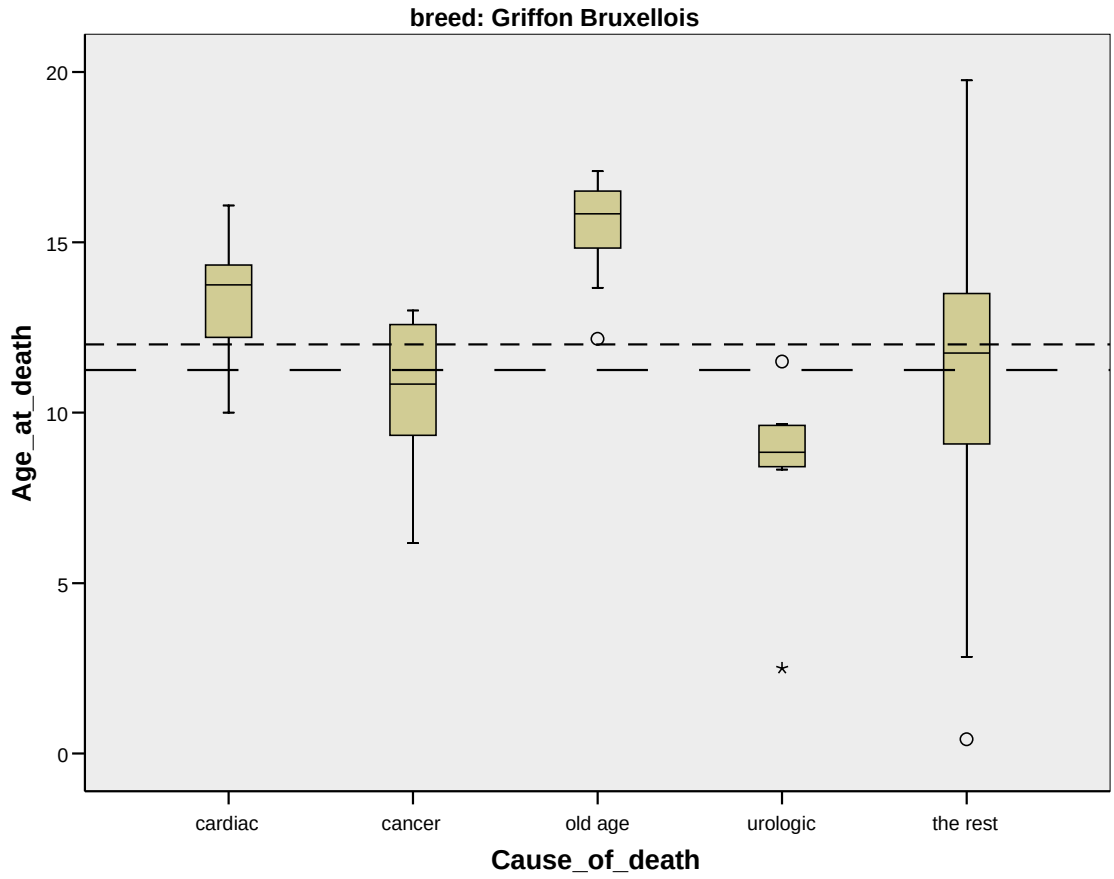


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the Griffon Bruxellois breed (N=71). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the Griffon Bruxellois breed. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 179 live dogs with a reported age was 6 years and 1 month (min=1 month, max=17 years and 9 months, Figure 3). Health information was reported for 179 live dogs of which 97 (54%) were healthy and 82 (46%) had at least one reported health condition, resulting in a total of 147 reported conditions with a median of 1 condition/dog (min=1, max=6).

The median current age of all healthy dogs with a reported age (N=97) was 5 years and 5 months (min=3 months, max=13 years and 11 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=77) was 6 years and 8 months (min=1 month, max=17 years and 9 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=138) was 4 years (min= 3 months, max= 15 years, Figure 4). Table 3 shows the disease conditions for the Griffon Bruxellois breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 179 the Griffon Bruxellois breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	59	40	99 (55%)
Male	57	23	80 (45%)
Totals	116 (65%)	63 (35%)	179 (100%)

There was no association between gender and neuter status (P=0.1046).

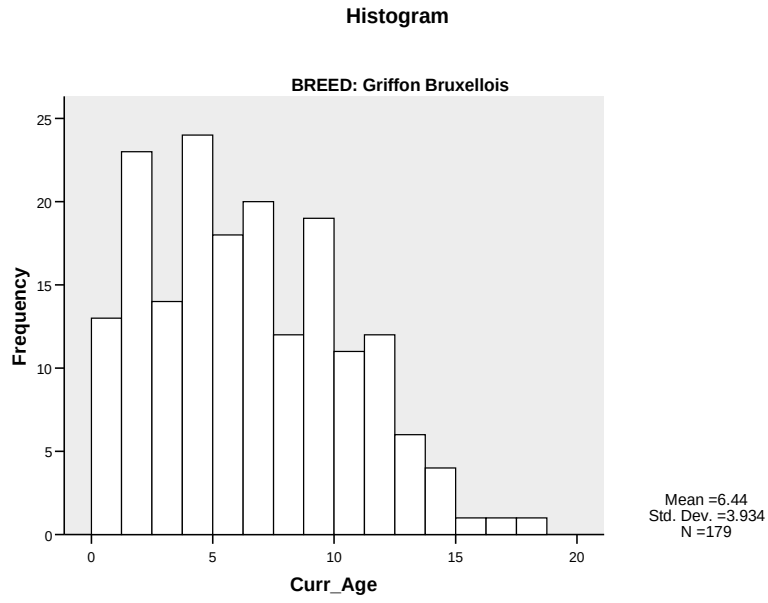


Figure 3. Histogram showing frequency of current age in years for the 179 live the Griffon Bruxellois breed with age reported.

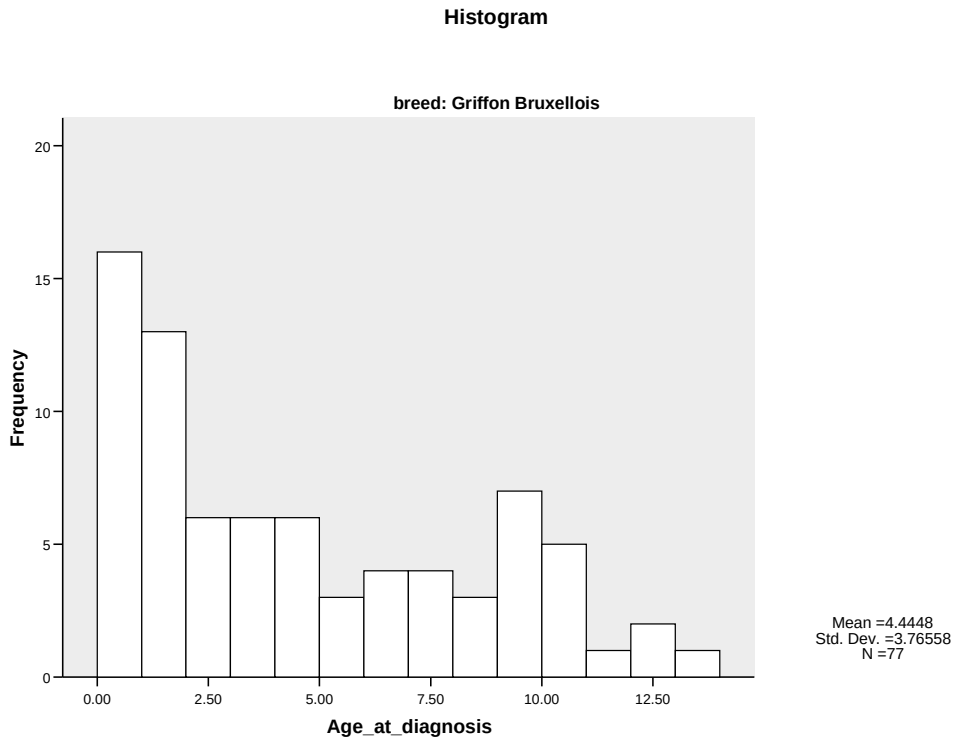


Figure 4. Histogram showing frequency of age at diagnosis for the 77 Griffon Bruxellois breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

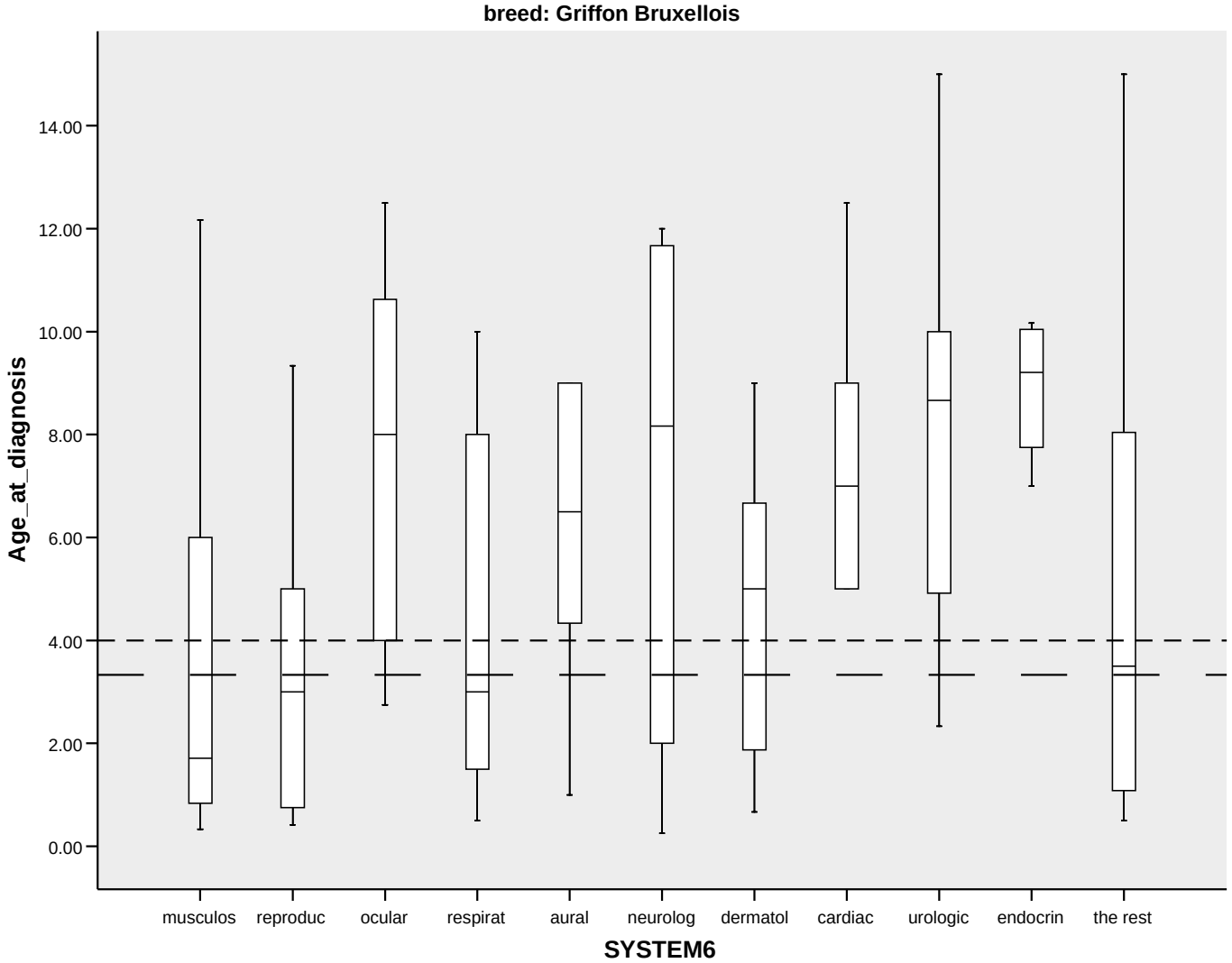


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Griffon Bruxellois breed (N=77 dogs with 138 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Griffon Bruxellois breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Griffon Bruxellois breed.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Musculoskeletal	30	20.4	Patellar luxation; arthritis; CHD
2	Reproductive	19	12.9	Cryptorchid; infertility; pyometra
3	Ocular	16	10.9	Cataracts; KCS; red eye; conjunctivitis
4	Respiratory	11	7.5	Noisy breathing; kennel cough
5	Aural	9	6.1	Otitis externa; excessive ear wax
6	Dental	9	6.1	Retained puppy teeth; dental disease; deformity other than extra teeth
7	Neurologic	9	6.1	Deafness; IVDD (unspecified>lumbosacral); seizures
8	Dermatologic	8	5.4	Dermatitis; alopecia; fading nose pigment
9	Cardiac	5	3.4	Heart murmur (unspecified); cardiomegaly; congestive heart failure (CHF)
10	Urologic	5	3.4	Cystouroliths (calcium oxalate); incontinence; urethral obstruction
11	Endocrine	4	2.7	Hypothyroidism; Cushing's disease
12	Gastrointestinal	4	2.7	Colitis; foreign body obstruction; regurgitation; vomiting
13	Unknown	4	2.7	Unknown; undiagnosed liver disease
14	Benign neoplasia	3	2.0	Lipoma
15	Immune mediated	3	2.0	Dust mite allergy; flea allergy; food hypersensitivity
16	Cancer	2	1.4	Type unspecified
17	Uncode and other	2	1.4	Inguinal hernia; protruding tongue
18	Anal gland	1	0.7	Anal gland stricture
19	Cerebrovascular	1	0.7	Stroke or cerebral vascular accident
20	Hepatic	1	0.7	Unspecified
21	Trauma	1	0.7	Unspecified
	Total	147	100.0	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for the Hamiltonstovare breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Hamiltonstovare breed

A total of 60 forms were sent out and 15 were returned, representing 56 live dogs. This breed had a 25.0% response rate (15/60) and it represented 0.11% of all returns (15/13,741).

Mortality data

A total of 6 deaths were reported and this represents 0.04% of all deaths reported in the survey (6/15,881). The median age at death for the Hamiltonstovare breed was 10 years and 2 months (min = 3 years and 8 months, max = 16 years and 1 month) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Hamiltonstovare breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Hamiltonstovare breed.

Cause of death		N	%	Most common specific causes in descending order
1	Old age	3	50.0	Old age
2	Cancer	2	33.3	Type unspecified (liver, lung)
3	Trauma	1	16.7	Road traffic accident
	Total	6	100.0	

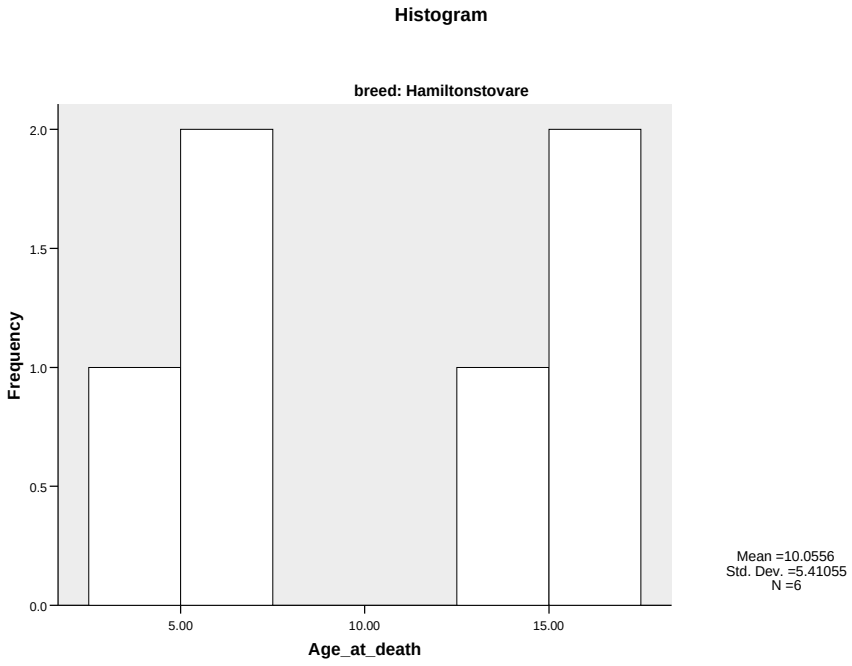


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 6 Hamiltonstovare deaths with age at death reported.

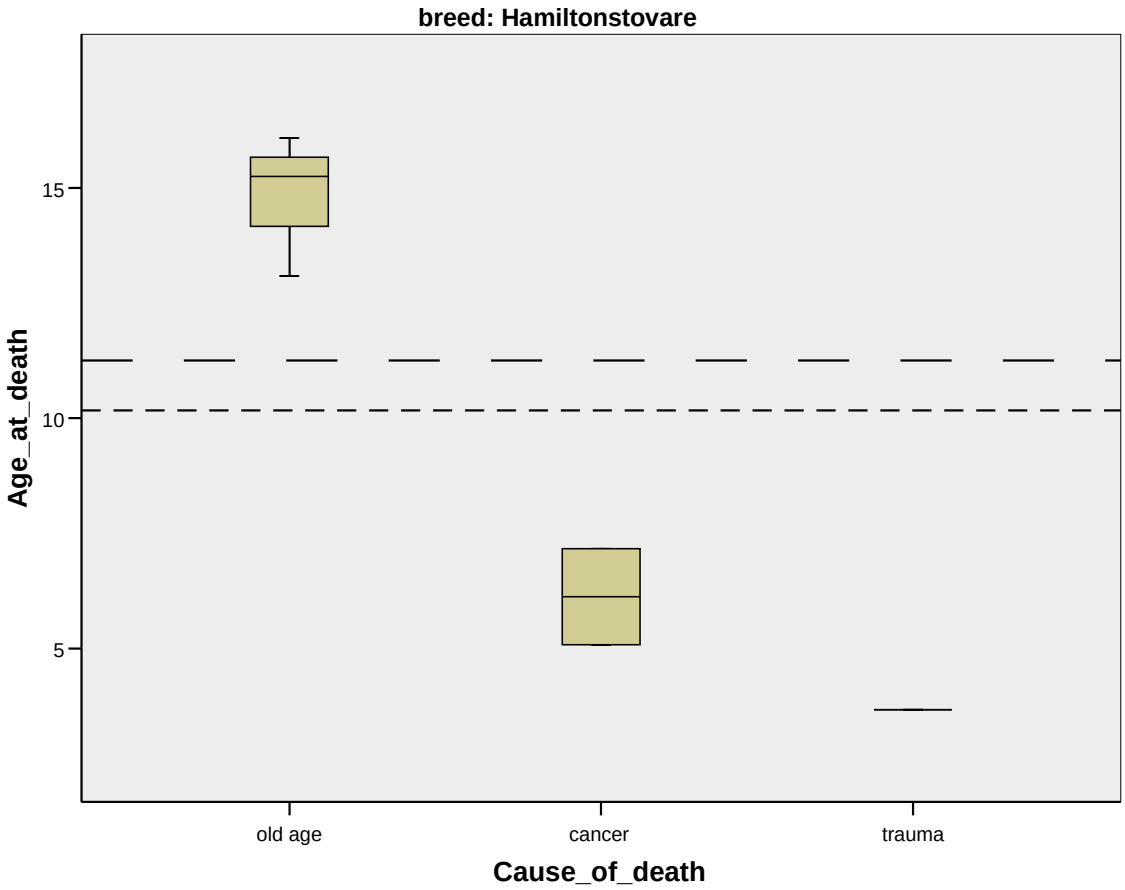


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the Hamiltonstovare breed (N=6). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the Hamiltonstovare breed. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 56 live dogs with a reported age was 4 years and 9 months (min=3 months, max=15 years and 6 months, Figure 3). Health information was reported for 56 live dogs of which 47 (84%) were healthy and 9 (16%) had at least one reported health condition, resulting in a total of 13 reported conditions with a median of 1 condition/dog (min=1, max=3).

The median current age of all healthy dogs with a reported age (N=47) was 4 years and 8 months (min=3 months, max=15 years and 6 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=9) was 6 years and 10 months (min=1 year and 11 months, max=12 years and 1 month). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=13) was 3 years (min= 5 months, max= 11 years, Figure 4). Table 3 shows the disease conditions for the Hamiltonstovare breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for the 56 Hamiltonstovare breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	24	5	29 (52%)
Male	27	0	27 (48%)
Totals	51 (91%)	5 (9%)	56 (100%)

Significantly more females were neutered (P=0.0238).

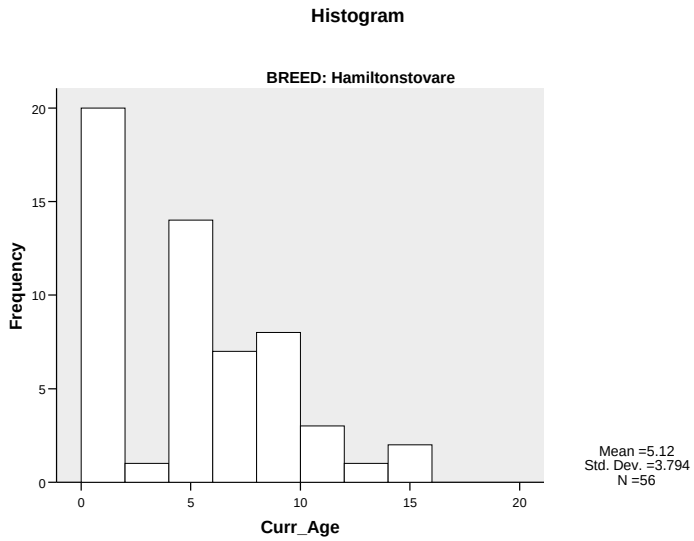


Figure 3. Histogram showing frequency of current age in years for the 56 live Hamiltonstovare breed with age reported.

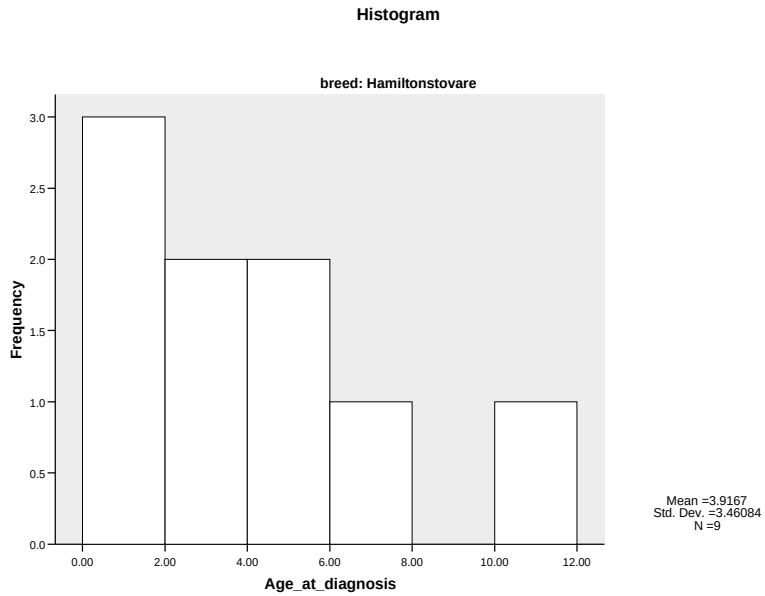


Figure 4. Histogram showing frequency of age at diagnosis for the 9 Hamiltonstovare breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

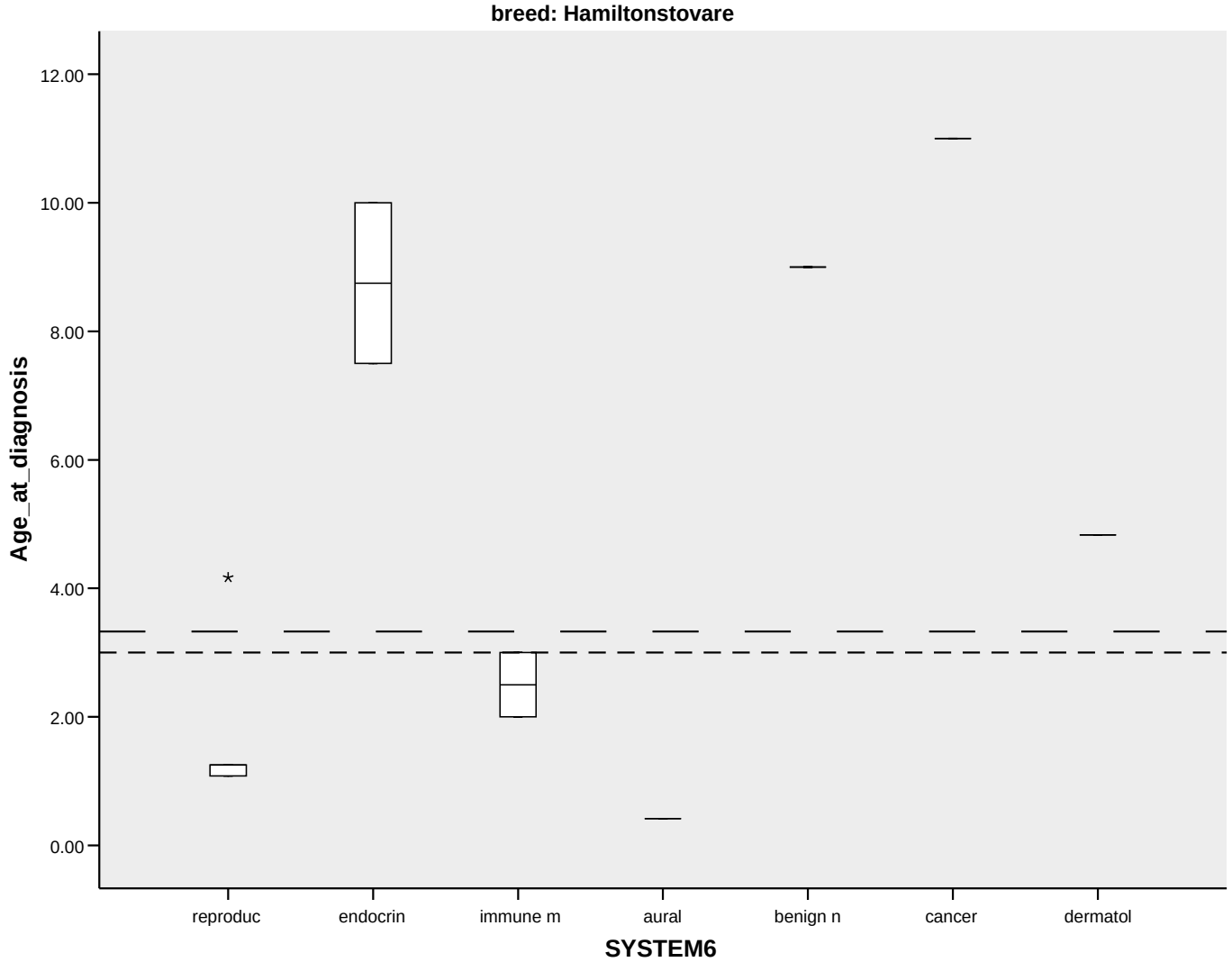


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Hamiltonstovare breed (N=9 dogs with 13 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Hamiltonstovare breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Hamiltonstovare breed.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Reproductive	5	38.5	False pregnancy; vaginitis
2	Endocrine	2	15.4	Diabetes mellitus
3	Immune mediated	2	15.4	Food hypersensitivity
4	Aural	1	7.7	Excessive ear wax
5	Benign neoplasia	1	7.7	Lipoma
6	Cancer	1	7.7	Type unspecified
7	Dermatologic	1	7.7	Panniculitis
	Total	13	100.0	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for the Havanese breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Havanese breed

A total of 50 forms were sent out and 11 were returned, representing 43 live dogs. This breed had a 22.0% response rate (11/50) and it represented 0.08% of all returns (11/13,741).

Mortality data

A total of 3 deaths were reported and this represents 0.02% of all deaths reported in the survey (3/15,881). The median age at death for the Havanese breed was 10 years and 3 months (min = 4 years, max = 18 years and 2 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Havanese breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Havanese breed.

Cause of death		N	%	Most common specific causes in descending order
1	Neurologic	1	33.3	Encephalitis
2	Old age	1	33.3	Old age
3	Trauma	1	33.3	Unspecified
	Total	3	100.0	

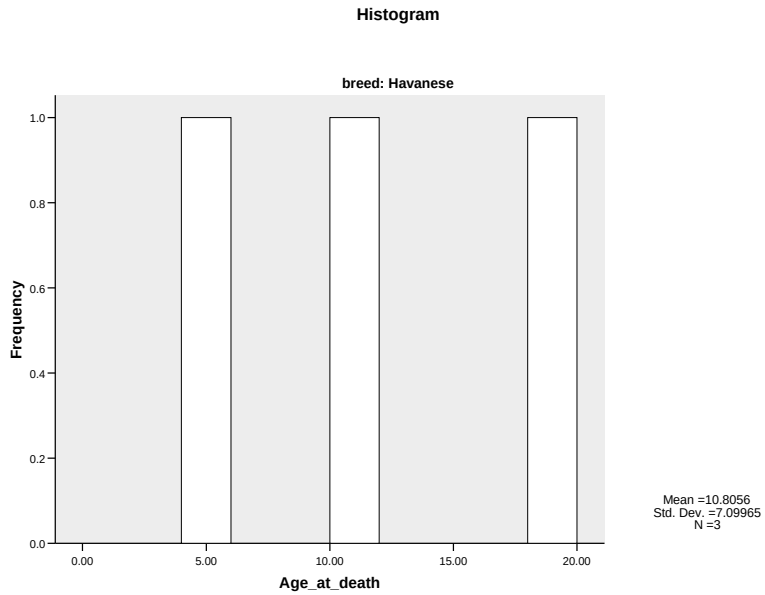


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 3 Havanese deaths with age at death reported.

Morbidity data

The median current age of the 43 live dogs with a reported age was 4 years (min=7 months, max=11 years and 10 months, Figure 2). Health information was reported for 43 live dogs of which 29 (67%) were healthy and 14 (33%) had at least one reported health condition, resulting in a total of 15 reported conditions with a median of 1 condition/dog (min=1, max=2).

The median current age of all healthy dogs with a reported age (N=29) was 4 years and 2 months (min=7 months, max=11 years and 10 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=14) was 3 years and 8 months (min=1 year and 4 months, max=10 years and 4 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=15) was 1 year and 6 months (min= 3 months, max= 5 years and 3 months, Figure 3). Table 3 shows the disease conditions for the Havanese breed. Age at diagnosis is presented for the most common disease conditions (Figure 4).

Table 2. Distribution of gender and neuter status for the 43 Havanese breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	17	7	24 (56%)
Male	16	3	19 (44%)
Totals	33 (77%)	10 (23%)	43 (100%)

There was no association between gender and neuter status (P=0.3025).

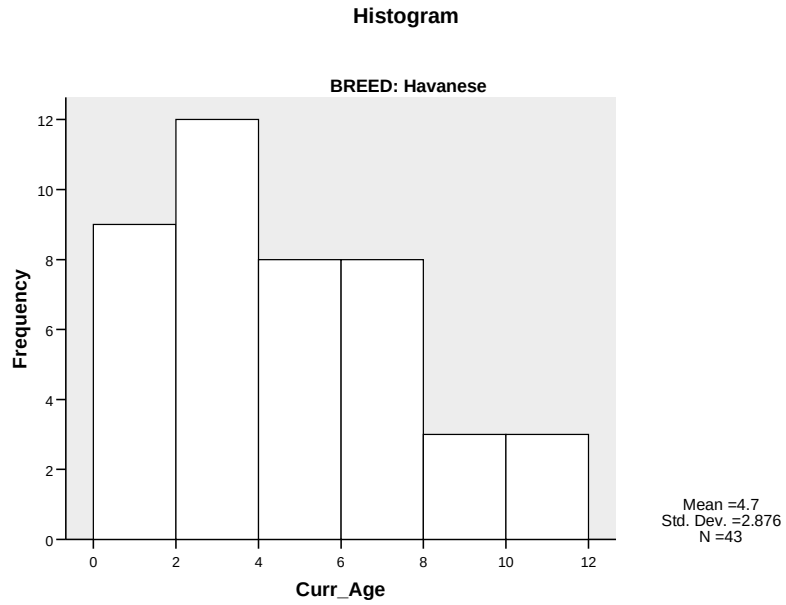


Figure 2. Histogram showing frequency of current age in years for the 43 live Havanese breed with age reported.

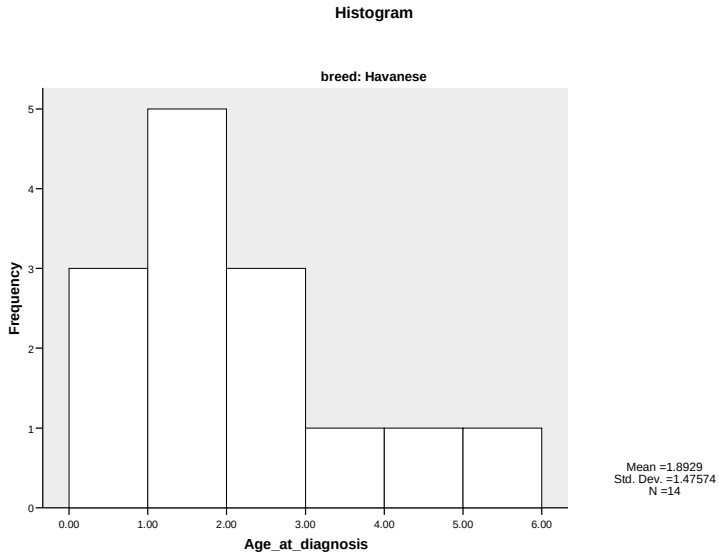


Figure 3. Histogram showing frequency of age at diagnosis for the 14 Havanese breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

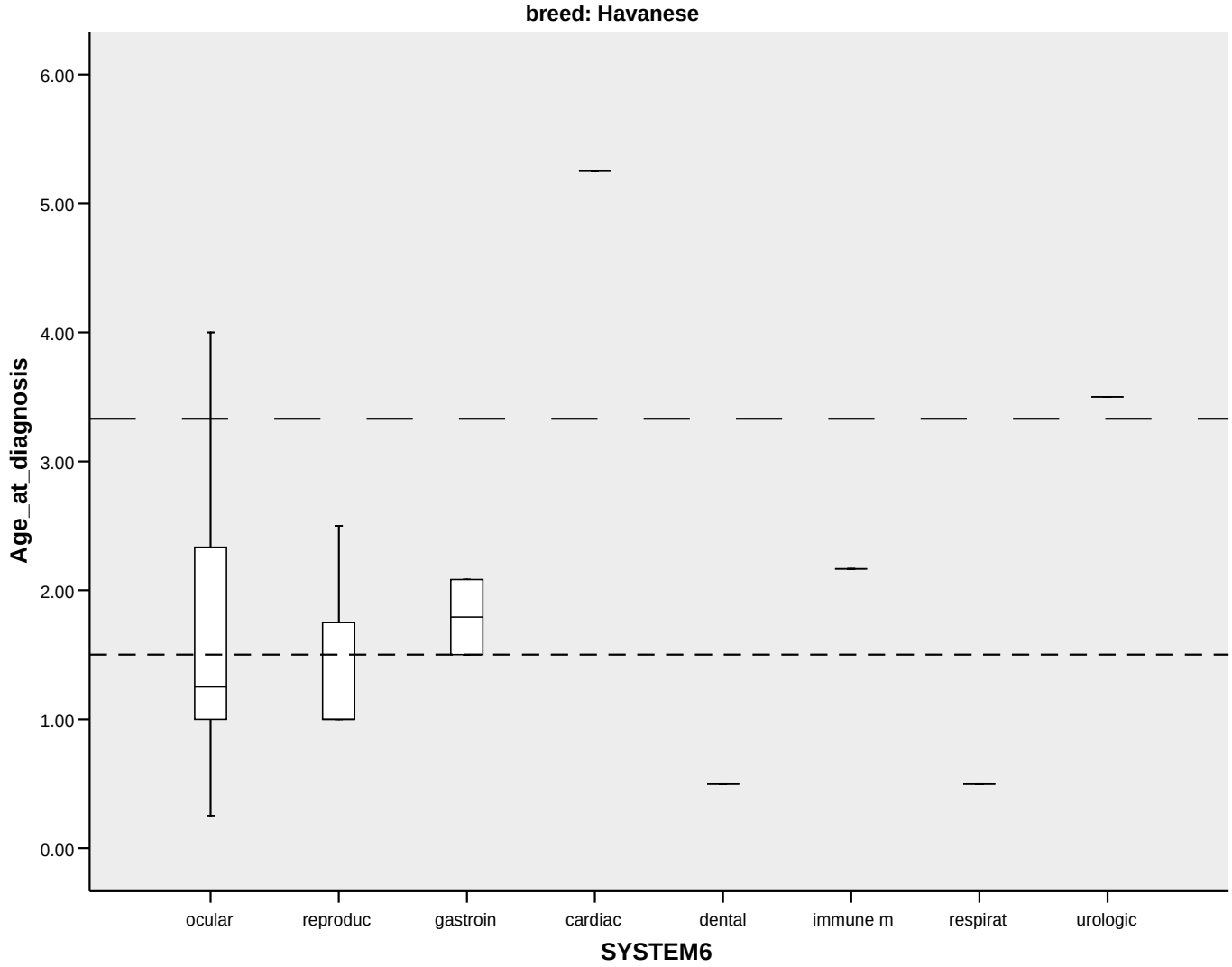


Figure 4. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Havanese breed (N=14 dogs with 15 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Havanese breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Havanese breed.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Ocular	5	33.3	Cataracts; cherry eye; epiphora; red eye
2	Reproductive	3	20.0	Cryptorchid; fading puppy; infertility
3	Gastrointestinal	2	13.3	Diarrhoea
4	Cardiac	1	6.7	Heart murmur (unspecified)
5	Dental	1	6.7	Defect other than extra teeth
6	Immune mediated	1	6.7	Allergy other (unspecified)
7	Respiratory	1	6.7	Long soft palate
8	Urologic	1	6.7	Cystitis
	Total	15	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for the Hovawart breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Hovawart breed

A total of 110 forms were sent out and 33 were returned, representing 49 live dogs. This breed had a 30.0% response rate (33/110) and it represented 0.24% of all returns (33/13,741).

Mortality data

A total of 19 deaths were reported and this represents 0.12% of all deaths reported in the survey (19/15,881). The median age at death for the Hovawart breed was 12 years and 11 months (min = 7 years, max = 14 years and 9 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Hovawart breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Hovawart breed.

Cause of death		N	%	Most common specific causes in descending order
1	Old age	6	31.6	Old age
2	Cancer	3	15.8	Osteosarcoma; type unspecified (mammary)
3	Other	3	15.8	Uncodeable
4	Cardiac	2	10.5	Dilated cardiomyopathy; heart failure
5	Cerebral vascular	2	10.5	Stroke or cerebral vascular accident
6	Urologic	2	10.5	Chronic kidney failure; urethral obstruction
7	Musculoskeletal	1	5.3	Arthritis
	Total	19	100.0	

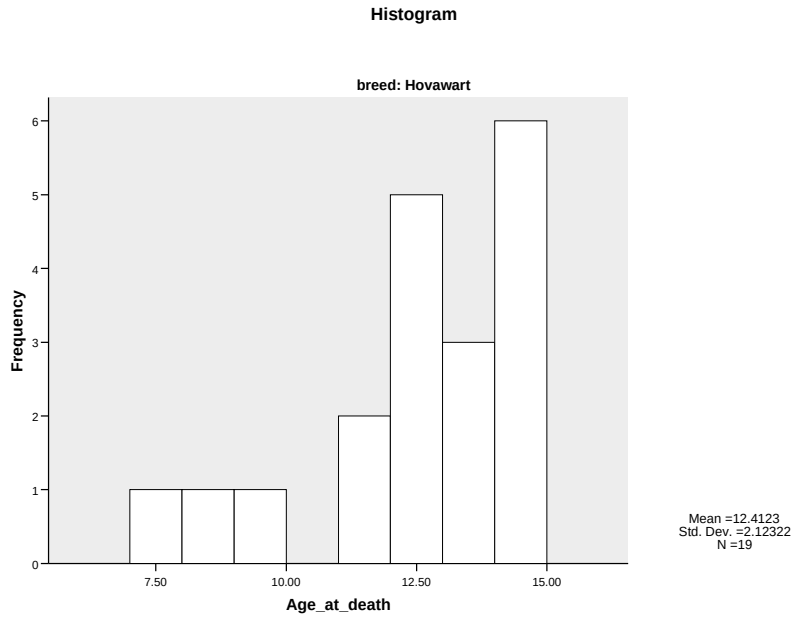


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 19 Hovawart deaths with age at death reported.

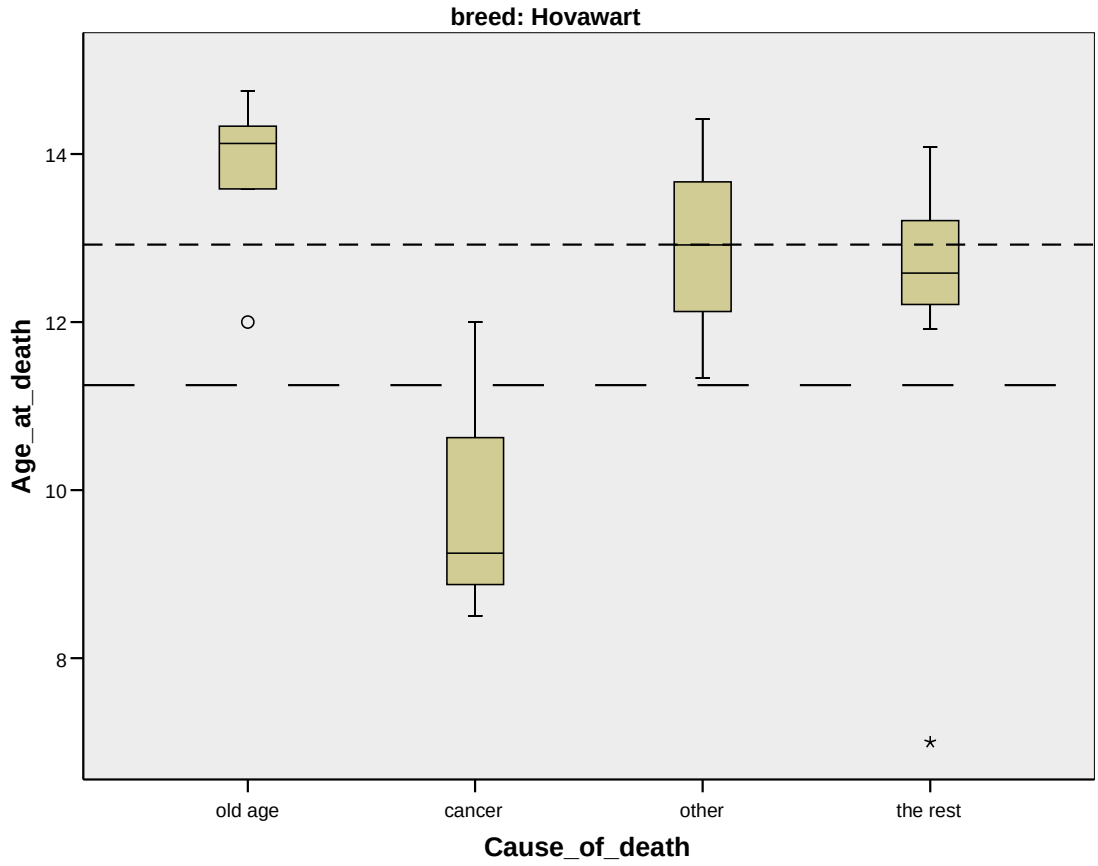


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the Hovawart breed (N=19). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the Hovawart breed. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 49 live dogs with a reported age was 4 years and 6 months (min=5 months, max=14 years and 11 months, Figure 3). Health information was reported for 49 live dogs of which 35 (71%) were healthy and 14 (29%) had at least one reported health condition, resulting in a total of 26 reported conditions with a median of 1.5 conditions/dog (min=1, max=5).

The median current age of all healthy dogs with a reported age (N=35) was 4 years (min=5 months, max=10 years and 1 month). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=14) was 8 years and 6 months (min=2 years and 9 months, max=14 years and 11 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=25) was 6 years and 3 months (min= 1 year, max= 12 years and 7 months, Figure 4). Table 3 shows the disease conditions for the Hovawart breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for the 49 Hovawart breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	14	12	26 (53%)
Male	17	6	23 (47%)
Totals	31 (63%)	18 (37%)	49 (100%)

There was no association between gender and neuter status (P=0.1459).

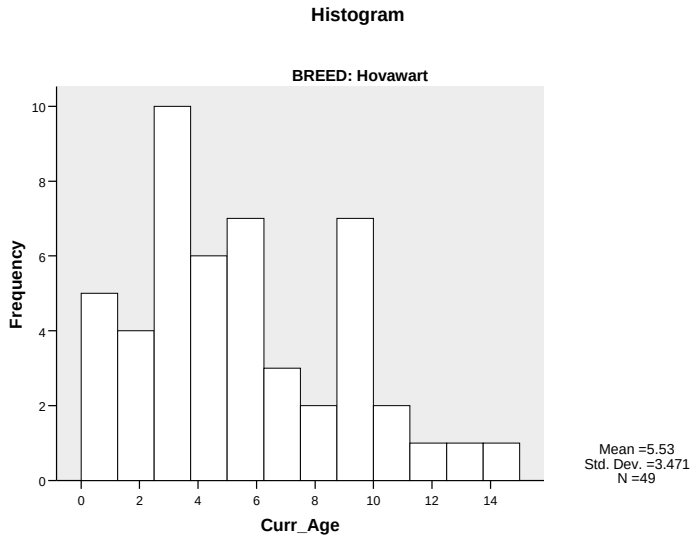


Figure 3. Histogram showing frequency of current age in years for the 49 live Hovawart breed with age reported.

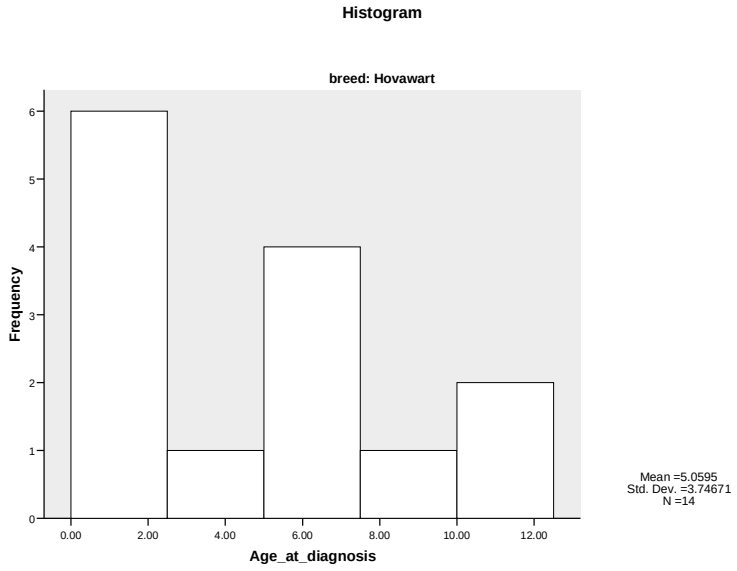


Figure 4. Histogram showing frequency of age at diagnosis for the 14 Hovawart breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

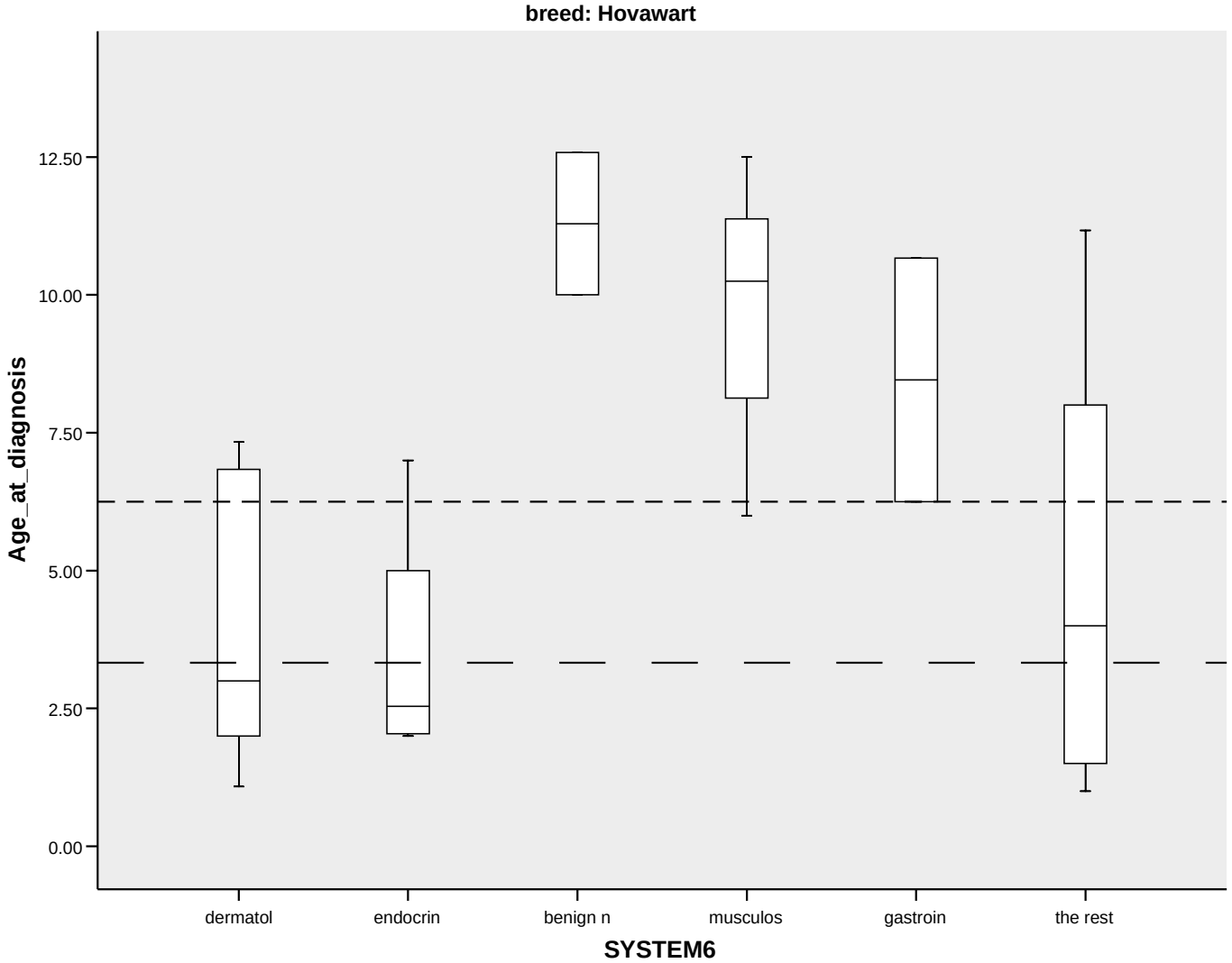


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Hovawart breed (N=14 dogs with 25 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Hovawart breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Hovawart breed.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Dermatologic	5	19.2	Mites (cheyletiella); pyotraumatic dermatitis; ringworm; sebaceous cyst; seborrhoea
2	Endocrine	4	15.4	Hypothyroidism
3	Benign neoplasia	3	11.5	Lipoma; histiocytoma
4	Musculoskeletal	3	11.5	Arthritis (unspecified>stifle)
5	Aural	2	7.7	Otitis externa
6	Gastrointestinal	2	7.7	Gastric dilatation/volvulus (GDV); megaoesophagus
7	Anal gland	1	3.8	Anal sacculitis
8	Dental	1	3.8	Dental disease
9	Neurologic	1	3.8	Seizures
10	Ocular	1	3.8	Cataracts
11	Reproductive	1	3.8	False pregnancy
12	Respiratory	1	3.8	Pneumonia
13	Trauma	1	3.8	Forelimb
	Total	26	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for Hungarian Wirehaired Viszlas

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Hungarian Wirehaired Viszlas

A total of 136 forms were sent out and 54 were returned, representing 102 live dogs. This breed had a 39.7% response rate (54/136) and it represented 0.39% of all returns (54/13,741).

Mortality data

A total of 15 deaths were reported and this represents 0.09% of all deaths reported in the survey (15/15,881). The median age at death for Hungarian Wirehaired Viszlas was 9 years and 10 months (min = 2 years, max = 15 years) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Hungarian Wirehaired Viszlas. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Hungarian Wirehaired Viszlas.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	7	46.7	Type unspecified; brain tumour
2	Cardiac	2	13.3	Heart attack; heart failure
3	Old age	2	13.3	Old age
4	Dermatologic	1	6.7	Chronic ear infections
5	Endocrine	1	6.7	Addison's disease
6	Gastrointestinal	1	6.7	Gastric dilatation/volvulus (GDV)
7	Unknown	1	6.7	
	Total	15	100.0	

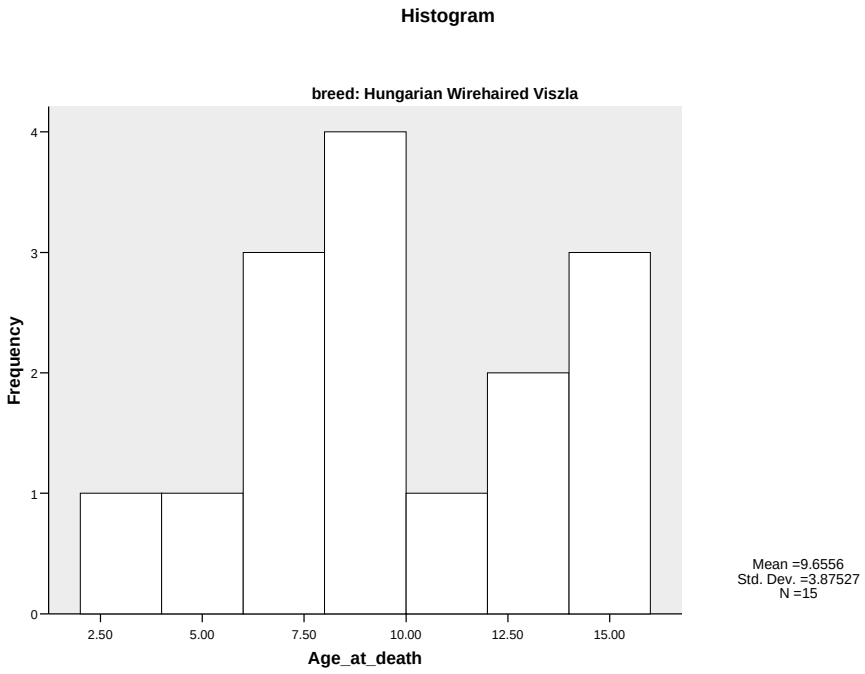


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 15 Hungarian Wirehaired Viszla deaths with age at death reported.

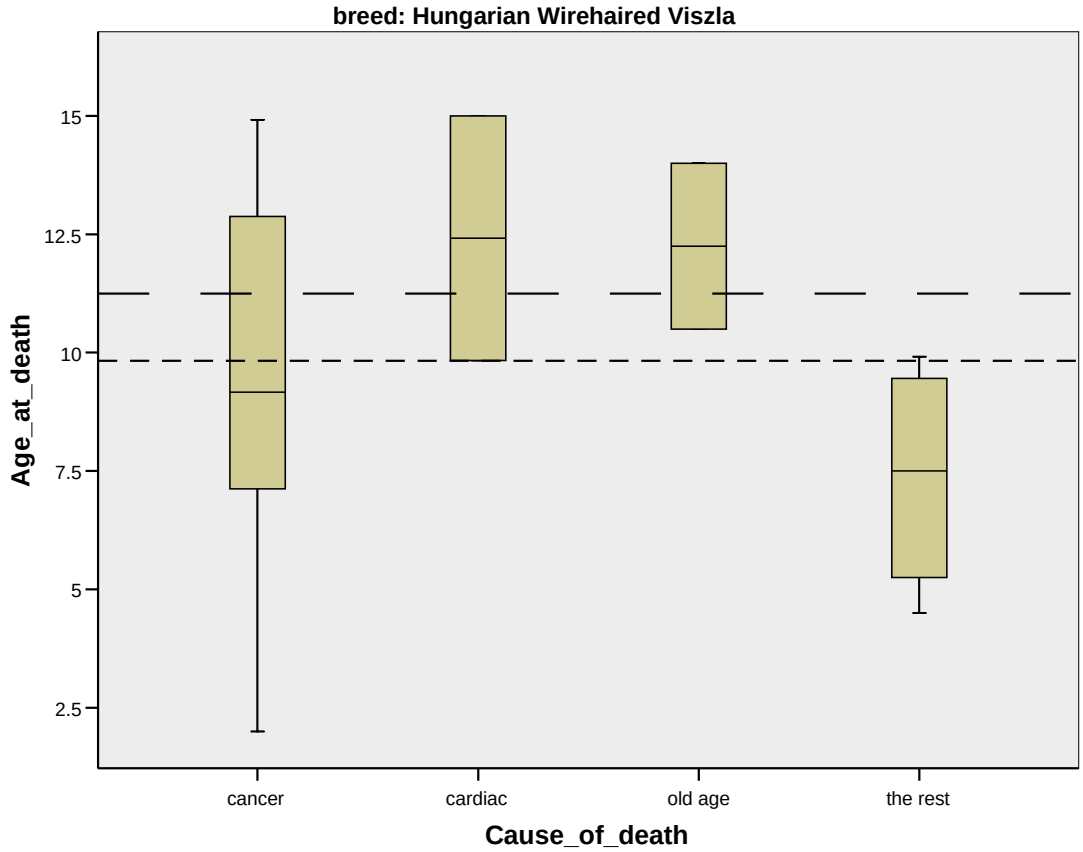


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Hungarian Wirehaired Viszlas (N=15). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Hungarian Wirehaired Viszlas. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 102 live dogs with a reported age was 2 years and 11 months (min=3 months, max=12 years and 1 month, Figure 3). Health information was reported for 102 live dogs of which 64 (63%) were healthy and 38 (37%) had at least one reported health condition, resulting in a total of 53 reported conditions with a median of 1 condition/dog (min=1, max=5).

The median current age of all healthy dogs with a reported age (N=64) was 2 years and 6 months (min=3 months, max=12 years and 1 month). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=35) was 3 years and 7 months (min=8 months, max=8 years and 11 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=48) was 1 year and 6 months (min= 3 months, max= 6 years and 6 months, Figure 4). Table 3 shows the disease conditions for Hungarian Wirehaired Viszlas. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 101 Hungarian Wirehaired Viszlas with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	51	14	65 (64%)
Male	31	5	36 (36%)
Totals	82 (81%)	19 (19%)	101 (100%)

There was no association between gender and neuter status (P=0.3461).

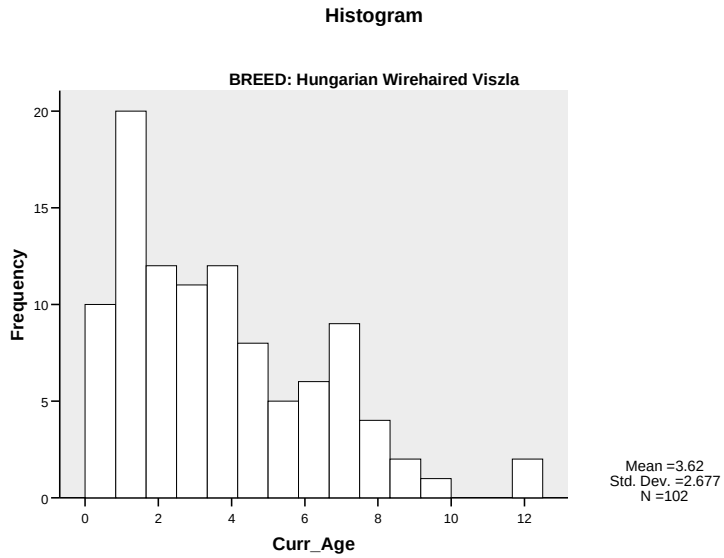


Figure 3. Histogram showing frequency of current age in years for the 102 live Hungarian Wirehaired Viszlas with age reported.

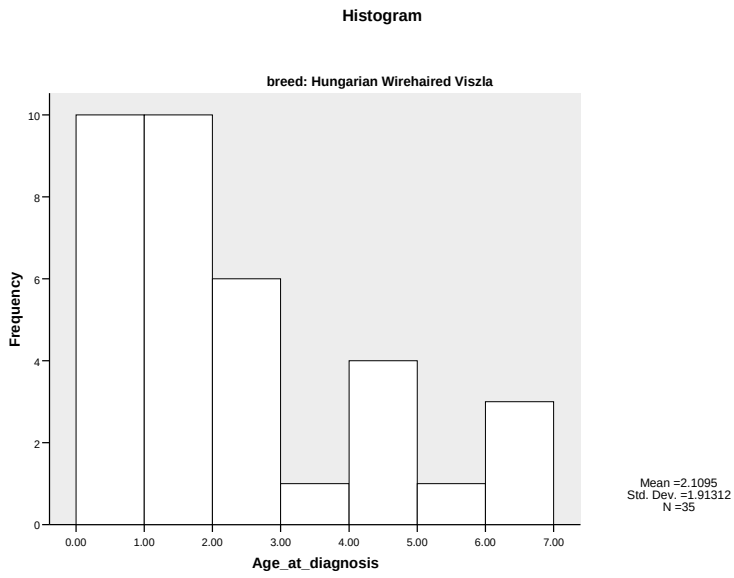


Figure 4. Histogram showing frequency of age at diagnosis for the 35 Hungarian Wirehaired Viszlas with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

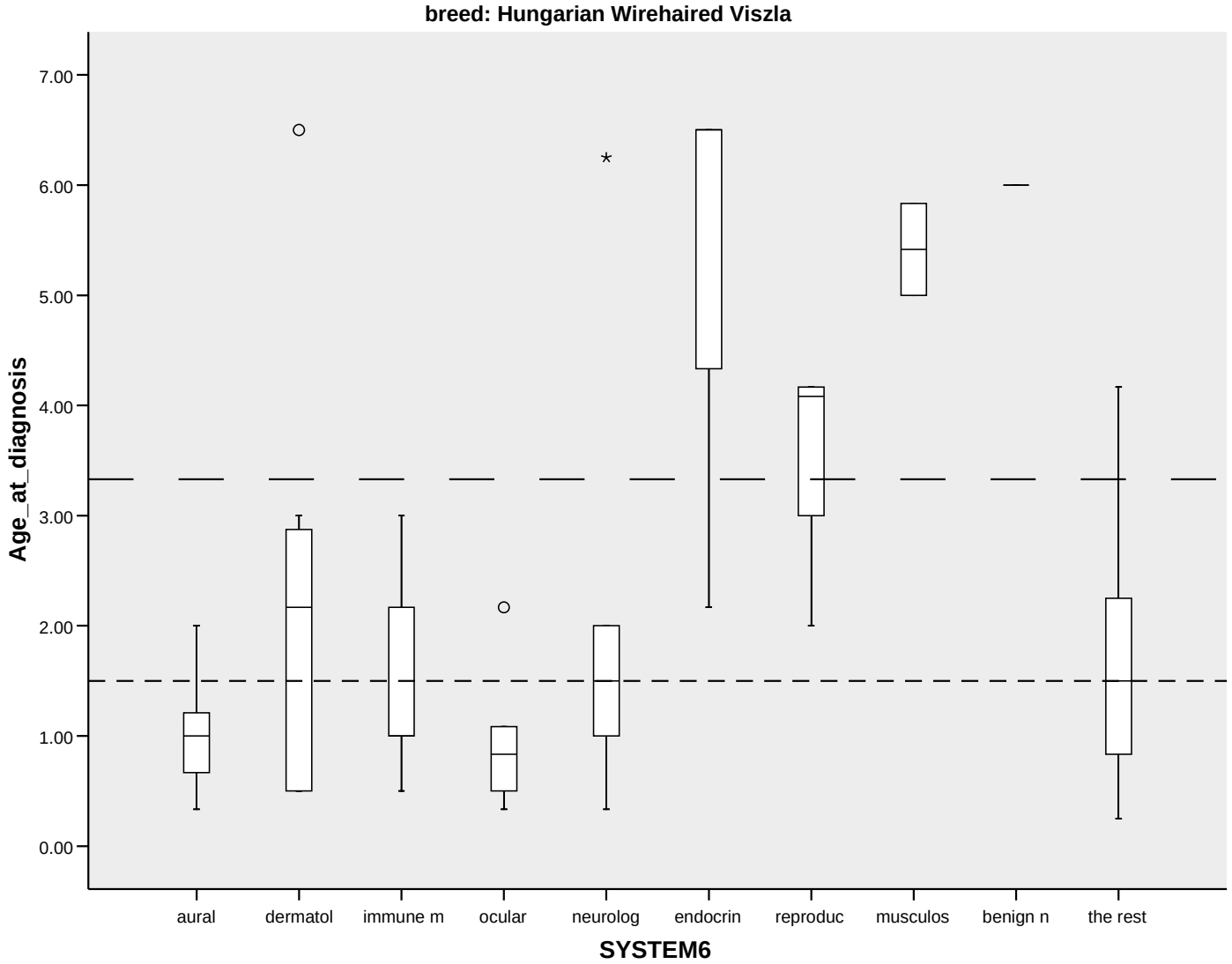


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Hungarian Wirehaired Viszlas (N=35 dogs with 48 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Hungarian Wirehaired Viszlas. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Hungarian Wirehaired Viszlas.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Aural	7	13.2	Otitis externa
2	Dermatologic	7	13.2	Alopecia; dermatitis; interdigital cysts; recurrent pyoderma; skin infection unspecified
3	Immune mediated	6	11.3	Atopy; dust mite allergy; flea allergy; food hypersensitivity; unspecified
4	Ocular	6	11.3	Entropion; conjunctivitis; eye infection; epiphora
5	Neurologic	5	9.4	Seizures; IVDD
6	Endocrine	4	7.5	Addison's disease; hypothyroidism; unspecified
7	Reproductive	4	7.5	Irregular heat cycles; false pregnancy; pyometra
8	Urologic	3	5.7	Incontinence (unspecified); cystitis
9	Musculoskeletal	2	3.8	Lameness (hindlimb); stiff joints
10	Other	2	3.8	Uncodeable
11	Unknown	2	3.8	Undiagnosed illness
12	Benign neoplasia	1	1.9	Lipoma
13	Cancer	1	1.9	Type unspecified
14	Cardiac	1	1.9	Heart murmur with clinical signs (grade unspecified)
15	Gastrointestinal	1	1.9	Vomiting
16	Respiratory	1	1.9	Kennel cough
	Total	53	100.0	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for Irish Red & White Setters

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Irish Red & White Setters

A total of 215 forms were sent out and 139 were returned, representing 337 live dogs. This breed had a 64.7% response rate (139/215) and it represented 1.01% of all returns (139/13,741).

Mortality data

A total of 179 deaths were reported and this represents 1.13% of all deaths reported in the survey (179/15,881). The median age at death for Irish Red & White Setters was 11 years and 5 months (min = 11 months, max = 17 years and 6 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Irish Red & White Setters. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Irish Red & White Setters.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	54	30.2	Lung (unspec.); mammary (unspec.); mouth (unspec)
2	Old age	34	19.0	Old age
3	Gastrointestinal	15	8.4	Gastric dilation/volvulus; pancreatitis
4	Cardiac	14	7.8	Heart attack; heart failure; heart defect (unspecified)
5	Urologic	12	6.7	Chronic kidney failure; incontinence
6	Perioperative	7	3.9	
7	Combinations	6	3.4	
8	Other	6	3.4	Uncodeable
9	Cerebral vascular	5	2.8	Stroke or cerebral vascular accident
10	Trauma	4	2.2	Road traffic accident; unspecified
11	Respiratory	3	1.7	Unspecified
12	Unknown	3	1.7	
13	Endocrine	2	1.1	Cushings disease; diabetes mellitus
14	Hepatic	2	1.1	Chronic liver failure
15	Immune mediated	2	1.1	Haemolytic anaemia
16	Musculoskeletal	2	1.1	Arthritis
17	Neurologic	2	1.1	Seizures
18	Reproductive	2	1.1	Prostatic cyst; pyometra
19	Portosystemic shunt (PSS)	1	0.6	
20	Behaviour	1	0.6	Aggression
21	Infection	1	0.6	E. coli infection
22	Internal bleeding	1	0.6	
	Total	179	100.0	

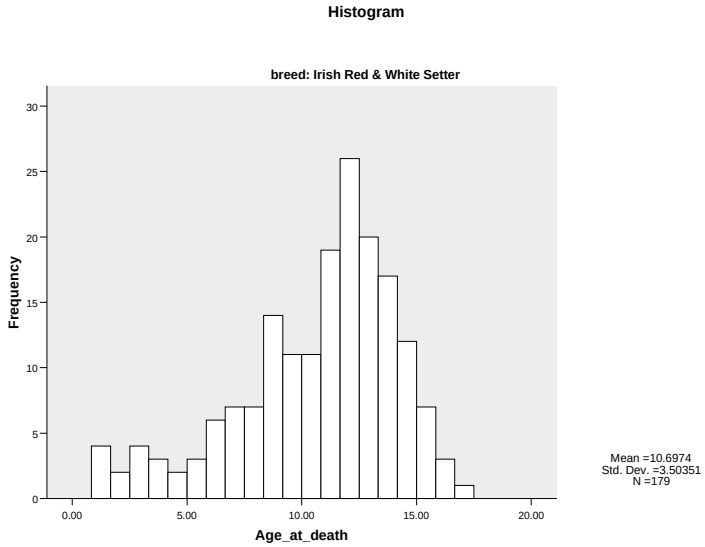


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 179 Irish Red & White Setter deaths with age at death reported.

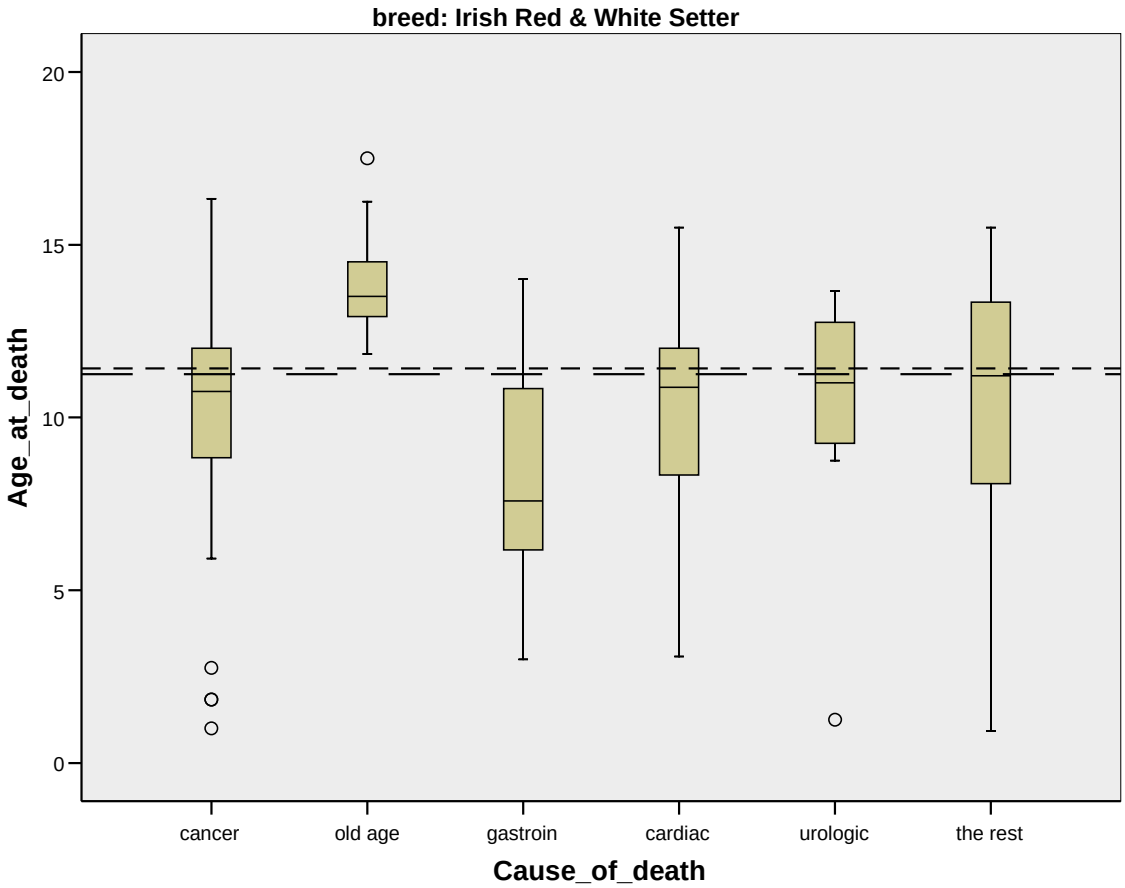


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Irish Red & White Setters (N=179). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Irish Red & White Setters. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 337 live dogs with a reported age was 5 years and 1 month (min=3 months, max=15 years and 7 months, Figure 3). Health information was reported for 337 live dogs of which 182 (54%) were healthy and 155 (46%) had at least one reported health condition, resulting in a total of 283 reported conditions with a median of 1 condition/dog (min=1, max=8).

The median current age of all healthy dogs with a reported age (N=182) was 4 years (min=3 months, max=15 years and 7 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=150) was 6 years and 9 months (min=7 months, max=13 years and 9 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=273) was 3 years and 4 months (min= 1 month, max= 12 years and 6 months, Figure 4). Table 3 shows the disease conditions for Irish Red & White Setters. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 337 Irish Red & White Setters with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	146	49	195 (58%)
Male	119	23	142 (42%)
Totals	265 (79%)	72 (21%)	337 (100%)

Significantly more females were neutered (P=0.0483).

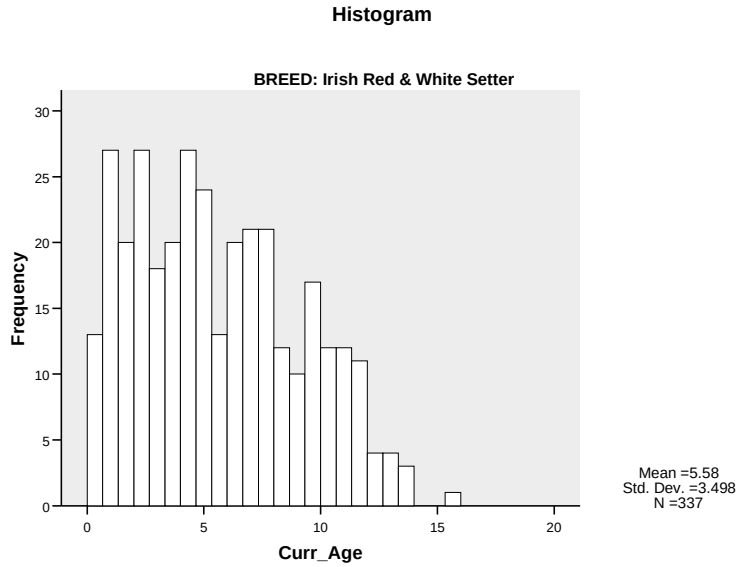


Figure 3. Histogram showing frequency of current age in years for the 337 live Irish Red & White Setters with age reported.

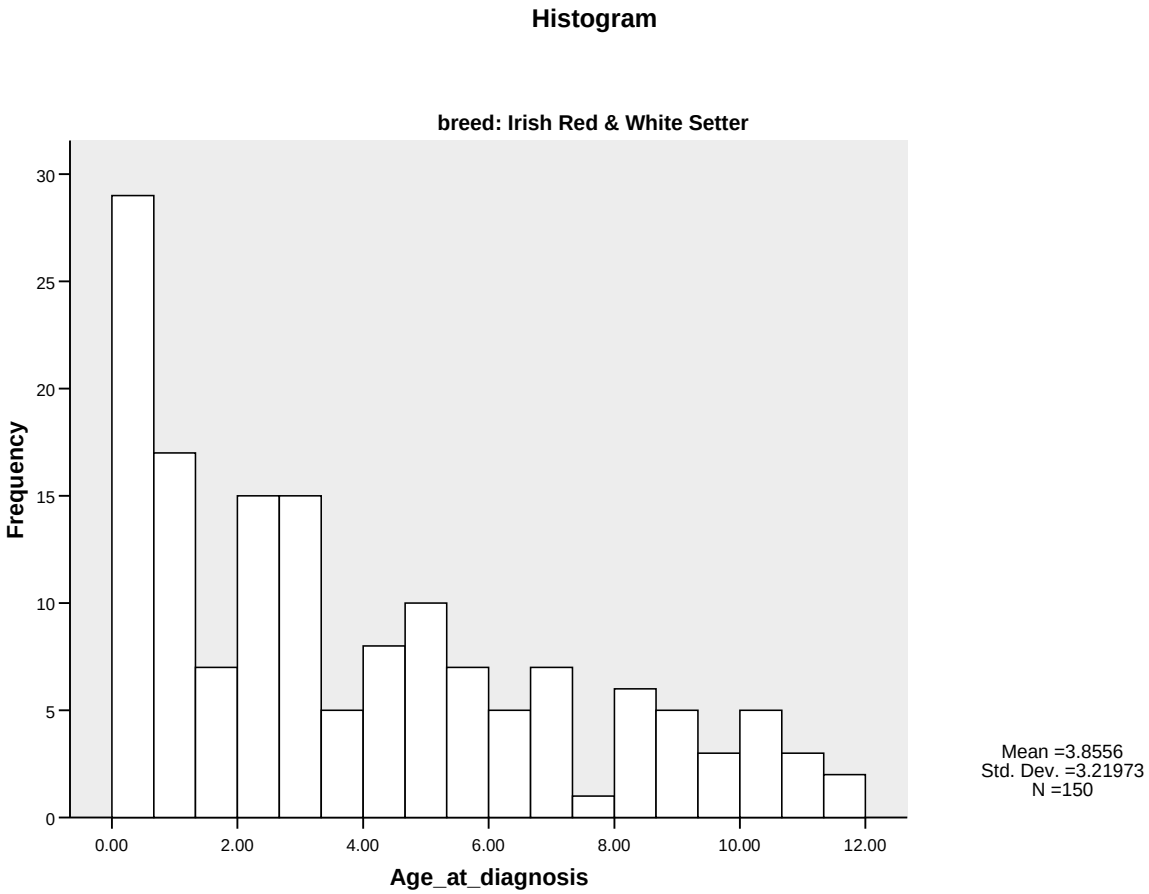


Figure 4. Histogram showing frequency of age at diagnosis for the 150 Irish Red & White Setters with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

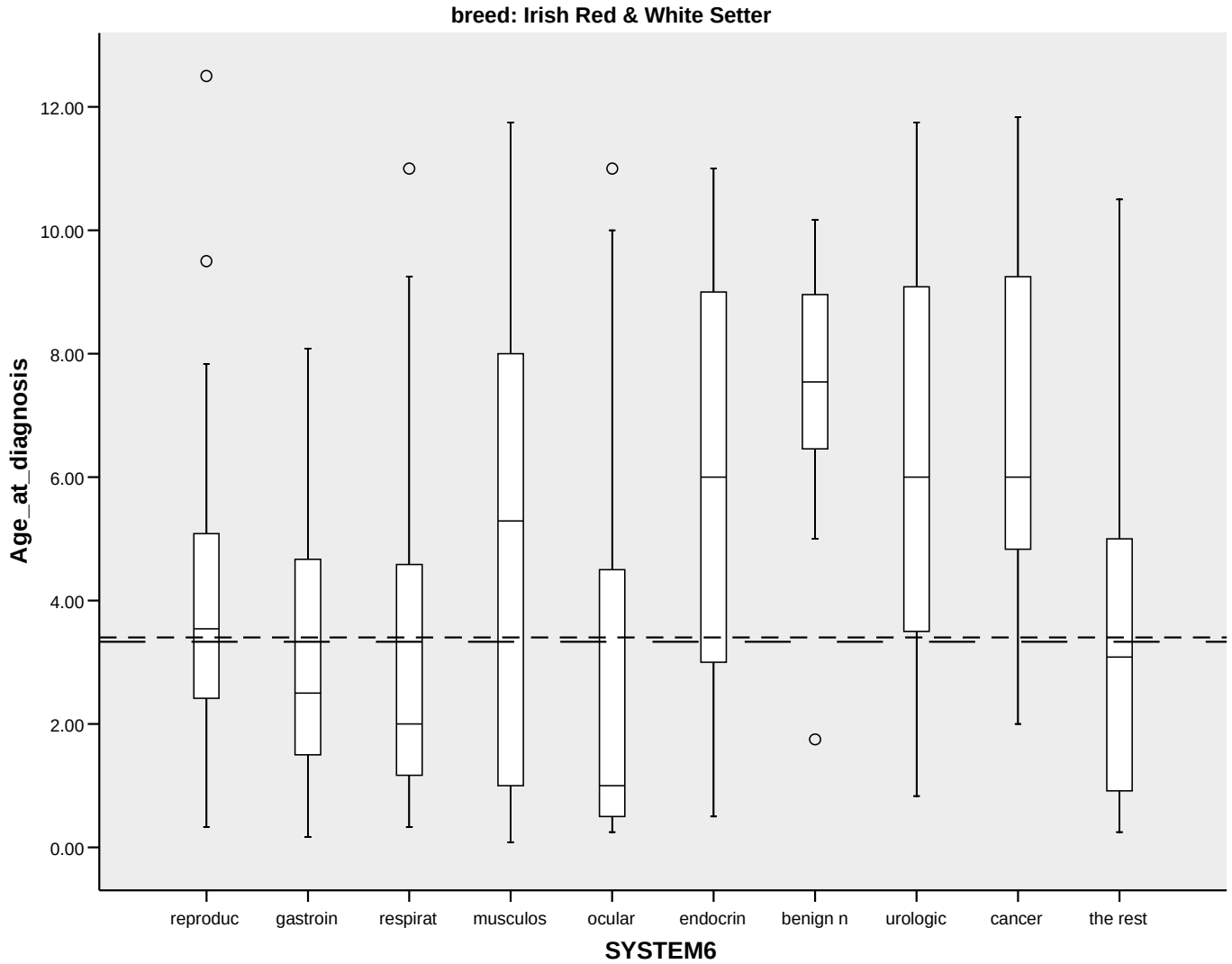


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Irish Red & White Setters (N=150 dogs with 273 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Irish Red & White Setters. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Irish Red & White Setters.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Reproductive	45	15.9	False pregnancy; pyometra; dystochia (uterine inertia=physical blockage); infertility
2	Gastrointestinal	34	12.0	GDV; colitis; diarrhoea; megaoesophagus; campylobacter; vomiting & diarrhoea
3	Respiratory	31	11.0	Kennel cough; coughing; noisy breathing; respiratory infection
4	Musculoskeletal	30	10.6	Arthritis (unspecified=shoulders=elbows>hips>rest); CHD; OCD; spondylitis
5	Ocular	23	8.1	Entropion; cataracts; KCS
6	Dermatologic	14	4.9	Fading nose pigment; sebaceous cysts; mites (sarcoptes); dermatitis
7	Endocrine	13	4.6	Hypothyroidism; Cushing's disease; hyperthyroidism; weight loss (undiagnosed)
8	Benign neoplasia	12	4.2	Lipoma; cysts; histiocytoma
9	Cardiac	12	4.2	Heart murmur (unspecified>grade 3>rest); aortic stenosis; arrhythmia; coughing
10	Immune mediated	11	3.9	Gluten-sensitive enteropathy; flea allergy; food hypersensitivity; atopy; AIHA
11	Urologic	11	3.9	Incontinence (unspecified>after spay); cystitis; cystouroliths (calcium oxalate)
12	Cancer	10	3.5	Type unspecified; fibrosarcoma (tail); leukaemia
13	Aural	9	3.2	Otitis externa; ear mites
14	Dental	8	2.8	Retained puppy teeth; defect other than extra teeth
15	Other	6	2.1	Uncodeable
16	Anal gland	3	1.1	Anal sacculitis
17	Neurologic	3	1.1	Seizures
18	Trauma	3	1.1	Skin; spine; vertebrae
19	Unknown	2	0.7	Undiagnosed illness
20	Behaviour	1	0.4	Unspecified
21	Haematopoietic	1	0.4	Von Willebrand disease (VWD)
22	Hepatic	1	0.4	Portsystemic shunt (PSS)
	Total	283	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for Irish Setters

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Irish Setters

A total of 1298 forms were sent out and 235 were returned, representing 680 live dogs. This breed had an 18.1% response rate (235/1298) and it represented 1.71% of all returns (235/13,741).

Mortality data

A total of 451 deaths were reported and this represents 2.84% of all deaths reported in the survey (451/15,881). The median age at death for Irish Setters was 12 years (min = 4 months, max = 17 years and 2 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Irish Setters. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Irish Setters.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	123	27.3	Type unspecified (mammary, liver, unspecified)
2	Old age	101	22.4	Old age
3	Cardiac	45	10.0	Heart failure; heart defect unspecified
4	Gastrointestinal	36	8.0	GDV; megaoesophagus; pancreatitis
5	Combinations	22	4.9	Kidney & liver failure; cancer; incontinence
6	Other	15	3.3	Uncodeable
7	Cerebral vascular	12	2.7	Stroke or cerebral vascular accident
8	Neurologic	11	2.4	Seizures; spinal disease unspecified
9	Urologic	9	2.0	Kidney failure (chronic > acute); incontinence
10	Endocrine	8	1.8	Cushings disease; diabetes mellitus; Addisons disease
11	Hepatic	8	1.8	Chronic liver failure; liver disease unspecified
12	Unknown	8	1.8	
13	Respiratory	7	1.6	Laryngeal paralysis; pneumonia
14	Internal bleeding	6	1.3	
15	Musculoskeletal	6	1.3	Arthritis
16	Perioperative	6	1.3	
17	Reproductive	6	1.3	Pyometra
18	Trauma	4	0.9	Road traffic accident; unspecified
19	Senility	3	0.7	
20	Portosystemic shunt (PSS)	2	0.4	
21	Behaviour	2	0.4	Aggression; unspecified
22	Cardiovascular	2	0.4	
23	Collapse	2	0.4	
24	Immune mediated	2	0.4	Unspecified
25	Septicaemia	2	0.4	
26	Dermatologic	1	0.2	Skin disease (unspecified)
27	Poisoning	1	0.2	
28	Sudden death	1	0.2	
	Total	451	100.0	

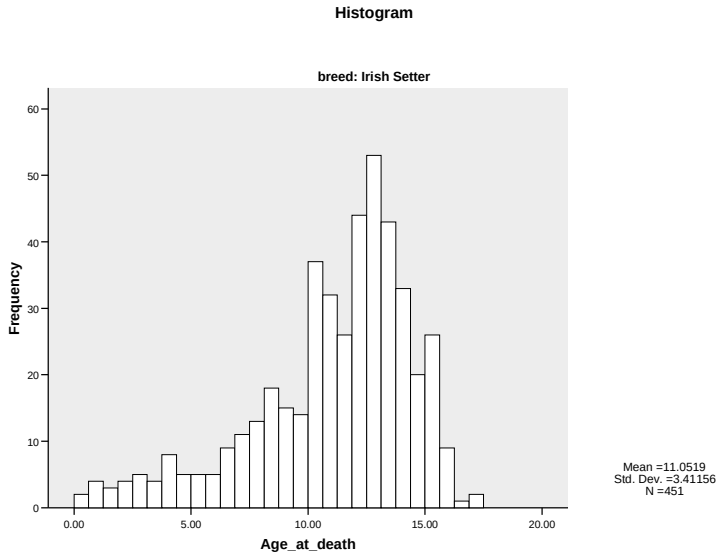


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 451 Irish Setter deaths with age at death reported.

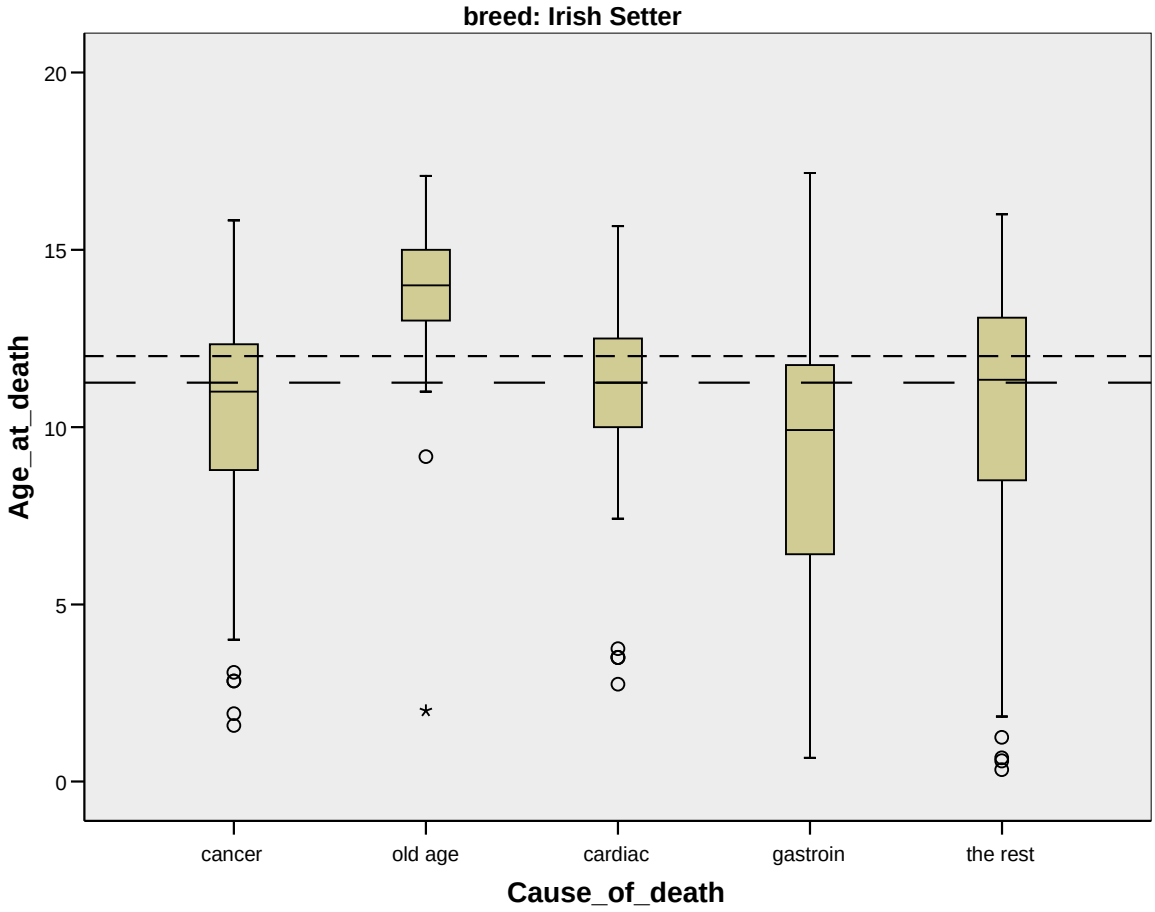


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Irish Setters (N=451). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Irish Setters. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 680 live dogs with a reported age was 5 years and 11 months (min=2 months, max=15 years and 7 months, Figure 3). Health information was reported for 680 live dogs of which 372 (55%) were healthy and 308 (45%) had at least one reported health condition, resulting in a total of 591 reported conditions with a median of 1 condition/dog (min=1, max=11).

The median current age of all healthy dogs with a reported age (N=372) was 4 years and 7 months (min=2 months, max=15 years and 7 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=292) was 7 years and 7 months (min=4 months, max=15 years and 5 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=566) was 4 years (min= 2 months, max= 15 years and 5 months, Figure 4). Table 3 shows the disease conditions for Irish Setters. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 676 Irish Setters with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	332	71	403 (60%)
Male	243	30	273 (40%)
Totals	575 (85%)	101 (15%)	676 (100%)

Significantly more females were neutered (P=0.0177).

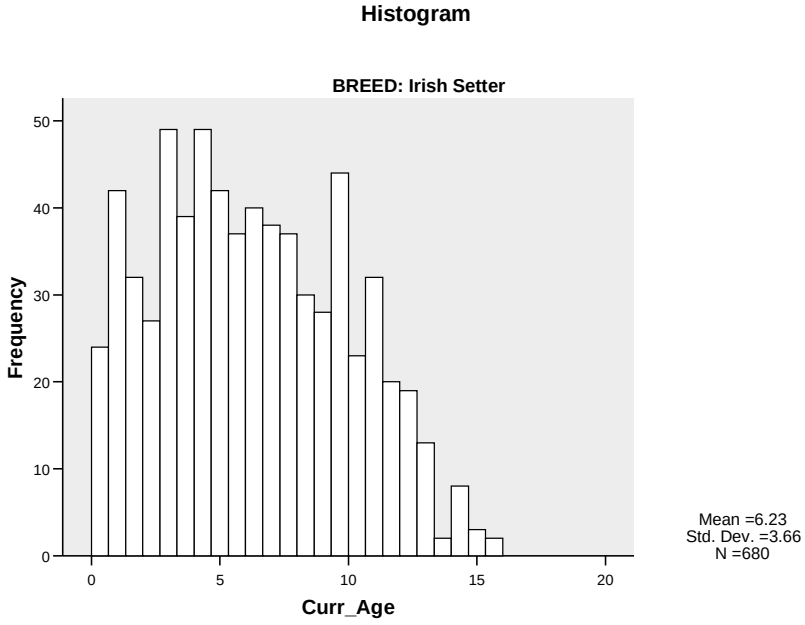


Figure 3. Histogram showing frequency of current age in years for the 680 live Irish Setters with age reported.

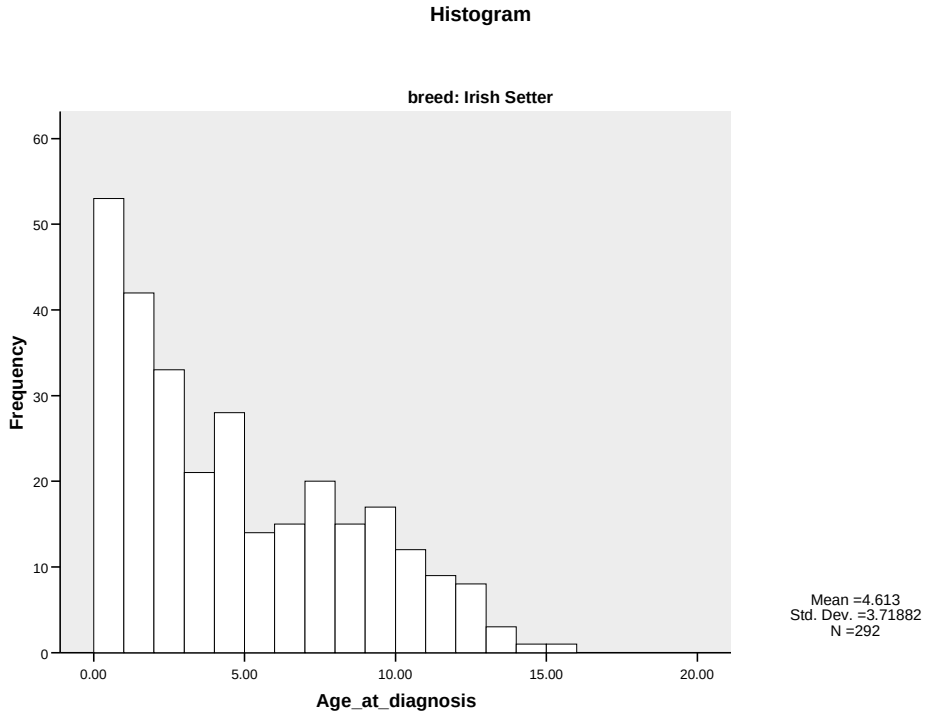


Figure 4. Histogram showing frequency of age at diagnosis for the 292 Irish Setters with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

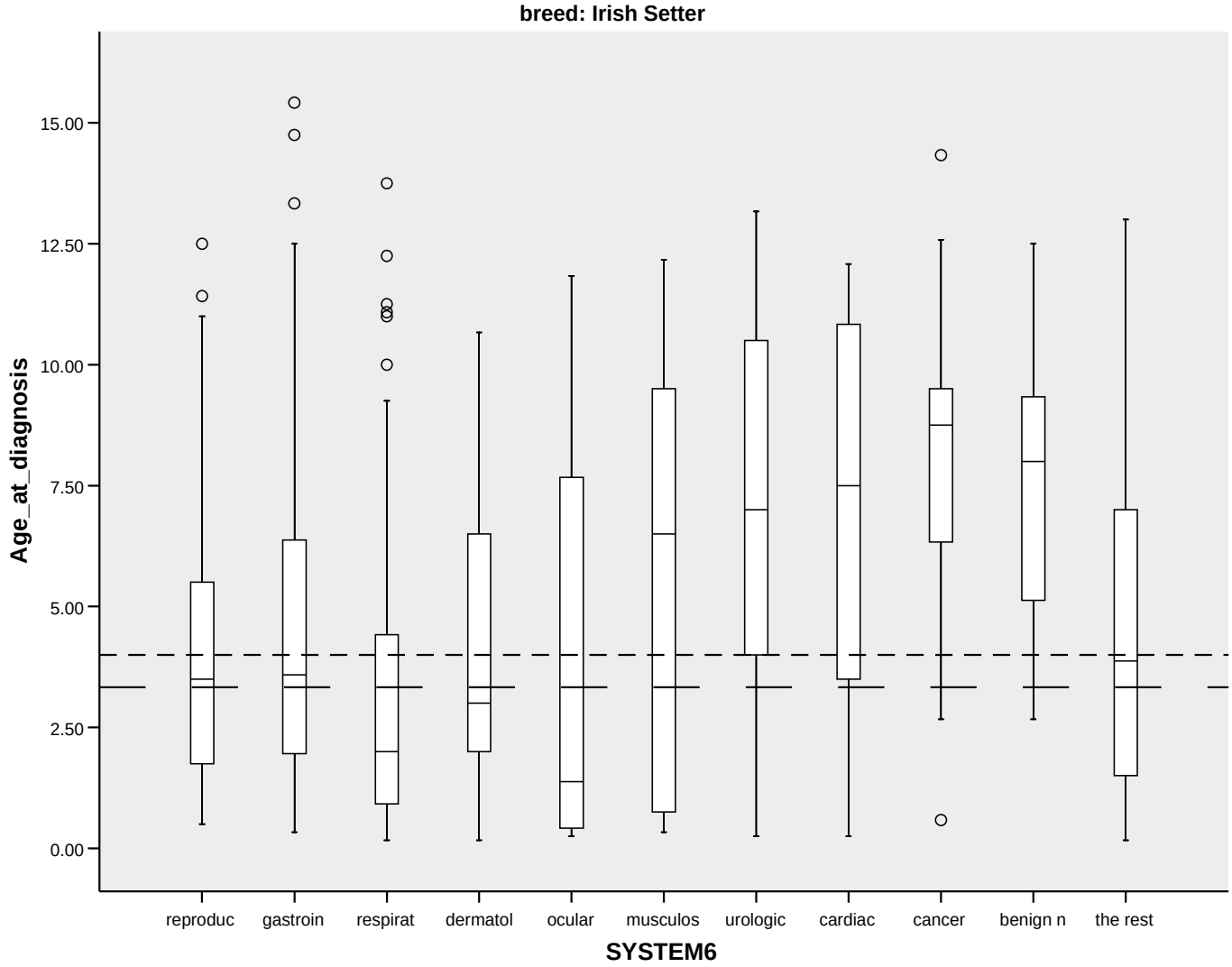


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Irish Setters (N=292 dogs with 566 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Irish Setters. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Irish Setters.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Reproductive	90	15.2	False pregnancy; pyometra; dystochia (uterine inertia>physical blockage); infertility
2	Gastrointestinal	85	14.4	Gastric dilatation/volvulus (GDV); colitis; foreign body obstruction; megaoesophagus
3	Respiratory	54	9.1	Kennel cough; pneumonia; laryngeal paralysis; bronchitis; coughing
4	Dermatologic	50	8.5	Recurrent pyoderma; dermatitis; fading nose pigment; alopecia; mites (sarcoptes)
5	Ocular	43	7.3	Entropion; cataracts; ectropion; conjunctivitis; persistent papillary membrane (PPM); epiphora; red eye
6	Musculoskeletal	41	6.9	Arthritis (unspecified=shoulders>hindlimb=hips>rest); CHD; panosteitis
7	Urologic	37	6.3	Incontinence (unspecified>after spay); cystitis; cystouroliths (struvite=unspecified); haematuria
8	Cardiac	25	4.2	Heart murmur (unspecified); arrhythmia; dilated cardiomyopathy; CHF
9	Immune mediated	25	4.2	Food allergy; gluten-sensitive enteropathy; AIHA; flea allergy
10	Neurologic	25	4.2	Seizures; deafness; spondylopathy; IVDD (cervical); vestibular disease
11	Cancer	22	3.7	Unspecified (mammary>rest); haemangiopericytoma; sarcoma;
12	Benign neoplasia	21	3.6	Lipoma; unspecified; adenoma
13	Aural	18	3.0	Otitis externa; ear mites; otitis media
14	Endocrine	17	2.9	Hypothyroidism; Cushing's disease; diabetes mellitus
15	Dental	10	1.7	Retained puppy teeth; dental disease; defect other than extra teeth
16	Other	10	1.7	Uncodeable
17	Unknown	8	1.4	Undiagnosed illness
18	Trauma	6	1.0	Forelimb; hindlimb; spine; tail
19	Hepatic	2	0.3	Hepatitis
20	Behaviour	1	0.2	Unspecified
21	Haematopoietic	1	0.2	Bleeding disorder unspecified
	Total	591	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for Irish Water Spaniels

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Irish Water Spaniels

A total of 210 forms were sent out and 90 were returned, representing 151 live dogs. This breed had a 42.9% response rate (90/210) and it represented 0.65% of all returns (90/13,741).

Mortality data

A total of 95 deaths were reported and this represents 0.60% of all deaths reported in the survey (95/15,881). The median age at death for Irish Water Spaniels was 9 years and 4 months (min = 7 months, max = 17 years and 2 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Irish Water Spaniels. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Irish Water Spaniels.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	53	55.8	Lymphoma; type unspecified (liver, unspecified)
2	Old age	10	10.5	Old age &nd age combinations
3	Other	5	5.3	Uncodeable
4	Behaviour	3	3.2	Aggression; unspecified
5	Endocrine	3	3.2	Addisons disease; Cushings disease; diabetes mellitus
6	Cerebral vascular	2	2.1	Stroke or cerebral vascular accident
7	Combinations	2	2.1	
8	Poisoning	2	2.1	
9	Trauma	2	2.1	Unspecified
10	Unknown	2	2.1	
11	Cardiac	1	1.1	Heart defect unspecified
12	Cardiovascular	1	1.1	Thrombosis
13	Dermatologic	1	1.1	Skin disease unspecified
14	Gastrointestinal	1	1.1	Gastric dilatation/volvulus (GDV)
15	Hepatic	1	1.1	Hepatitis
16	Immune mediated	1	1.1	Thrombocytopaenia
17	Neurologic	1	1.1	Seizures
18	Respiratory	1	1.1	Respiratory failure unspecified
19	Sudden death	1	1.1	
20	Systemic	1	1.1	Allergy to insect bite or sting or snake bite
21	Urologic	1	1.1	Kidney failure
	Total	95	100.0	

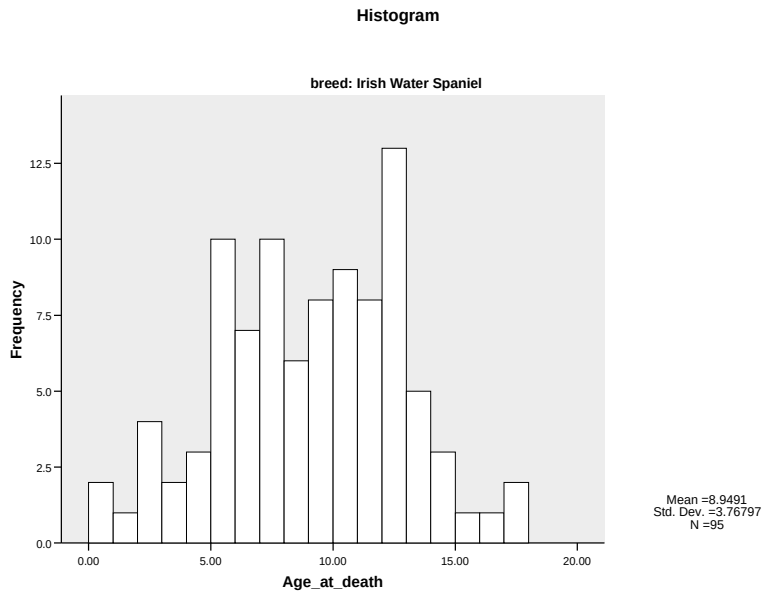


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 95 Irish Water Spaniel deaths with age at death reported.

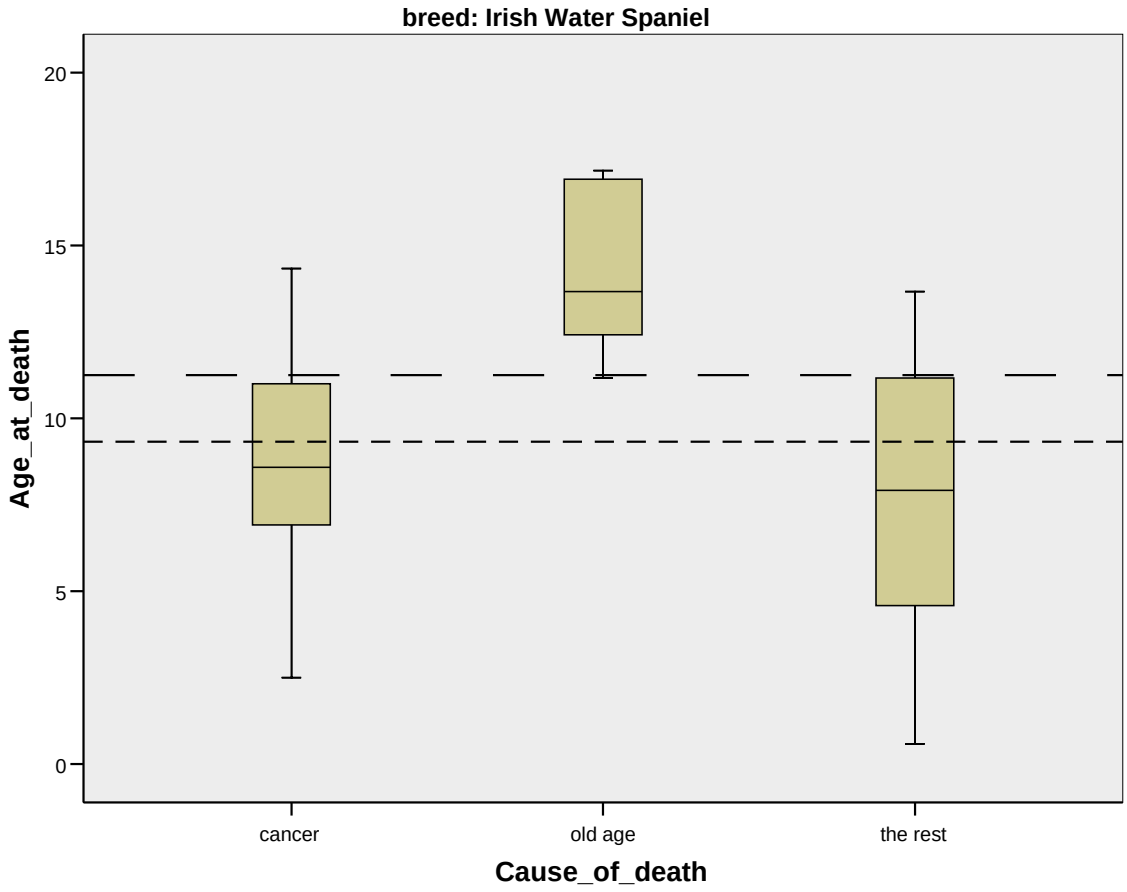


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Irish Water Spaniels (N=95). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Irish Water Spaniels. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 151 live dogs with a reported age was 4 years and 2 months (min=3 months, max=13 years and 11 months, Figure 3). Health information was reported for 151 live dogs of which 88 (58%) were healthy and 63 (42%) had at least one reported health condition, resulting in a total of 104 reported conditions with a median of 1 condition/dog (min=1, max=7).

The median current age of all healthy dogs with a reported age (N=88) was 3 years and 4 months (min=3 months, max=11 years and 4 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=59) was 6 years and 1 month (min=5 months, max=13 years and 11 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=96) was 3 years and 2 months (min= 3 months, max= 12 years and 4 months, Figure 4). Table 3 shows the disease conditions for Irish Water Spaniels. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 149 Irish Water Spaniels with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	52	29	81 (54%)
Male	53	15	68 (46%)
Totals	105 (70%)	44 (30%)	149 (100%)

There was no association between gender and neuter status (P=0.0670).

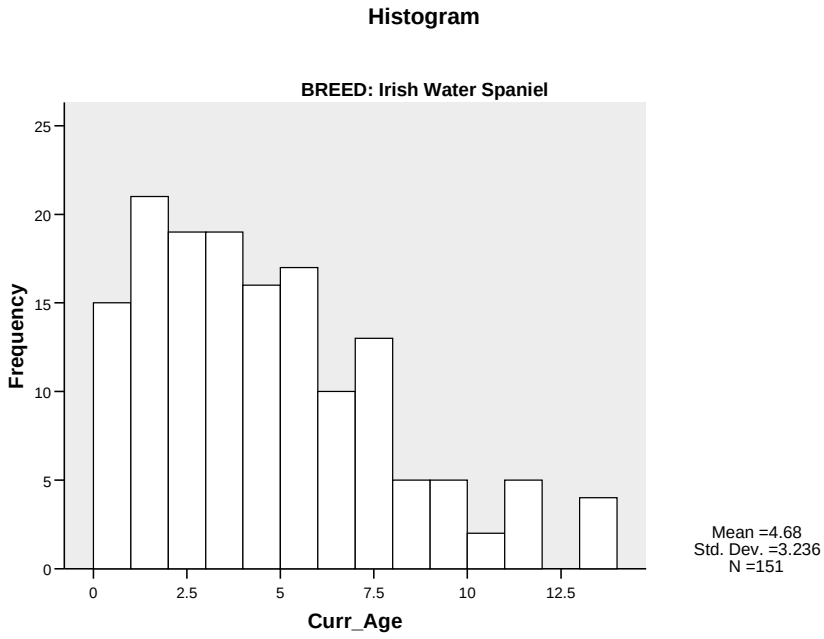


Figure 3. Histogram showing frequency of current age in years for the 151 live Irish Water Spaniels with age reported.

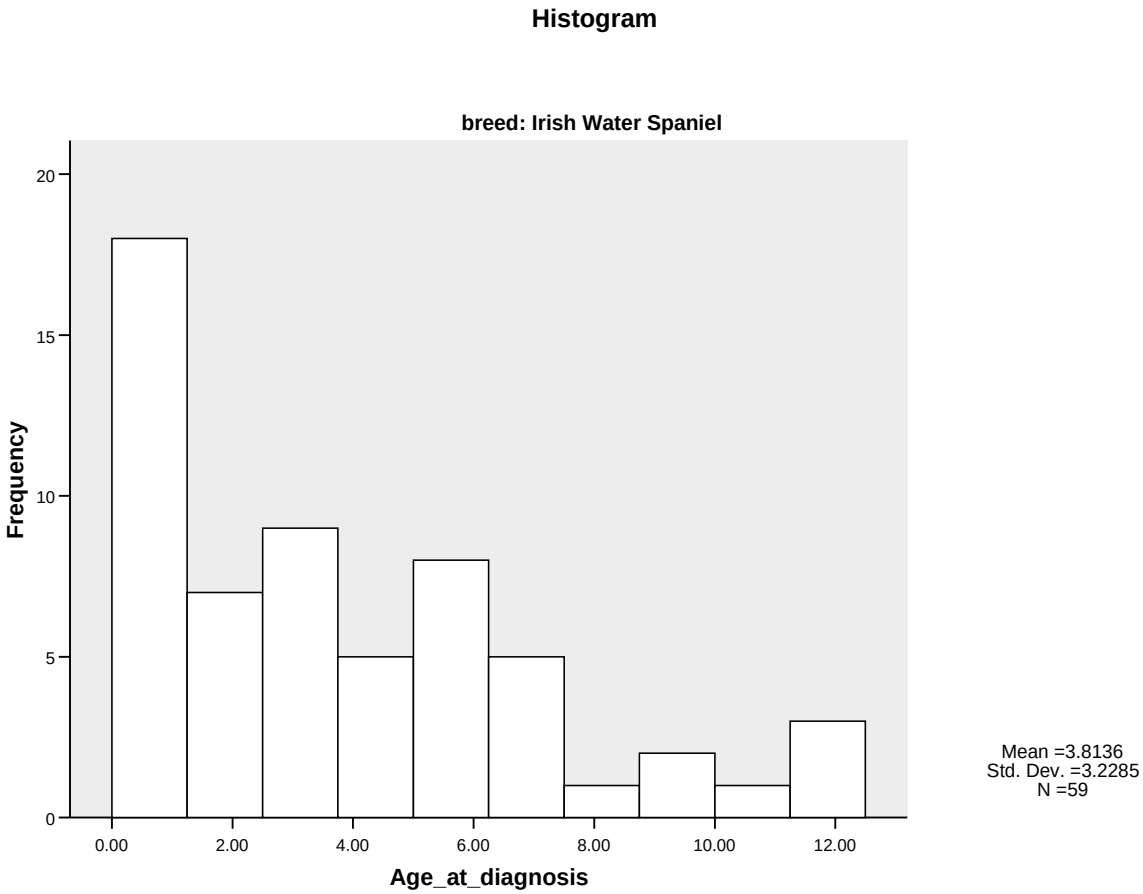


Figure 4. Histogram showing frequency of age at diagnosis for the 59 Irish Water Spaniels with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

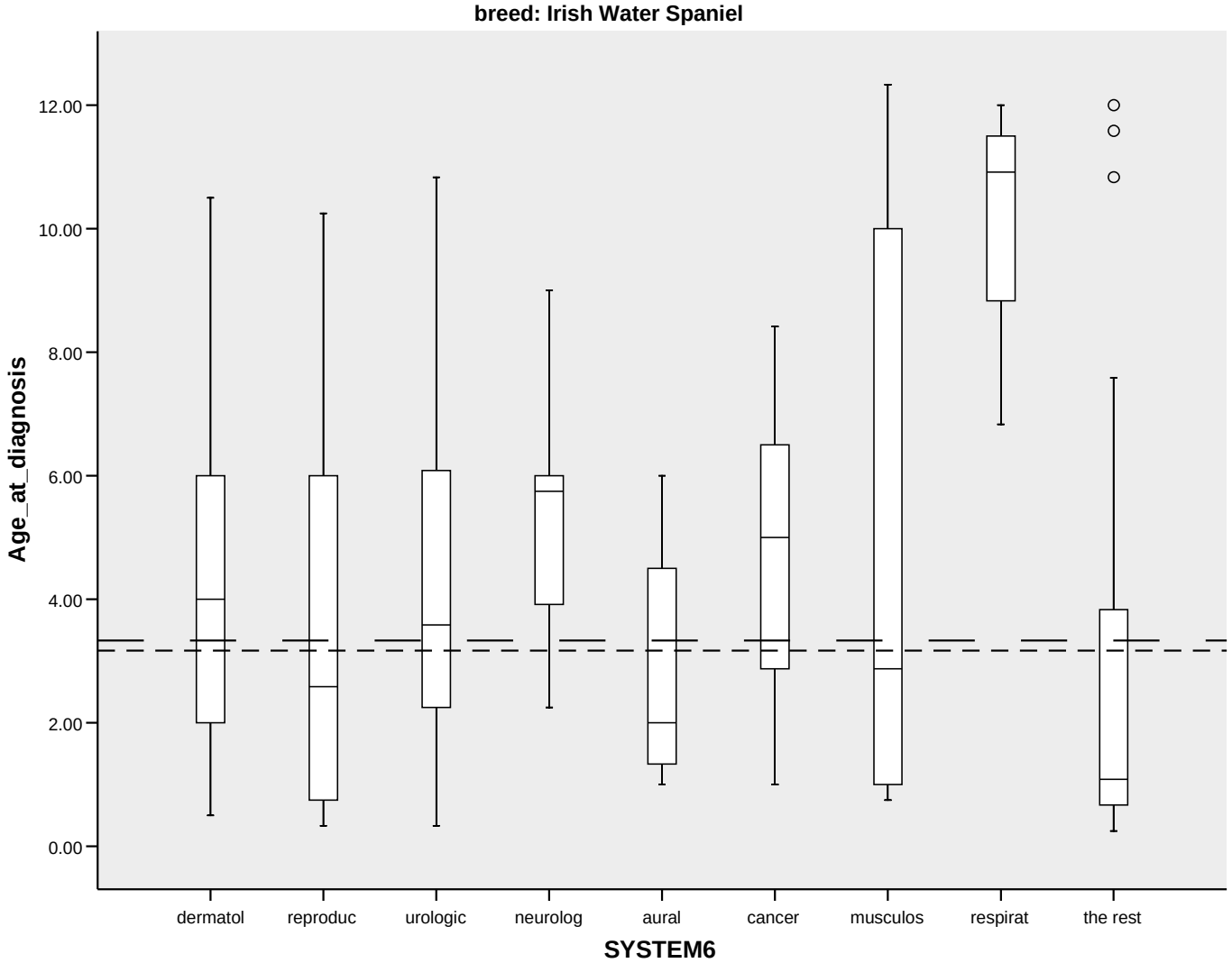


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Irish Water Spaniels (N=59 dogs with 96 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Irish Water Spaniels. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Irish Water Spaniels.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Dermatologic	20	19.2	Alopecia; follicular dysplasia; paronchyia; dermatitis
2	Reproductive	12	11.5	False pregnancy; pyometra; irregular heat cycles
3	Urologic	12	11.5	Cystitis; incontinence (after spay>unspecified); bladder stones (struvite); haematuria
4	Neurologic	10	9.6	Seizures; deafness; IVDD (unspecified)
5	Aural	7	6.7	Otitis externa; excessive ear wax
6	Cancer	7	6.7	Type unspecified (skin); melanoma
7	Musculoskeletal	6	5.8	CHD; arthritis (forelimb=unspecified); CLR; patellar luxation
8	Ocular	6	5.8	Eye infections; cataracts; entropion; distichiasis; red eye
9	Immune mediated	4	3.8	Atopy; food allergy; wasp sting allergy
10	Respiratory	4	3.8	Bronchitis; coughing; kennel cough; laryngeal paralysis
11	Other	4	3.8	Uncodeable
12	Dental	3	2.9	Retained puppy teeth; defect other than extra teeth
13	Gastrointestinal	3	2.9	Campylobacter; colitis; diarrhoea
14	Benign neoplasia	2	1.9	Lipoma
15	Cardiac	1	1.0	Arrhythmia
16	Endocrine	1	1.0	Cushings disease
17	Hepatic	1	1.0	Portosystemic shunt (PSS)
18	Trauma	1	1.0	Dermatalogic
	Total	104	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for Irish Wolfhounds

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Irish Wolfhounds

A total of 261 forms were sent out and 40 were returned, representing 123 live dogs. This breed had a 15.3% response rate (40/261) and it represented 0.29% of all returns (40/13,741).

Mortality data

A total of 112 deaths were reported and this represents 0.71% of all deaths reported in the survey (112/15,881). The median age at death for Irish Wolfhounds was 7 years and 0 months (min = 1 year and 2 months, max = 17 years and 7 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Irish Wolfhounds. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Irish Wolfhounds.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	38	33.9	Osteosarcoma
2	Cardiac	22	19.6	Cardiomyopathy (unspecified); heart failure
3	Gastrointestinal	14	12.5	Gastric dilatation/volvulus (GDV)
4	Combinations	6	5.4	
5	Urologic	6	5.4	Kidney failure (chronic > acute)
6	Old age	5	4.5	Old age & age combinations
7	Cerebral vascular	4	3.6	Stroke or cerebral vascular accident
8	Neurologic	3	2.7	CDRM; spinal disease unspecified
9	Other	3	2.7	Uncodeable
10	Perioperative	3	2.7	
11	Endocrine	2	1.8	Addisons disease; Cushings disease
12	Respiratory	2	1.8	Pneumonia; unspecified
13	Behaviour	1	0.9	Aggression
14	Musculoskeletal	1	0.9	Arthritis
15	Reproductive	1	0.9	Died after bad whelping
16	Unknown	1	0.9	
	Total	112	100.0	

CDRM= chronic degenerative radiculomyelopathy

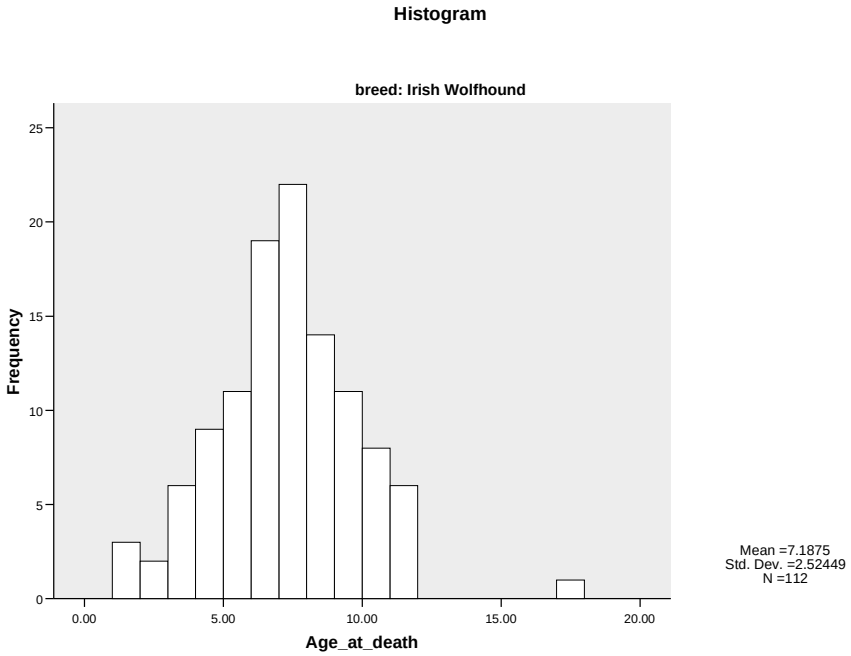


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 112 Irish Wolfhound deaths with age at death reported.

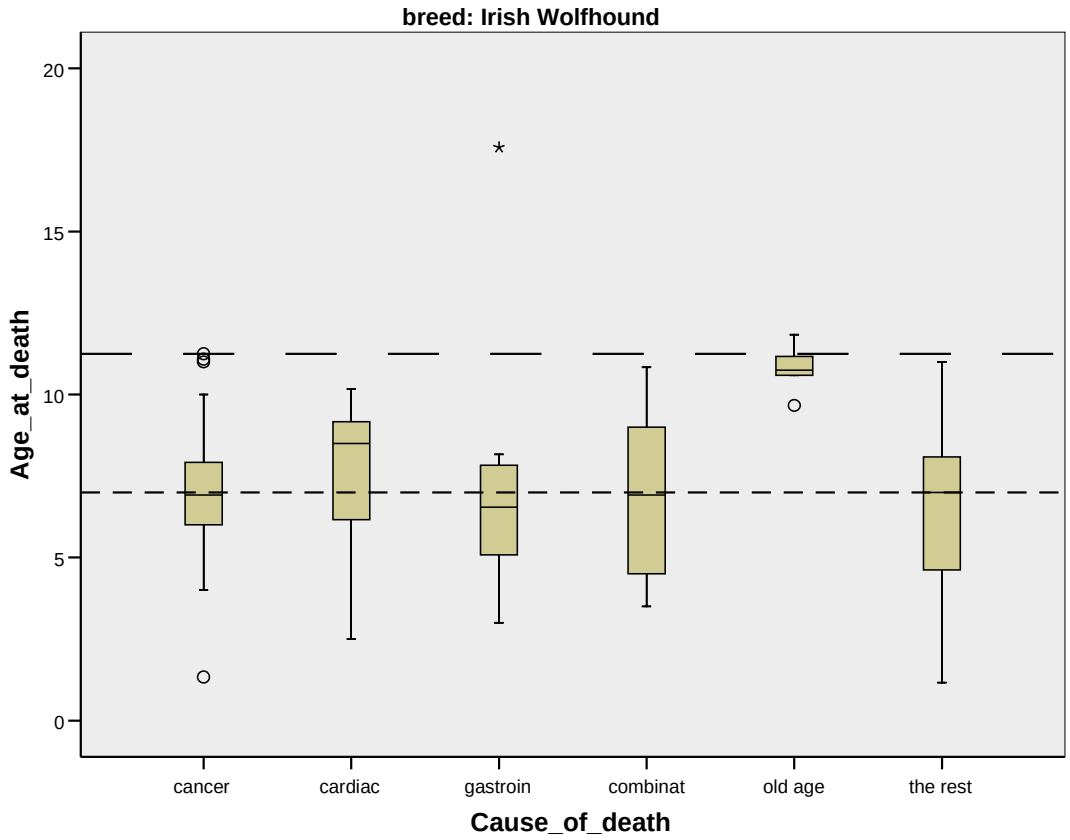


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Irish Wolfhounds (N=112). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Irish Wolfhounds. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 123 live dogs with a reported age was 3 years and 6 months (min=8 months, max=15 years and 4 months, Figure 3). Health information was reported for 123 live dogs of which 76 (62%) were healthy and 47 (38%) had at least one reported health condition, resulting in a total of 76 reported conditions with a median of 1 condition/dog (min=1, max=4).

The median current age of all healthy dogs with a reported age (N=76) was 2 years and 12 months (min=8 months, max=15 years and 4 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=45) was 5 years (min=1 year and 2 months, max=11 years and 8 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=74) was 2 years and 9 months (min= 3 months, max= 11 years, Figure 4). Table 3 shows the disease conditions for Irish Wolfhounds. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 123 Irish Wolfhounds with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	67	11	78 (63%)
Male	43	2	45 (37%)
Totals	110 (89%)	13 (11%)	123 (100%)

There was no association between gender and neuter status (P=0.0933).

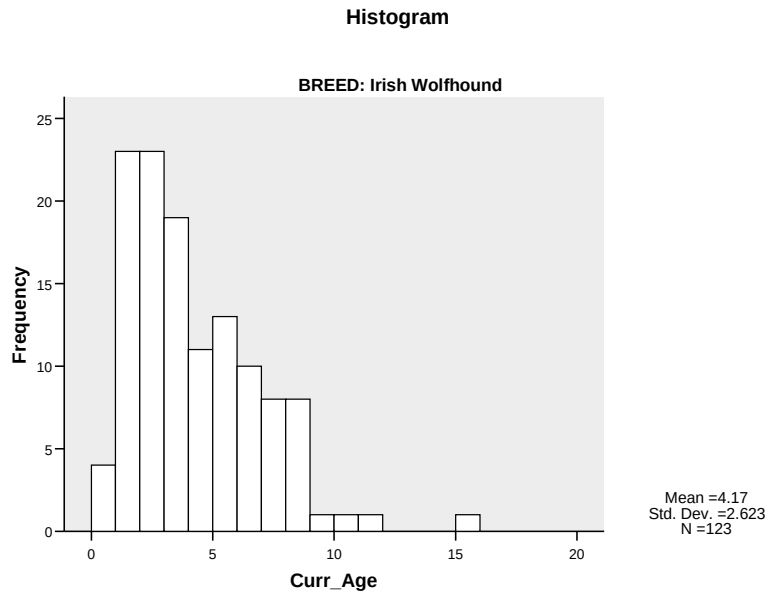


Figure 3. Histogram showing frequency of current age in years for the 123 live Irish Wolfhounds with age reported.

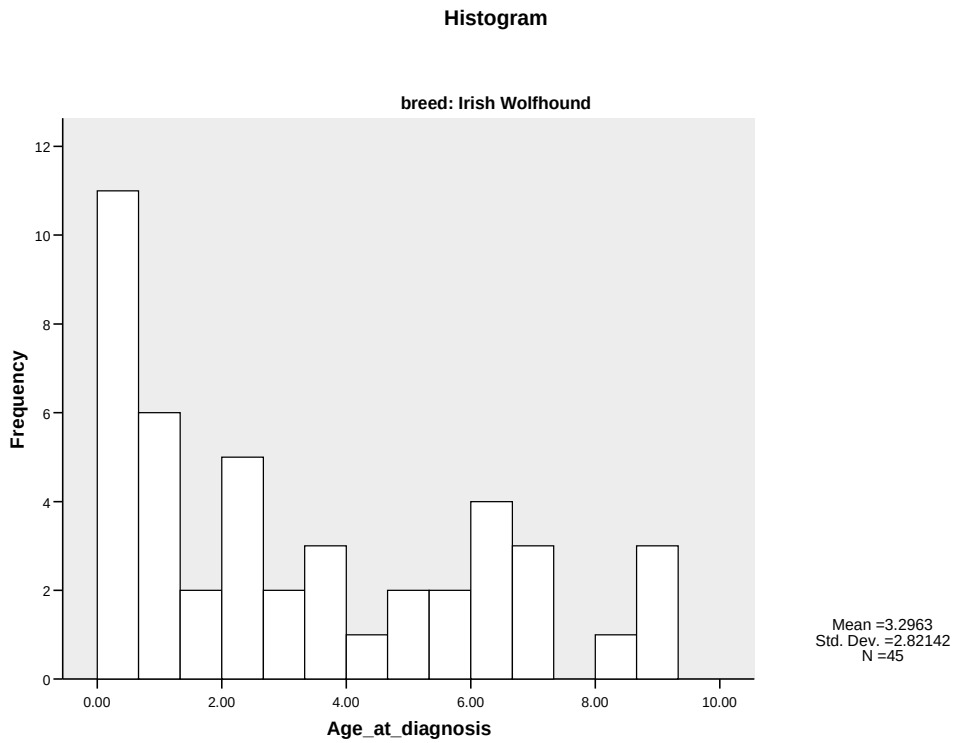


Figure 4. Histogram showing frequency of age at diagnosis for the 45 Irish Wolfhounds with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

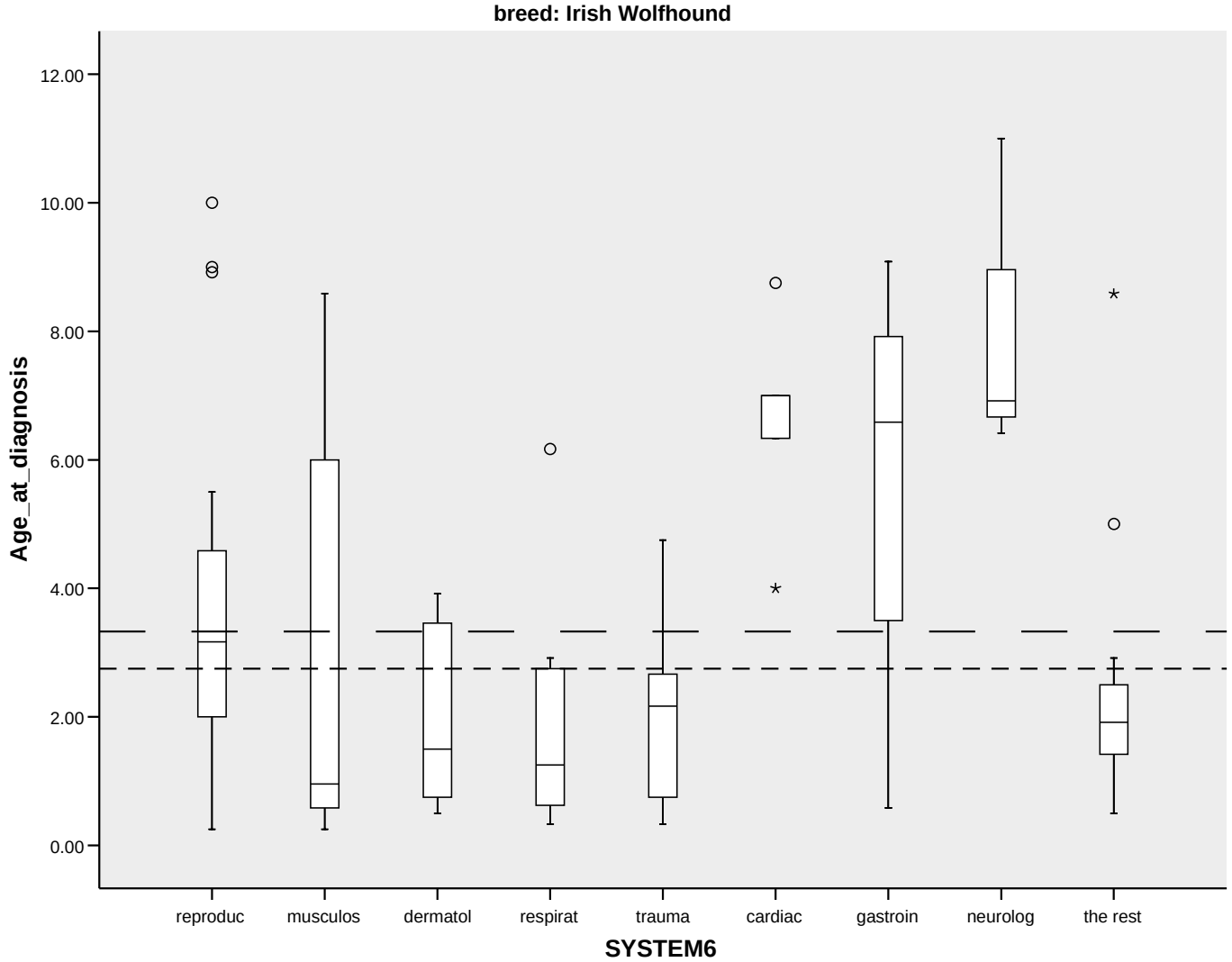


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Irish Wolfhounds (N=45 dogs with 74 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Irish Wolfhounds. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Irish Wolfhounds.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Reproductive	20	26.3	Dystochia (uterine inertia); irregular heat cycles; pyometra; cryptorchid
2	Musculoskeletal	10	13.2	OCD (shoulder>elbow); elbow dysplasia; CHD; spondylitis; prognathism
3	Dermatologic	8	10.5	Recurrent pyoderma; mites (cheyletiella=sarcoptes); calcinosis circumscripta
4	Respiratory	7	9.2	Kennel cough; bronchitis; pneumonia
5	Trauma	7	9.2	Dermatologic; musculoskeletal (forelimb>hindlimb=tail); neurologic
6	Cardiac	5	6.6	Cardiomyopathy (dilated>unspecified); atrial fibrillation; heart valve condition unspecified
7	Gastrointestinal	4	5.3	Gastric dilatation/volvulus (GDV); pancreatitis; vomiting
8	Neurologic	4	5.3	IVDD (cervical); seizures; Wobbler syndrome
9	Urologic	4	5.3	Cystitis
10	Immune mediated	2	2.6	Gluten-sensitive enteropathy; thrombocytopaenia
11	Anal gland	1	1.3	Anal sacculitis
12	Cancer	1	1.3	Type unspecified (mammary)
13	Dental	1	1.3	Retained puppy teeth
14	Endocrine	1	1.3	Hypothyroidism
15	Other	1	1.3	Uncodeable
	Total	76	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for Italian Greyhounds

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Italian Greyhounds

A total of 229 forms were sent out and 42 were returned, representing 122 live dogs. This breed had a 14.6% response rate (42/229) and it represented 0.31% of all returns (42/13,741).

Mortality data

A total of 46 deaths were reported and this represents 0.29% of all deaths reported in the survey (46/15,881). The median age at death for Italian Greyhounds was 13 years and 6 months (min = 6 months, max = 18 years) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Italian Greyhounds. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Italian Greyhounds.

Cause of death		N	%	Most common specific causes in descending order
1	Old age	13	28.3	Old age & age combinations
2	Cancer	7	15.2	Type unspecified (mammary); carcinoma; haemangiosarcoma
3	Cardiac	7	15.2	Heart failure; cardiomegaly
4	Cerebral vascular	5	10.9	Stroke or cerebral vascular accident
5	Trauma	3	6.5	Unspecified
6	Gastrointestinal	2	4.3	Gastric dilatation/volvulus (GDV); gastroenteritis
7	Musculoskeletal	2	4.3	Osteoporosis
8	Behaviour	1	2.2	Aggression
9	Combinations	1	2.2	
10	Hepatic	1	2.2	Liver failure
11	Immune mediated	1	2.2	Thrombocytopaenia
12	Neurologic	1	2.2	Spinal disease unspecified
13	Respiratory	1	2.2	Pulmonary bullae
14	Unknown	1	2.2	
	Total	46	100.0	

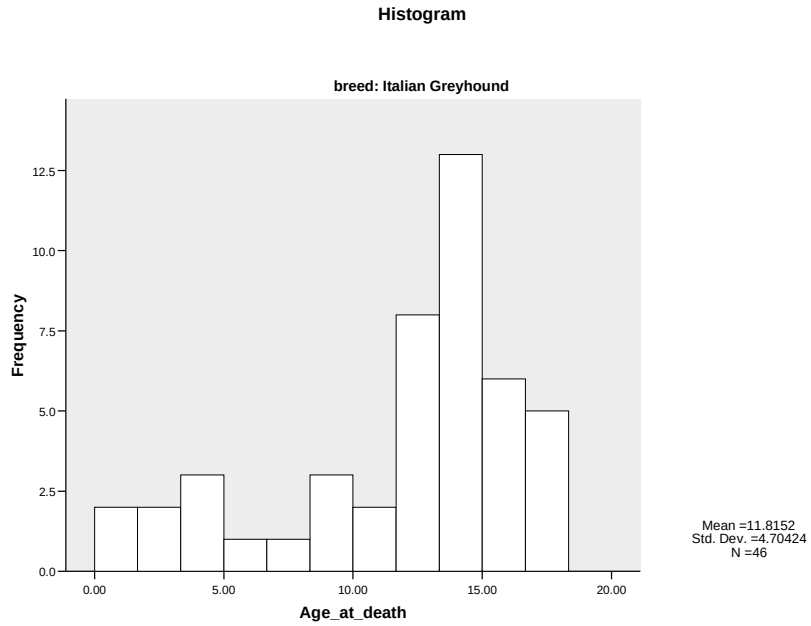


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 46 Italian Greyhound deaths with age at death reported.

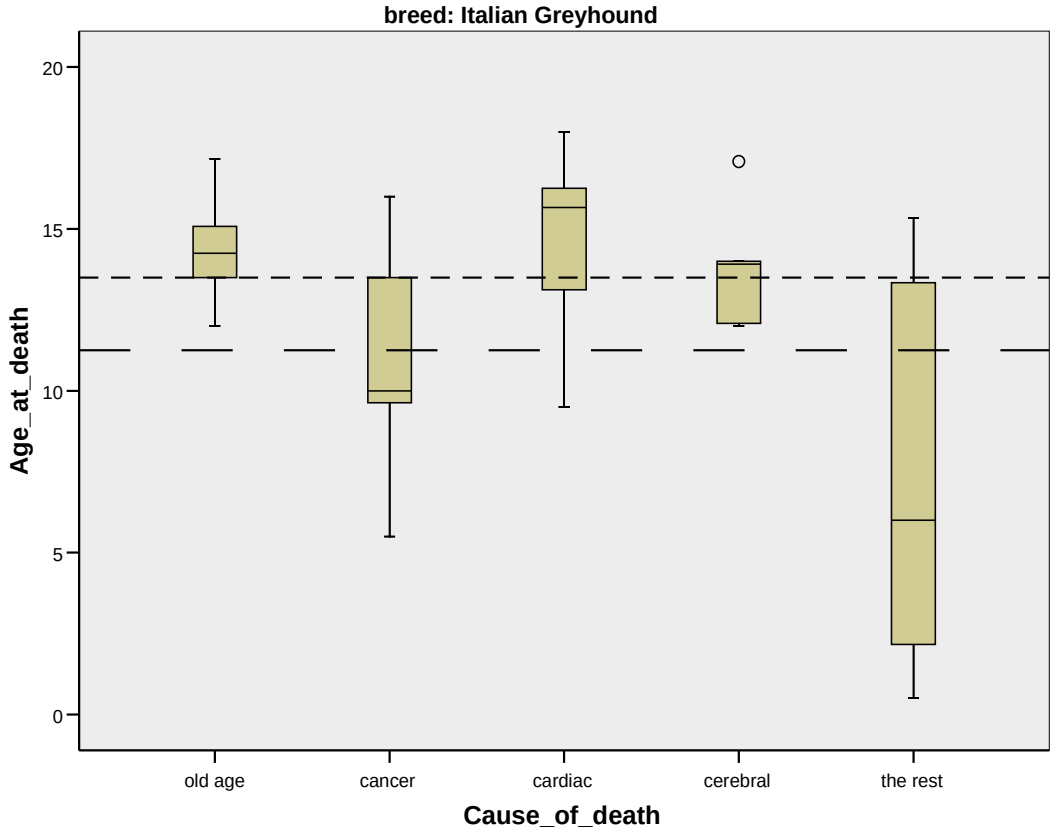


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Italian Greyhounds (N=46). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Italian Greyhounds. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 122 live dogs with a reported age was 4 years and 8 months (min=3 months, max=15 years and 2 months, Figure 3). Health information was reported for 122 live dogs of which 65 (53%) were healthy and 57 (47%) had at least one reported health condition, resulting in a total of 107 reported conditions with a median of 1 condition/dog (min=1, max=6).

The median current age of all healthy dogs with a reported age (N=65) was 3 years and 5 months (min=3 months, max=14 years and 2 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=55) was 6 years and 6 months (min=7 months, max=15 years and 2 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=103) was 3 years (min= 2 months, max= 13 years and 11 months, Figure 4). Table 3 shows the disease conditions for Italian Greyhounds. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 120 Italian Greyhounds with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	49	22	71 (59%)
Male	34	15	49 (41%)
Totals	83 (69%)	37 (31%)	120 (100%)

There was no association between gender and neuter status (P=0.9652).

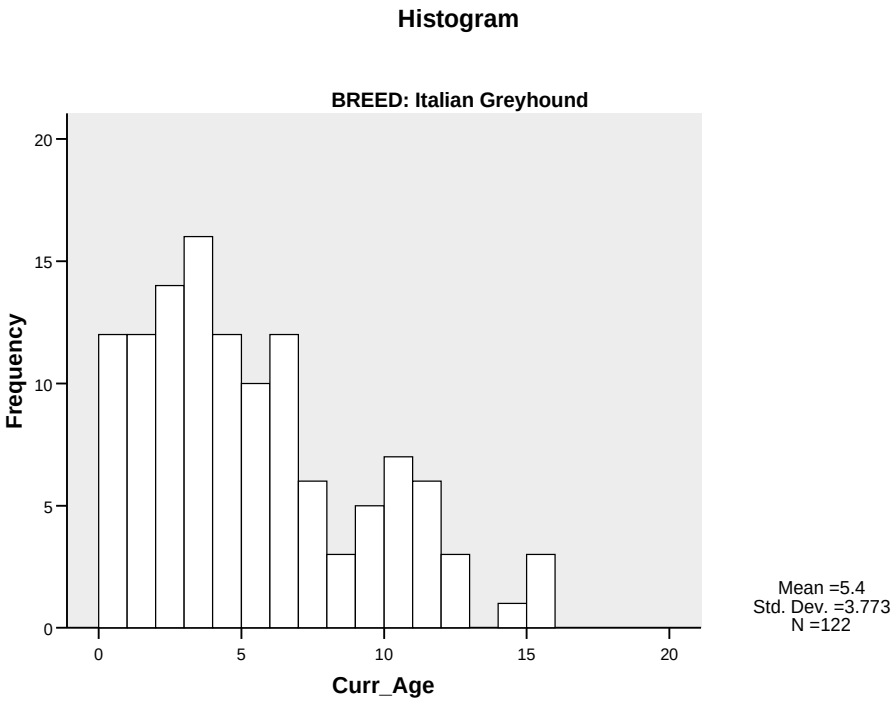


Figure 3. Histogram showing frequency of current age in years for the 122 live Italian Greyhounds with age reported.

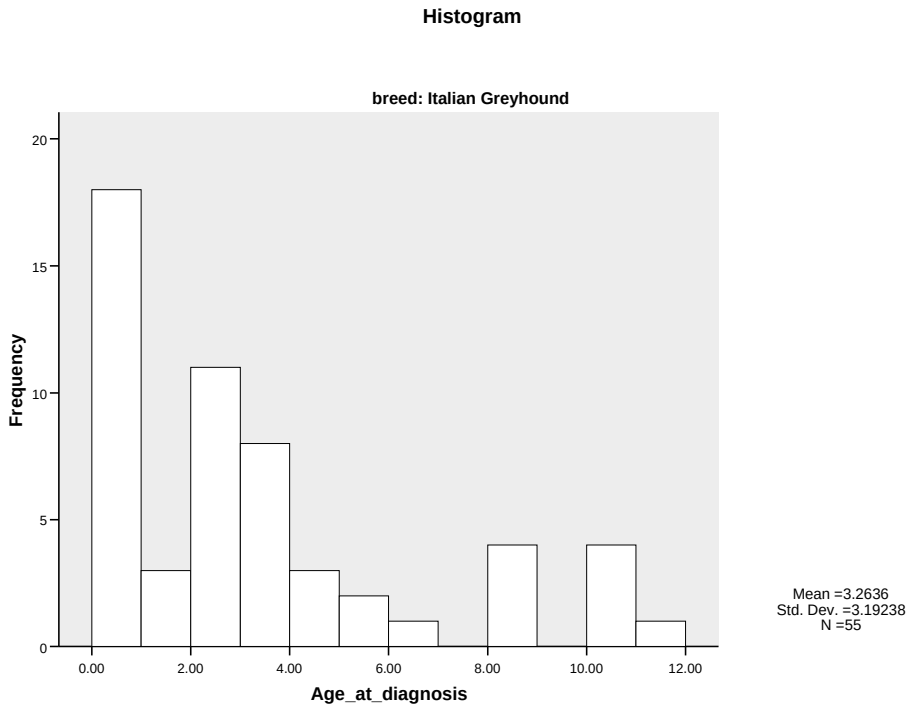


Figure 4. Histogram showing frequency of age at diagnosis for the 55 Italian Greyhounds with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

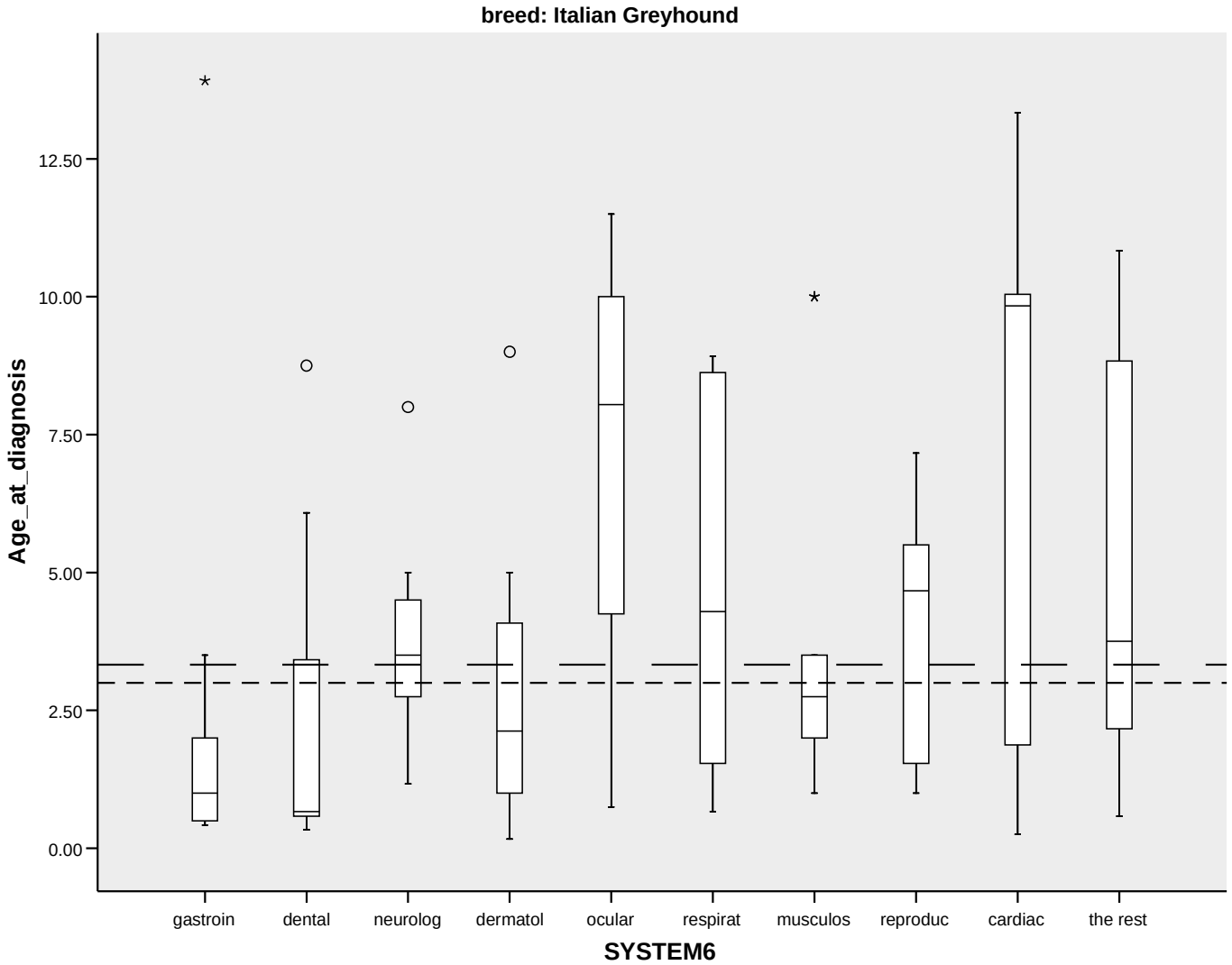


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Italian Greyhounds (N=55 dogs with 103 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Italian Greyhounds. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Italian Greyhounds.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Gastrointestinal	18	16.8	Colitis; diarrhoea; gastroenteritis; haemorrhagic gastroenteritis; IBD
2	Dental	13	12.1	Retained puppy teeth; dental disease
3	Neurologic	11	10.3	Seizures
4	Dermatologic	10	9.3	Alopecia; follicular dysplasia; mites (demodex=sarcoptes); dermatitis
5	Ocular	10	9.3	Cataracts; epiphora
6	Respiratory	10	9.3	Kennel cough; noisy breathing; coughing; long soft palate; rhinitis
7	Musculoskeletal	9	8.4	Fracture (forelimb>hind paw); arthritis (unspecified); patellar luxation
8	Reproductive	8	7.5	Dystochia (uterine inertia>physical blockage); cryptorchid; false pregnancy
9	Cardiac	7	6.5	Heart murmur; heart valve condition (unspecified); PDA; aortic stenosis; congestive heart failure (CHF)
10	Trauma	3	2.8	Musculoskeletal (forelimb; hindlimb; tail)
11	Cancer	2	1.9	Carcinoma (mammary); type unspecified (mammary)
12	Other	2	1.9	Uncodeable
13	Behaviour	1	0.9	Unspecified
14	Endocrine	1	0.9	Unspecified
15	Hepatic	1	0.9	Hepatitis
16	Immune mediated	1	0.9	Atopy
	Total	107	100.0	

PDA=persistent ductus arteriosus (congenital heart defect)

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for the Italian Spinone breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Italian Spinone breed

A total of 376 forms were sent out and 122 were returned, representing 222 live dogs. This breed had a 32.4% response rate (122/376) and it represented 0.89% of all returns (122/13,741).

Mortality data

A total of 47 deaths were reported and this represents 0.30% of all deaths reported in the survey (47/15,881). The median age at death for the Italian Spinone breed was 9 years (min = 7 months, max = 16 years) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Italian Spinone breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Italian Spinone breed.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	21	44.7	Type unspecified (bone, liver, spleen)
2	Old age	7	14.9	Old age & age combinations
3	Urologic	4	8.5	Chronic kidney failure; unspecified
4	Combinations	3	6.4	
5	Gastrointestinal	3	6.4	Gastric dilatation/volvulus (GDV)
6	Behaviour	2	4.3	Aggression; unspecified
7	Cardiac	1	2.1	Cardiomegaly (enlarged heart)
8	Cerebral vascular	1	2.1	Stroke or cerebral vascular accident
9	Collapse	1	2.1	
10	Dermatologic	1	2.1	Unspecified
11	Neurologic	1	2.1	Spinal disease unspecified
12	Senility	1	2.1	
13	Trauma	1	2.1	Unspecified
	Total	47	100.0	

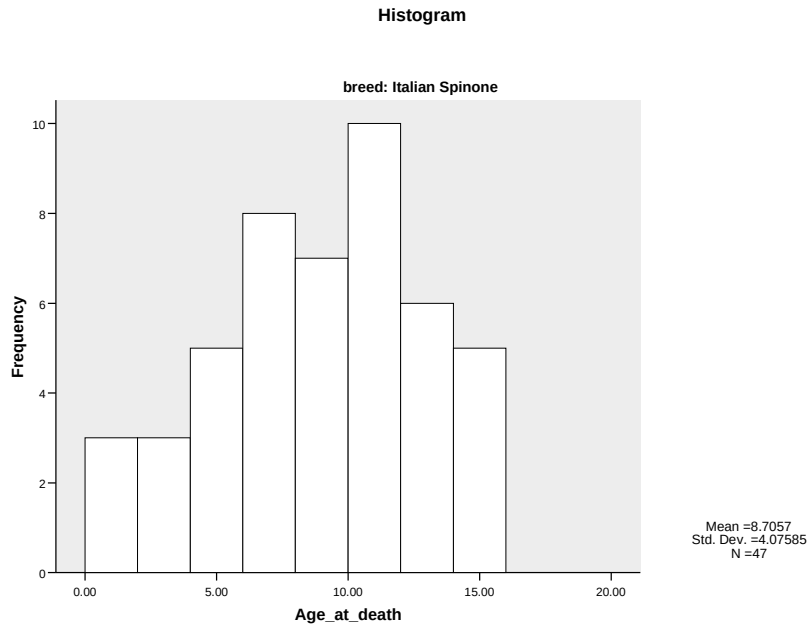


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 47 Italian Spinone deaths with age at death reported.

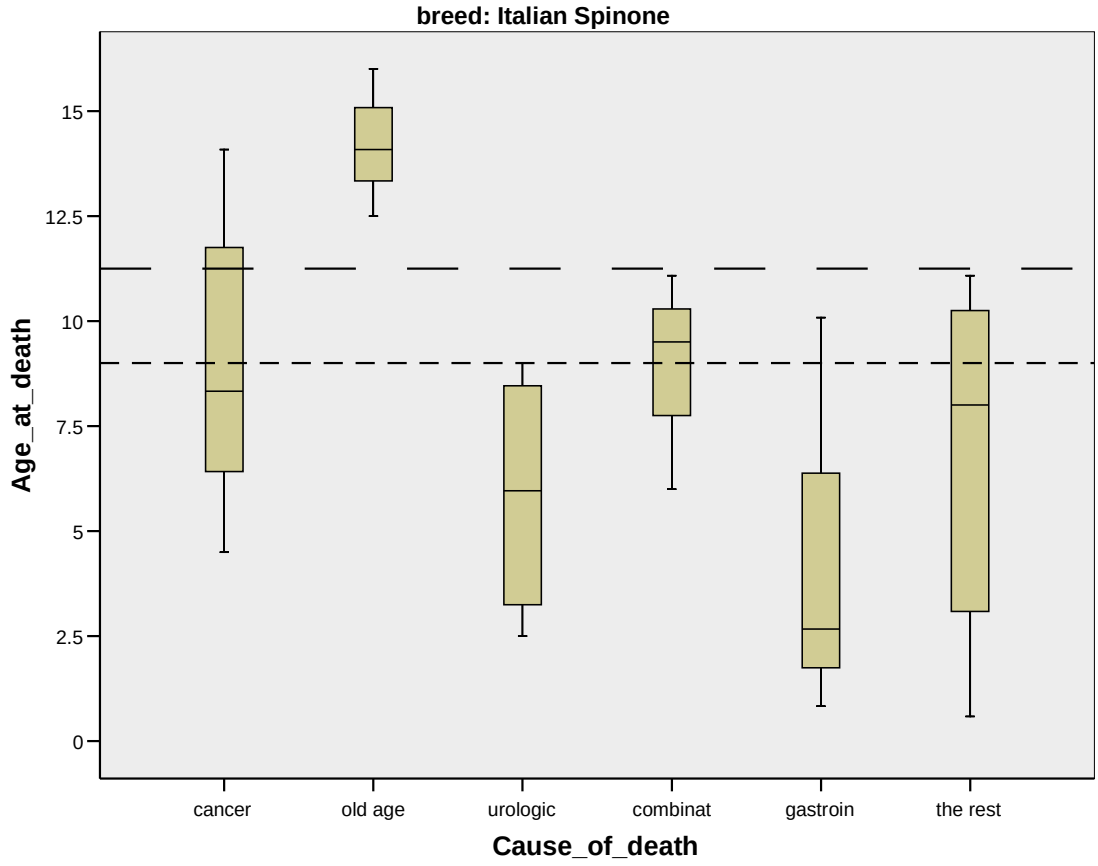


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the Italian Spinone breed (N=47). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the Italian Spinone breed. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 219 live dogs with a reported age was 5 years and 1 month (min=3 months, max=15 years, Figure 3). Health information was reported for 222 live dogs of which 102 (46%) were healthy and 120 (54%) had at least one reported health condition, resulting in a total of 225 reported conditions with a median of 2 conditions/dog (min=1, max=5).

The median current age of all healthy dogs with a reported age (N=102) was 3 years and 7 months (min=3 months, max=13 years and 1 month). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=112) was 5 years and 12 months (min=3 months, max=15 years). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=212) was 2 years and 7 months (min= 1 month, max= 13 years and 10 months, Figure 4). Table 3 shows the disease conditions for the Italian Spinone breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for the 222 Italian Spinone breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	56	60	116 (52%)
Male	81	25	106 (48%)
Totals	137 (62%)	85 (38%)	222 (100%)

Significantly more females were neutered (P<0.0001).

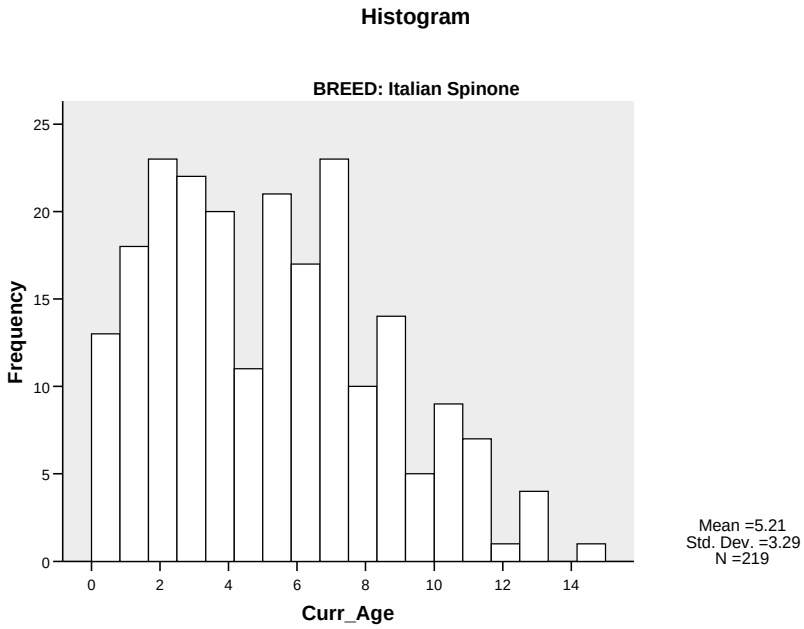


Figure 3. Histogram showing frequency of current age in years for the 219 live Italian Spinone breed with age reported.

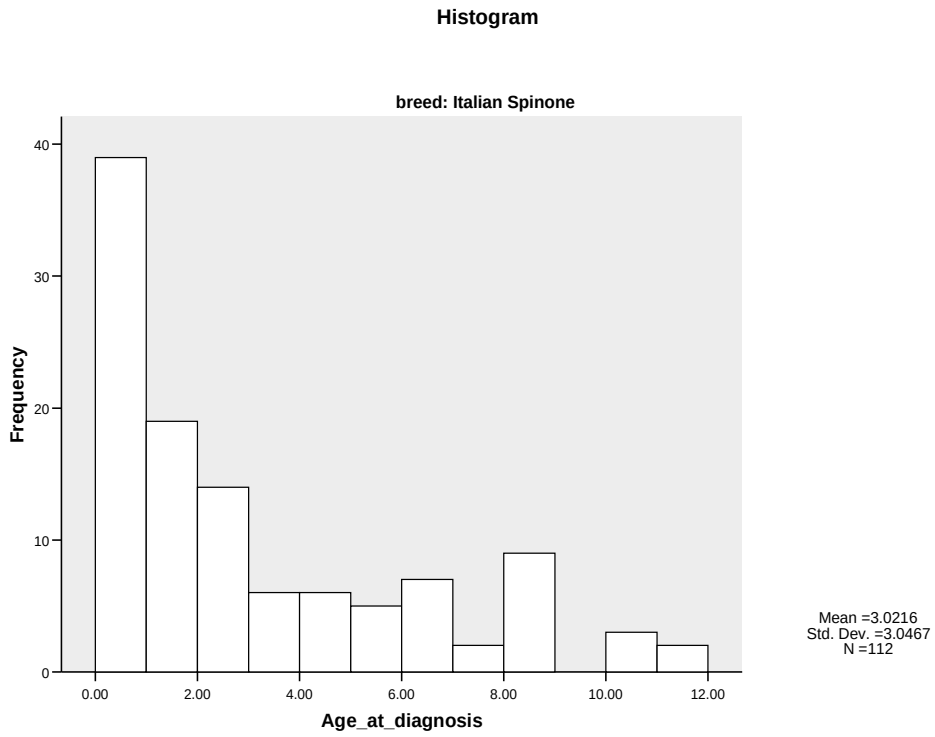


Figure 4. Histogram showing frequency of age at diagnosis for the 112 Italian Spinone breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

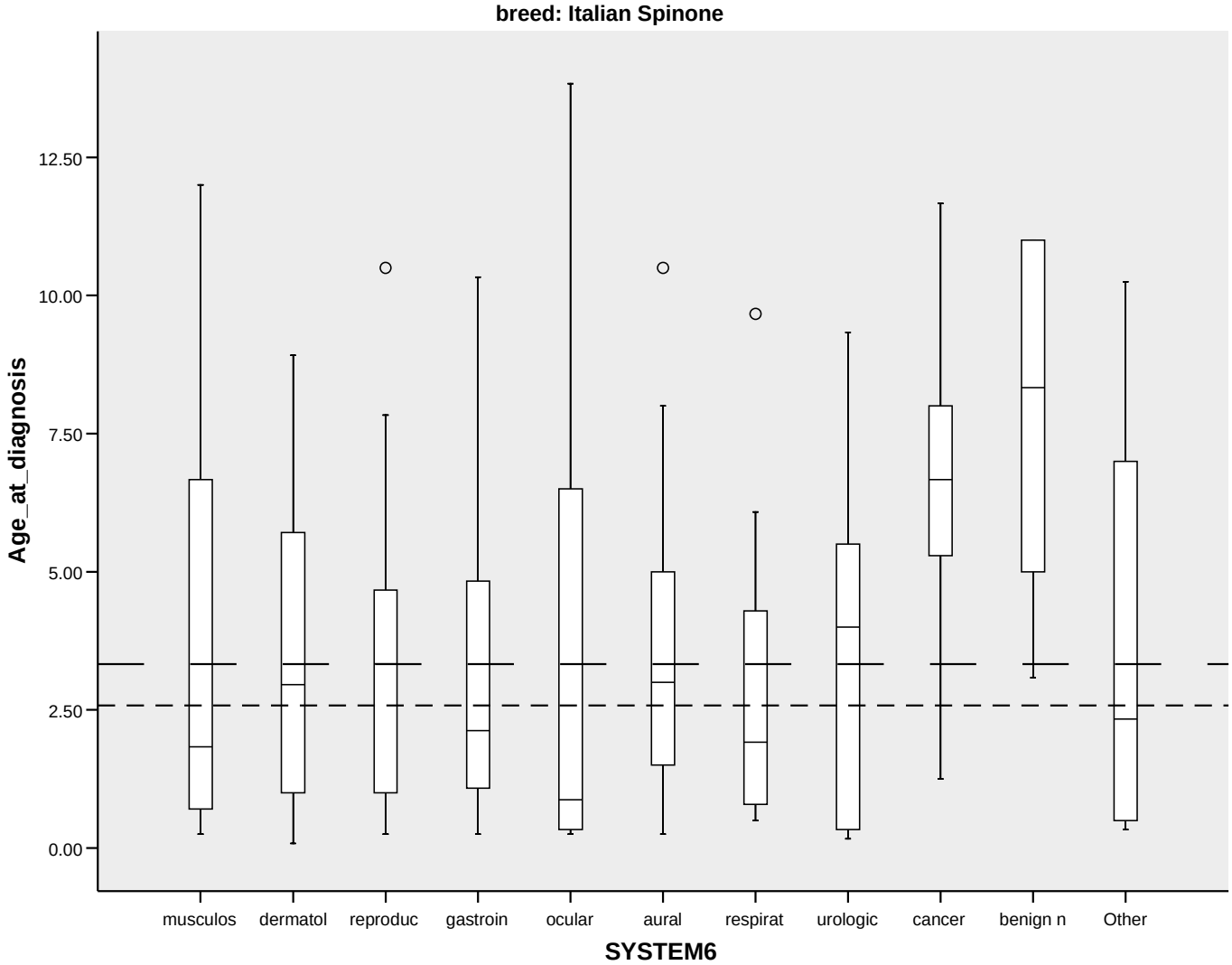


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Italian Spinone breed (N=112 dogs with 212 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Italian Spinone breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Italian Spinone breed.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Musculoskeletal	36	16.0	Arthritis; CHD; OCD (shoulder>unspecified); CLR; DJD
2	Dermatologic	28	12.4	Dermatitis; mites (sarcoptes>unspecified>demodex); pyotraumatic dermatitis
3	Reproductive	27	12.0	False pregnancy; pyometra; dystochia (uterine inertia>physical blockage)
4	Gastrointestinal	23	10.2	GDV; colitis; foreign body obstruction; haemorrhagic gastroenteritis; vomiting
5	Ocular	23	10.2	Entropion; ectropion; KCS; cherry eye; cataracts
6	Aural	17	7.6	Otitis externa; excessive ear wax; aural haematoma
7	Respiratory	16	7.1	Kennel cough
8	Immune mediated	14	6.2	Food allergy; gluten-sensitive enteropathy; flea allergy
9	Urologic	10	4.4	Cystitis; incontinence (unspecified>after spay)
10	Cancer	7	3.1	Unspecified; haemangiosarcoma (spleen); carcinoma (mammary); lymphoma
11	Benign neoplasia	6	2.7	Lipoma; histiocytoma (neck); unspecified (spleen)
12	Dental	4	1.8	Dental disease; retained puppy teeth
13	Endocrine	3	1.3	Hypothyroidism; Addisons disease
14	Neurologic	3	1.3	Seizures; IVDD (unspecified)
15	Cardiac	2	0.9	Heart murmur (unspecified)
16	Other	2	0.9	Uncodeable
17	Unknown	2	0.9	Undiagnosed illness
18	Anal gland	1	0.4	Anal sacculitis
19	Trauma	1	0.4	Musculoskeletal (hindlimb)
	Total	225	100.0	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for the Japanese Chin breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Japanese Chin breed

A total of 158 forms were sent out and 25 were returned, representing 113 live dogs. This breed had a 15.8% response rate (25/158) and it represented 0.18% of all returns (25/13,741).

Mortality data

A total of 38 deaths were reported and this represents 0.24% of all deaths reported in the survey (38/15,881). The median age at death for the Japanese Chin breed was 9 years and 3 months (min = 7 months, max = 14 years and 1 month) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Japanese Chin breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Japanese Chin breed.

Cause of death		N	%	Most common specific causes in descending order
1	Cardiac	13	34.2	Heart failure; MVD; cardiomegaly
2	Cancer	5	13.2	Type unspecified (stomach, nose, brain)
3	Old age	5	13.2	Old age & age combinations
4	Combinations	4	10.5	Heart failure; ocular; epilepsy; MVD; kidney failure
5	Cerebral vascular	3	7.9	Stroke or cerebral vascular accident
6	Neurologic	3	7.9	Occipital dysplasia; seizures
7	Hepatic	1	2.6	Chronic liver failure
8	Musculoskeletal	1	2.6	Deformed hindlimb
9	Other	1	2.6	Uncodeable
10	Reproductive	1	2.6	Pyometra
11	Respiratory	1	2.6	Respiratory failure unspecified
	Total	38	100.0	

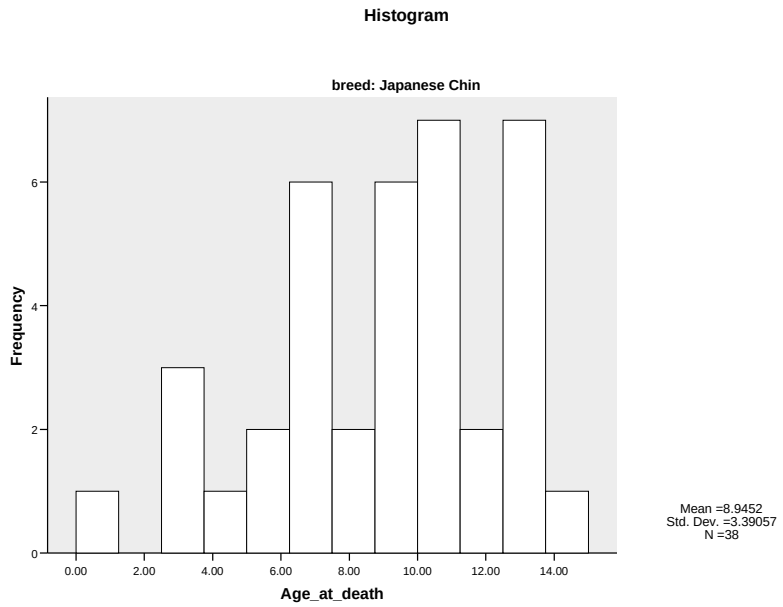


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 38 Japanese Chin deaths with age at death reported.

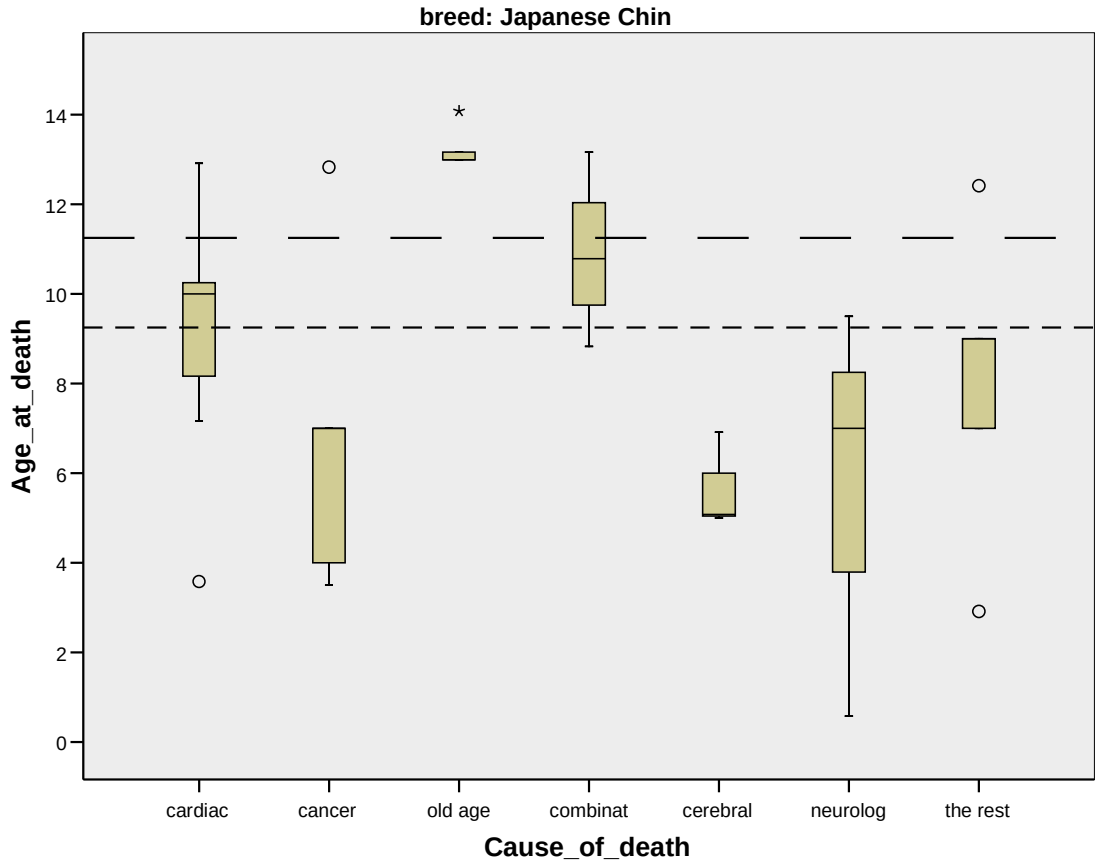


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the Japanese Chin breed (N=38). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the Japanese Chin breed. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 112 live dogs with a reported age was 4 years and 7 months (min=4 months, max=14 years and 1 month, Figure 3). Health information was reported for 113 live dogs of which 68 (60%) were healthy and 45 (40%) had at least one reported health condition, resulting in a total of 65 reported conditions with a median of 1 condition/dog (min=1, max=3).

The median current age of all healthy dogs with a reported age (N=68) was 4 years (min=4 months, max=14 years and 1 month). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=43) was 5 years and 2 months (min=8 months, max=12 years). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=61) was 2 years and 3 months (min= 2 months, max= 11 years, Figure 4). Table 3 shows the disease conditions for the Japanese Chin breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for the 111 Japanese Chin breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	55	12	67 (60%)
Male	34	10	44 (40%)
Totals	89 (80%)	22 (20%)	111 (100%)

There was no association between gender and neuter status (P=0.5335).

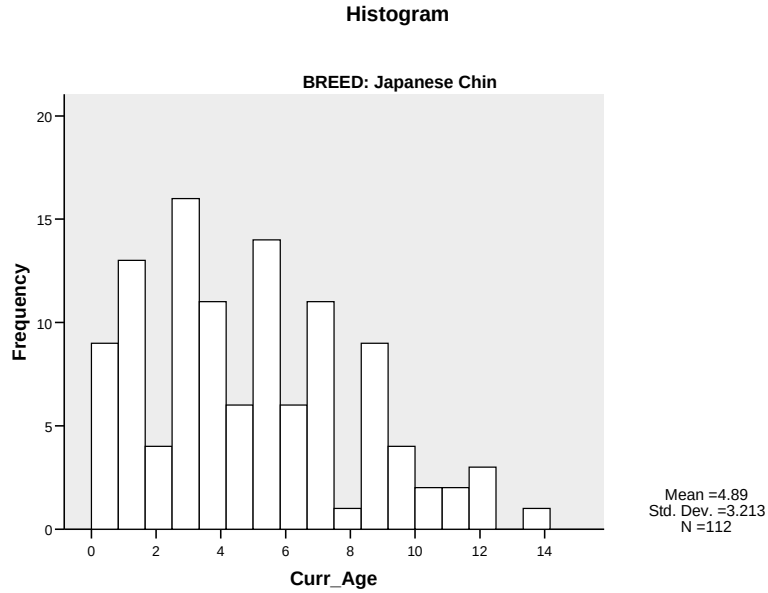


Figure 3. Histogram showing frequency of current age in years for the 112 live Japanese Chin breed with age reported.

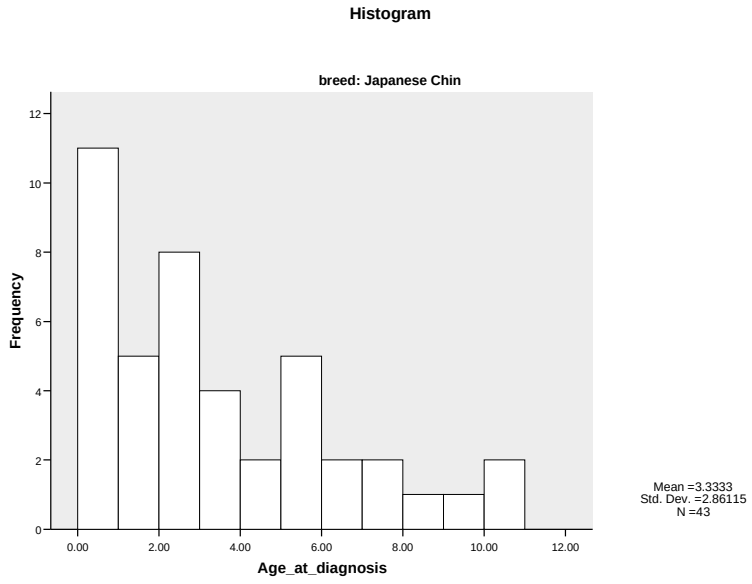


Figure 4. Histogram showing frequency of age at diagnosis for the 43 Japanese Chin breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

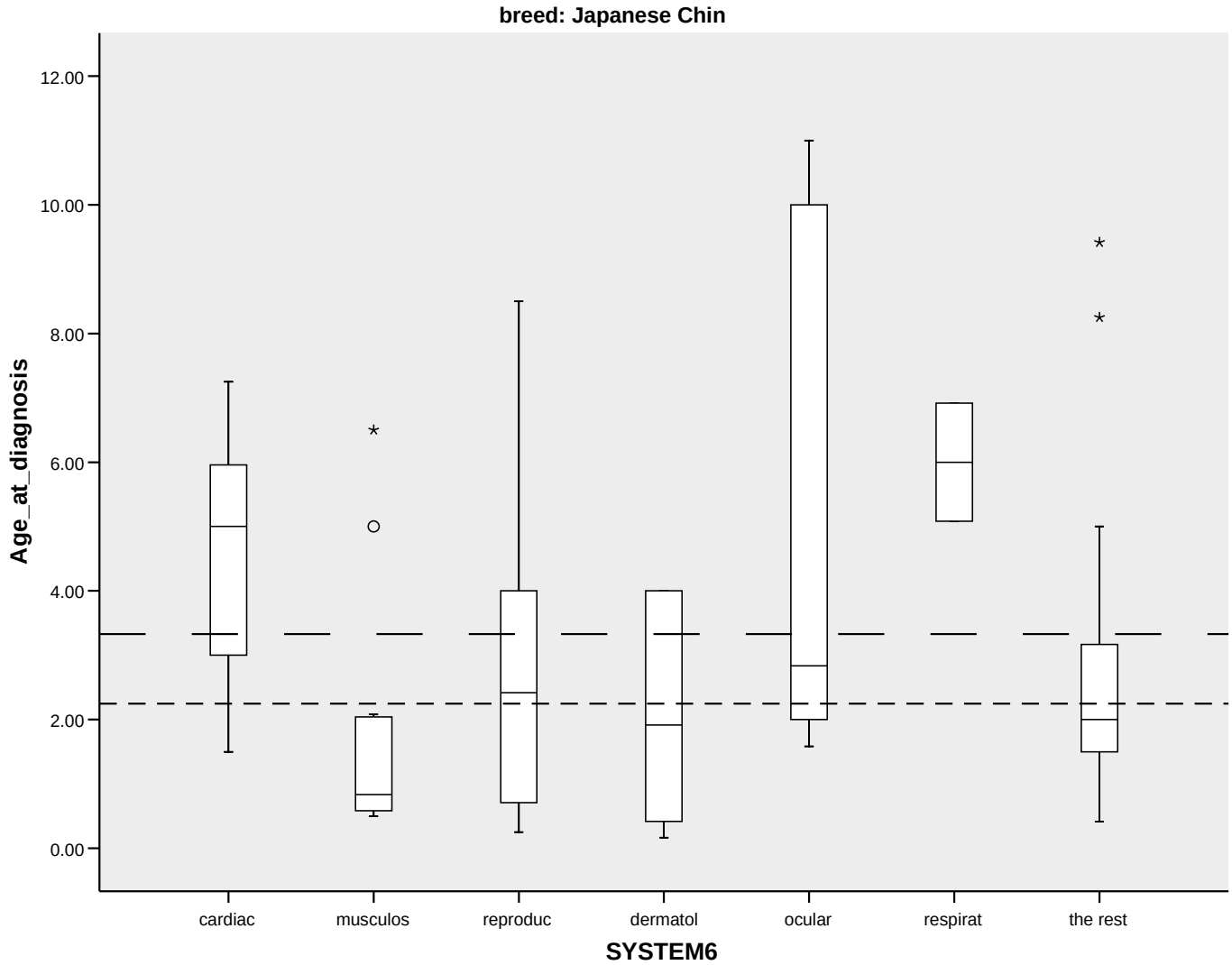


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Japanese Chin breed (N=43 dogs with 61 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Japanese Chin breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Japanese Chin breed.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Cardiac	14	21.5	Heart murmur (unspecified>grade 3=grade 5>with clinical signs); MVD
2	Musculoskeletal	12	18.5	Patellar luxation; arthritis (forelimb=hindlimb); CHD
3	Reproductive	12	18.5	Pyometra; dystochia (uterine inertia>physical blockage); cryptorchid
4	Dermatologic	6	9.2	Dermatitis; mites (cheyletiella)
5	Ocular	5	7.7	Cataracts; KCS; distichiasis; corneal ulcer
6	Aural	3	4.6	Otitis externa; ear mites
7	Respiratory	3	4.6	Coughing
8	Other	3	4.6	Uncodeable
9	Neurologic	2	3.1	Seizures
10	Cancer	1	1.5	Unspecified
11	Cerebrovascular	1	1.5	Stroke or cerebral vascular accident
12	Dental	1	1.5	Dental disease
13	Gastrointestinal	1	1.5	Bowel disorder unspecified
14	Urologic	1	1.5	Cystouroliths unspecified
	Total	65	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for the Shiba Inu breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Shiba Inu breed

A total of 78 forms were sent out and 17 were returned, representing 56 live dogs. This breed had a 21.8% response rate (17/78) and it represented 0.12% of all returns (17/13,741).

Mortality data

A total of 3 deaths were reported and this represents 0.02% of all deaths reported in the survey (3/15,881). The median age at death for the Shiba Inu breed was 7 years (min = 4 years and 6 months, max = 9 years) and this was lower than the overall median of 11 years and 3 months. Table 1 shows the age at death and causes of death for the Shiba Inu breed.

Table 1. Causes of death by organ system/category for the Shiba Inu breed.

Cause of death		N	%	Age at death
1	Endocrine – Diabetes mellitus	1	33.3	7 years
2	Hepatic – Liver disease (unspecified)	1	33.3	9 years
3	Poisoning	1	33.3	4 years and 6 months
	Total	3	100.0	

Morbidity data

The median current age of the 56 live dogs with a reported age was 4 years and 3 months (min=3 months, max=15 years and 7 months, Figure 3). Health information was reported for 56 live dogs of which 43 (77%) were healthy and 13 (23%) had at least one reported health condition, resulting in a total of 17 reported conditions with a median of 1 condition/dog (min=1, max=3).

The median current age of all healthy dogs with a reported age (N=43) was 3 years and 2 months (min=3 months, max=10 years and 6 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=11) was 8 years and 6 months (min=1 year and 2 months, max=15 years and 7 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=13) was 3 years and 10 months (min= 5 months, max= 13 years, Figure 4). Table 3 shows the disease conditions for the Shiba Inu breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for the 56 Shiba Inu breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	25	7	32 (57%)
Male	23	1	24 (43%)
Totals	48 (86%)	8 (14%)	56 (100%)

There was no association between gender and neuter status (P=0.0609).

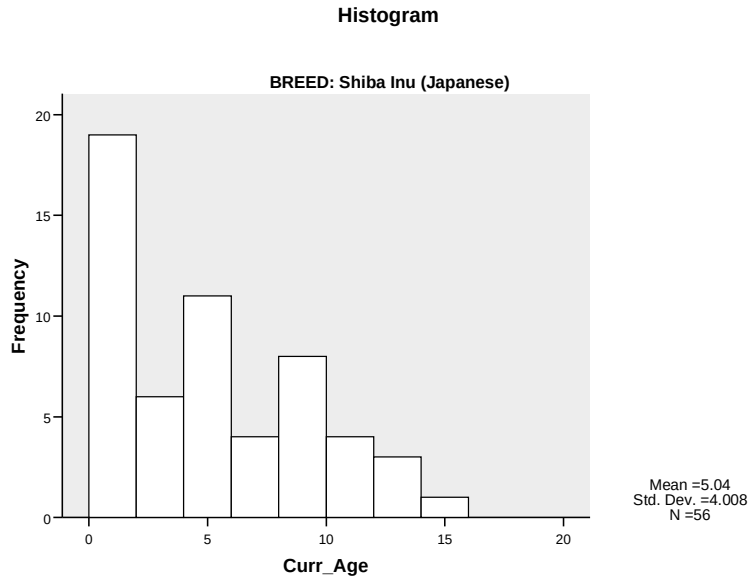


Figure 3. Histogram showing frequency of current age in years for the 56 live Shiba Inu breed with age reported.

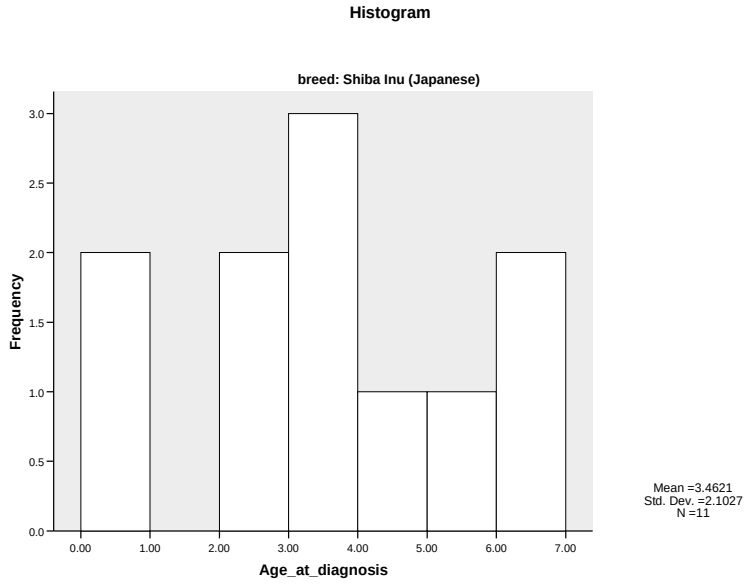


Figure 4. Histogram showing frequency of age at diagnosis for the 11 Shiba Inu breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

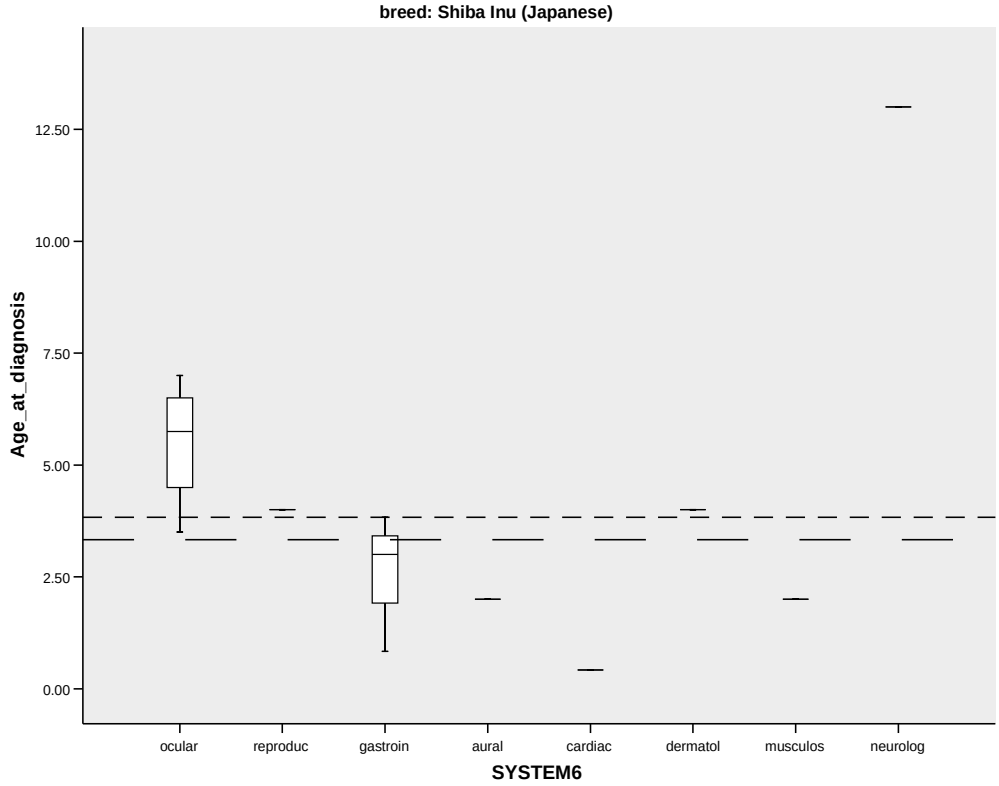


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Shiba Inu breed (N=11 dogs with 13 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Shiba Inu breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Shiba Inu breed.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Ocular	4	23.5	Cataracts; conjunctivitis; glaucoma; PRA
2	Reproductive	4	23.5	Inability to breed; infertility
3	Gastrointestinal	3	17.6	Colitis; acute gastroenteritis
4	Aural	1	5.9	Otitis externa
5	Cardiac	1	5.9	Heart murmur (grade 4)
6	Dermatologic	1	5.9	Pyotraumatic dermatitis
7	Immune mediated	1	5.9	Vaccine reaction
8	Musculoskeletal	1	5.9	Patellar luxation
9	Neurologic	1	5.9	Unspecified
	Total	17	100.0	

PRA=progressive retinal atrophy

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for Keeshonds

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Keeshonds

A total of 275 forms were sent out and 78 were returned, representing 194 live dogs. This breed had a 28.4% response rate (78/275) and it represented 0.57% of all returns (78/13,741).

Mortality data

A total of 104 deaths were reported and this represents 0.65% of all deaths reported in the survey (104/15,881). The median age at death for Keeshonds was 12 years and 2 months (min = 1 year and 10 months, max = 16 years and 1 month) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Keeshonds. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Keeshonds.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	33	31.7	Type unspecified (liver, brain tumour) carcinoma
2	Old age	27	26.0	Old age
3	Urologic	7	6.7	Kidney failure (chronic > acute)
4	Cardiac	6	5.8	Failure; cardiomegaly; attack; defect (unspecified)
5	Combinations	4	3.8	
6	Other	4	3.8	Uncodeable
7	Unknown	4	3.8	
8	Cerebral vascular	3	2.9	Stroke or cerebral vascular accident
9	Endocrine	3	2.9	Cushings disease; diabetes mellitus
10	Hepatic	2	1.9	Chronic liver failure
11	Neurologic	2	1.9	Seizures; unspecified spinal disease
12	Senility	2	1.9	
13	Behaviour	1	1.0	Aggression
14	Dermatologic	1	1.0	Skin disease unspecified
15	Gastrointestinal	1	1.0	Parvo virus
16	Musculoskeletal	1	1.0	Arthritis
17	Respiratory	1	1.0	Laryngeal paralysis
18	Systemic	1	1.0	Allergy or insect bite or sting or snake bite
19	Trauma	1	1.0	Unspecified
	Total	104	100.0	

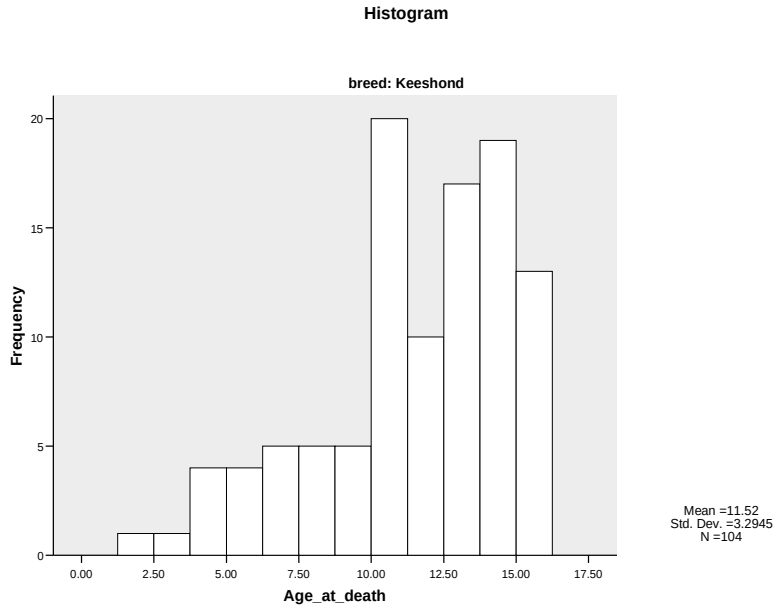


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 104 Keeshond deaths with age at death reported.

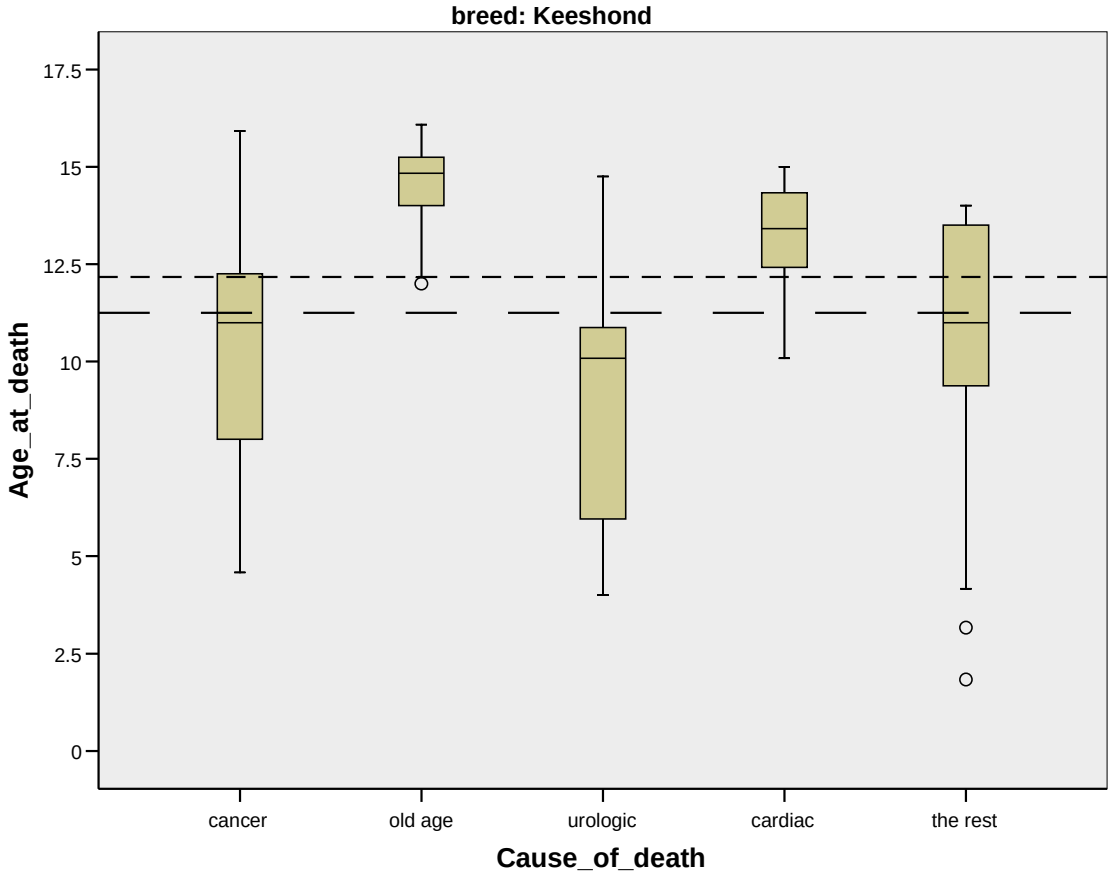


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Keeshonds (N=104). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Keeshonds. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 194 live dogs with a reported age was 5 years and 9 months (min=3 months, max=19 years, Figure 3). Health information was reported for 194 live dogs of which 125 (64%) were healthy and 69 (36%) had at least one reported health condition, resulting in a total of 105 reported conditions with a median of 1 condition/dog (min=1, max=8).

The median current age of all healthy dogs with a reported age (N=125) was 4 years and 10 months (min=3 months, max=19 years). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=66) was 7 years and 5 months (min=1 year and 8 months, max=13 years and 5 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=102) was 3 years and 11 months (min= 1 month, max= 13 years and 4 months, Figure 4). Table 3 shows the disease conditions for Keeshonds. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 186 Keeshonds with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	45	49	94 (51%)
Male	72	20	92 (49%)
Totals	117 (63%)	69 (37%)	186 (100%)

Significantly more females were neutered (P<0.0001).

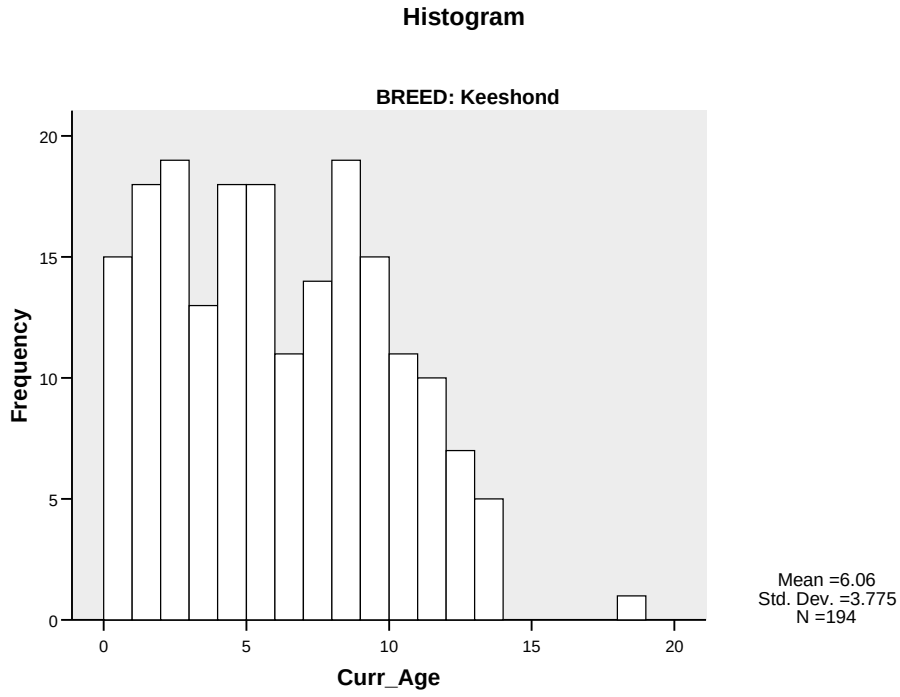


Figure 3. Histogram showing frequency of current age in years for the 194 live Keeshonds with age reported.

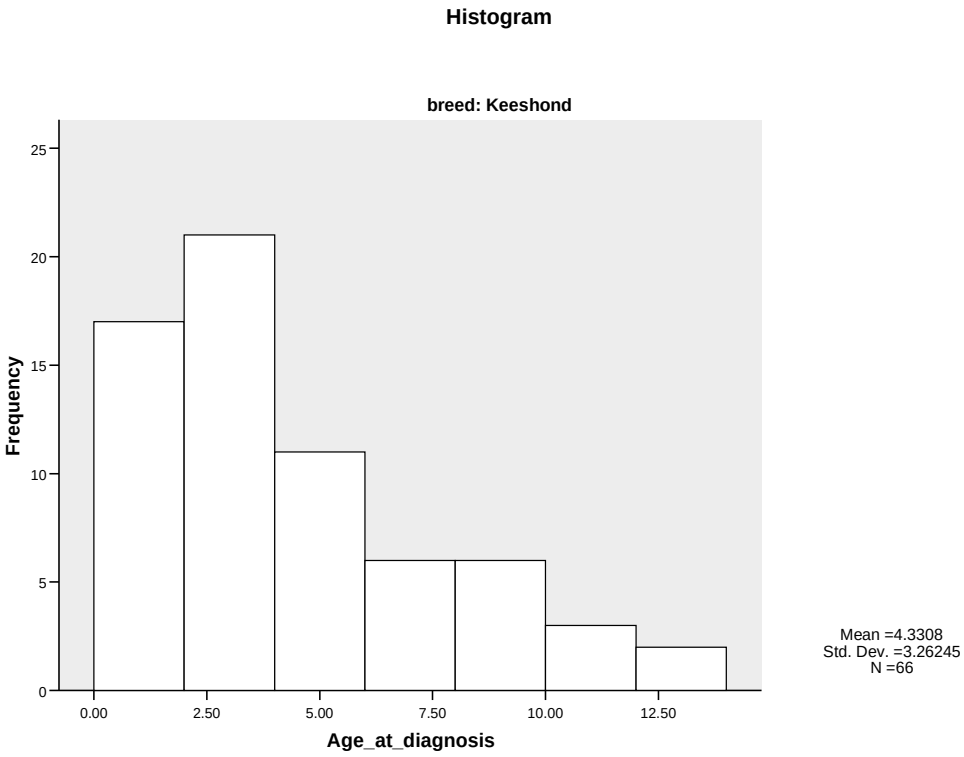


Figure 4. Histogram showing frequency of age at diagnosis for the 66 Keeshonds with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

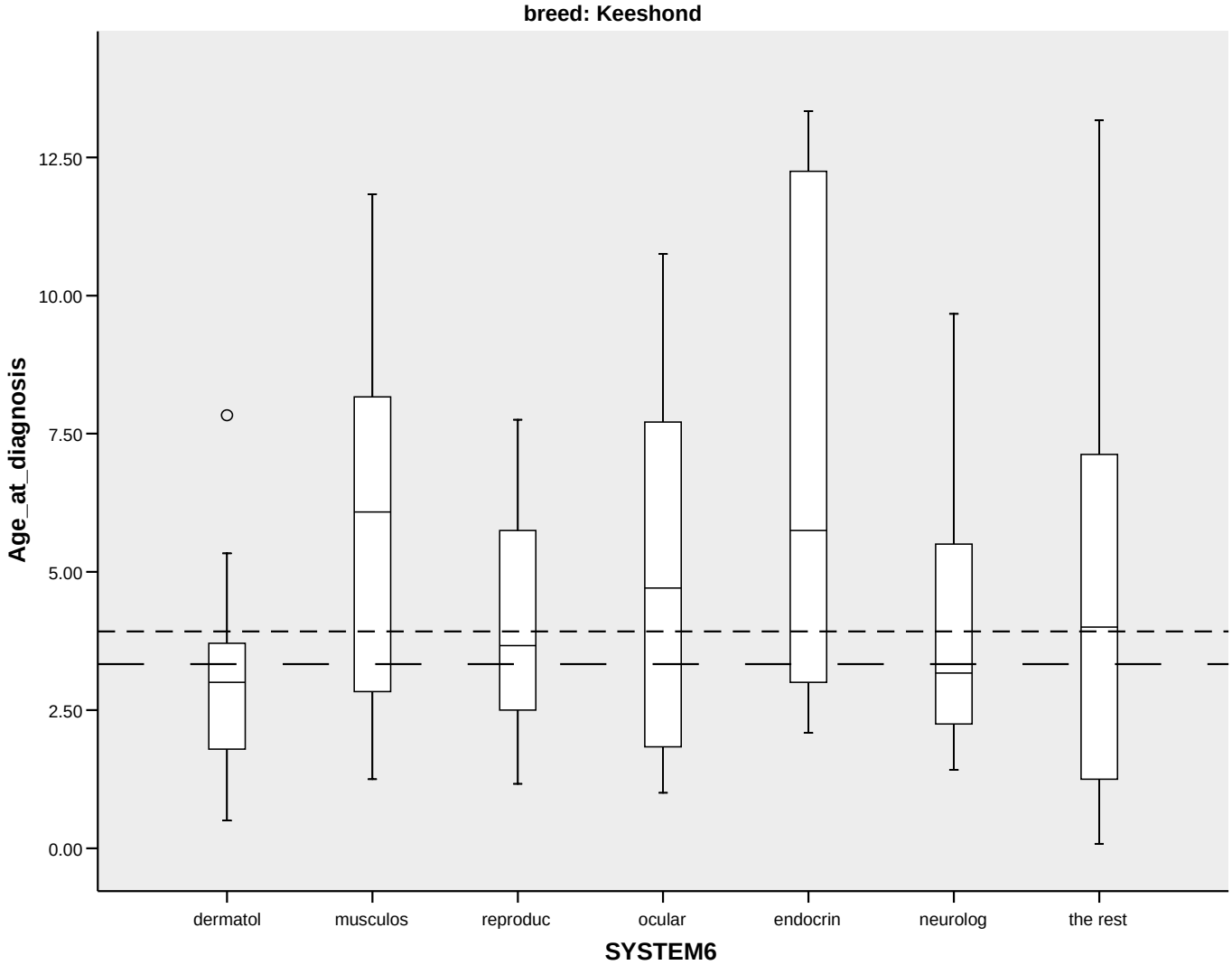


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Keeshonds (N=66 dogs with 102 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Keeshonds. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Keeshonds.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Dermatologic	19	18.1	Alopecia; recurrent pyoderma; dermatitis
2	Musculoskeletal	17	16.2	Arthritis (forelimb>hindlimb>stifle); CLR; CHD; coxofemoral luxation; lameness (hindlimb)
3	Reproductive	13	12.4	Pyometra; metritis
4	Ocular	12	11.4	Cataracts; epiphora; corneal ulcer
5	Endocrine	10	9.5	Hypothyroidism; hyperparathyroidism (unspecified>primary); Cushings disease
6	Neurologic	8	7.6	Seizures; IVDD (cervical); rage syndrome
7	Immune mediated	6	5.7	Atopy; allergy (unspecified); gluten-sensitive enteropathy; skin disease unspecified
8	Gastrointestinal	4	3.8	Diarrhoea; colitis; regurgitation
9	Respiratory	3	2.9	Bronchitis; long soft palate; noisy breathing
10	Urologic	3	2.9	Cystitis; incontinence (after spay)
11	Benign neoplasia	2	1.9	Lipoma
12	Cardiac	2	1.9	Coughing; heart murmur (unspecified)
13	Aural	1	1.0	Otitis externa
14	Behaviour	1	1.0	Unspecified
15	Cancer	1	1.0	Type unspecified (skin)
16	Dental	1	1.0	Retained puppy teeth
17	Other	1	1.0	Unspecified
18	Unknown	1	1.0	Undiagnosed skin disease
	Total	105	100.0	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for the Komondor breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Komondor breed

A total of 27 forms were sent out and 10 were returned, representing 19 live dogs. This breed had a 37.0% response rate (10/27) and it represented 0.07% of all returns (10/13,741).

Mortality data

A total of 10 deaths were reported and this represents 0.06% of all deaths reported in the survey (10/15,881). The median age at death for the Komondor breed was 9 years and 2 months (min = 3 years, max = 13 years and 2 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Komondor breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Komondor breed.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	3	30.0	Type unspecified (liver, kidney, unspecified)
2	Combinations	2	20.0	Multiple organ failure
3	Dermatologic	1	10.0	Chronic ear infections
4	Gastrointestinal	1	10.0	Gastric dilatation/volvulus (GDV)
5	Neurologic	1	10.0	Unspecified spinal disease with paralysis
6	Old age	1	10.0	Old age
7	Sudden death	1	10.0	
	Total	10	100.0	

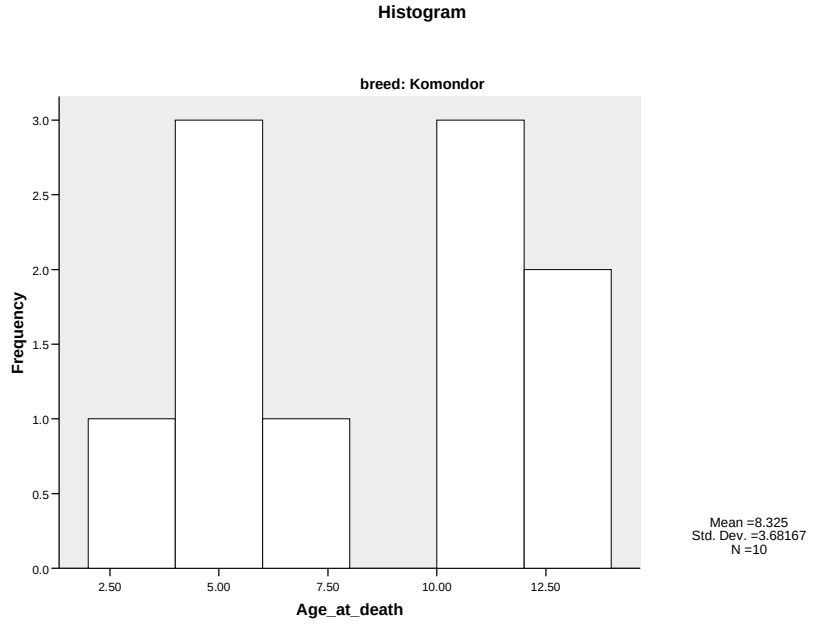


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 10 Komondor deaths with age at death reported.

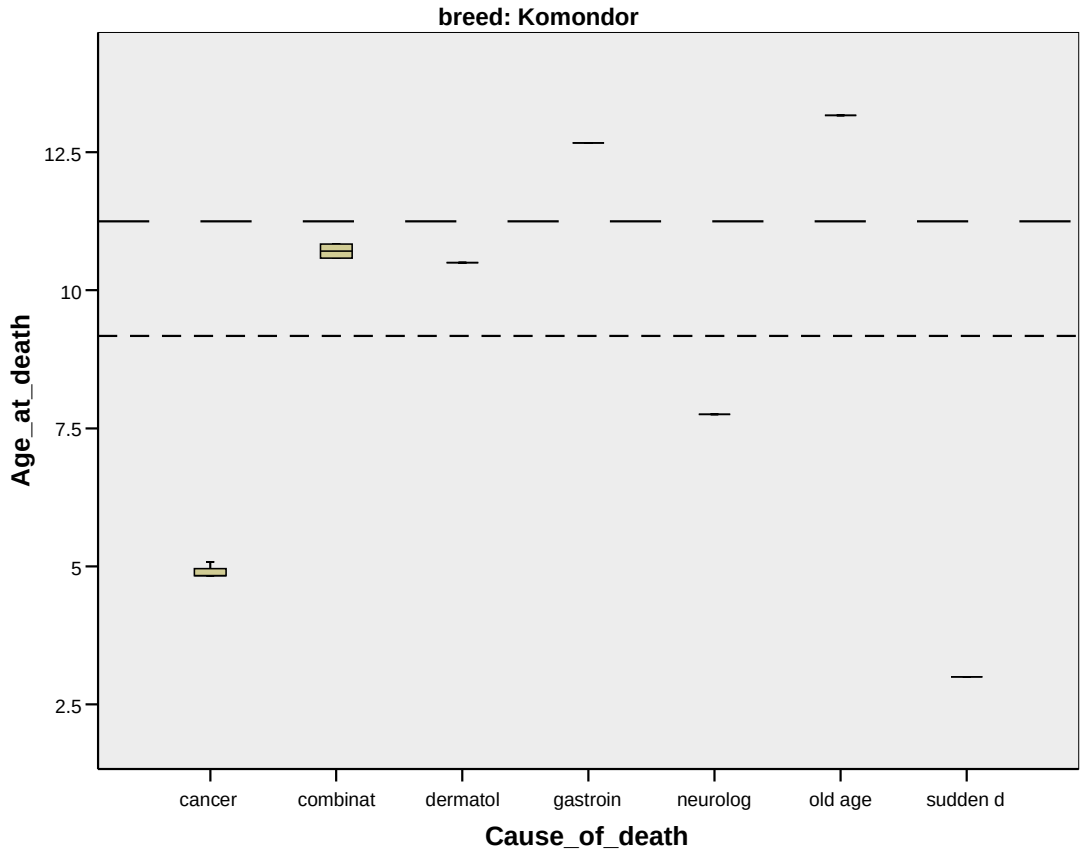


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the Komondor breed (N=10). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the Komondor breed. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 19 live dogs with a reported age was 5 years and 8 months (min=4 months, max=13 years and 11 months, Figure 3). Health information was reported for 19 live dogs of which 9 (47%) were healthy and 10 (53%) had at least one reported health condition, resulting in a total of 17 reported conditions with a median of 1 condition/dog (min=1, max=5).

The median current age of all healthy dogs with a reported age (N=9) was 4 years and 1 month (min=4 months, max=13 years and 11 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=10) was 6 years (min=8 months, max=13 years and 11 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=16) was 4 years and 1 month (min= 6 months, max= 10 years and 9 months, Figure 4). Table 3 shows the disease conditions for the Komondor breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for the19 Komondor breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	9	2	11 (58%)
Male	6	2	8 (42%)
Totals	15 (79%)	4 (21%)	19 (100%)

There was no association between gender and neuter status (P=0.7189).

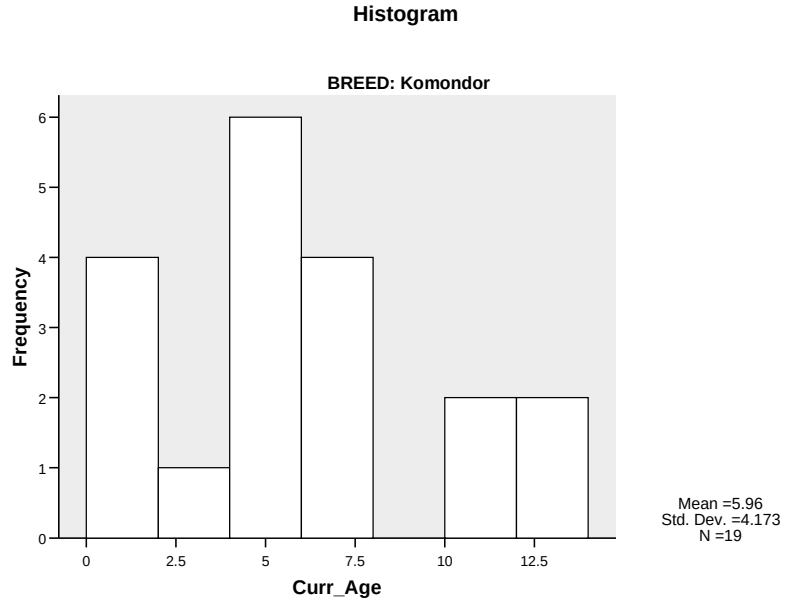


Figure 3. Histogram showing frequency of current age in years for the 19 live Komondor breed with age reported.

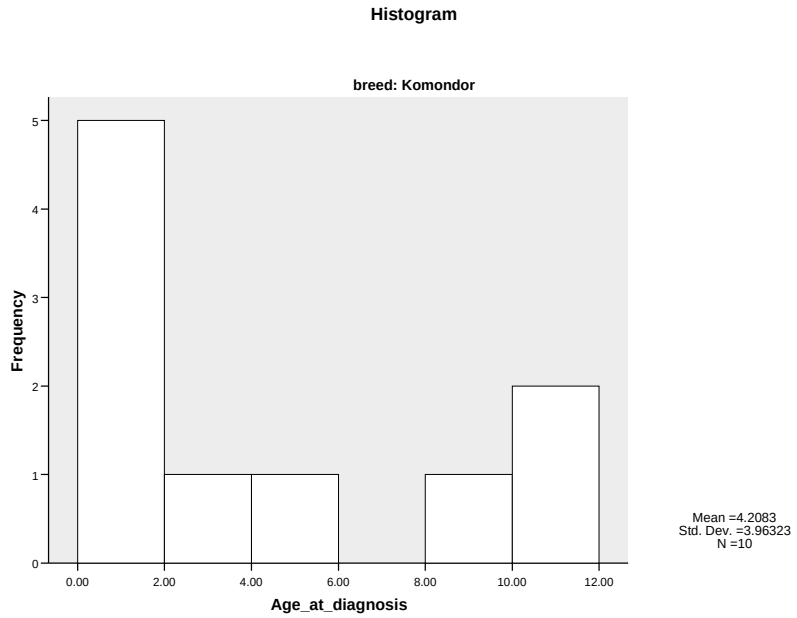


Figure 4. Histogram showing frequency of age at diagnosis for the 10 Komondor breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

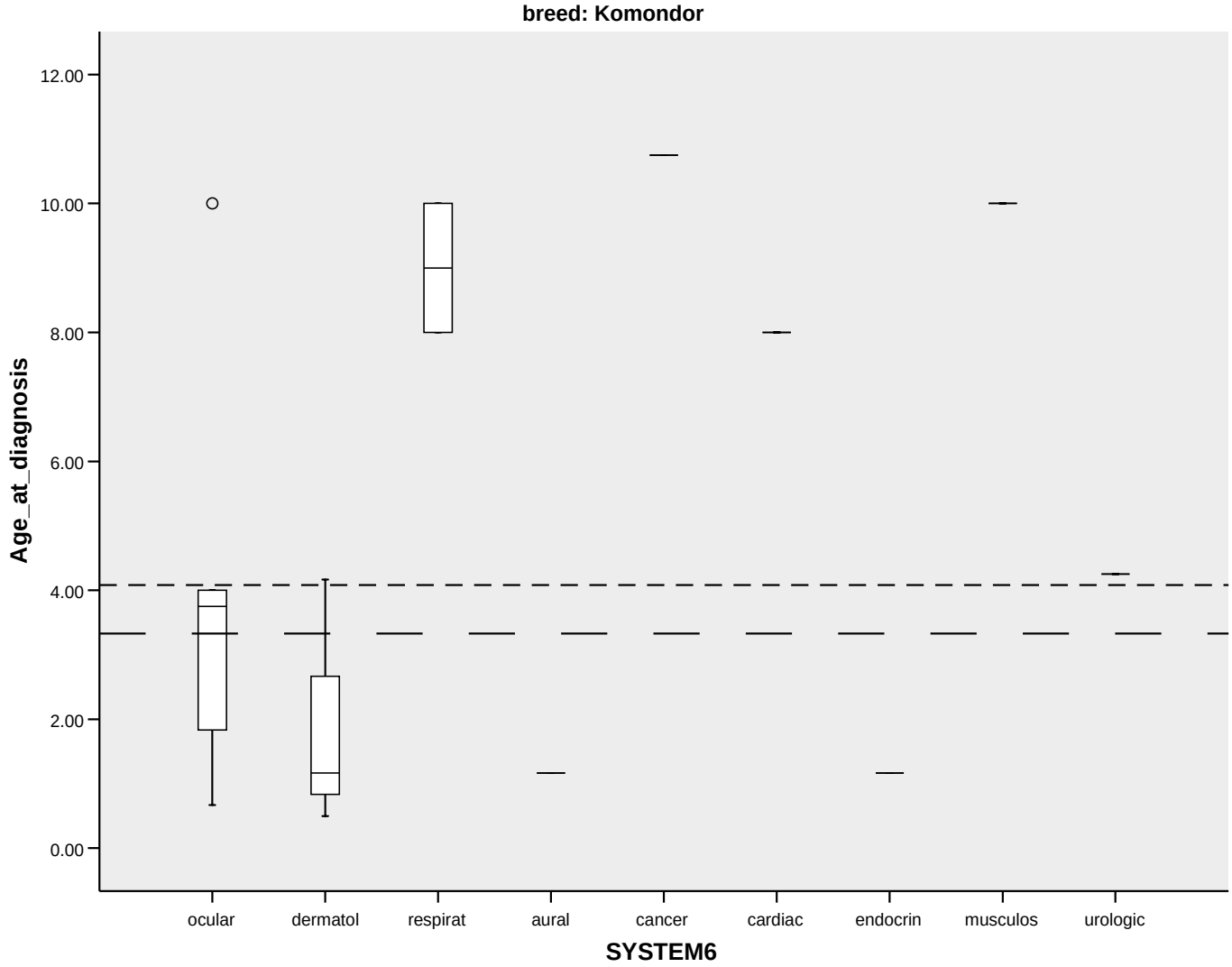


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Komondor breed (N=10 dogs with 16 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Komondor breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Komondor breed.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Ocular	5	29.4	Entropion; KCS; red eye
2	Dermatologic	3	17.6	Recurrent pyoderma; dermatitis
3	Respiratory	2	11.8	Bronchitis; noisy breathing
4	Aural	1	5.9	Otitis externa
5	Cancer	1	5.9	Type unspecified (mammary)
6	Cardiac	1	5.9	Cardiomegaly
7	Endocrine	1	5.9	Addisons disease
8	Immune mediated	1	5.9	Gluten-sensitive enteropathy
9	Musculoskeletal	1	5.9	Arthritis
10	Urologic	1	5.9	Cystitis
	Total	17	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for the Kooikerhondje breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Kooikerhondje breed

A total of 35 forms were sent out and 9 were returned, representing 13 live dogs. This breed had a 25.7% response rate (9/35) and it represented 0.07% of all returns (9/13,741).

Mortality data

A total of 7 deaths were reported and this represents 0.04% of all deaths reported in the survey (7/15,881). The median age at death for the Kooikerhondje breed was 3 years and 11 months (min = 6 months, max = 13 years and 11 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Kooikerhondje breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Kooikerhondje breed.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	2	28.6	Brain tumour; unspecified
2	Neurologic	2	28.6	Myasthenia gravis
3	Behaviour	1	14.3	Aggression
4	Old age	1	14.3	Old age
5	Trauma	1	14.3	Unspecified
	Total	7	100.0	

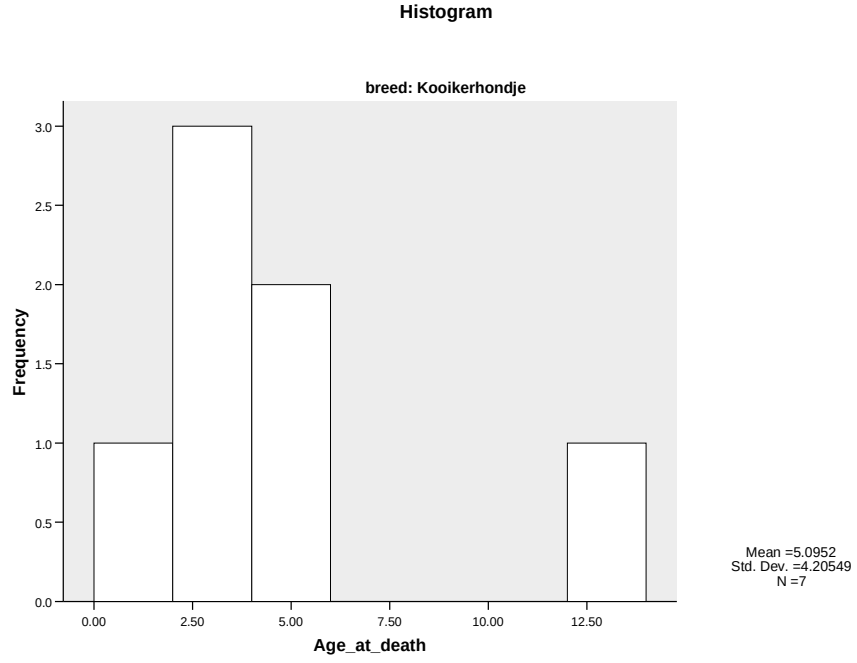


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 7 Kooikerhondje deaths with age at death reported.

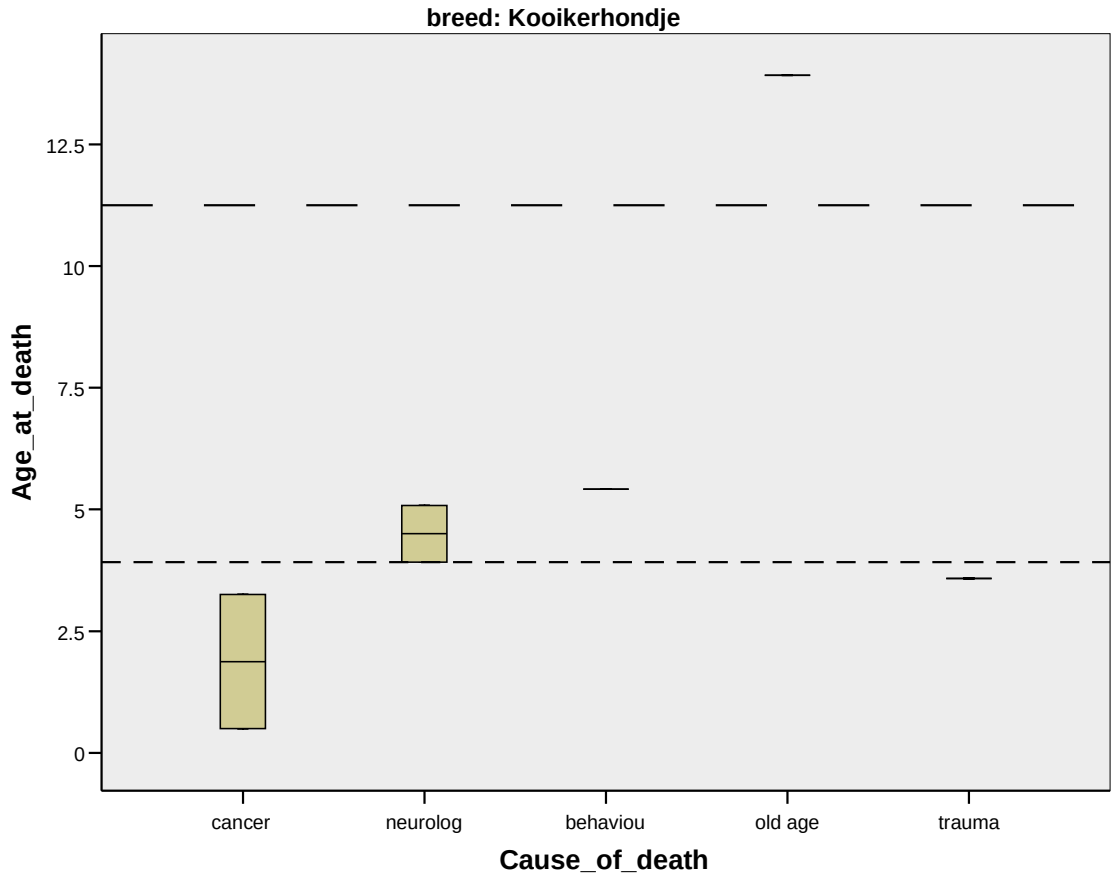


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the Kooikerhondje breed (N=7). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the Kooikerhondje breed. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 13 live dogs with a reported age was 8 years and 7 months (min=8 months, max=12 years and 10 months, Figure 3). Health information was reported for 13 live dogs of which 7 (54%) were healthy and 6 (46%) had at least one reported health condition, resulting in a total of 10 reported conditions with a median of 1.5 conditions/dog (min=1, max=3).

The median current age of all healthy dogs with a reported age (N=7) was 7 years and 6 months (min=8 months, max=12 years and 6 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=6) was 9 years and 2 months (min=6 years and 6 months, max=12 years and 10 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=10) was 3 years and 6 months (min= 11 months, max= 9 years and 6 months, Figure 4). Table 3 shows the disease conditions for the Kooikerhondje breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for the13 Kooikerhondje breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	2	7	9 (69%)
Male	2	2	4 (31%)
Totals	4 (31%)	9 (69%)	13 (100%)

There was no association between gender and neuter status (P=0.3166).

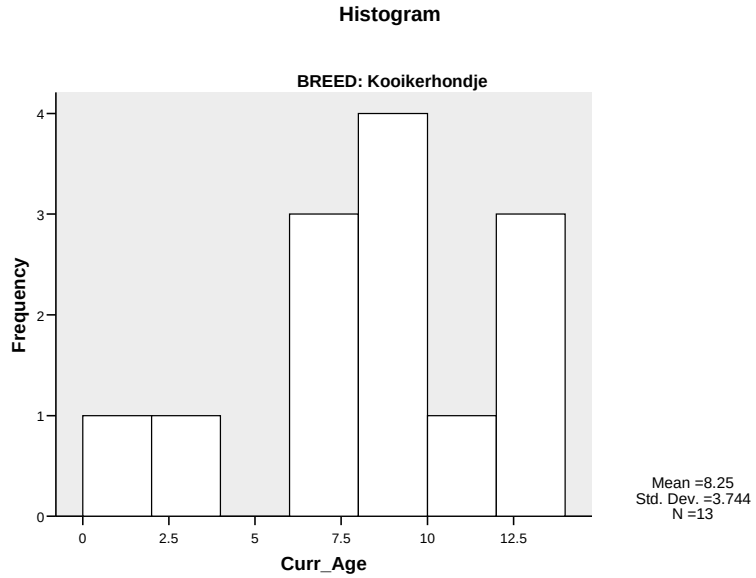


Figure 3. Histogram showing frequency of current age in years for the 13 live Kooikerhondje breed with age reported.

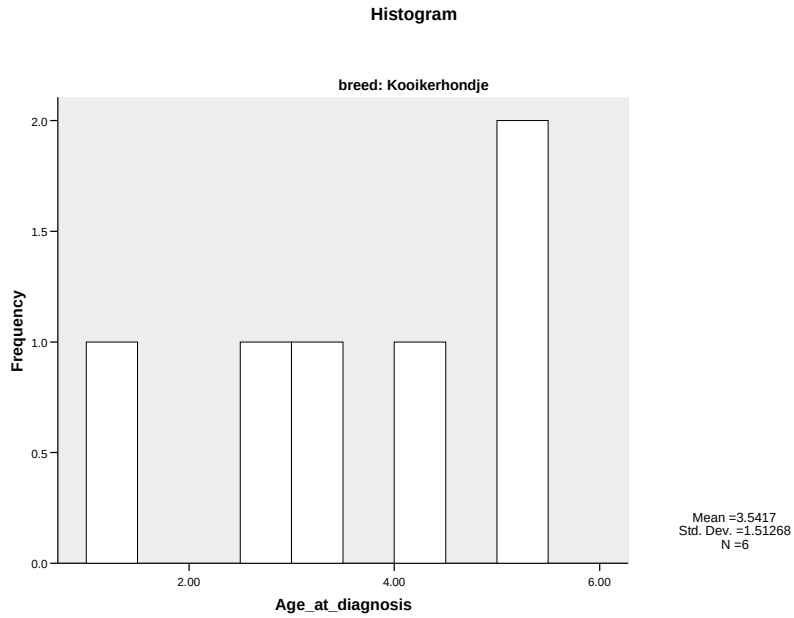


Figure 4. Histogram showing frequency of age at diagnosis for the 6 Kooikerhondje breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

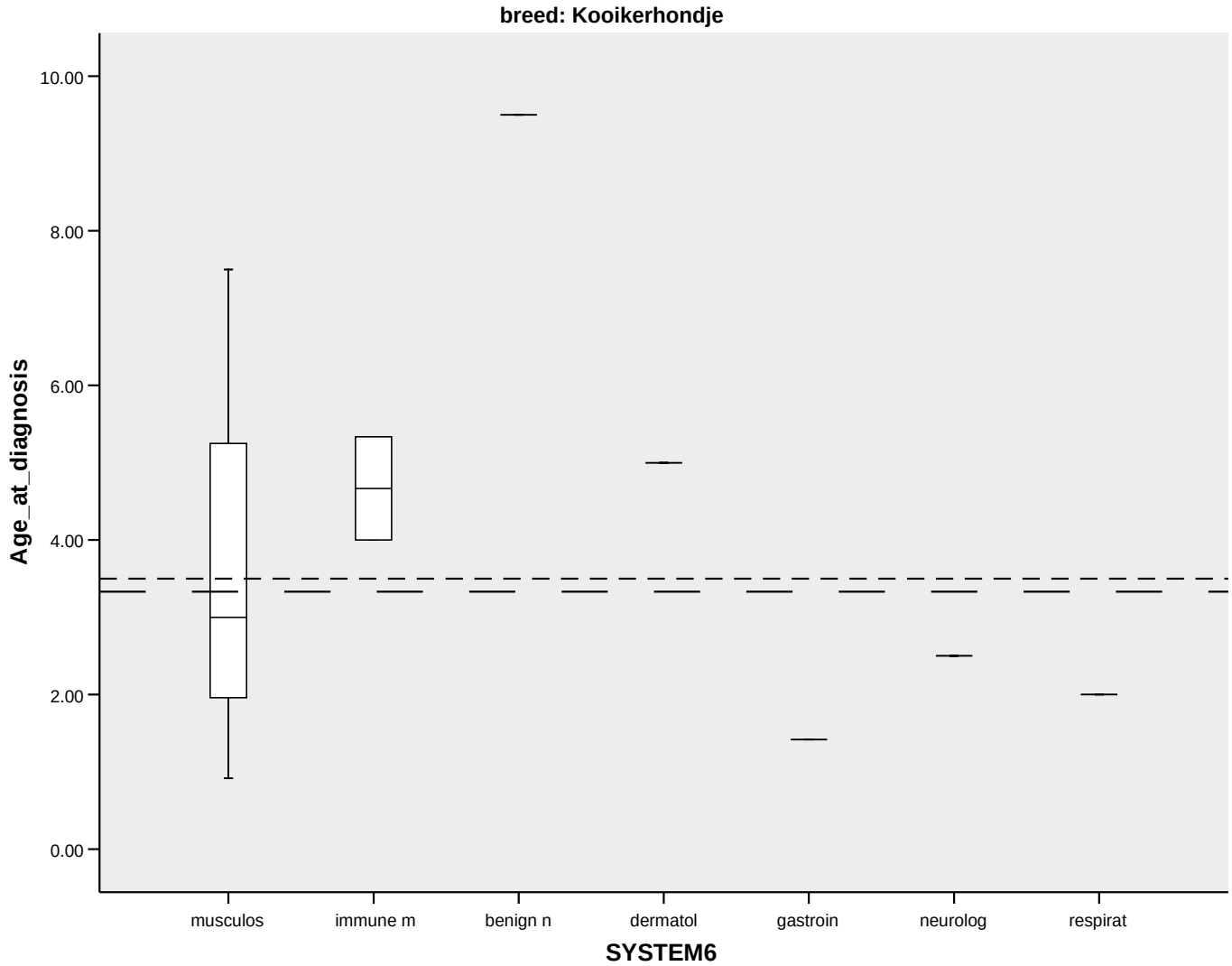


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Kooikerhondje breed (N=6 dogs with 10 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Kooikerhondje breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Kooikerhondje breed.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Musculoskeletal	3	30.0	Arthritis; fracture (forelimb); patellar luxation
2	Immune mediated	2	20.0	Gluten-sensitive enteropathy; AIHA
3	Benign neoplasia	1	10.0	Lipoma
4	Dermatologic	1	10.0	Pyotraumatic dermatitis
5	Gastrointestinal	1	10.0	Colitis
6	Neurologic	1	10.0	Myasthenia gravis
7	Respiratory	1	10.0	Coughing
	Total	10	100.0	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for Labrador Retrievers

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Labrador Retrievers

A total of 1775 forms were sent out and 369 were returned, representing 1341 live dogs. This breed had a 20.8% response rate (369/1775) and it represented 2.69% of all returns (369/13,741).

Mortality data

A total of 574 deaths were reported and this represents 3.61% of all deaths reported in the survey (574/15,881). The median age at death for Labrador Retrievers was 12 years and 3 months (min = 2 months, max = 19 years) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Labrador Retrievers. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Labrador Retrievers.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	179	31.2	Type unspecified (liver, mammary, unspecified
2	Old age	132	23.0	Old age & age combinations
3	Cardiac	42	7.3	Heart failure; heart defect (unspec.); heart attack; cardiomyopathy
4	Cerebral vascular	32	5.6	Stroke or cerebral vascular accident
5	Combinations	29	5.1	
6	Hepatic	18	3.1	Chronic liver failure; liver disease unspecified
7	Trauma	18	3.1	Road traffic accident; unspecified; spinal injury
8	Musculoskeletal	17	3.0	Arthritis; hip dysplasia; OCD
9	Neurologic	17	3.0	Spinal disease unspecified; seizures; spondylitis
10	Other	16	2.8	Uncodeable
11	Unknown	11	1.9	
12	Urologic	11	1.9	Chronic kidney failure; incontinence
13	Gastrointestinal	8	1.4	Gastric dilatation/volvulus (GDV); pancreatitis; foreign body
14	Respiratory	8	1.4	Laryngeal paralysis; unspecified respiratory disease
15	Perioperative	6	1.0	
16	Endocrine	5	0.9	Cushings disease; diabetes mellitus
17	Immune mediated	5	0.9	Unspecified; AIHA
18	Poisoning	4	0.7	
19	Infection	3	0.5	Leptospirosis; viral (unspecified); chest (unspecified)
20	Internal bleeding	3	0.5	
21	Behaviour	2	0.3	Aggression; unspecified
22	Ocular	2	0.3	Blindness
23	Cardiovascular	1	0.2	Unspecified
24	Collapse	1	0.2	
25	Drowning	1	0.2	
26	Pining	1	0.2	
27	Senility	1	0.2	
28	Sudden death	1	0.2	
	Total	574	100.0	

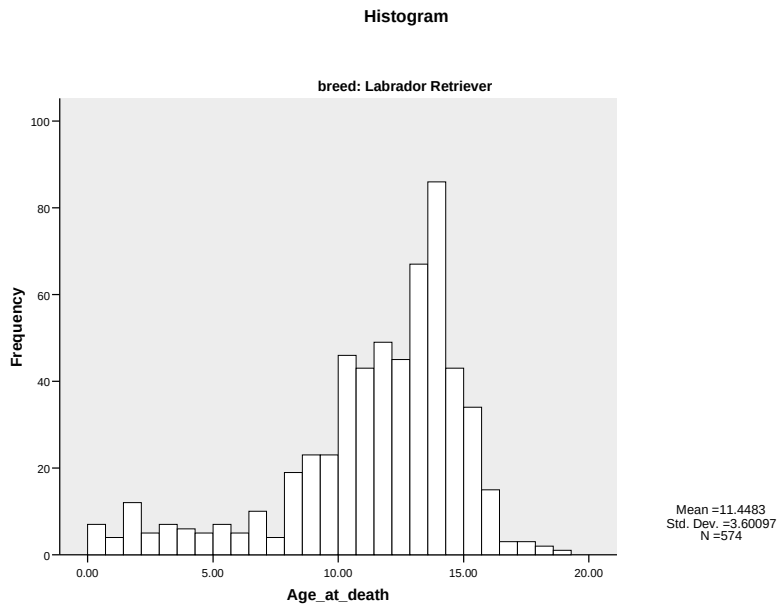


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 574 Labrador Retriever deaths with age at death reported.

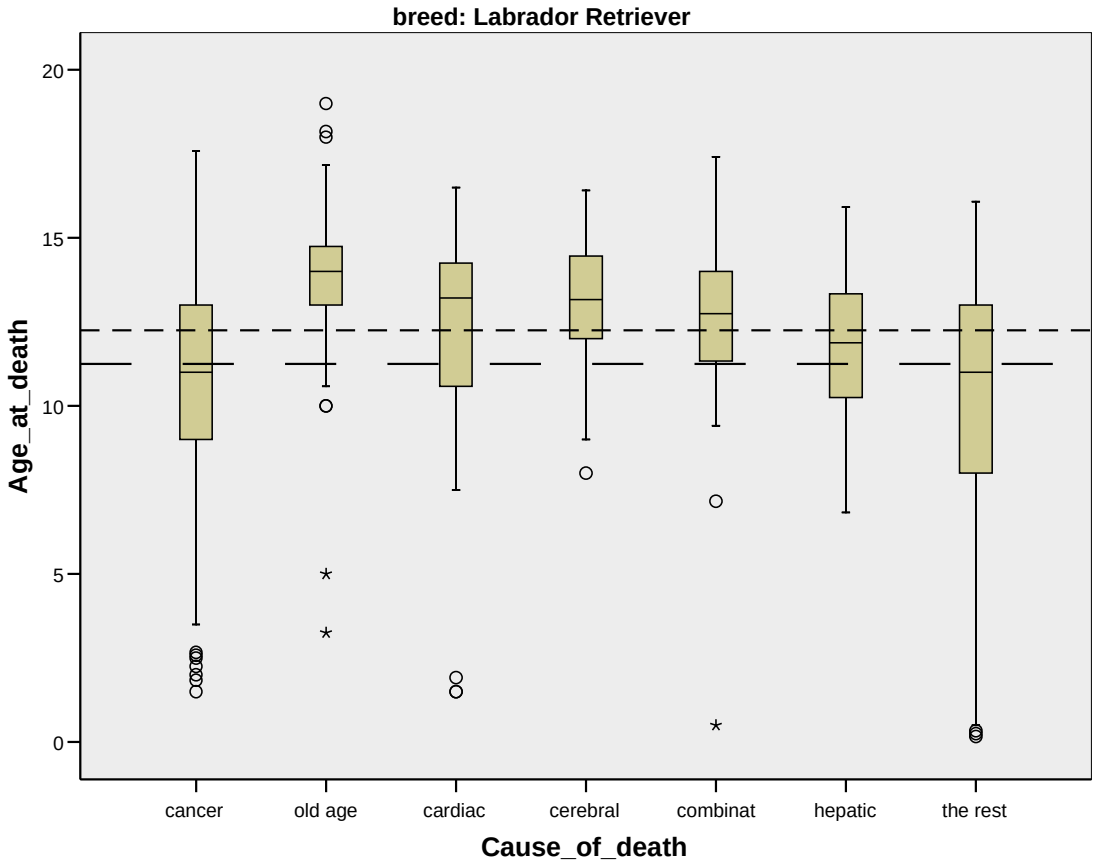


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Labrador Retrievers (N=574). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Labrador Retrievers. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 1340 live dogs with a reported age was 5 years (min=1 month, max=17 years and 9 months, Figure 3). Health information was reported for 1341 live dogs of which 902 (67%) were healthy and 439 (33%) had at least one reported health condition, resulting in a total of 676 reported conditions with a median of 1 condition/dog (min=1, max=8).

The median current age of all healthy dogs with a reported age (N=902) was 3 years and 9 months (min=1 month, max=17 years and 9 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=431) was 7 years and 5 months (min=5 months, max=16 years and 1 month). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=649) was 3 years and 6 months (min= 1 month, max= 15 years, Figure 4). Table 3 shows the disease conditions for Labrador Retrievers. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 1328 Labrador Retrievers with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	601	250	851 (64%)
Male	412	65	477 (36%)
Totals	1013 (76%)	315 (24%)	1328 (100%)

Significantly more females were neutered (P<0.0001).

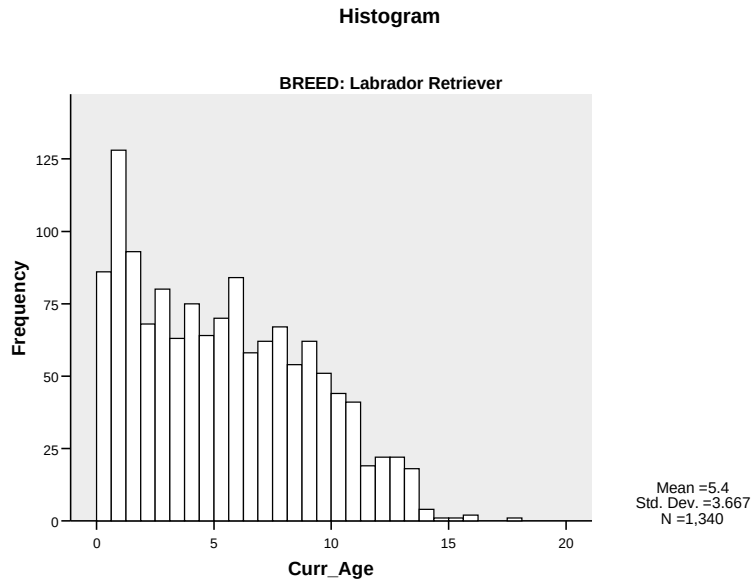


Figure 3. Histogram showing frequency of current age in years for the 1340 live Labrador Retrievers with age reported.

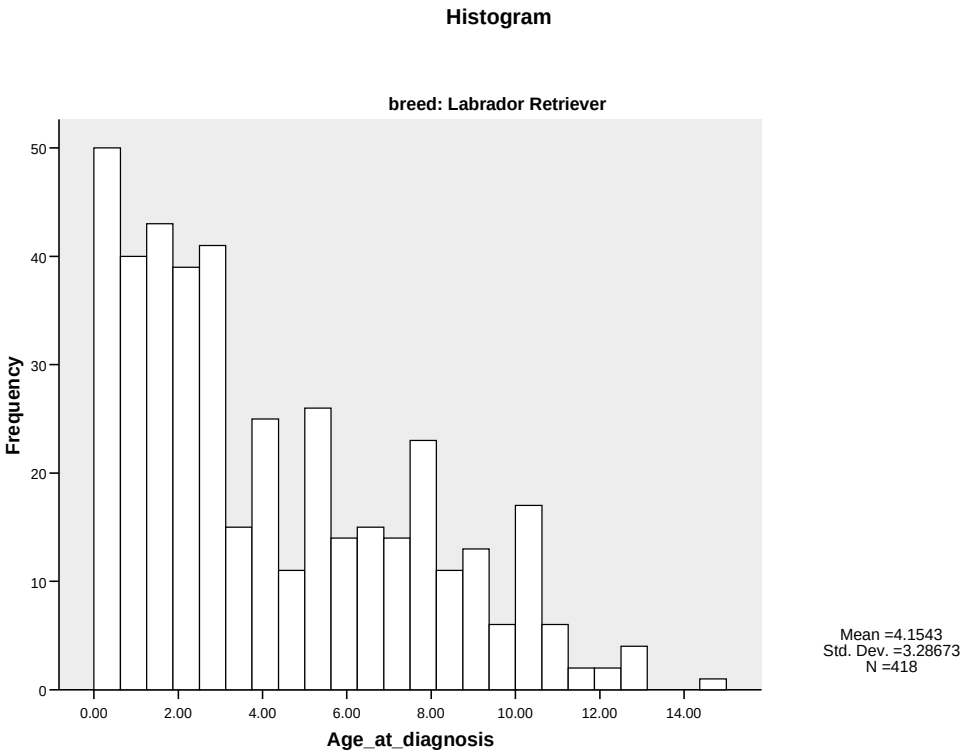


Figure 4. Histogram showing frequency of age at diagnosis for the 418 Labrador Retrievers with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

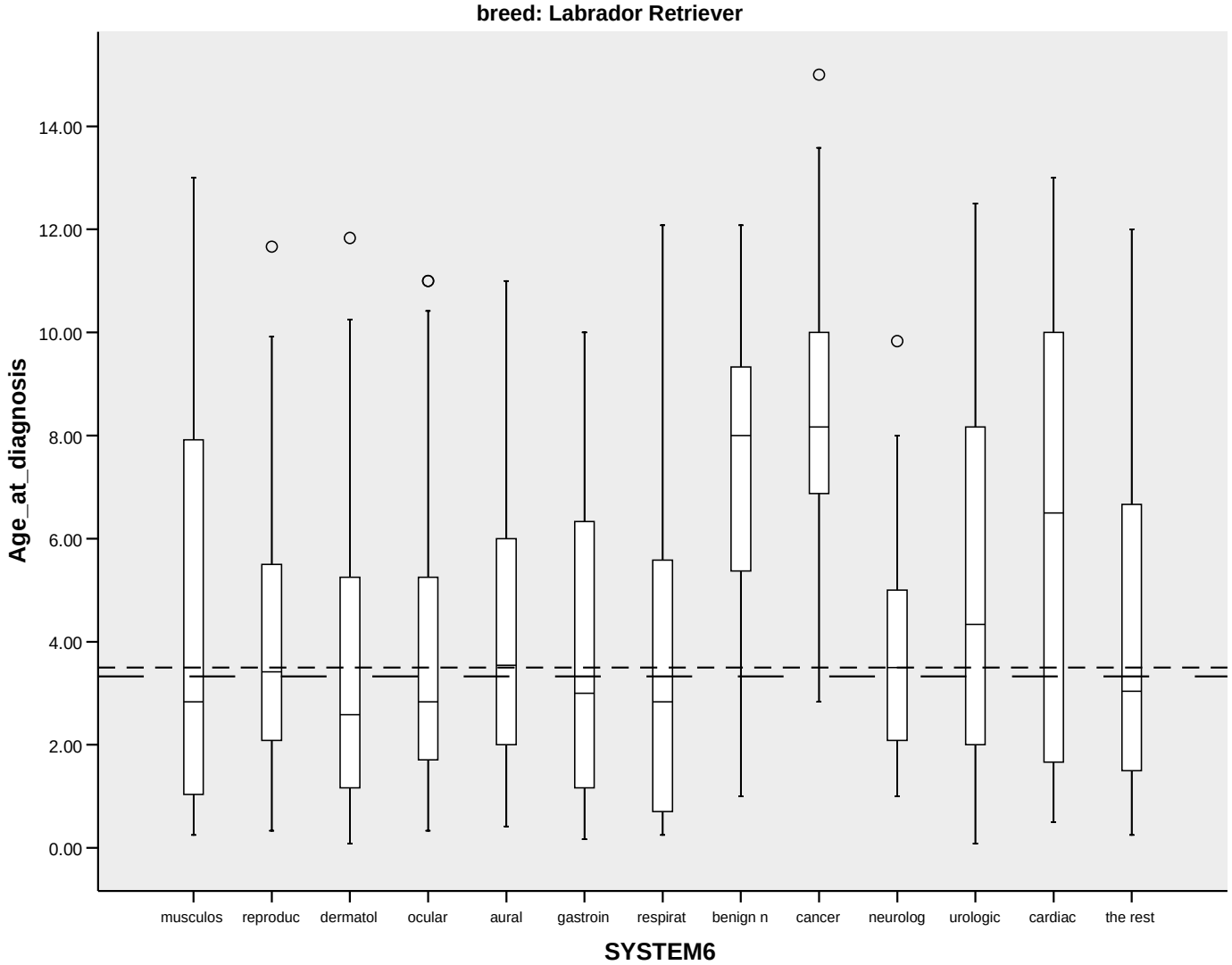


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Labrador Retrievers (N=418 dogs with 649 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Labrador Retrievers. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Labrador Retrievers.

	Disease condition	All conditions N	All conditions %	Most common specific conditions in descending order
1	Musculoskeletal	182	26.9	Arthritis (elbows>unspecified>shoulders>rest); CLR; CHD; OCD (elbow>hock>rest)
2	Reproductive	88	13.0	Dystochia (uterine inertia>physical blockage); pyometra; infertility; false pregnancy
3	Dermatologic	56	8.3	Mites (sarcoptes>unspecified); pyotraumatic dermatitis; dermatitis
4	Ocular	48	7.1	Cataracts (unspecified>congenital); entropion; corneal FB
5	Aural	37	5.5	Otitis externa; aural haematoma; ear mites; excessive ear wax
6	Gastrointestinal	34	5.0	Colitis; vomiting & diarrhoea; GDV; gastroenteritis (unspecified>chronic); other (unspec.)
7	Respiratory	31	4.6	Kennel cough; coughing; laryngeal paralysis
8	Benign neoplasia	29	4.3	Lipoma; histiocytoma (skin); type unspecified (hock)
9	Cancer	29	4.3	Type unspecified (mammary>rest); MCT; melanoma (mouth; back); carcinoma (unspecified)
10	Neurologic	25	3.7	Seizures; IVDD (unspecified)
11	Urologic	24	3.6	Cystitis; incontinence (unspecified>after spay); cystouroliths (unspecified=struvite)
12	Immune mediated	23	3.4	Atopy; gluten-sensitive enteropathy; dust mite allergy; food allergy; AIHA
13	Cardiac	17	2.5	Heart murmur; cardiomyopathy (unspecified>dilated); arrhythmia
14	Trauma	16	2.4	Musculoskeletal (hindlimb>forelimb=head=tail); ocular; other (unspecified)
15	Endocrine	11	1.6	Hypothyroidism; unspecified; diabetes mellitus
16	Unknown	10	1.5	Undiagnosed illness
17	Dental	6	0.9	Defect other than extra teeth; dental disease; retained puppy teeth
18	Hepatic	3	0.4	Hepatitis; liver failure (chronic)
19	Anal gland	2	0.3	Anal sacculitis
20	Other	2	0.3	Uncodeable
21	Cardiopulmonary	1	0.1	Pleural effusion
22	Cerebrovascular	1	0.1	Stroke or cerebral vascular accident
23	Haematopoietic	1	0.1	Von Willebrands disease (VWD)
	Total	676	100.0	

MCT=mast cell tumour

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for the Lagotto Romagnolo breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Lagotto Romagnolo breed

A total of 205 forms were sent out and 33 were returned, representing 41 live dogs. This breed had a 16.1% response rate (33/205) and it represented 0.24% of all returns (33/13,741).

Mortality data
No deaths were reported for this breed.

Morbidity data
The median current age of the 41 live dogs with a reported age was 2 years and 1 month (min=3 months, max=7 years and 11 months, Figure 1). Health information was reported for 41 live dogs of which 33 (80%) were healthy and 8 (20%) had at least one reported health condition, resulting in a total of 10 reported conditions with a median of 1 condition/dog (min=1, max=2).

The median current age of all healthy dogs with a reported age (N=33) was 2 years (min=3 months, max=7 years and 11 months). The distribution of gender and neuter status is shown in Table 1.

The median current age of all dogs with one or more disease conditions and a reported age (N=8) was 3 years and 3 months (min=1 year and 3 months, max=6 years and 10 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=10) was 11 months (min= 3 months, max= 6 years and 6 months, Figure 2). Table 2 shows the disease conditions for the Lagotto Romagnolo breed. Age at diagnosis is presented for the most common disease conditions (Figure 3).

Table 1. Distribution of gender and neuter status for 40 the Lagotto Romagnolo breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	10	4	14 (35%)
Male	24	2	26 (65%)
Totals	34 (85%)	6 (15%)	40 (100%)

There was no association between gender and neuter status (P=0.08).

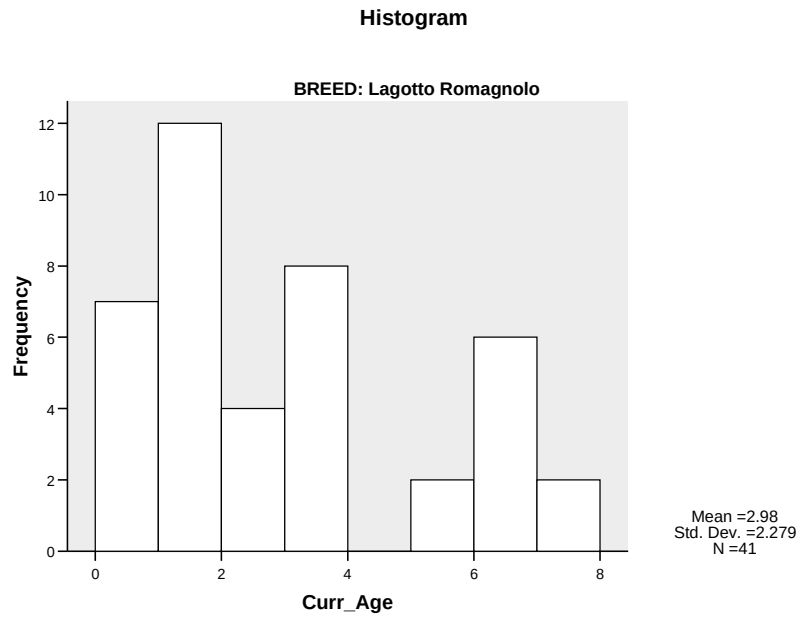


Figure 1. Histogram showing frequency of current age in years for the 41 live the Lagotto Romagnolo breed with age reported.

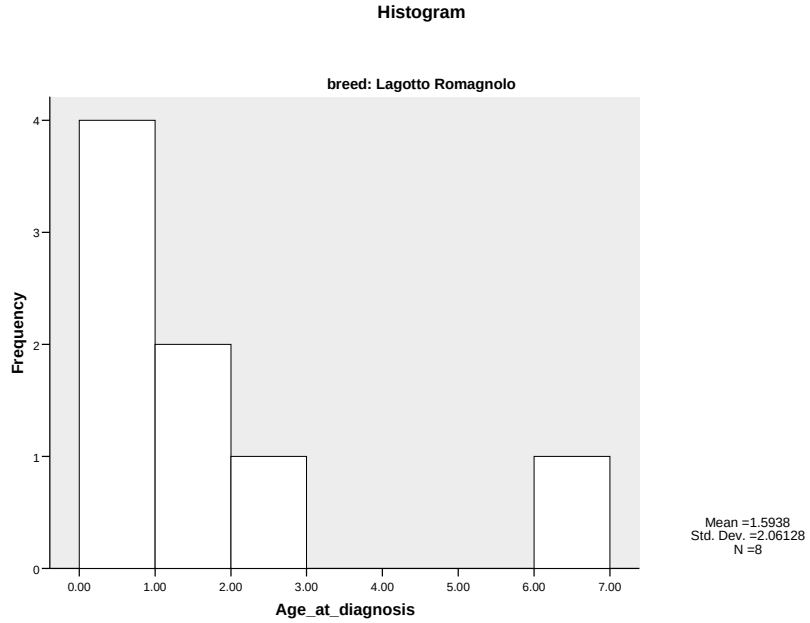


Figure 2. Histogram showing frequency of age at diagnosis for the 8 Lagotto Romagnolo breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

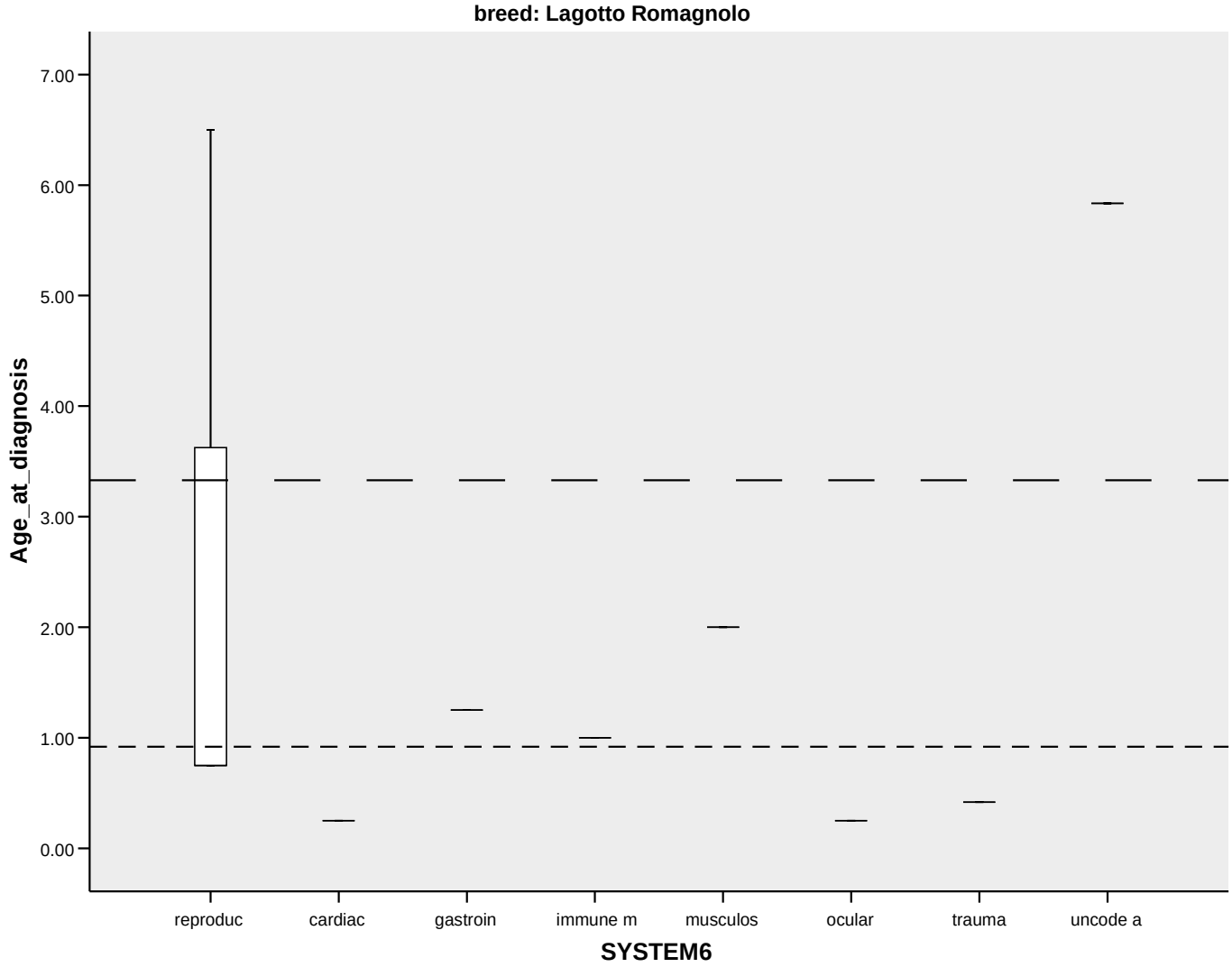


Figure 3. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Lagotto Romagnolo breed (N=8 dogs with 10 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Lagotto Romagnolo breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 2. Disease conditions by organ system/category for the Lagotto Romagnolo breed.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Reproductive	3	30.0	Cryptorchid; false pregnancy; dystochia (physical blockage)
2	Cardiac	1	10.0	Heart murmur (unspecified)
3	Gastrointestinal	1	10.0	Diarrhoea (acute)
4	Immune mediated	1	10.0	Gluten-sensitive enteropathy
5	Musculoskeletal	1	10.0	Arthritis (hindlimb)
6	Ocular	1	10.0	Conjunctivitis
7	Trauma	1	10.0	Unspecified
8	Other	1	10.0	Uncodeable
	Total	10	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for the Lancashire Heeler breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Lancashire Heeler breed

A total of 208 forms were sent out and 66 were returned, representing 141 live dogs. This breed had a 31.7% response rate (66/208) and it represented 0.48% of all returns (66/13,741).

Mortality data

A total of 30 deaths were reported and this represents 0.19% of all deaths reported in the survey (30/15,881). The median age at death for the Lancashire Heeler breed was 11 years and 9 months (min = 2 months, max = 21 years and 10 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Lancashire Heeler breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Lancashire Heeler breed.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	8	26.7	Type unspecified
2	Old age	8	26.7	Old age
3	Trauma	4	13.3	Road traffic accident
4	Cardiac	2	6.7	Cardiomegaly; heart failure
5	Combinations	2	6.7	
6	Hepatic	2	6.7	Liver disease (unspecified); liver failure
7	Cerebral vascular	1	3.3	Stroke or cerebral vascular accident
8	Gastrointestinal	1	3.3	Gastroenteritis
9	Neurologic	1	3.3	Seizures
10	Urologic	1	3.3	Kidney problem (unspecified)
	Total	30	100.0	

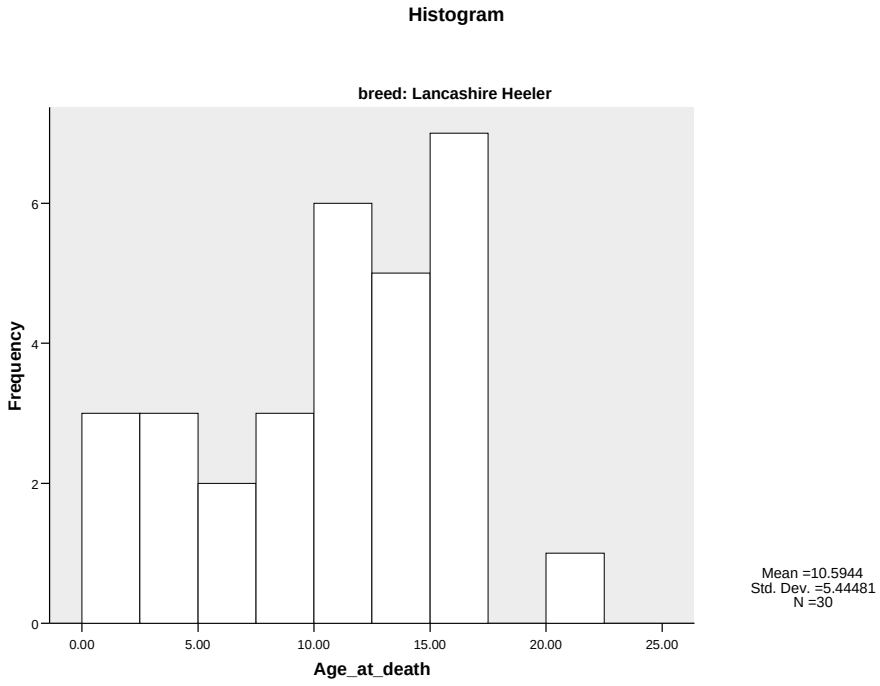


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 30 Lancashire Heeler deaths with age at death reported.

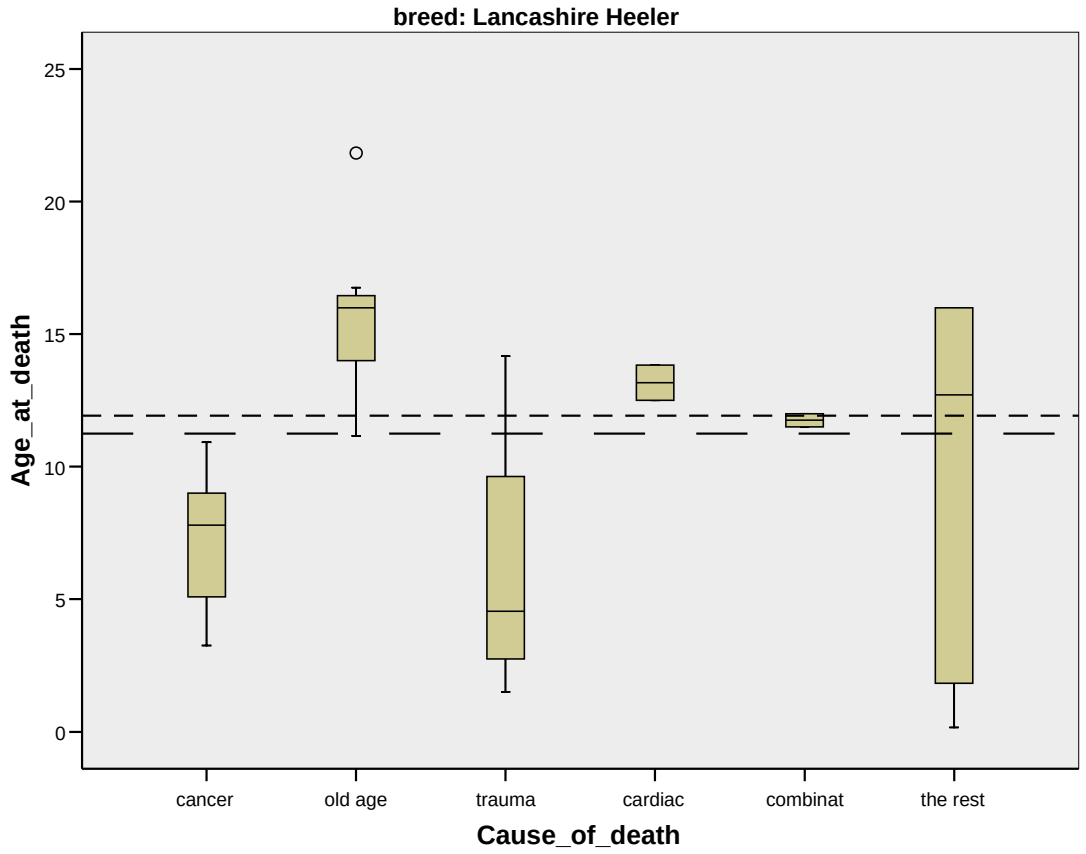


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the Lancashire Heeler breed (N=30). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the Lancashire Heeler breed. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 141 live dogs with a reported age was 4 years and 6 months (min=4 months, max=15 years, Figure 3). Health information was reported for 141 live dogs of which 103 (73%) were healthy and 38 (27%) had at least one reported health condition, resulting in a total of 59 reported conditions with a median of 1 condition/dog (min=1, max=5).

The median current age of all healthy dogs with a reported age (N=103) was 3 years and 8 months (min=4 months, max=13 years and 2 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=37) was 6 years and 6 months (min=4 months, max=15 years). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=55) was 3 years and 11 months (min= 5 months, max= 11 years and 6 months, Figure 4). Table 3 shows the disease conditions for the Lancashire Heeler breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for the 139 Lancashire Heeler breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	49	25	74 (53%)
Male	46	19	65 (47%)
Totals	95 (68%)	44 (32%)	139 (100%)

There was no association between gender and neuter status (P=0.5647).

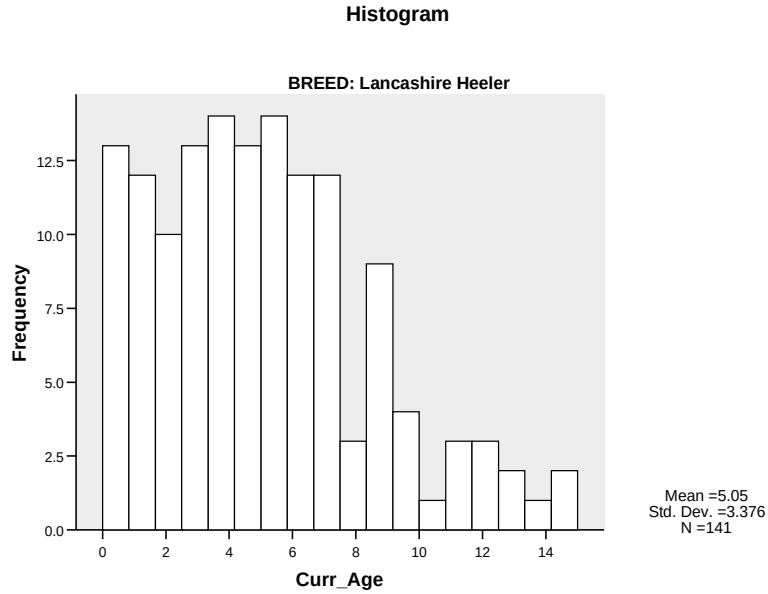


Figure 3. Histogram showing frequency of current age in years for the 141 live Lancashire Heeler breed with age reported.

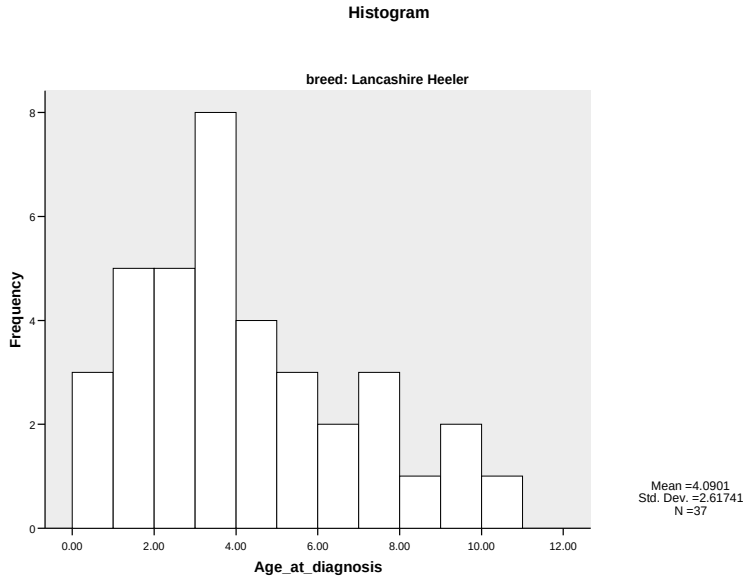


Figure 4. Histogram showing frequency of age at diagnosis for the 37 Lancashire Heeler breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

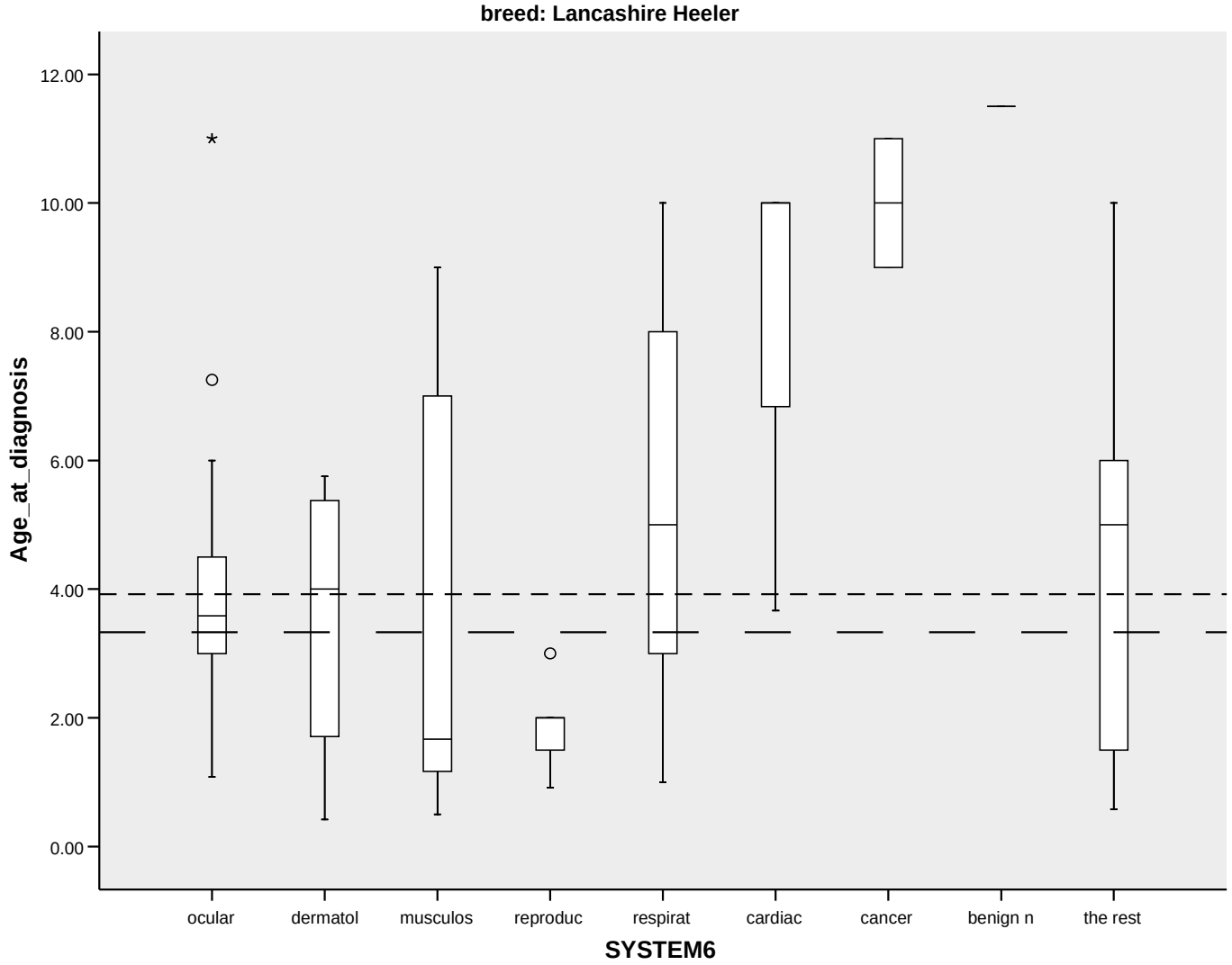


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Lancashire Heeler breed (N=37 dogs with 55 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Lancashire Heeler breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Lancashire Heeler breed.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Ocular	19	32.2	Lens luxation; cataracts; persistent puppillary membrane (PPM); conjunctivitis; unspecified; red eye
2	Dermatologic	6	10.2	Dermatitis; mites (sarcoptes); recurrent pyoderma; other (unspecified)
3	Musculoskeletal	6	10.2	Arthritis; elbow dysplasia; hip dysplasia (CHD); brachygnathism
4	Reproductive	6	10.2	Cryptorchid; inability to breed; dystochia (uterine inertia); irregular heat cycles
5	Respiratory	5	8.5	Kennel cough; snoring
6	Cardiac	3	5.1	Heart murmur (unspecified); coughing
7	Cancer	2	3.4	Unspecified
8	Gastrointestinal	2	3.4	Colitis
9	Aural	1	1.7	Otitis interna
10	Benign neoplasia	1	1.7	Lipoma
11	Dental	1	1.7	Retained puppy teeth
12	Endocrine	1	1.7	Unspecified
13	Immune mediated	1	1.7	Flea allergy
14	Neurologic	1	1.7	Seizures
15	Trauma	1	1.7	Urologic
16	Other	1	1.7	Uncodeable
17	Unknown	1	1.7	Undiagnosed illness
18	Urologic	1	1.7	Uroliths (unspecified)
	Total	59	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for the Large Munsterlander breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Large Munsterlander breed

A total of 220 forms were sent out and 99 were returned, representing 180 live dogs. This breed had a 45.0% response rate (99/220) and it represented 0.72% of all returns (99/13,741).

Mortality data

A total of 69 deaths were reported and this represents 0.43% of all deaths reported in the survey (69/15,881). The median age at death for the Large Munsterlander breed was 11 years and 4 months (min = 1 year and 6 months, max = 16 years and 7 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Large Munsterlander breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Large Munsterlander breed.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	17	24.6	Lymphoma; unspecified; brain tumour
2	Old age	8	11.6	Old age
3	Neurologic	7	10.1	Seizures; CDRM; spinal paralysis
4	Trauma	6	8.7	Road traffic accident; spinal injury; head trauma
5	Cardiac	4	5.8	Heart attack; heart failure; mitral valve disease (MVD)
6	Musculoskeletal	4	5.8	Hip dysplasia; arthritis
7	Unknown	4	5.8	
8	Gastrointestinal	3	4.3	Gastric dilatation/volvulus
9	Hepatic	3	4.3	Chronic liver failure; liver disease unspecified
10	Cerebral vascular	2	2.9	Stroke or cerebral vascular accident
11	Combinations	2	2.9	Seizures & paresis
12	Immune mediated	2	2.9	Unspecified
13	Senility	2	2.9	
14	Behaviour	1	1.4	Aggression
15	Endocrine	1	1.4	Cushings
16	Other	1	1.4	Uncodeable
17	Respiratory	1	1.4	Respiratory failure (unspecified)
18	Urologic	1	1.4	Chronic kidney failure
	Total	69	100.0	

CDRM=chronic degenerative radiculomyelopathy

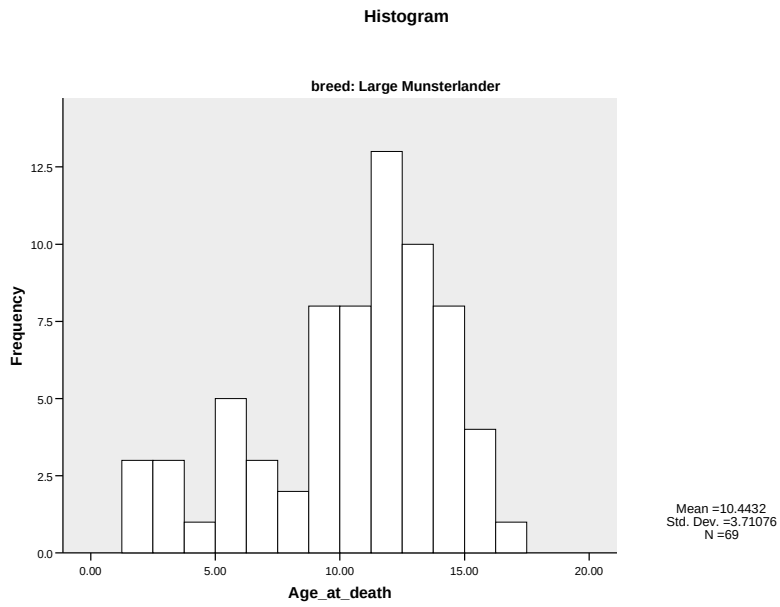


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 69 Large Munsterlander deaths with age at death reported.

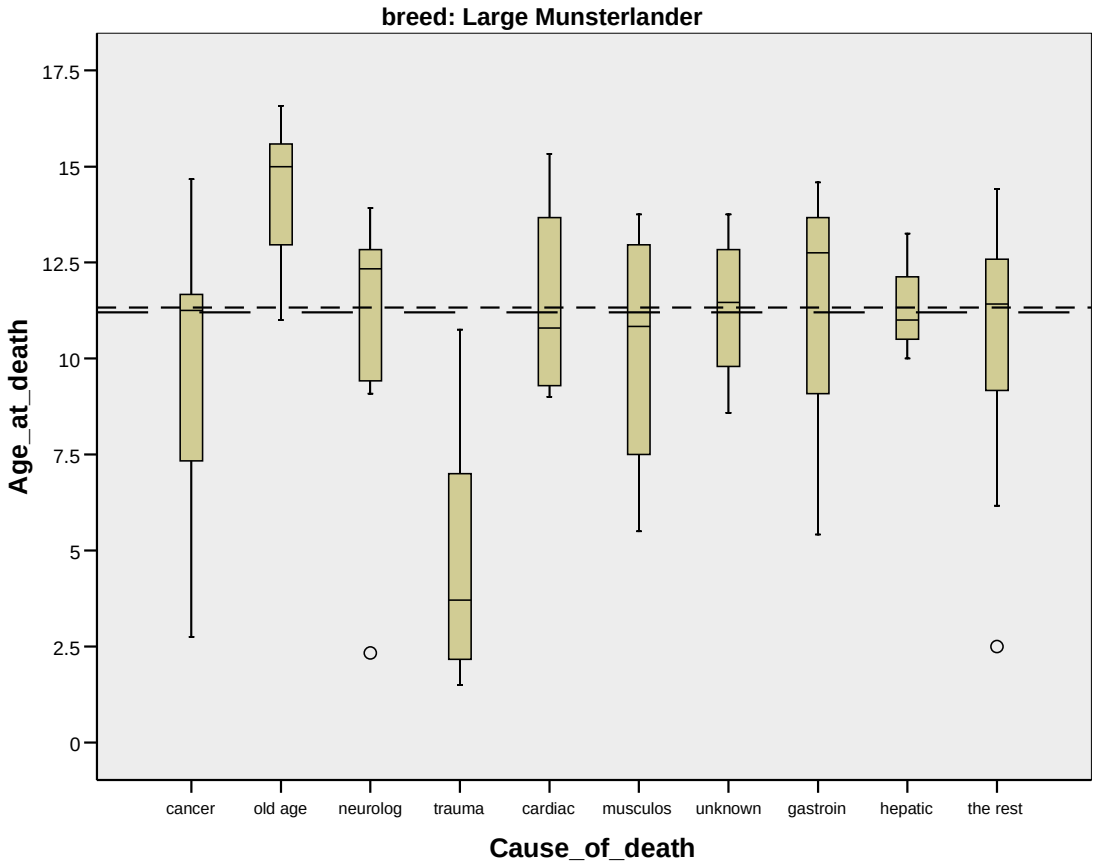


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the Large Munsterlander breed (N=69). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the Large Munsterlander breed. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 180 live dogs with a reported age was 4 years and 7 months (min=3 months, max=18 years and 1 month, Figure 3). Health information was reported for 180 live dogs of which 105 (58%) were healthy and 75 (42%) had at least one reported health condition, resulting in a total of 105 reported conditions with a median of 1 condition/dog (min=1, max=7).

The median current age of all healthy dogs with a reported age (N=105) was 3 years and 4 months (min=3 months, max=13 years). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=73) was 6 years and 10 months (min=9 months, max=18 years and 1 month). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=102) was 2 years and 7 months (min= 2 months, max= 12 years and 6 months, Figure 4). Table 3 shows the disease conditions for the Large Munsterlander breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for the 180 Large Munsterlander breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	47	54	101 (56%)
Male	56	23	79 (44%)
Totals	103 (57%)	77 (43%)	180 (100%)

Significantly more females were neutered (P=0.0010).

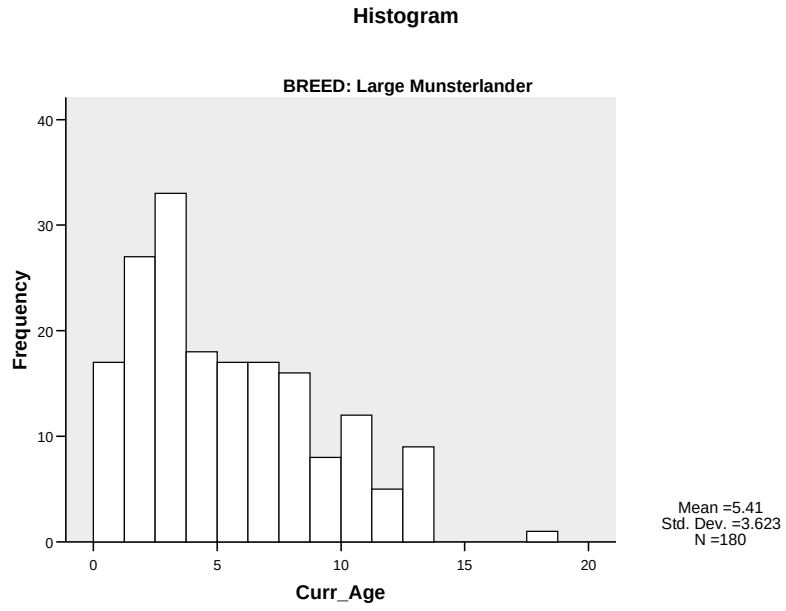


Figure 3. Histogram showing frequency of current age in years for the 180 live Large Munsterlander breed with age reported.

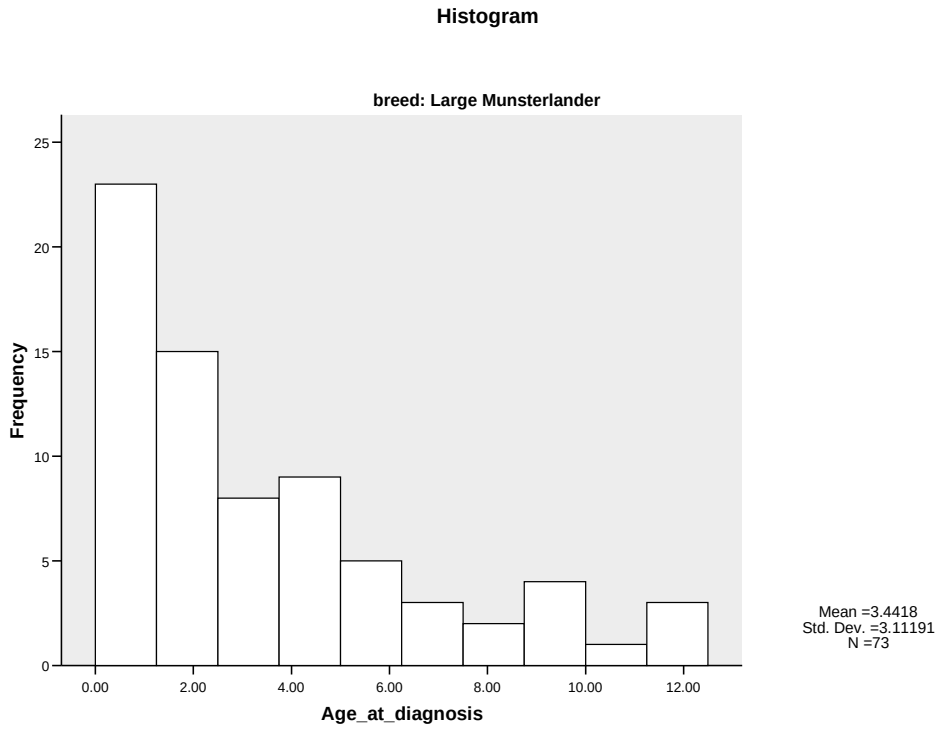


Figure 4. Histogram showing frequency of age at diagnosis for the 73 Large Munsterlander breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

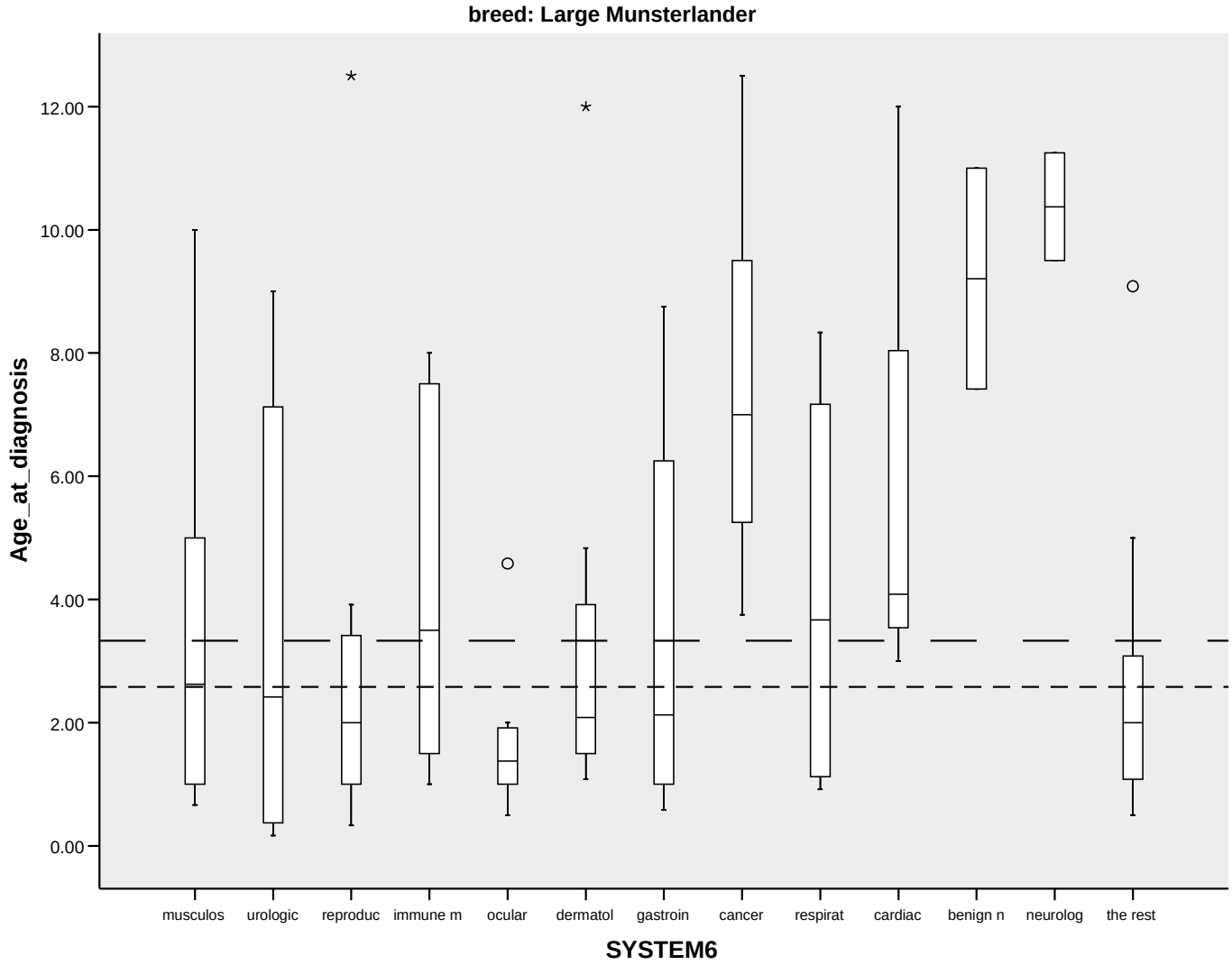


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Large Munsterlander breed (N=73 dogs with 102 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Large Munsterlander breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Large Munsterlander breed.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Musculoskeletal	19	18.1	CLR; CHD; lameness (forelimb); arthritis (elbows; hips; shoulders)
2	Urologic	12	11.4	Cystitis; incontinence (unspecified=OHE); PLN; haematuria
3	Reproductive	11	10.5	False pregnancy; pyometra
4	Immune mediated	9	8.6	Flea allergy; atopy; AIHA; masticatory muscle myositis (MMM); systemic lupus erythematosus (SLE)
5	Ocular	8	7.6	KCS; cataracts (unspecified=congenital); conjunctivitis; red eye; distichiasis
6	Dermatologic	7	6.7	Dermatitis; interdigital cysts; paronchyia; mites (sarcoptes)
7	Gastrointestinal	7	6.7	Colitis; foreign body obstruction; gastric dilatation/volvulus (GDV); diarrhoea; inappetance
8	Cancer	5	4.8	Type unspecified (mammary>neck=foot); sarcoma
9	Trauma	5	4.8	Dermatalogic; musculoskeletal (forelimb; forepaw); ocular
10	Respiratory	4	3.8	Kennel cough; rhinitis; pneumonia; upper respiratory tract infection
11	Aural	3	2.9	Otitis externa; excessive ear wax
12	Cardiac	3	2.9	Heart murmur (unspecified>without clinical signs)
13	Benign neoplasia	2	1.9	Lipoma
14	Dental	2	1.9	Defect other than extra teeth; dental disease
15	Endocrine	2	1.9	Hyperthyroidism; unspecified
16	Neurologic	2	1.9	IVDD (unspecified); vestibular disease
17	Other	2	1.9	Uncodeable
18	Behaviour	1	1.0	Unspecified
19	Unknown	1	1.0	Undiagnosed illness
	Total	105	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for the Leonberger breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Leonberger breed

A total of 350 forms were sent out and 109 were returned, representing 223 live dogs. This breed had a 31.1% response rate (109/350) and it represented 0.79% of all returns (109/13,741).

Mortality data

A total of 47 deaths were reported and this represents 0.30% of all deaths reported in the survey (47/15,881). The median age at death for the Leonberger breed was 7 years and 1 month (min = 5 months, max = 12 years and 8 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Leonberger breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Leonberger breed.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	21	44.7	Unspecified; lymphoma; bone (unspec.)
2	Cardiac	5	10.6	Heart failure; cardiomegaly; dilated cardiomyopathy
3	Unknown	4	8.5	
4	Dermatologic	3	6.4	Anal furunculosis
5	Neurologic	3	6.4	Seizures; spinal cord disease; unspecified
6	Respiratory	3	6.4	Laryngeal paralysis; tracheitis; pneumonia
7	Endocrine	2	4.3	Addisons disease; diabetes mellitus
8	Trauma	2	4.3	Road traffic accident; unspecified
9	Behaviour	1	2.1	Aggression
10	Collapse	1	2.1	
11	Old age	1	2.1	Old age & age combinations
12	Other	1	2.1	Unspecified
	Total	47	100.0	

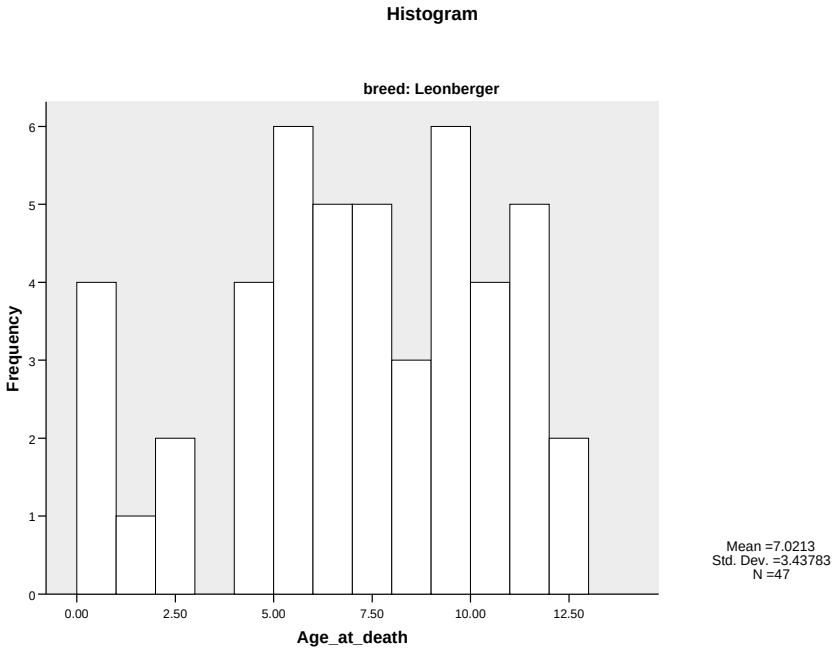


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 47 Leonberger deaths with age at death reported.

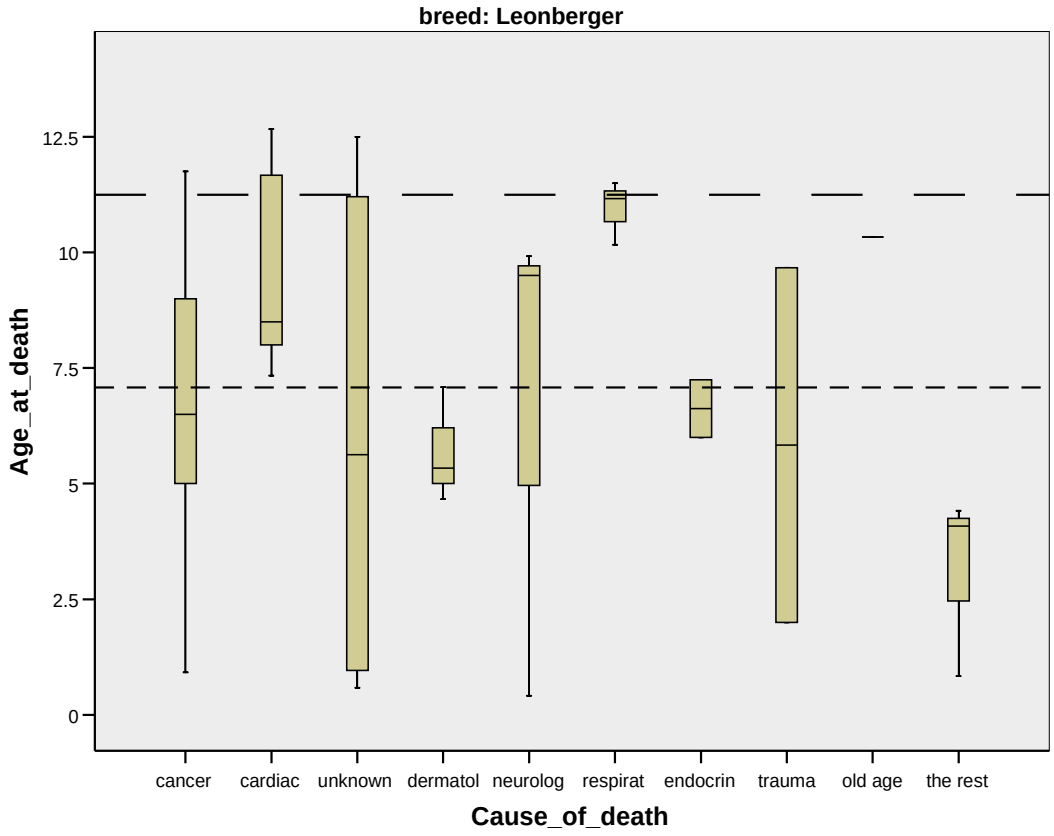


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the Leonberger breed (N=47). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the Leonberger breed. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 223 live dogs with a reported age was 3 years and 6 months (min=1 month, max=11 years and 8 months, Figure 3). Health information was reported for 223 live dogs of which 125 (56%) were healthy and 98 (44%) had at least one reported health condition, resulting in a total of 170 reported conditions with a median of 1 condition/dog (min=1, max=7).

The median current age of all healthy dogs with a reported age (N=125) was 2 years and 6 months (min=2 months, max=11 years). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=95) was 5 years and 1 month (min=1 month, max=11 years and 8 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=162) was 2 years and 6 months (min= 1 month, max= 11 years and 2 months, Figure 4). Table 3 shows the disease conditions for the Leonberger breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for the 223 Leonberger breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	80	49	129 (58%)
Male	77	17	94 (42%)
Totals	157 (70%)	66 (30%)	223 (100%)

Significantly more females were neutered (P=0.0013).

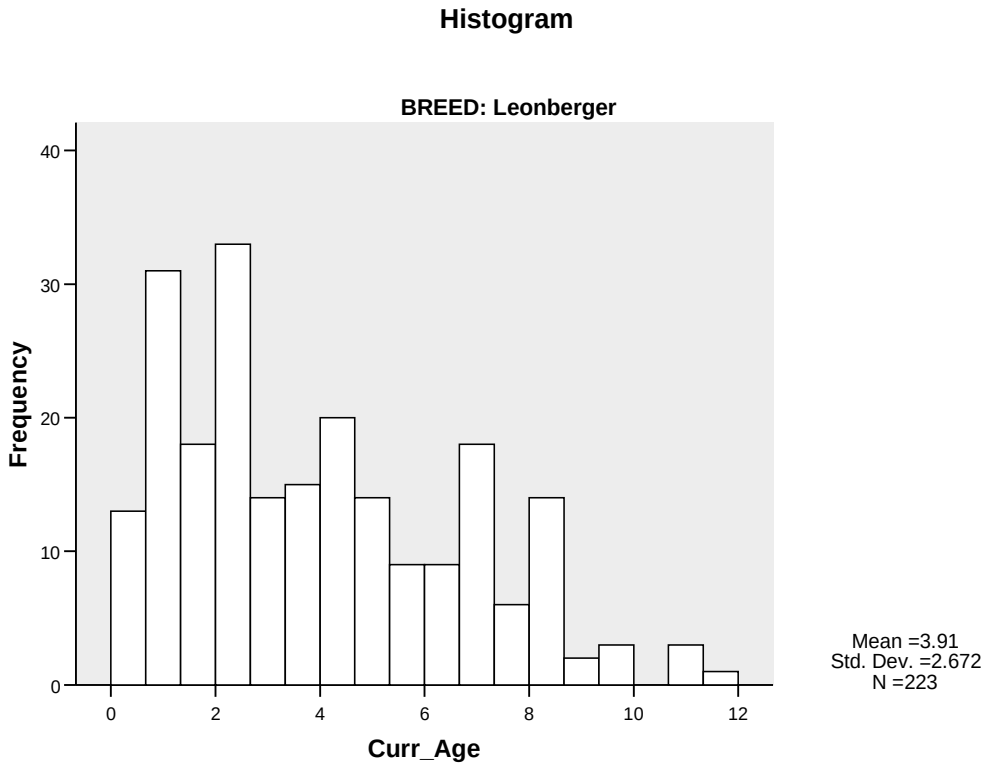


Figure 3. Histogram showing frequency of current age in years for the 223 live Leonberger breed with age reported.

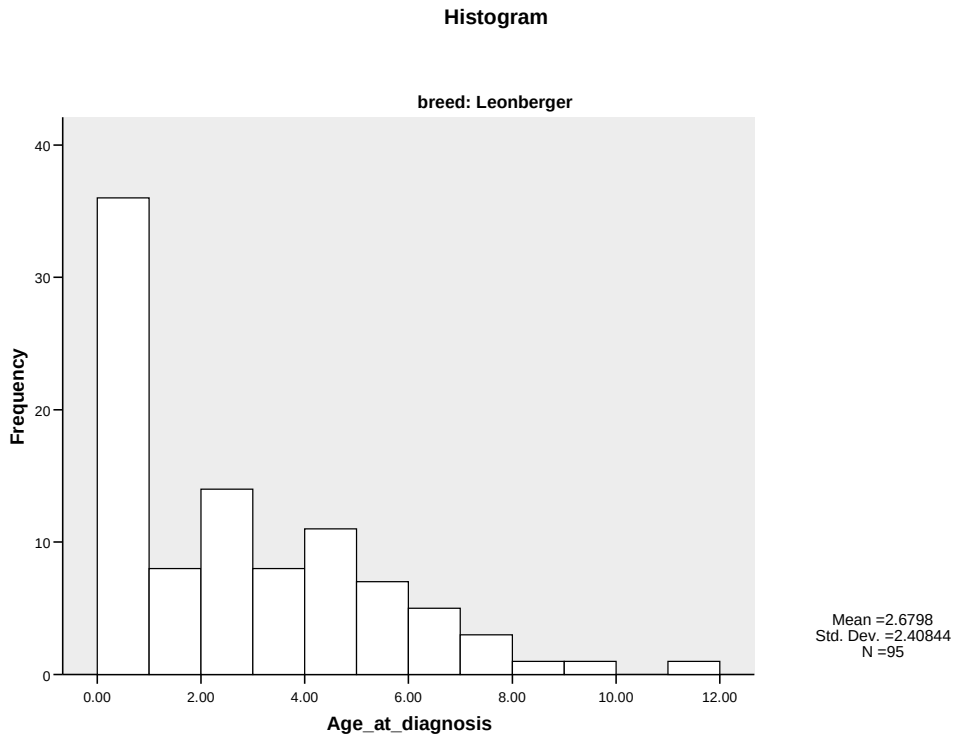


Figure 4. Histogram showing frequency of age at diagnosis for the 95 Leonberger breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

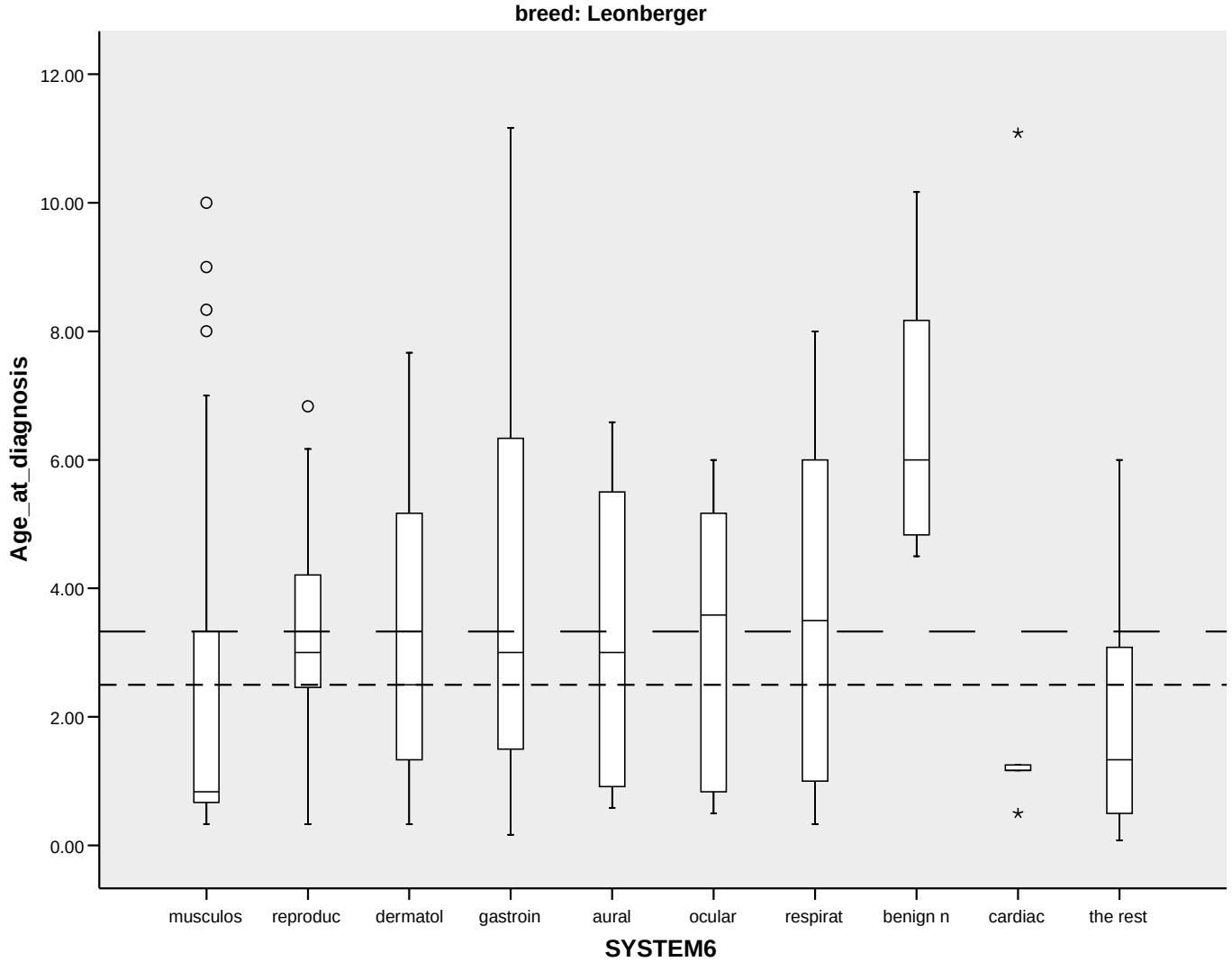


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Leonberger breed (N=95 dogs with 162 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Leonberger breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Leonberger breed.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Musculoskeletal	36	21.2	Panosteitis; CLR; arthritis (carpus>rest); CHD; lameness (unspecified)
2	Reproductive	20	11.8	Irregular heat cycles; dystochia (uterine inertia); pyometra; infertility
3	Dermatologic	19	11.2	Pyotraumatic dermatitis; mites (sarcoptes>cheyletiella); dermatitis
4	Gastrointestinal	15	8.8	Gastric dilatation/volvulus (GDV); colitis; diarrhoea; vomiting; campylobacter; inappetance
5	Aural	13	7.6	Otitis externa; ear mites
6	Ocular	13	7.6	Cataracts (unspecified>congenital); entropion
7	Immune mediated	10	5.9	Gluten-sensitive enteropathy; flea allergy; food allergy; atopy; bee sting allergy
8	Respiratory	9	5.3	Laryngeal paralysis; kennel cough; bronchitis; laryngitis
9	Trauma	8	4.7	Dermatalogic; ocular (eyelid; eyeball); musculoskeletal (hindlimb)
10	Benign neoplasia	5	2.9	Lipoma
11	Cardiac	5	2.9	Heart murmur (unspecified>grade 3); cardiomyopathy (unspecified); pulmonic stenosis
12	Dental	3	1.8	Retained puppy teeth; extra teeth
13	Neurologic	3	1.8	Polyneuropathy; seizures; vestibular disease
14	Unknown	3	1.8	Undiagnosed illness
15	Endocrine	2	1.2	Addisons disease; hypothyroidism
16	Urologic	2	1.2	Cystitis
17	Behaviour	1	0.6	Unspecified
18	Cancer	1	0.6	Lymphoma (thorax)
19	Haematopoietic	1	0.6	Platelet disorder (unspecified)
20	Hepatic	1	0.6	Hepatitis
	Total	170	100.0	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for the Lhasa Apso breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Lhasa Apso breed

A total of 225 forms were sent out and 52 were returned, representing 243 live dogs. This breed had a 23.1% response rate (52/225) and it represented 0.38% of all returns (52/13,741).

Mortality data

A total of 84 deaths were reported and this represents 0.53% of all deaths reported in the survey (84/15,881). The median age at death for the Lhasa Apso breed was 14 years and 4 months (min = 1 year, max = 18 years and 5 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Lhasa Apso breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Lhasa Apso breed.

Cause of death		N	%	Most common specific causes in descending order
1	Old age	27	32.1	Old age & age combinations
2	Cancer	15	17.9	Type unspecified (liver, unspecified); brain tumour
3	Urologic	6	7.1	Chronic kidney failure
4	Cerebral vascular	5	6.0	Stroke or cerebral vascular accident
5	Senility	5	6.0	
6	Combinations	4	4.8	
7	Cardiac	3	3.6	Heart attack; heart failure; cardiomegaly
8	Hepatic	3	3.6	Liver failure (chronic > acute)
9	Gastrointestinal	2	2.4	Haemorrhagic gastroenteritis; unspecified
10	Musculoskeletal	2	2.4	Fractured jaw
11	Neurologic	2	2.4	Seizures
12	Perioperative	2	2.4	
13	Trauma	2	2.4	Road traffic accident; unspecified
14	Collapse	1	1.2	
15	Drowning	1	1.2	
16	Endocrine	1	1.2	Cushings disease
17	Poisoning	1	1.2	
18	Systemic	1	1.2	Allergy to insect bite or sting or snake bite
19	Unknown	1	1.2	
	Total	84	100.0	

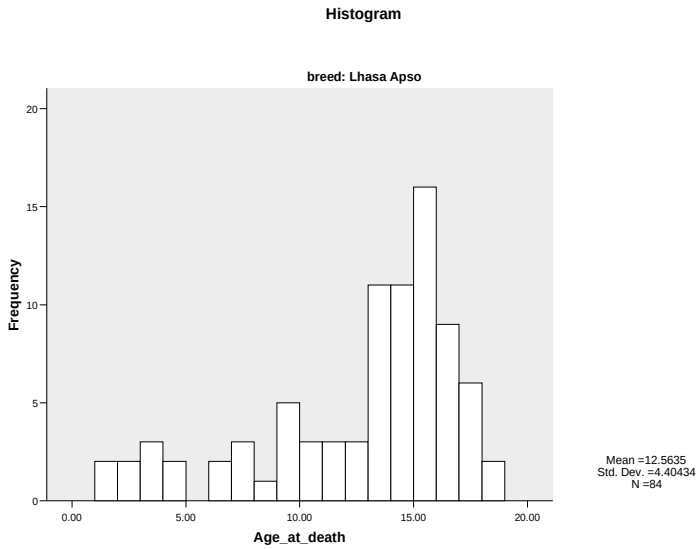


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 84 Lhasa Apso deaths with age at death reported.

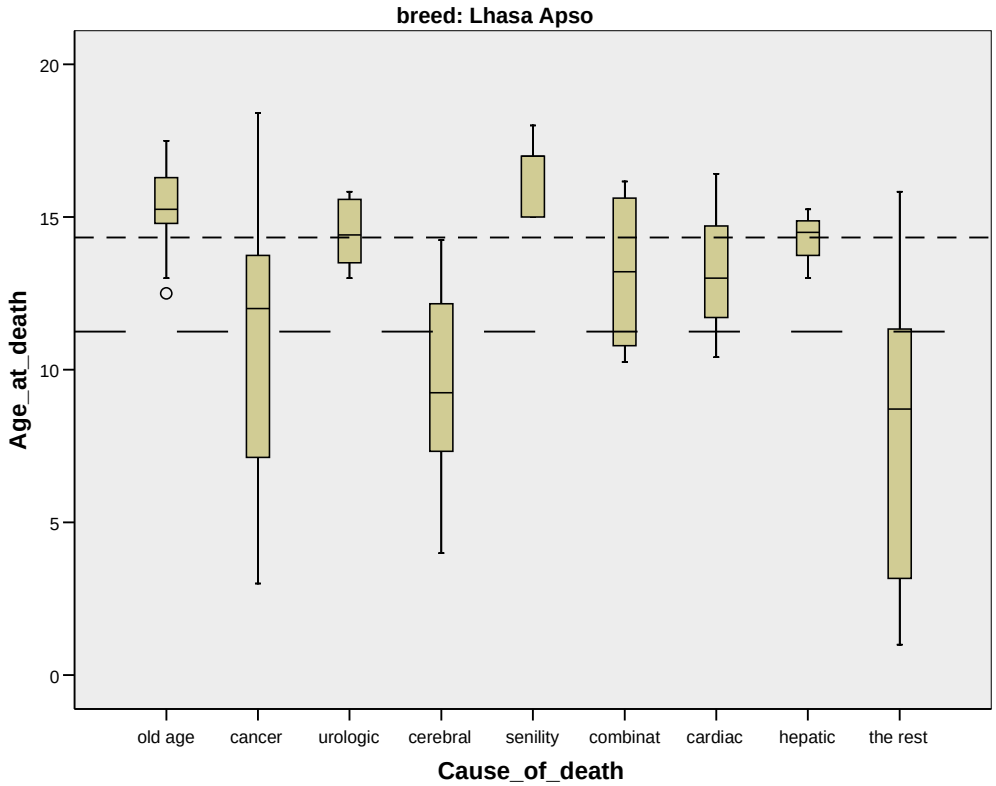


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the Lhasa Apso breed (N=84). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the Lhasa Apso breed. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 243 live dogs with a reported age was 5 years (min=2 months, max=17 years and 7 months, Figure 3). Health information was reported for 243 live dogs of which 167 (69%) were healthy and 76 (31%) had at least one reported health condition, resulting in a total of 117 reported conditions with a median of 1 condition/dog (min=1, max=4).

The median current age of all healthy dogs with a reported age (N=167) was 4 years (min=2 months, max=17 years and 7 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=68) was 7 years and 9 months (min=5 months, max=17 years and 5 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=107) was 5 years and 2 months (min= 3 months, max= 14 years and 1 month, Figure 4). Table 3 shows the disease conditions for the Lhasa Apso breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for the 239 Lhasa Apso breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	115	44	159 (67%)
Male	65	15	80 (33%)
Totals	180 (75%)	59 (25%)	239 (100%)

There was no association between gender and neuter status (P=0.1311).

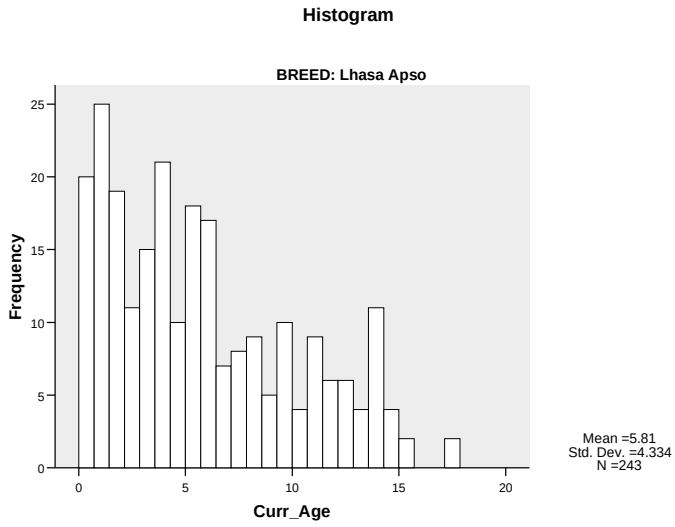


Figure 3. Histogram showing frequency of current age in years for the 243 live Lhasa Apso breed with age reported.

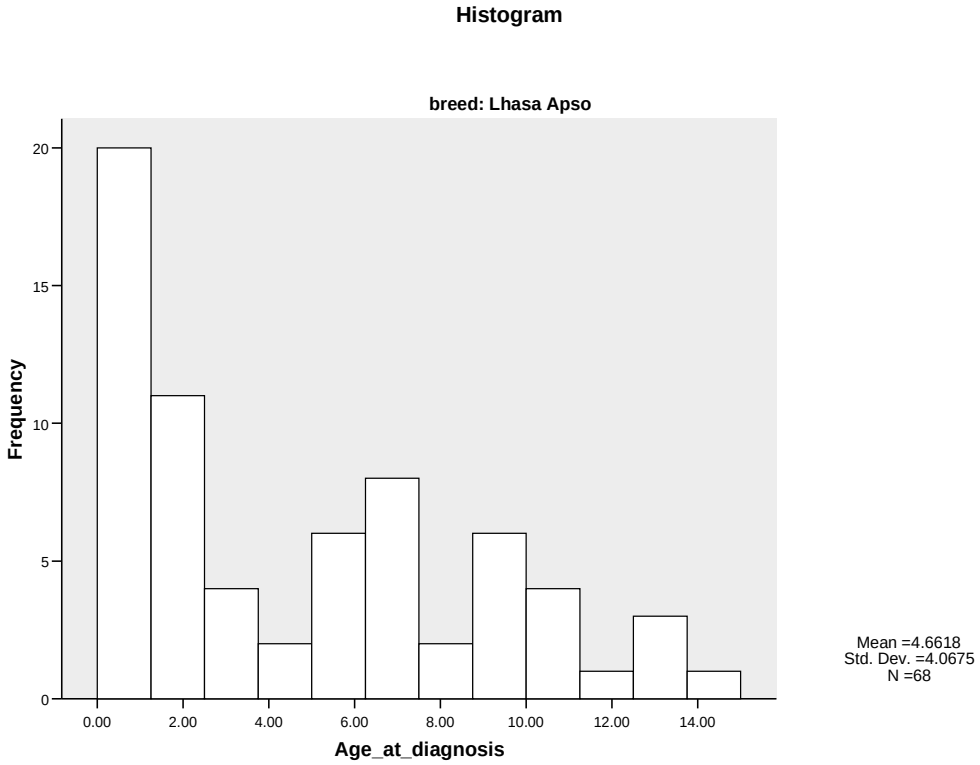


Figure 4. Histogram showing frequency of age at diagnosis for the 68 Lhasa Apso breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

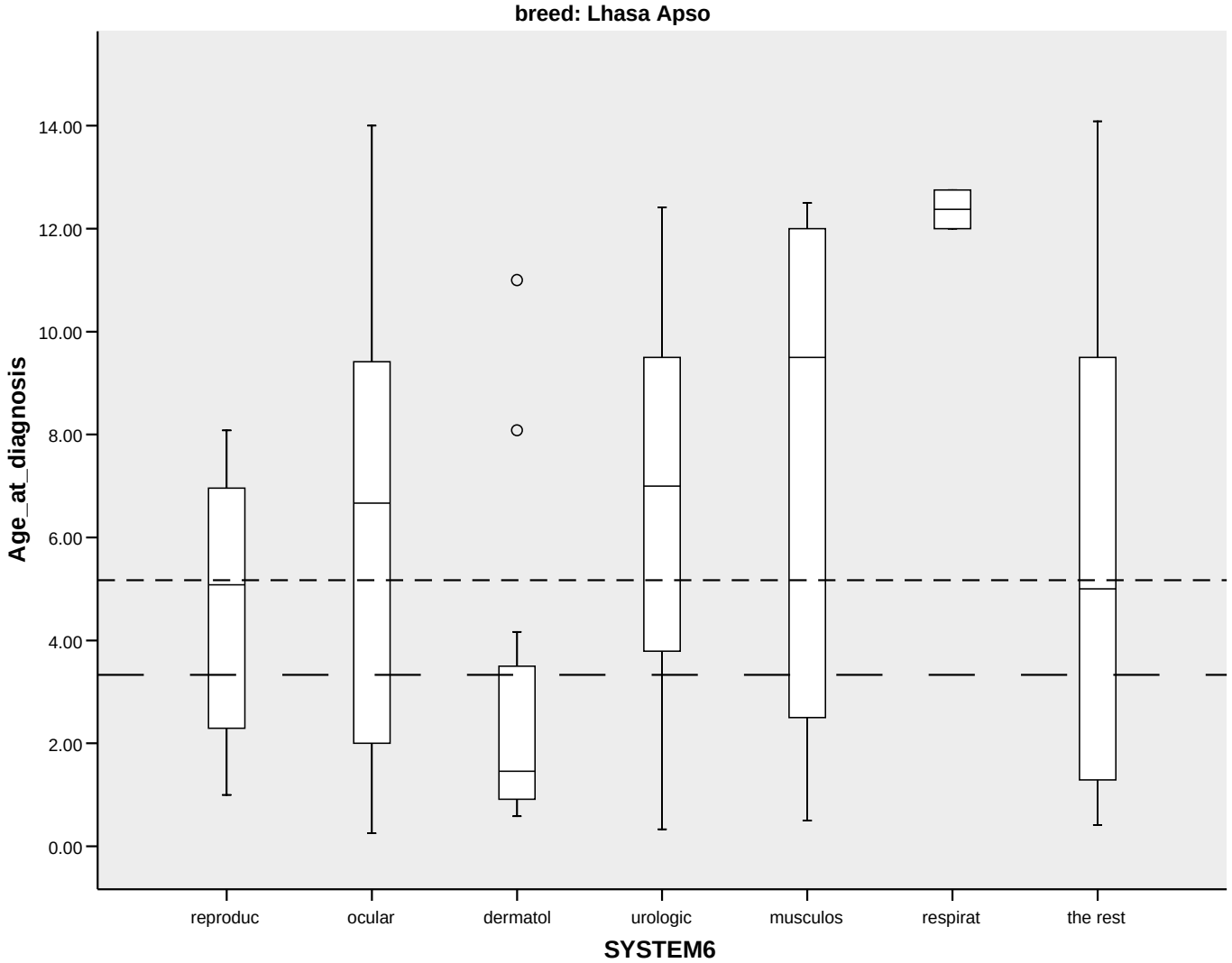


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Lhasa Apso breed (N=68 dogs with 107 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Lhasa Apso breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Lhasa Apso breed.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Reproductive	23	19.7	Pyometra; dystochia (uterine inertia>physical blockage); metritis; irregular heat cycles
2	Ocular	20	17.1	Cherry eye; cataracts; corneal ulcer
3	Dermatologic	18	15.4	Fading nose pigment; mites (cheyletiella); dermatitis; sebaceous adenitis
4	Urologic	11	9.4	Cystouroliths (unspecified>struvite); cystitis; haematuria
5	Musculoskeletal	10	8.5	Arthritis (carpus; forelimb; legs); CHD; stiff joints; CLR; brachygnathism; prognathism
6	Dental	8	6.8	Retained puppy teeth; dental disease
7	Endocrine	3	2.6	Addison's disease; diabetes mellitus
8	Gastrointestinal	3	2.6	Colitis; foreign body obstruction; megaoesophagus
9	Immune mediated	3	2.6	Flea allergy; gluten-sensitive enteropathy
10	Neurologic	3	2.6	IVDD (unspecified; thoracic); seizures
11	Trauma	3	2.6	Hind limb; spine
12	Benign neoplasia	2	1.7	Lipoma
13	Cancer	2	1.7	Lymphoma; mast cell tumour (MCT) (skin)
14	Respiratory	2	1.7	Bronchitis; noisy breathing
15	Aural	1	0.9	Otitis externa
16	Behaviour	1	0.9	Unspecified
17	Cardiac	1	0.9	Heart murmur (without clinical signs)
18	Cardiopulmonary	1	0.9	Coughing
19	Cerebrovascular	1	0.9	Stroke or cerebral vascular accident
20	Other	1	0.9	Uncodeable
	Total	117	100.0	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for the Lowchen breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Lowchen breed

A total of 75 forms were sent out and 12 were returned, representing 62 live dogs. This breed had a 16.0% response rate (12/75) and it represented 0.09% of all returns (12/13,741).

Mortality data

A total of 9 deaths were reported and this represents 0.06% of all deaths reported in the survey (9/15,881). The median age at death for the Lowchen breed was 10 years (min = 1 year and 1 month, max = 16 years and 6 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Lowchen breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Lowchen breed.

Cause of death		N	%	Most common specific causes in descending order
1	Cardiac	2	22.2	Cardiomegaly; defect (unspecified)
2	Old age	2	22.2	Old age & age combinations
3	Behaviour	1	11.1	Aggression
4	Combinations	1	11.1	Multiple organ failure
5	Gastrointestinal	1	11.1	Unspecified
6	Perioperative	1	11.1	
7	Reproductive	1	11.1	Pyometra
	Total	9	100.0	

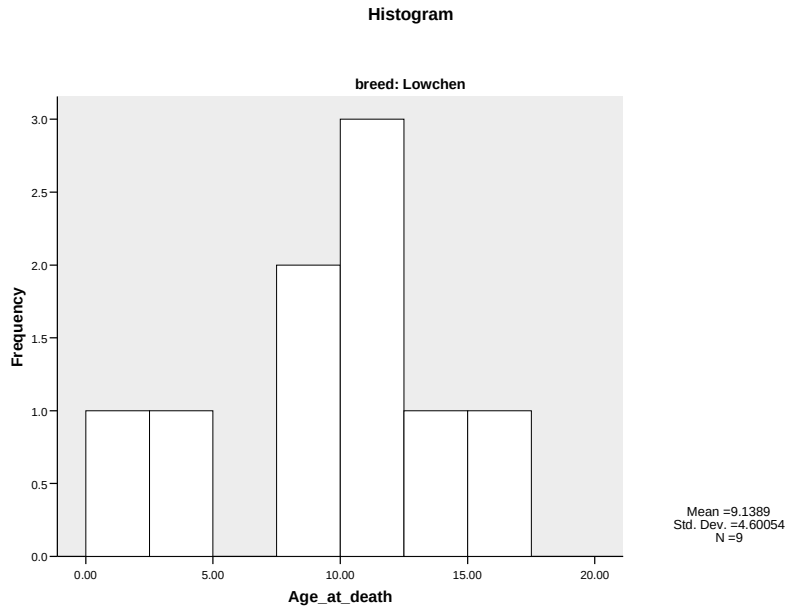


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 9 Lowchen deaths with age at death reported.

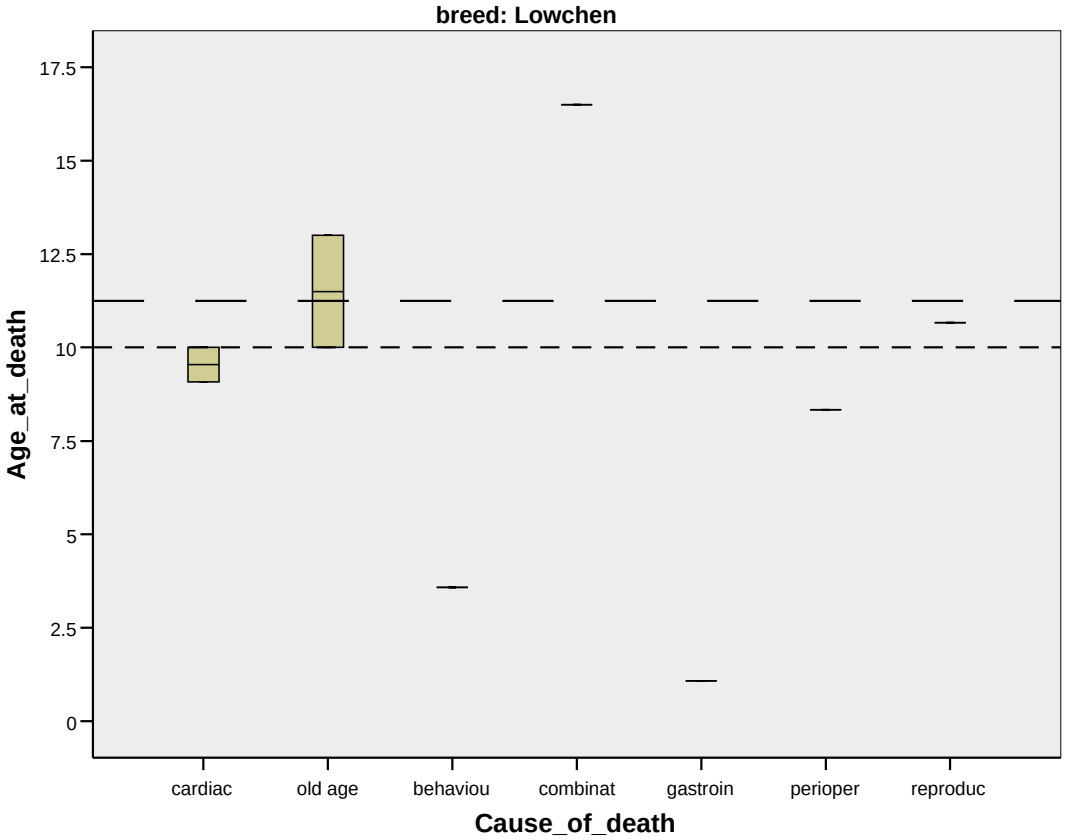


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the Lowchen breed (N=9). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the Lowchen breed. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 62 live dogs with a reported age was 3 years (min=3 months, max=15 years and 10 months, Figure 3). Health information was reported for 62 live dogs of which 42 (68%) were healthy and 20 (32%) had at least one reported health condition, resulting in a total of 30 reported conditions with a median of 1 condition/dog (min=1, max=3).

The median current age of all healthy dogs with a reported age (N=42) was 1 year and 11 months (min=3 months, max=12 years and 8 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=16) was 6 years and 3 months (min=1 year and 2 months, max=15 years and 10 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=26) was 3 years and 8 months (min= 2 months, max= 14 years and 6 months, Figure 4). Table 3 shows the disease conditions for the Lowchen breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for the 62 Lowchen breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	36	10	46 (74%)
Male	16	0	16 (26%)
Totals	52 (84%)	10 (16%)	62 (100%)

Significantly more females were neutered (P=0.0417).

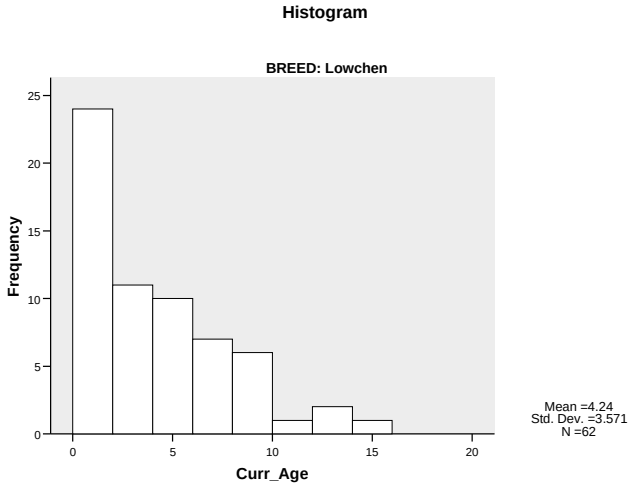


Figure 3. Histogram showing frequency of current age in years for the 62 live the Lowchen breed with age reported.

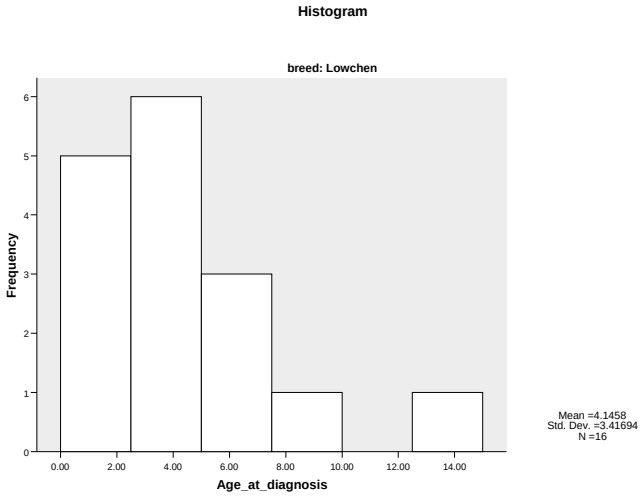


Figure 4. Histogram showing frequency of age at diagnosis for the 16 Lowchen breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

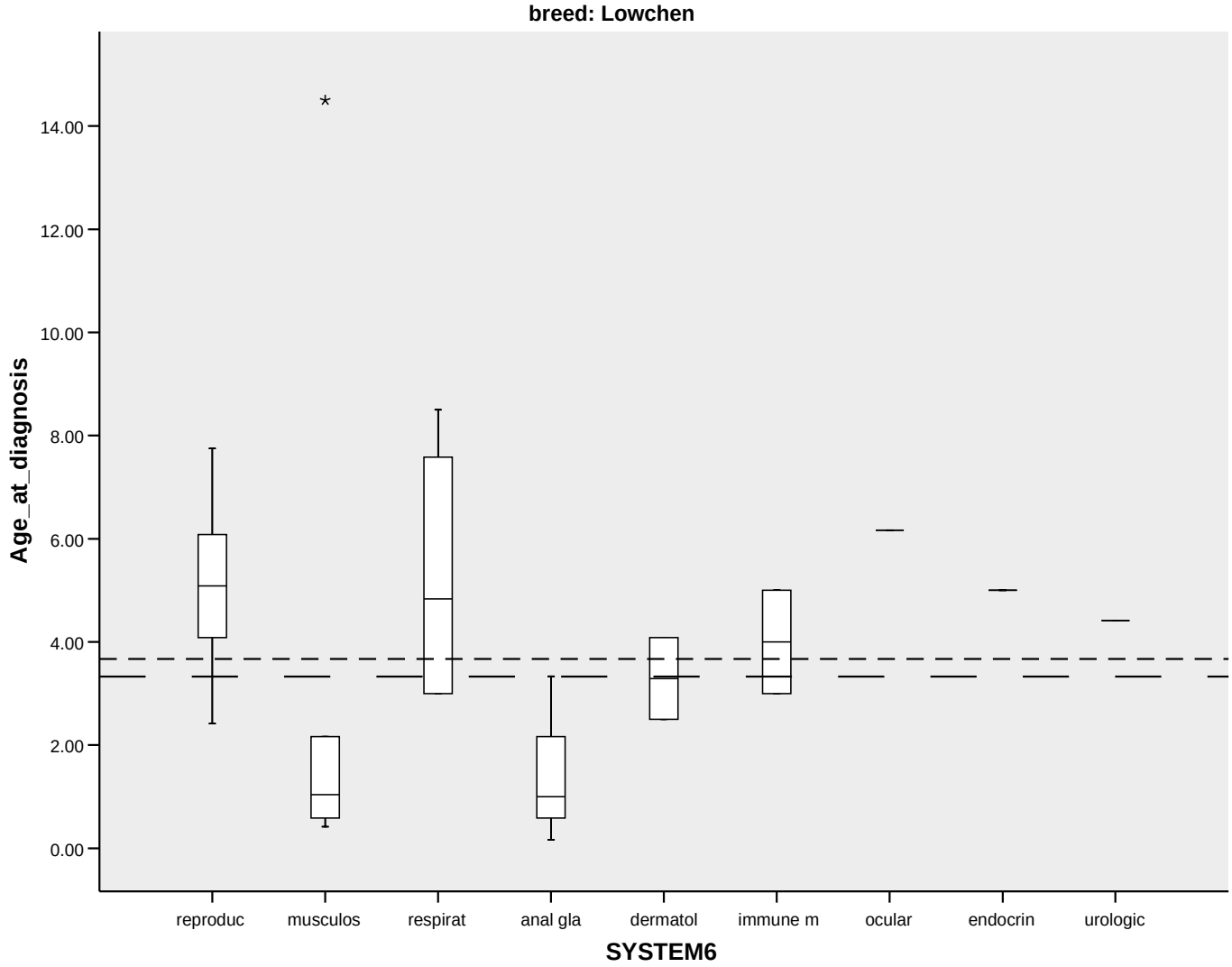


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Lowchen breed (N=16 dogs with 26 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Lowchen breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Lowchen breed.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Reproductive	8	26.7	Infertility; pyometra; agalactia; mastitis; spontaneous abortion; vaginitis
2	Musculoskeletal	6	20.0	Patellar luxation; avascular necrosis FH; bone malformation (unspecified)
3	Respiratory	4	13.3	Kennel cough; coughing; other (unspecified)
4	Anal gland	3	10.0	Anal sacculitis
5	Dermatologic	3	10.0	Alopecia; fading nose pigment
6	Immune mediated	2	6.7	Flea allergy; gluten-sensitive enteropathy
7	Ocular	2	6.7	Cataracts; corneal ulcer
8	Endocrine	1	3.3	Cushing's disease
9	Urologic	1	3.3	Cystouroliths (struvite)
	Total	30	100.0	

Avascular necrosis FH=femoral head or Legg Calve Perthes disease

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for the Maltese breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Maltese breed

A total of 247 forms were sent out and 37 were returned, representing 124 live dogs. This breed had a 15.0% response rate (37/247) and it represented 0.27% of all returns (37/13,741).

Mortality data

A total of 42 deaths were reported and this represents 0.26% of all deaths reported in the survey (42/15,881). The median age at death for the Maltese breed was 12 years and 3 months (min = 1 year and 1 month, max = 19 years and 2 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Maltese breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Maltese breed.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	8	19.0	Brain tumour; unspecifief
2	Old age	8	19.0	Old age
3	Cardiac	7	16.7	Heart attack; congenital heart defect; heart failure
4	Urologic	4	9.5	Chronic kidney failure
5	Cerebral vascular	3	7.1	Stroke or cerebral vascular accident
6	Combinations	3	7.1	
7	Neurologic	3	7.1	Seizures; spinal paralysis
8	Hepatic	2	4.8	Chronic liver failure
9	Trauma	2	4.8	Road traffic accident; unspecified
10	Gastrointestinal	1	2.4	Twisted bowel
11	Other	1	2.4	Uncodeable
	Total	42	100.0	

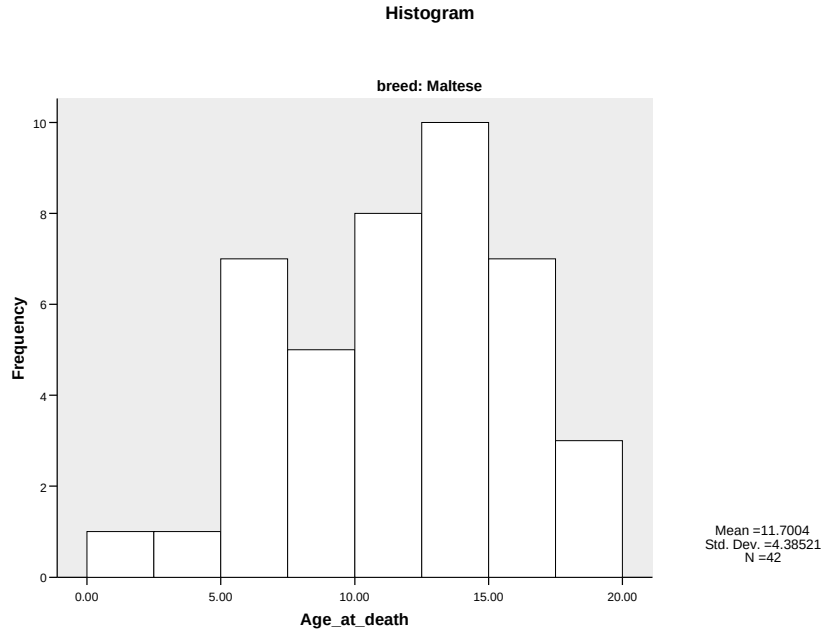


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 42 Maltese deaths with age at death reported.

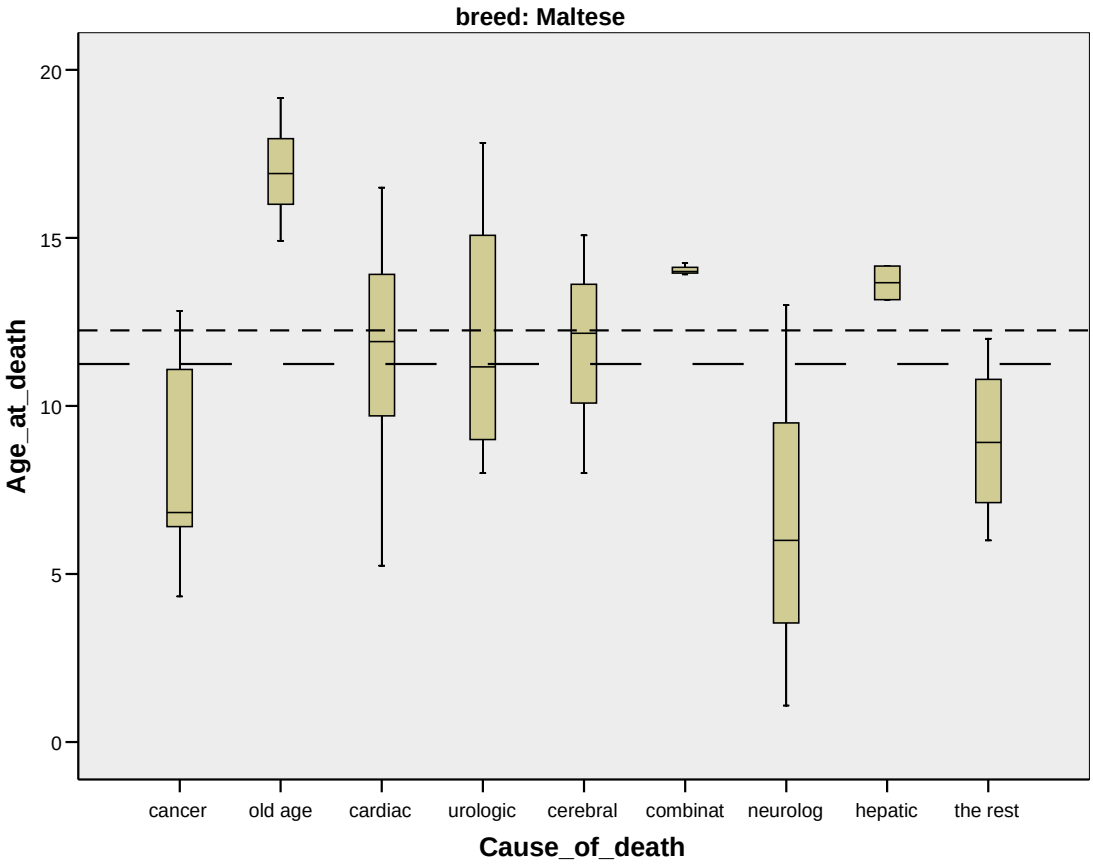


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the Maltese breed (N=42). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the Maltese breed. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 124 live dogs with a reported age was 4 years and 7 months (min=6 months, max=16 years and 6 months, Figure 3). Health information was reported for 124 live dogs of which 69 (56%) were healthy and 55 (44%) had at least one reported health condition, resulting in a total of 88 reported conditions with a median of 1 condition/dog (min=1, max=7).

The median current age of all healthy dogs with a reported age (N=69) was 3 years and 6 months (min=6 months, max=16 years and 6 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=51) was 6 years and 1 month (min=8 months, max=15 years and 2 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=83) was 3 years and 4 months (min= 2 months, max= 14 years and 9 months, Figure 4). Table 3 shows the disease conditions for the Maltese breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for the124 Maltese breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	57	22	79 (64%)
Male	34	11	45 (36%)
Totals	91 (73%)	33 (27%)	124 (100%)

There was no association between gender and neuter status (P=0.6801).

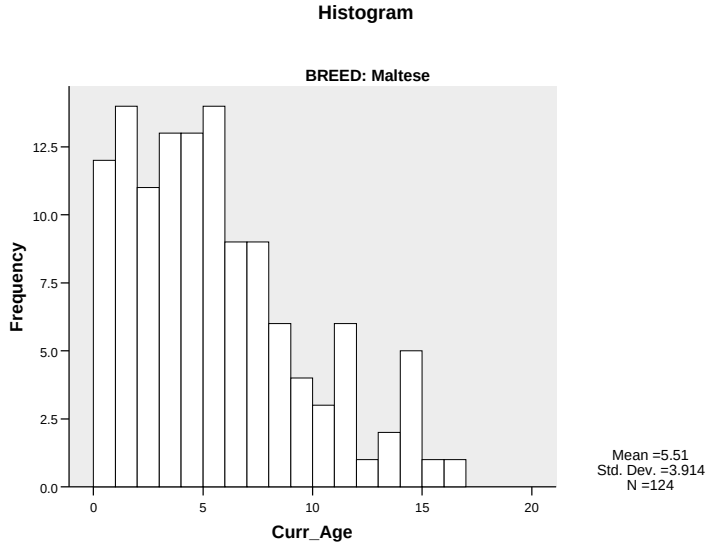


Figure 3. Histogram showing frequency of current age in years for the 124 live Maltese breed with age reported.

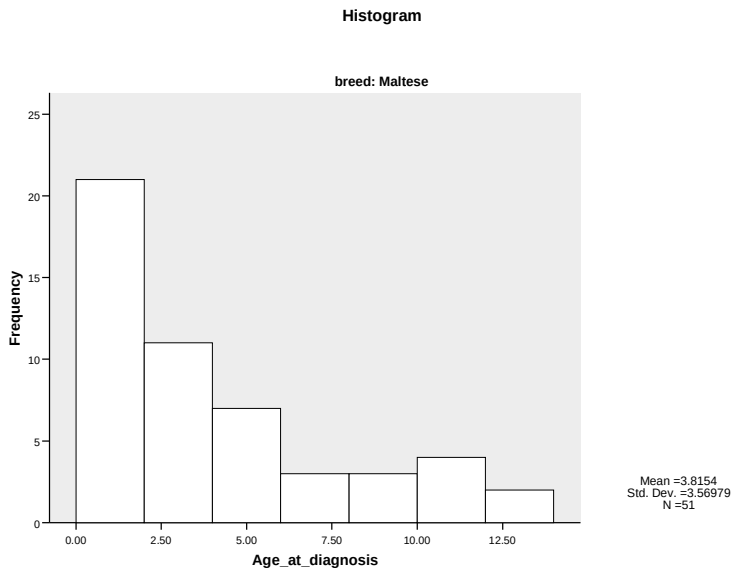


Figure 4. Histogram showing frequency of age at diagnosis for the 51 Maltese breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

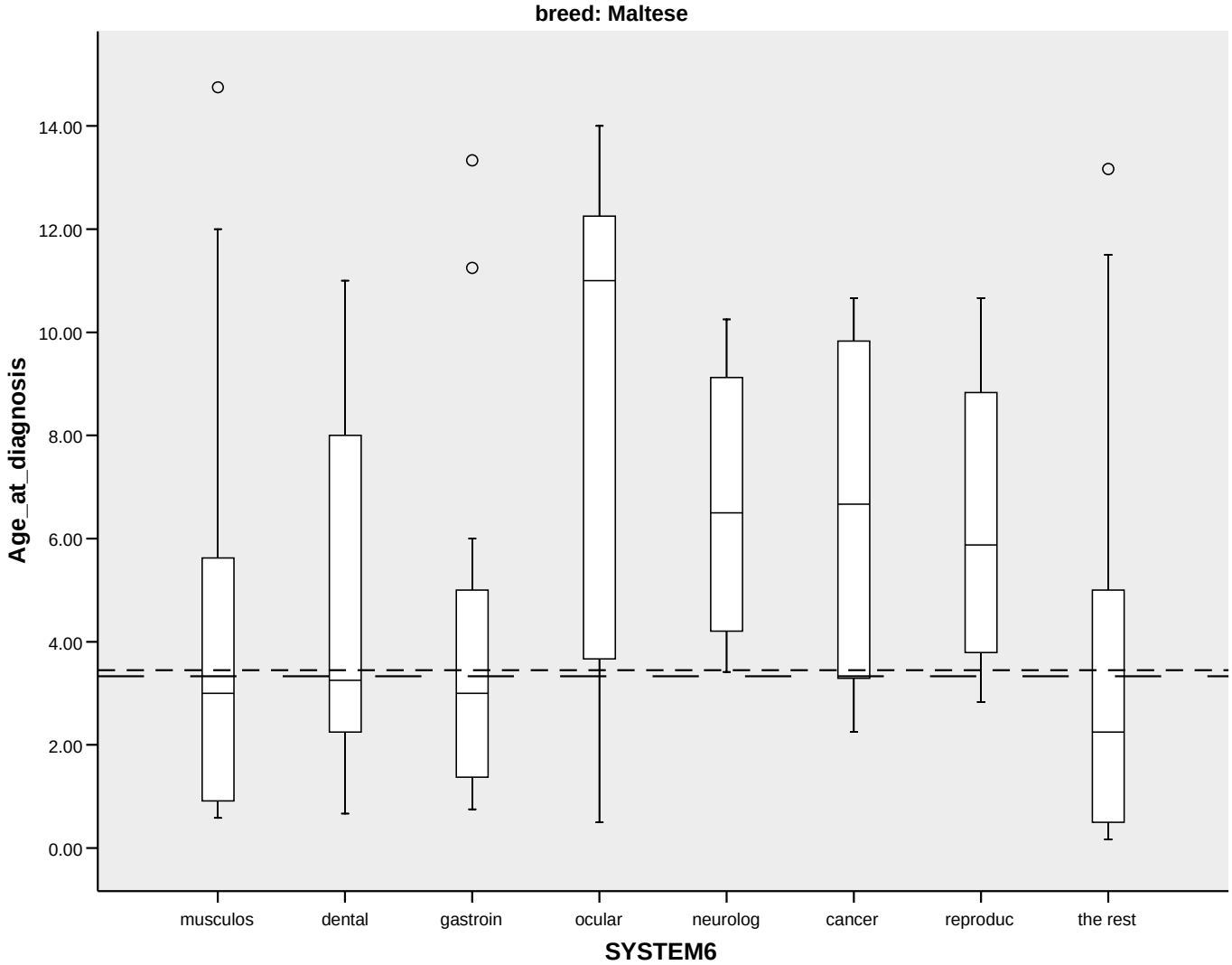


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Maltese breed (N=51 dogs with 83 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Maltese breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Maltese breed.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Musculoskeletal	12	13.6	Patellar luxation; arthritis (hips); avascular necrosis FH; spondylitis; prognathism
2	Dental	11	12.5	Dental disease; retained puppy teeth
3	Gastrointestinal	11	12.5	Colitis; constipation; diarrhoea; E. coli infection; IBD; pancreatitis; weight loss
4	Ocular	9	10.2	Cataracts; epiphora; blocked tear duct; conjunctivitis; eye infection; PRA; corneal ulcer
5	Dermatologic	7	8.0	Dermatitis; alopecia; fading nose pigment; deformed claws
6	Neurologic	5	5.7	Seizures; granulomatous meningoencephalitis (GME)
7	Cancer	4	4.5	Unspecified; mast cell tumour (MCT); squamous cell carcinoma (SCC)
8	Reproductive	4	4.5	Dystochia (uterine inertia=physical blockage); pyometra; enlarged prostate
9	Respiratory	4	4.5	Other (unspecified)
10	Other	4	4.5	Uncodeable
11	Hepatic	3	3.4	Cholangiohepatitis; enlarged liver
12	Immune mediated	3	3.4	Food allergy; other allergies (unspecified)
13	Unknown	3	3.4	Undiagnosed illness
14	Anal gland	2	2.3	Anal sacculitis
15	Aural	2	2.3	Otitis externa; ear mites
16	Trauma	2	2.3	Ocular (eyeball); urologic (bladder)
17	Cardiac	1	1.1	Heart murmur (unspecified)
18	Endocrine	1	1.1	Hypothyroidism
	Total	88	100.0	

avascular necrosis FH=femoral head or Legg Calve Perthes disease

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for Manchester Terriers

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Manchester Terriers

A total of 178 forms were sent out and 59 were returned, representing 117 live dogs. This breed had a 33.1% response rate (59/178) and it represented 0.43% of all returns (59/13,741).

Mortality data

A total of 32 deaths were reported and this represents 0.20% of all deaths reported in the survey (32/15,881). The median age at death for Manchester Terriers was 12 years and 10 months (min = 11 months, max = 17 years and 6 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Manchester Terriers. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Manchester Terriers.

Cause of death		N	%	Most common specific causes in descending order
1	Old age	10	31.3	Old age & old age combinations
2	Cancer	7	21.9	Tupe unspecified (liver, unspecified); lymphoma
3	Cerebral vascular	3	9.4	Stroke or cerebral vascular accident
4	Gastrointestinal	3	9.4	Gastric dilatation/volvulus (GDV); pancreatitis; unspecified
5	Urologic	3	9.4	Chronic kidney failure
6	Trauma	2	6.3	Road traffic accident
7	Cardiac	1	3.1	Heart defect (unspecified)
8	Neurologic	1	3.1	Seizures
9	Other	1	3.1	Uncodeable
10	Unknown	1	3.1	
	Total	32	100.0	

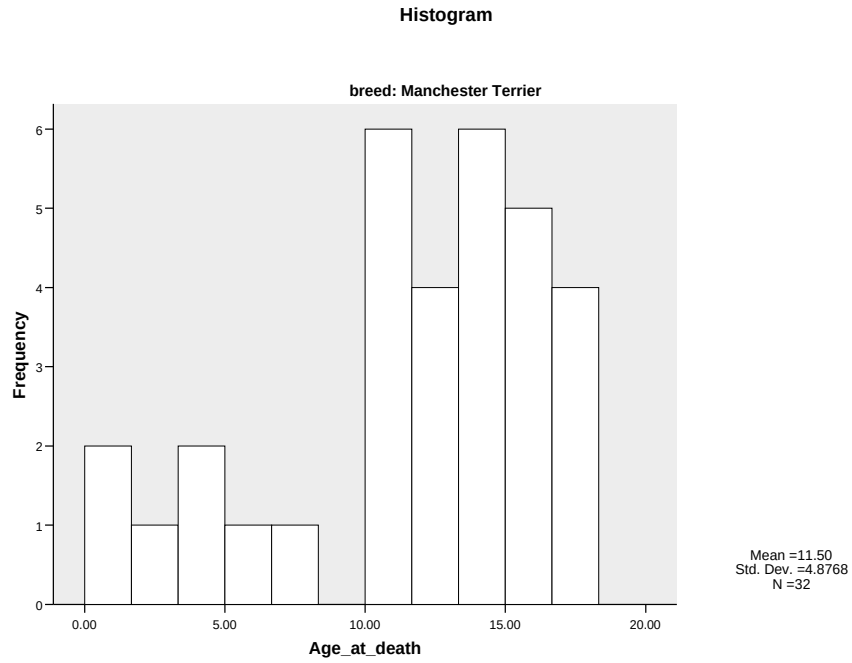


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 32 Manchester Terrier deaths with age at death reported.

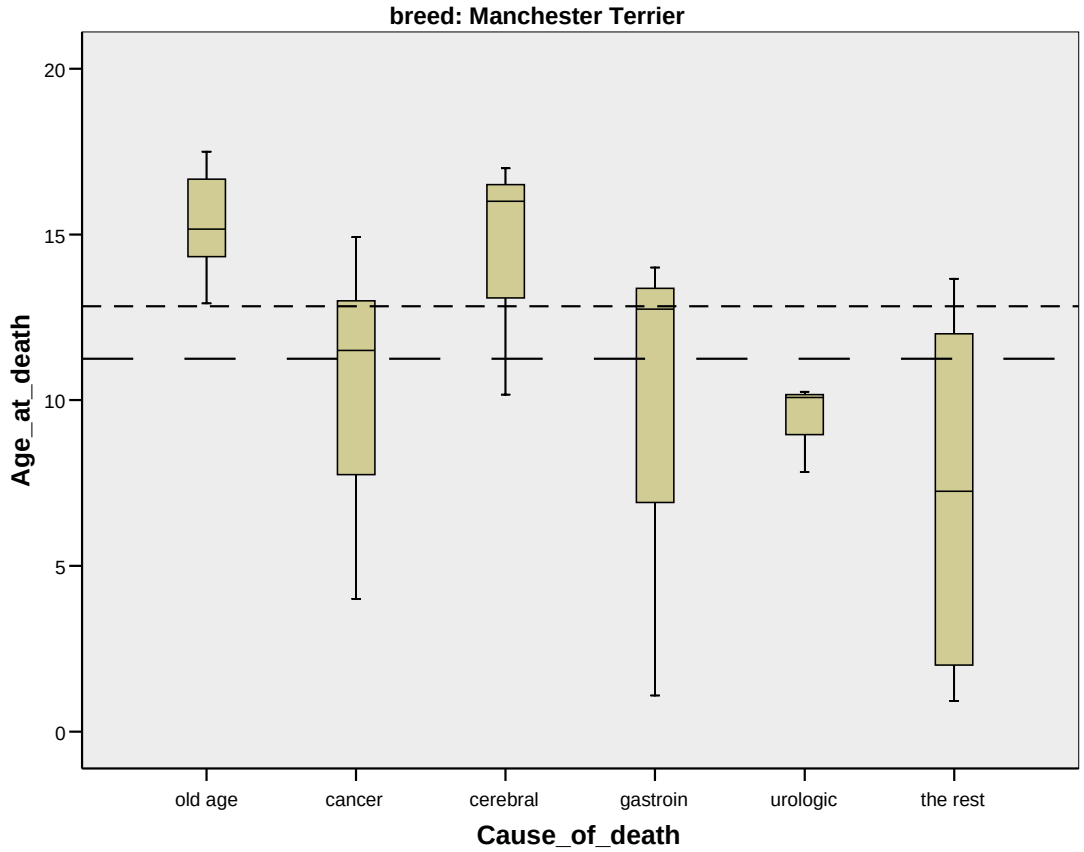


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Manchester Terriers (N=32). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Manchester Terriers. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 117 live dogs with a reported age was 4 years and 7 months (min=3 months, max=16 years and 6 months, Figure 3). Health information was reported for 117 live dogs of which 78 (67%) were healthy and 39 (33%) had at least one reported health condition, resulting in a total of 69 reported conditions with a median of 2 conditions/dog (min=1, max=5).

The median current age of all healthy dogs with a reported age (N=78) was 3 years and 8 months (min=3 months, max=14 years and 6 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=35) was 6 years and 5 months (min=1 year and 5 months, max=16 years and 6 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=62) was 3 years and 6 months (min= 6 months, max= 15 years and 11 months, Figure 4). Table 3 shows the disease conditions for Manchester Terriers. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 117 Manchester Terriers with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	47	23	70 (60%)
Male	37	10	47 (40%)
Totals	84 (72%)	33 (28%)	117 (100%)

There was no association between gender and neuter status (P=0.1724).

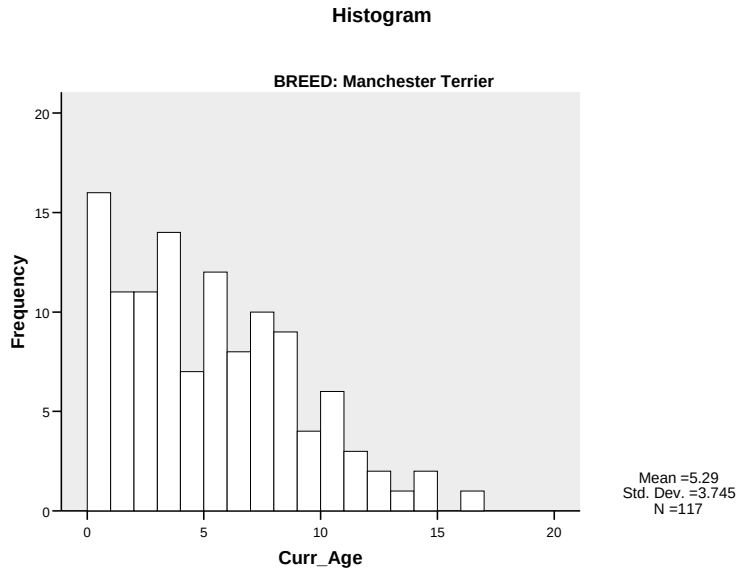


Figure 3. Histogram showing frequency of current age in years for the 117 live Manchester Terriers with age reported.

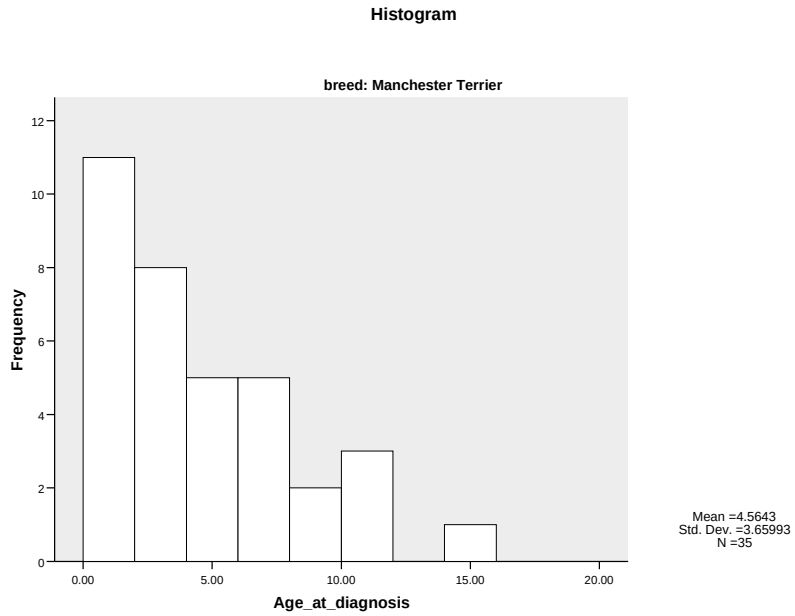


Figure 4. Histogram showing frequency of age at diagnosis for the 35 Manchester Terriers with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

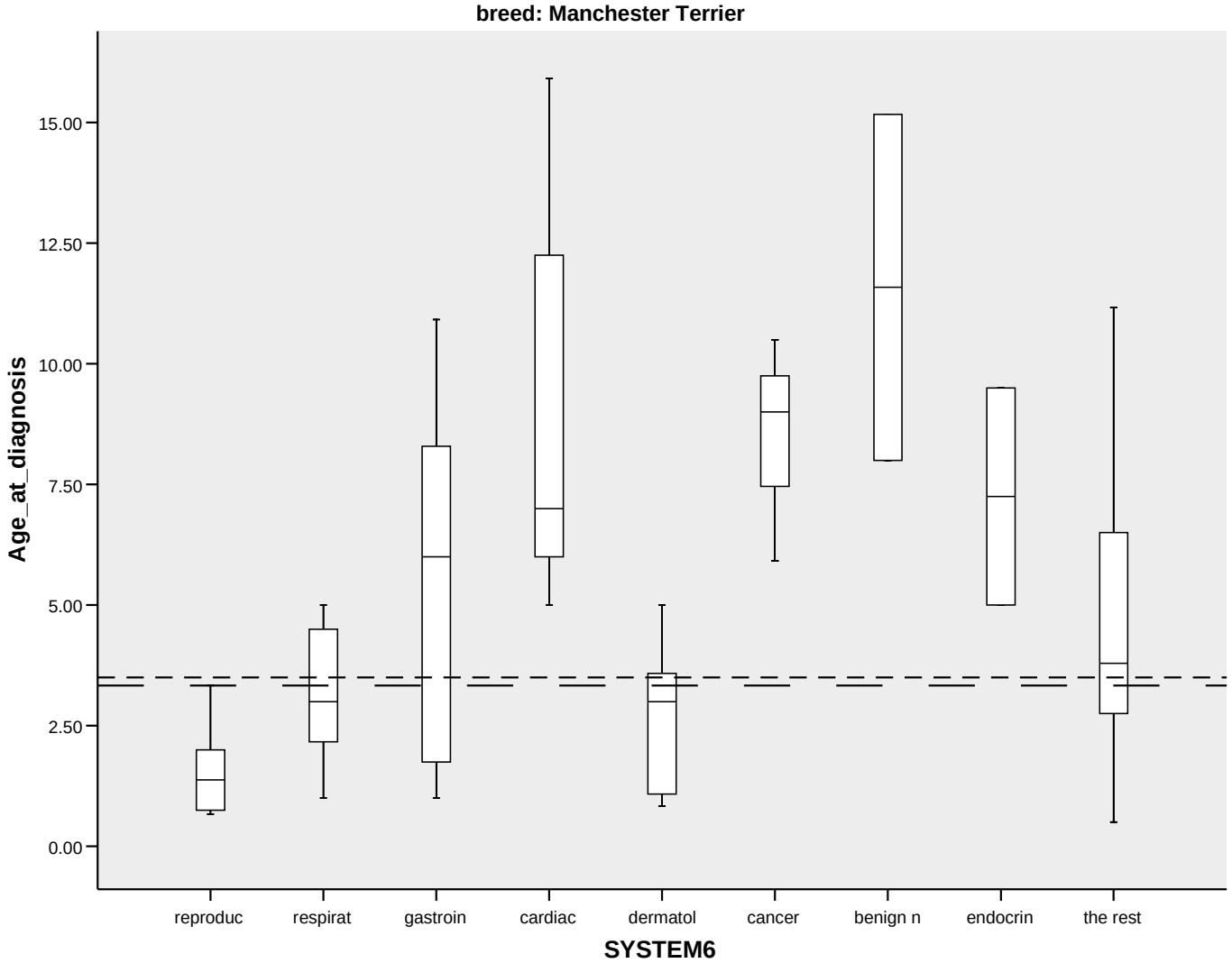


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Manchester Terriers (N=35 dogs with 62 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Manchester Terriers. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Manchester Terriers.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Reproductive	17	24.6	False pregnancy; irregular heat cycles; eclampsia; uterine inertia; pyometra; prostatic cyst
2	Respiratory	9	13.0	Kennel cough
3	Gastrointestinal	8	11.6	Vomiting & diarrhoea; GDV; campylobacter; colitis; gastroenteritis (acute); diarrhoea
4	Cardiac	5	7.2	Heart murmur (grade 1=without clinical signs>unspecified)
5	Dermatologic	5	7.2	Ringworm; follicular dysplasia; mites (demodex); other (unspecified)
6	Anal gland	4	5.8	Anal sacculitis
7	Immune mediated	4	5.8	Gluten-sensitive enteropathy; atopy
8	Cancer	3	4.3	Unspecified (oral); mast cell tumour (MCT) (flank)
9	Benign neoplasia	2	2.9	Lipoma
10	Endocrine	2	2.9	Addisons disease; hypothyroidism
11	Musculoskeletal	2	2.9	Lameness (hind limb); patellar luxation
12	Trauma	2	2.9	Skin; spinal cord
13	Urologic	2	2.9	Cystitis; incontinence after spay
14	Cerebrovascular	1	1.4	Stroke or cerebral vascular accident
15	Dental	1	1.4	Dental disease
16	Haematopoietic	1	1.4	Von Willebrands disease (VWD)
17	Ocular	1	1.4	Conjunctivitis
	Total	69	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for Maremma Sheepdogs

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Maremma Sheepdogs

A total of 64 forms were sent out and 13 were returned, representing 35 live dogs. This breed had a 20.3% response rate (13/64) and it represented 0.09% of all returns (13/13,741).

Mortality data

A total of 19 deaths were reported and this represents 0.12% of all deaths reported in the survey (19/15,881). The median age at death for Maremma Sheepdogs was 10 years (min = 1 year and 2 months, max = 14 years and 6 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Maremma Sheepdogs. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Maremma Sheepdogs.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	8	42.1	Ttype unspecified (liver, unspecified)
2	Cardiac	4	21.1	Heart failure; heart attack; cardiomegaly
3	Combinations	1	5.3	
4	Immune mediated	1	5.3	Unspecified
5	Neurologic	1	5.3	Seizures
6	Old age	1	5.3	Old age
7	Respiratory	1	5.3	Laryngeal paralysis
8	Sudden death	1	5.3	
9	Unknown	1	5.3	
	Total	19	100.0	

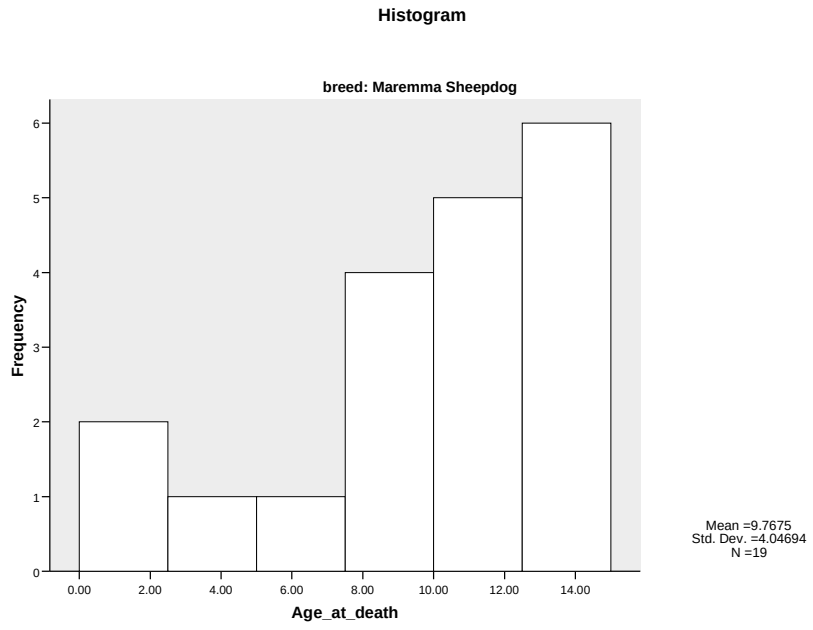


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 19 Maremma Sheepdog deaths with age at death reported.

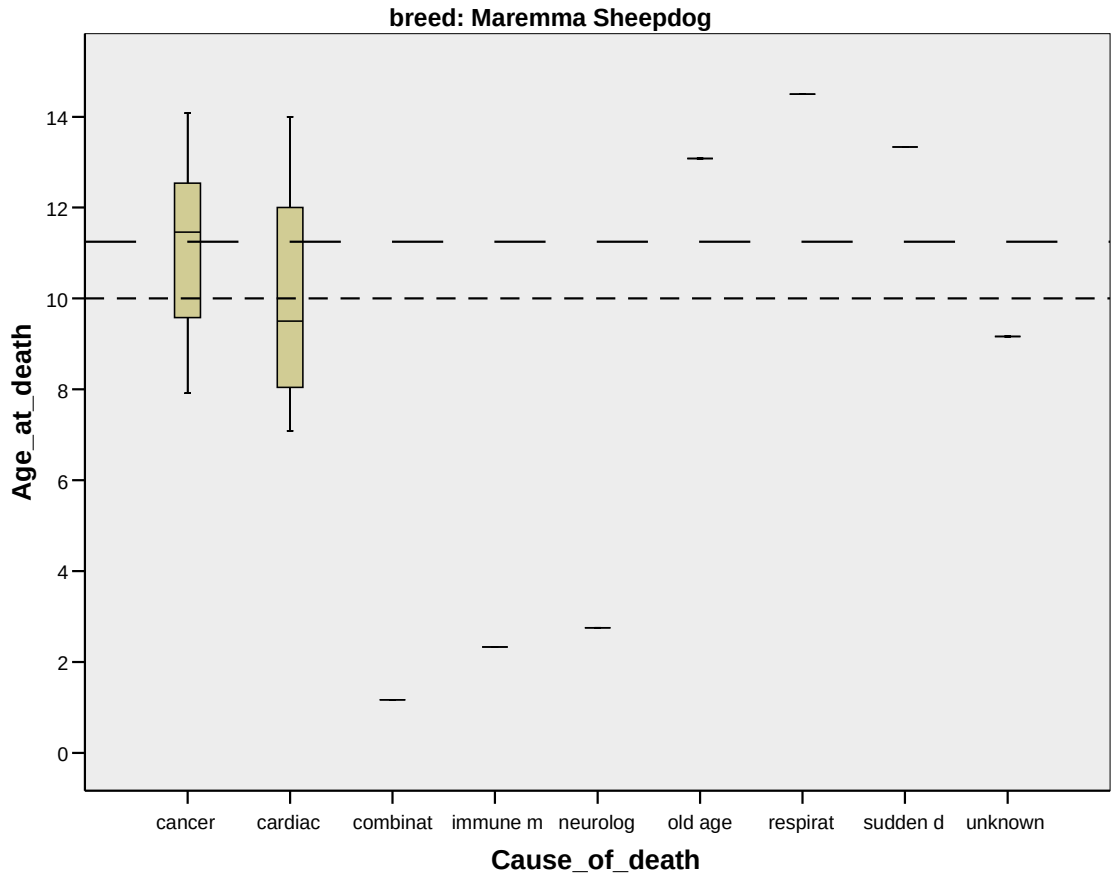


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Maremma Sheepdogs (N=19). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Maremma Sheepdogs. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 35 live dogs with a reported age was 6 years and 9 months (min=1 year and 3 months, max=14 years and 10 months, Figure 3). Health information was reported for 35 live dogs of which 27 (77%) were healthy and 8 (23%) had at least one reported health condition, resulting in a total of 13 reported conditions with a median of 1.5 conditions/dog (min=1, max=3).

The median current age of all healthy dogs with a reported age (N=27) was 6 years and 5 months (min=1 year and 3 months, max=14 years and 10 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=7) was 8 years and 8 months (min=5 years and 5 months, max=11 years and 5 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=12) was 3 years (min= 5 months, max= 9 years, Figure 4). Table 3 shows the disease conditions for Maremma Sheepdogs. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 35 Maremma Sheepdogs with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	14	7	21 (60%)
Male	12	2	14 (40%)
Totals	26 (74%)	9 (26%)	35 (100%)

There was no association between gender and neuter status (P=0.2066).

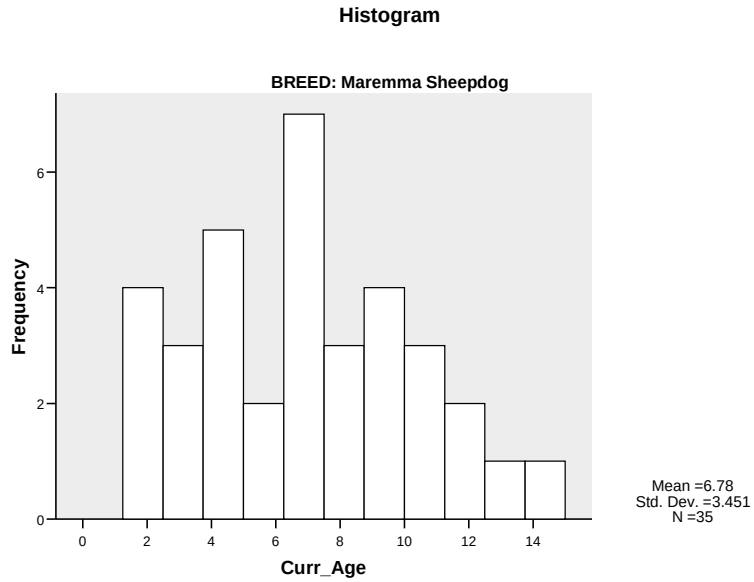


Figure 3. Histogram showing frequency of current age in years for the 35 live Maremma Sheepdogs with age reported.

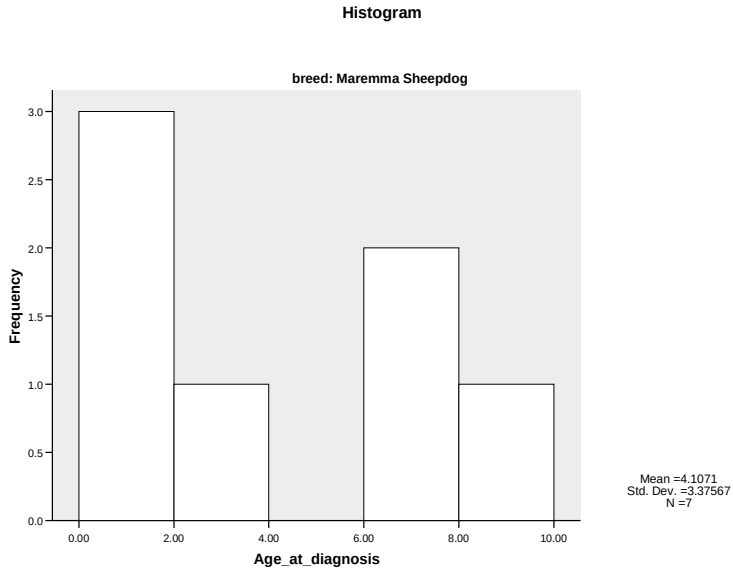


Figure 4. Histogram showing frequency of age at diagnosis for the 7 Maremma Sheepdogs with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

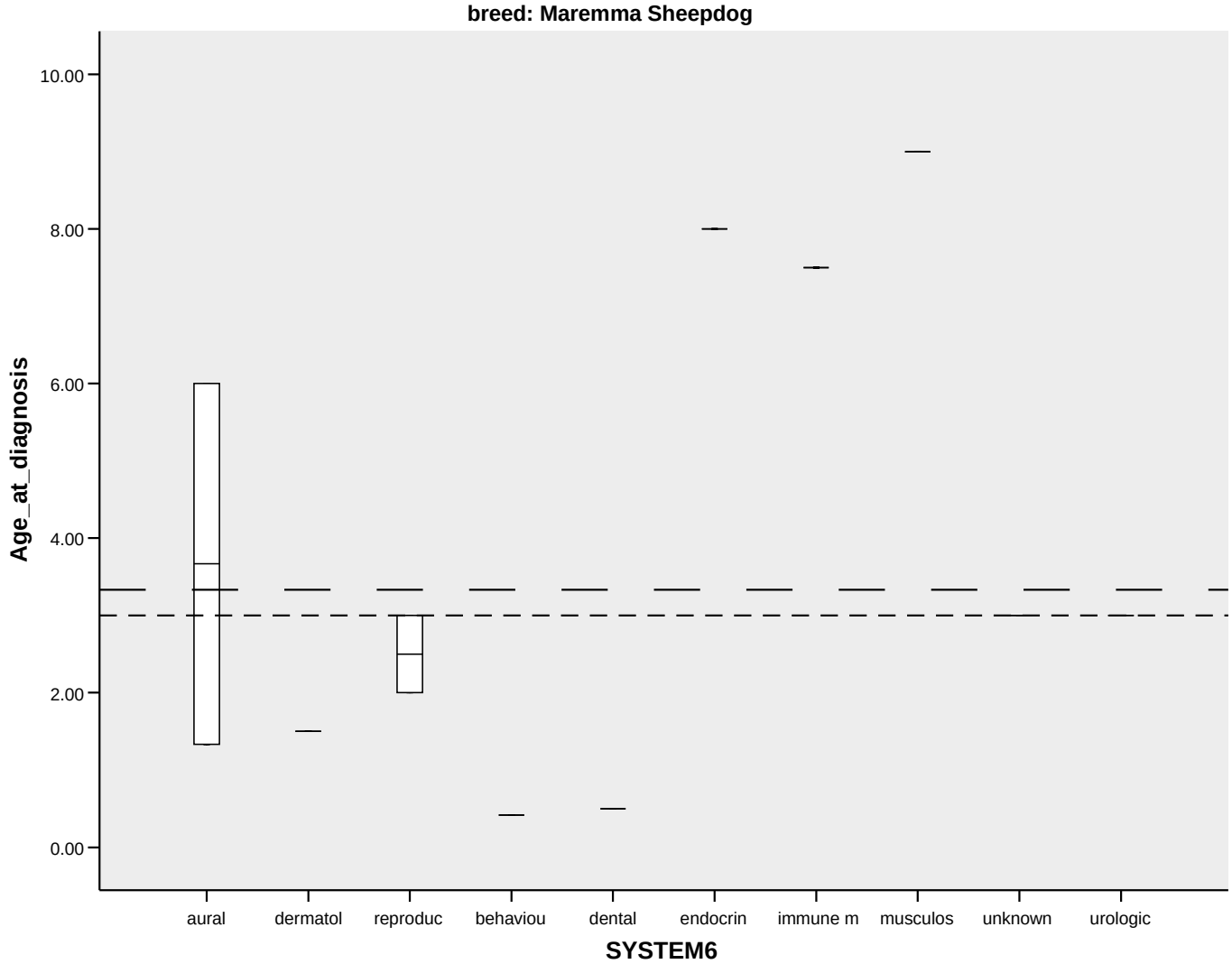


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Maremma Sheepdogs (N=7 dogs with 12 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Maremma Sheepdogs. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Maremma Sheepdogs.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Aural	2	15.4	Otitis externa
2	Dermatologic	2	15.4	Dermatitis; pyotraumatic dermatitis
3	Reproductive	2	15.4	False pregnancy; inability to breed
4	Behaviour	1	7.7	Unspecified
5	Dental	1	7.7	Retained puppy teeth
6	Endocrine	1	7.7	Hypothyroidism
7	Immune mediated	1	7.7	Unspecified
8	Musculoskeletal	1	7.7	Arthritis
9	Unknown	1	7.7	Undiagnosed illness
10	Urologic	1	7.7	Cystitis
	Total	13	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for Miniature Bull Terriers

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Miniature Bull Terriers

A total of 95 forms were sent out and 25 were returned, representing 66 live dogs. This breed had a 26.3% response rate (25/95) and it represented 0.18% of all returns (25/13,741).

Mortality data

A total of 20 deaths were reported and this represents 0.13% of all deaths reported in the survey (20/15,881). The median age at death for Miniature Bull Terriers was 6 years and 1 month (min = 8 months, max = 13 years and 2 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Miniature Bull Terriers. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Miniature Bull Terriers.

Cause of death		N	%	Most common specific causes in descending order
1	Old age	4	20.0	Old age
2	Trauma	3	15.0	Unspecified
3	Behaviour	2	10.0	Aggression; unspecified
4	Gastrointestinal	2	10.0	Foreign body obstruction
5	Other	2	10.0	Uncodeable
6	Cancer	1	5.0	Type unspecified
7	Combinations	1	5.0	
8	Hepatic	1	5.0	Chronic liver failure
9	Infection	1	5.0	Kennel cough
10	Ocular	1	5.0	Unspecified
11	Perioperative	1	5.0	
12	Urologic	1	5.0	Chronic kidney failure
	Total	20	100.0	

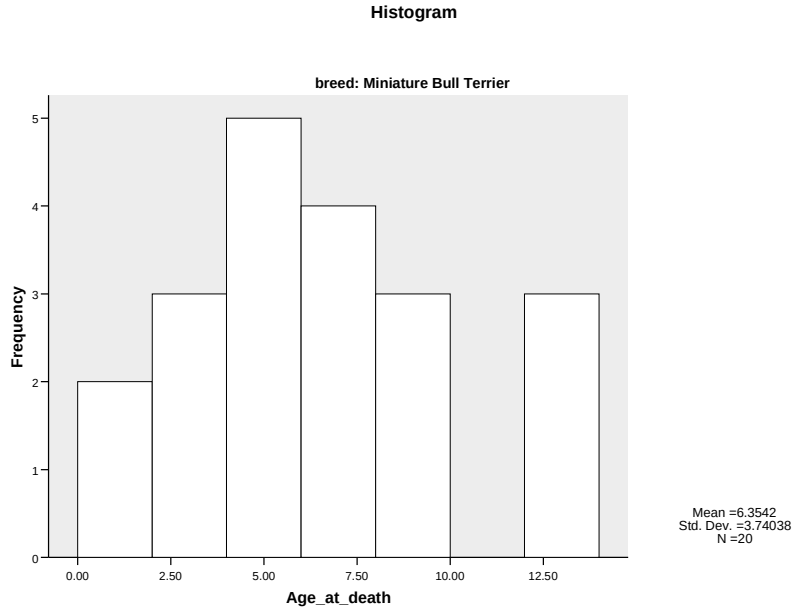


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 20 Miniature Bull Terrier deaths with age at death reported.

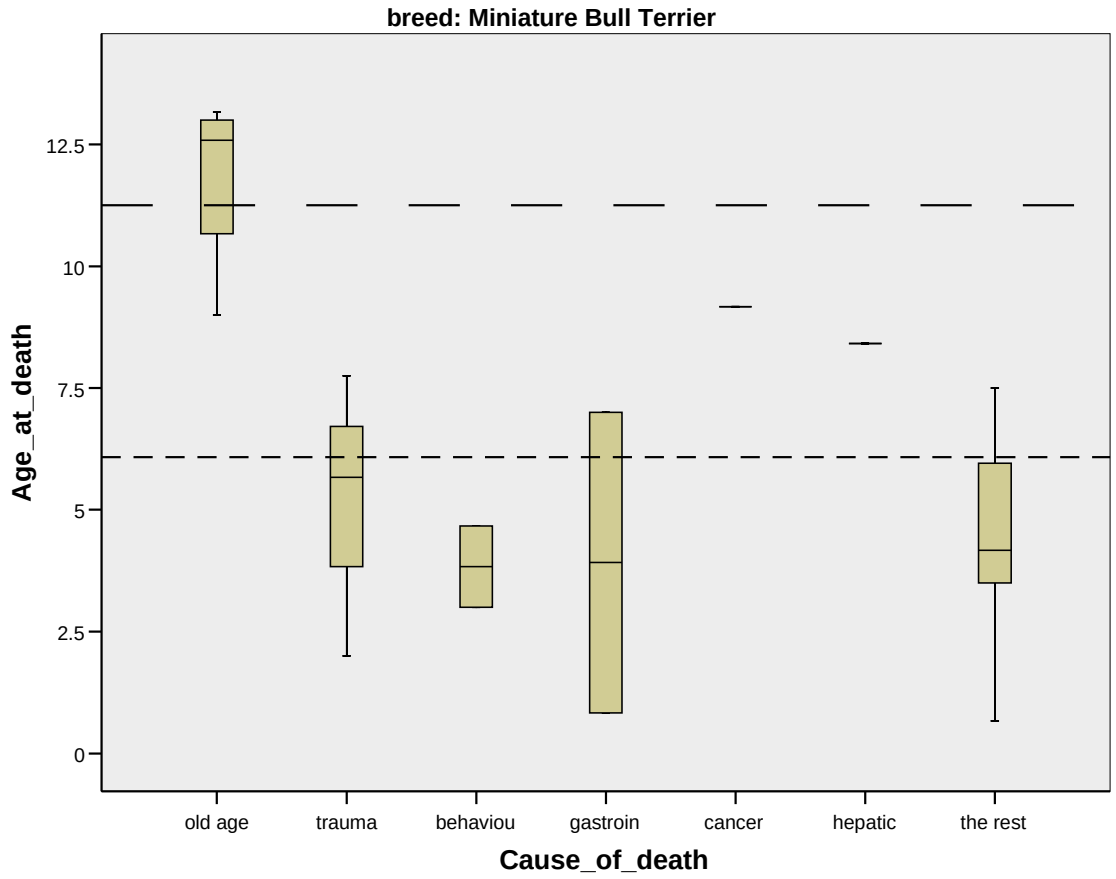


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Miniature Bull Terriers (N=20). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Miniature Bull Terriers. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 66 live dogs with a reported age was 3 years and 4 months (min=2 months, max=14 years and 3 months, Figure 3). Health information was reported for 66 live dogs of which 44 (67%) were healthy and 22 (33%) had at least one reported health condition, resulting in a total of 32 reported conditions with a median of 1 condition/dog (min=1, max=4).

The median current age of all healthy dogs with a reported age (N=44) was 2 years and 7 months (min=2 months, max=9 years). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=20) was 5 years and 2 months (min=5 months, max=14 years and 3 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=29) was 3 years (min= 4 months, max= 13 years, Figure 4). Table 3 shows the disease conditions for Miniature Bull Terriers. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 66 Miniature Bull Terriers with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	34	6	40 (61%)
Male	23	3	26 (39%)
Totals	57 (86%)	9 (14%)	66 (100%)

There was no association between gender and neuter status (P=0.6889).

Figure 3. Histogram showing frequency of current age in years for the 66 live Miniature Bull Terriers with age reported.

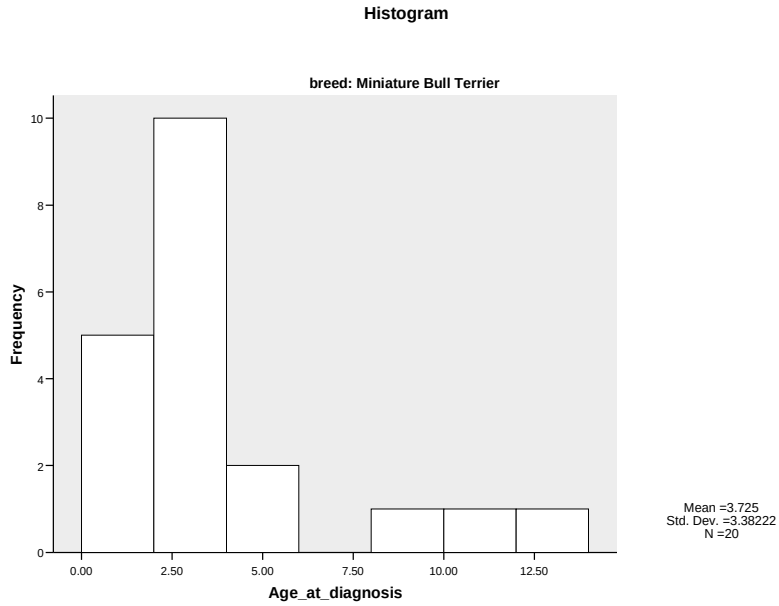


Figure 4. Histogram showing frequency of age at diagnosis for the 20 Miniature Bull Terriers with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

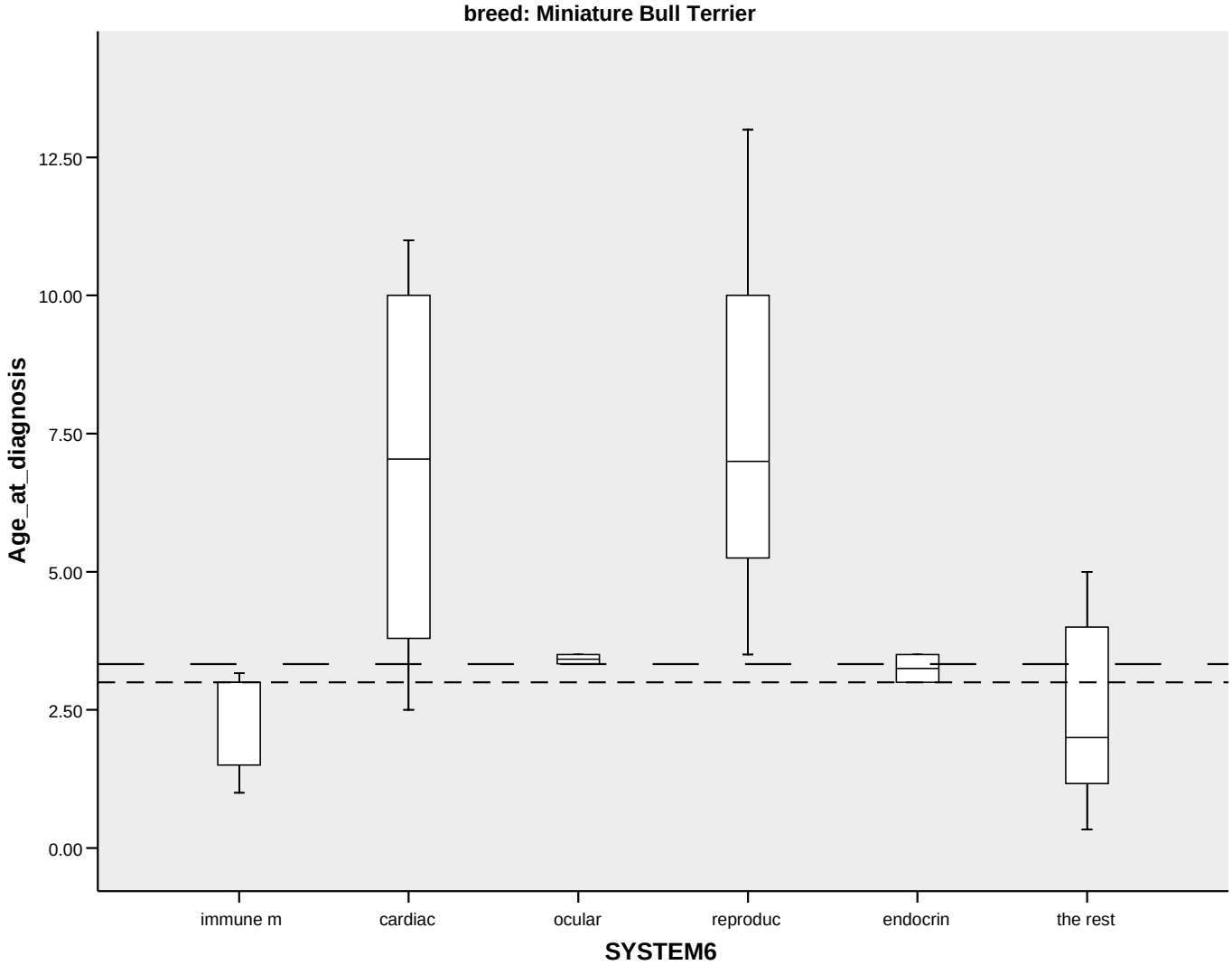


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Miniature Bull Terriers (N=20 dogs with 29 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Miniature Bull Terriers. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Miniature Bull Terriers.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Immune mediated	5	15.6	Gluten-sensitive enteropathy; atopy
2	Cardiac	4	12.5	Heart murmur (unspecified); dilated cardiomyopathy
3	Ocular	4	12.5	KCS; lens luxation
4	Reproductive	4	12.5	Pyometra; uterine inertia
5	Dermatologic	2	6.3	Dermatitis; unspecified
6	Endocrine	2	6.3	Hypothyroidism; unspecified
7	Musculoskeletal	2	6.3	Arthritis (spine); patellar luxation
8	Aural	1	3.1	Otitis externa
9	Behaviour	1	3.1	Unspecified
10	Benign neoplasia	1	3.1	Granuloma
11	Cancer	1	3.1	Unspecified
12	Neurologic	1	3.1	Seizures
13	Respiratory	1	3.1	Kennel cough
14	Trauma	1	3.1	Dermatologic
15	Unknown	1	3.1	Undiagnosed illness
16	Urologic	1	3.1	Cystitis
	Total	32	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for Miniature Schnauzers

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Miniature Schnauzers

A total of 583 forms were sent out and 289 were returned, representing 586 live dogs. This breed had a 49.6% response rate (289/583) and it represented 2.10% of all returns (289/13,741).

Mortality data

A total of 214 deaths were reported and this represents 1.35% of all deaths reported in the survey (214/15,881). The median age at death for Miniature Schnauzers was 12 years and 1 month (min = 7 months, max = 18 years and 2 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Miniature Schnauzers. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Miniature Schnauzers.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	46	21.5	Type unspecified (liver, stomach)
2	Old age	36	16.8	Old age and age combinations
3	Cardiac	25	11.7	Heart failure; heart attack; heart defect unspecified
4	Neurologic	14	6.5	Seizures; IVDD; spondylosis; unspecified
5	Combinations	13	6.1	
6	Hepatic	11	5.1	Liver disease (unspecified); liver failure
7	Cerebral vascular	9	4.2	Stroke or cerebral vascular accident
8	Endocrine	8	3.7	Cushings disease; diabetes mellitus; diabetes insipidus
9	Gastrointestinal	7	3.3	Pancreatitis; haemorrhagic gastroenteritis (HGE)
10	Other	7	3.3	Uncodeable
11	Urologic	7	3.3	Chronic kidney failure
12	Perioperative	4	1.9	
13	Respiratory	4	1.9	Choked; tracheal collapse; unspecified
14	Reproductive	3	1.4	Pyometra
15	Unknown	3	1.4	
16	Ocular	2	0.9	Blindness
17	Senility	2	0.9	
18	Trauma	2	0.9	Attacked by dog; unspecified
19	Portosystemic shunt (PSS)	1	0.5	
20	Behaviour	1	0.5	Unspecified behavioural problem
21	Cardiovascular	1	0.5	Unspecified
22	Hyperthermia	1	0.5	
23	Immune mediated	1	0.5	Haemolytic anaemia
24	Infection	1	0.5	Viral (unspecified)
25	Internal bleeding	1	0.5	
26	Musculoskeletal	1	0.5	Arthritis
27	Poisoning	1	0.5	
28	Septicaemia	1	0.5	
29	Sudden death	1	0.5	
	Total	214	100.0	

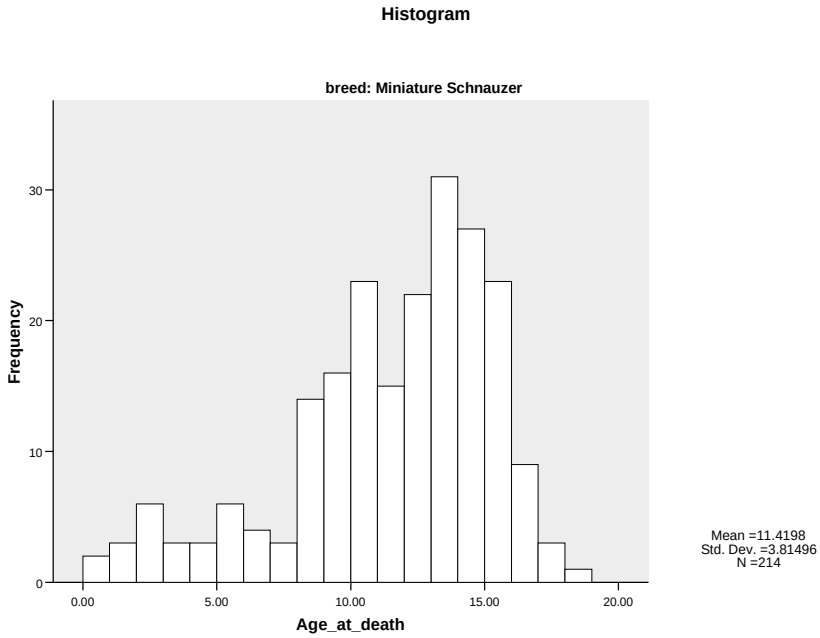


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 214 Miniature Schnauzer deaths with age at death reported.

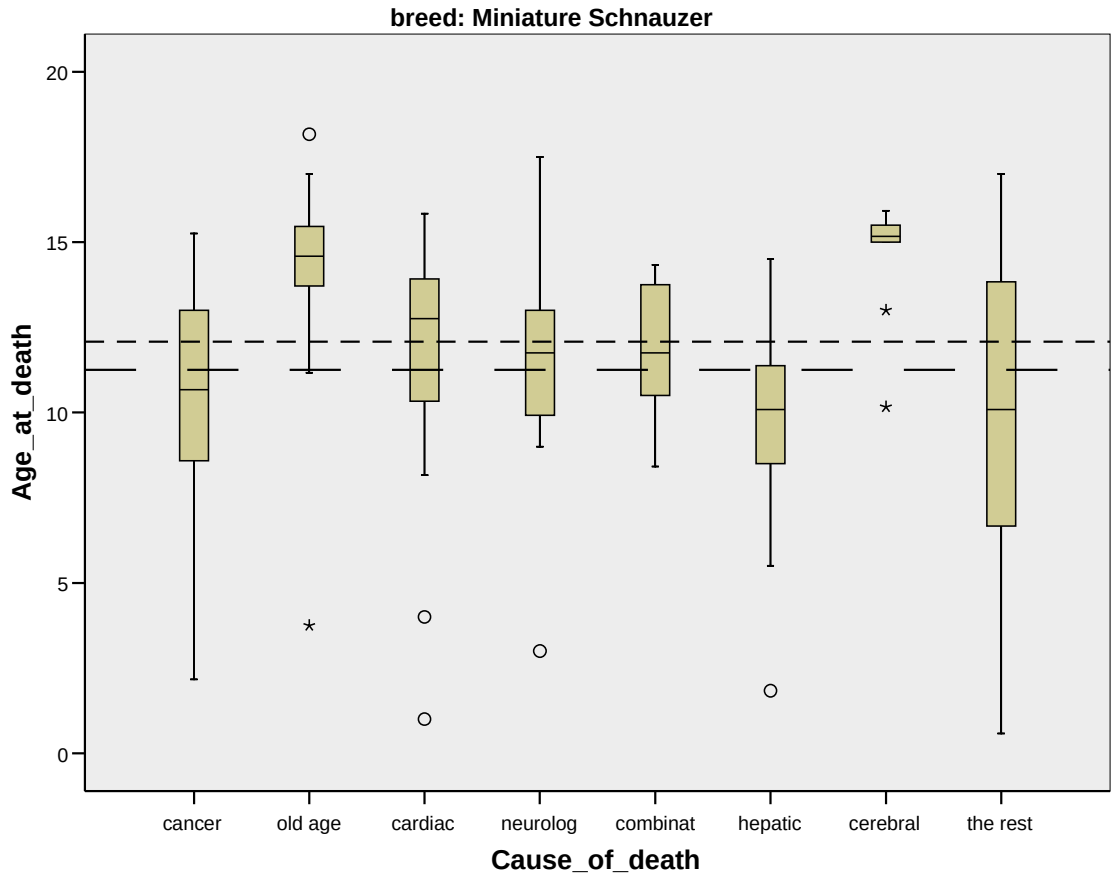


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Miniature Schnauzers (N=214). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Miniature Schnauzers. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 584 live dogs with a reported age was 4 years and 7 months (min=2 months, max=16 years and 6 months, Figure 3). Health information was reported for 586 live dogs of which 393 (67%) were healthy and 193 (33%) had at least one reported health condition, resulting in a total of 388 reported conditions with a median of 1 condition/dog (min=1, max=9).

The median current age of all healthy dogs with a reported age (N=393) was 3 years and 4 months (min=2 months, max=15 years and 9 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=186) was 7 years and 9 months (min=8 months, max=16 years and 6 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=374) was 5 years (min= 2 months, max= 14 years and 3 months, Figure 4). Table 3 shows the disease conditions for Miniature Schnauzers. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 586 Miniature Schnauzers with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	185	187	372 (63%)
Male	163	51	214 (37%)
Totals	348 (59%)	238 (41%)	586 (100%)

Significantly more females were neutered (P<0.0001).

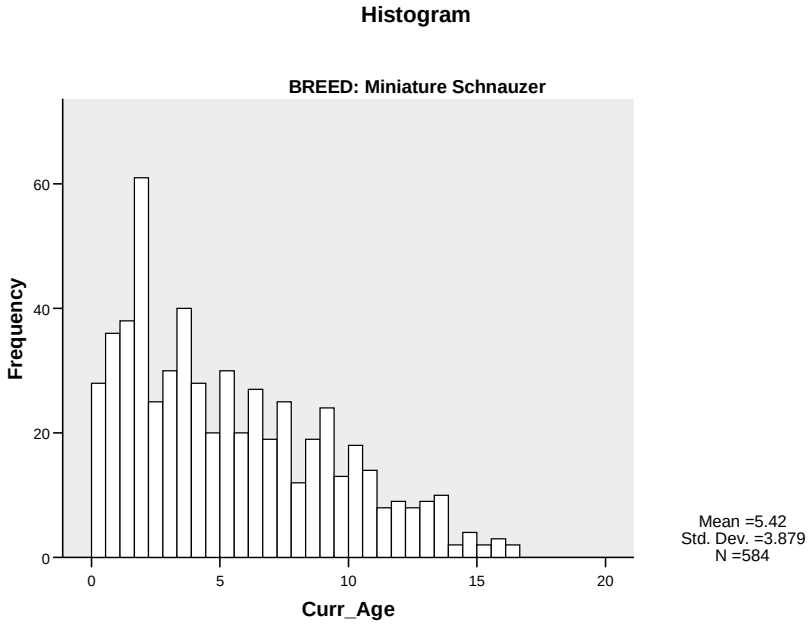


Figure 3. Histogram showing frequency of current age in years for the 584 live Miniature Schnauzers with age reported.

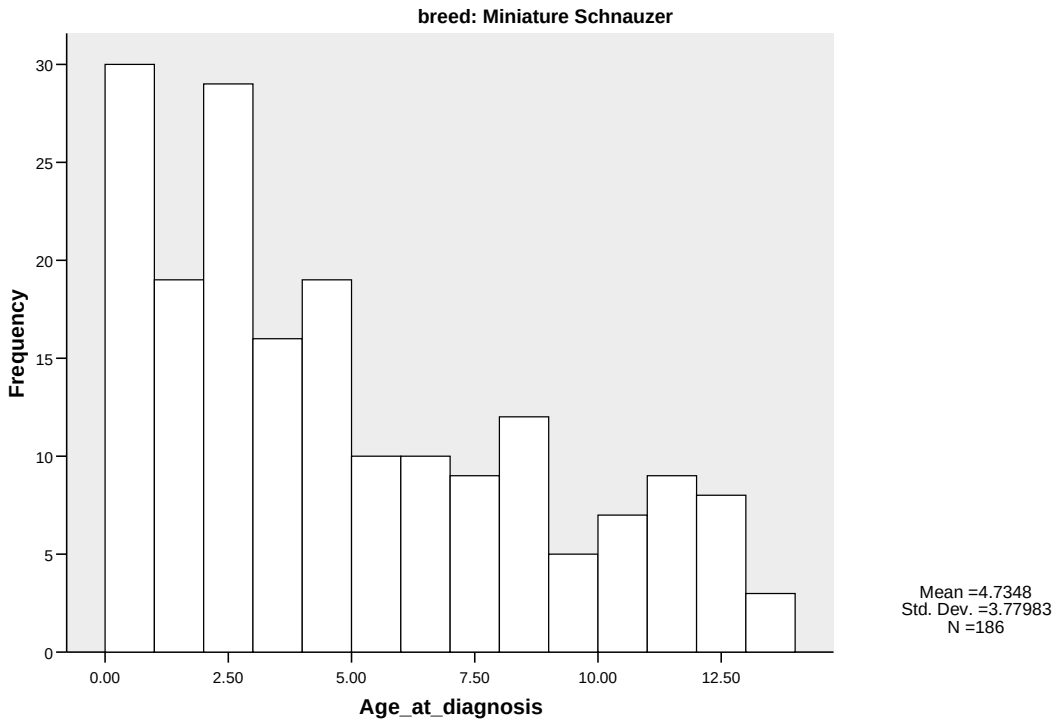


Figure 4. Histogram showing frequency of age at diagnosis for the 186 Miniature Schnauzers with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

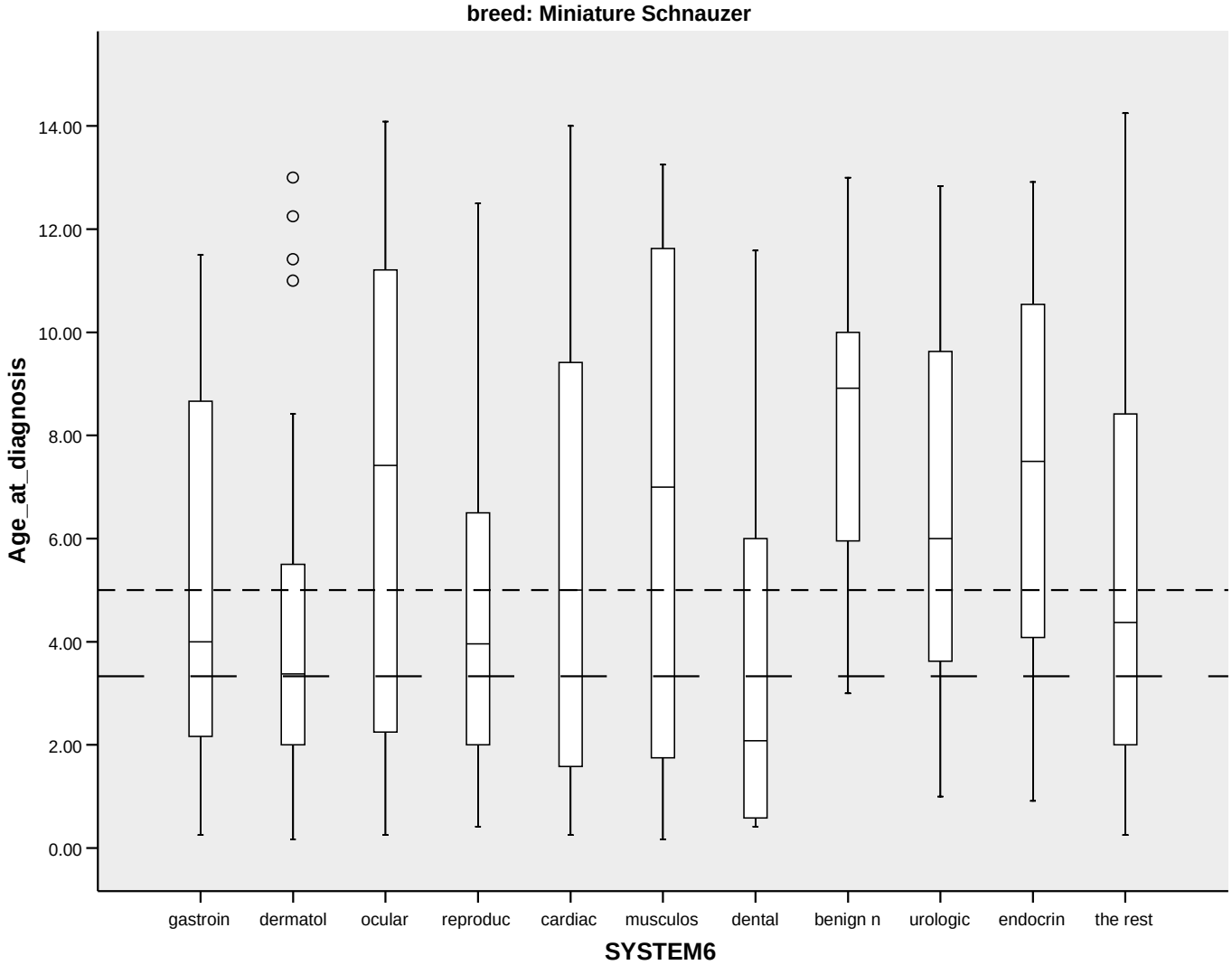


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Miniature Schnauzers (N=186 dogs with 374 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Miniature Schnauzers. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Miniature Schnauzers.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Gastrointestinal	46	11.9	Pancreatitis; colitis; haemorrhagic gastroenteritis
2	Dermatologic	42	10.8	Dermatitis; alopecia; recurrent pyoderma; pyotraumatic dermatitis; fungal skin infection
3	Ocular	39	10.1	Cataracts; blocked tear ducts; KCS; epiphora; corneal ulcer; red eye
4	Reproductive	37	9.5	Pyometra; vaginitis; difficulty whelping (unspecified); false pregnancy; infertility
5	Cardiac	33	8.5	Heart murmur (unspecified>without clinical signs>grade 2>rest); arrhythmia
6	Musculoskeletal	29	7.5	Arthritis (hindlimb>unspecified>spine>rest); prognathism; CHD
7	Dental	26	6.7	Retained puppy teeth; dental disease; defect other than extra teeth
8	Benign neoplasia	24	6.2	Lipoma; adenoma (anal); cysts (leg); unspecified (neck)
9	Urologic	19	4.9	Cystouroliths (unspecified>struvite>calcium oxalate=cystine); cystitis; incontinence
10	Endocrine	16	4.1	Hypothyroidism; Cushing's disease; diabetes mellitus; hyperthyroidism; pituitary dwarfism
11	Immune mediated	16	4.1	Food allergy; flea allergy; atopy; other allergy (unspecified)
12	Neurologic	14	3.6	Seizures; IVDD (unspecified>lumbar); meningitis
13	Cancer	12	3.1	Type unspecified (skin>rest); carcinoma (liver)
14	Respiratory	11	2.8	Kennel cough; bronchitis; rhinitis; noisy breathing; respiratory infection
15	Aural	6	1.5	Otitis externa; excessive ear wax; ear mites
16	Unknown	5	1.3	Undiagnosed or unknown; undiagnosed liver disease
17	Behaviour	3	0.8	Unspecified
18	Other	3	0.8	Uncodeable
19	Anal gland	2	0.5	Anal sacculitis
20	Cerebrovascular	2	0.5	Stroke or cerebral vascular accident
21	Haematopoietic	1	0.3	Bleeding disorder unspecified
22	Hepatic	1	0.3	Unspecified
23	Trauma	1	0.3	Spine
	Total	388	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for the Newfoundland breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Newfoundland breed

A total of 890 forms were sent out and 233 were returned, representing 506 live dogs. This breed had a 26.2% response rate (233/890) and it represented 1.70% of all returns (233/13,741).

Mortality data

A total of 269 deaths were reported and this represents 1.69% of all deaths reported in the survey (269/15,881). The median age at death for the Newfoundland breed was 9 years and 8 months (min = 5 months, max = 15 years and 10 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Newfoundland breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Newfoundland breed.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	73	27.1	Osteosarcoma
2	Old age	52	19.3	Old age
3	Cardiac	43	16.0	Heart failure; cardiomyopathy (dilated, unspecified)
4	Gastrointestinal	18	6.7	Gastric dilatation/volvulus (GDV); pancreatitis; unspecified
5	Combinations	11	4.1	Musculoskeletal; cardiomyopathy; CVA; cancer
6	Musculoskeletal	10	3.7	Arthritis; hip dysplasia; coxofemoral luxation
7	Other	10	3.7	Uncodeable
8	Behaviour	6	2.2	Unspecified problem; aggression
9	Neurologic	6	2.2	Seizures; paralysis; spinal (unspecified)
10	Urologic	6	2.2	Chronic kidney failure; incontinence
11	Cerebral vascular	5	1.9	Stroke or cerebral vascular accident
12	Immune mediated	4	1.5	Unspecified; AIHA and thrombocytopaenia (Evans syndrome)
13	Unknown	4	1.5	
14	Hepatic	3	1.1	Liver failure; liver disease unspecified
15	Perioperative	3	1.1	
16	Collapse	2	0.7	
17	Poisoning	2	0.7	
18	Reproductive	2	0.7	Pyometra
19	Respiratory	2	0.7	Asphyxiation; pneumonia
20	Septicaemia	2	0.7	
21	Endocrine	1	0.4	Cushings disease
22	Internal bleeding	1	0.4	
23	Pining	1	0.4	
24	Sudden death	1	0.4	
25	Trauma	1	0.4	Unspecified
	Total	269	100.0	

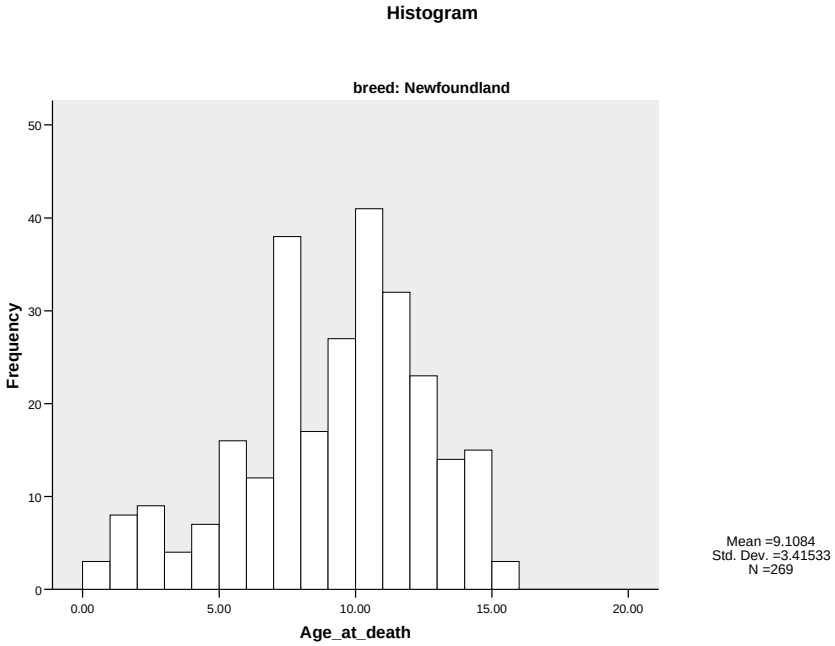


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 269 Newfoundland deaths with age at death reported.

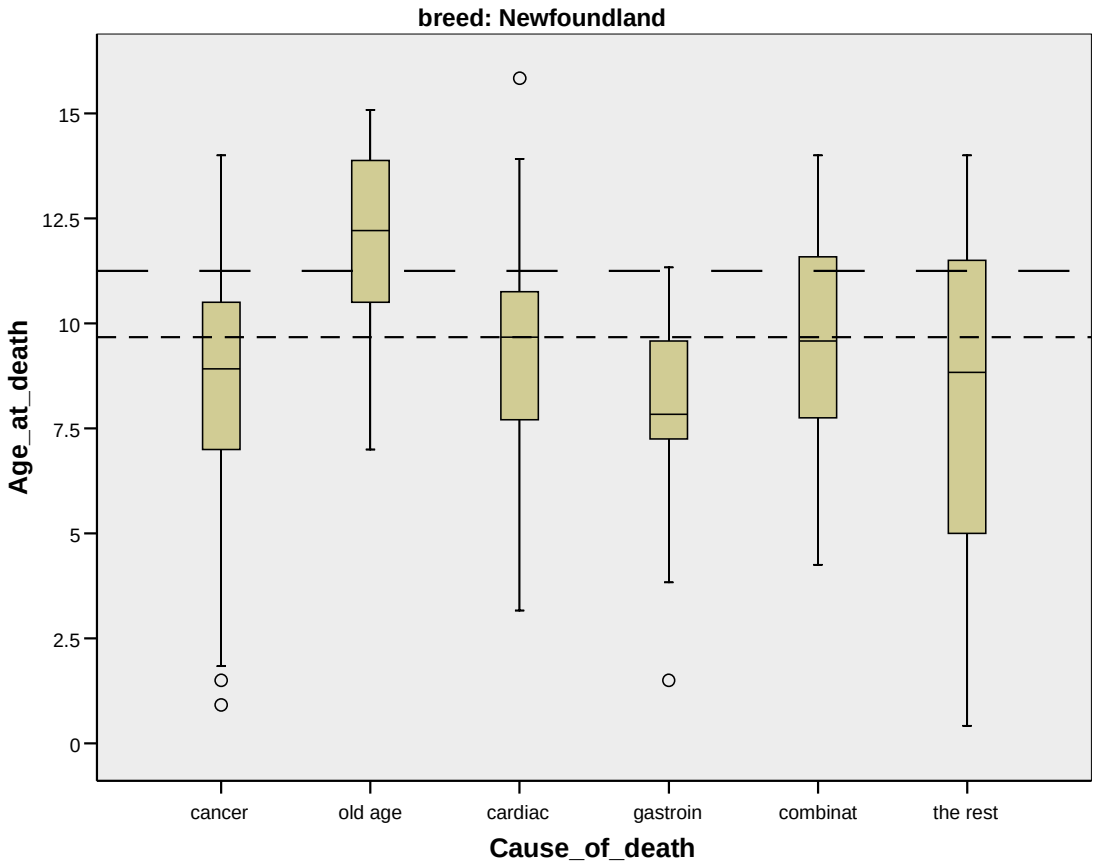


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the Newfoundland breed (N=269). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the Newfoundland breed. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 506 live dogs with a reported age was 4 years and 9 months (min=2 months, max=14 years and 2 months, Figure 3). Health information was reported for 506 live dogs of which 267 (53%) were healthy and 239 (47%) had at least one reported health condition, resulting in a total of 404 reported conditions with a median of 1 condition/dog (min=1, max=6).

The median current age of all healthy dogs with a reported age (N=267) was 3 years and 10 months (min=2 months, max=14 years and 2 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=231) was 5 years and 11 months (min=4 months, max=14 years and 1 month). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=391) was 2 years and 6 months (min= 1 month, max= 12 years and 3 months, Figure 4). Table 3 shows the disease conditions for the Newfoundland breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for the 501 Newfoundland breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	170	116	286 (57%)
Male	144	71	215 (43%)
Totals	314 (63%)	187 (37%)	501 (100%)

There was no association between gender and neuter status (P=0.0843).

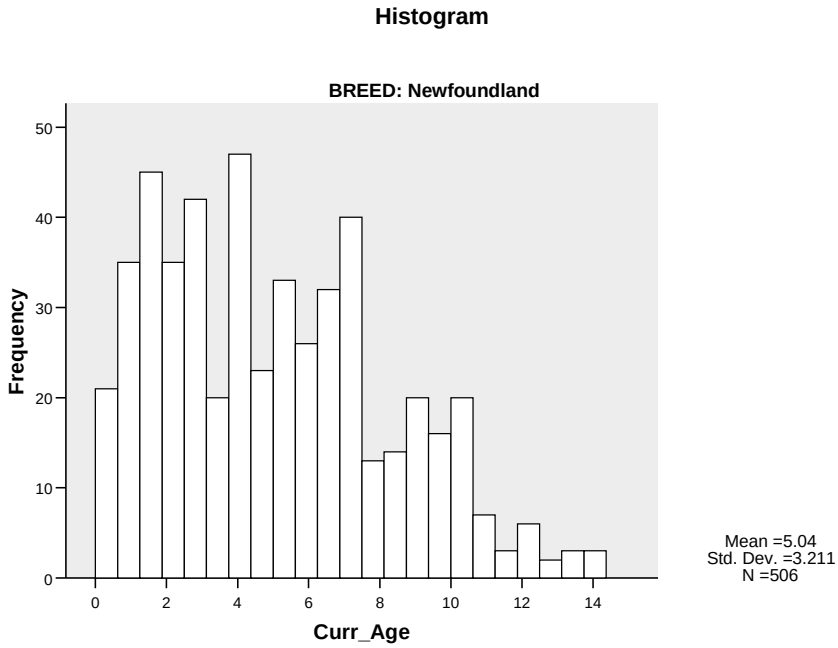


Figure 3. Histogram showing frequency of current age in years for the 506 live Newfoundland breed with age reported.

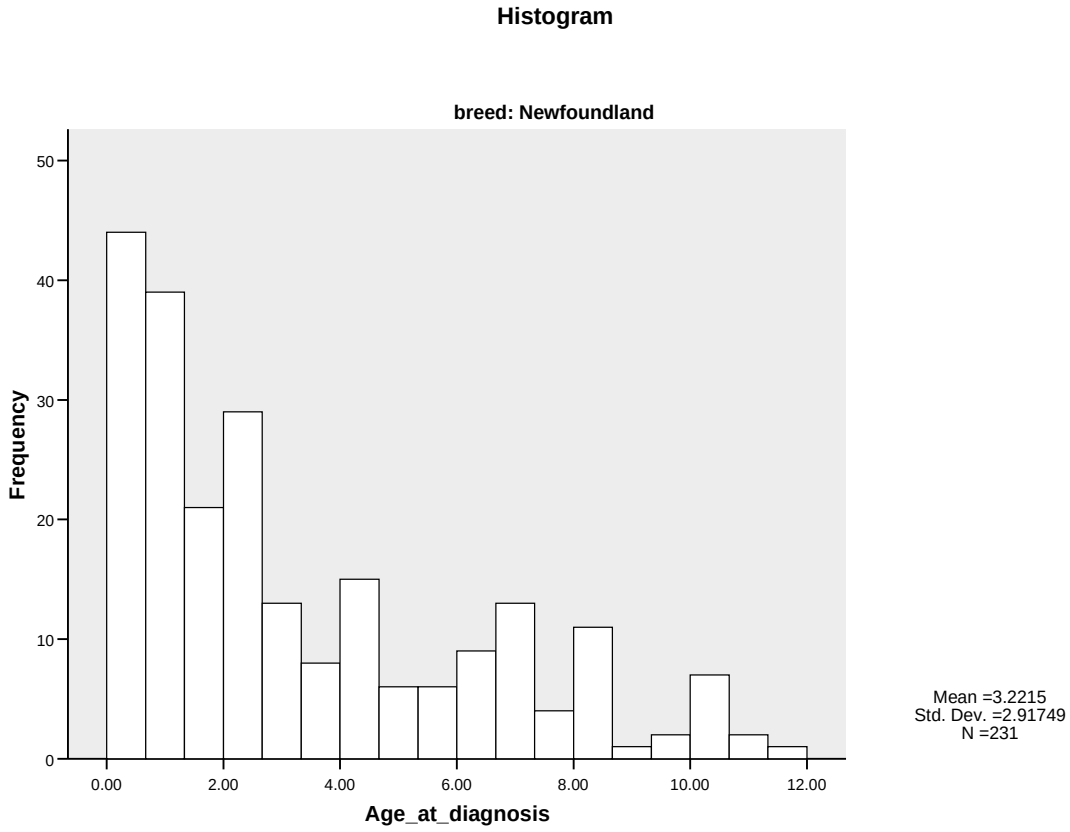


Figure 4. Histogram showing frequency of age at diagnosis for the 231 Newfoundland breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

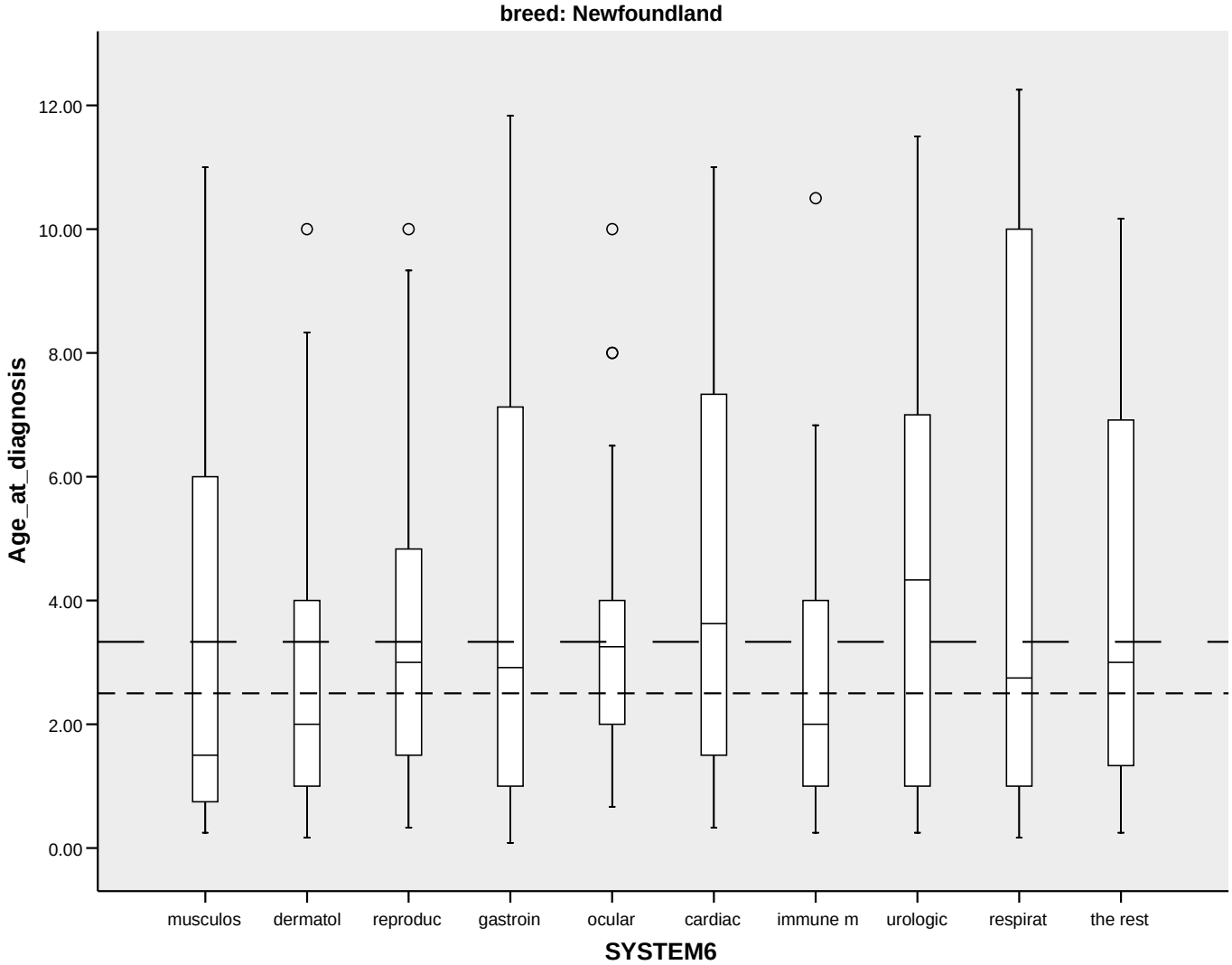


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Newfoundland breed (N=231 dogs with 391 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Newfoundland breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Newfoundland breed.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Musculoskeletal	101	25.0	CLR; CHD; arthritis (hips=unspec>elbows>forelimb>rest); OCD (elbow=shoulder=unspec)
2	Dermatologic	61	15.1	Pyotraumatic dermatitis; dermatitis; alopecia; mites (cheyletiella>sarcoptes)
3	Reproductive	45	11.1	False pregnancy; pyometra; infertility; vaginitis
4	Gastrointestinal	27	6.7	Gastric dilatation/volvulus; diarrhoea; colitis; EPI; pancreatitis
5	Ocular	27	6.7	Entropion; KCS; cataracts; red eye
6	Cardiac	26	6.4	Heart murmur (unspec>grade 1,2>grade 3); cardiomyopathy (dilated>unspec); aortic stenosis
7	Immune mediated	24	5.9	Atopy; dust mite allergy; allergy other (unspecified); food allergy
8	Urologic	21	5.2	Cystitis; incontinence (unspecified>after spay); cystinuria; kidney disease other (unspec)
9	Aural	20	5.0	Otitis externa; aural haematoma; otitis media
10	Respiratory	17	4.2	Kennel cough; pneumonia; laryngeal paralysis
11	Unknown	9	2.2	
12	Cancer	7	1.7	Unspecified; carcinoma (toe); lymphoma; plasma cell tumour (lip)
13	Trauma	7	1.7	Musculoskeletal (forelimb>hindlimb=hind paw); neurologic (nerve); other (unspecified)
14	Neurologic	5	1.2	IVDD (lumbar); deafness; meningitis; seizures
15	Benign neoplasia	4	1.0	Lipoma
16	Endocrine	2	0.5	Cushings disease; diabetes mellitus
17	Dental	1	0.2	Defect other than extra teeth
	Total	404	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for the Norwegian Buhund breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Norwegian Buhund breed

A total of 84 forms were sent out and 29 were returned, representing 42 live dogs. This breed had a 34.5% response rate (29/84) and it represented 0.21% of all returns (29/13,741).

Mortality data

A total of 17 deaths were reported and this represents 0.11% of all deaths reported in the survey (17/15,881). The median age at death for the Norwegian Buhund breed was 12 years and 8 months (min = 3 years and 6 months, max = 16 years and 2 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Norwegian Buhund breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Norwegian Buhund breed.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	6	35.3	Type unspecified); unspecified
2	Combinations	3	17.6	Arthritis; incontinence; pneumonia; heart defect unspecified
3	Old age	2	11.8	Old age
4	Other	2	11.8	Uncodeable
5	Cardiac	1	5.9	Heart failure
6	Cerebral vascular	1	5.9	Stroke or cerebral vascular accident
7	Neurologic	1	5.9	Seizures
8	Urologic	1	5.9	Kidney failure
	Total	17	100.0	

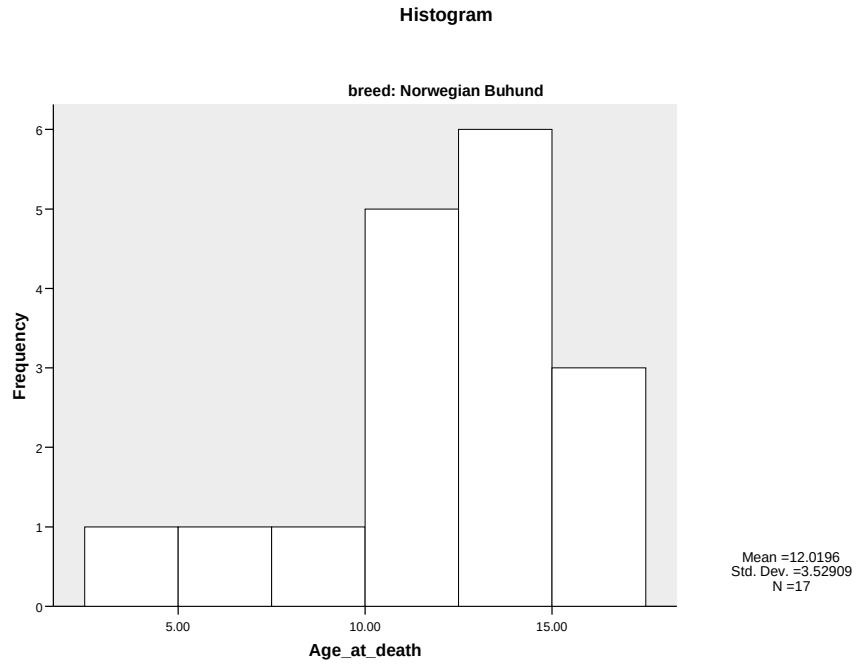


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 17 Norwegian Buhund deaths with age at death reported.

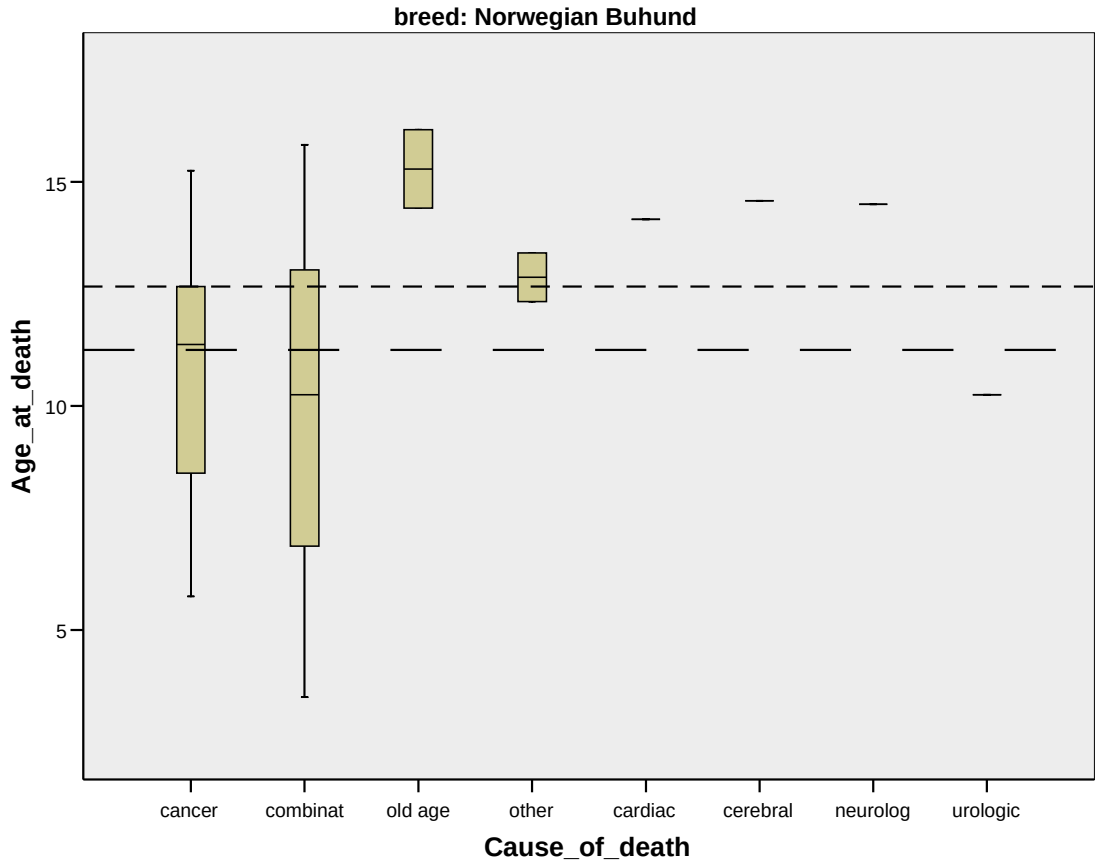


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the Norwegian Buhund breed (N=17). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the Norwegian Buhund breed. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 42 live dogs with a reported age was 5 years and 7 months (min=7 months, max=14 years and 5 months, Figure 3). Health information was reported for 42 live dogs of which 29 (69%) were healthy and 13 (31%) had at least one reported health condition, resulting in a total of 20 reported conditions with a median of 1 condition/dog (min=1, max=3).

The median current age of all healthy dogs with a reported age (N=29) was 4 years (min=7 months, max=14 years and 5 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=13) was 7 years and 2 months (min=1 year and 3 months, max=12 years and 7 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=20) was 7 years and 3 months (min= 5 months, max= 11 years and 9 months, Figure 4). Table 3 shows the disease conditions for the Norwegian Buhund breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for the 42 Norwegian Buhund breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	12	7	19 (45%)
Male	15	8	23 (55%)
Totals	27 (64%)	15 (36%)	42 (100%)

There was no association between gender and neuter status (P=0.8897).

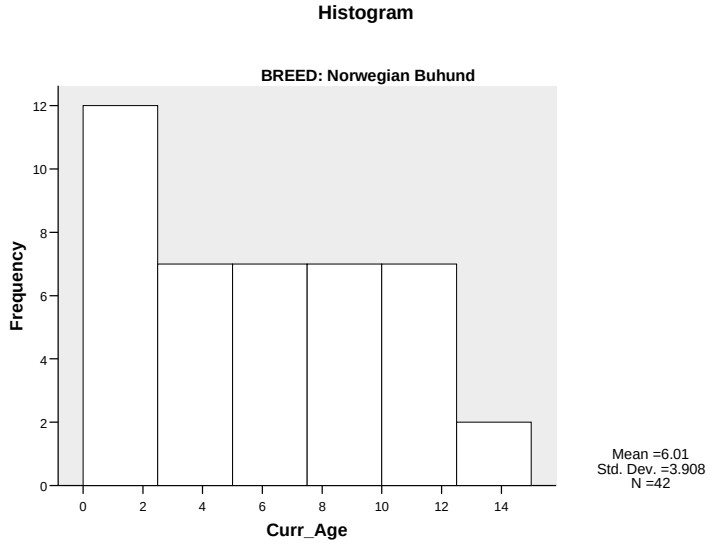


Figure 3. Histogram showing frequency of current age in years for the 42 live Norwegian Buhund breed with age reported.

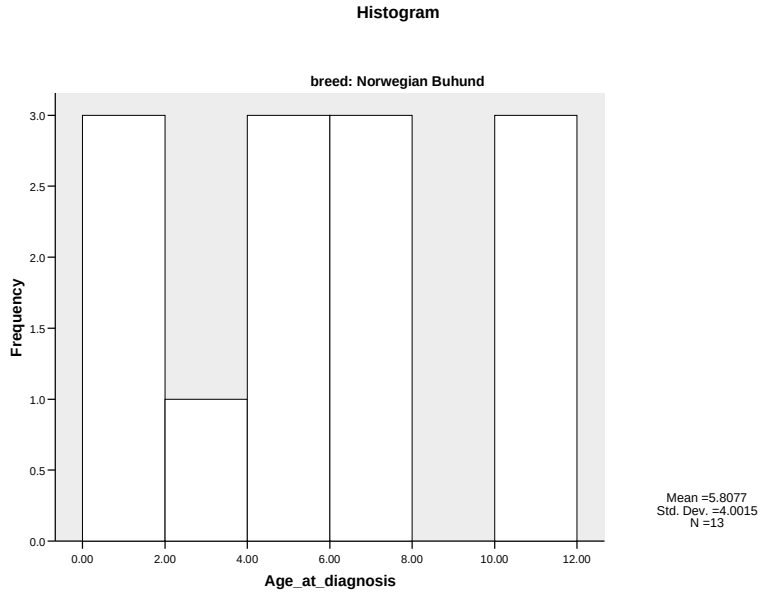


Figure 4. Histogram showing frequency of age at diagnosis for the 13 Norwegian Buhund breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

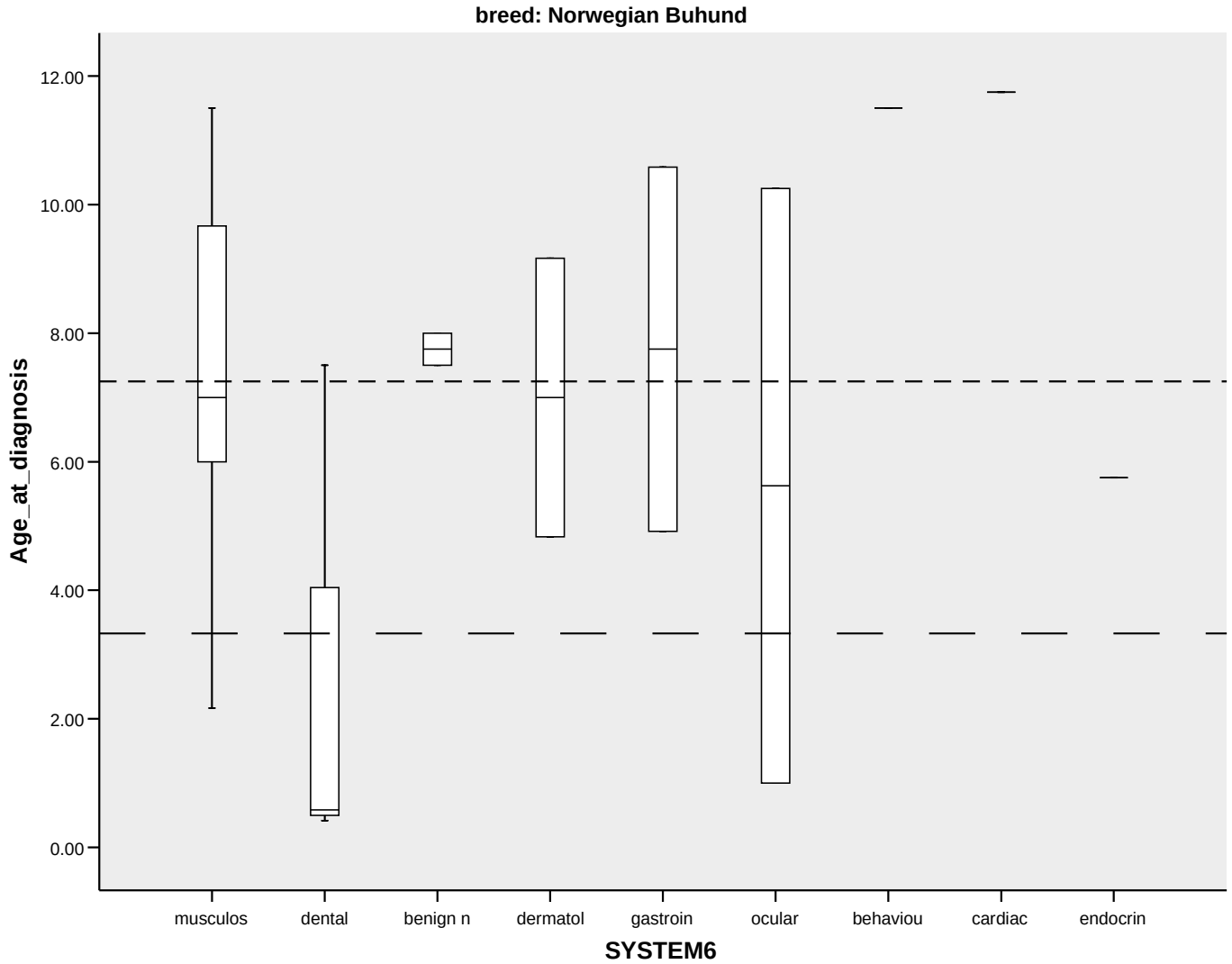


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Norwegian Buhund breed (N=13 dogs with 20 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Norwegian Buhund breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Norwegian Buhund breed.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Musculoskeletal	6	30.0	Arthritis; unspecified; CHD
2	Dental	3	15.0	Retained puppy teeth; dental disease
3	Benign neoplasia	2	10.0	Lipoma
4	Dermatologic	2	10.0	Sebaceous adenitis
5	Gastrointestinal	2	10.0	Pancreatitis
6	Ocular	2	10.0	Blocked tear duct; red eye
7	Behaviour	1	5.0	Unspecified
8	Cardiac	1	5.0	Mitral valve disease (MVD)
9	Endocrine	1	5.0	Hypothyroidism
	Total	20	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for Norwich Terriers

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Norwich Terriers

A total of 200 forms were sent out and 71 were returned, representing 182 live dogs. This breed had a 35.5% response rate (71/200) and it represented 0.52% of all returns (71/13,741).

Mortality data

A total of 56 deaths were reported and this represents 0.35% of all deaths reported in the survey (56/15,881). The median age at death for Norwich Terriers was 13 years and 5 months (min = 1 year and 4 months, max = 16 years and 9 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Norwich Terriers. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Norwich Terriers.

Cause of death		N	%	Most common specific causes in descending order
1	Old age	17	30.4	Old age
2	Cancer	12	21.4	Type unspecified (liver, mammary)
3	Cardiac	7	12.5	Heart attack; heart failure
4	Cerebral vascular	4	7.1	Stroke or cerebral vascular accident
5	Neurologic	4	7.1	Seizures
6	Respiratory	3	5.4	Breathing difficulties
7	Urologic	3	5.4	Kidney failure
8	Died	1	1.8	Natural causes
9	Hyperthermia	1	1.8	
10	Other	1	1.8	Uncodeable
11	Perioperative	1	1.8	
12	Reproductive	1	1.8	Blood clot after whelping
13	Trauma	1	1.8	Road traffic accident
	Total	56	100.0	

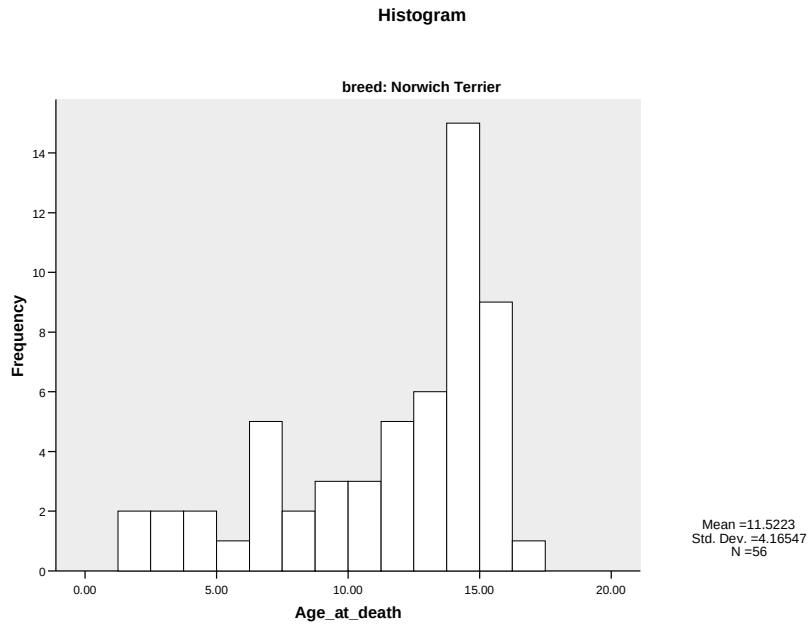


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 56 Norwich Terrier deaths with age at death reported.

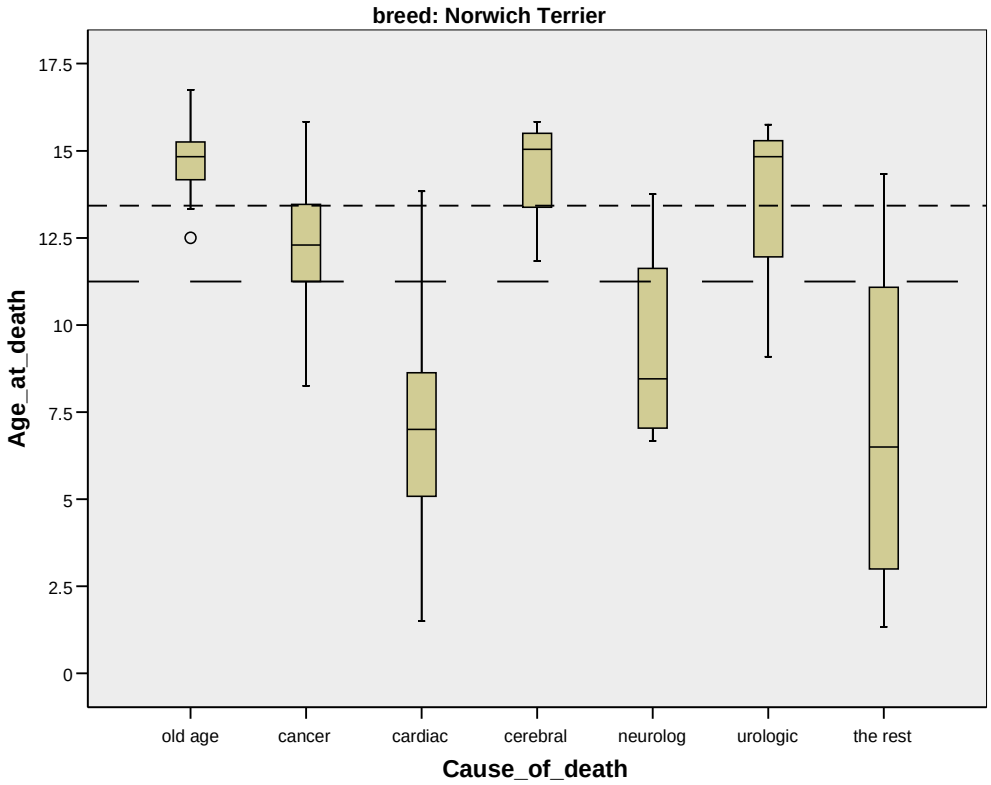


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Norwich Terriers (N=56). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Norwich Terriers. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 182 live dogs with a reported age was 4 years and 6 months (min=3 months, max=16 years and 3 months, Figure 3). Health information was reported for 182 live dogs of which 114 (63%) were healthy and 68 (37%) had at least one reported health condition, resulting in a total of 116 reported conditions with a median of 1 condition/dog (min=1, max=8).

The median current age of all healthy dogs with a reported age (N=114) was 3 years and 3 months (min=3 months, max=14 years and 7 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=66) was 6 years and 8 months (min=6 months, max=16 years and 3 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=110) was 3 years and 7 months (min= 1 month, max= 13 years, Figure 4). Table 3 shows the disease conditions for Norwich Terriers. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 181 Norwich Terriers with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	84	32	116 (64%)
Male	51	14	65 (36%)
Totals	135 (75%)	46 (25%)	181 (100%)

There was no association between gender and neuter status (P=0.3700).

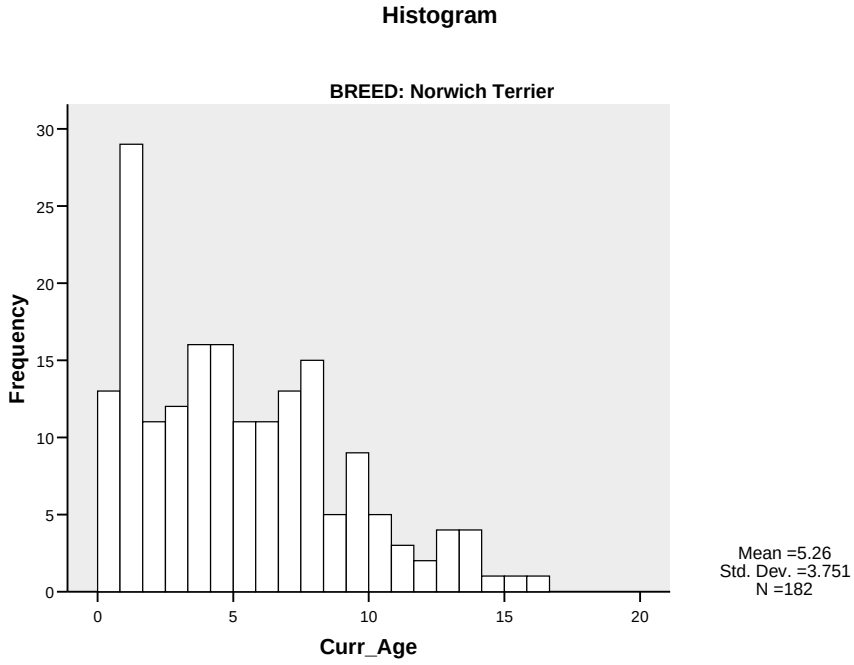


Figure 3. Histogram showing frequency of current age in years for the 182 live Norwich Terriers with age reported.

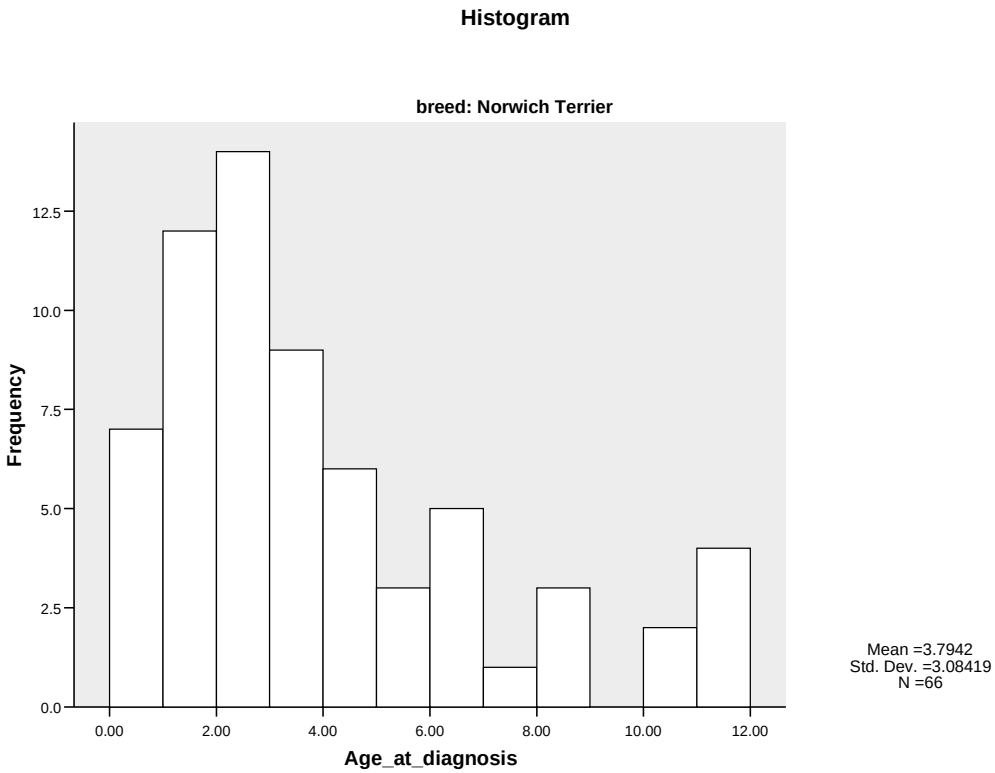


Figure 4. Histogram showing frequency of age at diagnosis for the 66 Norwich Terriers with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

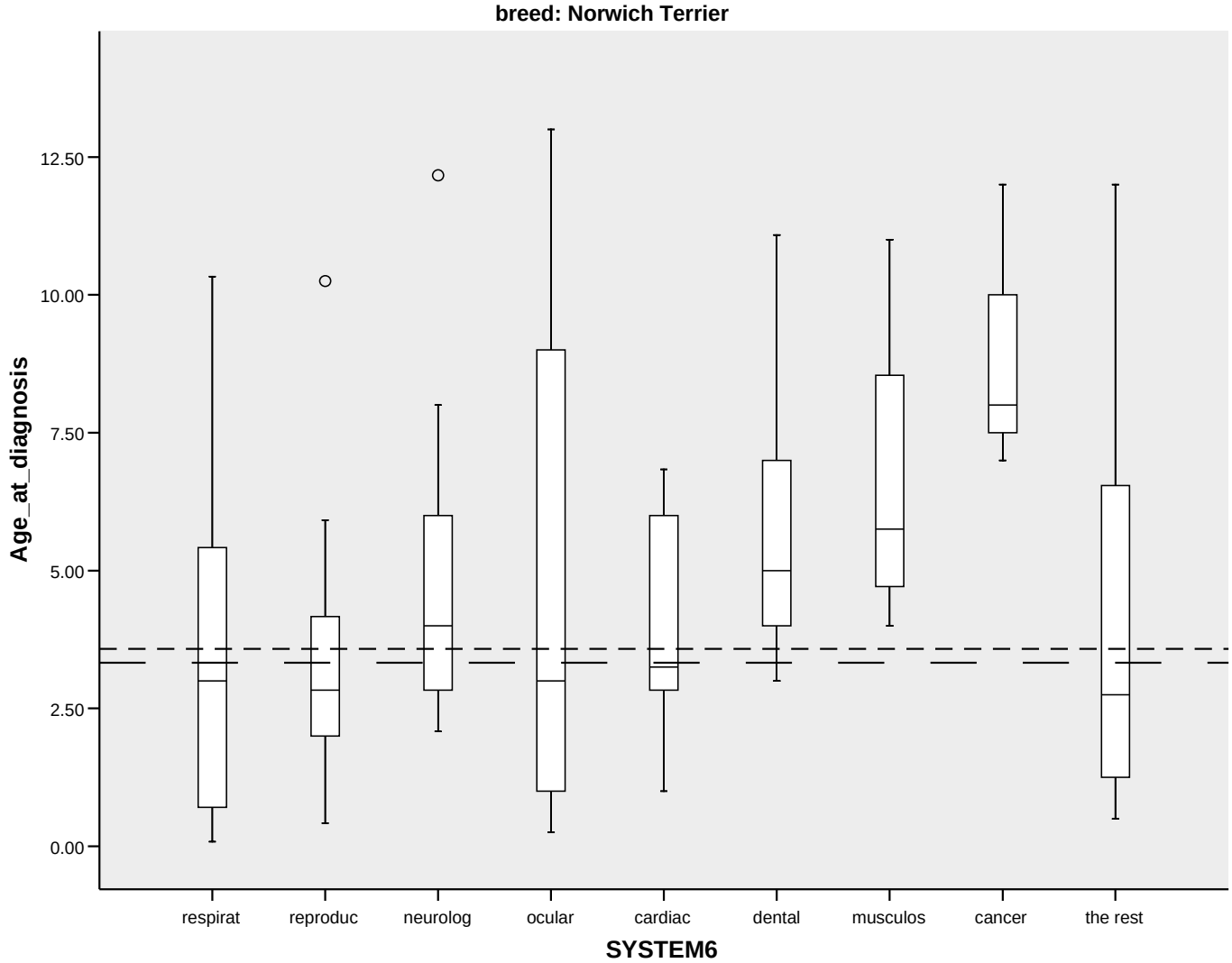


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Norwich Terriers (N=66 dogs with 110 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Norwich Terriers. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Norwich Terriers.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Respiratory	24	20.7	Noisy breathing; rhinitis; long soft palate; bronchitis; kennel cough; unspecified
2	Reproductive	20	17.2	Dystochia (physical blockage>uterine inertia); caesarean; cryptorchid; false pregnancy
3	Neurologic	17	14.7	Seizures; Scottie cramp; collapse (unspecified); deafness
4	Ocular	13	11.2	Cataracts; blocked tear duct; epiphora; blindness; cherry eye
5	Cardiac	5	4.3	Heart murmur (unspecified); cardiomegaly; collapse or fainting
6	Dental	5	4.3	Dental disease
7	Musculoskeletal	4	3.4	Patellar luxation; arthritis (unspecified); unspecified
8	Aural	3	2.6	Otitis externa; narrow ear canal
9	Cancer	3	2.6	Type unspecified (skin>mammary)
10	Dermatologic	3	2.6	Dermatitis
11	Immune mediated	3	2.6	Flea allergy; drug reaction; vaccine reaction
12	Unknown	3	2.6	Undiagnosed disease
13	Urologic	3	2.6	Cystitis; cystouroliths (struvite); incontinence (unspecified)
14	Benign neoplasia	2	1.7	Unspecified (skin)
15	Endocrine	2	1.7	Cushings disease; hypothyroidism
16	Gastrointestinal	2	1.7	Colitis; epulis
17	Trauma	2	1.7	Musculoskeletal (hind paw); unspecified
18	Hepatic	1	0.9	Acute liver failure
19	Other	1	0.9	Uncodeable
	Total	116	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for Nova Scotia Duck Tolling Retrievers

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Nova Scotia Duck Tolling Retrievers

A total of 175 forms were sent out and 60 were returned, representing 91 live dogs. This breed had a 34.3% response rate (60/175) and it represented 0.44% of all returns (60/13,741).

Mortality data

A total of 9 deaths were reported and this represents 0.06% of all deaths reported in the survey (9/15,881). The median age at death for Nova Scotia Duck Tolling Retrievers was 8 years (min = 9 months, max = 14 years and 4 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Nova Scotia Duck Tolling Retrievers. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Nova Scotia Duck Tolling Retrievers.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	3	33.3	Type unspecified (mammary, lung)
2	Neurologic	2	22.2	Cerebellar abiotrophy; meningitis
3	Cardiac	1	11.1	Heart failure
4	Cerebral vascular	1	11.1	Stroke or cerebral vascular accident
5	Other	1	11.1	Uncodeable
6	Trauma	1	11.1	Road traffic accident
	Total	9	100.0	

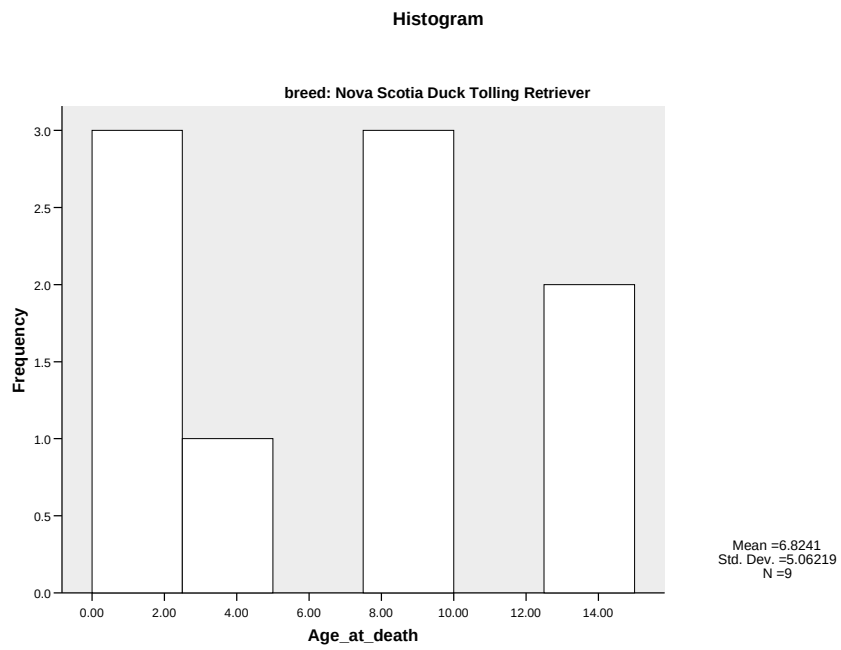


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 9 Nova Scotia Duck Tolling Retriever deaths with age at death reported.

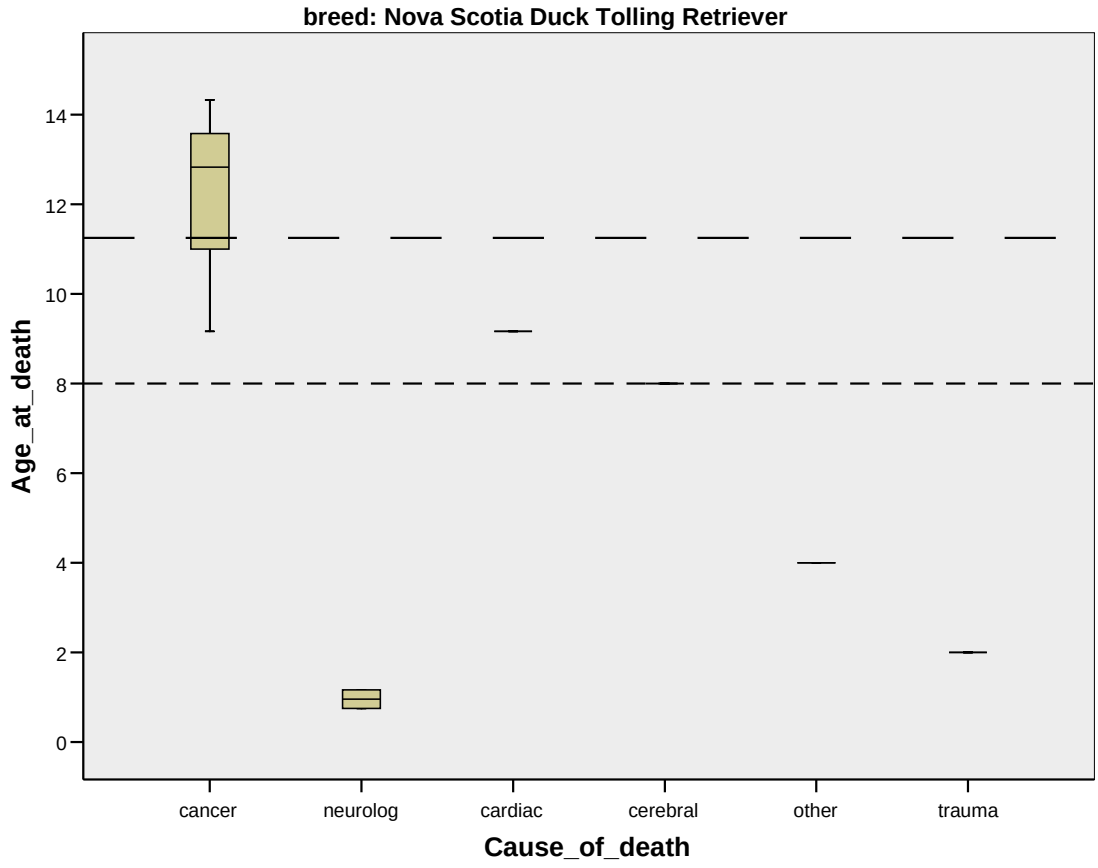


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Nova Scotia Duck Tolling Retrievers (N=9). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Nova Scotia Duck Tolling Retrievers. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 91 live dogs with a reported age was 3 years and 3 months (min=2 months, max=14 years, Figure 3). Health information was reported for 91 live dogs of which 50 (55%) were healthy and 41 (45%) had at least one reported health condition, resulting in a total of 69 reported conditions with a median of 1 condition/dog (min=1, max=4).

The median current age of all healthy dogs with a reported age (N=50) was 1 year and 5 months (min=2 months, max=10 years and 9 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=40) was 5 years and 6 months (min=7 months, max=14 years). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=67) was 2 years and 6 months (min= 2 months, max= 12 years, Figure 4). Table 3 shows the disease conditions for Nova Scotia Duck Tolling Retrievers. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 91 Nova Scotia Duck Tolling Retrievers with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	30	20	50 (55%)
Male	27	14	41 (45%)
Totals	57 (63%)	34 (37%)	91 (100%)

There was no association between gender and neuter status (P=0.5658).

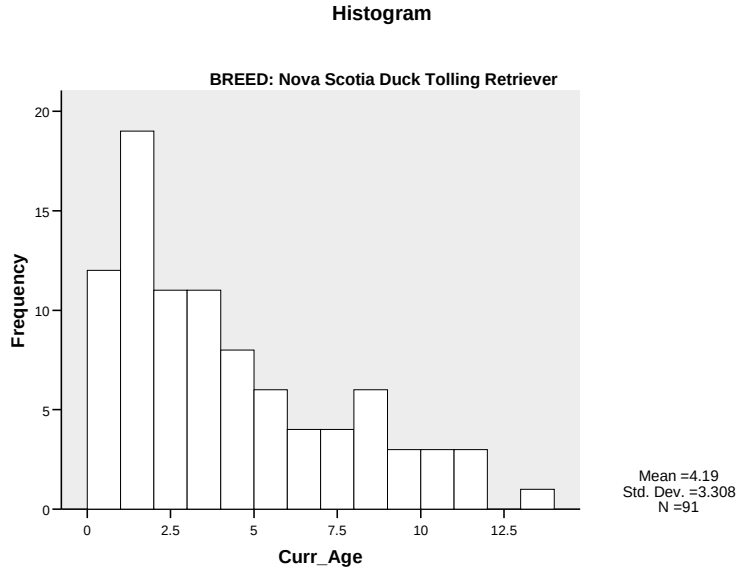


Figure 3. Histogram showing frequency of current age in years for the 91 live Nova Scotia Duck Tolling Retrievers with age reported.

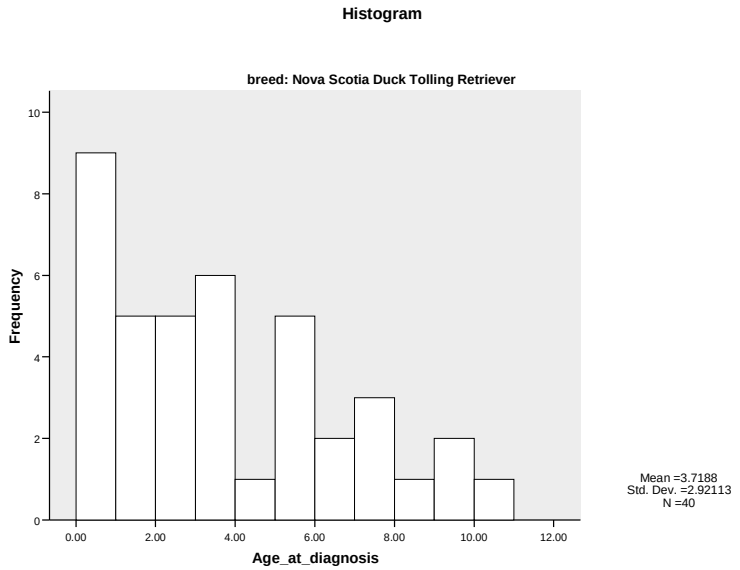


Figure 4. Histogram showing frequency of age at diagnosis for the 40 Nova Scotia Duck Tolling Retrievers with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

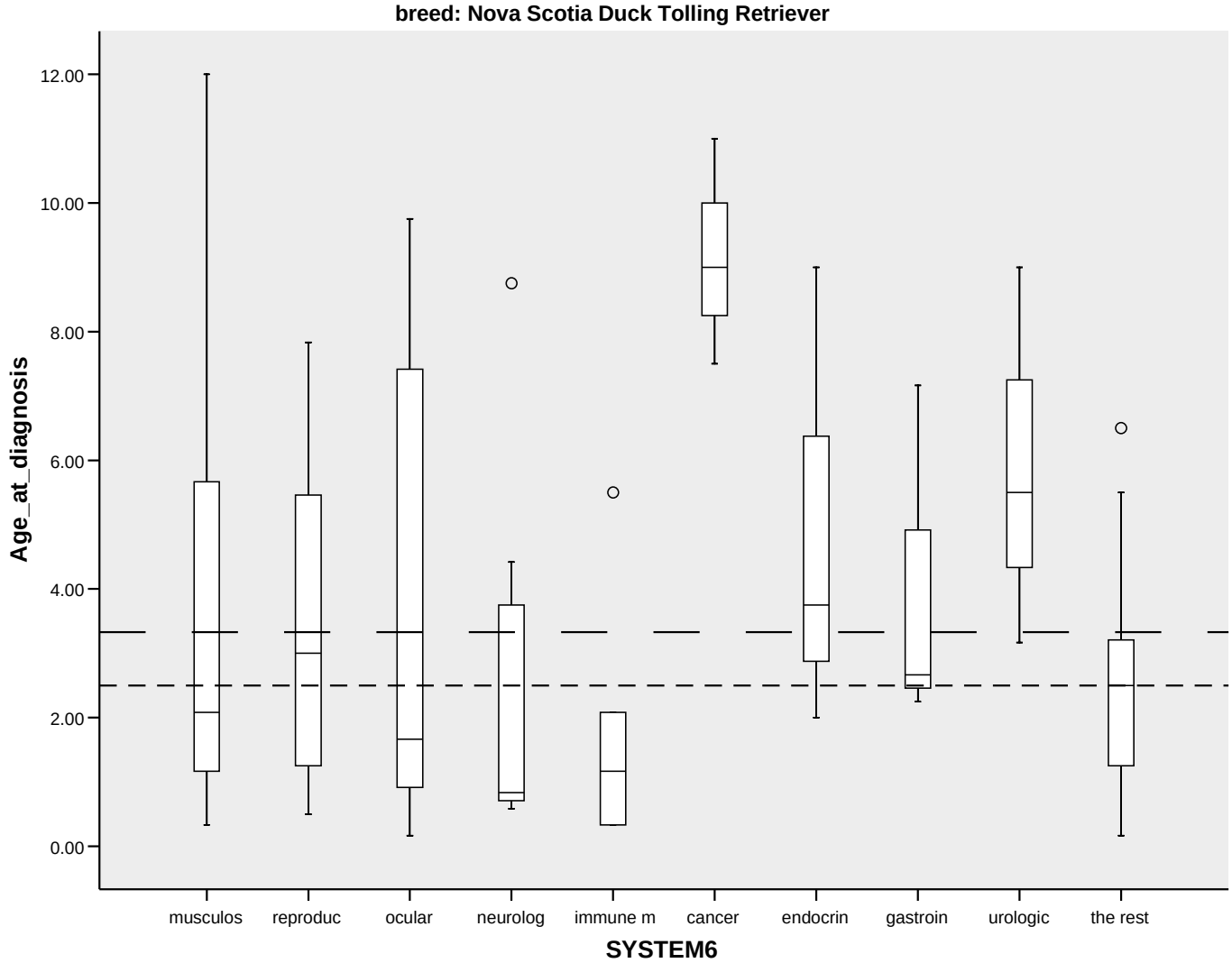


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Nova Scotia Duck Tolling Retrievers (N=40 dogs with 67 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Nova Scotia Duck Tolling Retrievers. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Nova Scotia Duck Tolling Retrievers.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Musculoskeletal	11	15.9	Arthritis (hindlimb=unspecified); CLR; other (unspecified); lameness (forelimb=hindlimb)
2	Reproductive	11	15.9	False pregnancy; prostatomegaly; cryptorchid; eclampsia; mastitis; pyometra
3	Ocular	9	13.0	Corneal ulcer; entropion; distichiasis; conjunctivitis; trichiasis
4	Neurologic	7	10.1	Meningitis; IVDD (lumbosacral=unspecified); rage syndrome; seizures
5	Immune mediated	6	8.7	Flea allergy; food allergy; allergy other (unspecified)
6	Cancer	4	5.8	MCT (limbs; mammary); schwannoma
7	Dermatologic	4	5.8	Mites (cheyletiella=sarcoptes); sebaceous cyst; dermatitis
8	Endocrine	3	4.3	Hypothyroidism; hypoparathyroidism
9	Gastrointestinal	3	4.3	Colitis; foreign body obstruction; pancreatitis
10	Unknown	3	4.3	Undiagnosed illness
11	Urologic	3	4.3	Cystitis; incontinence (unspecified); urethral obstruction
12	Respiratory	2	2.9	Kennel cough
13	Aural	1	1.4	Otitis externa
14	Dental	1	1.4	Retained puppy teeth
15	Hepatic	1	1.4	Hepatitis
	Total	69	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for Old English Sheepdogs

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Old English Sheepdogs

A total of 66 forms were sent out and 32 were returned, representing 97 live dogs. This breed had a 48.5% response rate (32/66) and it represented 0.23% of all returns (32/13,741).

Mortality data

A total of 65 deaths were reported and this represents 0.41% of all deaths reported in the survey (65/15,881). The median age at death for Old English Sheepdogs was 10 years and 9 months (min = 1 year and 4 months, max = 15 years and 1 month) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Old English Sheepdogs. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Old English Sheepdogs.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	17	26.2	Type unspecified (mammary, stomach, throat)
2	Old age	14	21.5	Old age & age combinations
3	Cardiac	6	9.2	Heart defect unspecified; congenital heart defect unspec
4	Urologic	6	9.2	Kidney failure
5	Gastrointestinal	5	7.7	Gastric dilatation/volvulus (GDV)
6	Trauma	4	6.2	Spinal injury; road traffic accident; attacked by dog
7	Cerebral vascular	2	3.1	Stroke or cerebral vascular accident
8	Other	2	3.1	Uncodeable
9	Unknown	2	3.1	Undiagnosed illness
10	Behaviour	1	1.5	Aggression
11	Combinations	1	1.5	
12	Endocrine	1	1.5	Hypothyroidism
13	Internal bleeding	1	1.5	
14	Musculoskeletal	1	1.5	Arthritis
15	Neurologic	1	1.5	Seizures
16	Sudden death	1	1.5	
	Total	65	100.0	

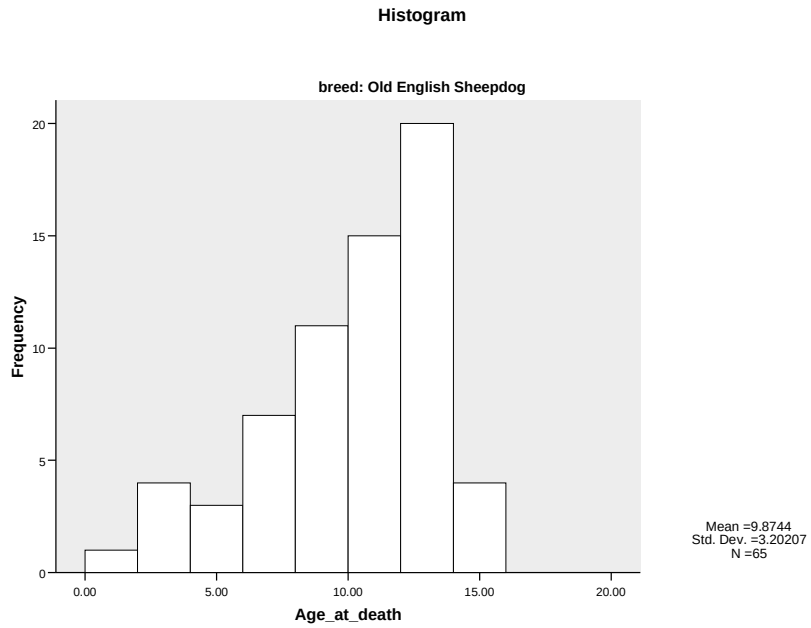


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 65 Old English Sheepdog deaths with age at death reported.

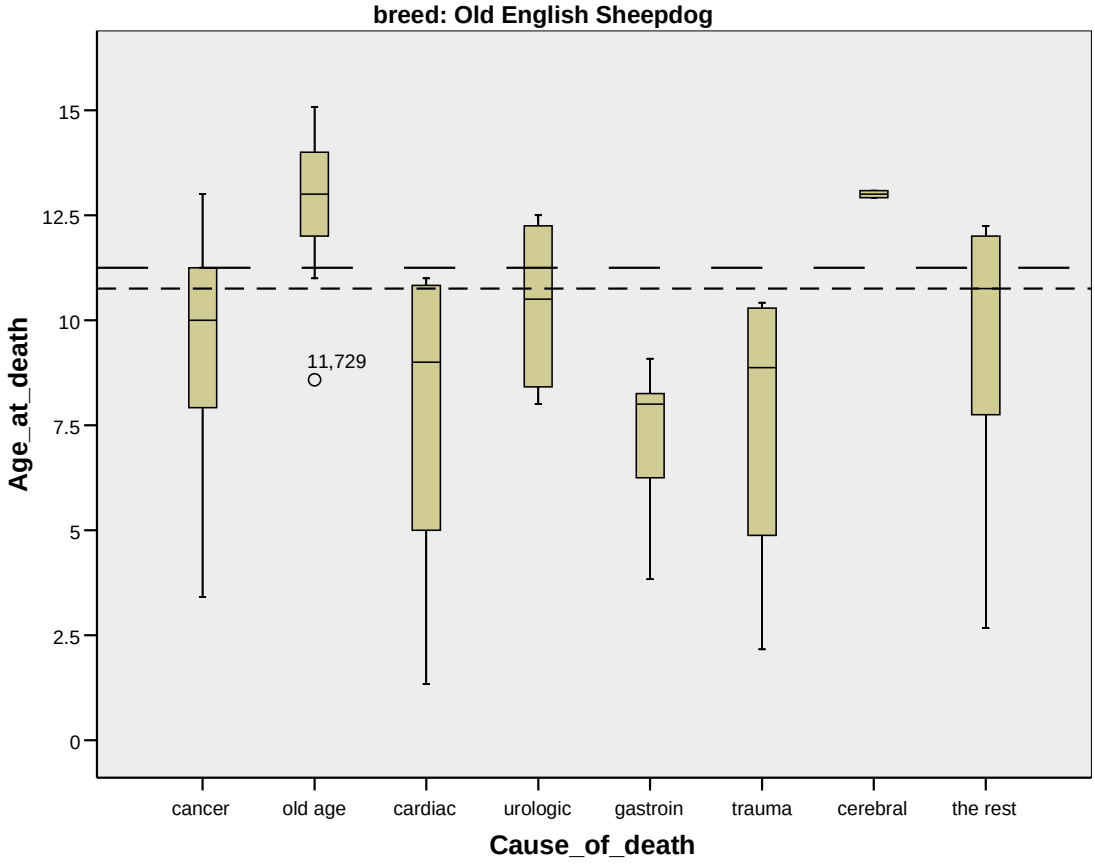


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Old English Sheepdogs (N=65). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Old English Sheepdogs. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 96 live dogs with a reported age was 5 years and 3 months (min=3 months, max=12 years and 4 months, Figure 3). Health information was reported for 97 live dogs of which 63 (65%) were healthy and 34 (35%) had at least one reported health condition, resulting in a total of 62 reported conditions with a median of 1 condition/dog (min=1, max=5).

The median current age of all healthy dogs with a reported age (N=63) was 4 years and 12 months (min=3 months, max=10 years and 6 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=33) was 7 years and 7 months (min=1 year and 1 month, max=12 years and 4 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=61) was 3 years and 1 month (min= 5 months, max= 10 years and 11 months, Figure 4). Table 3 shows the disease conditions for Old English Sheepdogs. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 97 Old English Sheepdogs with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	45	20	65 (67%)
Male	31	1	32 (33%)
Totals	76 (78%)	21 (22%)	97 (100%)

Significantly more females were neutered (P=0.0019).

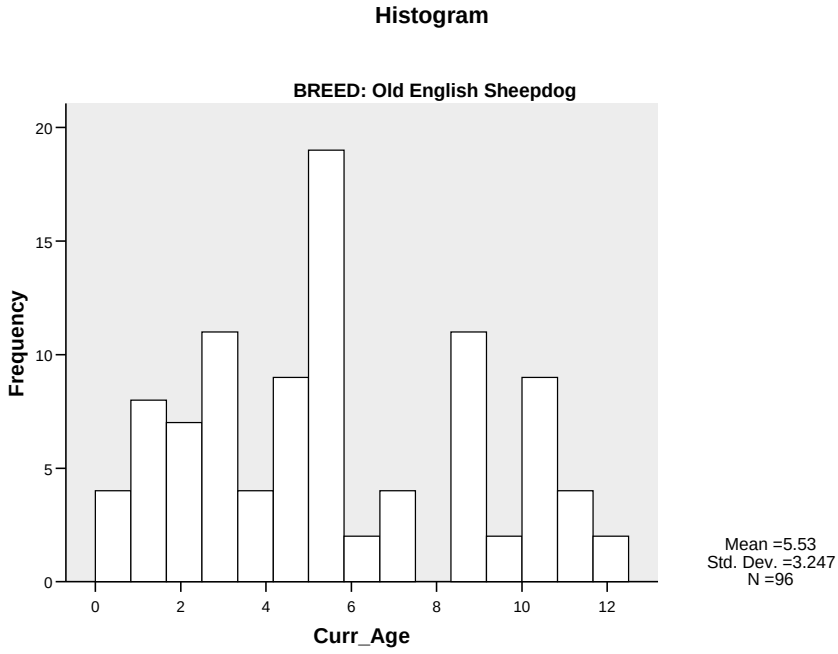


Figure 3. Histogram showing frequency of current age in years for the 96 live Old English Sheepdogs with age reported.

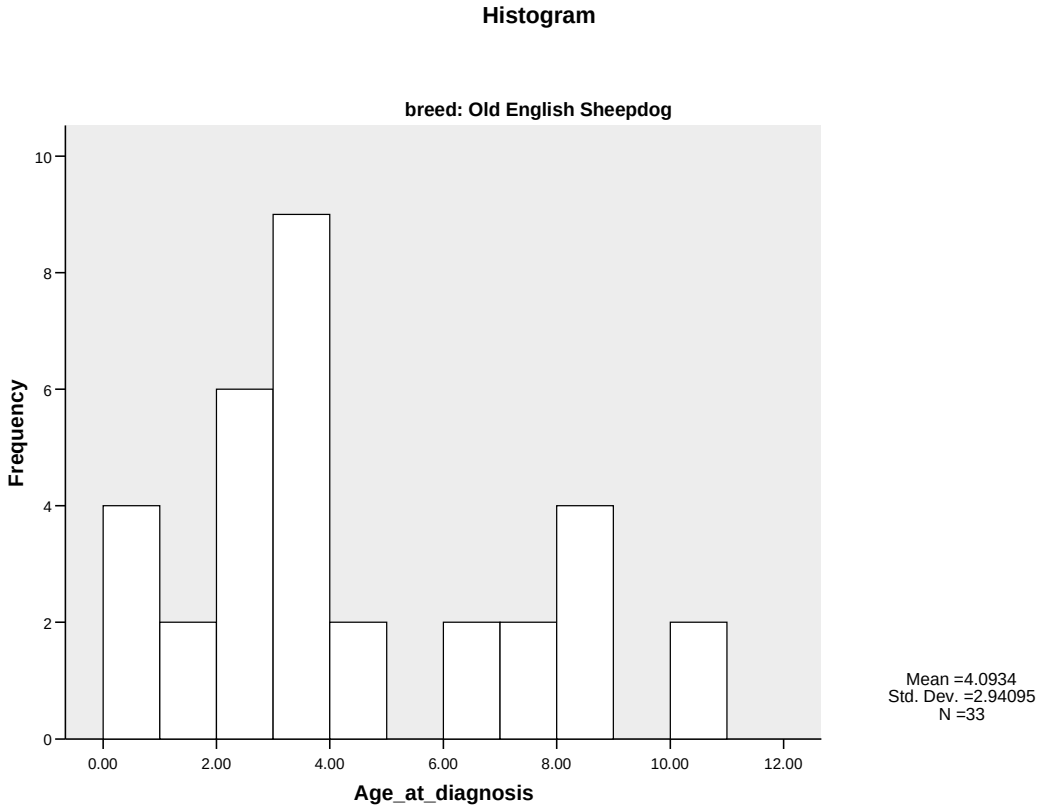


Figure 4. Histogram showing frequency of age at diagnosis for the 33 Old English Sheepdogs with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

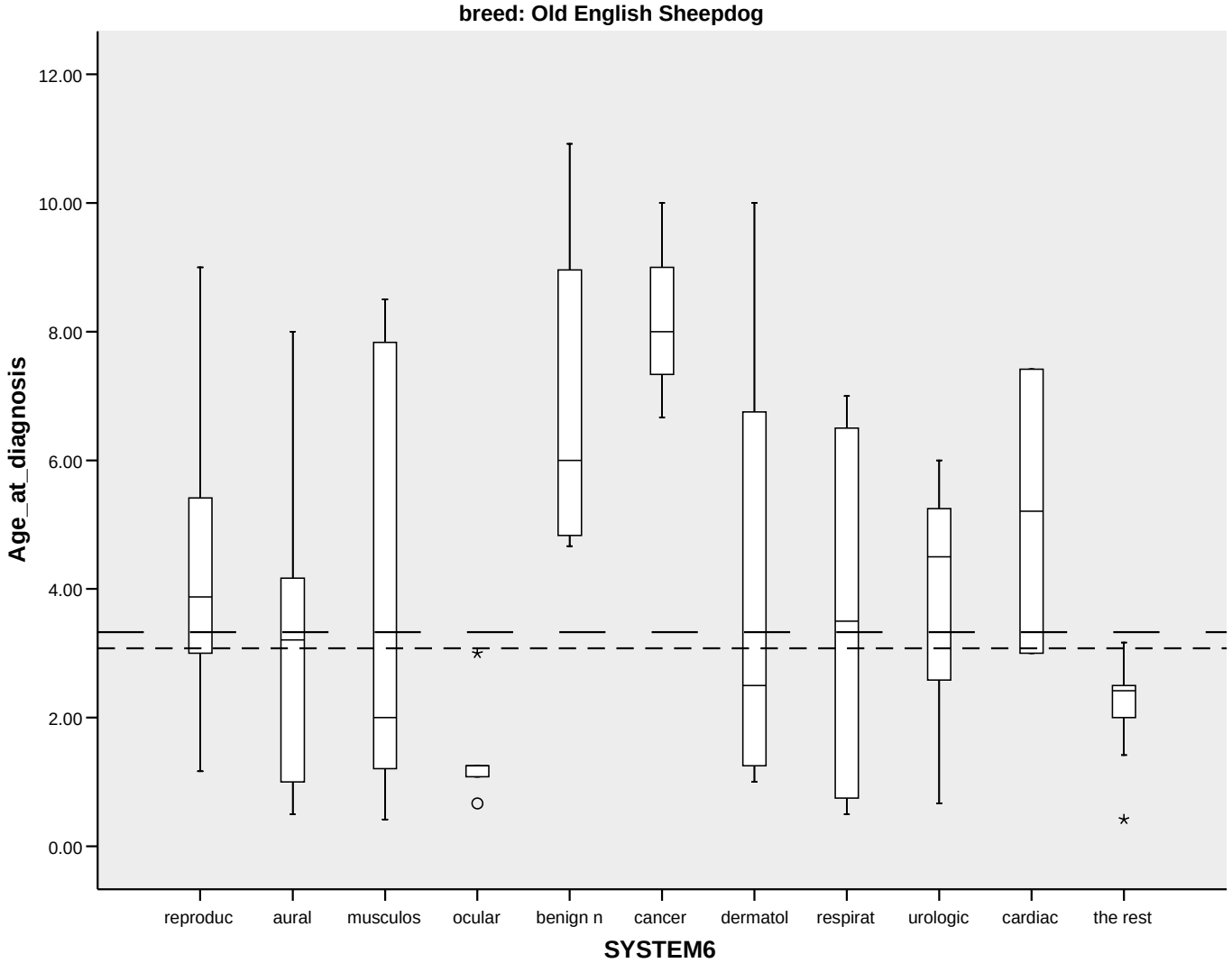


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Old English Sheepdogs (N=33 dogs with 61 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Old English Sheepdogs. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Old English Sheepdogs.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Reproductive	12	19.4	Infertility; irregular heat cycles; pyometra; dystochia (physical blockage=uterine inertia)
2	Aural	7	11.3	Otitis externa; excessive ear wax
3	Musculoskeletal	7	11.3	CHD; stiff joints; arthritis (hindlimb); prognathism
4	Ocular	5	8.1	Cataracts; congenital cataracts; entropion; other (unspecified)
5	Benign neoplasia	4	6.5	Lipoma
6	Cancer	4	6.5	Type unspecified (mammary>skin)
7	Dermatologic	4	6.5	Anal furunculosis; fading nose pigment; mites (sarcoptes); dermatitis
8	Respiratory	4	6.5	Kennel cough; rhinitis
9	Immune mediated	3	4.8	Atopy; food allergy
10	Urologic	3	4.8	Cystouroliths (struvite); incontinence (unspecified)
11	Cardiac	2	3.2	Heart murmur (grade 3); arrhythmia
12	Gastrointestinal	2	3.2	Colitis; pancreatitis
13	Unknown	2	3.2	Undiagnosed illness
14	Haematopoietic	1	1.6	Anaemia unspecified
15	Trauma	1	1.6	Dermatologic
16	Other	1	1.6	Uncodeable
	Total	62	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for the Pekingese breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Pekingese breed

A total of 174 forms were sent out and 33 were returned, representing 174 live dogs. This breed had a 19.0% response rate (33/174) and it represented 0.24% of all returns (33/13,741).

Mortality data

A total of 87 deaths were reported and this represents 0.55% of all deaths reported in the survey (87/15,881). The median age at death for the Pekingese breed was 11 years and 5 months (min = 1 year, max = 18 years and 2 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Pekingese breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Pekingese breed.

Cause of death		N	%	Most common specific causes in descending order
1	Cardiac	20	23.0	Heart failure; cardiomegaly; attack; heart disease unspecified
2	Old age	19	21.8	Old age
3	Neurologic	8	9.2	Spinal disease unspecified; seizures; IVDD
4	Cancer	7	8.0	Type unspecified (lung, stomach)
5	Perioperative	7	8.0	
6	Combinations	4	4.6	
7	Ocular	3	3.4	Blindness
8	Reproductive	3	3.4	Pyometra; testicular torsion
9	Died	2	2.3	
10	Infection	2	2.3	Kennel cough
11	Other	2	2.3	Uncodeable
12	Respiratory	2	2.3	Respiratory disease unspecified; respiratory failure
13	Unknown	2	2.3	
14	Urologic	2	2.3	Kidney failure; bladder stones; cystitis
15	Dermatologic	1	1.1	Chronic skin infections
16	Gastrointestinal	1	1.1	Intestinal perforation
17	Immune mediated	1	1.1	Thrombocytopaenia
18	Sudden death	1	1.1	
	Total	87	100.0	

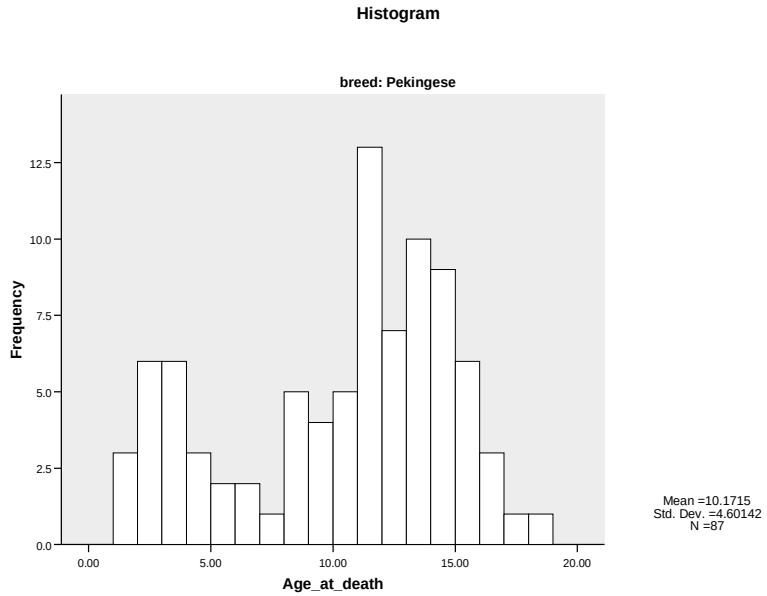


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 87 Pekingese deaths with age at death reported.

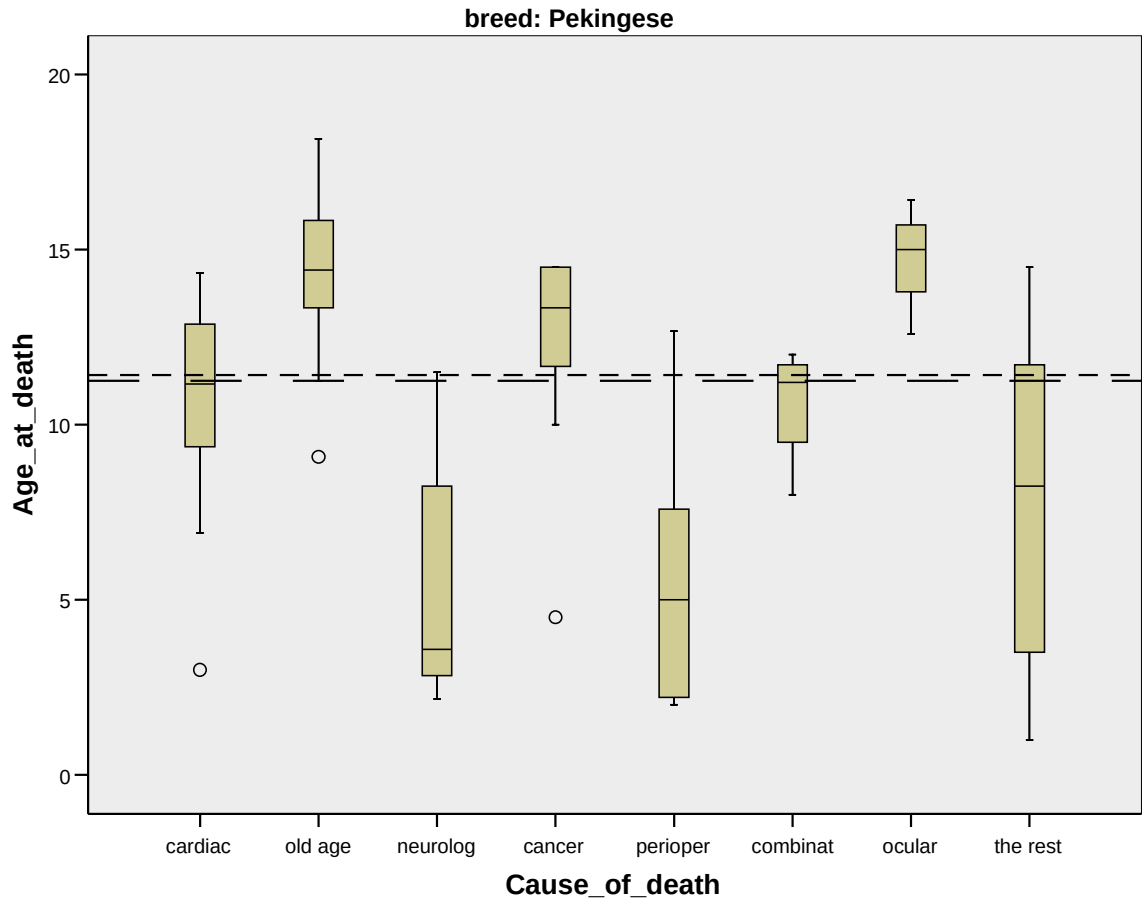


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the Pekingese breed (N=87). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the Pekingese breed. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 174 live dogs with a reported age was 5 years (min=2 months, max=16 years and 2 months, Figure 3). Health information was reported for 174 live dogs of which 109 (63%) were healthy and 65 (37%) had at least one reported health condition, resulting in a total of 108 reported conditions with a median of 1 condition/dog (min=1, max=8).

The median current age of all healthy dogs with a reported age (N=109) was 3 years and 9 months (min=2 months, max=16 years and 2 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=62) was 6 years and 8 months (min=1 year and 1 month, max=15 years and 7 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=103) was 3 years and 6 months (min= 3 months, max= 14 years and 1 month, Figure 4). Table 3 shows the disease conditions for the Pekingese breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 174 the Pekingese breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	95	19	114 (66%)
Male	55	5	60 (34%)
Totals	150 (86%)	24 (14%)	174 (100%)

There was no association between gender and neuter status (P=0.1297).

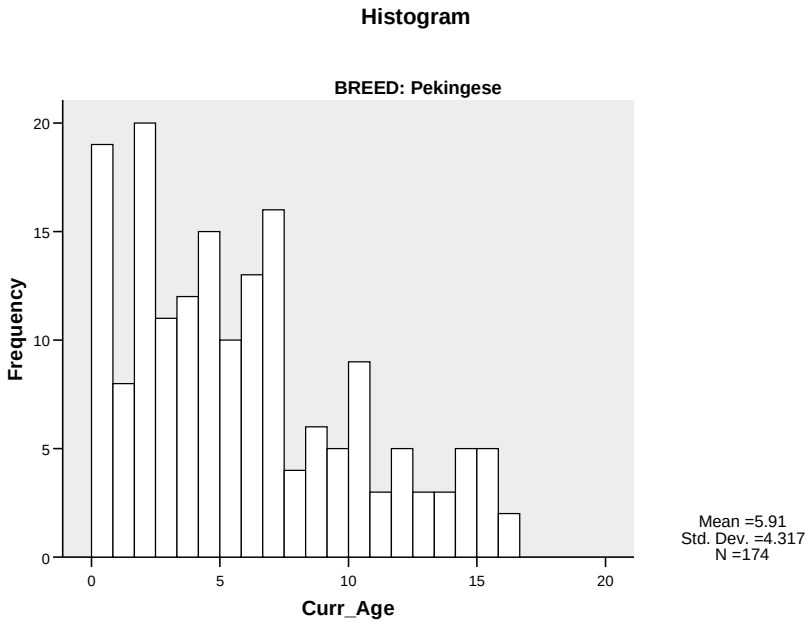


Figure 3. Histogram showing frequency of current age in years for the 174 live the Pekingese breed with age reported.

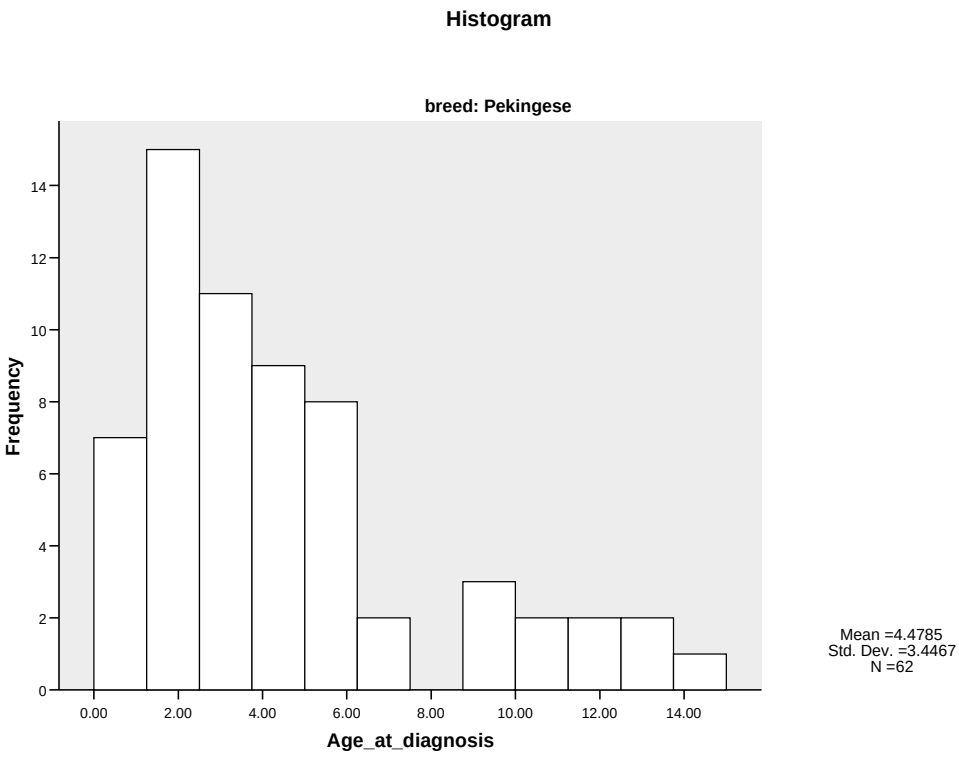


Figure 4. Histogram showing frequency of age at diagnosis for the 62 Pekingese breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

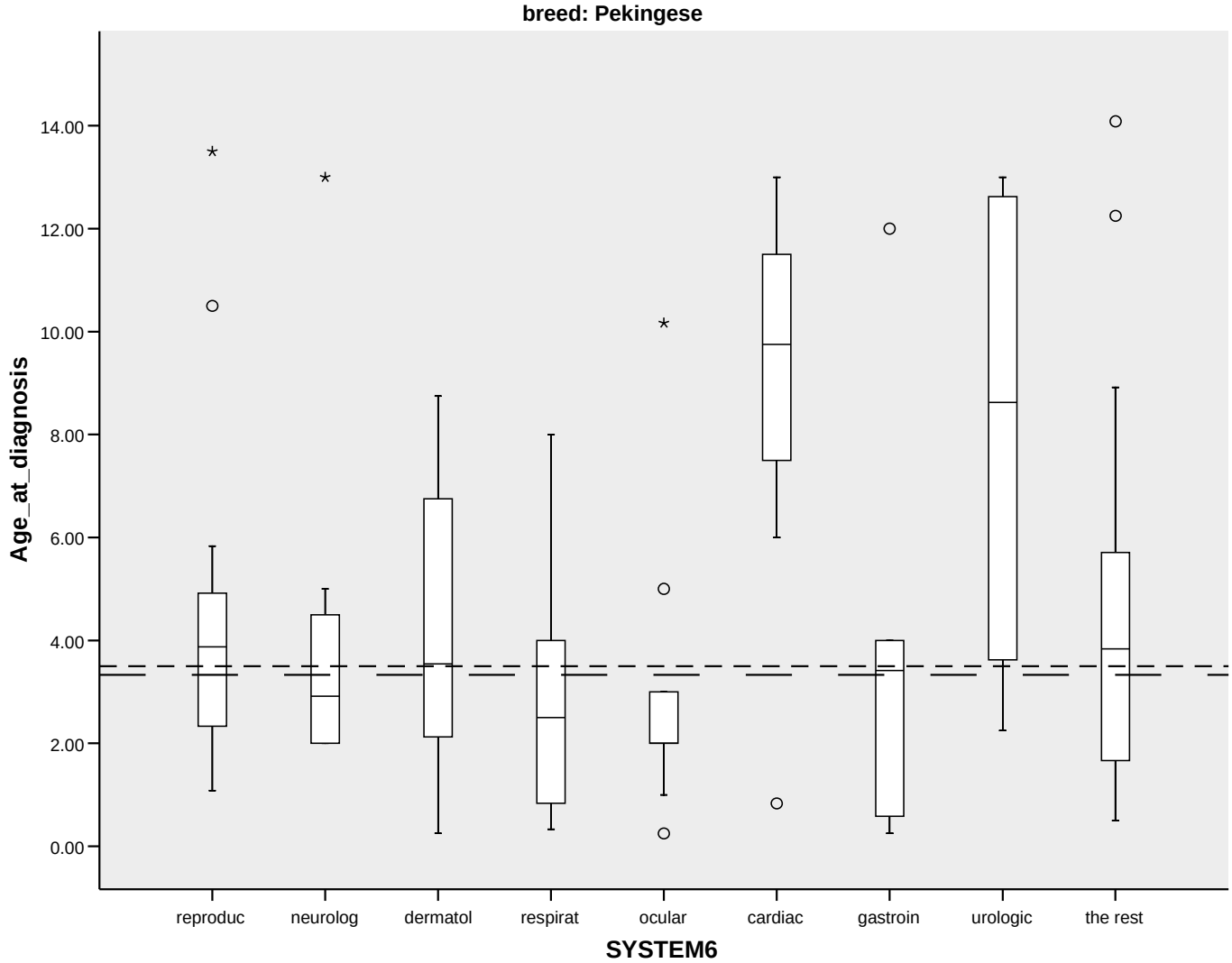


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Pekingese breed (N=62 dogs with 103 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Pekingese breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Pekingese breed.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Reproductive	22	20.4	Dystochia (uterine inertia>physical blockage); pyometra; infertility; irregular heat cycles
2	Neurologic	15	13.9	IVDD (unspecified>lumbar>thoracic); deafness
3	Dermatologic	12	11.1	Sebaceous cysts; dermatitis; pyotraumatic dermatitis
4	Respiratory	11	10.2	Kennel cough; noisy breathing; BOAS; long soft palate; rhinitis; unspecified
5	Ocular	9	8.3	Corneal ulcer; KCS; entropion; eye infections; enucleation
6	Cardiac	8	7.4	Heart murmur (unspecified>without clinical signs); coughing; CHF; slow heart rate
7	Musculoskeletal	6	5.6	Patellar luxation; spondylitis
8	Gastrointestinal	5	4.6	Vomiting; gastric dilatation/volvulus (GDV); colitis; malabsorption
9	Aural	4	3.7	Otitis externa; excessive ear wax
10	Unknown	4	3.7	Undiagnosed illness
11	Urologic	4	3.7	Cystouroliths (calcium oxalate=unspecified); cystitis; incontinence (unspecified)
12	Immune mediated	3	2.8	Atopy; food allergy
13	Trauma	3	2.8	Unspecified
14	Cerebrovascular	1	0.9	Stroke or cerebral vascular accident
15	Endocrine	1	0.9	Diabetes mellitus
	Total	108	100.0	

BOAS=brachycephalic obstructive airway syndrome

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for Pharoah Hounds

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Pharoah Hounds

A total of 30 forms were sent out and 8 were returned, representing 20 live dogs. This breed had a 26.7% response rate (8/30) and it represented 0.06% of all returns (8/13,741).

Mortality data

A total of 15 deaths were reported and this represents 0.09% of all deaths reported in the survey (15/15,881). The median age at death for Pharoah Hounds was 11 years and 10 months (min = 3 years, max = 17 years and 2 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Pharoah Hounds. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Pharoah Hounds.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	5	33.3	Type unspecified (neck), haemangiosarcoma (spleen)
2	Behaviour	2	13.3	Aggression
3	Neurologic	2	13.3	IVDD; spinal disease unspecified
4	Old age	2	13.3	Old age
5	Other	2	13.3	Uncodeable
6	Combinations	1	6.7	Hyperthermia & cancer
7	Dermatologic	1	6.7	Unspecified
	Total	15	100.0	

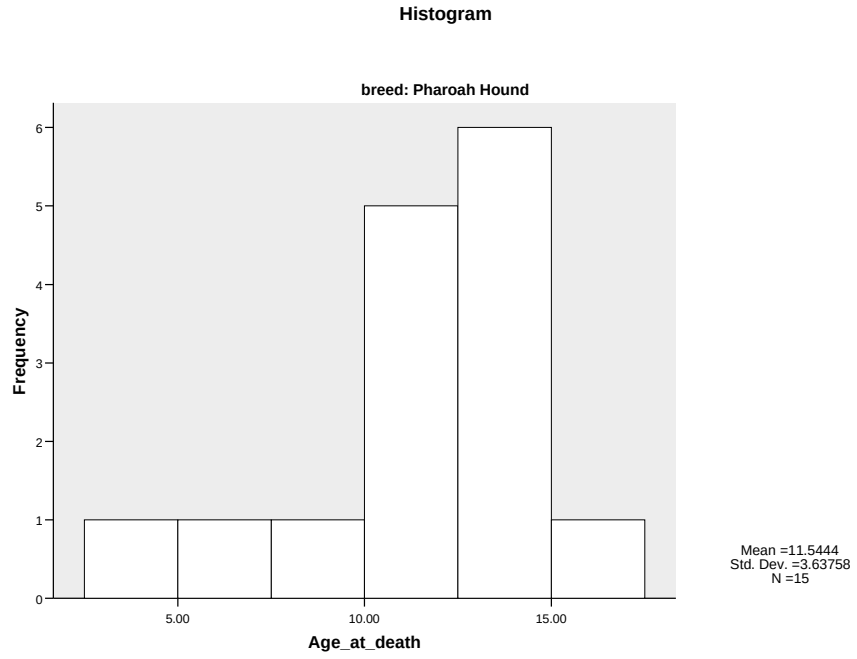


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 15 Pharoah Hound deaths with age at death reported.

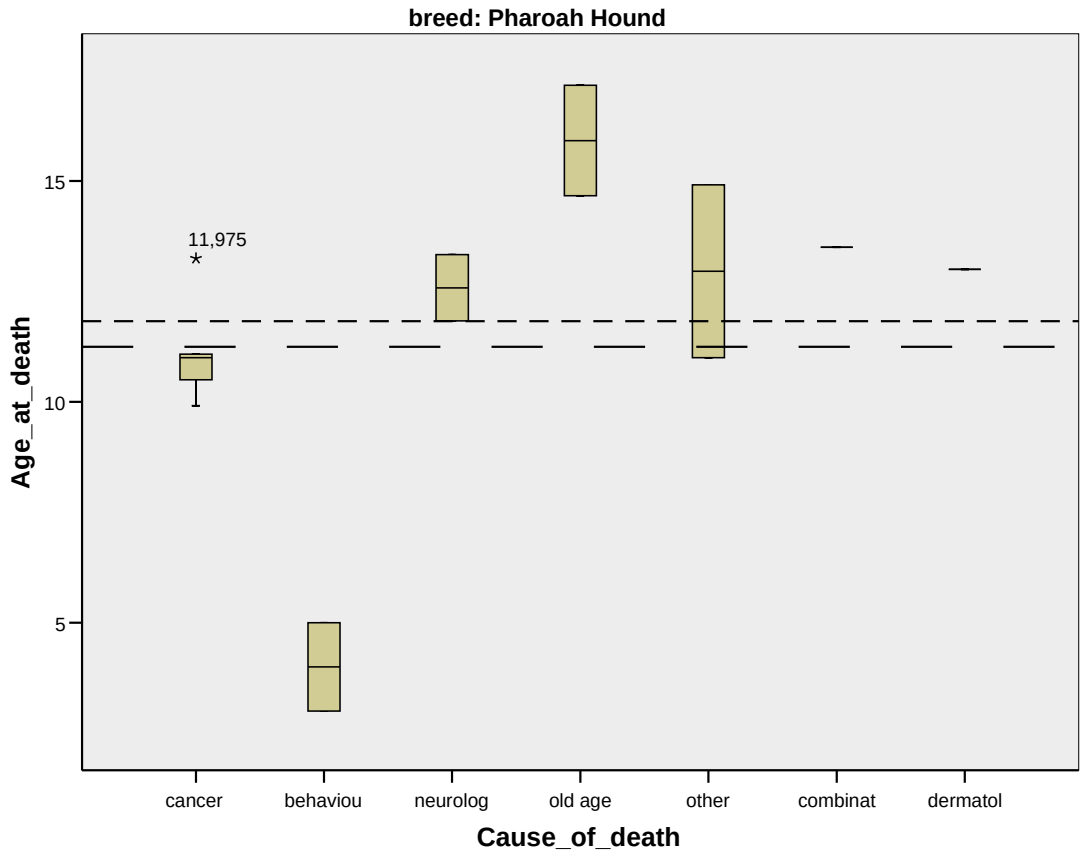


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Pharoah Hounds (N=15). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Pharoah Hounds. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 20 live dogs with a reported age was 5 years and 4 months (min=5 months, max=12 years and 11 months, Figure 3). Health information was reported for 20 live dogs of which 15 (75%) were healthy and 5 (25%) had at least one reported health condition, resulting in a total of 6 reported conditions with a median of 1 condition/dog (min=1, max=2).

The median current age of all healthy dogs with a reported age (N=15) was 4 years and 11 months (min=5 months, max=12 years and 11 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=3) was 5 years and 9 months (min=4 years and 6 months, max=9 years and 10 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=3) was 3 years (min= 2 years, max= 4 years). Table 3 shows the disease conditions and age at diagnosis for Pharoah Hounds.

Table 2. Distribution of gender and neuter status for 20 Pharoah Hounds with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	10	5	15 (75%)
Male	4	1	5 (25%)
Totals	14 (70%)	6 (30%)	20 (100%)

There was no association between gender and neuter status (P=0.5731).

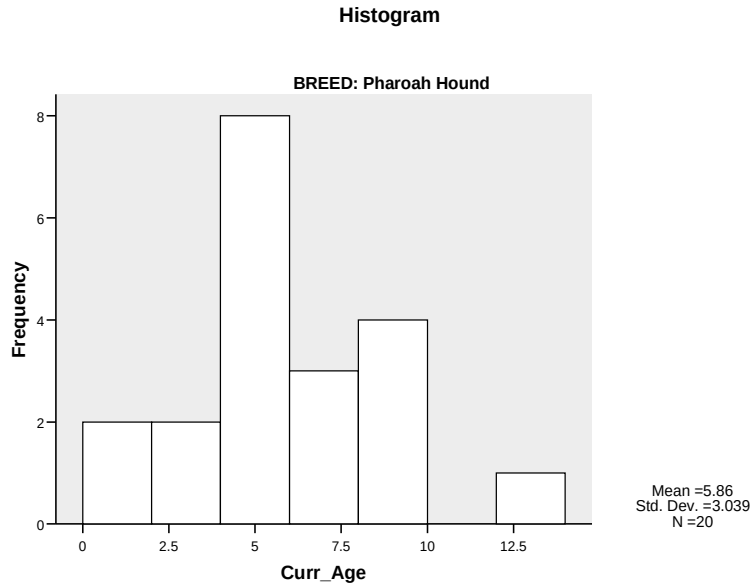


Figure 3. Histogram showing frequency of current age in years for the 20 live Pharoah Hounds with age reported.

Table 3. Disease conditions by organ system/category for Pharoah Hounds.

		All conditions		
Disease condition		N	%	Age at diagnosis
1	Respiratory – kennel cough	3	50.0	
2	Benign neoplasia – lipoma	1	16.7	4 years
3	Gastrointestinal – colitis	1	16.7	3 years
4	Reproductive – irregular heat cycles	1	16.7	2 years
	Total	6	100.0	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for Pointers

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Pointers

A total of 386 forms were sent out and 93 were returned, representing 335 live dogs. This breed had a 24.1% response rate (93/386) and it represented 0.68% of all returns (93/13,741).

Mortality data

A total of 145 deaths were reported and this represents 0.91% of all deaths reported in the survey (145/15,881). The median age at death for Pointers was 12 years and 5 months (min = 6 months, max = 16 years and 5 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Pointers. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Pointers.

Cause of death		N	%	Most common specific causes in descending order
1	Old age	35	24.1	Old age
2	Cancer	30	20.7	Type unspecified (bone, lung)
3	Combinations	11	7.6	
4	Neurologic	10	6.9	Seizures; Wobbler's syndrome
5	Other	10	6.9	Uncodeable
6	Urologic	7	4.8	Kidney failure (chronic > acute); incontinence
7	Cardiac	6	4.1	Heart attack; failure; murmur (unspecified)
8	Unknown	6	4.1	
9	Endocrine	5	3.4	Addisons disease; Cushings disease; diabetes mellitus
10	Cerebral vascular	4	2.8	Stroke or cerebral vascular accident
11	Musculoskeletal	4	2.8	Arthritis
12	Respiratory	4	2.8	Respiratory disease unspecified; pneumonia; failure
13	Gastrointestinal	3	2.1	Gastric dilatation/volvulus (GDV); colitis
14	Trauma	3	2.1	Unspecified; road traffic accident
15	Behaviour	2	1.4	Aggression
16	Poisoning	2	1.4	
17	Immune mediated	1	0.7	Unspecified
18	Perioperative	1	0.7	
19	Senility	1	0.7	
	Total	145	100.0	

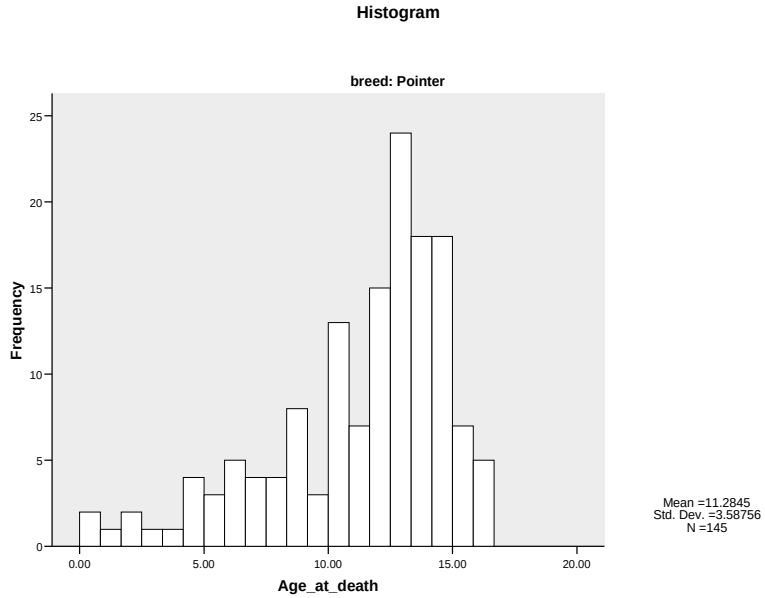


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 145 Pointer deaths with age at death reported.

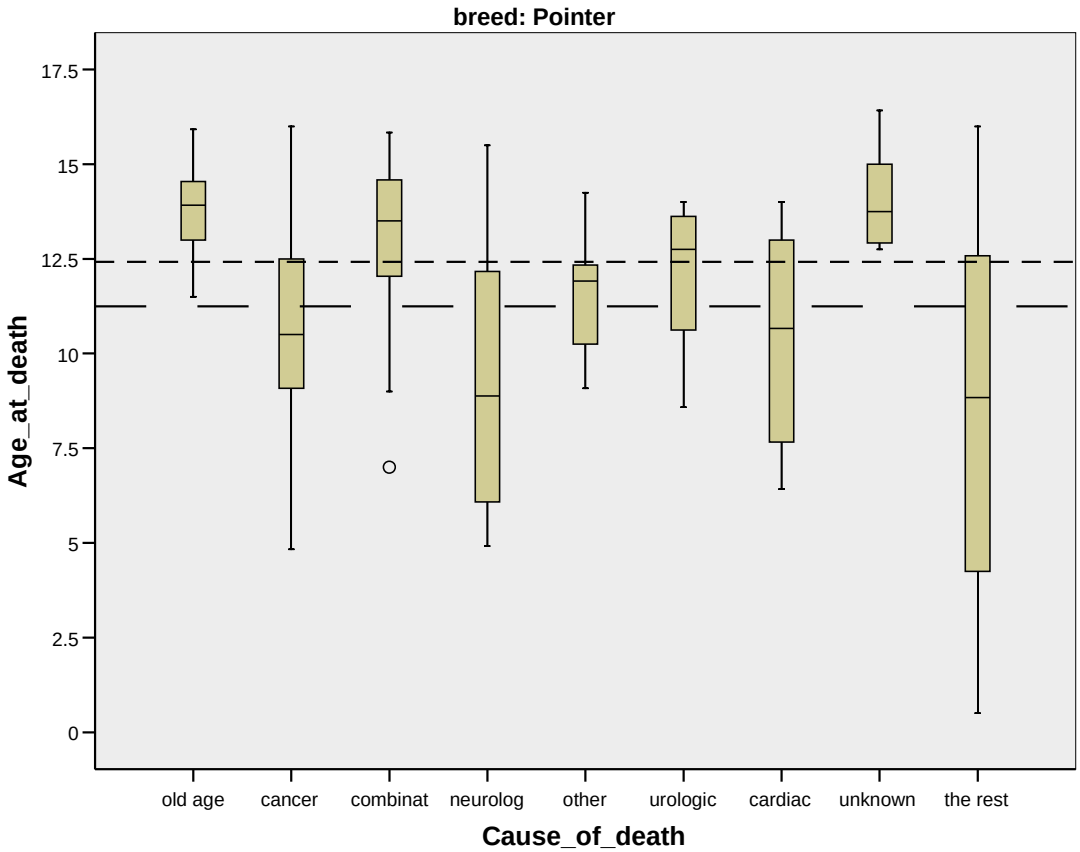


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Pointers (N=145). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Pointers. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 334 live dogs with a reported age was 5 years (min=2 months, max=15 years, Figure 3). Health information was reported for 335 live dogs of which 214 (64%) were healthy and 121 (36%) had at least one reported health condition, resulting in a total of 187 reported conditions with a median of 1 condition/dog (min=1, max=7).

The median current age of all healthy dogs with a reported age (N=214) was 3 years and 11 months (min=2 months, max=15 years). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=111) was 6 years and 12 months (min=6 months, max=14 years and 4 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=173) was 2 years and 9 months (min= 2 months, max= 13 years and 5 months, Figure 4). Table 3 shows the disease conditions for Pointers. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 334 Pointers with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	134	65	199 (60%)
Male	111	24	135 (40%)
Totals	245 (73%)	89 (27%)	334 (100%)

Significantly more females were neutered (P=0.0025).

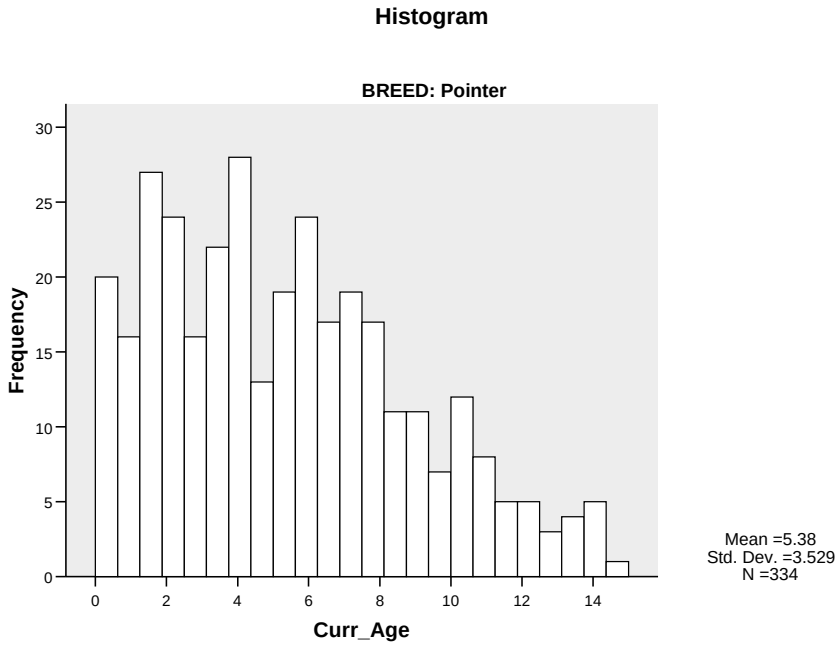


Figure 3. Histogram showing frequency of current age in years for the 334 live Pointers with age reported.

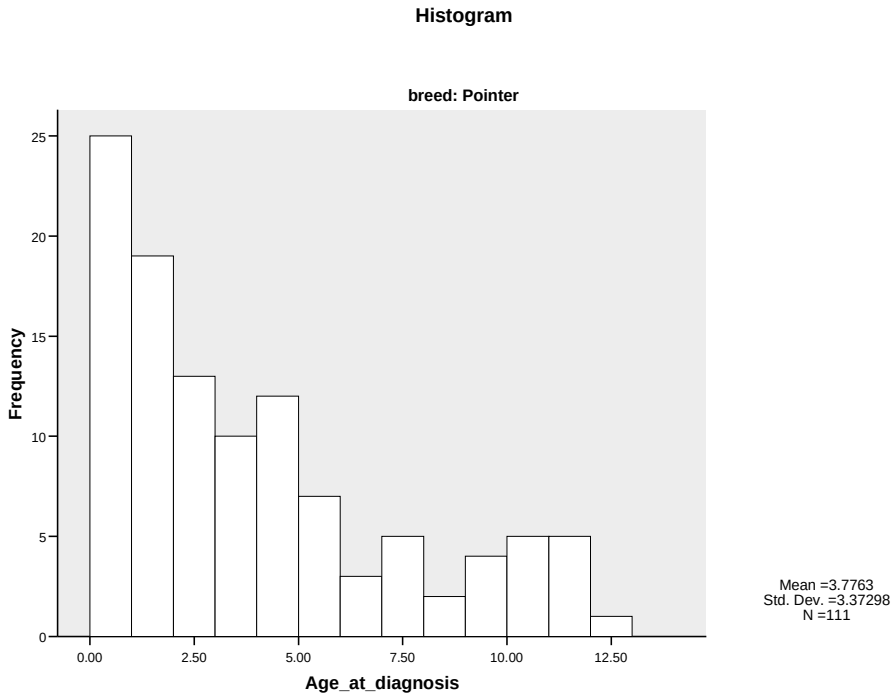


Figure 4. Histogram showing frequency of age at diagnosis for the 111 Pointers with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

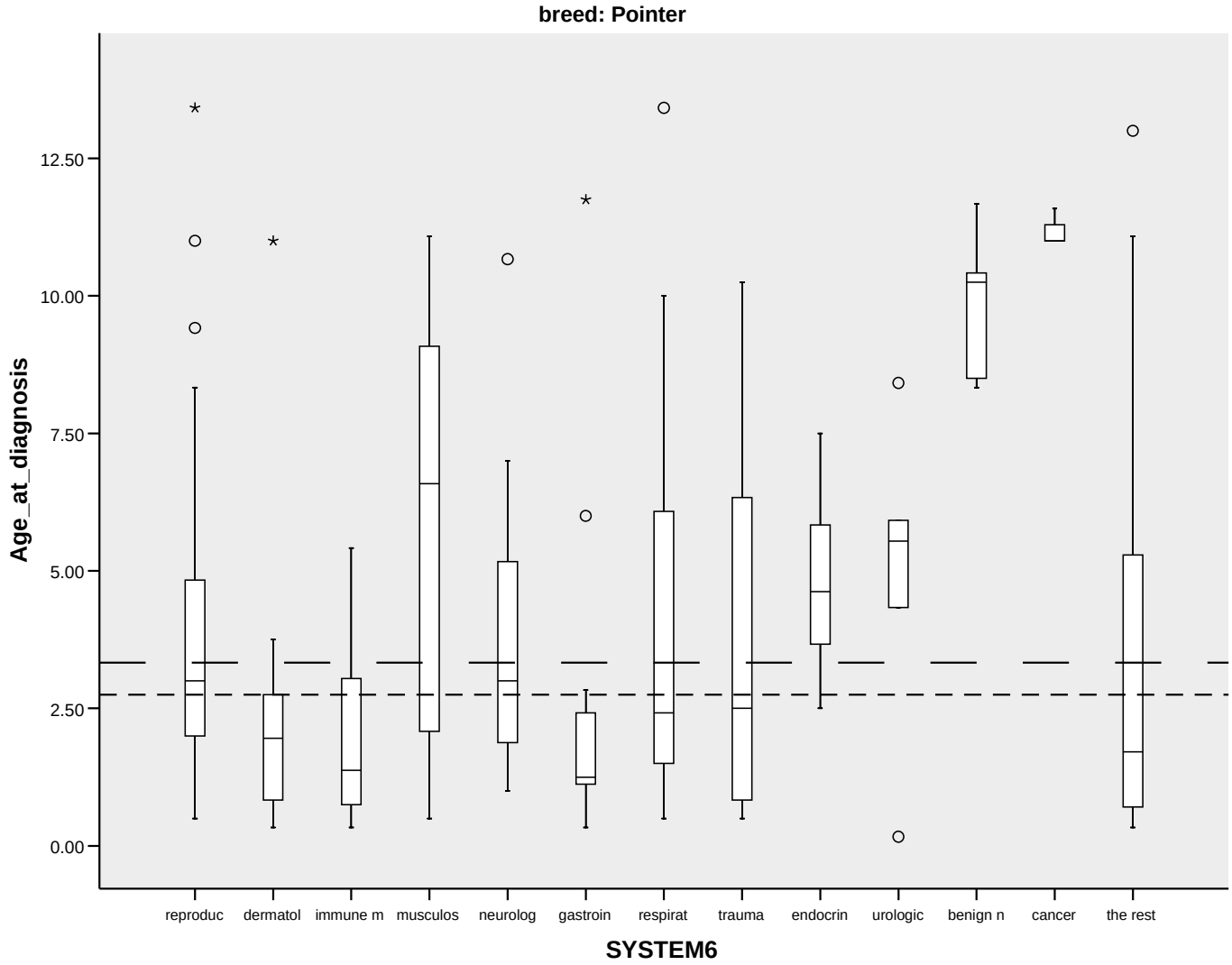


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Pointers (N=111 dogs with 173 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Pointers. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Pointers.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Reproductive	39	20.9	Dystochia (uterine inertia>physical blockage); false pregnancy; pyometra; infertility
2	Dermatologic	17	9.1	Alopecia; recurrent pyoderma; dermatitis; mites (demodex=sarcoptes)
3	Immune mediated	16	8.6	Allergy other (unspecified); atopy; food allergy; gluten-sensitive enteropathy
4	Musculoskeletal	16	8.6	Arthritis; CLR; fracture; ligament injury; rheumatoid arthritis; stiff joints; prognathism
5	Neurologic	12	6.4	Seizures; IVDD (lumbosacral); spondylopathy
6	Gastrointestinal	11	5.9	Colitis; diarrhoea; IBD; foreign body abscess; pancreatitis; vomiting; weight loss
7	Ocular	11	5.9	Conjunctivitis; blocked tear duct; KCS; ectropion; entropion; red eye; corneal ulcer
8	Respiratory	11	5.9	Kennel cough; coughing; pneumonia
9	Unknown	10	5.3	Undiagnosed illness
10	Trauma	9	4.8	Skin>hindlimb>head or jaw; liver; spine
11	Dental	6	3.2	Retained puppy teeth; defect other than extra teeth; dental disease
12	Endocrine	6	3.2	Addisons disease; hypothyroidism
13	Urologic	6	3.2	Cystitis; cystouroliths (unspecified)
14	Benign neoplasia	5	2.7	Lipoma
15	Cancer	4	2.1	Unspecified (anal gland; hip; unspecified)
16	Cardiac	3	1.6	Heart murmur (unspecified); aortic stenosis
17	Aural	2	1.1	Otitis externa; ear mites
18	Uncode and other	2	1.1	Lyme disease; abscess in throat region
19	Anal gland	1	0.5	Anal sacculitis
	Total	187	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for Polish Lowland Sheepdogs

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Polish Lowland Sheepdogs

A total of 134 forms were sent out and 21 were returned, representing 45 live dogs. This breed had a 15.7% response rate (21/134) and it represented 0.15% of all returns (21/13,741).

Mortality data

A total of 11 deaths were reported and this represents 0.07% of all deaths reported in the survey (11/15,881). The median age at death for Polish Lowland Sheepdogs was 9 years and 7 months (min = 2 years and 10 months, max = 15 years and 1 month) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Polish Lowland Sheepdogs. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Polish Lowland Sheepdogs.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	7	63.6	Type unspecified
2	Cardiac	1	9.1	Heart disease unspecified
3	Endocrine	1	9.1	Diabetes mellitus
4	Other	1	9.1	Uncodeable
5	Trauma	1	9.1	Unspecified
	Total	11	100.0	

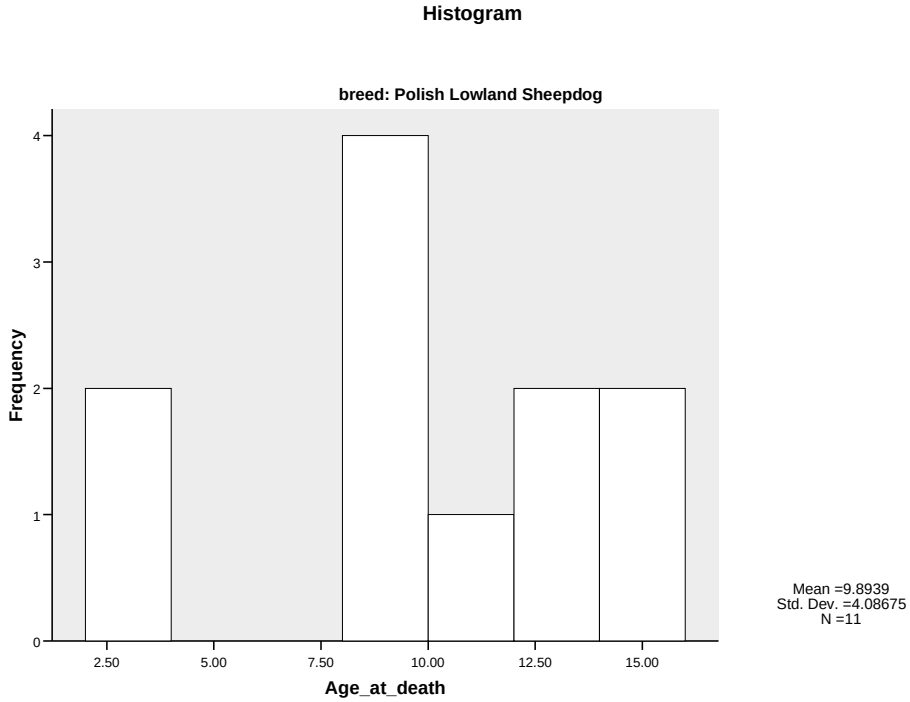


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 11 Polish Lowland Sheepdog deaths with age at death reported.

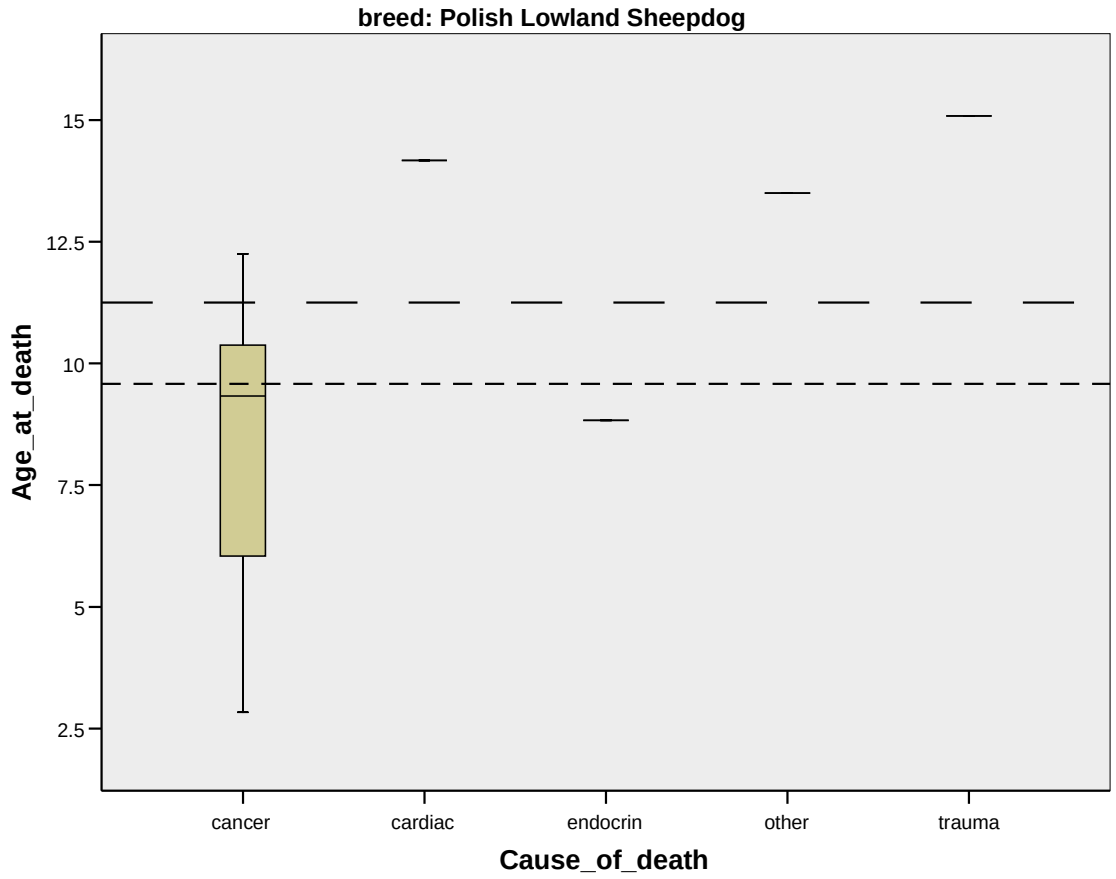


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Polish Lowland Sheepdogs (N=11). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Polish Lowland Sheepdogs. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 45 live dogs with a reported age was 6 years and 5 months (min=4 months, max=12 years and 1 month, Figure 3). Health information was reported for 45 live dogs of which 24 (53%) were healthy and 21 (47%) had at least one reported health condition, resulting in a total of 32 reported conditions with a median of 1 condition/dog (min=1, max=3).

The median current age of all healthy dogs with a reported age (N=24) was 3 years and 10 months (min=4 months, max=12 years and 1 month). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=19) was 7 years (min=1 year and 10 months, max=11 years and 8 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=30) was 3 years and 0 months (min= 4 months, max= 10 years and 6 months, Figure 4). Table 3 shows the disease conditions for Polish Lowland Sheepdogs. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 44 Polish Lowland Sheepdogs with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	13	13	26 (59%)
Male	17	1	18 (41%)
Totals	30 (68%)	14 (32%)	44 (100%)

Significantly more females were neutered (P=0.0019).

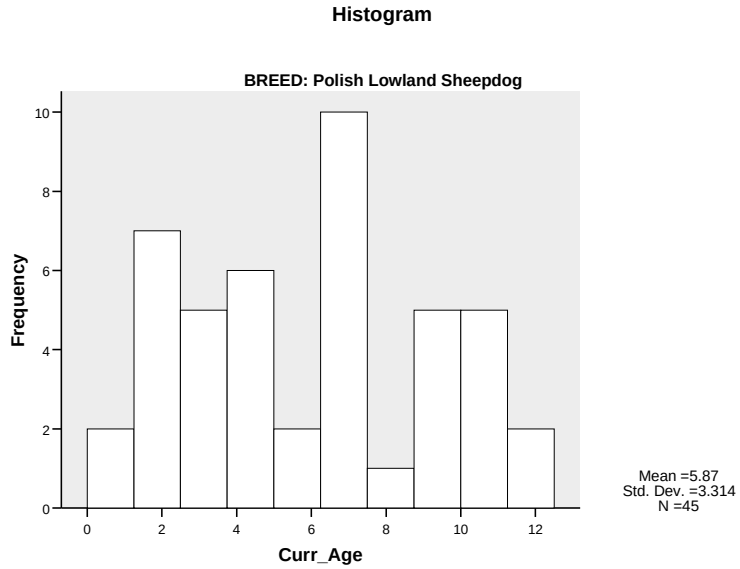


Figure 3. Histogram showing frequency of current age in years for the 45 live Polish Lowland Sheepdogs with age reported.

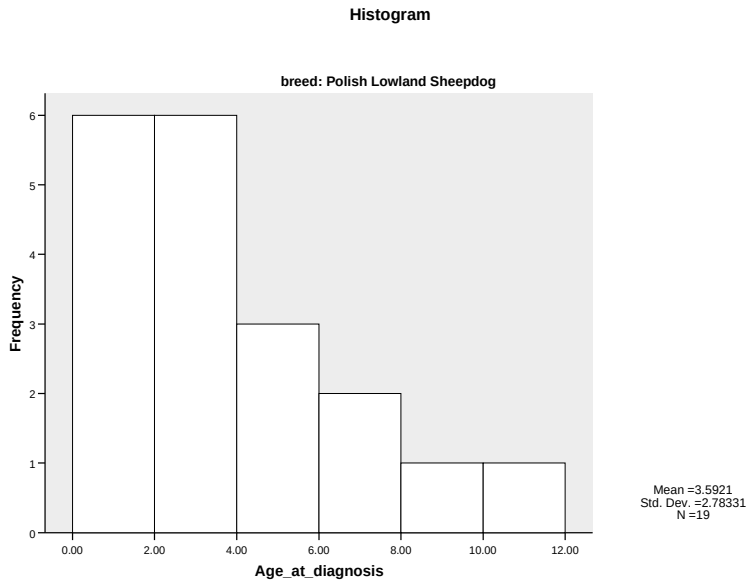


Figure 4. Histogram showing frequency of age at diagnosis for the 19 Polish Lowland Sheepdogs with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

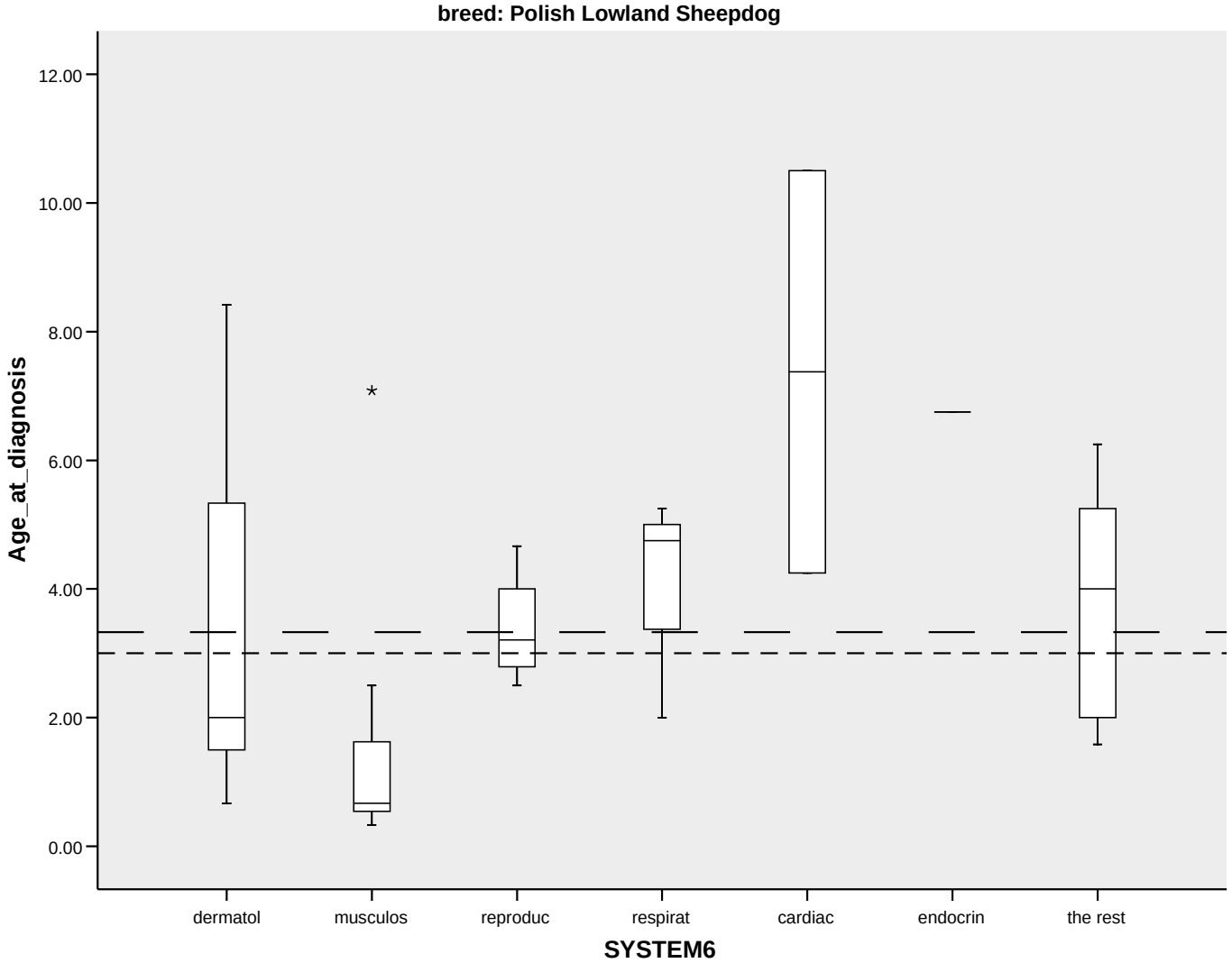


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Polish Lowland Sheepdogs (N=19 dogs with 30 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Polish Lowland Sheepdogs. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Polish Lowland Sheepdogs.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Dermatologic	7	21.9	Pyotraumatic dermatitis; mites (sarcoptes); interdigital cysts
2	Musculoskeletal	7	21.9	Arthritis (hindlimb; hips); spinal fracture; CHD; lameness (forelimb); prognathism
3	Reproductive	4	12.5	Difficulty whelping unspecified; infertility; irregular heat cycles; spontaneous abortion
4	Respiratory	4	12.5	Kennel cough; noisy breathing
5	Cardiac	2	6.3	Heart murmur (unspecified; without clinical signs)
6	Endocrine	2	6.3	Diabetes mellitus; hyperthyroidism
7	Aural	1	3.1	Otitis externa
8	Benign neoplasia	1	3.1	Lipoma
9	Cancer	1	3.1	Histiocytoma
10	Gastrointestinal	1	3.1	Pancreatitis
11	Neurologic	1	3.1	Seizures
12	Trauma	1	3.1	Forelimb
	Total	32	100.0	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for the Pomeranian breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Pomeranian breed

A total of 141 forms were sent out and 22 were returned, representing 126 live dogs. This breed had a 15.6% response rate (22/141) and it represented 0.16% of all returns (22/13,741).

Mortality data

A total of 29 deaths were reported and this represents 0.18% of all deaths reported in the survey (29/15,881). The median age at death for the Pomeranian breed was 9 years and 8 months (min = 7 months, max = 17 years and 3 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Pomeranian breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Pomeranian breed.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	6	20.7	Type unspecified (mammary, brain)
2	Cardiac	6	20.7	Heart disease unspecified; heart failure
3	Neurologic	3	10.3	Seizures
4	Gastrointestinal	2	6.9	Parvovirus; unspecified
5	Old age	2	6.9	Old age
6	Sudden death	2	6.9	
7	Unknown	2	6.9	
8	Collapse	1	3.4	
9	Other	1	3.4	Uncodeable
10	Perioperative	1	3.4	
11	Respiratory	1	3.4	Tracheal collapse
12	Trauma	1	3.4	Unspecified
13	Urologic	1	3.4	Protein losing nephropathyPLN
	Total	29	100.0	

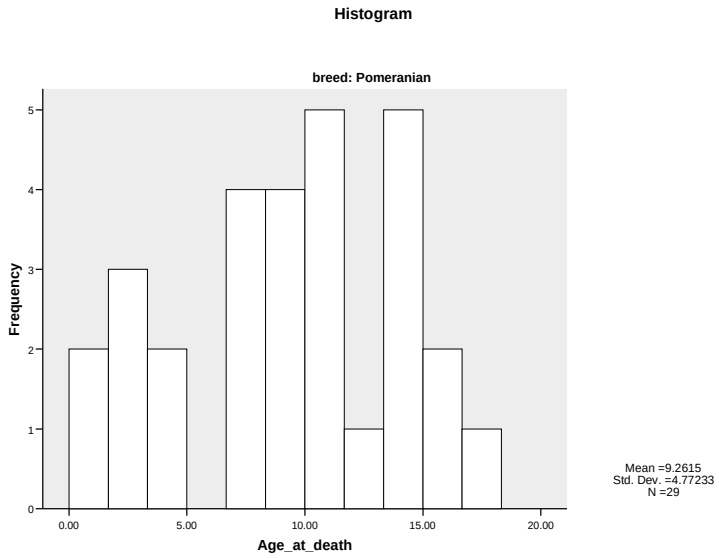


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 29 Pomeranian deaths with age at death reported.

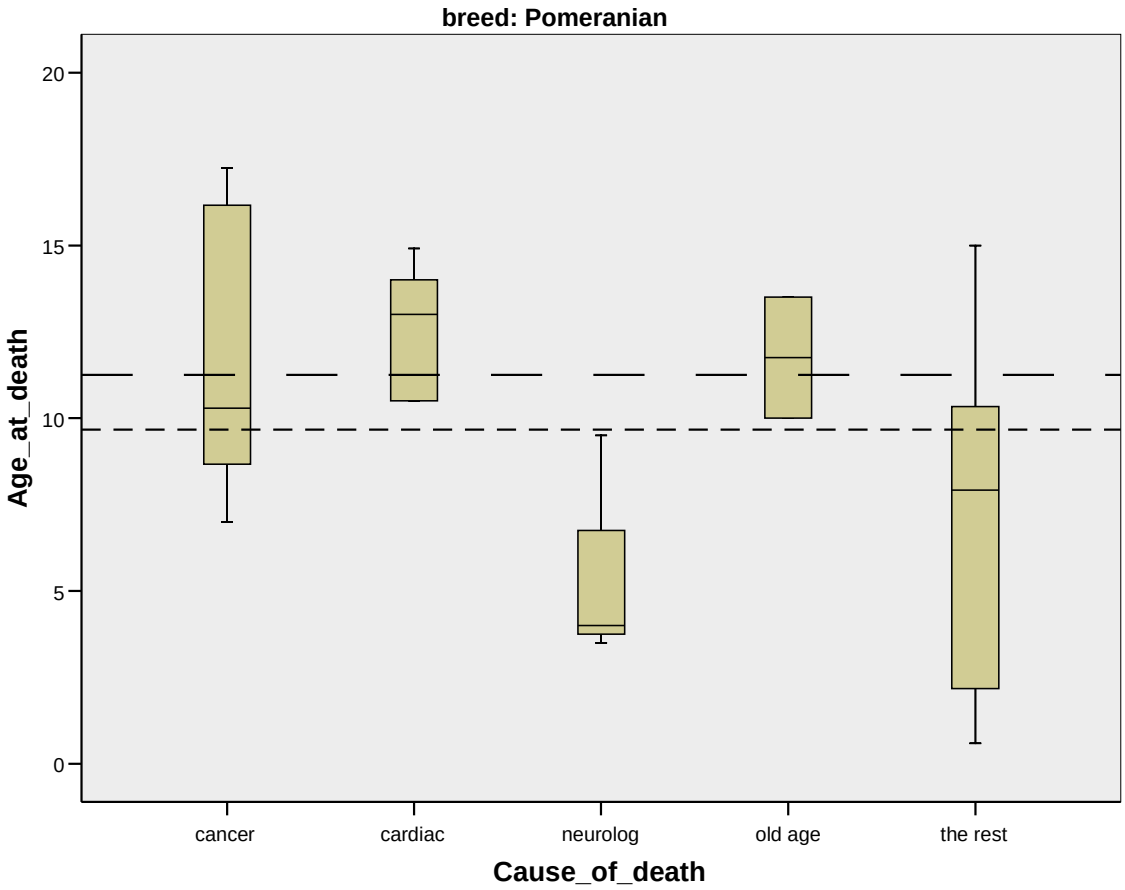


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the Pomeranian breed (N=29). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the Pomeranian breed. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 126 live dogs with a reported age was 3 years and 12 months (min=1 month, max=14 years and 6 months, Figure 3). Health information was reported for 126 live dogs of which 81 (64%) were healthy and 45 (36%) had at least one reported health condition, resulting in a total of 74 reported conditions with a median of 1 condition/dog (min=1, max=6).

The median current age of all healthy dogs with a reported age (N=81) was 3 years and 1 month (min=1 month, max=14 years and 4 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=43) was 5 years and 5 months (min=11 months, max=14 years and 6 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=70) was 2 years (min= 3 months, max= 12 years, Figure 4). Table 3 shows the disease conditions for the Pomeranian breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for the 123 Pomeranian breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	67	13	80 (65%)
Male	37	6	43 (35%)
Totals	104 (85%)	19 (15%)	123 (100%)

There was no association between gender and neuter status (P=0.7368).

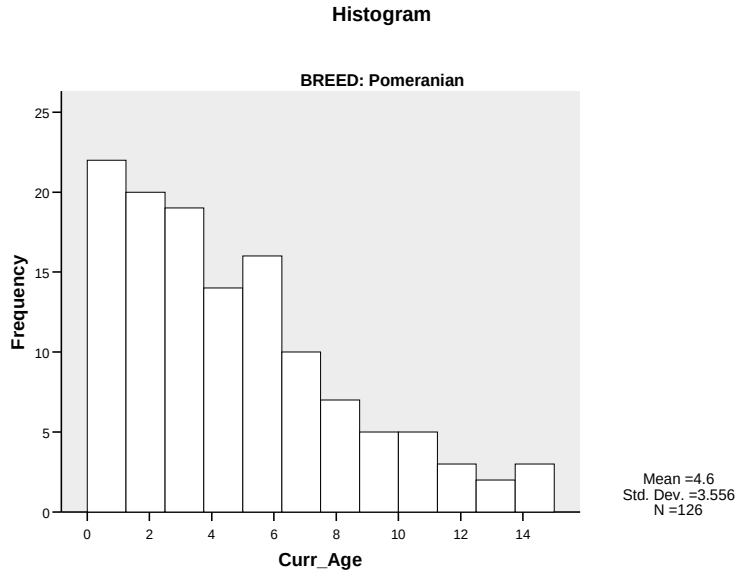


Figure 3. Histogram showing frequency of current age in years for the 126 live Pomeranian breed with age reported.

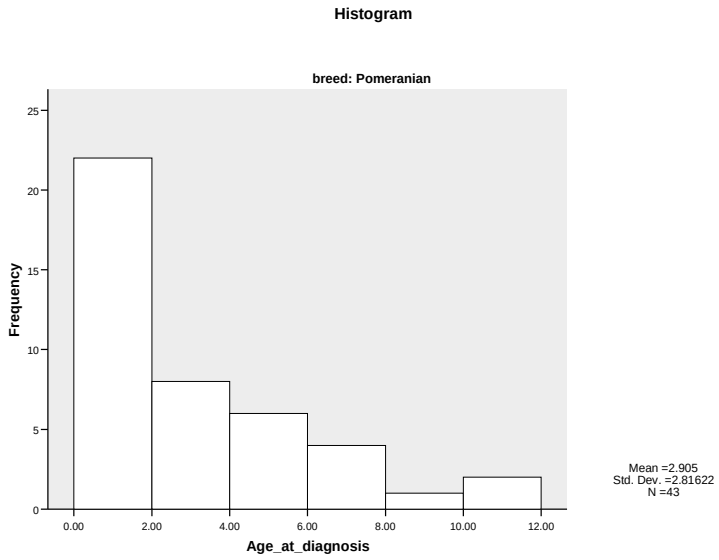


Figure 4. Histogram showing frequency of age at diagnosis for the 43 Pomeranian breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

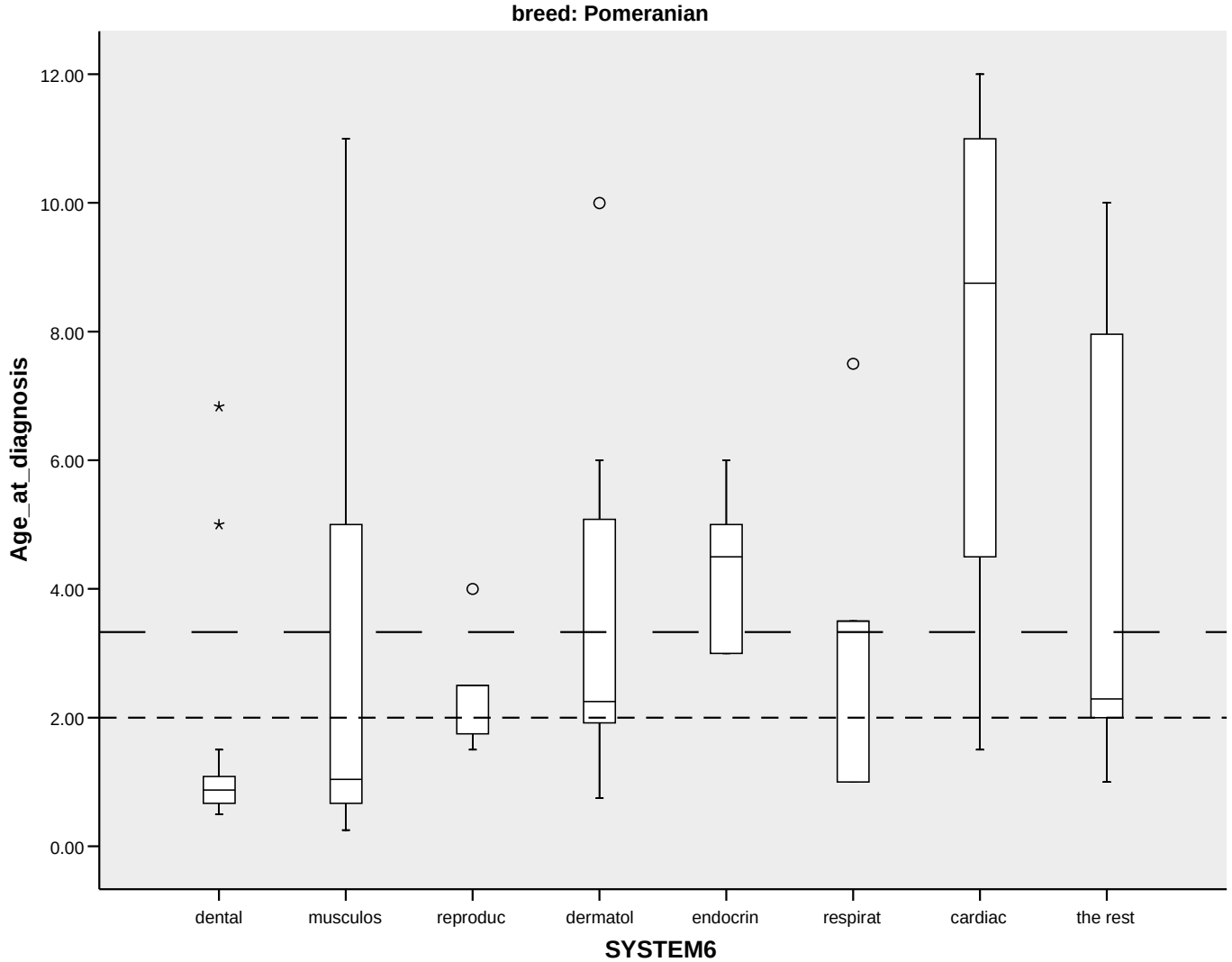


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Pomeranian breed (N=43 dogs with 70 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Pomeranian breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Pomeranian breed.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Dental	18	24.3	Retained puppy teeth; dental disease
2	Musculoskeletal	11	14.9	Patellar luxation; prognathism; arthritis (unspecified)
3	Reproductive	11	14.9	Infertility; agalactia; uterine inertia; false pregnancy; irregular heat cycles; prostatomegaly
4	Dermatologic	8	10.8	Pyotraumatic dermatitis; dermatitis; alopecia; recurrent pyoderma; unspecified
5	Endocrine	6	8.1	Unspecified; hypothyroidism
6	Respiratory	5	6.8	Hypoplastic trachea; noisy breathing; tracheal collapse; trachitis
7	Cardiac	4	5.4	Heart murmur (unspecified; grade 3); CHF; arrhythmia
8	Ocular	3	4.1	Epiphora; corneal ulcer
9	Aural	2	2.7	Otitis externa
10	Cerebrovascular	1	1.4	Stroke or cerebral vascular accident
11	Gastrointestinal	1	1.4	Colitis
12	Immune mediated	1	1.4	Gluten-sensitive enteropathy
13	Neurologic	1	1.4	Granulomatous meningoencephalitis (GME)
14	Trauma	1	1.4	Unspecified
15	Uncode and other	1	1.4	Uncodeable
	Total	74	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for Miniature Poodles

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Miniature Poodles

A total of 81 forms were sent out and 26 were returned, representing 108 live dogs. This breed had a 32.1% response rate (26/81) and it represented 0.19% of all returns (26/13,741).

Mortality data

A total of 23 deaths were reported and this represents 0.14% of all deaths reported in the survey (23/15,881). The median age at death for Miniature Poodles was 13 years and 11 months (min = 6 years and 6 months, max = 18 years and 6 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Miniature Poodles. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Miniature Poodles.

Cause of death		N	%	Most common specific causes in descending order
1	Old age	9	39.1	Old age
2	Cancer	2	8.7	Brain tumour; adenocarcinoma (rectum)
3	Cardiac	2	8.7	Heart attack; heart failure
4	Endocrine	2	8.7	Cushings disease; diabetes mellitus
5	Cerebral vascular	1	4.3	Stroke or cerebral vascular accident
6	Combinations	1	4.3	
7	Gastrointestinal	1	4.3	Colitis
8	Hepatic	1	4.3	Liver failure
9	Ocular	1	4.3	Blindness
10	Trauma	1	4.3	Unspecified
11	Unknown	1	4.3	
12	Urologic	1	4.3	Acute kidney failure
	Total	23	100.0	

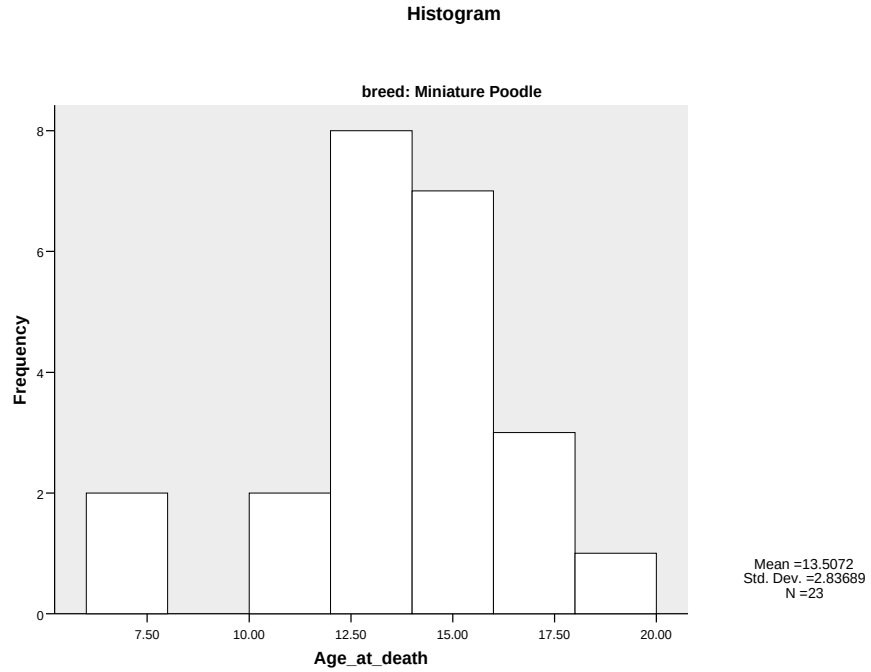


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 23 Miniature Poodle deaths with age at death reported.

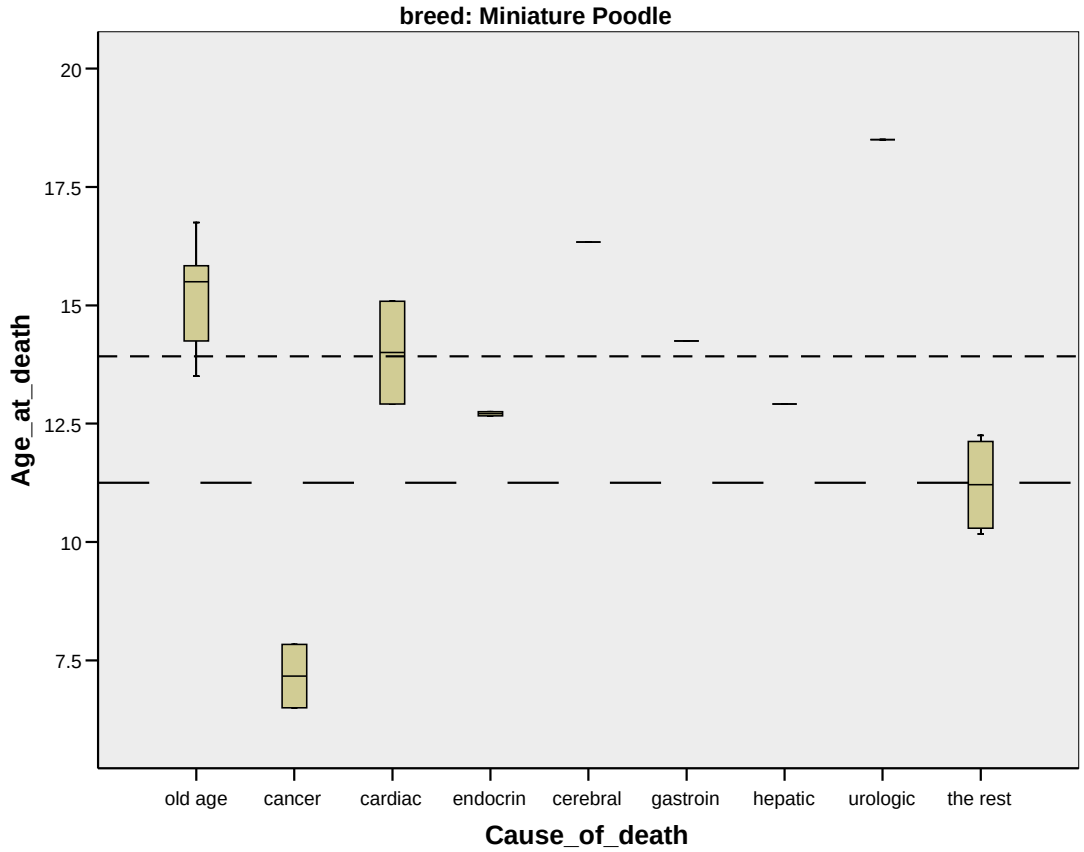


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Miniature Poodles (N=23). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Miniature Poodles. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 108 live dogs with a reported age was 4 years and 8 months (min=2 months, max=12 years and 1 month, Figure 3). Health information was reported for 108 live dogs of which 72 (67%) were healthy and 36 (33%) had at least one reported health condition, resulting in a total of 54 reported conditions with a median of 1 condition/dog (min=1, max=4).

The median current age of all healthy dogs with a reported age (N=72) was 3 years and 9 months (min=2 months, max=12 years and 1 month). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=35) was 7 years (min=9 months, max=10 years and 9 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=53) was 2 years and 6 months (min= 3 months, max= 9 years and 3 months, Figure 4). Table 3 shows the disease conditions for Miniature Poodles. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 103 Miniature Poodles with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	55	16	71 (69%)
Male	25	7	32 (31%)
Totals	80 (78%)	23 (22%)	103 (100%)

There was no association between gender and neuter status (P=0.9406).

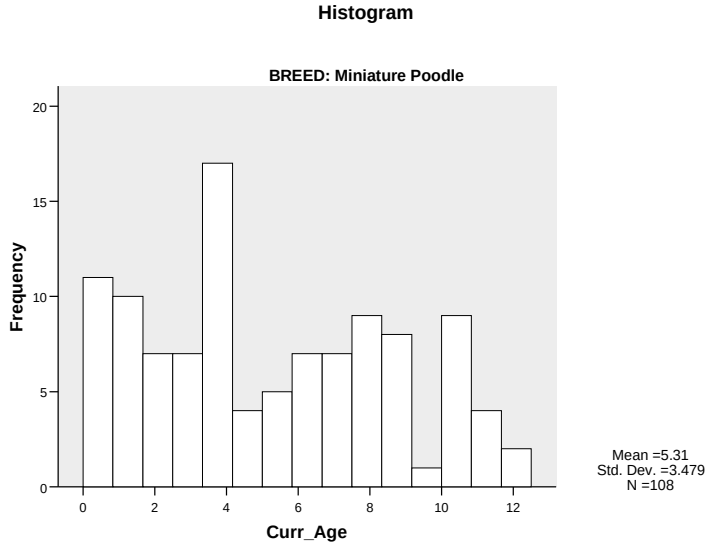


Figure 3. Histogram showing frequency of current age in years for the 108 live Miniature Poodles with age reported.

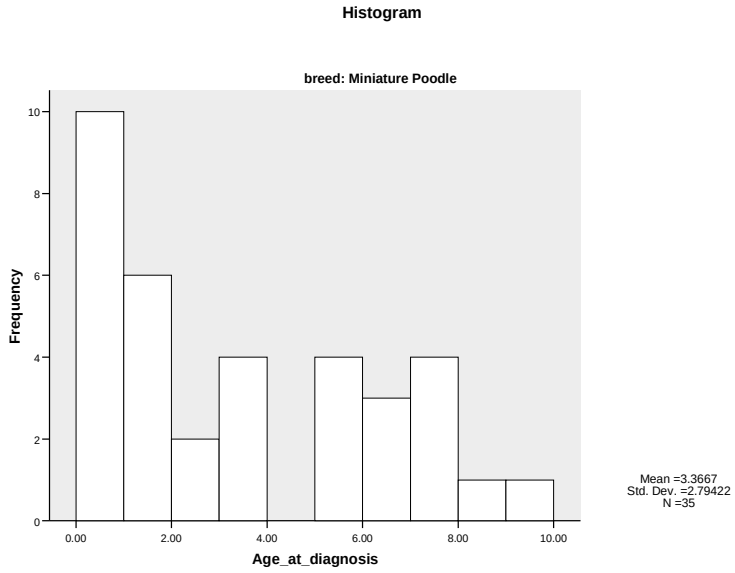


Figure 4. Histogram showing frequency of age at diagnosis for the 35 Miniature Poodles with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

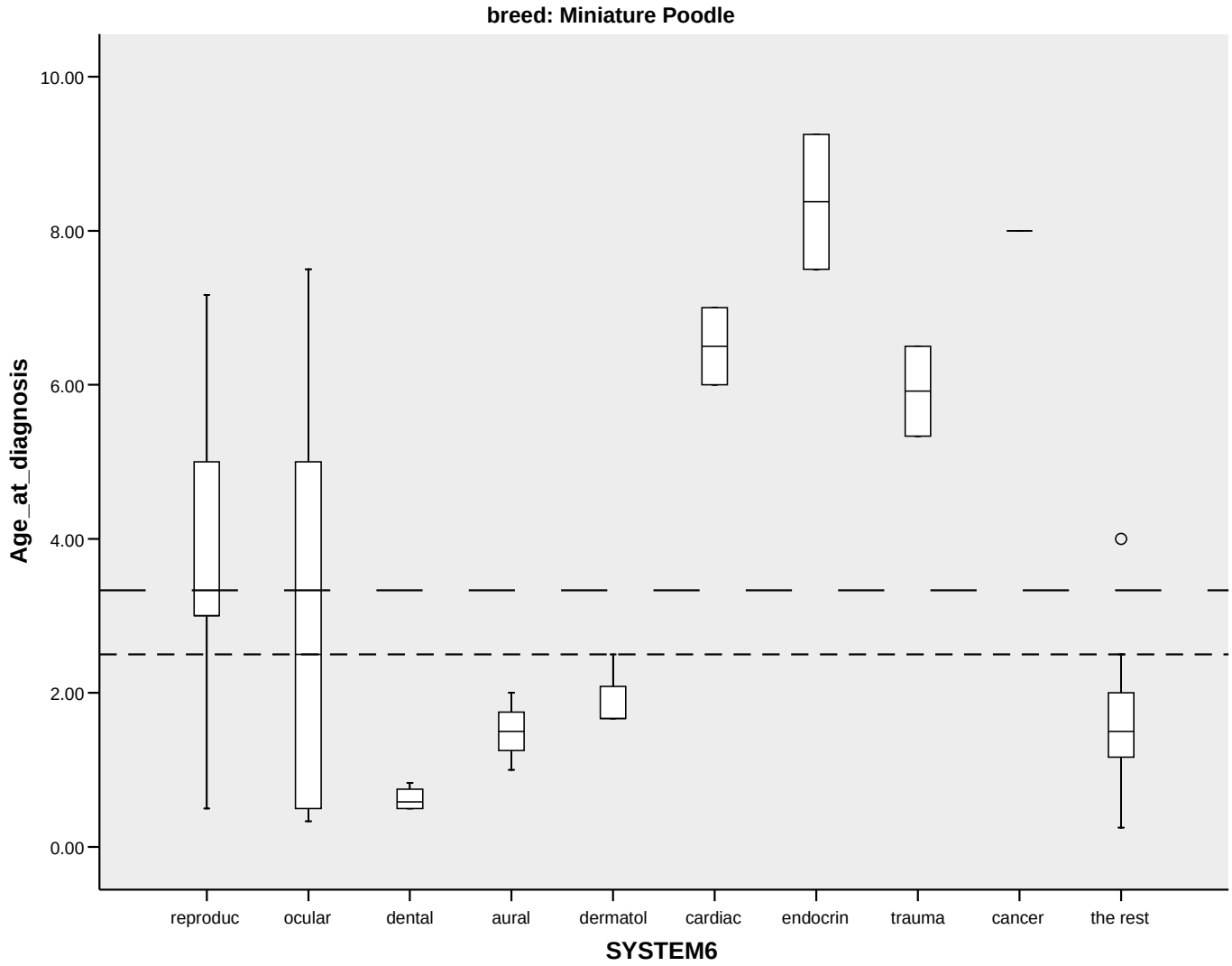


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Miniature Poodles (N=35 dogs with 53 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Miniature Poodles. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Miniature Poodles.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Reproductive	14	25.9	Infertility; false pregnancy; irregular heat cycles; mastitis
2	Ocular	10	18.5	PRA; distichiasis; red eye; cataracts; epiphora
3	Dental	8	14.8	Retained puppy teeth; missing teeth
4	Aural	4	7.4	Otitis externa; excessive ear wax
5	Dermatologic	3	5.6	Dermatitis; alopecia
6	Gastrointestinal	3	5.6	Colitis; IBD
7	Cardiac	2	3.7	Heart murmur (unspecified)
8	Endocrine	2	3.7	Cushing's disease; unspecified
9	Musculoskeletal	2	3.7	Fracture (hindlimb); patellar luxation
10	Trauma	2	3.7	Unspecified
11	Unknown	2	3.7	Undiagnosed illness
12	Cancer	1	1.9	Type unspecified (mammary)
13	Neurologic	1	1.9	Seizures
	Total	54	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for Standard Poodles

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Standard Poodles

A total of 237 forms were sent out and 83 were returned, representing 255 live dogs. This breed had a 35.0 % response rate (83/237) and it represented 0.60% of all returns (83/13,741).

Mortality data

A total of 118 deaths were reported and this represents 0.74 % of all deaths reported in the survey (118/15,881). The median age at death for Standard Poodles was 12 years (min = 1 year and 3 months, max = 18 years) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Standard Poodles. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Standard Poodles.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	35	29.7	Type unspecified (liver); carcinoma; mast cell tumour
2	Old age	21	17.8	Old age
3	Combinations	7	5.9	
4	Gastrointestinal	7	5.9	Gastric dilatation/volvulus (GDV)
5	Cardiac	6	5.1	Heart failure; dilated cardiomyopathy; cardiomegaly
6	Immune mediated	5	4.2	SLE; haemolytic anaemia; thrombocytopaenia
7	Other	5	4.2	Uncodeable
8	Urologic	5	4.2	Kidney failure
9	Endocrine	4	3.4	Addisons disease
10	Musculoskeletal	4	3.4	Arthritis
11	Perioperative	4	3.4	
12	Behaviour	3	2.5	Aggression
13	Reproductive	3	2.5	Pyometra
14	Cerebral vascular	2	1.7	Stroke or cerebral vascular accident
15	Hepatic	2	1.7	Liver failure (chronic=acute)
16	Unknown	2	1.7	Undiagnosed illness
17	Ocular	1	0.8	Glaucoma
18	Respiratory	1	0.8	Collapsed lung
19	Senility	1	0.8	
	Total	118	100.0	

SLE=systemic lupus erythematosus

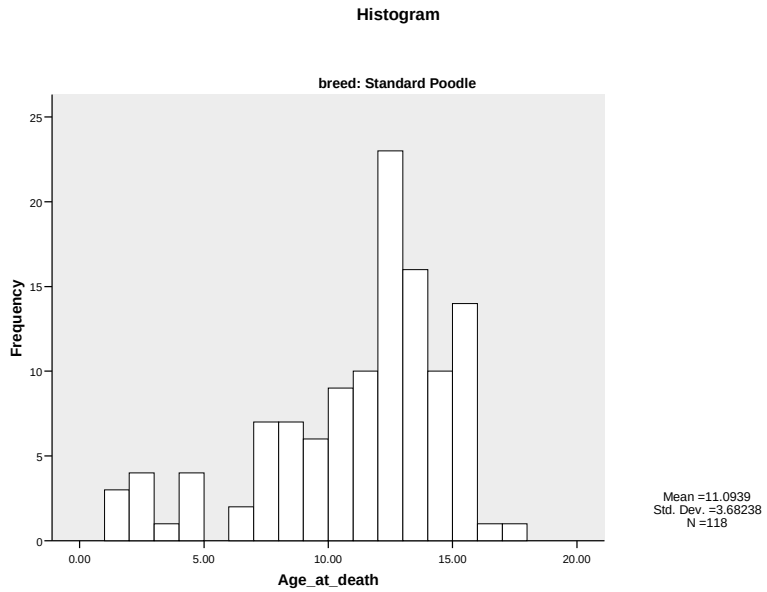


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 118 Standard Poodle deaths with age at death reported.

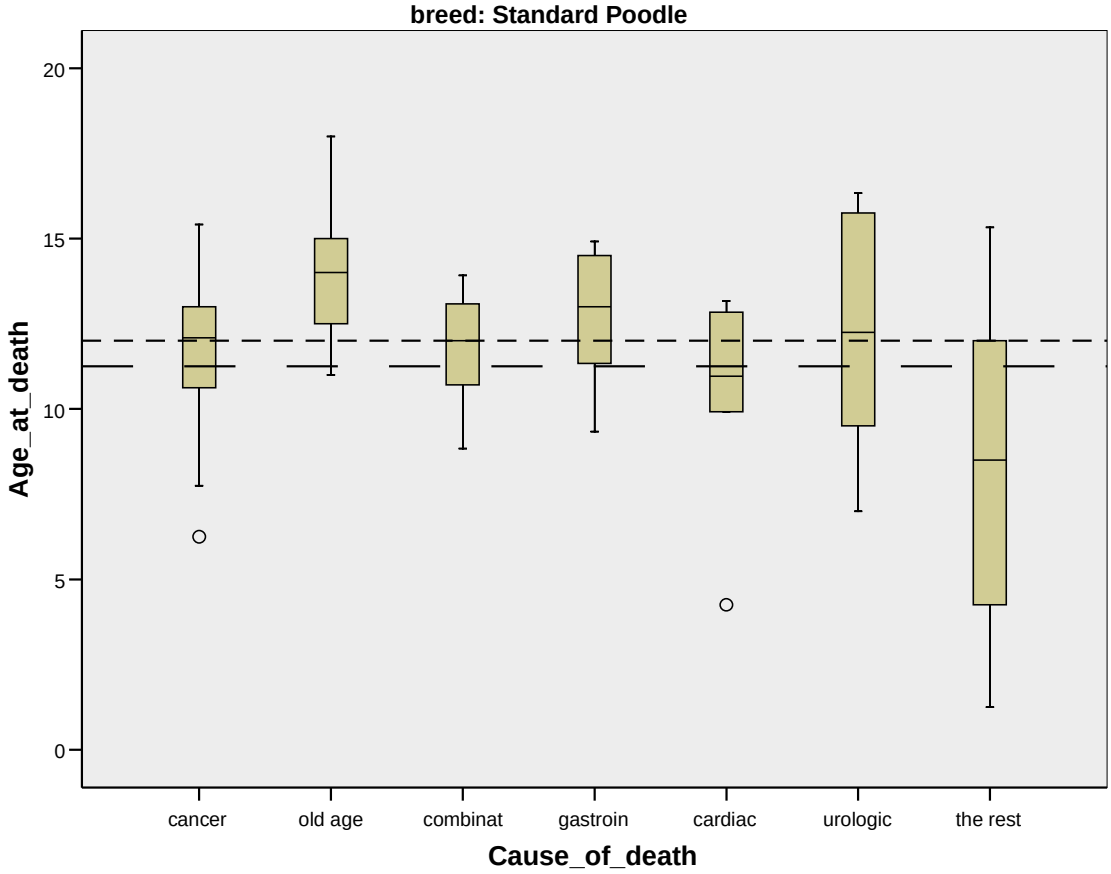


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Standard Poodles (N=118). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Standard Poodles. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 255 live dogs with a reported age was 5 years and 5 months (min=2 months, max=15 years, Figure 3). Health information was reported for 255 live dogs of which 170 (67%) were healthy and 85 (33%) had at least one reported health condition, resulting in a total of 148 reported conditions with a median of 1 condition/dog (min=1, max=7).

The median current age of all healthy dogs with a reported age (N=170) was 4 years and 6 months (min=2 months, max=14 years and 8 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=83) was 8 years and 1 month (min=10 months, max=15 years). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=143) was 4 years (min= 3 months, max= 13 years and 4 months, Figure 4). Table 3 shows the disease conditions for Standard Poodles. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 254 Standard Poodles with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	88	80	168 (66%)
Male	51	35	86 (34%)
Totals	139 (55%)	115 (45%)	254 (100%)

There was no association between gender and neuter status (P=0.2943).

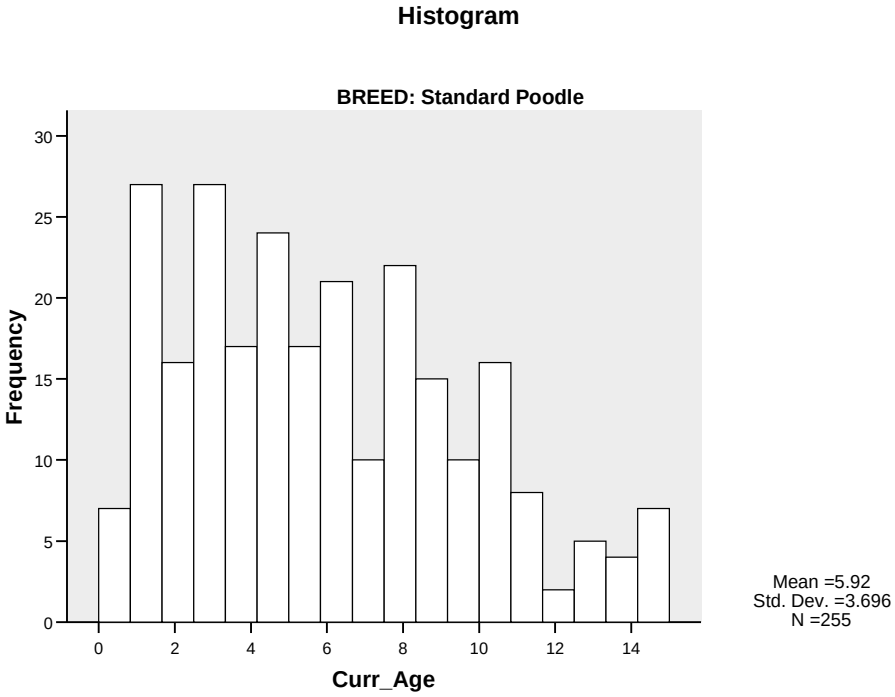


Figure 3. Histogram showing frequency of current age in years for the 255 live Standard Poodles with age reported.

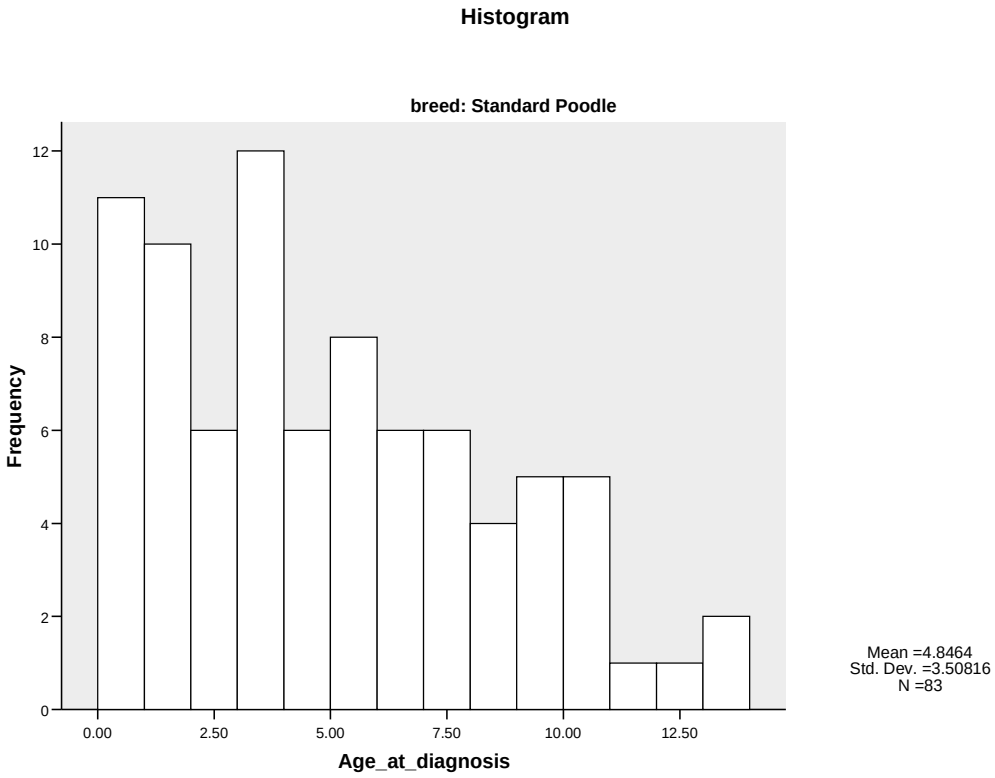


Figure 4. Histogram showing frequency of age at diagnosis for the 83 Standard Poodles with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

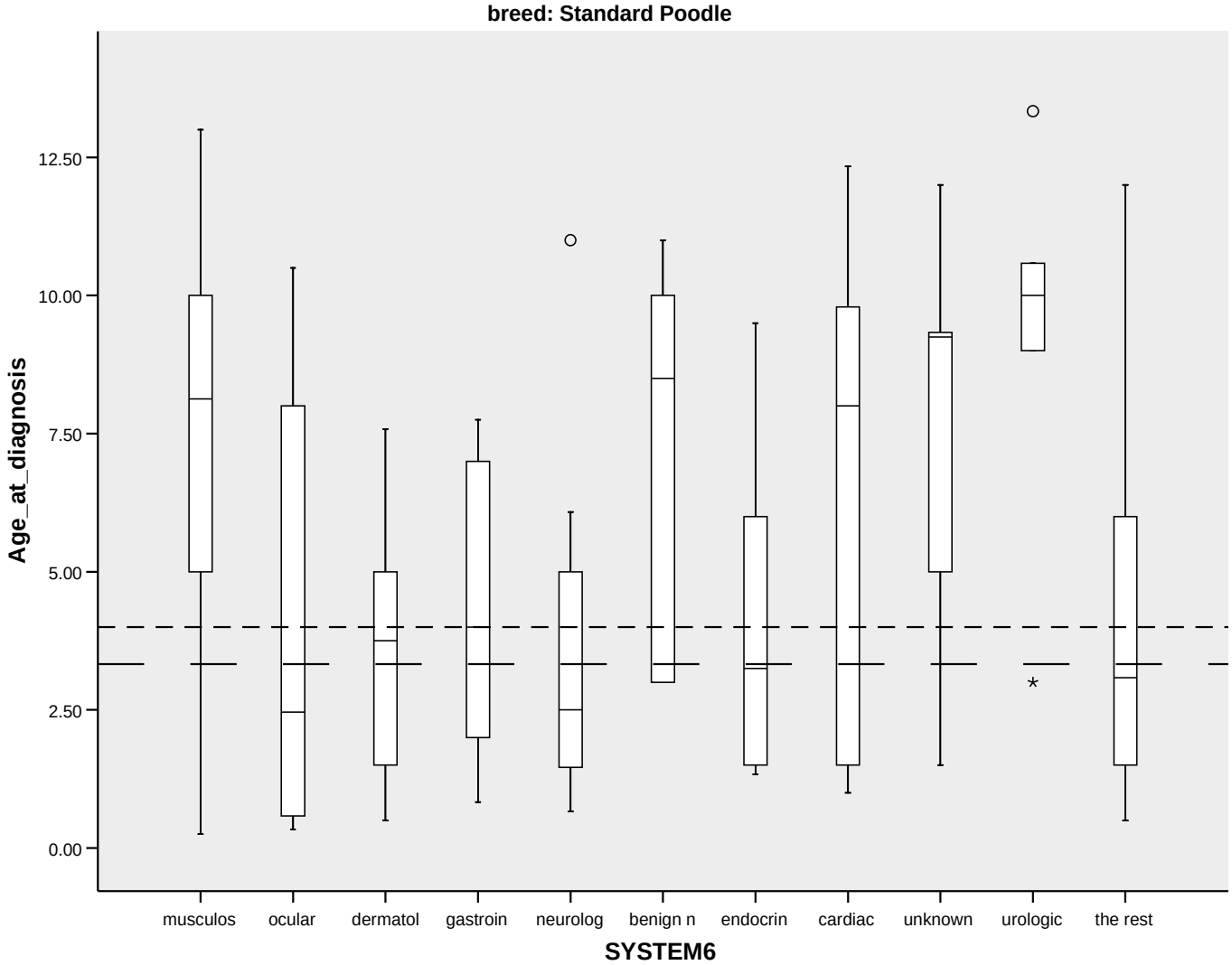


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Standard Poodles (N=83 dogs with 143 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Standard Poodles. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Standard Poodles.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Musculoskeletal	18	12.2	Arthritis (hips>hindlimb=spine>rest); spondylosis; stiff joints
2	Ocular	16	10.8	Conjunctivitis; KCS; entropion; blocked tear duct; eye infection; cataracts; corneal ulcer
3	Dermatologic	13	8.8	Dermatitis; fading nose pigment; sebaceous adenitis; sebaceous cysts
4	Gastrointestinal	13	8.8	Gastric dilatation/volvulus; pancreatitis; constipation; diarrhoea; IBD
5	Neurologic	11	7.4	Seizures; deafness; other (unspecified)
6	Reproductive	11	7.4	Pyometra; infertility; dystochia (uterine inertia); cryptorchid; metritis; irregular heats
7	Benign neoplasia	10	6.8	Lipoma; cysts
8	Endocrine	10	6.8	Addison's disease; hypothyroidism; weight gain (unspecified)
9	Aural	8	5.4	Otitis externa
10	Cardiac	7	4.7	Arrhythmia; heart murmur (unspecified>grade 3); cardiomyopathy (unspecified)
11	Unknown	6	4.1	Unknown; undiagnosed spinal problem
12	Urologic	6	4.1	Cystitis; cystouroliths (struvite=unspecified); kidney failure (chronic); incontinence
13	Immune mediated	5	3.4	Food allergy; thrombocytopaenia; vaccine booster reaction; other (unspecified)
14	Cancer	3	2.0	Unspecified; lymphoma (toe)
15	Respiratory	3	2.0	Noisy breathing; unspecified
16	Hepatic	2	1.4	Hepatitis
17	Other	2	1.4	Uncodeable
18	Anal gland	1	0.7	Anal sacculitis
19	Behaviour	1	0.7	Unspecified
20	Dental	1	0.7	Dental disease
21	Haematopoietic	1	0.7	Von Willbrands disease (VWD)
	Total	148	100.0	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for Toy Poodles

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Toy Poodles

A total of 48 forms were sent out and 11 were returned, representing 56 live dogs. This breed had a 22.9% response rate (11/48) and it represented 0.08% of all returns (11/13,741).

Mortality data

A total of 20 deaths were reported and this represents 0.13% of all deaths reported in the survey (20/15,881). The median age at death for Toy Poodles was 14 years and 8 months (min = 1 year and 9 months, max = 18 years and 11 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Toy Poodles. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Toy Poodles.

Cause of death		N	%	Most common specific causes in descending order
1	Old age	5	25.0	Old age & age combinations
2	Urologic	4	20.0	Kidney failure (chronic > acute)
3	Cancer	3	15.0	Lymphoma; unspecified; liver (unspecified)
4	Combinations	3	15.0	
5	Cerebral vascular	2	10.0	Stroke or cerebral vascular accident
6	Cardiac	1	5.0	Heart attack
7	Immune mediated	1	5.0	AIHA & thrombocytopaenia (Evans syndrome)
8	Neurologic	1	5.0	Seizures
	Total	20	100.0	

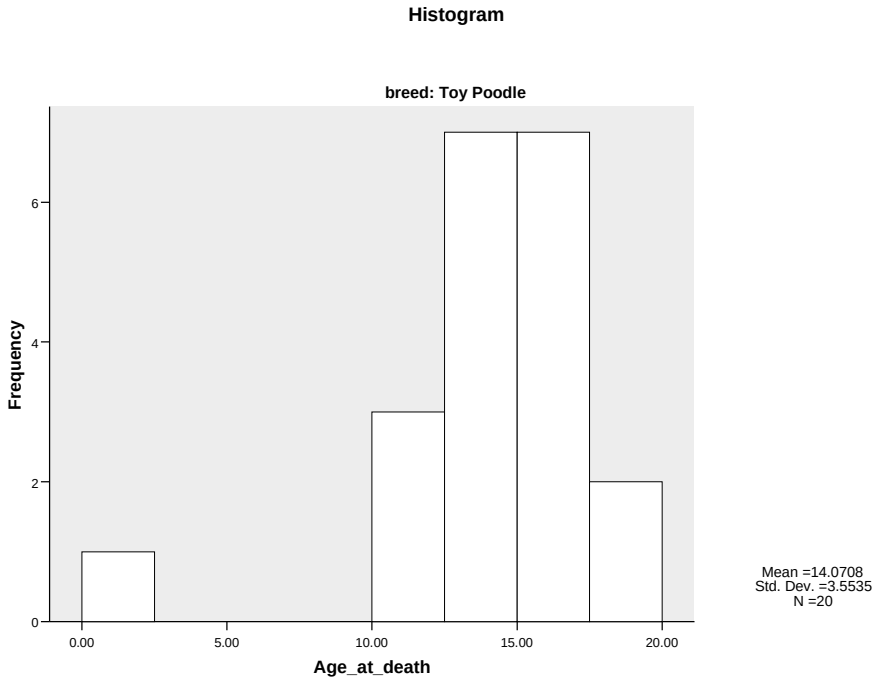


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 20 Toy Poodle deaths with age at death reported.

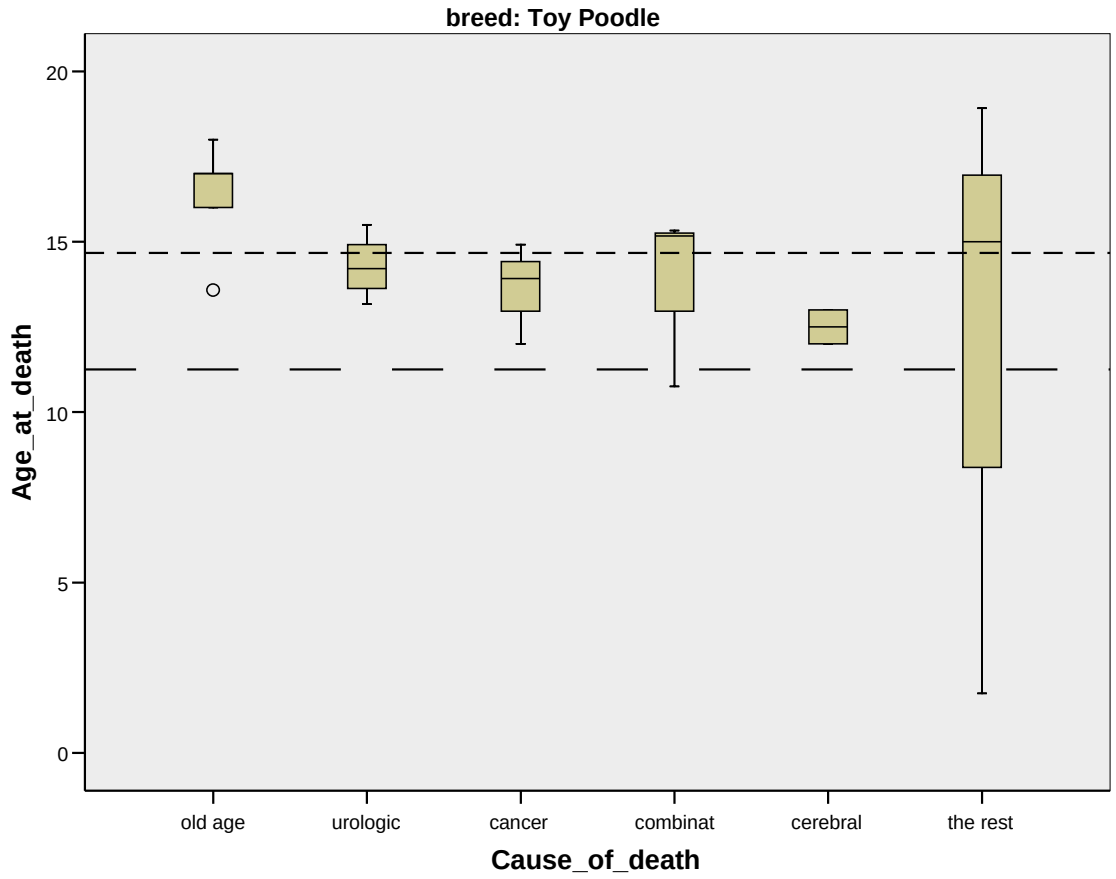


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Toy Poodles (N=20). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Toy Poodles. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 56 live dogs with a reported age was 5 years (min=2 months, max=14 years and 1 month, Figure 3). Health information was reported for 56 live dogs of which 42 (75%) were healthy and 14 (25%) had at least one reported health condition, resulting in a total of 21 reported conditions with a median of 1 condition/dog (min=1, max=3).

The median current age of all healthy dogs with a reported age (N=42) was 4 years and 5 months (min=2 months, max=14 years and 1 month). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=13) was 7 years and 1 month (min=1 year, max=13 years and 6 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=20) was 2 years (min= 6 months, max= 13 years and 6 months, Figure 4). Table 3 shows the disease conditions for Toy Poodles. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 56 Toy Poodles with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	28	11	39 (70%)
Male	13	4	17 (30%)
Totals	41 (73%)	15 (27%)	56 (100%)

There was no association between gender and neuter status (P=0.7164).

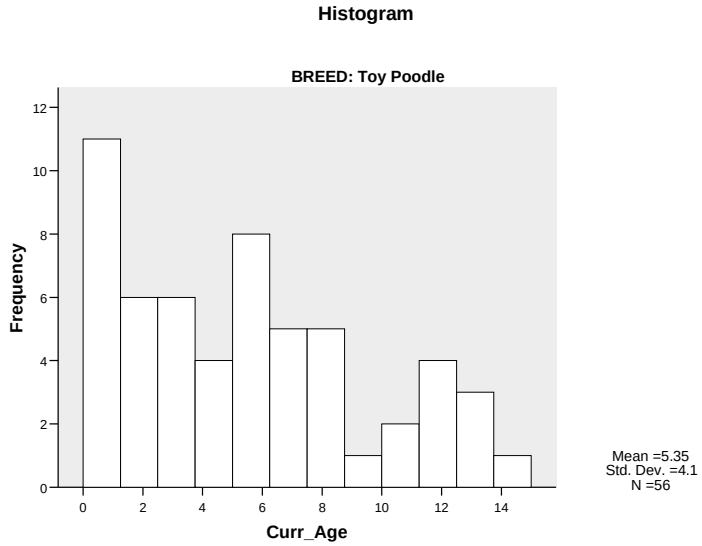


Figure 3. Histogram showing frequency of current age in years for the 56 live Toy Poodles with age reported.

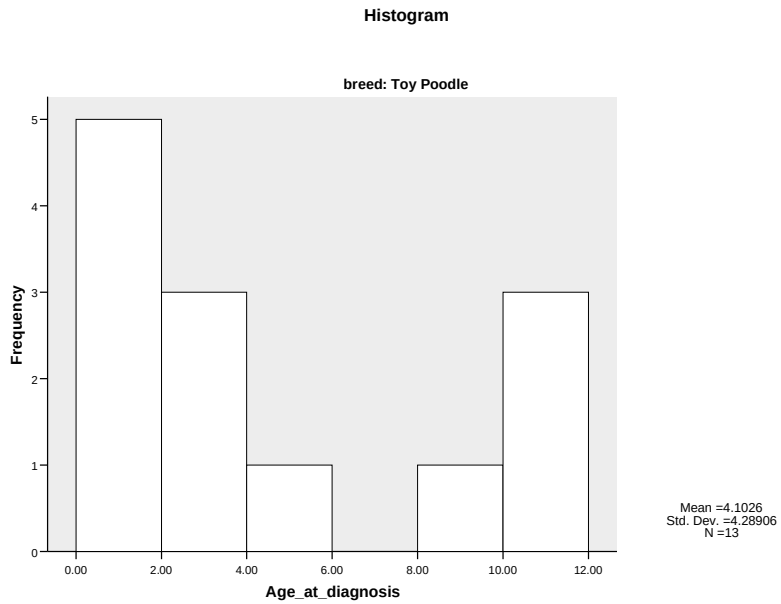


Figure 4. Histogram showing frequency of age at diagnosis for the 13 Toy Poodles with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

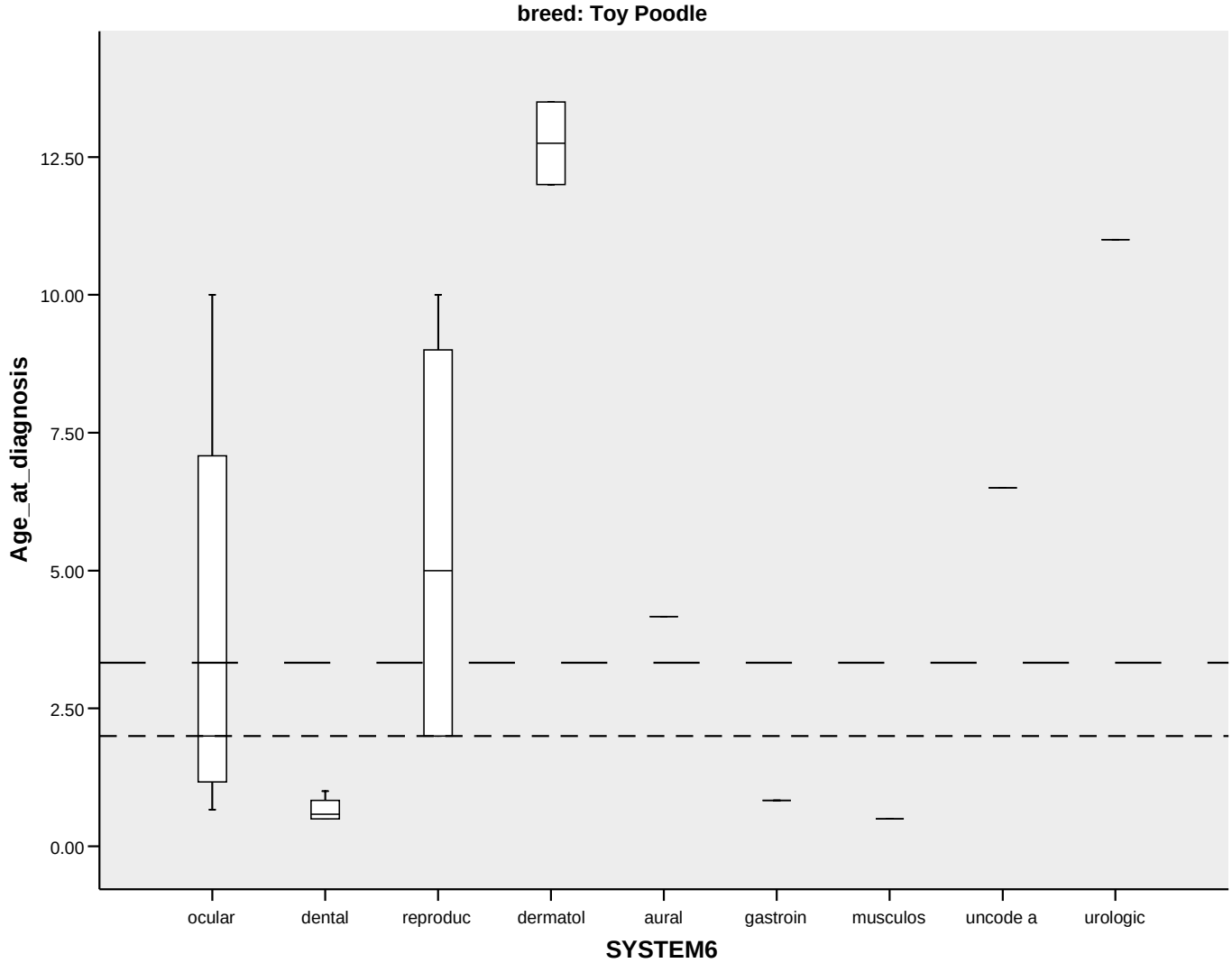


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Toy Poodles (N=13 dogs with 20 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Toy Poodles. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Toy Poodles.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Ocular	5	23.8	KCS; cataracts; distichiasis; corneal ulcer
2	Dental	4	19.0	Retained puppy teeth; defect other than extra teeth
3	Reproductive	4	19.0	Eclampsia; false pregnancy; infertility; pyometra
4	Dermatologic	2	9.5	Alopecia
5	Aural	1	4.8	Otitis externa
6	Gastrointestinal	1	4.8	Inappetance
7	Musculoskeletal	1	4.8	Ligament injury (unspecified)
8	Other	1	4.8	Uncodeable
9	Unknown	1	4.8	Undiagnosed illness
10	Urologic	1	4.8	Incontinence
	Total	21	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for Portuguese Water Dogs

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Portuguese Water Dogs

A total of 46 forms were sent out and 11 were returned, representing 26 live dogs. This breed had a 23.9% response rate (11/46) and it represented 0.08% of all returns (11/13,741).

Mortality data

A total of 6 deaths were reported and this represents 0.04% of all deaths reported in the survey (6/15,881). The median age at death for Portuguese Water Dogs was 11 years and 5 months (min = 4 years and 3 months, max = 15 years and 3 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Portuguese Water Dogs. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Portuguese Water Dogs.

Cause of death		N	%	Most common specific causes in descending order
1	Old age	3	50.0	Old age
2	Cancer	1	16.7	Carcinoma (lung)
3	Other	1	16.7	Uncodeable
4	Unknown	1	16.7	
5	Total	6	100.0	

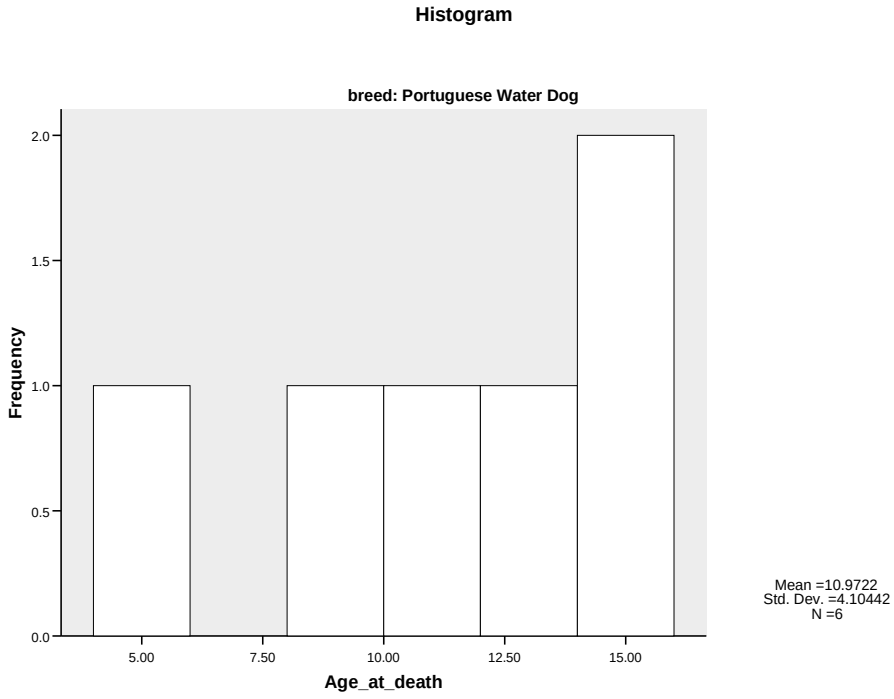


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 6 Portuguese Water Dog deaths with age at death reported.

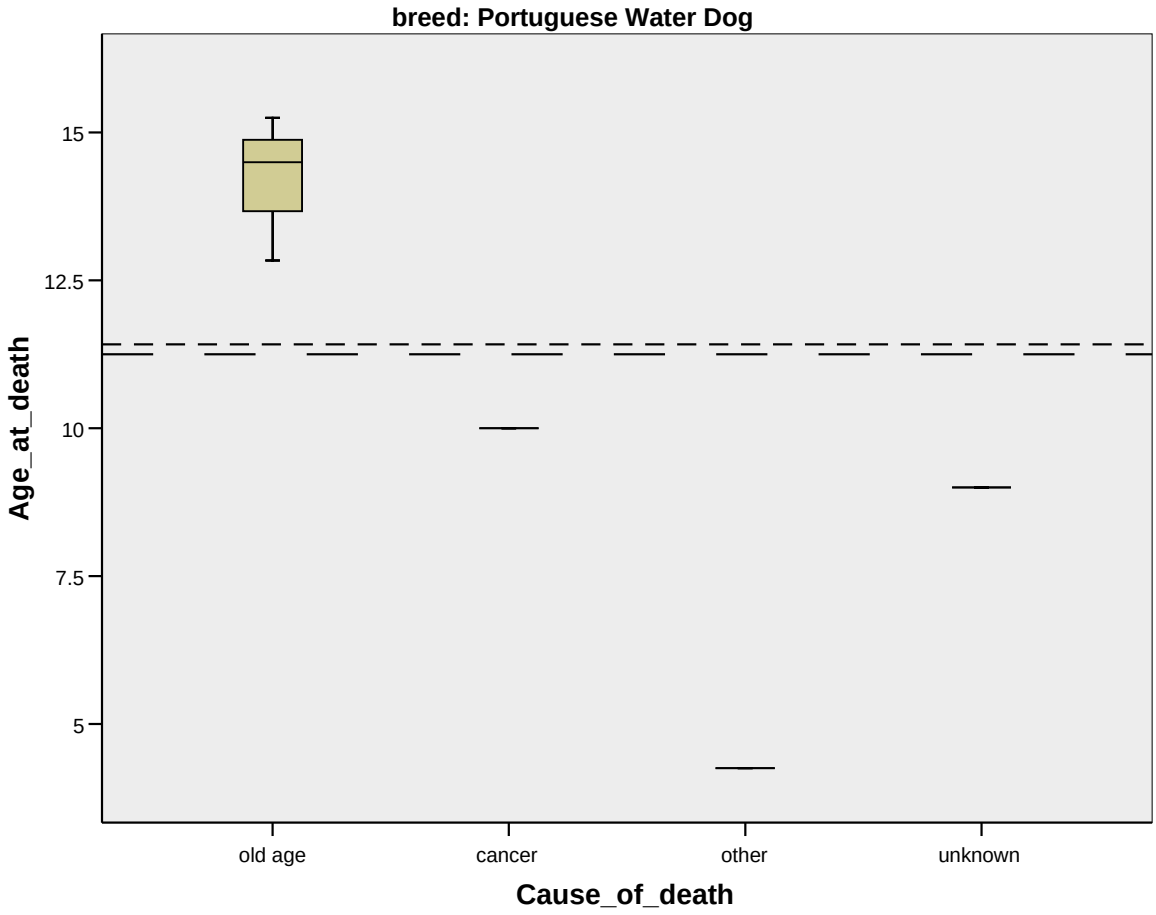


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Portuguese Water Dogs (N=6). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Portuguese Water Dogs. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 26 live dogs with a reported age was 4 years and 2 months (min=4 months, max=12 years, Figure 3). Health information was reported for 26 live dogs of which 21 (81%) were healthy and 5 (19%) had at least one reported health condition, resulting in a total of 6 reported conditions with a median of 1 condition/dog (min=1, max=2).

The median current age of all healthy dogs with a reported age (N=21) was 3 years and 3 months (min=4 months, max=12 years). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=5) was 5 years and 6 months (min=4 years and 1 month, max=12 years). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=6) was 2 years and 6 months (min= 4 months, max= 8 years). Table 3 shows the disease conditions and age at diagnosis for Portuguese Water Dogs

Table 2. Distribution of gender and neuter status for 26 Portuguese Water Dogs with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	10	6	16 (62%)
Male	8	2	10 (38%)
Totals	18 (69%)	8 (31%)	26 (100%)

There was no association between gender and neuter status (P=0.3469).

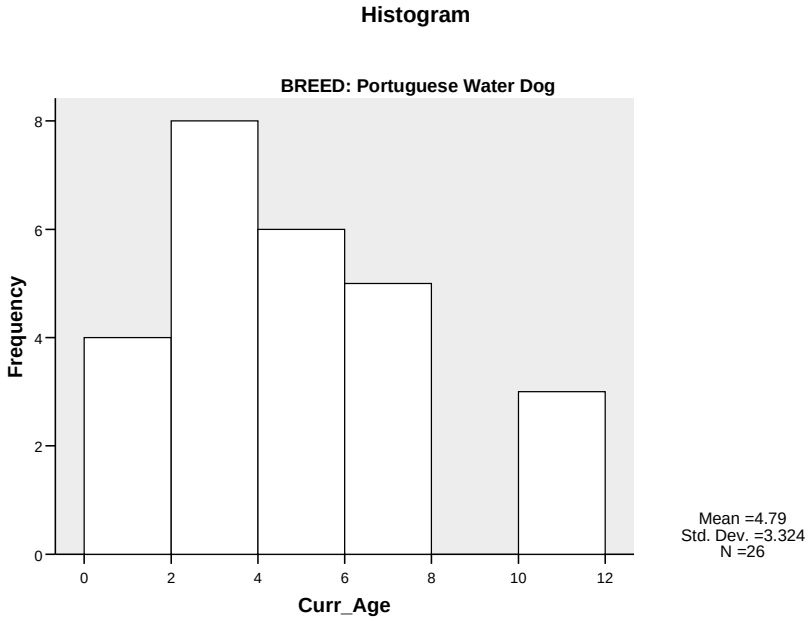


Figure 3. Histogram showing frequency of current age in years for the 26 live Portuguese Water Dogs with age reported.

Table 3. Disease conditions by organ system/category for Portuguese Water Dogs.

		All conditions		
Disease condition		N	%	Age at diagnosis
1	Aural – otitis externa	1	16.7	3 years and 2 months
2	Dermatologic – dermatitis	1	16.7	4 months
3	Endocrine – Addisons disease	1	16.7	1 year and 4 months
4	Musculoskeletal – hip dysplasia	1	16.7	1 year and 10 months
5	Neurologic – seizures	1	16.7	8 years
6	Urologic – cystitis	1	16.7	5 years and 4 months
	Total	6	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for Pug Dogs

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Pug Dogs

A total of 1200 forms were sent out and 196 were returned, representing 461 live dogs. This breed had a 16.3% response rate (196/1200) and it represented 1.43% of all returns (196/13,741).

Mortality data

A total of 163 deaths were reported and this represents 1.03% of all deaths reported in the survey (163/15,881). The median age at death for Pug Dogs was 11 years (min = 2 months, max = 17 years) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Pug Dogs. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Pug Dogs.

Cause of death		N	%	Most common specific causes in descending order
1	Old age	41	25.2	Old age
2	Cardiac	20	12.3	Failure; attack; disease (unspecified); cardiomegaly
3	Cancer	18	11.0	Leukaemia; type unspecified (mouth); lymphoma
4	Neurologic	14	8.6	Seizures; spinal disease unspecified; IVDD; spondylitis
5	Perioperative	11	6.7	
6	Urologic	10	6.1	Kidney failure; urethral obstruction; incontinence
7	Other	8	4.9	Uncodeable
8	Cerebral vascular	7	4.3	Stroke or cerebral vascular accident
9	Musculoskeletal	7	4.3	Hemivertebra; OCD (bilateral); muscle dysfunction
10	Combinations	6	3.7	
11	Respiratory	4	2.5	Pneumonia; bronchitis
12	Reproductive	3	1.8	Pyometra
13	Unknown	3	1.8	
14	Collapse	2	1.2	
15	Hepatic	2	1.2	Liver disease; liver failure
16	Internal bleeding	2	1.2	
17	Trauma	2	1.2	Road traffic accident
18	Endocrine	1	0.6	Cushings disease
19	Gastrointestinal	1	0.6	Haematochezia (blood in stool)
20	Poisoning	1	0.6	
	Total	163	100.0	

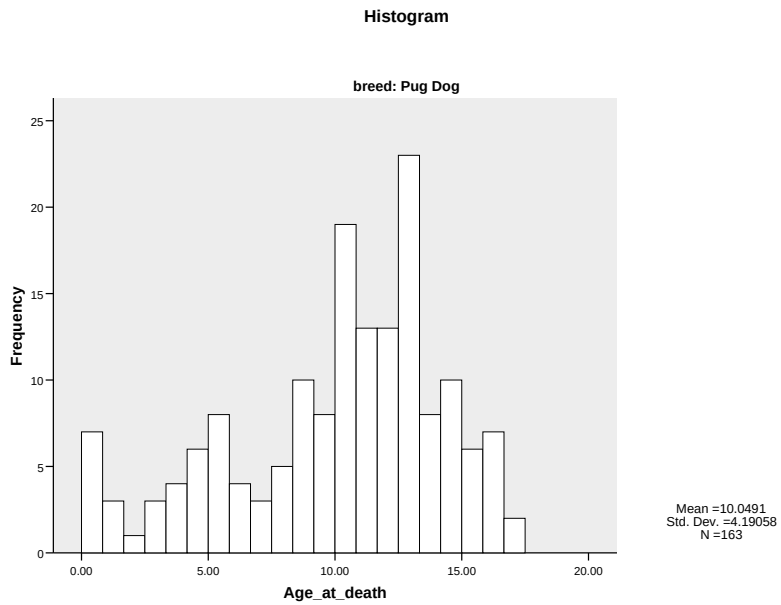


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 163 Pug Dog deaths with age at death reported.

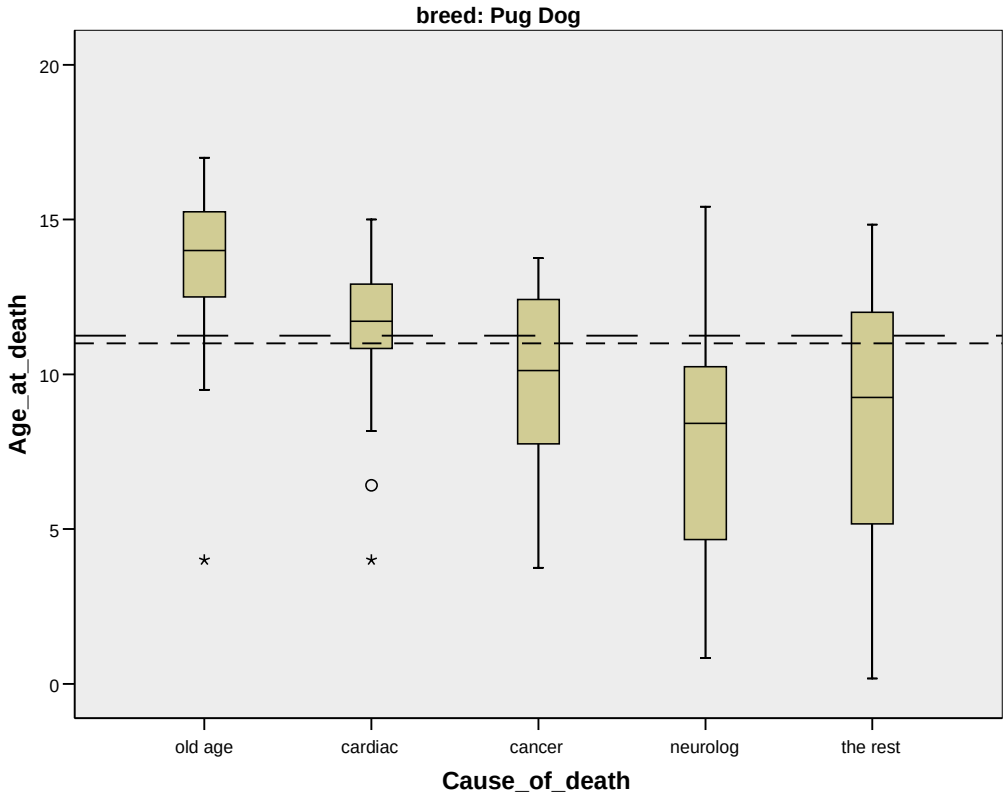


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Pug Dogs (N=163). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Pug Dogs. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 461 live dogs with a reported age was 4 years and 11 months (min=1 month, max=16 years and 10 months, Figure 3). Health information was reported for 461 live dogs of which 248 (54%) were healthy and 213 (46%) had at least one reported health condition, resulting in a total of 367 reported conditions with a median of 1 condition/dog (min=1, max=7).

The median current age of all healthy dogs with a reported age (N=248) was 3 years and 7 months (min=1 month, max=16 years and 8 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=206) was 6 years and 7 months (min=4 months, max=16 years and 10 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=355) was 3 years (min= 3 months, max= 13 years and 4 months, Figure 4). Table 3 shows the disease conditions for Pug Dogs. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 455 Pug Dogs with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	142	121	263 (58%)
Male	144	48	192 (42%)
Totals	286 (63%)	169 (37%)	455 (100%)

Significantly more females were neutered (P=<0.0001).

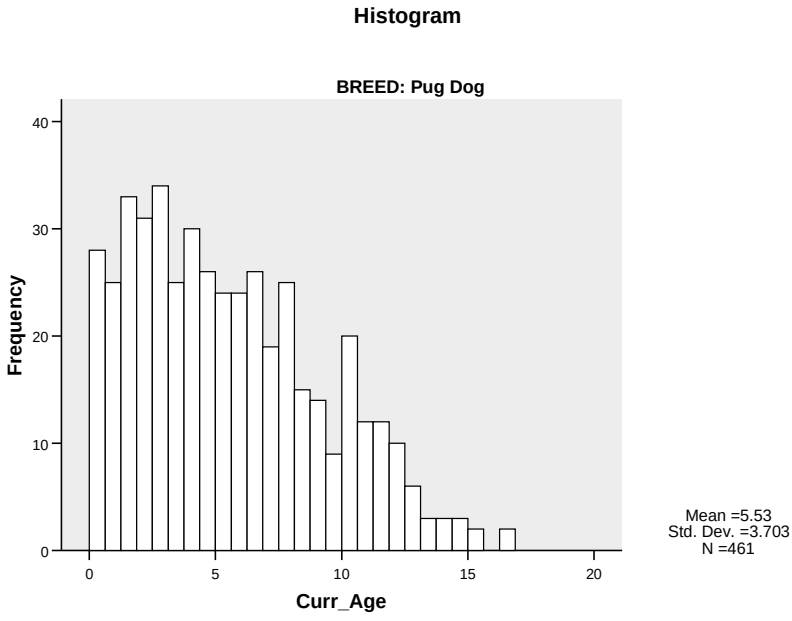


Figure 3. Histogram showing frequency of current age in years for the 461 live Pug Dogs with age reported.

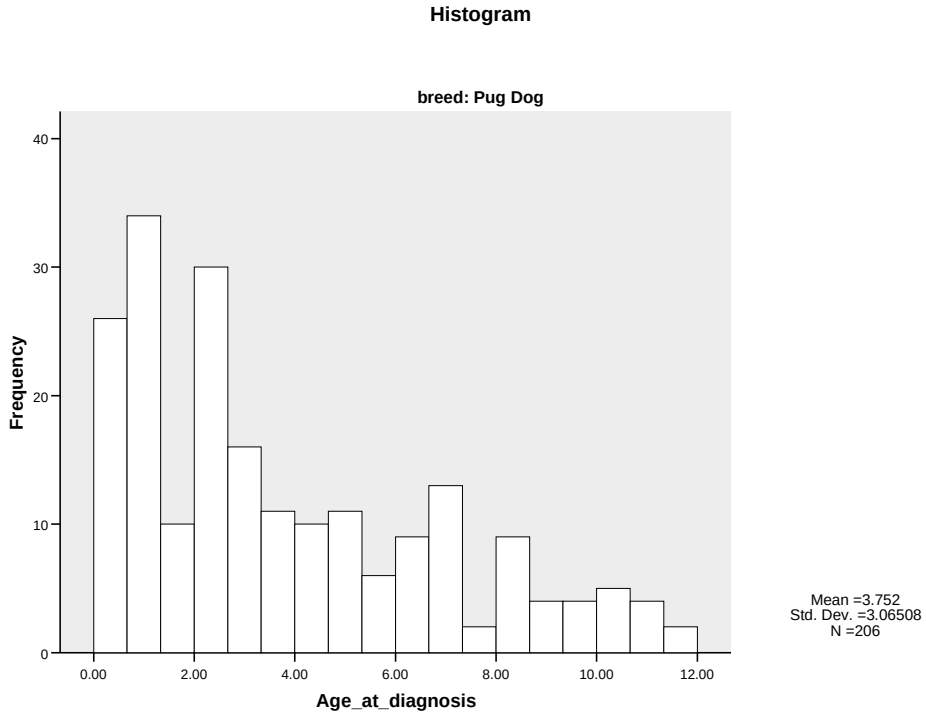


Figure 4. Histogram showing frequency of age at diagnosis for the 206 Pug Dogs with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

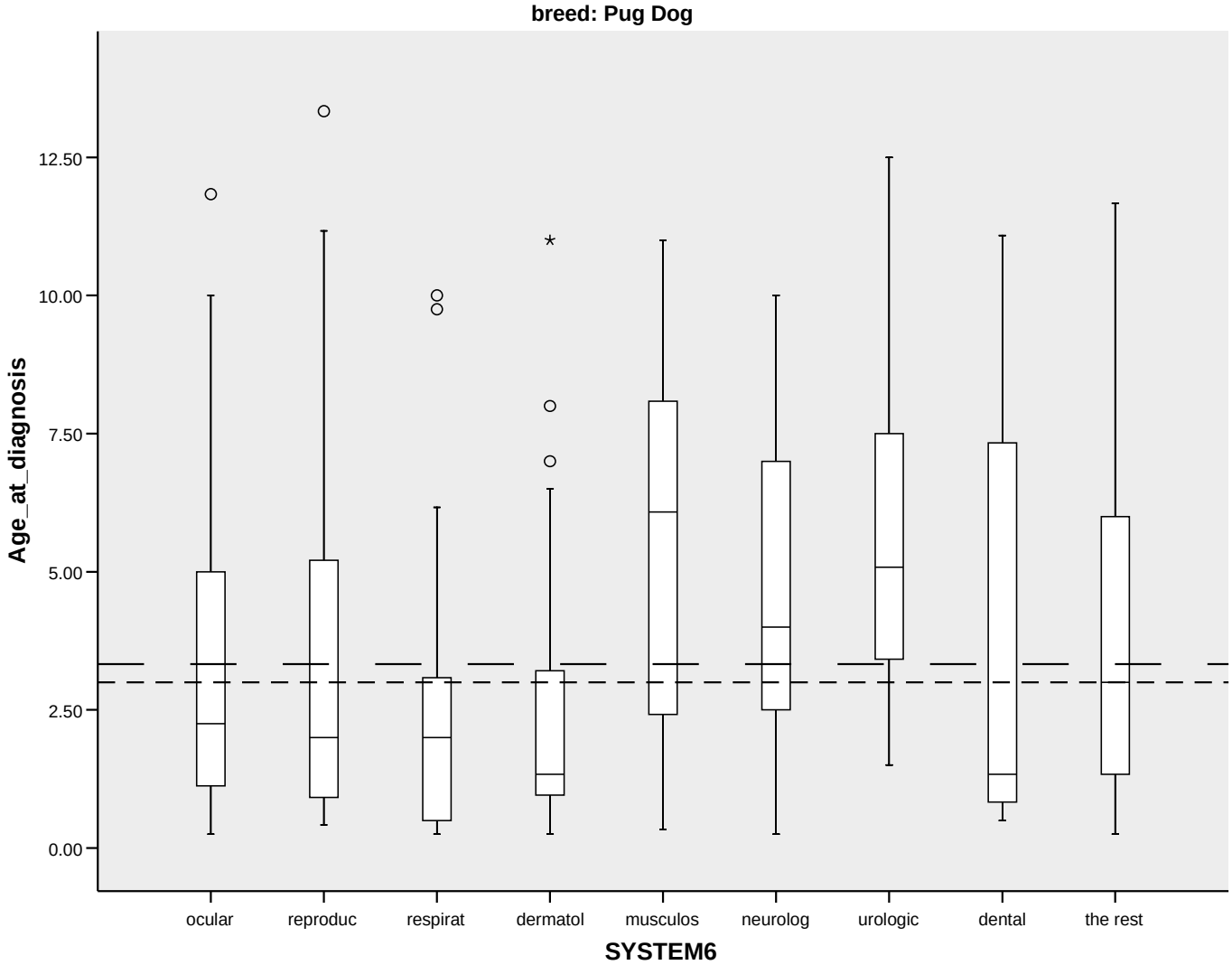


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Pug Dogs (N=206 dogs with 355 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Pug Dogs. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Pug Dogs.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Ocular	81	22.1	Corneal ulcer; KCS; entropion; blindness; enucleation; pigmentary keratitis; unspecified
2	Reproductive	33	9.0	Pyometra; vaginitis; infertility; cryptorchid; prostatomegaly
3	Respiratory	33	9.0	Noisy breathing; kennel cough; long soft palate; BOAS; tracheal collapse
4	Dermatologic	32	8.7	Dermatitis; mites (demodex>cheyletiella=sarcoptes); ringworm; pyotraumatic dermatitis
5	Musculoskeletal	31	8.4	Patellar luxation; arthritis; hip dysplasia (CHD); stiff joints
6	Neurologic	29	7.9	Seizures; IVDD (thoracic>unspecified); other (unspecified); CDRM; deafness
7	Urologic	26	7.1	Cystitis; incontinence (unspecified>after spay); cystouroliths (unspecified); cystitis
8	Dental	17	4.6	Retained puppy teeth; dental disease
9	Unknown	13	3.5	Undiagnosed illness
10	Aural	12	3.3	Otitis externa; ear mites
11	Immune mediated	12	3.3	Food allergy; atopy; other allergy (unspecified); gluten-sensitive enteropathy; flea allergy
12	Cardiac	9	2.5	Coughing; cardiomegaly; heart murmur; congestive heart failure (CHF); dilated cardiomyopathy
13	Gastrointestinal	7	1.9	Colitis; vomiting; campylobacter; constipation; diarrhoea
14	Cancer	6	1.6	Unspecified; MCT (leg; perianal); haemangiosarcoma (toe)
15	Trauma	6	1.6	Cornea; eyeball; unspecified; forelimb
16	Anal gland	5	1.4	Anal sacculitis
17	Benign neoplasia	4	1.1	Lipoma; unspecified
18	Other	3	0.8	Uncodeable
19	Cerebrovascular	2	0.5	Stroke or cerebral vascular accident
20	Endocrine	2	0.5	Diabetes mellitus; weight gain (undiagnosed)
21	Haematopoietic	2	0.5	Anaemia (unspecified)
22	Cardiopulmonary	1	0.3	Coughing
23	Hepatic	1	0.3	Acute liver failure
	Total	367	100.0	

BOAS=brachycephalic obstructive airway diseas
CDRM=chronic degenerative radiculomyelopathy

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for the Rhodesian Ridgeback breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Rhodesian Ridgeback breed

A total of 535 forms were sent out and 172 were returned, representing 330 live dogs. This breed had a 32.1% response rate (172/535) and it represented 1.25% of all returns (172/13,741).

Mortality data

A total of 183 deaths were reported and this represents 1.15% of all deaths reported in the survey (183/15,881). The median age at death for the Rhodesian Ridgeback breed was 11 years (min = 1 year, max = 16 years and 2 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Rhodesian Ridgeback breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Rhodesian Ridgeback breed.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	56	30.6	Type unspecified (liver, bone, spleen)
2	Old age	33	18.0	Old age & age combinations
3	Other	13	7.1	Uncodeable
4	Cardiac	11	6.0	Heart attack; heart failure
5	Combinations	11	6.0	
6	Gastrointestinal	11	6.0	Gastric volvulus/dilatation (GDV); megaoesophagus
7	Neurologic	9	4.9	Seizures; IVDD; syringohydromyelia
8	Behaviour	8	4.4	Aggression; chronic neurosis
9	Musculoskeletal	7	3.8	Arthritis; hip dysplasia
10	Urologic	5	2.7	Kidney failure (chronic & acute); incontinence
11	Cerebral vascular	4	2.2	Stroke or cerebral vascular accident
12	Perioperative	4	2.2	
13	Trauma	4	2.2	Road traffic accident; unspecified
14	Poisoning	3	1.6	
15	Respiratory	2	1.1	Laryngeal paralysis
16	Reproductive	1	0.5	Pyometra
17	Unknown	1	0.5	
	Total	183	100.0	

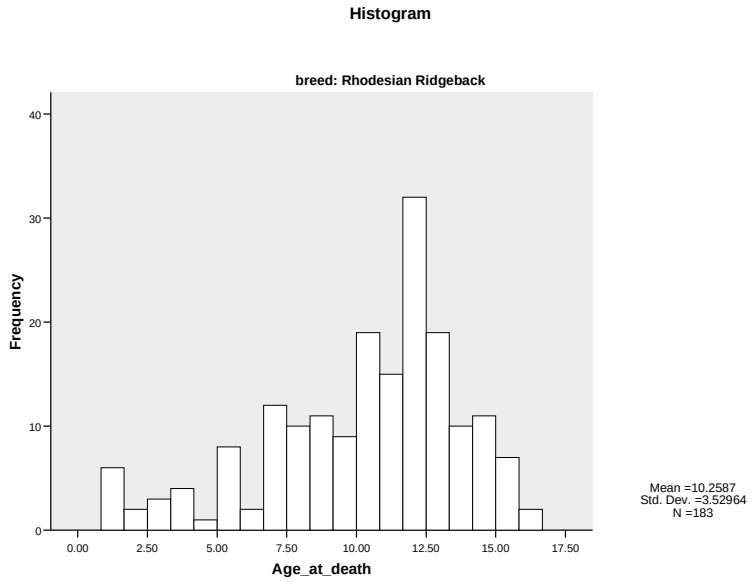


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 183 Rhodesian Ridgeback deaths with age at death reported.

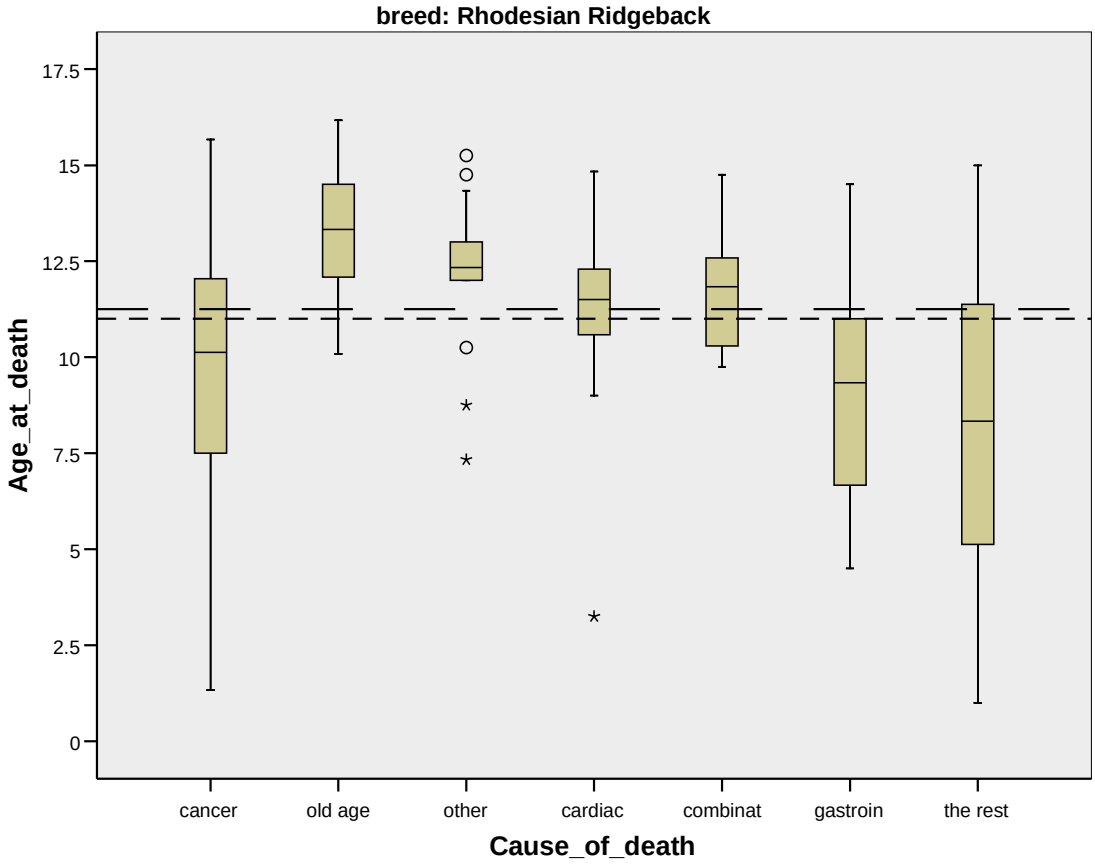


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the Rhodesian Ridgeback breed (N=183). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the Rhodesian Ridgeback breed. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 328 live dogs with a reported age was 4 years and 6 months (min=2 months, max=14 years and 6 months, Figure 3). Health information was reported for 330 live dogs of which 222 (67%) were healthy and 108 (33%) had at least one reported health condition, resulting in a total of 164 reported conditions with a median of 1 condition/dog (min=1, max=5).

The median current age of all healthy dogs with a reported age (N=222) was 3 years and 6 months (min=2 months, max=14 years). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=104) was 6 years and 4 months (min=4 months, max=14 years and 6 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=157) was 2 years and 9 months (min= 2 months, max= 14 years, Figure 4). Table 3 shows the disease conditions for the Rhodesian Ridgeback breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for the 327 Rhodesian Ridgeback breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	117	84	201 (61%)
Male	93	33	126 (39%)
Totals	210 (64%)	117 (36%)	327 (100%)

Significantly more females were neutered (P=0.0042).

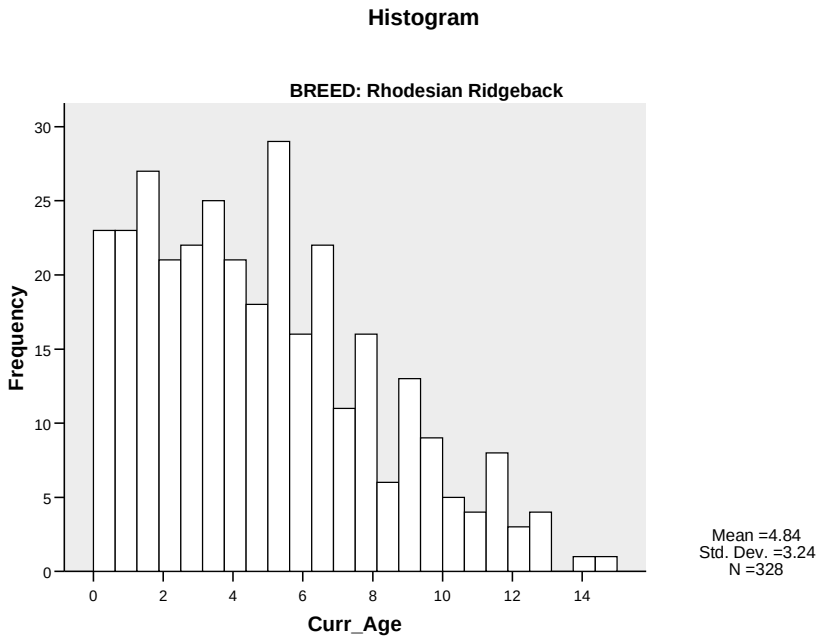


Figure 3. Histogram showing frequency of current age in years for the 328 live Rhodesian Ridgeback breed with age reported.

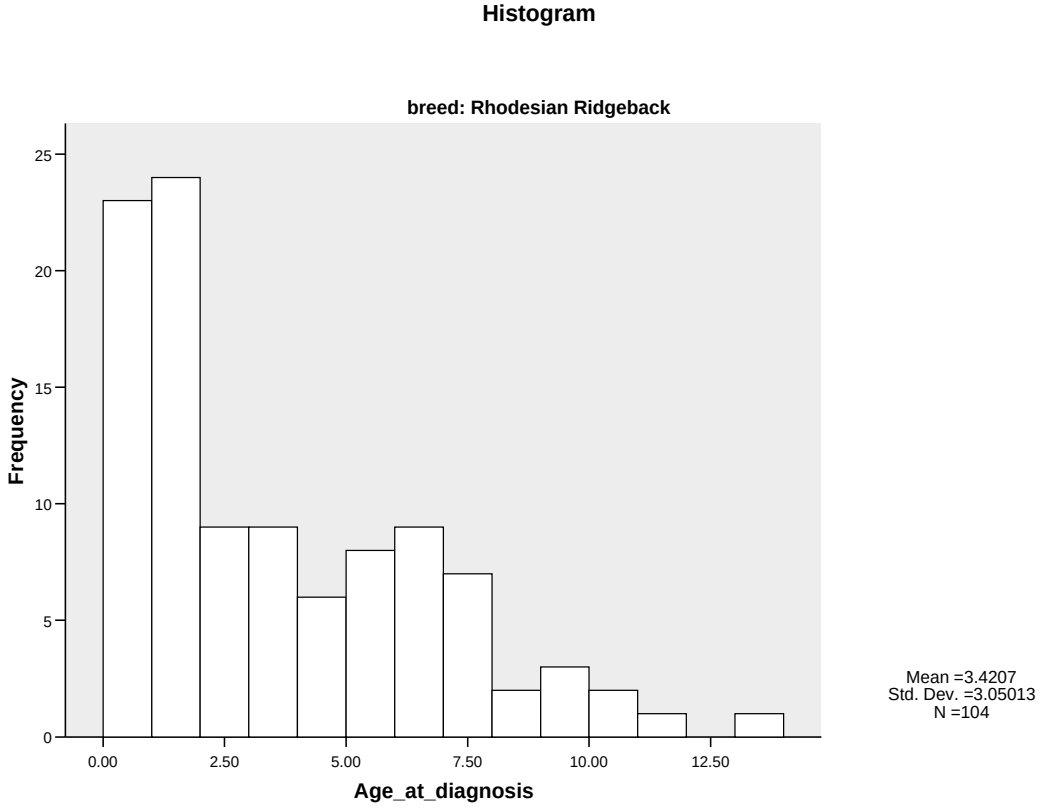


Figure 4. Histogram showing frequency of age at diagnosis for the 104 of the Rhodesian Ridgeback breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

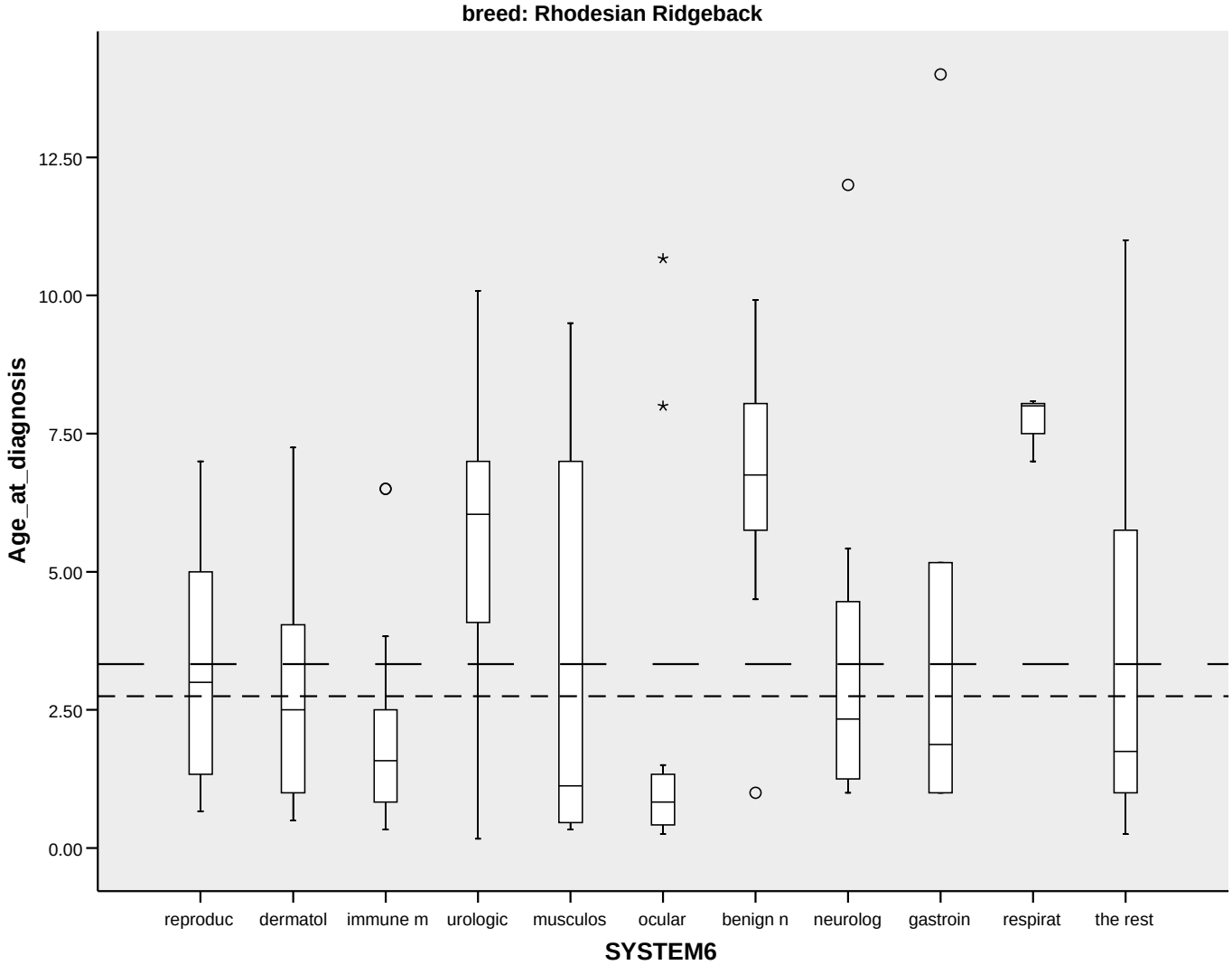


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Rhodesian Ridgeback breed (N=104 dogs with 157 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Rhodesian Ridgeback breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Rhodesian Ridgeback breed.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Reproductive	26	15.9	False pregnancy; pyometra; dystochia (uterine inertia=physical blockage); cryptorchid
2	Dermatologic	25	15.2	Alopecia; pyotraumatic dermatitis; mites; recurrent pyoderma; dermatitis
3	Immune mediated	18	11.0	Atopy; food allergy; other allergy (unspecified); gluten-sensitive enteropathy
4	Urologic	14	8.5	Incontinence (unspecified>after spay); cystitis; haematuria; urethral obstruction
5	Musculoskeletal	12	7.3	Arthritis; OCD; hypertrophic osteodystrophy
6	Ocular	12	7.3	Entropion; cataracts; distichiasis
7	Benign neoplasia	11	6.7	Lipoma; unspecified (tail); cyst (flank); chondroma (hind limb)
8	Aural	8	4.9	Otitis externa; excessive ear wax
9	Neurologic	7	4.3	Seizures; deafness; rage syndrome; secondary seizures (brain trauma)
10	Gastrointestinal	6	3.7	Colitis; diarrhoea; IBD; malabsorption
11	Other	5	3.0	Uncodeable
12	Cardiac	4	2.4	Heart murmur (unspecified>grade 1)
13	Endocrine	4	2.4	Hypothyroidism; unspecified
14	Unknown	4	2.4	Undiagnosed illness
15	Cancer	3	1.8	Type unspecified (hock); neoplasia; chondrosarcoma
16	Respiratory	3	1.8	Laryngeal paralysis
17	Anal gland	1	0.6	Anal sacculitis
18	Trauma	1	0.6	Eyeball
	Total	164	100.0	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for Rottweilers

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Rottweilers

A total of 252 forms were sent out and 67 were returned, representing 220 live dogs. This breed had a 26.6% response rate (67/252) and it represented 0.49% of all returns (67/13,741).

Mortality data

A total of 137 deaths were reported and this represents 0.86% of all deaths reported in the survey (137/15,881). The median age at death for Rottweilers was 8 years and 11 months (min = 5 months, max = 16 years and 9 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Rottweilers. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Rottweilers.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	62	45.3	Osteosarcoma; unspecified
2	Old age	14	10.2	Old age
3	Musculoskeletal	8	5.8	Hip dysplasia; arthritis; CLR; myositis
4	Cardiac	7	5.1	Heart attack; heart failure; heart defect unspecified
5	Cerebral vascular	7	5.1	Stroke or cerebral vascular accident
6	Other	6	4.4	Uncodeable
7	Combinations	5	3.6	
8	Immune mediated	4	2.9	Unspecified; MMM; thrombocytopaenia
9	Neurologic	4	2.9	Spinal paralysis; seizures; spinal cord disease
10	Unknown	4	2.9	
11	Urologic	4	2.9	Kidney failure
12	Perioperative	3	2.2	Postoperative > perioperative
13	Trauma	3	2.2	Spinal; road traffic accident
14	Gastrointestinal	2	1.5	Parvovirus; foreign body obstruction
15	Respiratory	2	1.5	Choked; respiratory failure
16	Hepatic	1	0.7	Liver failure
17	Systemic	1	0.7	Allergy to insect bite or sting or snake bite
	Total	137	100.0	

MMM=masticatory muscle myositis

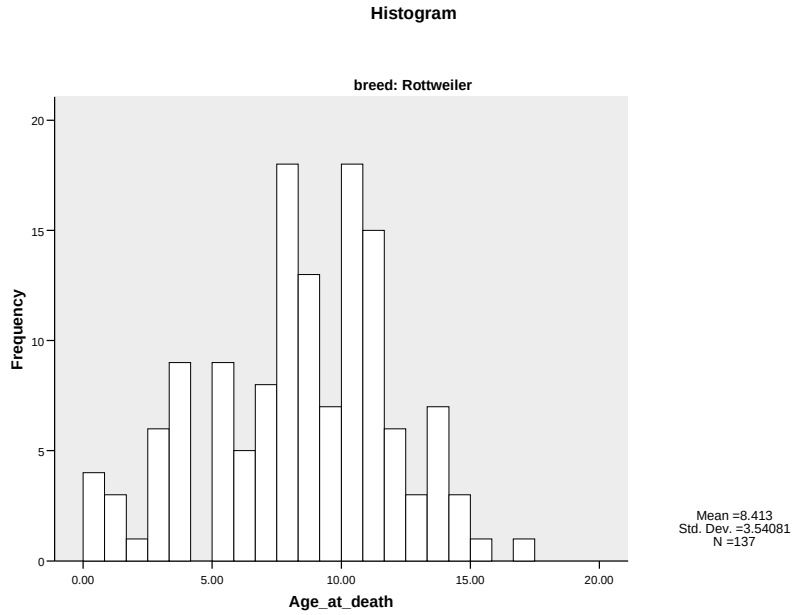


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 137 Rottweiler deaths with age at death reported.

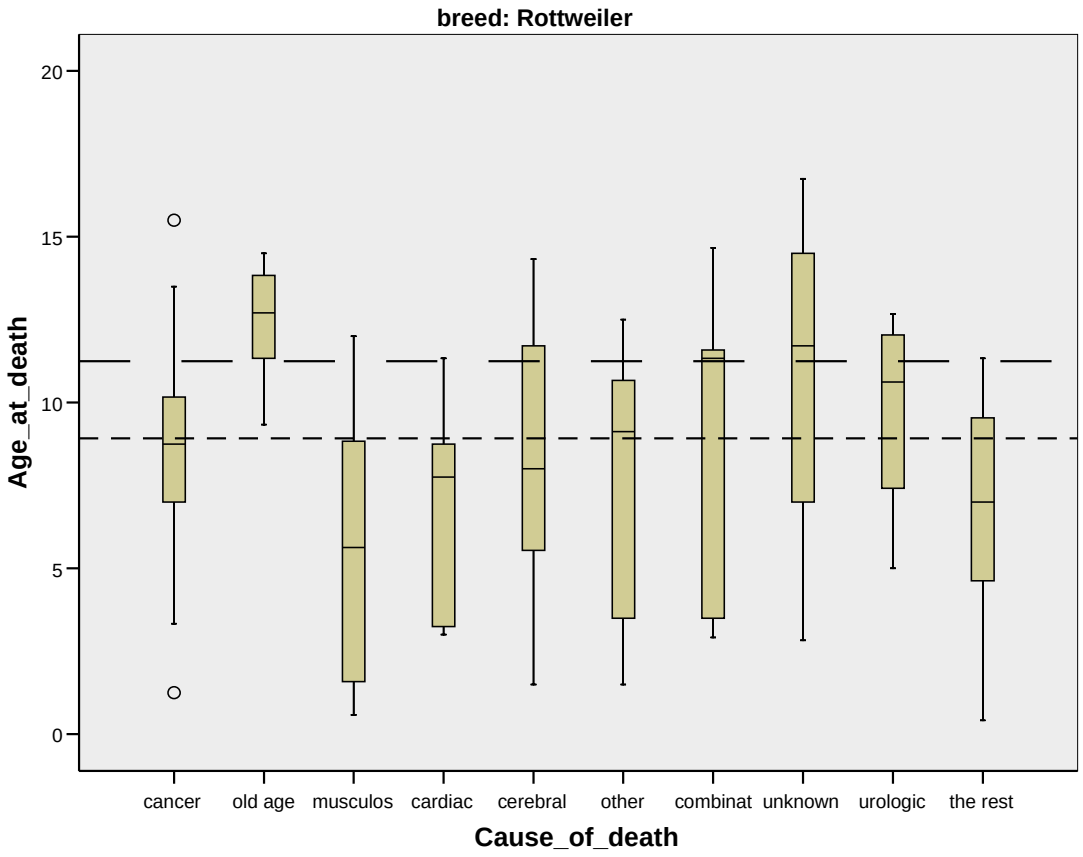


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Rottweilers (N=137). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Rottweilers. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 220 live dogs with a reported age was 4 years and 5 months (min=2 months, max=11 years and 3 months, Figure 3). Health information was reported for 220 live dogs of which 137 (62%) were healthy and 83 (38%) had at least one reported health condition, resulting in a total of 136 reported conditions with a median of 1 condition/dog (min=1, max=7).

The median current age of all healthy dogs with a reported age (N=137) was 3 years and 8 months (min=2 months, max=11 years and 3 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=83) was 6 years (min=10 months, max=10 years and 6 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=136) was 2 years (min= 2 months, max= 10 years and 4 months, Figure 4). Table 3 shows the disease conditions for Rottweilers. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 212 Rottweilers with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	92	38	130 (61%)
Male	73	9	82 (39%)
Totals	165 (78%)	47 (22%)	212 (100%)

Significantly more females were neutered (P=0.0018).

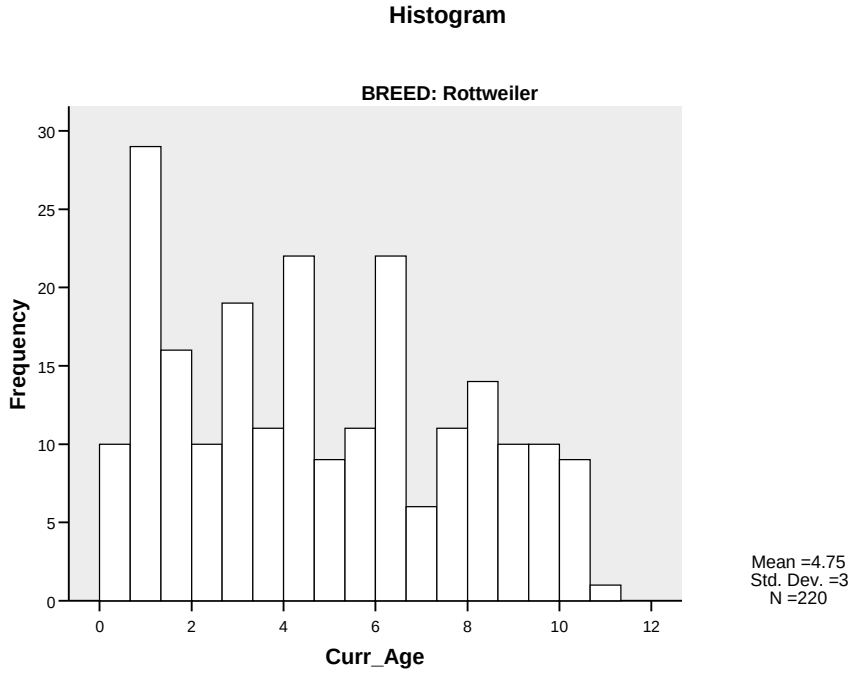


Figure 3. Histogram showing frequency of current age in years for the 220 live Rottweilers with age reported.

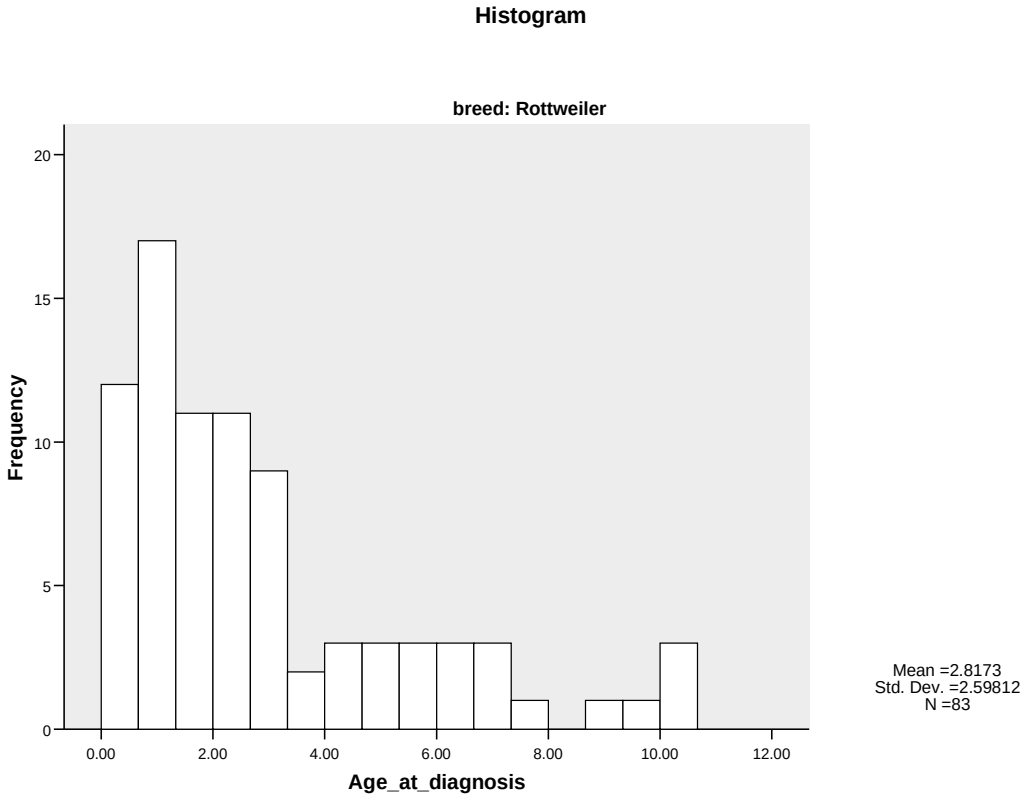


Figure 4. Histogram showing frequency of age at diagnosis for the 83 Rottweilers with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

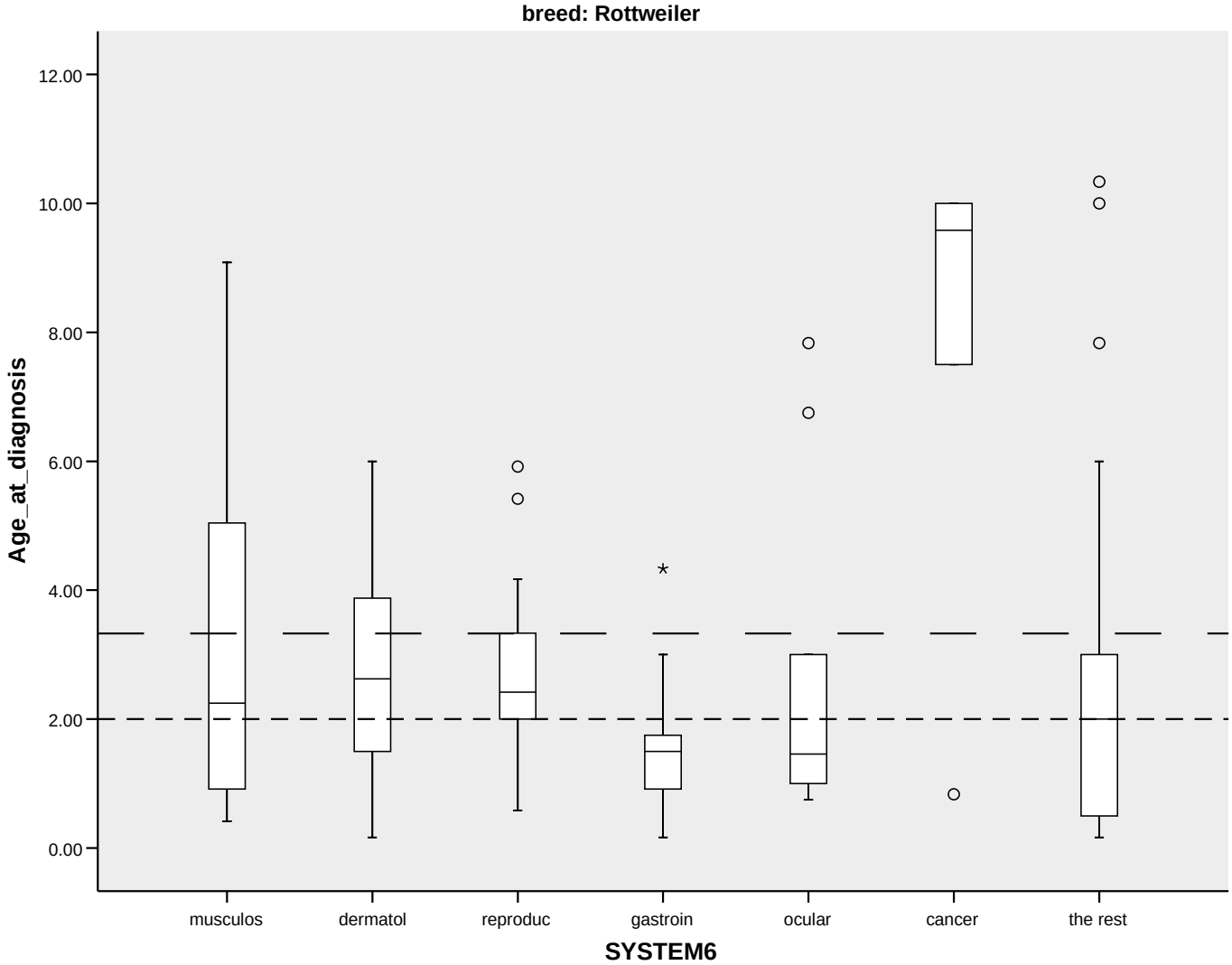


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Rottweilers (N=83 dogs with 136 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Rottweilers. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Rottweilers.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Musculoskeletal	39	28.7	CLR; lameness (forelimb>hindlimb); arthritis; CHD; elbow dysplasia
2	Dermatologic	24	17.6	Pyotraumatic dermatitis; mites (sarcoptes>cheyletiella=demodex)
3	Reproductive	17	12.5	False pregnancy; pyometra; agalactia; eclampsia; mastitis; vaginitis; infertility
4	Gastrointestinal	11	8.1	Colitis; campylobacter; diarrhoea; regurgitation; weight loss
5	Ocular	10	7.4	Entropion; corneal ulcer; conjunctivitis; epiphora; unspecified
6	Immune mediated	8	5.9	Immunoglobulin type A (IgA) deficiency; food allergy; MMM; food allergy; flea allergy; dust mite allergy
7	Cancer	6	4.4	Unspecified (liver>rest); lymphoma (foot)
8	Respiratory	5	3.7	Kennel cough; rhinitis; noisy breathing
9	Urologic	4	2.9	Cystitis; incontinence (unspecified)
10	Aural	3	2.2	Otitis externa
11	Benign neoplasia	2	1.5	Lipoma
12	Endocrine	2	1.5	Hypothyroidism
13	Neurologic	2	1.5	Seizures
14	Cardiac	1	0.7	Chronic heart failure
15	Trauma	1	0.7	Forelimb
16	Unknown	1	0.7	Undiagnosed illness
	Total	136	100.0	

MMM=masticatory muscle myositis

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for Russian Black Terriers

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Russian Black Terriers

A total of 111 forms were sent out and 23 were returned, representing 36 live dogs. This breed had a 20.7% response rate (23/111) and it represented 0.17% of all returns (23/13,741).

Mortality data

A total of 4 deaths were reported and this represents 0.03% of all deaths reported in the survey (4/15,881). The median age at death for Russian Black Terriers was 1 year and 10 months (min = 3 months, max = 11 years and 6 months) and this was lower than the overall median of 11 years and 3 months. Table 1 shows the age at death and causes of death for Russian Black Terriers.

Table 1. Causes of death by organ system/category for Russian Black Terriers.

Cause of death		N	%	Age at death
1	Cancer – carcinoma (stomach); brain tumour	2	50.0	3 years; 11 years & 6 months
2	Gastrointestinal – Campylobacter; Parvovirus	2	50.0	3 months; 7 months
	Total	4	100.0	

Morbidity data

The median current age of the 35 live dogs with a reported age was 2 years and 4 months (min=4 months, max=8 years and 7 months, Figure 1). Health information was reported for 36 live dogs of which 28 (78%) were healthy and 8 (22%) had at least one reported health condition, resulting in a total of 11 reported conditions with a median of 1 condition/dog (min=1, max=2).

The median current age of all healthy dogs with a reported age (N=28) was 1 year and 10 months (min=4 months, max=8 years and 7 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=8) was 3 years and 9 months (min=9 months, max=4 years and 11 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=11) was 1 year (min= 6 months, max= 3 years and 2 months, Figure 2). Table 3 shows the disease conditions for Russian Black Terriers.

Table 2. Distribution of gender and neuter status for 33 Russian Black Terriers with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	18	3	21 (64%)
Male	10	2	12 (36%)
Totals	28 (85%)	5 (15%)	33 (100%)

There was no association between gender and neuter status (P=0.8544).

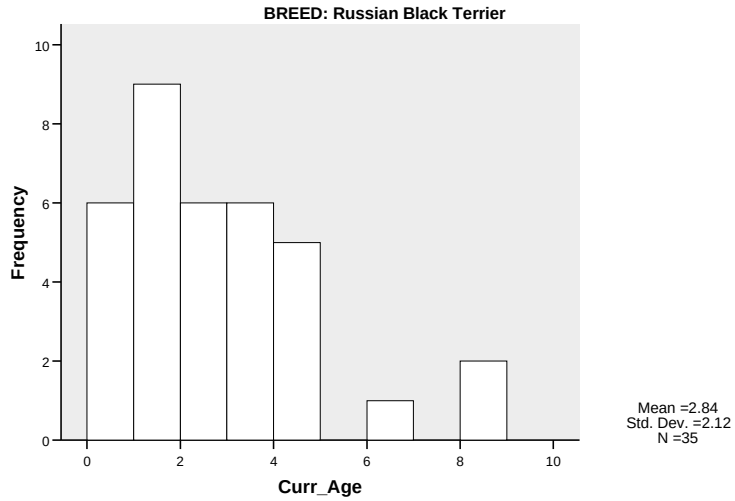


Figure 1. Histogram showing frequency of current age in years for the 35 live Russian Black Terriers with age reported.

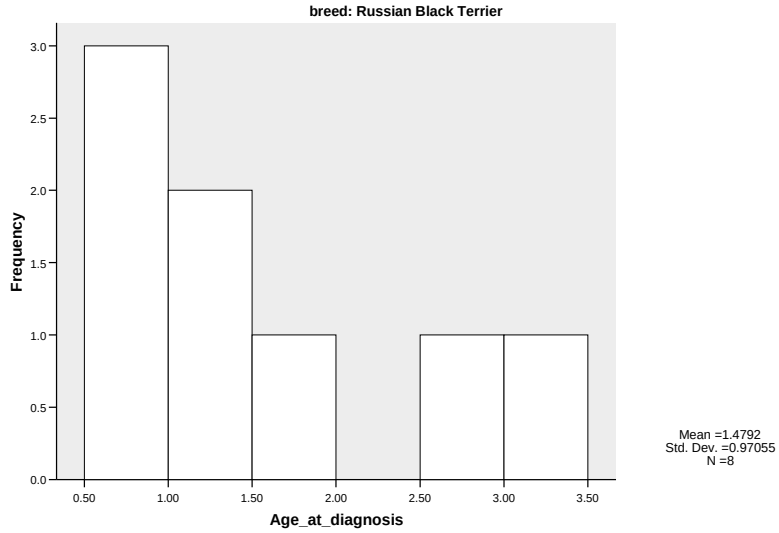


Figure 2. Histogram showing frequency of age at diagnosis for the 8 Russian Black Terriers with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

Table 3. Disease conditions by organ system/category for Russian Black Terriers.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Reproductive	4	36.4	False pregnancy; irregular heat cycles; pyometra; vaginitis
2	Musculoskeletal	2	18.2	Hip dysplasia (CHD); brachygnathism
3	Dermatologic	1	9.1	Alopecia
4	Gastrointestinal	1	9.1	Vomiting
5	Ocular	1	9.1	Entropion
6	Unknown	1	9.1	Undiagnosed illness
7	Urologic	1	9.1	Incontinence
	Total	11	100.0	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for the Samoyed breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Samoyed breed

A total of 425 forms were sent out and 173 were returned, representing 358 live dogs. This breed had a 40.7% response rate (173/425) and it represented 1.26% of all returns (173/13,741).

Mortality data

A total of 223 deaths were reported and this represents 1.40% of all deaths reported in the survey (223/15,881). The median age at death for the Samoyed breed was 12 years and 6 months (min = 4 months, max = 17 years) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Samoyed breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Samoyed breed.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	59	26.5	Type unspecified (mammary, liver); carcinoma
2	Old age	46	20.6	Old age & age combinations
3	Combinations	20	9.0	
4	Musculoskeletal	14	6.3	Arthritis; hip dysplasia
5	Other	14	6.3	Uncodeable
6	Cardiac	11	4.9	Heart failure; heart attack; hypertrophic cardiomyopathy
7	Gastrointestinal	9	4.0	Gastric dilatation/volvulus (GDV); gastric ulcer
8	Hepatic	7	3.1	Liver failure
9	Urologic	6	2.7	Kidney failure (chronic>acute); juvenile nephropathy
10	Endocrine	5	2.2	Diabetes mellitus; Addisons disease
11	Neurologic	5	2.2	Seizures; encephalitis (unspecified); spinal cord disease
12	Unknown	5	2.2	
13	Cerebral vascular	4	1.8	Stroke or cerebral vascular accident
14	Respiratory	3	1.3	Pneumonia; bronchitis
15	Immune mediated	2	0.9	Unspecified
16	Perioperative	2	0.9	
17	Poisoning	2	0.9	
18	Sudden death	2	0.9	
19	Trauma	2	0.9	Road traffic accident; spinal injury
20	Portosystemic shunt (PSS)	1	0.4	
21	Behaviour	1	0.4	Unspecified
22	Infection	1	0.4	Leptospirosis
23	Reproductive	1	0.4	Pregnancy complications
24	Septicaemia	1	0.4	
	Total	223	100.0	

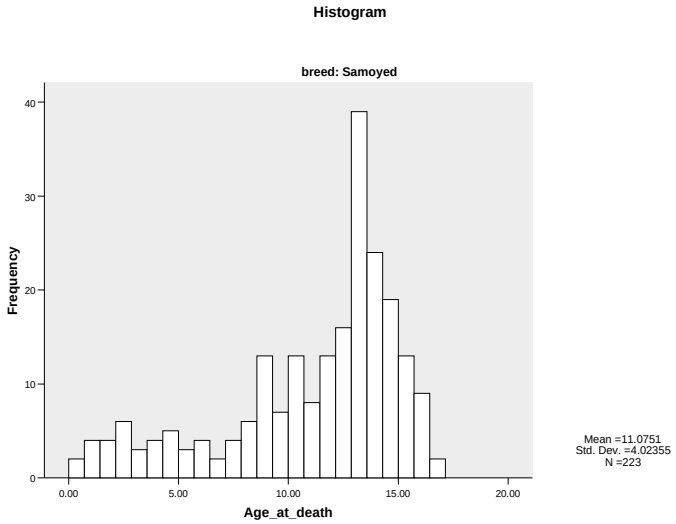


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 223 Samoyed deaths with age at death reported.

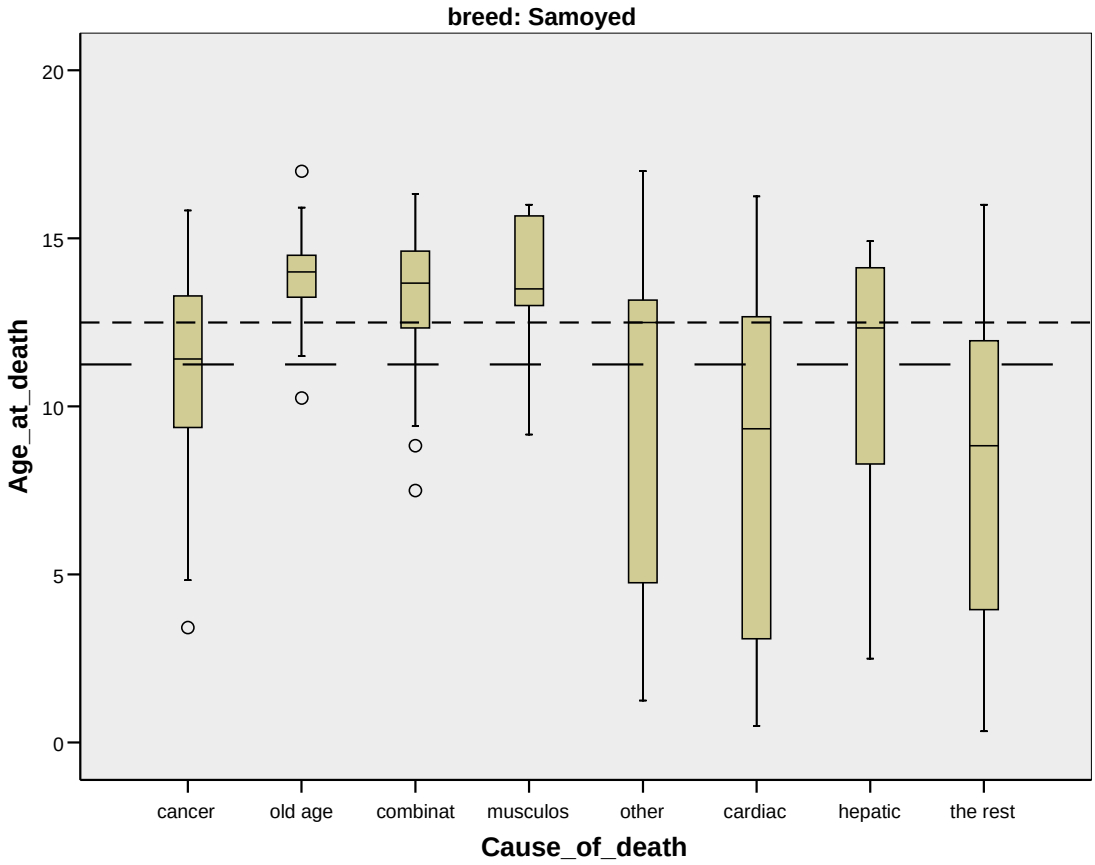


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the Samoyed breed (N=223). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the Samoyed breed. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 356 live dogs with a reported age was 5 years and 10 months (min=3 months, max=16 years, Figure 3). Health information was reported for 358 live dogs of which 195 (54%) were healthy and 163 (46%) had at least one reported health condition, resulting in a total of 310 reported conditions with a median of 1 condition/dog (min=1, max=11).

The median current age of all healthy dogs with a reported age (N=195) was 3 years and 11 months (min=3 months, max=14 years and 1 month). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=161) was 7 years and 11 months (min=10 months, max=16 years). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=305) was 4 years and 9 months (min= 2 months, max= 14 years, Figure 4). Table 3 shows the disease conditions for the Samoyed breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for the 354 Samoyed breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	133	98	231 (65%)
Male	95	28	123 (35%)
Totals	228 (64%)	126 (36%)	354 (100%)

Significantly more females were neutered (P=0.0002).

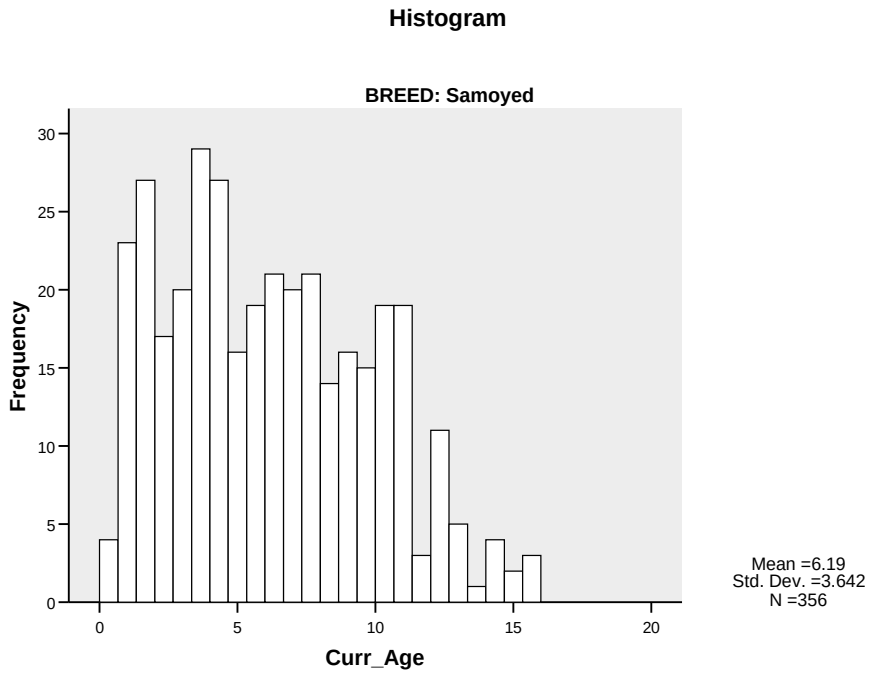


Figure 3. Histogram showing frequency of current age in years for the 356 live Samoyed breed with age reported.

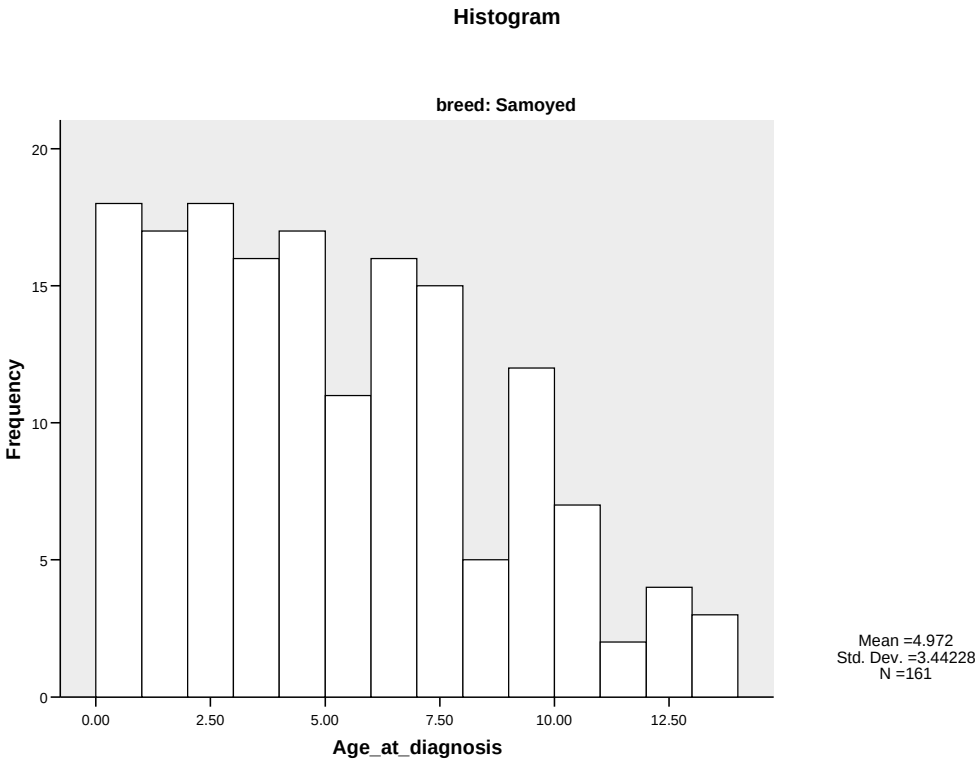


Figure 4. Histogram showing frequency of age at diagnosis for the 161 Samoyed breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

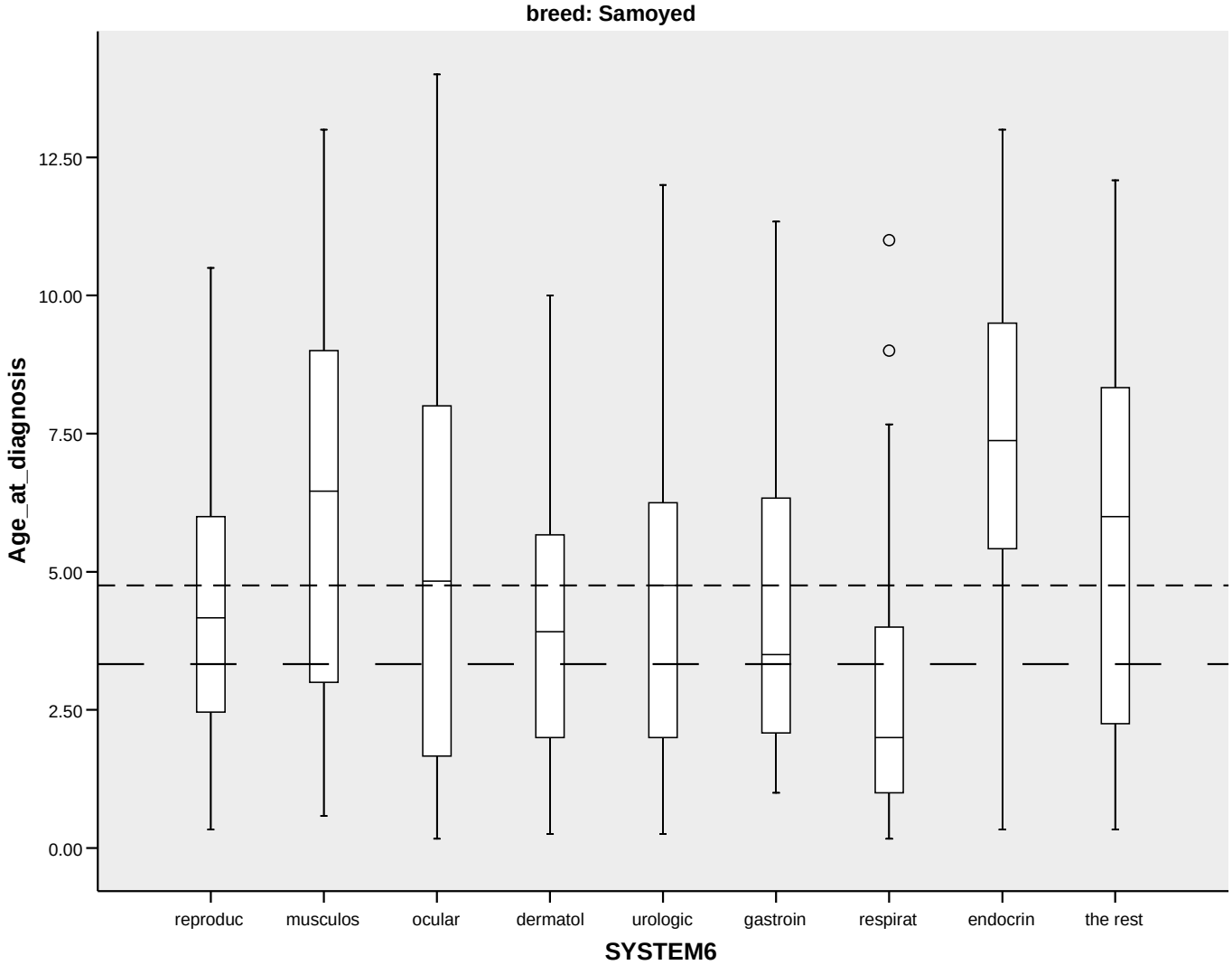


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Samoyed breed (N=161 dogs with 305 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Samoyed breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Samoyed breed.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Reproductive	59	19.0	Dystochia (uterine inertia>physical blockage); pyometra; cryptorchid; false pregnancy
2	Musculoskeletal	46	14.8	Arthritis (hindlimb>shoulders=unspec>hips=wrists=elbows>rest); CLR; CHD
3	Ocular	46	14.8	Corneal ulcer; conjunctivitis; cataracts; distichiasis; epiphora
4	Dermatologic	43	13.9	Fading nose pigment; pyotraumatic dermatitis; mites (sarcoptes>unspecified); dermatitis
5	Urologic	25	8.1	Cystitis; incontinence (unspecified>after spay); cystouroliths (struvite>unspecified)
6	Gastrointestinal	20	6.5	Foreign body obstruction; bacterial overgrowth; colitis; diarrhoea; pancreatitis; vomiting
7	Respiratory	15	4.8	Kennel cough; coughing; rhinitis; noisy breathing; pneumonia
8	Endocrine	12	3.9	Diabetes mellitus; hypothyroidism; diabetes insipidus; Cushings disease; hypoparathyroidism
9	Cardiac	7	2.3	Heart murmur (unspecified>grade 1); cardiomegaly; arrhythmia
10	Dental	7	2.3	Dental disease; defect other than extra teeth; missing lower teeth; retained puppy teeth
11	Immune mediated	7	2.3	Flea allergy; food allergy; atopy; gluten-sensitive enteropathy
12	Benign neoplasia	5	1.6	Lipoma; adenoma (anal); unspecified
13	Cancer	5	1.6	Unspecified (mammary>spleen=testicular); lymphoma (ribcage)
14	Trauma	4	1.3	Ocular (cornea; eyeball; eyelid); musculoskeletal (hindlimb)
15	Unknown	3	1.0	Undiagnosed illness
16	Aural	2	0.6	Otitis externa; excessive ear wax
17	Anal gland	1	0.3	Anal sacculitis
18	Cerebrovascular	1	0.3	Stroke or cerebral vascular accident
19	Haematopoietic	1	0.3	Anaemia unspecified
20	Other	1	0.3	Uncodeable
	Total	310	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for the Schipperke breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Schipperke breed

A total of 109 forms were sent out and 21 were returned, representing 77 live dogs. This breed had a 19.3% response rate (21/109) and it represented 0.15% of all returns (21/13,741).

Mortality data

A total of 36 deaths were reported and this represents 0.23% of all deaths reported in the survey (36/15,881). The median age at death for the Schipperke breed was 13 years (min = 6 months, max = 17 years and 6 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Schipperke breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Schipperke breed.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	11	30.6	Type unspecified; carcinoma
2	Old age	6	16.7	Old age
3	Cardiac	3	8.3	Heart attack; heart failure; mitral valve disease (MVD)
4	Urologic	3	8.3	Kidney failure
5	Other	2	5.6	Uncodeable
6	Trauma	2	5.6	Rod traffic accident; unspecified
7	Cerebral vascular	1	2.8	Stroke or cerebral vascular accident
8	Gastrointestinal	1	2.8	Inflammatory bowel disease (IBD)
9	Hepatic	1	2.8	Liver failure
10	Immune mediated	1	2.8	Unspecified
11	Ocular	1	2.8	Blindness
12	Pining	1	2.8	
13	Respiratory	1	2.8	Respiratory disease unspecified
14	Senility	1	2.8	
15	Unknown	1	2.8	
	Total	36	100.0	

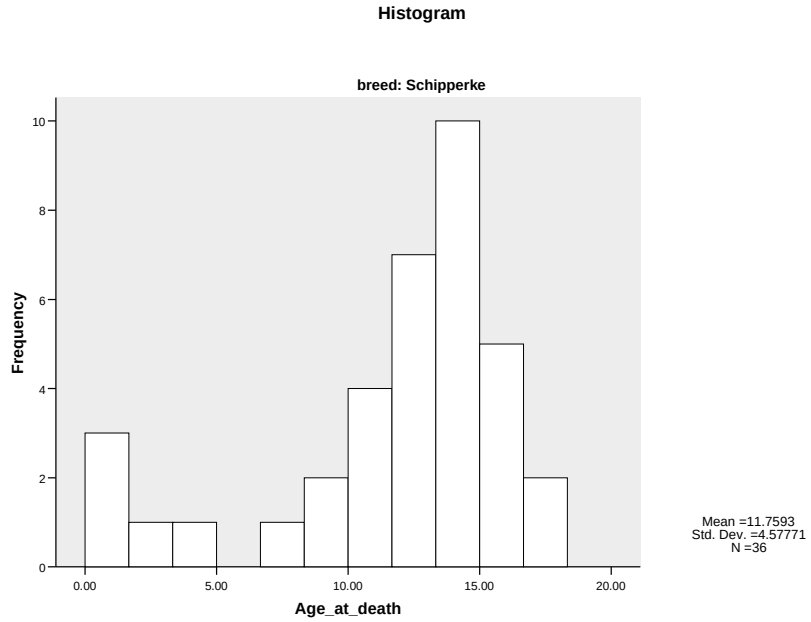


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 36 Schipperke deaths with age at death reported.

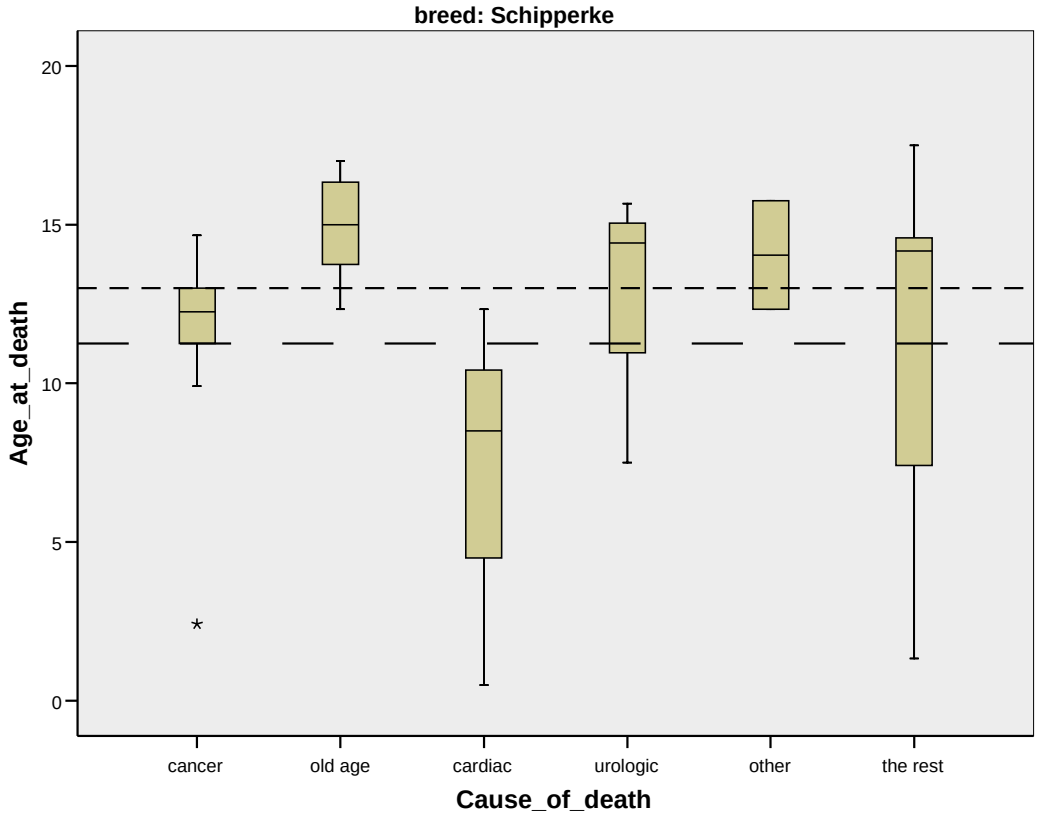


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the Schipperke breed (N=36). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the Schipperke breed. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 77 live dogs with a reported age was 5 years (min=1 month, max=15 years and 7 months, Figure 3). Health information was reported for 77 live dogs of which 54 (70%) were healthy and 23 (30%) had at least one reported health condition, resulting in a total of 31 reported conditions with a median of 1 condition/dog (min=1, max=3).

The median current age of all healthy dogs with a reported age (N=54) was 4 years and 1 month (min=1 month, max=14 years and 3 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=22) was 6 years and 5 months (min=10 months, max=15 years and 7 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=30) was 2 years and 8 months (min= 2 months, max= 15 years, Figure 4). Table 3 shows the disease conditions for the Schipperke breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for the 77 Schipperke breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	30	14	44 (57%)
Male	27	6	33 (43%)
Totals	57 (74%)	20 (26%)	77 (100%)

There was no association between gender and neuter status (P=0.1769).

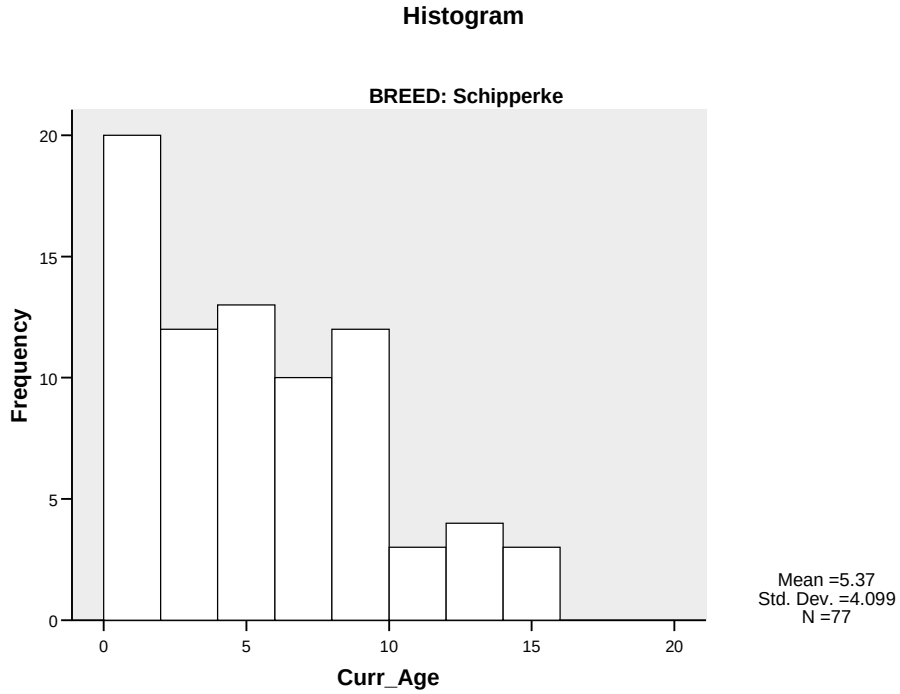


Figure 3. Histogram showing frequency of current age in years for the 77 live Schipperke breed with age reported.

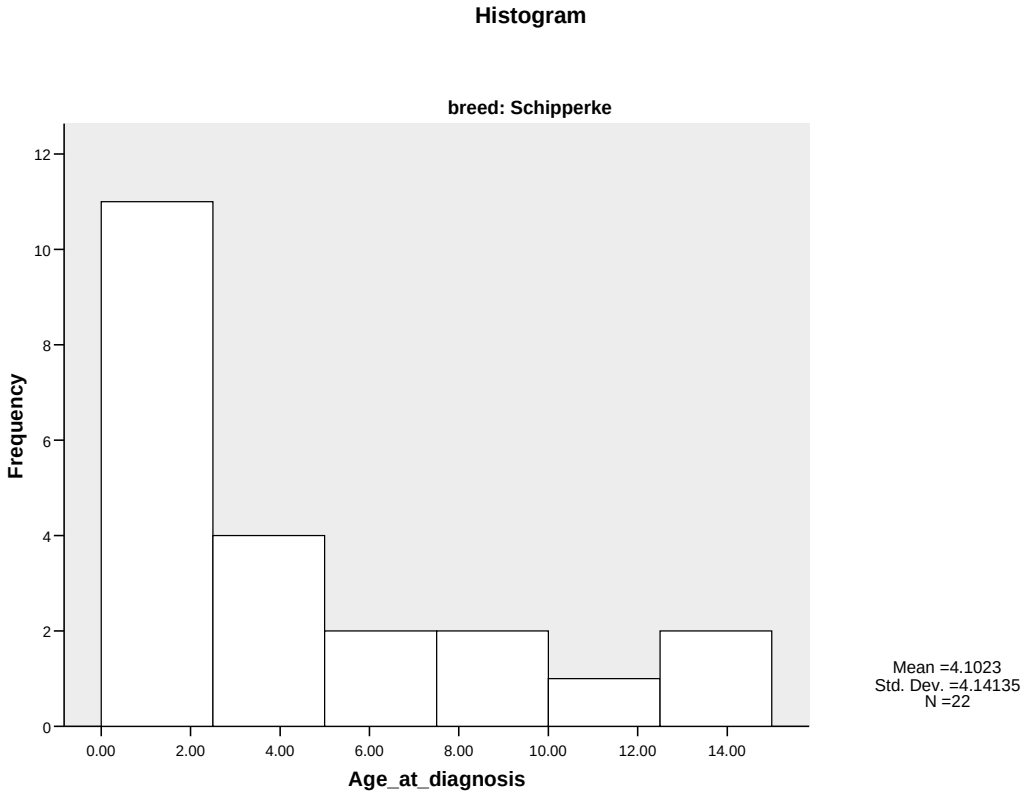


Figure 4. Histogram showing frequency of age at diagnosis for the 22 Schipperke breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

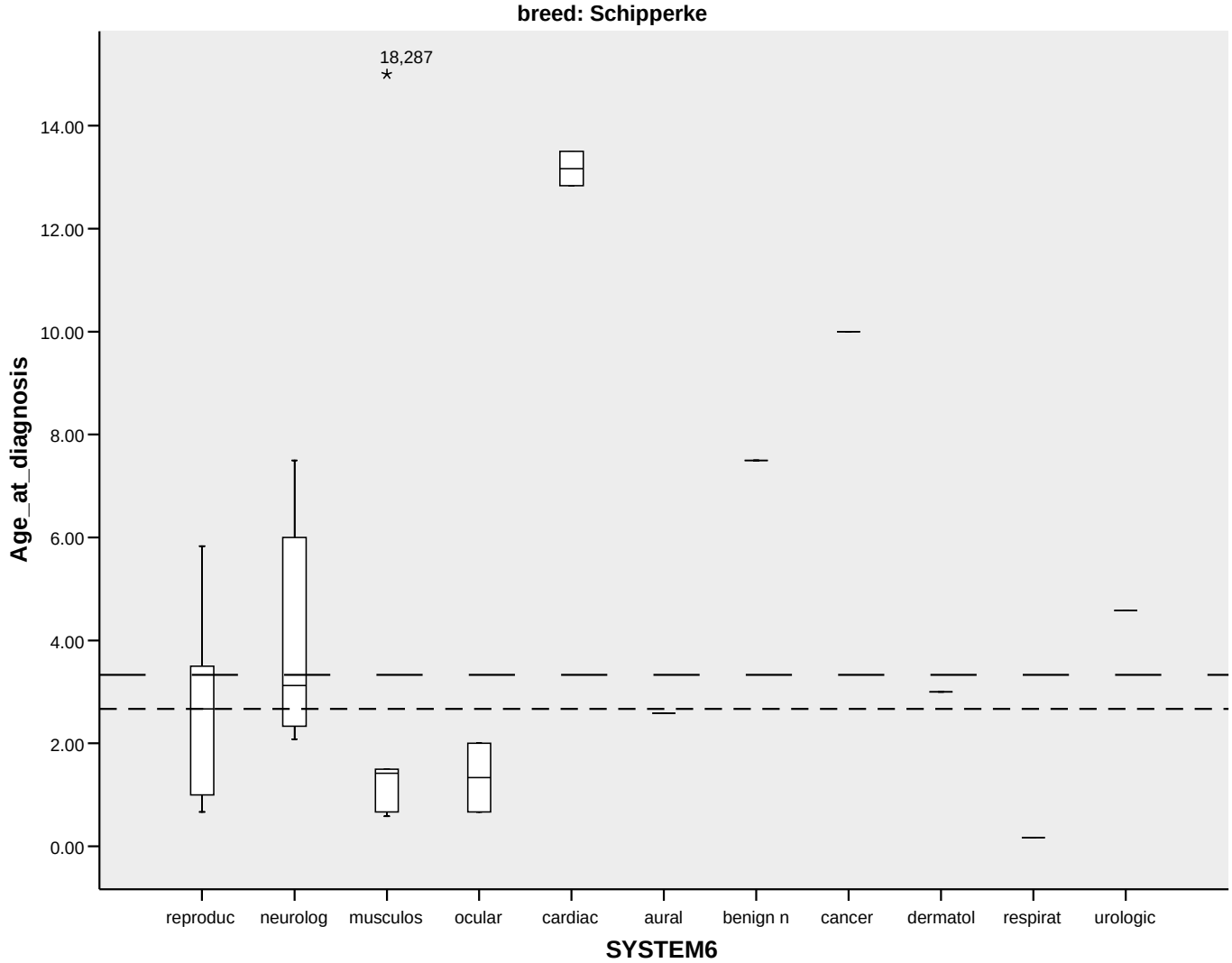


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Schipperke breed (N=22 dogs with 30 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Schipperke breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Schipperke breed.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Reproductive	9	29.0	Cryptorchid; dystochia (uterine inertia>physical blockage); agalactia; false pregnancy
2	Neurologic	6	19.4	Seizures
3	Musculoskeletal	5	16.1	Avascular necrosis of the femoral head or ; arthritis; CLR; coxofemoral luxation
4	Ocular	3	9.7	Blocked tear duct; epiphora
5	Cardiac	2	6.5	Chronic heart failure; heart murmur (unspecified)
6	Aural	1	3.2	Narrow ear canal
7	Benign neoplasia	1	3.2	Lipoma
8	Cancer	1	3.2	Unspecified (mammary)
9	Dermatologic	1	3.2	Fading nose pigment
10	Respiratory	1	3.2	Noisy breathing
11	Urologic	1	3.2	Pyelonephritis
	Total	31	100.0	

Avascular necrosis of the femoral head = Legg Calve Perthes disease

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for Scottish Terriers

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Scottish Terriers

A total of 278 forms were sent out and 47 were returned, representing 152 live dogs. This breed had a 16.9% response rate (47/278) and it represented 0.34% of all returns (47/13,741).

Mortality data

A total of 59 deaths were reported and this represents 0.37% of all deaths reported in the survey (59/15,881). The median age at death for Scottish Terriers was 10 years and 3 months (min = 6 months, max = 17 years and 6 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Scottish Terriers. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Scottish Terriers.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	28	47.5	Type unspecified (liver, pancreas, mammary)
2	Old age	7	11.9	Old age
3	Urologic	4	6.8	Kidney failure; bladder stones; urethral obstruction
4	Combinations	3	5.1	
5	Endocrine	3	5.1	Cushings disease; Addisons disease
6	Hepatic	3	5.1	Liver failure (chronic & acute); liver disease (unspec,)
7	Cardiac	2	3.4	Heart failure
8	Dermatologic	2	3.4	Unspecified
9	Gastrointestinal	2	3.4	Foreign body obstruction
10	Infection	1	1.7	Bacterial (unspecified)
11	Neurologic	1	1.7	Seizures
12	Other	1	1.7	Uncodeable
13	Perioperative	1	1.7	
14	Respiratory	1	1.7	Respiratory failure
	Total	59	100.0	

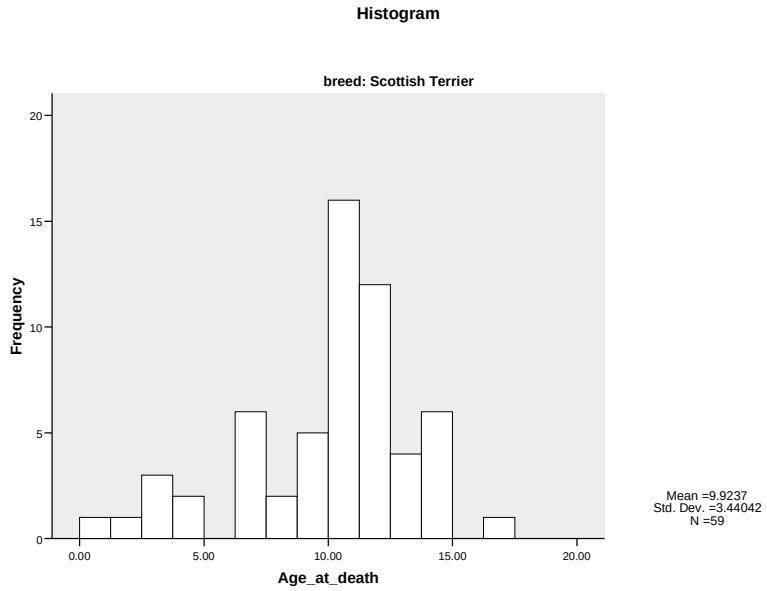


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 59 Scottish Terrier deaths with age at death reported.

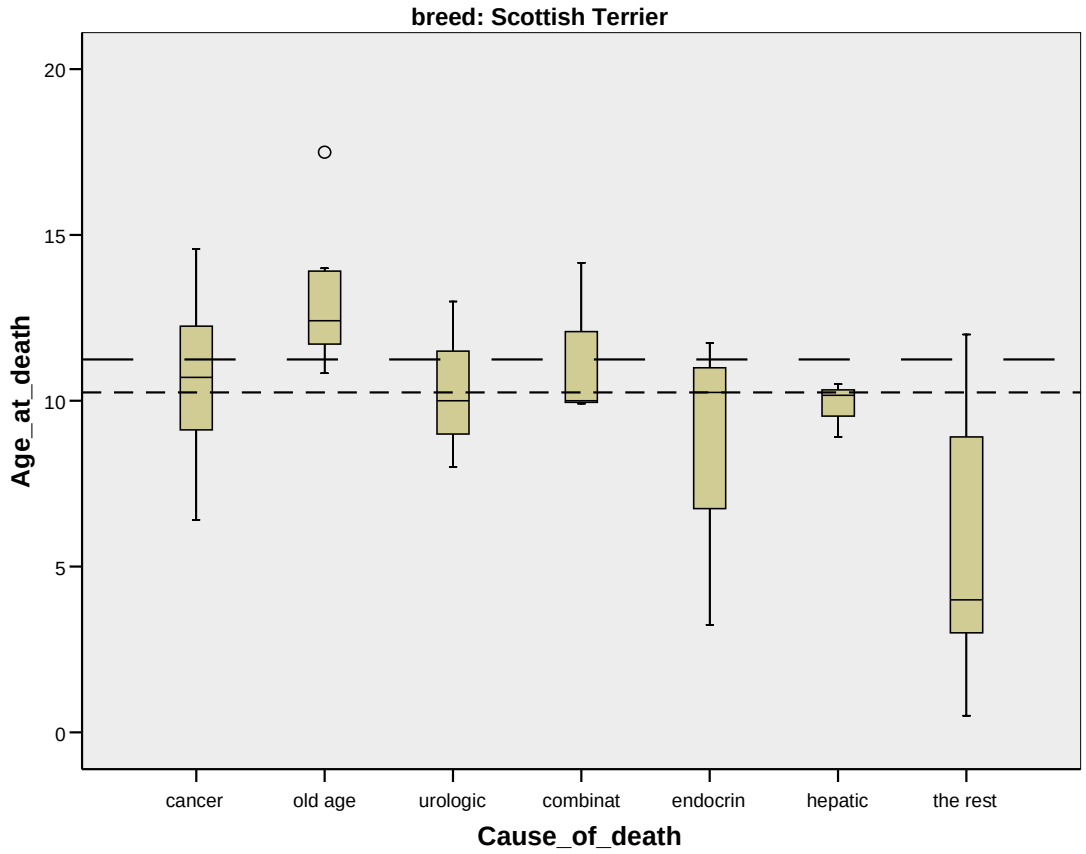


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Scottish Terriers (N=59). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Scottish Terriers. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 152 live dogs with a reported age was 4 years and 11 months (min=3 months, max=13 years and 8 months, Figure 3). Health information was reported for 152 live dogs of which 82 (54%) were healthy and 70 (46%) had at least one reported health condition, resulting in a total of 120 reported conditions with a median of 1 condition/dog (min=1, max=6).

The median current age of all healthy dogs with a reported age (N=82) was 3 years and 11 months (min=3 months, max=13 years and 8 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=64) was 6 years and 1 month (min=1 year, max=12 years and 3 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=113) was 3 years and 10 months (min= 1 month, max= 11 years and 3 months, Figure 4). Table 3 shows the disease conditions for Scottish Terriers. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 150 Scottish Terriers with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	73	25	98 (65%)
Male	46	6	52 (35%)
Totals	119 (79%)	31 (21%)	150 (100%)

Significantly more females were neutered (P=0.0443).

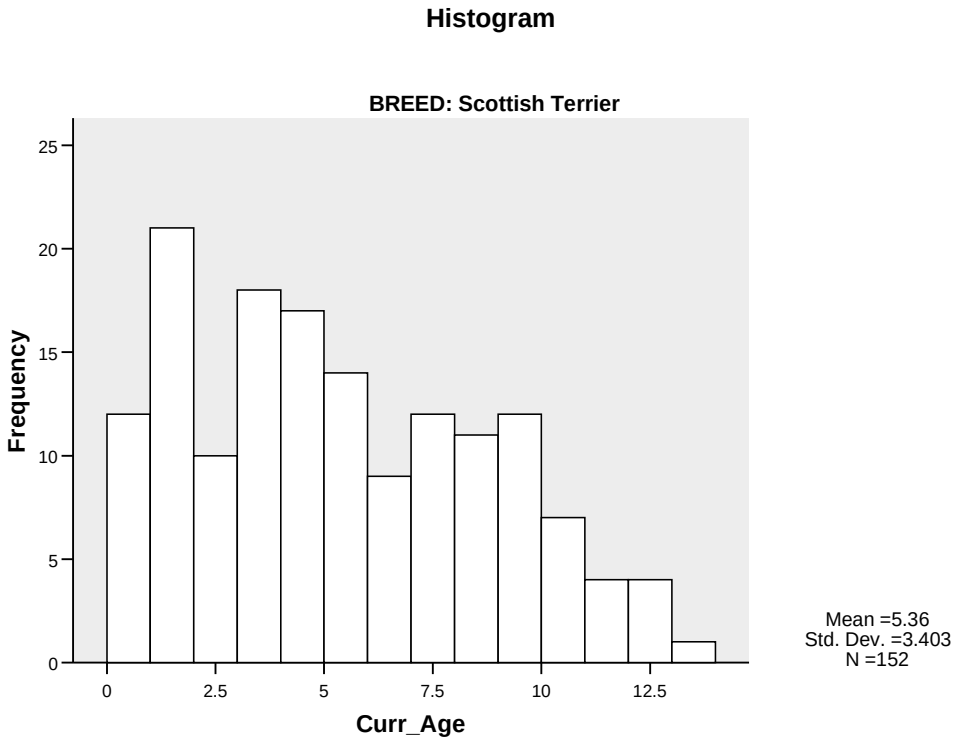


Figure 3. Histogram showing frequency of current age in years for the 152 live Scottish Terriers with age reported.

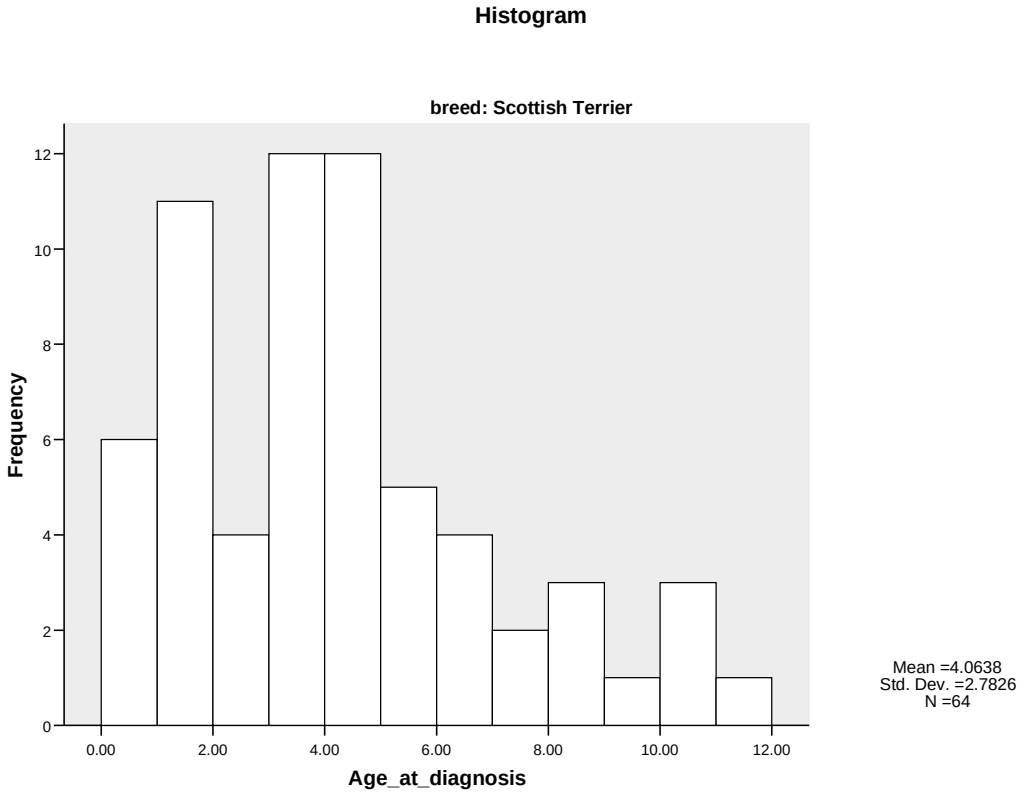


Figure 4. Histogram showing frequency of age at diagnosis for the 64 Scottish Terriers with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

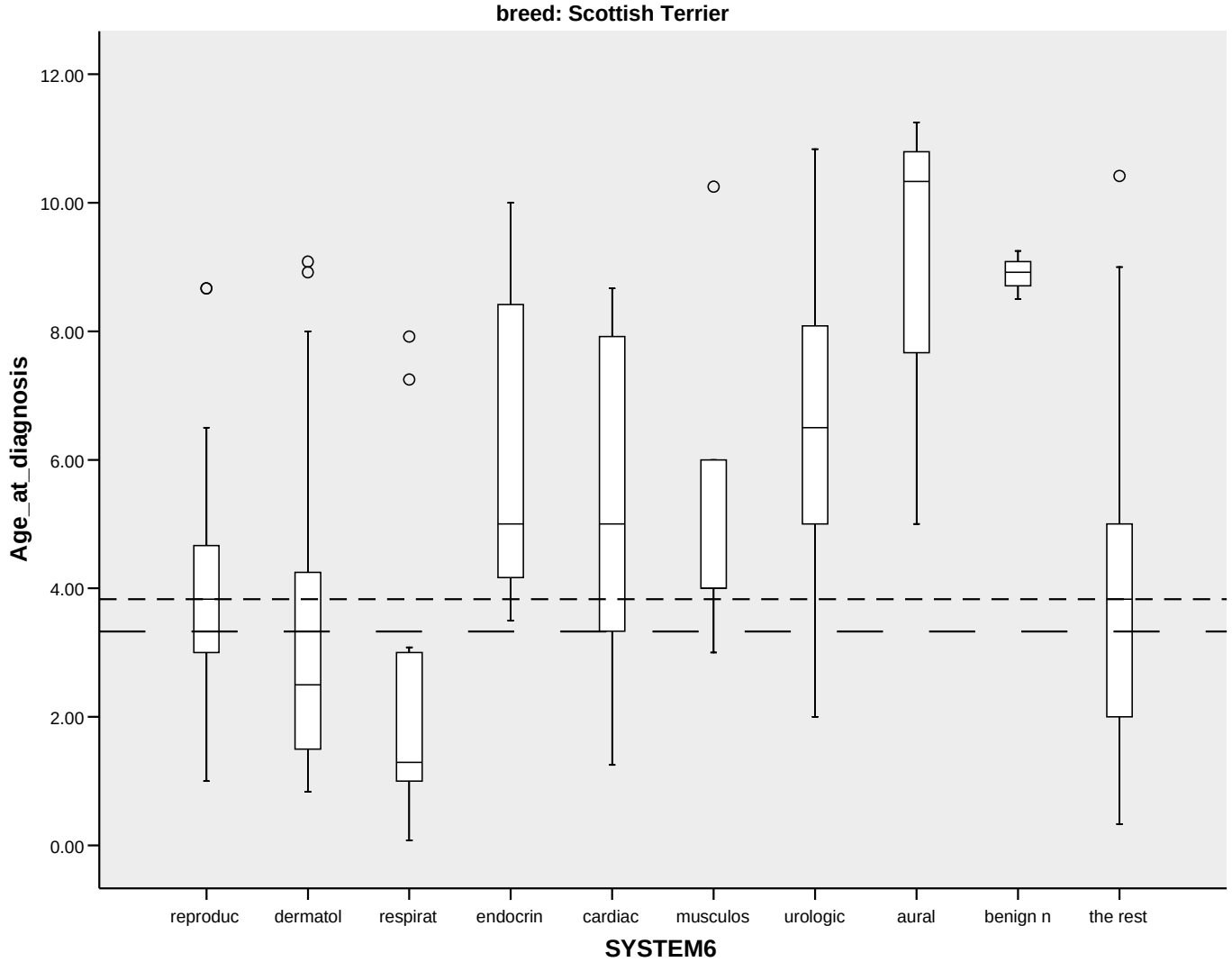


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Scottish Terriers (N=64 dogs with 113 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Scottish Terriers. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Scottish Terriers.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Reproductive	34	28.3	Dystochia (uterine inertia>physical blockage); infertility; pyometra; agalactia; vaginitis
2	Dermatologic	18	15.0	Dermatitis; parasites (unspecified); recurrent pyoderma; seborrhoea
3	Respiratory	14	11.7	Kennel cough; noisy breathing
4	Endocrine	7	5.8	Cushings disease; hypothyroidism
5	Cardiac	5	4.2	Heart murmur (without clinical signs>unspecified); arrhythmia
6	Gastrointestinal	5	4.2	Diarrhoea; campylobacter; foreign body obstruction; pancreatitis
7	Musculoskeletal	5	4.2	Patellar luxation; CLR; DJD; elbow dysplasia
8	Neurologic	5	4.2	Seizures; cerebellar atrophy; weakness
9	Urologic	5	4.2	Cystitis; kidney disease unspecified; incontinence (unspecified)
10	Dental	4	3.3	Dental disease; defect other than extra teeth; retained puppy teeth
11	Immune mediated	4	3.3	Gluten-sensitive enteropathy; flea allergy; food allergy; allergy (unspecified)
12	Ocular	4	3.3	KCS; corneal foreign body; persistent papillary membrane (PPM); unspecified
13	Aural	3	2.5	Otitis externa
14	Benign neoplasia	3	2.5	Adenoma (mammary); histiocytoma (skin); lipoma
15	Hepatic	3	2.5	Enlarged liver; hepatitis; polycystic liver disease
16	Unknown	1	0.8	Undiagnosed illness
	Total	120	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for Sealyham Terriers

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Sealyham Terriers

A total of 100 forms were sent out and 21 were returned, representing 47 live dogs. This breed had a 21.0% response rate (21/100) and it represented 0.15% of all returns (21/13,741).

Mortality data

A total of 12 deaths were reported and this represents 0.08% of all deaths reported in the survey (12/15,881). The median age at death for Sealyham Terriers was 12 years and 3 months (min = 2 years and 2 months, max = 14 years and 11 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Sealyham Terriers. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Sealyham Terriers.

Cause of death		N	%	Most common specific causes in descending order
1	Behaviour	2	16.7	Aggression
2	Neurologic	2	16.7	IVDD; unspecified spinal disease
3	Old age	2	16.7	Old age
4	Cancer	1	8.3	Type unspecified (jaw)
5	Cardiac	1	8.3	Heart failure
6	Combinations	1	8.3	
7	Gastrointestinal	1	8.3	Foreign body obstruction
8	Hepatic	1	8.3	Liver failure
9	Poisoning	1	8.3	
	Total	12	100.0	

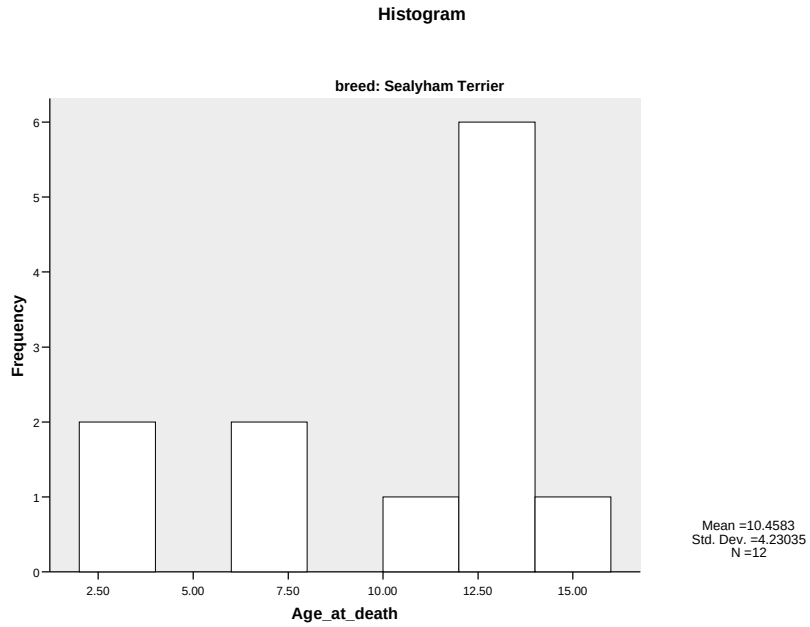


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 12 Sealyham Terrier deaths with age at death reported.

Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Sealyham Terriers (N=12). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Sealyham Terriers. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 47 live dogs with a reported age was 4 years and 10 months (min=4 months, max=12 years and 3 months, Figure 3). Health information was reported for 47 live dogs of which 25 (53%) were healthy and 22 (47%) had at least one reported health condition, resulting in a total of 29 reported conditions with a median of 1 condition/dog (min=1, max=3).

The median current age of all healthy dogs with a reported age (N=25) was 2 years and 3 months (min=4 months, max=12 years and 3 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=22) was 7 years and 9 months (min=1 year and 4 months, max=12 years and 3 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=29) was 6 years (min= 5 months, max= 11 years and 6 months, Figure 4). Table 3 shows the disease conditions for Sealyham Terriers. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 47 Sealyham Terriers with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	25	9	34 (72%)
Male	9	4	13 (28%)
Totals	34 (72%)	13 (28%)	47 (100%)

There was no association between gender and neuter status (P=0.7682).

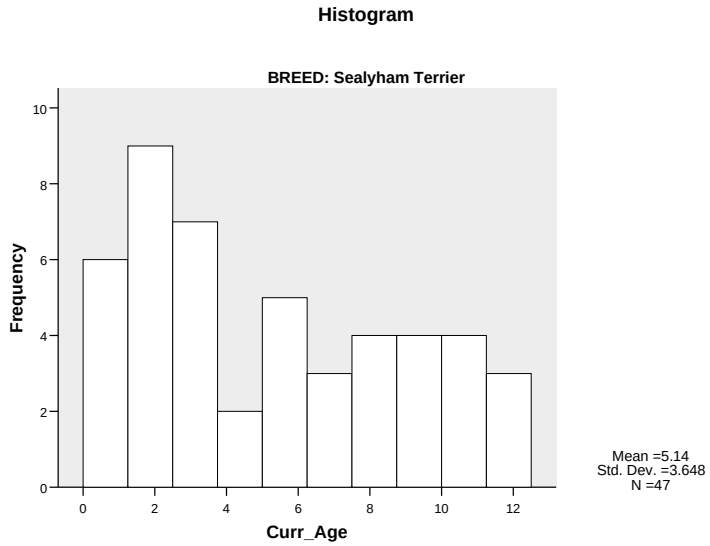


Figure 3. Histogram showing frequency of current age in years for the 47 live Sealyham Terriers with age reported.

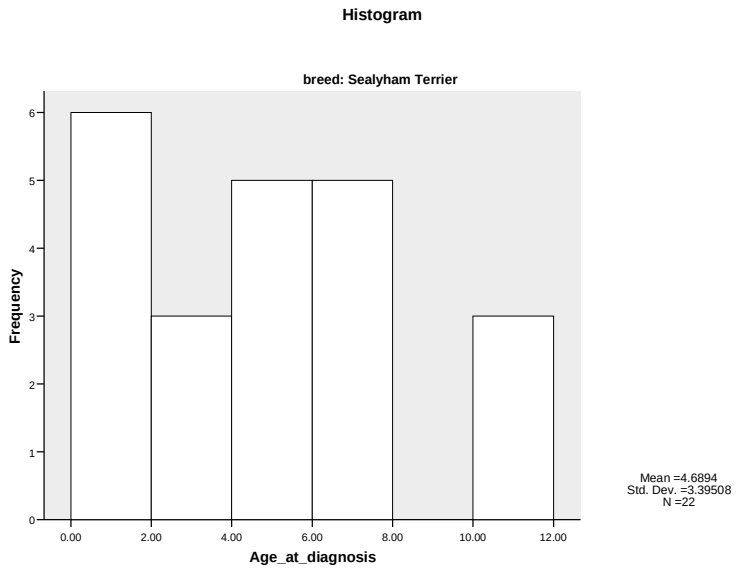


Figure 4. Histogram showing frequency of age at diagnosis for the 22 Sealyham Terriers with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

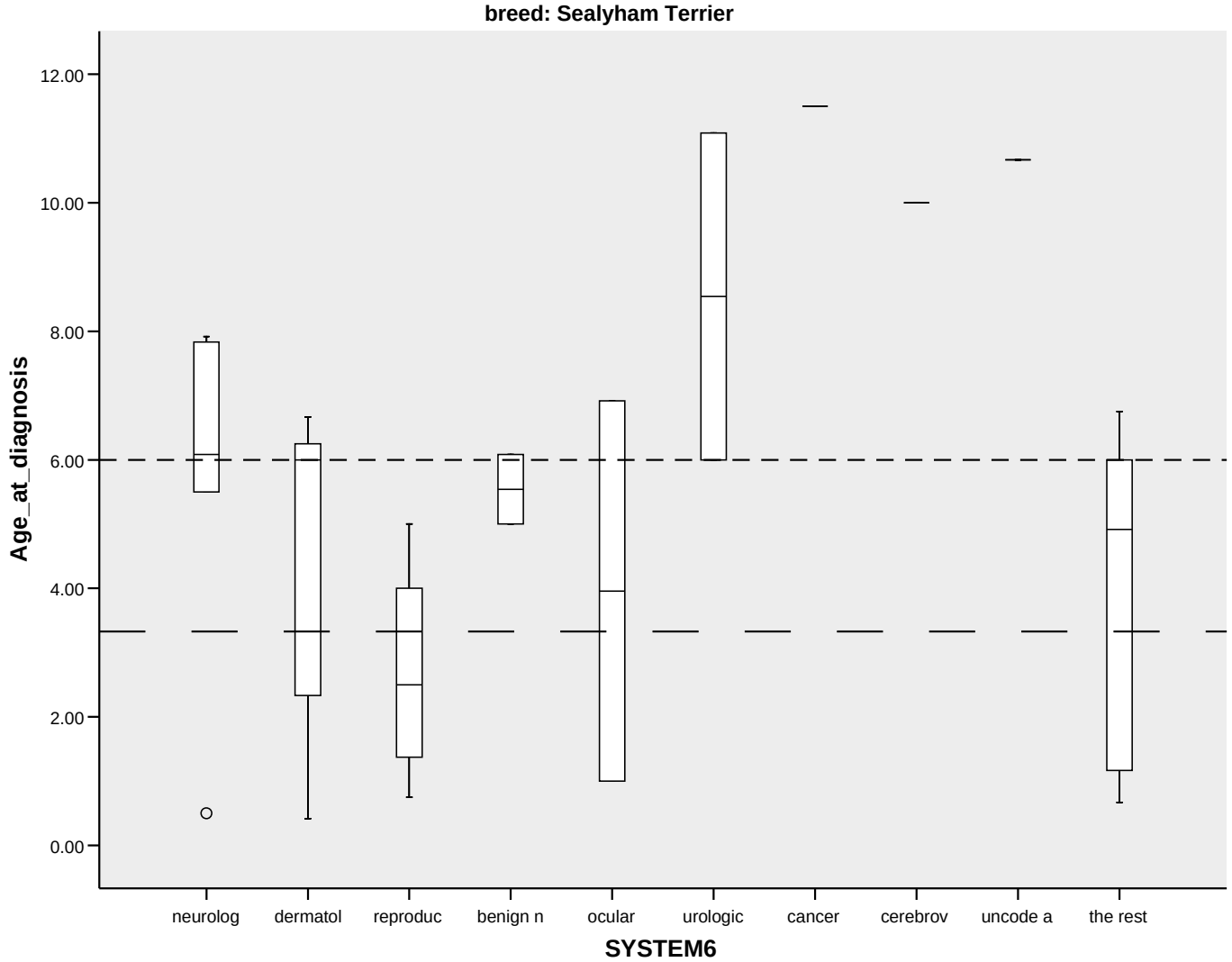


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Sealyham Terriers (N=22 dogs with 29 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Sealyham Terriers. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Sealyham Terriers.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Neurologic	6	20.7	IVDD; meningitis; seizures
2	Dermatologic	5	17.2	Mites (demodex); alopecia; pyotraumatic dermatitis; recurrent pyoderma; dermatitis
3	Reproductive	4	13.8	Cryptorchid; infertility; pyometra; dystochia (physical blockage)
4	Immune mediated	3	10.3	Atopy; flea allergy; allergy (unspecified)
5	Benign neoplasia	2	6.9	Lipoma
6	Ocular	2	6.9	Cherry eye; lens luxation
7	Urologic	2	6.9	Cystouroliths (unspecified); incontinence
8	Cancer	1	3.4	Unspecified (mammary)
9	Cerebrovascular	1	3.4	Stroke or cerebral vascular accident
10	Gastrointestinal	1	3.4	Colitis
11	Musculoskeletal	1	3.4	Spondylosis
12	Other	1	3.4	Uncodeable
	Total	29	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for Shetland Sheepdogs

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Shetland Sheepdogs

A total of 917 forms were sent out and 207 were returned, representing 694 live dogs. This breed had a 20.6% response rate (207/917) and it represented 1.51% of all returns (207/13,741).

Mortality data

A total of 364 deaths were reported and this represents 2.29% of all deaths reported in the survey (364/15,881). The median age at death for Shetland Sheepdogs was 12 years and 6 months (min = 2 months, max = 19 years) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Shetland Sheepdogs. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Shetland Sheepdogs.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	81	22.3	Type unspecified (mammary, mouth)
2	Urologic	63	17.3	Kidney failure (chronic>acute); glomerulonephritis
3	Old age	54	14.8	Old age
4	Cardiac	28	7.7	Heart failure; heart attack; heart disease unspecified
5	Neurologic	19	5.2	Seizures; IVDD; spinal paralysis
6	Cerebral vascular	16	4.4	Stroke or cerebral vascular accident
7	Gastrointestinal	16	4.4	Pancreatitis; gastroenteritis; colitis; unspecified
8	Combinations	14	3.8	
9	Hepatic	12	3.3	Liver failure; liver disease unspecified; hepatitis
10	Other	9	2.5	Uncodeable
11	Trauma	9	2.5	Unspecified; road traffic accident; spinal injury
12	Endocrine	7	1.9	Cushings disease; diabetes mellitus; hypothyroidism
13	Musculoskeletal	7	1.9	CLR; hip dysplasia; muscular dystrophy
14	Unknown	7	1.9	
15	Poisoning	5	1.4	
16	Reproductive	4	1.1	Pyometra; prostatic disease
17	Immune mediated	3	0.8	Unspecified; haemolytic anaemia
18	Perioperative	2	0.5	Perioperative; postoperative
19	Respiratory	2	0.5	Chronic bronchitis; emphysema
20	Portosystemic shunt (PSS)	1	0.3	
21	Collapse	1	0.3	
22	Dermatologic	1	0.3	Unspecified
23	Internal bleeding	1	0.3	
24	Pining	1	0.3	
25	Senility	1	0.3	
	Total	364	100.0	

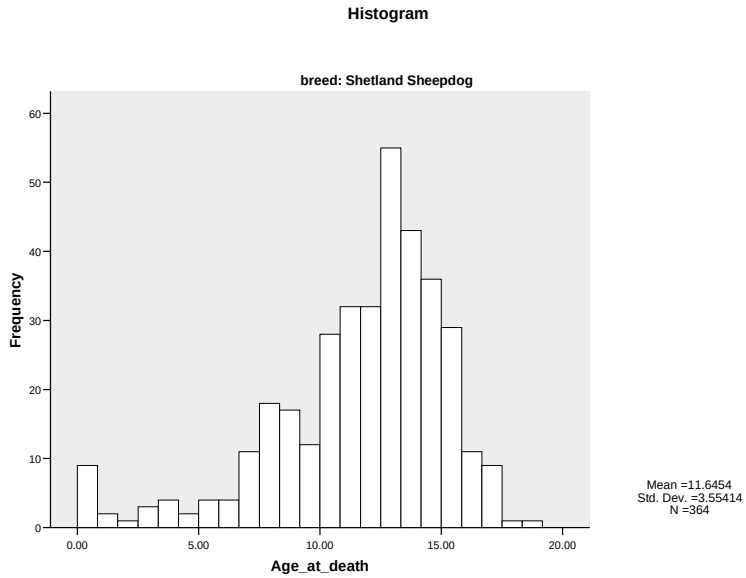


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 364 Shetland Sheepdog deaths with age at death reported.

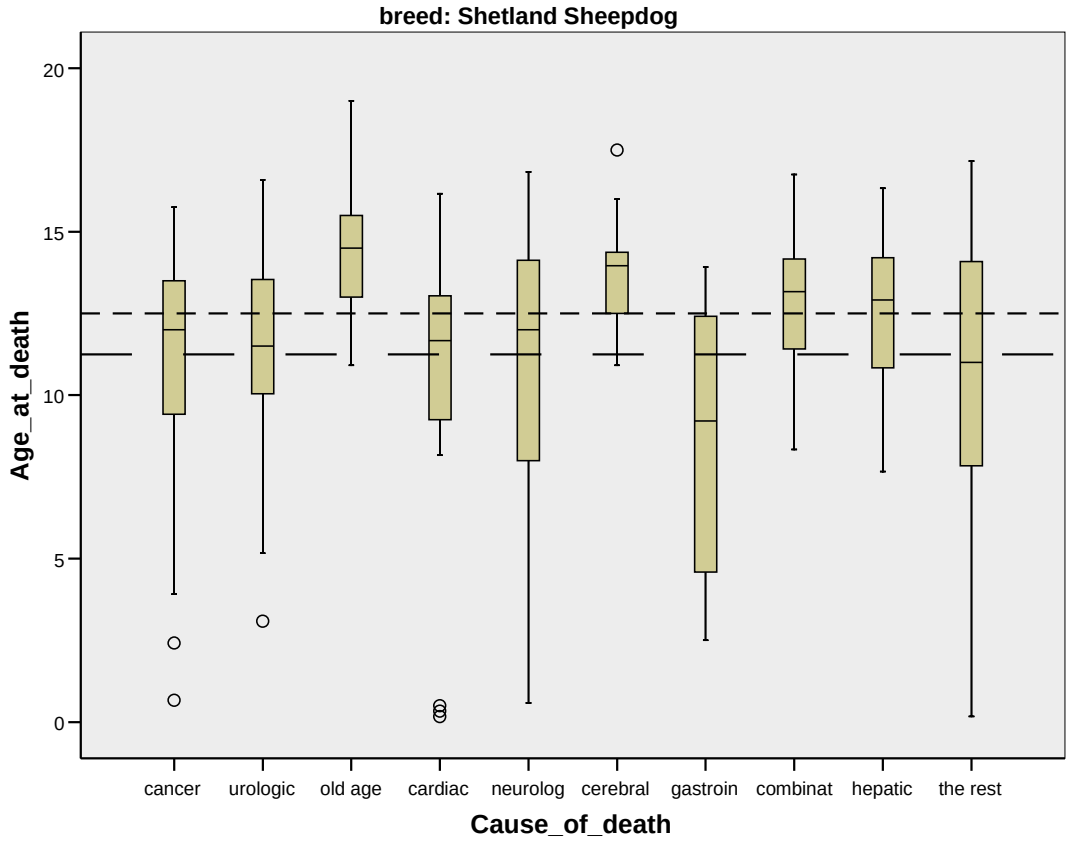


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Shetland Sheepdogs (N=364). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Shetland Sheepdogs. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 694 live dogs with a reported age was 5 years and 11 months (min=2 months, max=18 years and 9 months, Figure 3). Health information was reported for 694 live dogs of which 413 (60%) were healthy and 281 (40%) had at least one reported health condition, resulting in a total of 500 reported conditions with a median of 1 condition/dog (min=1, max=7).

The median current age of all healthy dogs with a reported age (N=413) was 4 years and 6 months (min=2 months, max=18 years and 7 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=270) was 8 years and 4 months (min=4 months, max=18 years and 9 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=472) was 4 years (min= 2 months, max= 14 years and 11 months, Figure 4). Table 3 shows the disease conditions for Shetland Sheepdogs. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 685 Shetland Sheepdogs with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	295	163	458 (67%)
Male	168	59	227 (33%)
Totals	463 (68%)	222 (32%)	685 (100%)

Significantly more females were neutered (P=0.0115).

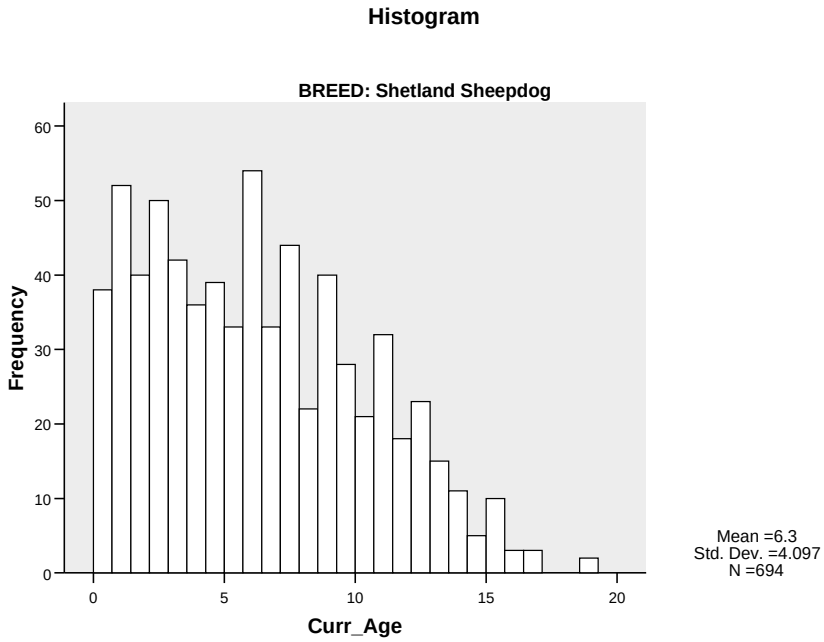


Figure 3. Histogram showing frequency of current age in years for the 694 live Shetland Sheepdogs with age reported.

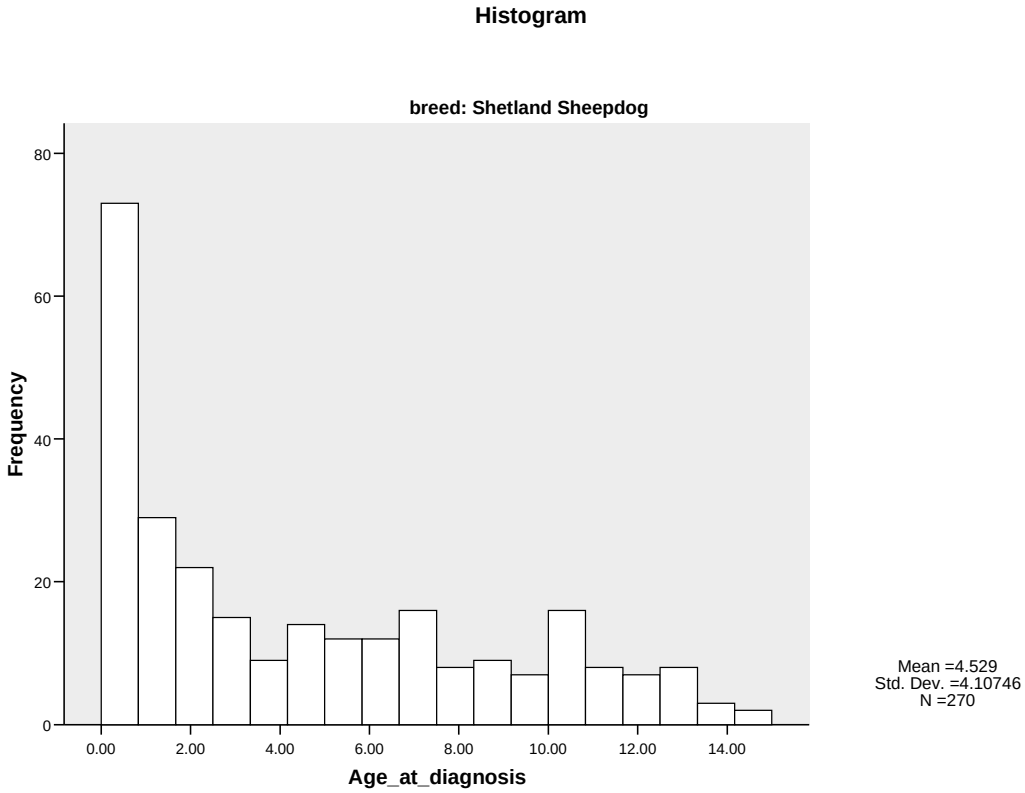


Figure 4. Histogram showing frequency of age at diagnosis for the 270 Shetland Sheepdogs with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

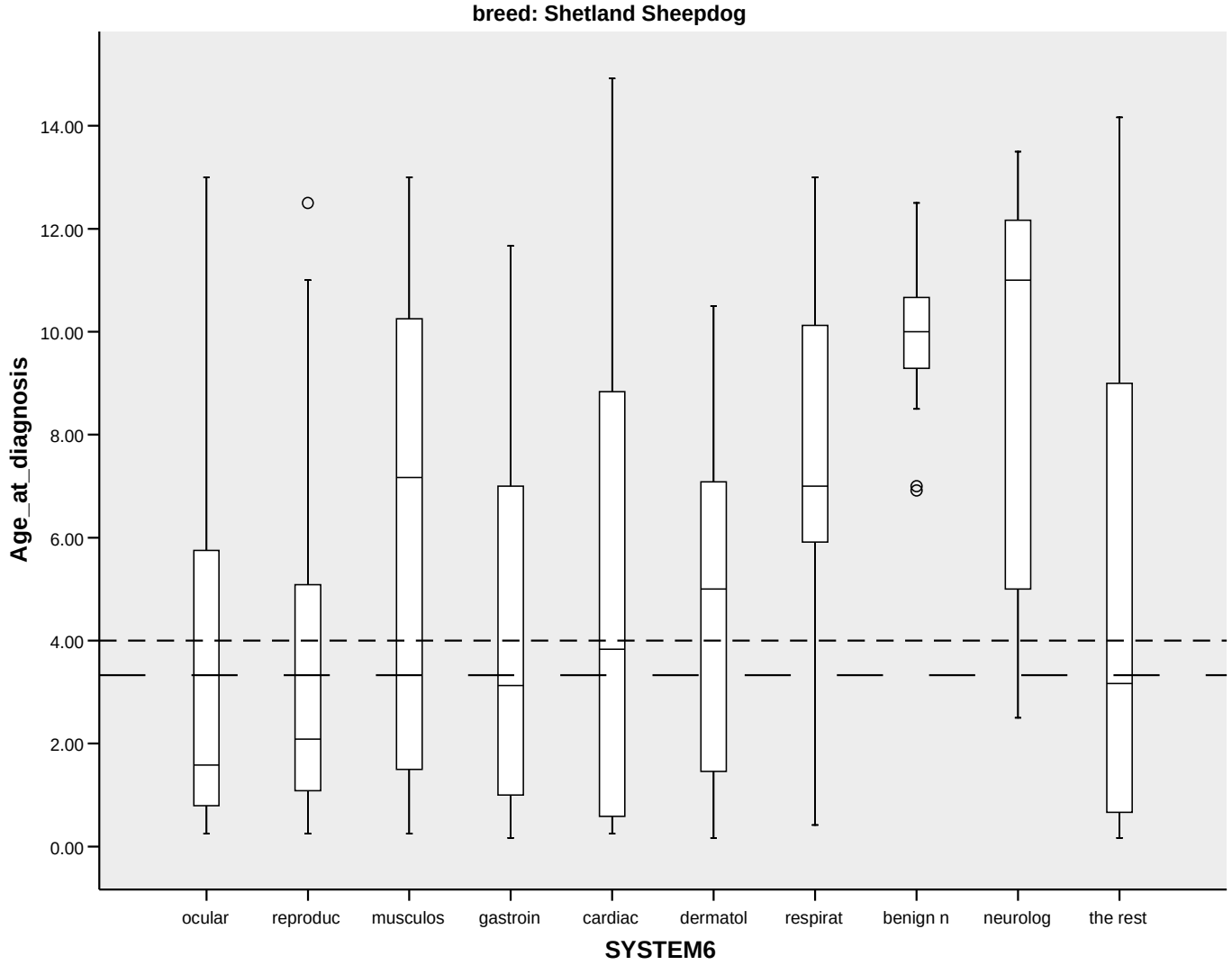


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Shetland Sheepdogs (N=270 dogs with 472 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Shetland Sheepdogs. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Shetland Sheepdogs.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Ocular	85	17.0	CEA; distichiasis; epiphora; blocked tear ducts; cataracts; entropion; trichiasis
2	Reproductive	63	12.6	Cryptorchid; pyometra; dystochia (physical blockage>uterine inertia); caesarean section
3	Musculoskeletal	61	12.2	Arthritis (unspecified>elbows=forelimb>hips=shoulder>rest); CLR; patellar luxation
4	Gastrointestinal	45	9.0	Colitis; pancreatitis; vomiting; diarrhoea; campylobacter; gastroenteritis (unspec>chronic)
5	Dental	41	8.2	Retained puppy teeth; dental disease; defect other than extra teeth
6	Cardiac	33	6.6	Heart murmur (unspec>grade 2>rest); CHF; arrhythmia; heart valve condition (unspec.)
7	Dermatologic	33	6.6	Mites (cheyletiella>sarcoptes>demodex); dermatitis; alopecia; puppy pyoderma
8	Respiratory	25	5.0	Kennel cough; coughing; bronchitis; rhinitis; tracheal collapse; other (unspecified)
9	Benign neoplasia	16	3.2	Lipoma; unspecified
10	Urologic	16	3.2	Incontinence (unspecified>after spay); cystitis; protein losing nephropathy (PLN)
11	Immune mediated	13	2.6	Food allergy; gluten-sensitive enteropathy; dust mite allergy; flea allergy
12	Neurologic	13	2.6	Deafness; seizures; IVDD; vestibular disease
13	Unknown	12	2.4	Unknown; undiagnosed liver disease
14	Endocrine	10	2.0	Hypothyroidism; diabetes insipidus; hyperthyroidism; weight gain (unspecified)
15	Cancer	7	1.4	Type unspecified; carcinoma (mammary); liposarcoma (skin); sertoli cell tumour
16	Trauma	6	1.2	Hindlimb; brain; female reproductive organs; forelimb; spine
17	Cerebrovascular	5	1.0	Stroke or cerebral vascular accident
18	Hepatic	5	1.0	Portosystemic shunt (PSS); acute liver failure; bile duct blockage; hepatitis
19	Cardiopulmonary	4	0.8	Coughing
20	Other	4	0.8	Uncodeable
21	Anal gland	2	0.4	Anal sacculitis
22	Aural	1	0.2	Otitis externa
	Total	500	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for the Shih Tzu breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Shih Tzu breed

A total of 265 forms were sent out and 63 were returned, representing 254 live dogs. This breed had a 23.8% response rate (63/265) and it represented 0.46% of all returns (63/13,741).

Mortality data

A total of 83 deaths were reported and this represents 0.52% of all deaths reported in the survey (83/15,881). The median age at death for the Shih Tzu breed was 13 years and 2 months (min = 1 year and 6 months, max = 19 years and 4 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Shih Tzu breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Shih Tzu breed.

Cause of death		N	%	Most common specific causes in descending order
1	Old age	17	20.5	Old age & age combinations
2	Cardiac	15	18.1	Heart attack; heart failure; heart defect unspecified
3	Urologic	13	15.7	Kidney failure (chronic>acute)
4	Cancer	12	14.5	Type unspecified; brain tumour
5	Combinations	6	7.2	
6	Cerebral vascular	3	3.6	Stroke or cerebral vascular accident
7	Hepatic	3	3.6	Liver failure
8	Other	3	3.6	Uncodeable
9	Endocrine	2	2.4	Cushings disease
10	Trauma	2	2.4	Attacked by dog; spinal injury
11	Unknown	2	2.4	
12	Neurologic	1	1.2	Seizures
13	Ocular	1	1.2	Blindness
14	Pining	1	1.2	
15	Respiratory	1	1.2	Bronchitis
16	Sudden death	1	1.2	
	Total	83	100.0	

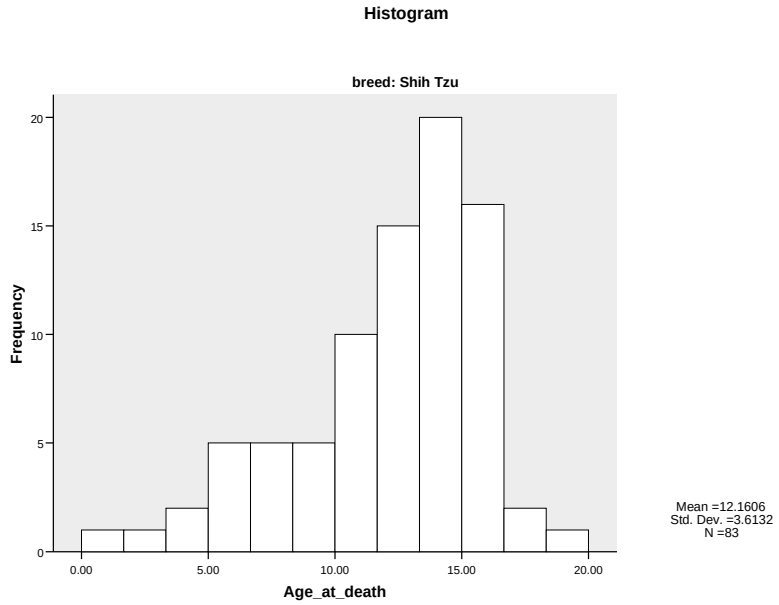


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 83 Shih Tzu deaths with age at death reported.

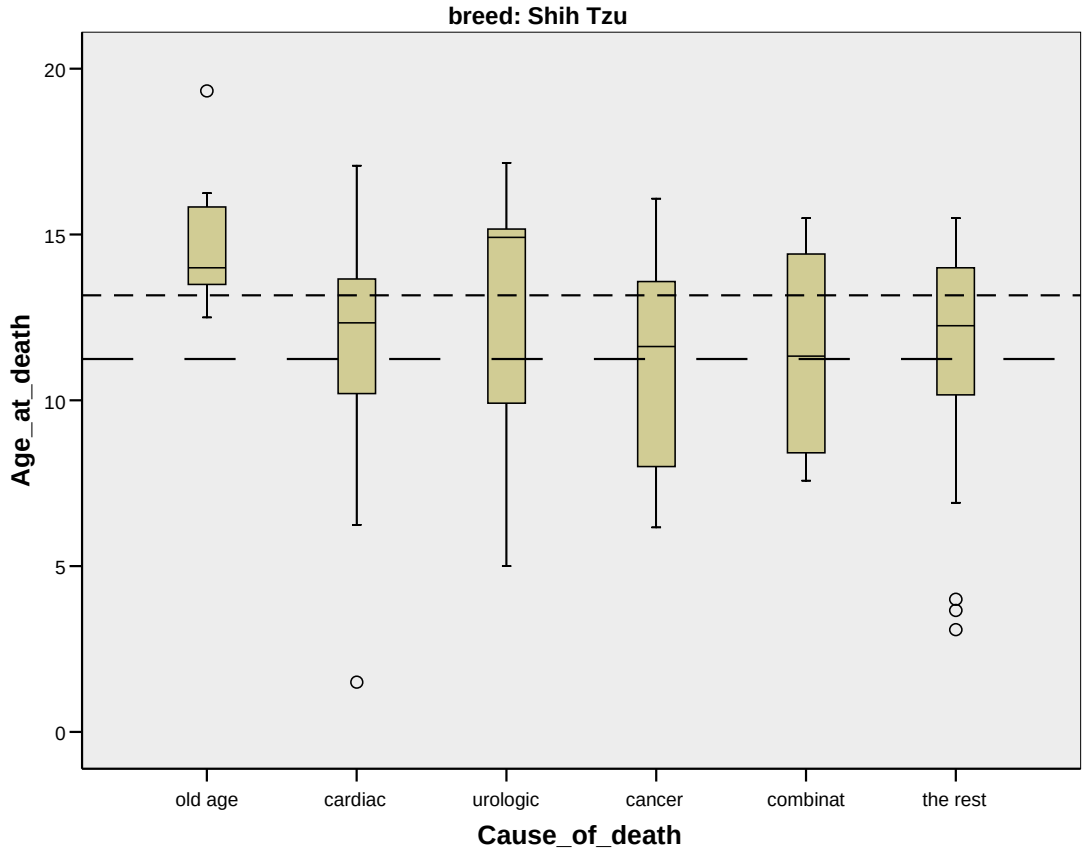


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the Shih Tzu breed (N=83). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the Shih Tzu breed. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 254 live dogs with a reported age was 4 years and 7 months (min=2 months, max=16 years and 7 months, Figure 3). Health information was reported for 254 live dogs of which 172 (68%) were healthy and 82 (32%) had at least one reported health condition, resulting in a total of 126 reported conditions with a median of 1 condition/dog (min=1, max=7).

The median current age of all healthy dogs with a reported age (N=172) was 3 years and 7 months (min=2 months, max=16 years and 7 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=75) was 6 years and 10 months (min=4 months, max=16 years). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=118) was 4 years (min= 1 month, max= 15 years and 3 months, Figure 4). Table 3 shows the disease conditions for the Shih Tzu breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for the 250 Shih Tzu breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	115	56	171 (68%)
Male	61	18	79 (32%)
Totals	176 (70%)	74 (30%)	250 (100%)

There was no association between gender and neuter status (P=0.1086).

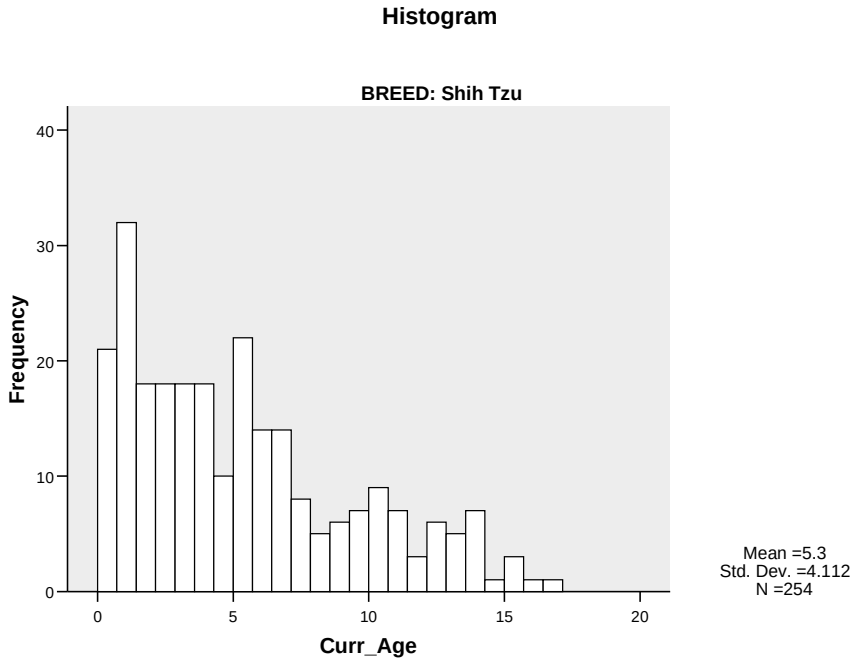


Figure 3. Histogram showing frequency of current age in years for the 254 live Shih Tzu breed with age reported.

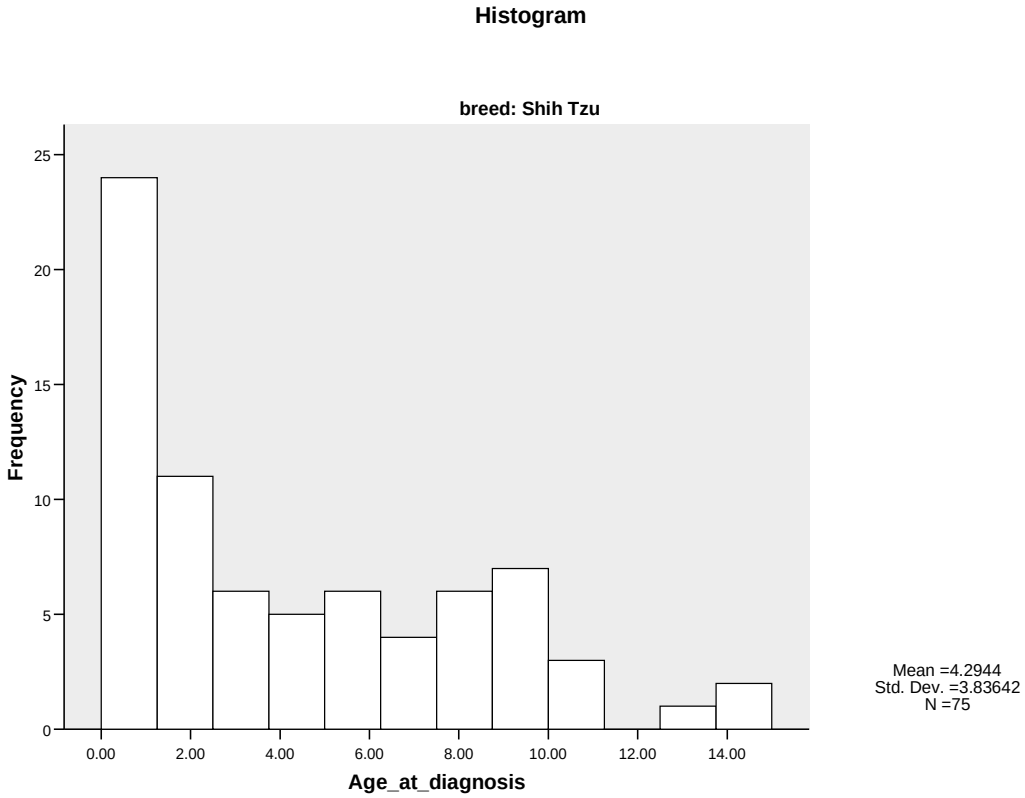


Figure 4. Histogram showing frequency of age at diagnosis for the 75 Shih Tzu breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

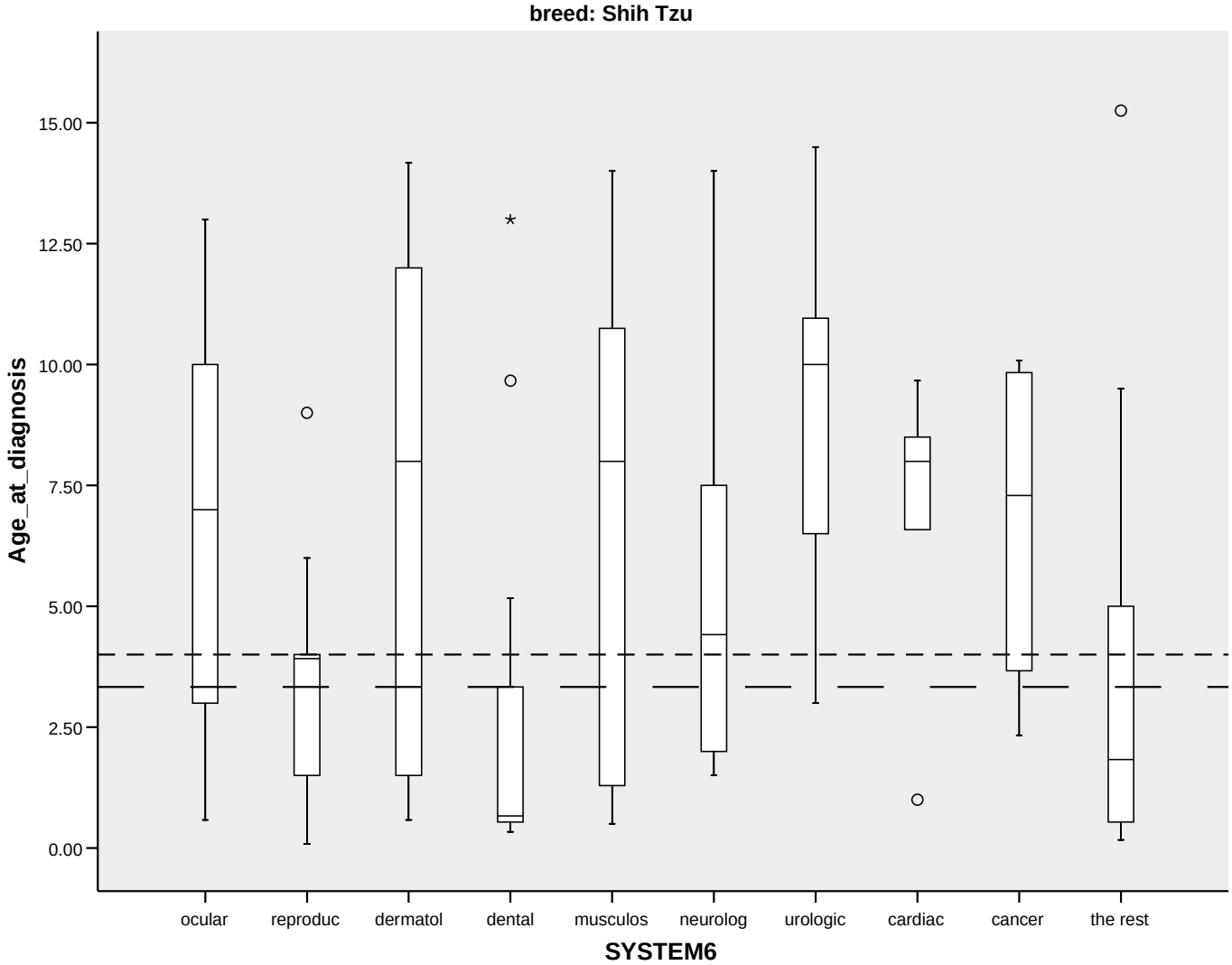


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Shih Tzu breed (N=75 dogs with 118 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Shih Tzu breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Shih Tzu breed.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Ocular	18	14.3	Corneal ulcer; cataracts; KCS; glaucoma; epiphora
2	Reproductive	18	14.3	False pregnancy; dystochia (uterine inertia=physical blockage); irregular heat cycles
3	Dermatologic	13	10.3	Dermatitis; pyotraumatic dermatitis; fading nose pigment
4	Dental	11	8.7	Retained puppy teeth; dental disease; dental deformity
5	Musculoskeletal	11	8.7	Arthritis (unspecified>hips=hindlimbs); CHD; CLR; stiff joints; sprain or strain
6	Neurologic	8	6.3	IVDD; seizures; deafness
7	Respiratory	8	6.3	Snoring; kennel cough; constricted nostrils; long soft palate; noisy breathing; pyothorax
8	Urologic	7	5.6	Cystouroliths (unspec); kidney failure (chronic>acute); haematuria
9	Cardiac	6	4.8	Heart murmur (unspecified>with clinical signs); arrhythmia; heart valve condition
10	Cancer	4	3.2	Unspecified (skin=mammary); MCT (lip); melanoma (eyelid)
11	Gastrointestinal	4	3.2	Colitis; inappetance
12	Trauma	4	3.2	Eyeball; chest; other (unspecified)
13	Immune mediated	3	2.4	Atopy; flea allergy; food allergy
14	Unknown	3	2.4	Undiagnosed illness
15	Aural	2	1.6	Otitis externa; ear mites
16	Hepatic	2	1.6	Portosystemic shunt (PSS)
17	Cardiopulmonary	1	0.8	Pleural effusion
18	Cerebrovascular	1	0.8	Stroke or cerebral vascular accident
19	Endocrine	1	0.8	Cushings disease
20	Other	1	0.8	Uncodeable
	Total	126	100.0	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for the Siberian Husky breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Siberian Husky breed

A total of 956 forms were sent out and 188 were returned, representing 797 live dogs. This breed had a 19.7% response rate (188/956) and it represented 1.37% of all returns (188/13,741).

Mortality data

A total of 129 deaths were reported and this represents 0.81% of all deaths reported in the survey (129/15,881). The median age at death for the Siberian Husky breed was 12 years and 7 months (min = 5 months, max = 18 years and 1 month) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Siberian Husky breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Siberian Husky breed.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	41	31.8	Type unspecified; brain tumour; carcinoma; lymphoma
2	Old age	21	16.3	Old age & age combinations
3	Neurologic	9	7.0	IVDD; seizures; spinal disease unspecified
4	Cardiac	8	6.2	Heart attack; heart failure; dilated cardiomyopathy
5	Gastrointestinal	7	5.4	Gastric dilatation/volvulus (GDV); gastroenteritis; colitis
6	Hepatic	6	4.7	Liver failure; liver disease unspecified
7	Trauma	4	3.1	Unspecified; road traffic accident; spinal injury
8	Urologic	4	3.1	Kidney failure (chronic>acute)
9	Combinations	3	2.3	
10	Endocrine	3	2.3	Diabetes mellitus; hyperthyroidism
11	Musculoskeletal	3	2.3	Arthritis
12	Portosystemic shunt (PSS)	2	1.6	
13	Other	2	1.6	Uncodeable
14	Perioperative	2	1.6	
15	Reproductive	2	1.6	Pyometra
16	Respiratory	2	1.6	Bronchitis; pneumonia
17	Senility	2	1.6	
18	Unknown	2	1.6	
19	Cerebral vascular	1	0.8	Stroke or cerebral vascular accident
20	Hyperthermia	1	0.8	
21	Infection	1	0.8	Viral (unspecified)
22	Ocular	1	0.8	Blindness
23	Poisoning	1	0.8	
24	Sudden death	1	0.8	
	Total	129	100.0	

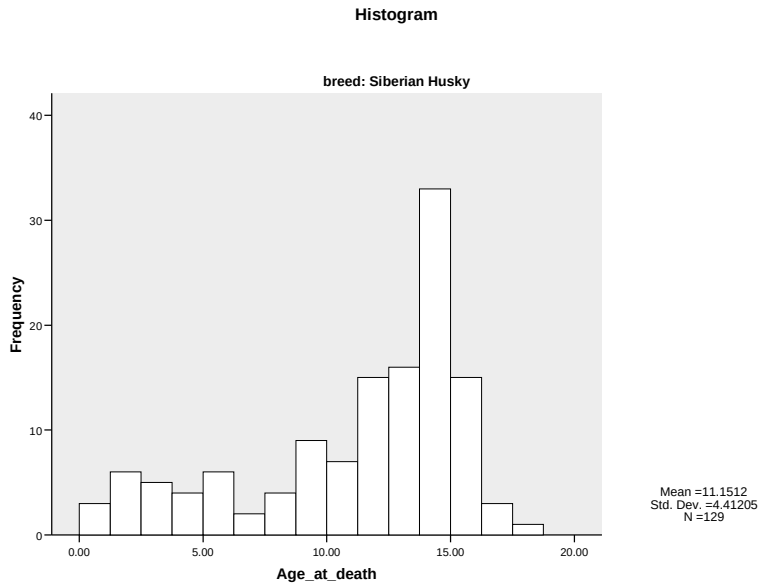


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 129 Siberian Husky deaths with age at death reported.

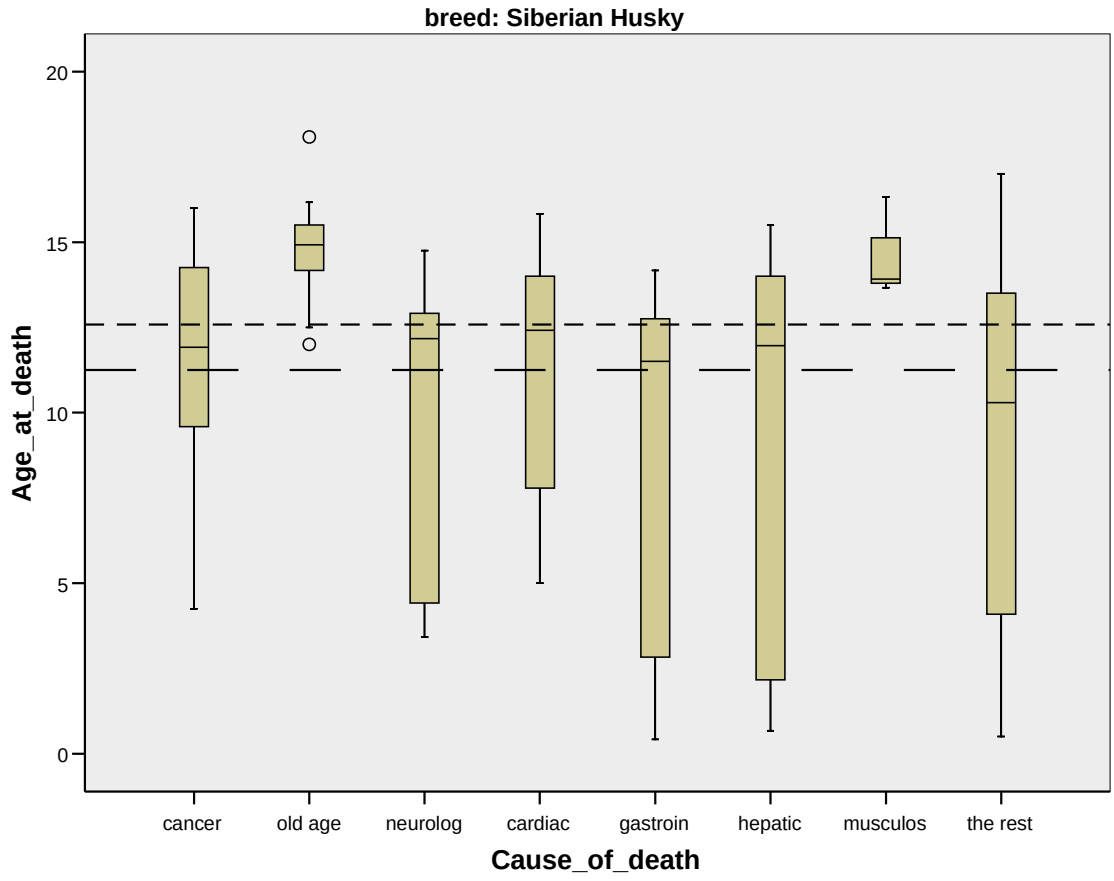


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the Siberian Husky breed (N=129). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the Siberian Husky breed. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 797 live dogs with a reported age was 4 years and 8 months (min=2 months, max=17 years and 6 months, Figure 3). Health information was reported for 797 live dogs of which 563 (71%) were healthy and 234 (29%) had at least one reported health condition, resulting in a total of 371 reported conditions with a median of 1 condition/dog (min=1, max=7).

The median current age of all healthy dogs with a reported age (N=563) was 4 years and 3 months (min=2 months, max=16 years and 5 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=226) was 6 years and 2 months (min=5 months, max=17 years and 6 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=359) was 2 years and 5 months (min= 1 month, max= 16 years and 11 months, Figure 4). Table 3 shows the disease conditions for the Siberian Husky breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for the 782 Siberian Husky breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	267	142	409 (52%)
Male	287	86	373 (48%)
Totals	554 (71%)	228 (29%)	782 (100%)

Significantly more females were neutered (P=0.0003).

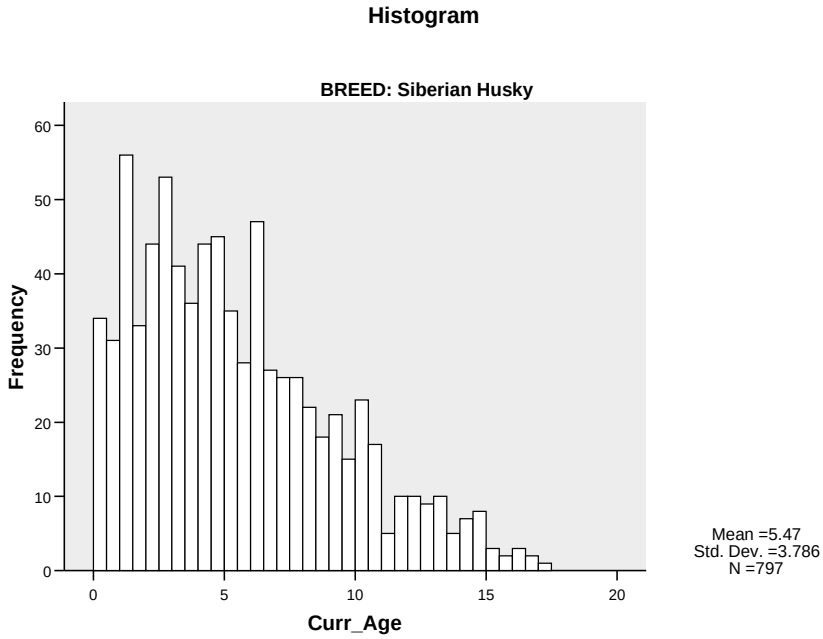


Figure 3. Histogram showing frequency of current age in years for the 797 live Siberian Husky breed with age reported.

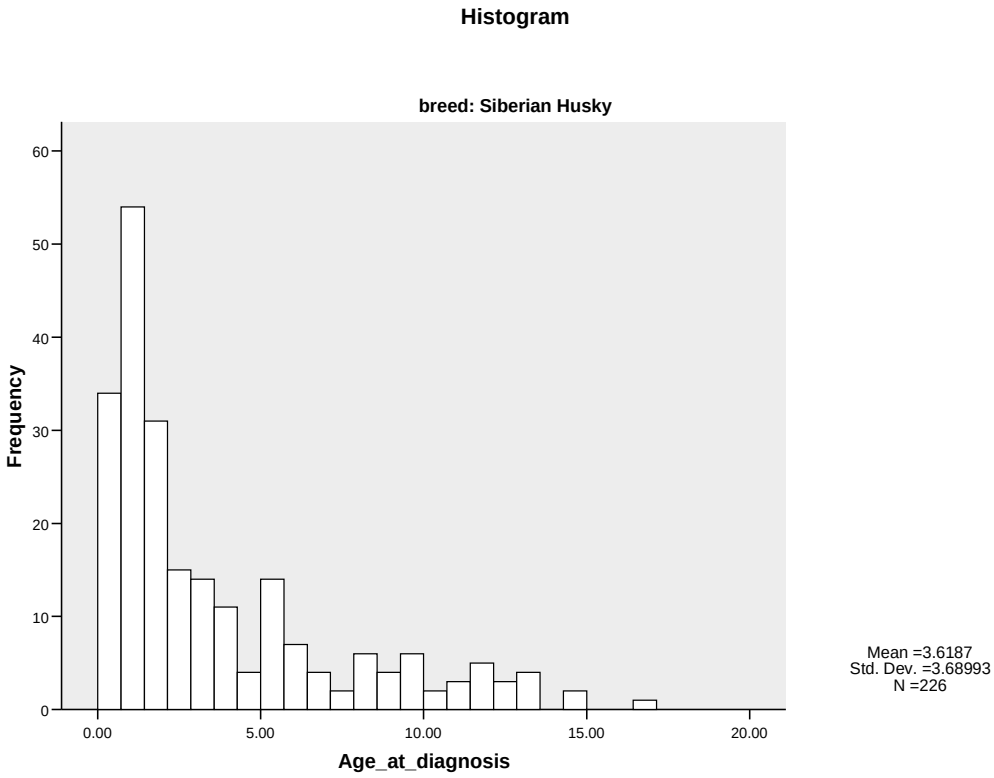


Figure 4. Histogram showing frequency of age at diagnosis for the 226 Siberian Husky breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

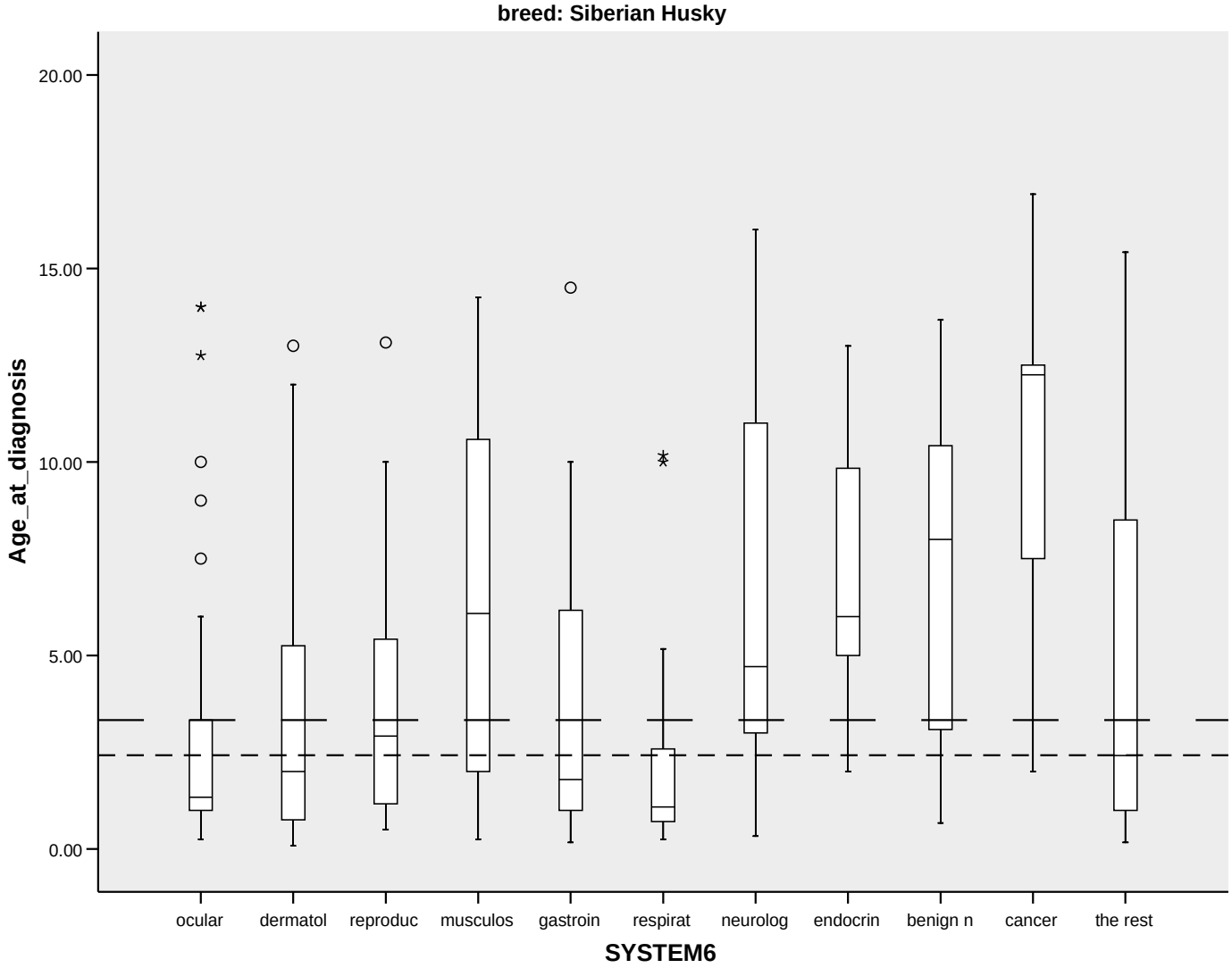


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Siberian Husky breed (N=226 dogs with 359 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Siberian Husky breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Siberian Husky breed.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Ocular	67	18.1	Cataracts; PPM; congenital cataracts; glaucoma; goniodysgenesis; epiphora
2	Dermatologic	52	14.0	Zinc-responsive dermatosis; pyotraumatic dermatitis; dermatitis; alopecia
3	Reproductive	48	12.9	Cryptorchid; false pregnancy; dystochia (uterine inertia>physical blockage); pyometra
4	Musculoskeletal	34	9.2	Arthritis (hindlimb=hips>rest); stiff joints; CLR; CHD; lameness
5	Gastrointestinal	32	8.6	Diarrhoea; colitis; foreign body obstruction; IBD; salivary gland removal
6	Respiratory	28	7.5	Kennel cough; rhinitis; coughing; long soft palate; noisy breathing; pneumonia
7	Neurologic	18	4.9	Seizures; deafness; IVDD (unspec>cervical=lumbosacral); CDRM; narcolepsy
8	Endocrine	13	3.5	Hypothyroidism; diabetes mellitus; Addisons disease
9	Benign neoplasia	11	3.0	Lipoma; unspecified
10	Urologic	11	3.0	Cystitis; cystouroliths (struvite>unspecified); incontinence (unspecified>after spay)
11	Cardiac	10	2.7	Heart murmur (unspecified>grade 1); aortic stenosis; CHF; collapse; coughing;
12	Cancer	9	2.4	Unspecified (mammary>skin=leg); adenocarcinoma; haemangiosarcoma (thigh)
13	Dental	8	2.2	Dental disease; retained puppy teeth
14	Immune mediated	7	1.9	Gluten-sensitive enteropathy; atopy; allergy to bee sting
15	Trauma	6	1.6	Spine; other (unspecified); eyeball
16	Unknown	5	1.3	Unknown; undiagnosed liver disease
17	Aural	4	1.1	Otitis externa; excessive ear wax
18	Anal gland	3	0.8	Anal sacculitis
19	Other	3	0.8	Uncodeable
20	Behaviour	1	0.3	Unspecified
21	Cerebrovascular	1	0.3	Stroke or cerebral vascular accident
	Total	371	100.0	

PPM=persistent papillary membrane (PPM)
CDRM=chronic degenerative radiculomyelopathy
CHF=congestive heart failure

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for Skye Terriers

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Skye Terriers

A total of 130 forms were sent out and 28 were returned, representing 78 live dogs. This breed had a 21.5% response rate (28/130) and it represented 0.20% of all returns (28/13,741).

Mortality data

A total of 37 deaths were reported and this represents 0.23% of all deaths reported in the survey (37/15,881). The median age at death for Skye Terriers was 11 years (min = 1 year and 11 months, max = 15 years and 7 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Skye Terriers. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Skye Terriers.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	10	27.0	Type unspecified (liver, mammary)
2	Cardiac	6	16.2	Heart failure; heart attack; heart defect unspecified
3	Old age	6	16.2	Old age & age combinations
4	Neurologic	3	8.1	IVDD; seizures
5	Urologic	3	8.1	Kidney failure
6	Hepatic	2	5.4	Liver failure; liver disease (unspecified)
7	Other	2	5.4	Uncodeable
8	Behaviour	1	2.7	Aggression
9	Cerebral vascular	1	2.7	Stroke or cerebral vascular accident
10	Gastrointestinal	1	2.7	Foreign body obstruction
11	Musculoskeletal	1	2.7	Arthritis
12	Respiratory	1	2.7	Pneumonia
	Total	37	100.0	

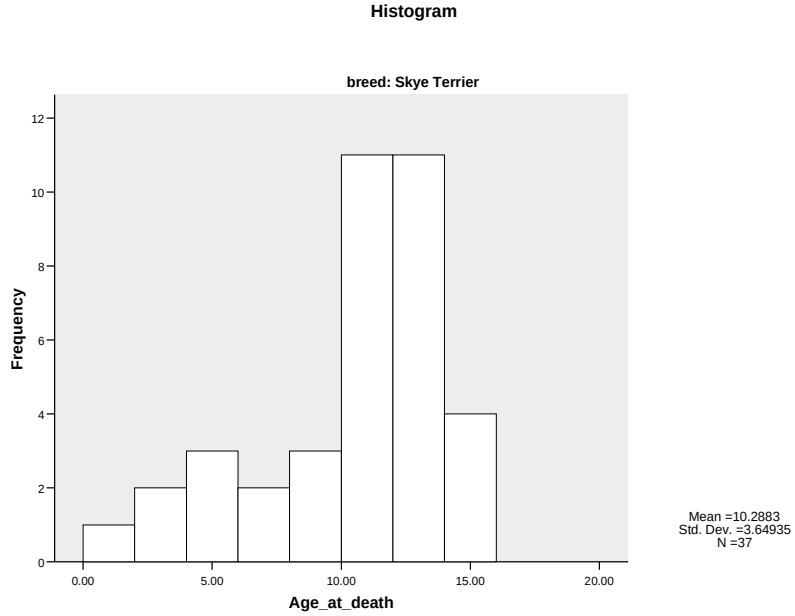


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 37 Skye Terrier deaths with age at death reported.

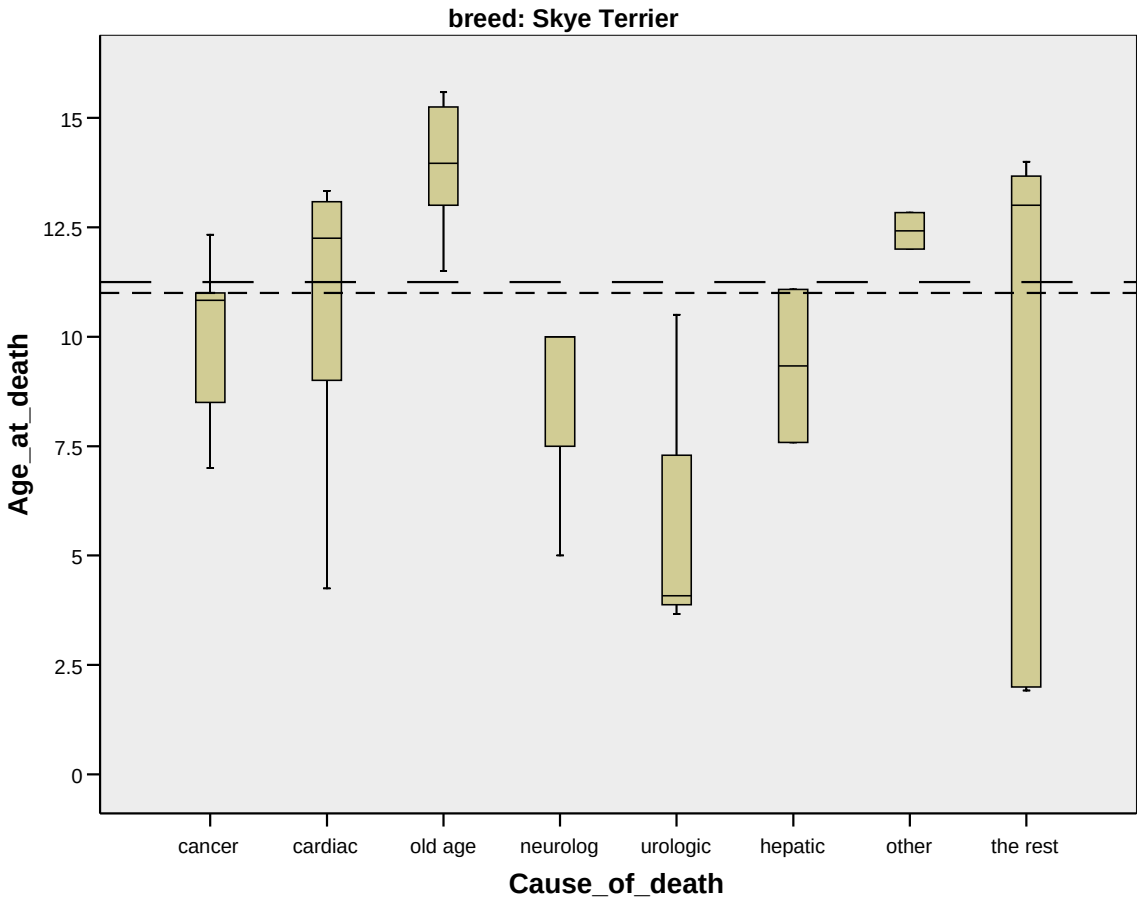


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Skye Terriers (N=37). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Skye Terriers. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 78 live dogs with a reported age was 6 years and 2 months (min=7 months, max=13 years and 8 months, Figure 3). Health information was reported for 78 live dogs of which 49 (63%) were healthy and 29 (37%) had at least one reported health condition, resulting in a total of 39 reported conditions with a median of 1 condition/dog (min=1, max=3).

The median current age of all healthy dogs with a reported age (N=49) was 5 years and 7 months (min=7 months, max=13 years and 8 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=27) was 6 years and 11 months (min=9 months, max=11 years and 9 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=36) was 3 years and 3 months (min= 4 months, max= 11 years and 7 months, Figure 4). Table 3 shows the disease conditions for Skye Terriers. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 78 Skye Terriers with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	32	16	48 (62%)
Male	24	6	30 (38%)
Totals	56 (72%)	22 (28%)	78 (100%)

There was no association between gender and neuter status (P=0.2030).

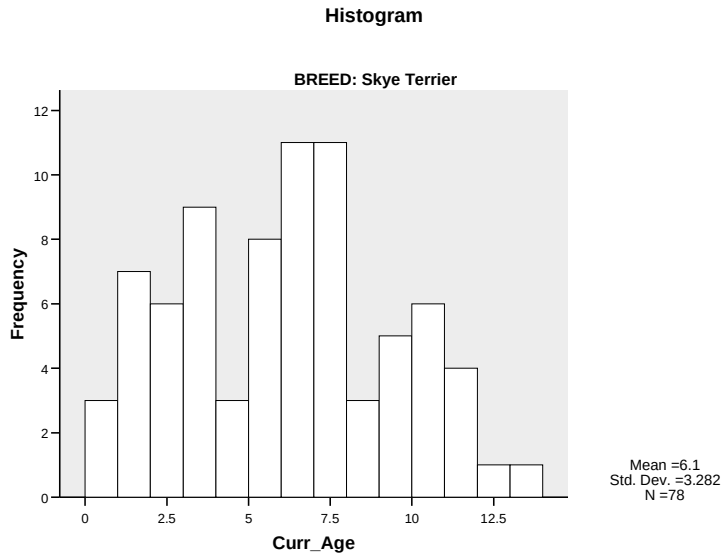


Figure 3. Histogram showing frequency of current age in years for the 78 live Skye Terriers with age reported.

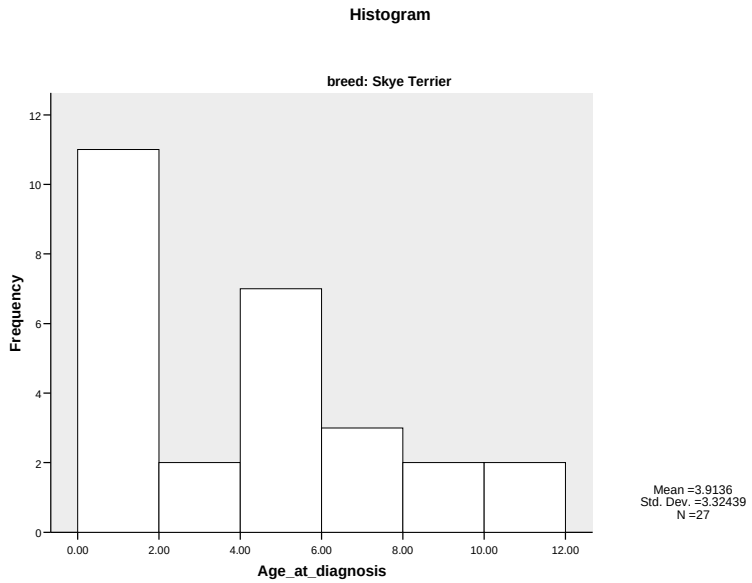


Figure 4. Histogram showing frequency of age at diagnosis for the 27 Skye Terriers with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

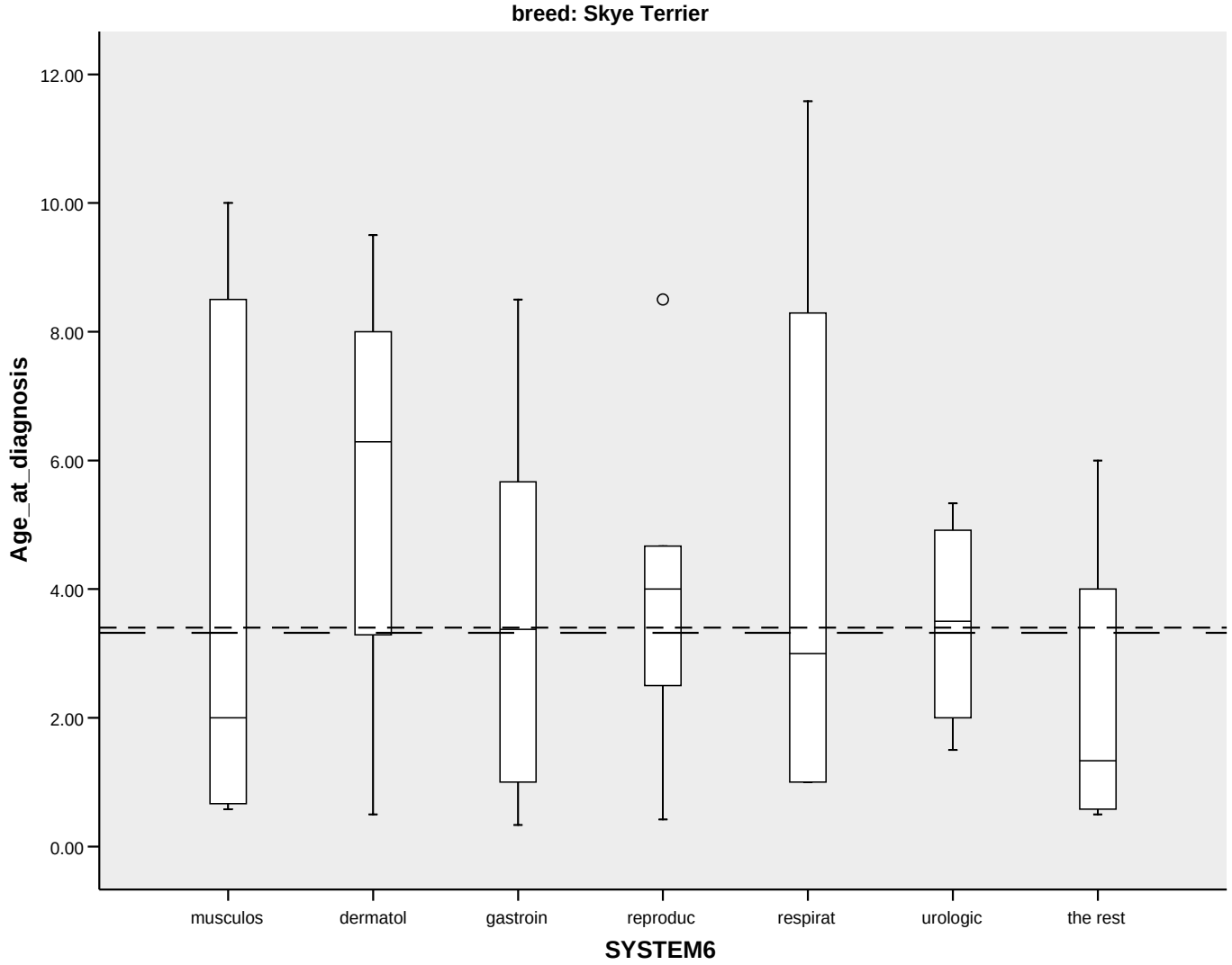


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Skye Terriers (N=27 dogs with 36 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Skye Terriers. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Skye Terriers.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Musculoskeletal	9	23.1	Arthritis; bone malformation (unspecified); patellar luxation
2	Dermatologic	6	15.4	Pyotraumatic dermatitis; dermatitis
3	Gastrointestinal	6	15.4	Foreign body obstruction; campylobacter; colitis; regurgitation; vomiting & diarrhoea
4	Reproductive	5	12.8	Pyometra; cryptorchid; uterine inertia; infertility
5	Respiratory	4	10.3	Kennel cough; coughing
6	Urologic	4	10.3	Cystitis; cystouroliths (unspecified)
7	Behaviour	1	2.6	Unspecified
8	Benign neoplasia	1	2.6	Lipoma
9	Cardiac	1	2.6	Arrhythmia
10	Immune mediated	1	2.6	Flea allergy
11	Trauma	1	2.6	Unspecified
	Total	39	100.0	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for the Sloughi breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Sloughi breed

A total of 30 forms were sent out and 8 were returned, representing 21 live dogs. This breed had a 26.7% response rate (8/30) and it represented 0.06% of all returns (8/13,741).

Mortality data
A total of 1 death was reported and this represents 0.01% of all deaths reported in the survey (1/15,881). The median age at death for the Sloughi breed was 5 years (min = 5 years, max = 5 years) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the age and cause of death for the Sloughi breed.

Table 1. Causes of death by organ system/category for the Sloughi breed.

Cause of death		N	%	Age at death
1	Cancer – Leukaemia	1	100.0	5 years
	Total	1	100.0	

Morbidity data
The median current age of the 21 live dogs with a reported age was 3 years and 6 months (min=1 year and 4 months, max=6 years and 11 months, Figure 3). Health information was reported for 21 live dogs of which 19 (90%) were healthy and 2 (10%) had at least one reported health condition, resulting in a total of 3 reported conditions with a median of 1.5 conditions/dog (min=1, max=2).

The median current age of all healthy dogs with a reported age (N=19) was 3 years and 2 months (min=1 year and 4 months, max=6 years and 8 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=2) was 5 years and 3 months (min=3 years and 6 months, max=6 years and 11 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=3) was 3 years and 5 months (min= 2 years and 4 months, max= 4 years, Figure 4). Table 3 shows the disease conditions for the Sloughi breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for the 21 Sloughi breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	14	1	15 (71%)
Male	6	0	6 (29%)
Totals	20 (95%)	1 (5%)	21 (100%)

There was no association between gender and neuter status (P=0.5169).

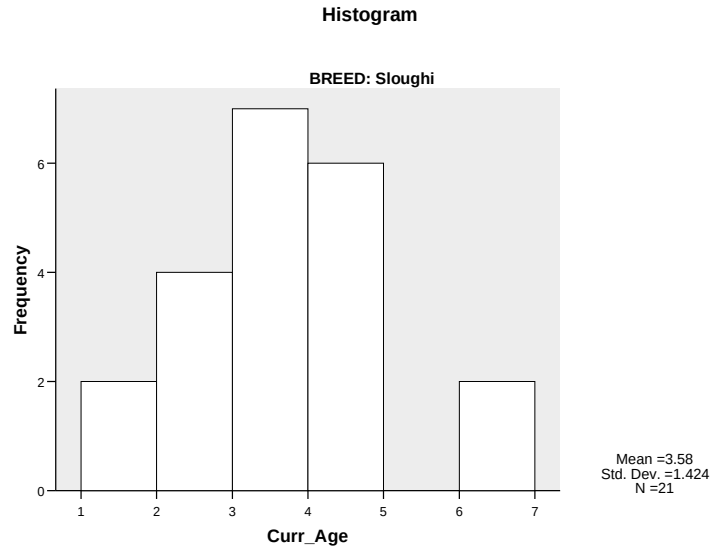


Figure 3. Histogram showing frequency of current age in years for the 21 live Sloughi breed with age reported.

Table 3. Disease conditions by organ system/category for the Sloughi breed.

		All conditions		
Disease condition		N	%	Age at diagnosis
1	Neurologic – seizures	1	33.3	3 years and 5 months
2	Reproductive – pyometra	1	33.3	4 years
3	Urologic – cystitis	1	33.3	2 years and 4 months
	Total	3	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for Soft Coated Wheaten Terriers

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Soft Coated Wheaten Terriers

A total of 824 forms were sent out and 380 were returned, representing 505 live dogs. This breed had a 46.1% response rate (380/824) and it represented 2.77% of all returns (380/13,741).

Mortality data

A total of 111 deaths were reported and this represents 0.70% of all deaths reported in the survey (111/15,881). The median age at death for Soft Coated Wheaten Terriers was 12 years and 6 months (min = 6 months, max = 17 years) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Soft Coated Wheaten Terriers. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Soft Coated Wheaten Terriers.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	29	26.1	Type unspecified (liver, mammary); carcinoma
2	Old age	23	20.7	Old age & age combinations
3	Other	10	9.0	Uncodeable
4	Urologic	9	8.1	Kidney failure; PLN; glomerulonephritis; incontinence
5	Combinations	8	7.2	
6	Neurologic	5	4.5	Seizures; myelopathy; spinal paralysis
7	Behaviour	4	3.6	Aggression; unspecified behavioural problem
8	Cardiac	4	3.6	Heart attack; heart failure
9	Cerebral vascular	4	3.6	Stroke or cerebral vascular accident
10	Gastrointestinal	4	3.6	Gastric dilatation/volvulus (GDV); PLE; unspecified
11	Trauma	3	2.7	Road traffic accident
12	Unknown	3	2.7	
13	Endocrine	1	0.9	Diabetes mellitus
14	Hepatic	1	0.9	Liver failure
15	Musculoskeletal	1	0.9	Arthritis
16	Poisoning	1	0.9	
17	Respiratory	1	0.9	Respiratory disease unspecified
	Total	111	100.0	

PLN=protein losing nephropathy
PLE=protein losing enteropathy

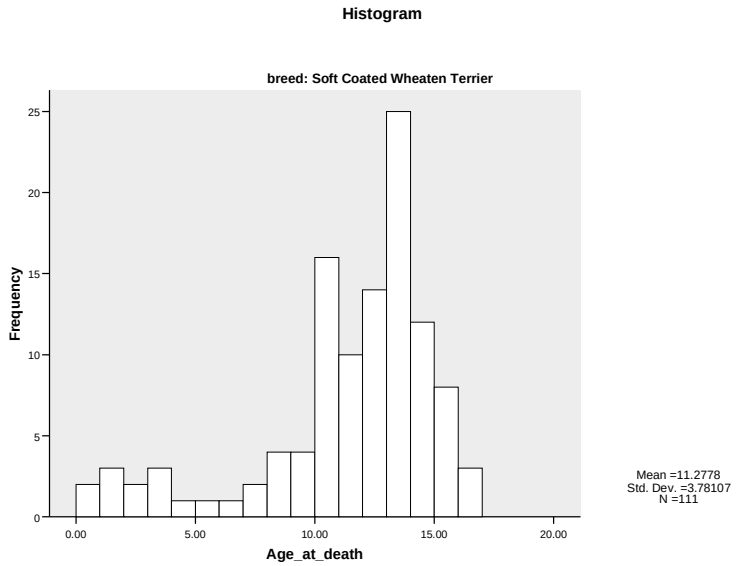


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 111 Soft Coated Wheaten Terrier deaths with age at death reported.

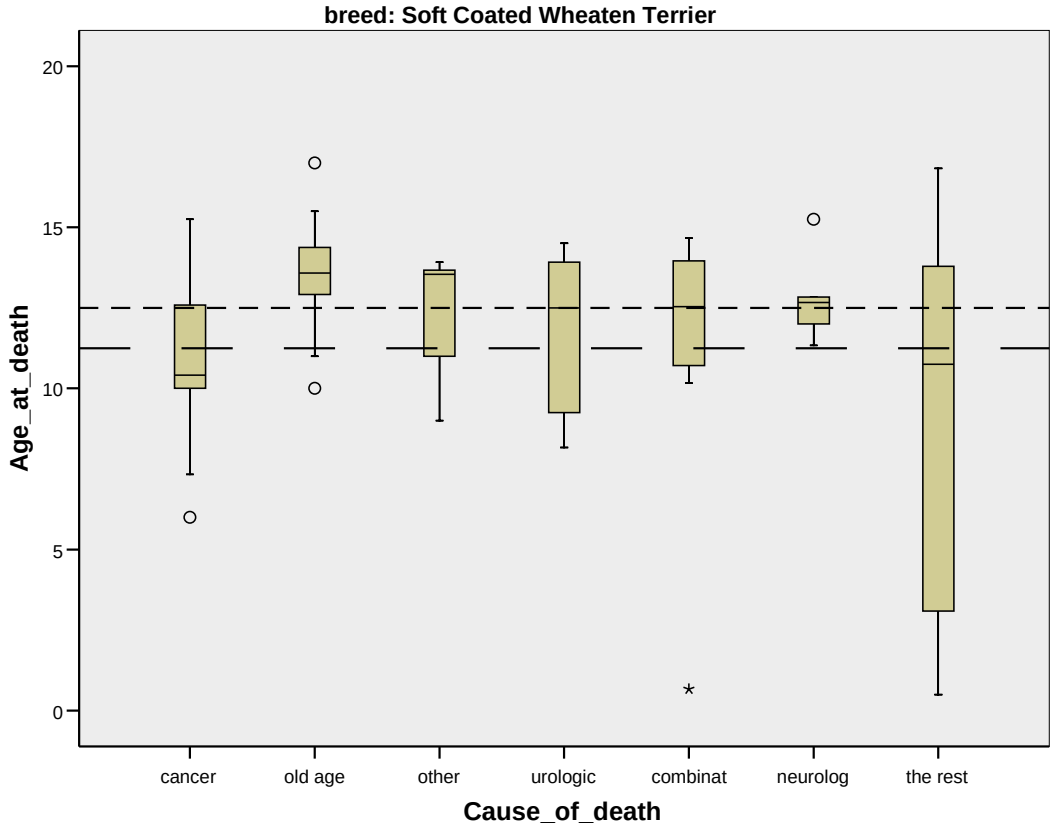


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Soft Coated Wheaten Terriers (N=111). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Soft Coated Wheaten Terriers. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 504 live dogs with a reported age was 4 years and 11 months (min=3 months, max=15 years and 9 months, Figure 3). Health information was reported for 505 live dogs of which 330 (65%) were healthy and 175 (35%) had at least one reported health condition, resulting in a total of 262 reported conditions with a median of 1 condition/dog (min=1, max=5).

The median current age of all healthy dogs with a reported age (N=330) was 4 years and 1 month (min=3 months, max=15 years and 9 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=168) was 6 years and 6 months (min=7 months, max=14 years and 4 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=254) was 3 years and 3 months (min= 2 months, max= 13 years, Figure 4). Table 3 shows the disease conditions for Soft Coated Wheaten Terriers. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 502 Soft Coated Wheaten Terriers with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	158	135	293 (58%)
Male	116	93	209 (42%)
Totals	274 (55%)	228 (45%)	502 (100%)

There was no association between gender and neuter status (P=0.7264).

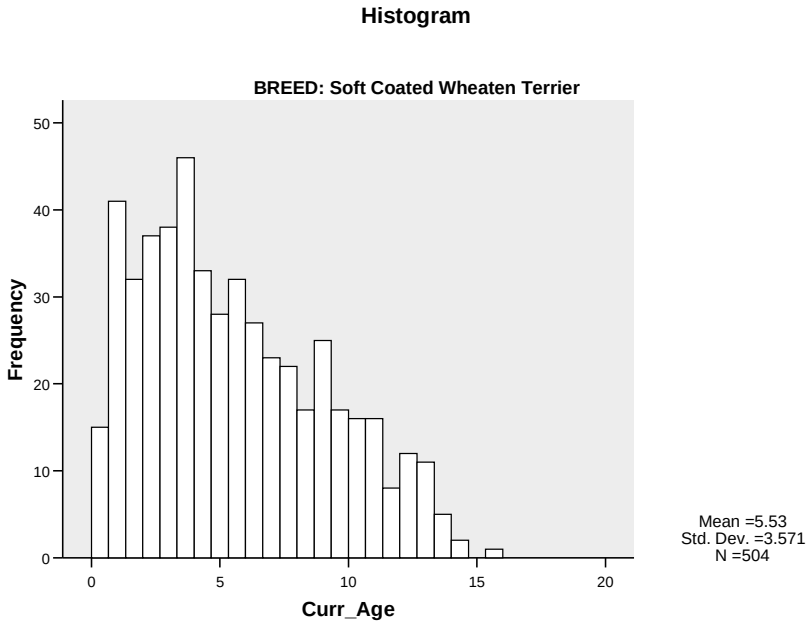


Figure 3. Histogram showing frequency of current age in years for the 504 live Soft Coated Wheaten Terriers with age reported.

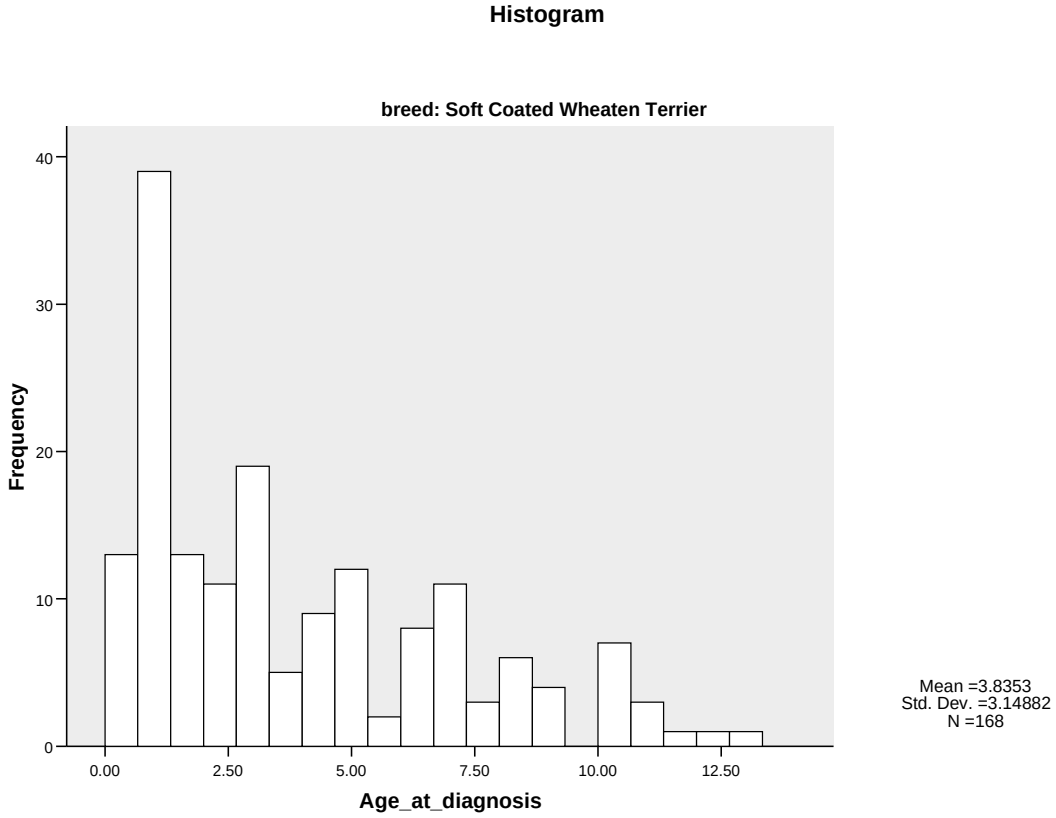


Figure 4. Histogram showing frequency of age at diagnosis for the 168 Soft Coated Wheaten Terriers with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

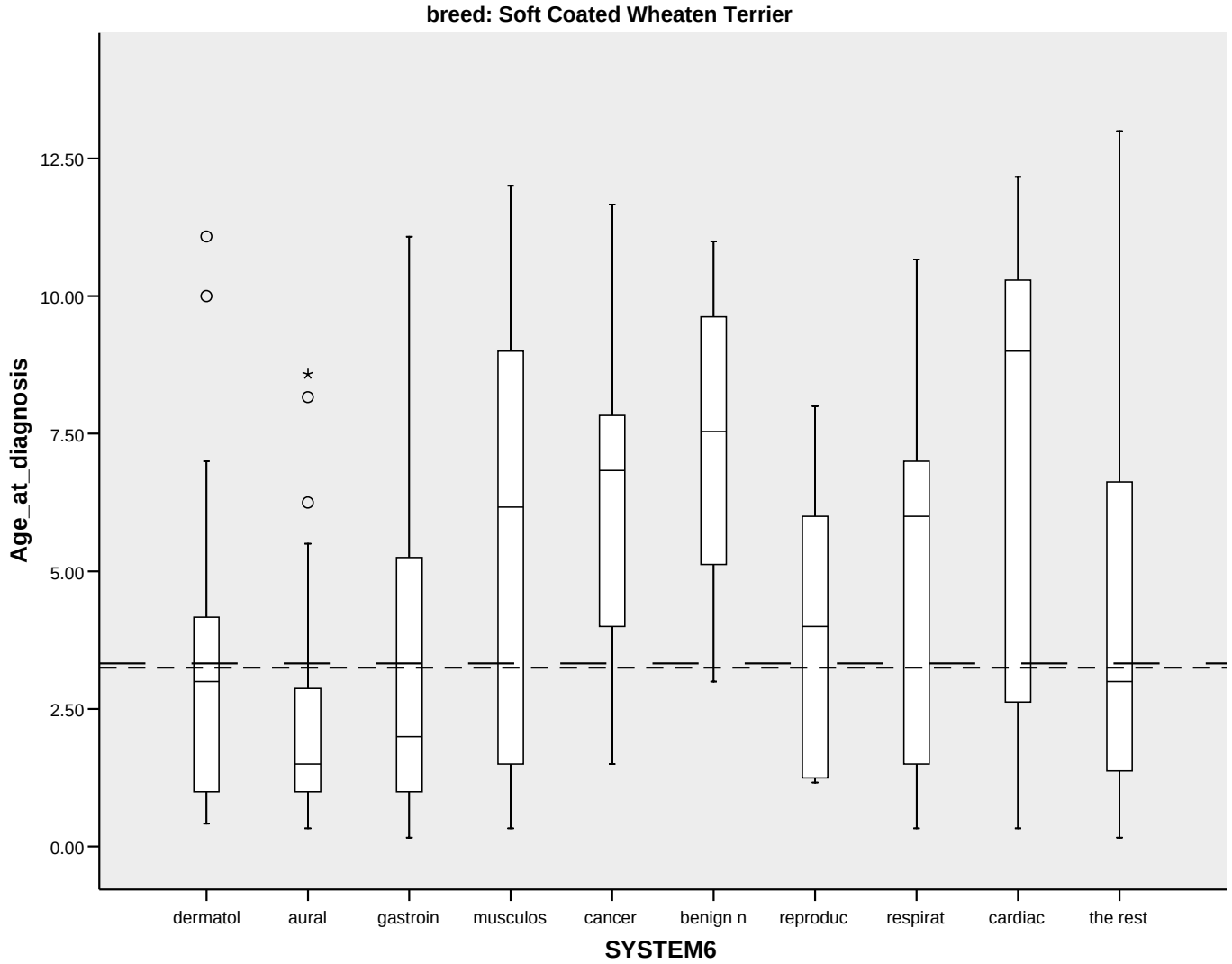


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Soft Coated Wheaten Terriers (N=168 dogs with 254 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Soft Coated Wheaten Terriers. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Soft Coated Wheaten Terriers.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Dermatologic	39	14.9	Dermatitis; sebaceous cysts; fading nose pigment; pyotraumatic dermatitis
2	Aural	34	13.0	Otitis externa
3	Gastrointestinal	30	11.5	Colitis; diarrhoea; inflammatory bowel disease (IBD); vomiting & diarrhoea; pancreatitis
4	Musculoskeletal	21	8.0	Arthritis (hindlimbs>shoulders=spine>rest); stiff joints; CHD; patellar luxation
5	Cancer	18	6.9	Unspecified (mammary>rest); carcinoma (mammary; tail); basal cell tumour, lymphoma
6	Immune mediated	17	6.5	Food allergy; flea allergy; atopy; gluten-sensitive enteropathy; allergy unspecified
7	Benign neoplasia	16	6.1	Lipoma; unspecified; adenoma; cysts
8	Reproductive	15	5.7	False pregnancy; dystochia (physical blockage); agalactia; inability to breed; mastitis; pyometra
9	Respiratory	14	5.3	Kennel cough; asthma; coughing; upper respiratory tract infection
10	Urologic	13	5.0	Incontinence (unspec.>after spay); cystitis; uroliths (unspecified); PLN; urethral obstruction
11	Cardiac	11	4.2	Heart murmur (unspecified>grade 2=without clinical signs); heart valve condition
12	Ocular	7	2.7	Cataracts; conjunctivitis; entropion; trichiasis; corneal ulcer
13	Unknown	7	2.7	Undiagnosed illness
14	Other	5	1.9	Uncodeable
15	Neurologic	4	1.5	IVDD; seizures
16	Behaviour	3	1.1	Unspecified; aggression
17	Trauma	3	1.1	Hindlimb; forelimb
18	Anal gland	2	0.8	Anal sacculitis
19	Endocrine	2	0.8	Hypothyroidism
20	Haematopoietic	1	0.4	Anaemia unspecified
	Total	262	100.0	

PLN=protein losing nephropathy

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for the St Bernard breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The St Bernard breed

A total of 130 forms were sent out and 24 were returned, representing 87 live dogs. This breed had an 18.5% response rate (24/130) and it represented 0.17% of all returns (24/13,741).

Mortality data

A total of 53 deaths were reported and this represents 0.33% of all deaths reported in the survey (53/15,881). The median age at death for the St Bernard breed was 7 years (min = 6 months, max = 12 years and 9 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the St Bernard breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the St Bernard breed.

Cause of death		N	%	Most common specific causes in descending order
1	Cardiac	15	28.3	Cardiomyopathy unspecified; heart failure
2	Cancer	9	17.0	Type unspecified (bone)
3	Gastrointestinal	8	15.1	Gastric dilatation/volvulus (GDV)
4	Old age	4	7.5	Old age & age combinations
5	Cerebral vascular	2	3.8	Stroke or cerebral vascular accident
6	Musculoskeletal	2	3.8	Arthritis; hip dysplasia
7	Perioperative	2	3.8	
8	Urologic	2	3.8	Kidney failure
9	Behaviour	1	1.9	Aggression
10	Combinations	1	1.9	
11	Endocrine	1	1.9	Addisons disease
12	Hepatic	1	1.9	Liver failure
13	Hyperthermia	1	1.9	
14	Neurologic	1	1.9	Seizures
15	Other	1	1.9	Uncodeable
16	Reproductive	1	1.9	Pyometra
17	Septicaemia	1	1.9	
	Total	53	100.0	

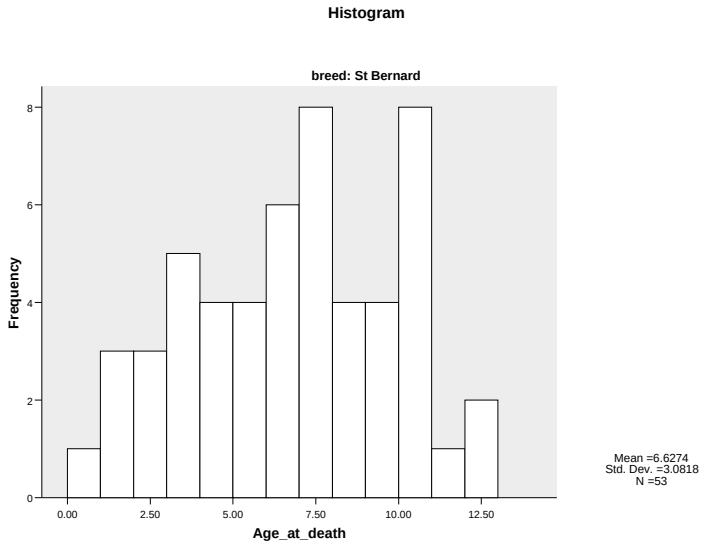


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 53 St Bernard deaths with age at death reported.

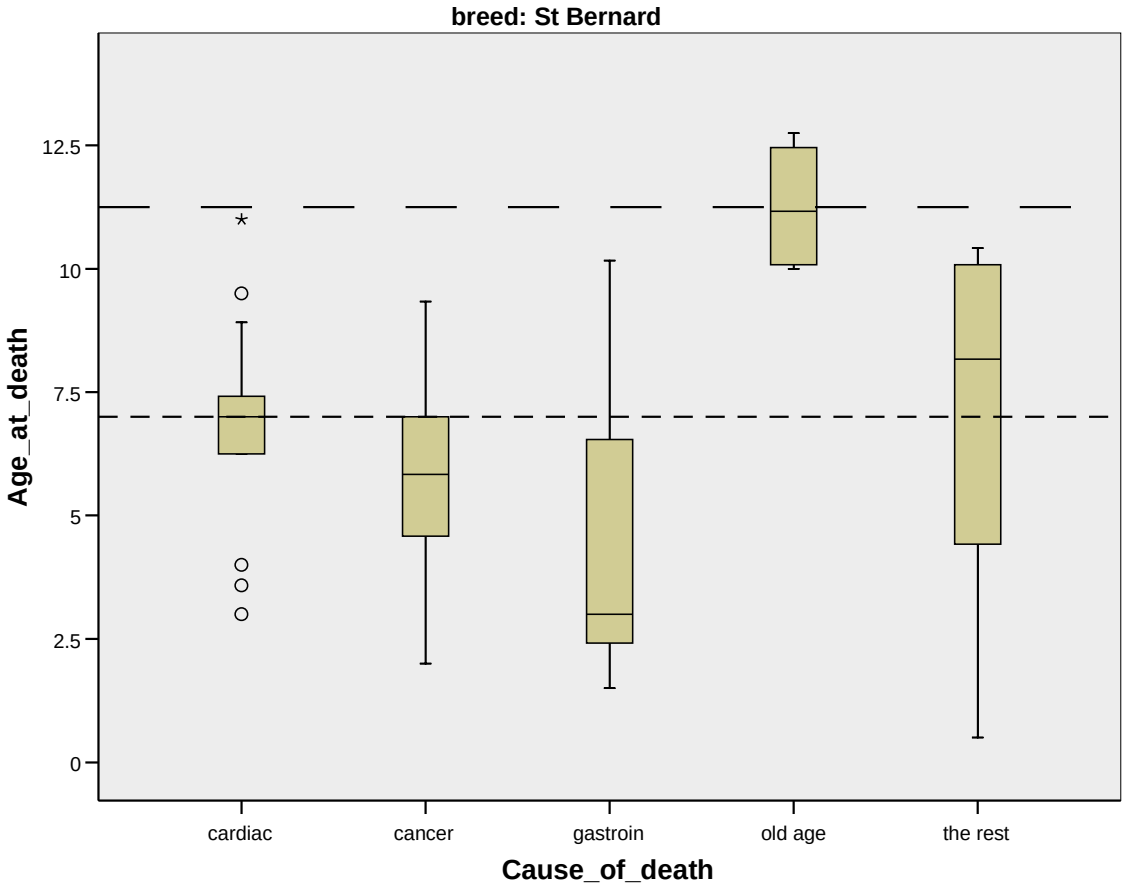


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the St Bernard breed (N=53). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the St Bernard breed. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 87 live dogs with a reported age was 3 years and 9 months (min=5 months, max=11 years, Figure 3). Health information was reported for 87 live dogs of which 43 (49%) were healthy and 44 (51%) had at least one reported health condition, resulting in a total of 77 reported conditions with a median of 1 condition/dog (min=1, max=6).

The median current age of all healthy dogs with a reported age (N=43) was 3 years and 5 months (min=5 months, max=11 years). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=44) was 4 years and 3 months (min=1 year and 3 months, max=8 years and 9 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=77) was 2 years and 3 months (min= 3 months, max= 7 years, Figure 4). Table 3 shows the disease conditions for the St Bernard breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 87 St Bernards with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	44	7	51 (59%)
Male	33	3	36 (41%)
Totals	77 (89%)	10 (11%)	87 (100%)

There was no association between gender and neuter status (P=0.4374).

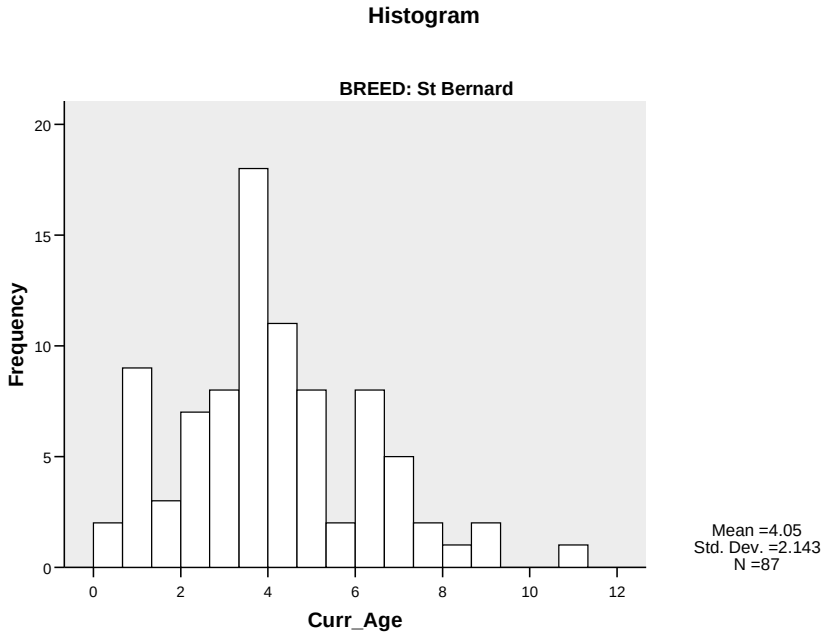


Figure 3. Histogram showing frequency of current age in years for the 87 live St Bernards with age reported.

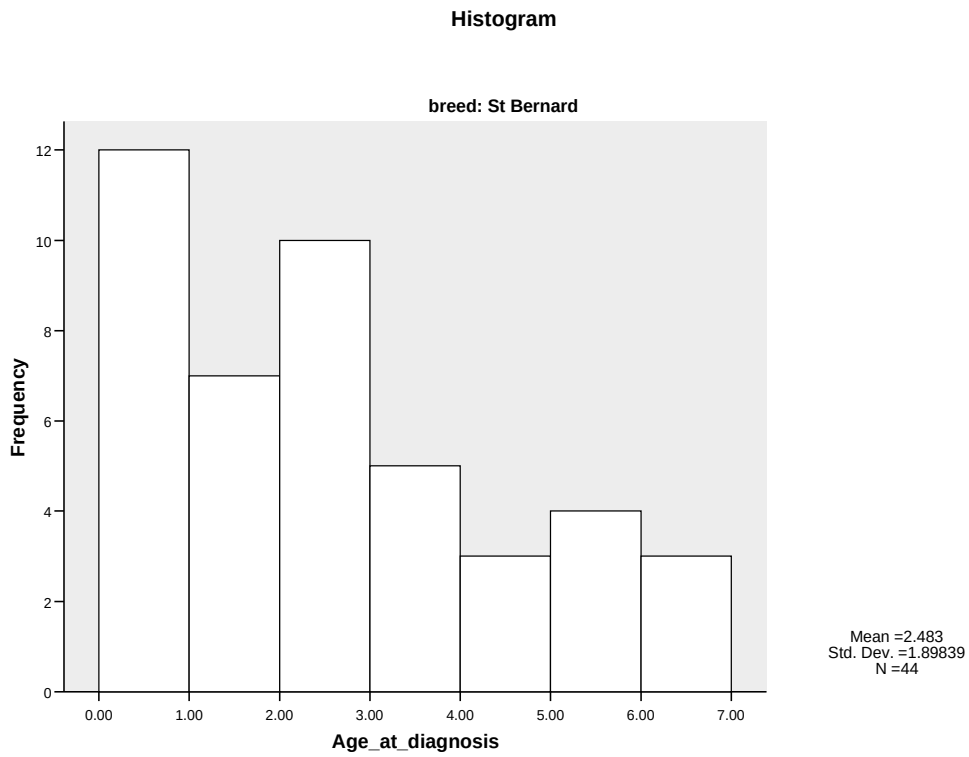


Figure 4. Histogram showing frequency of age at diagnosis for the 44 St Bernard breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

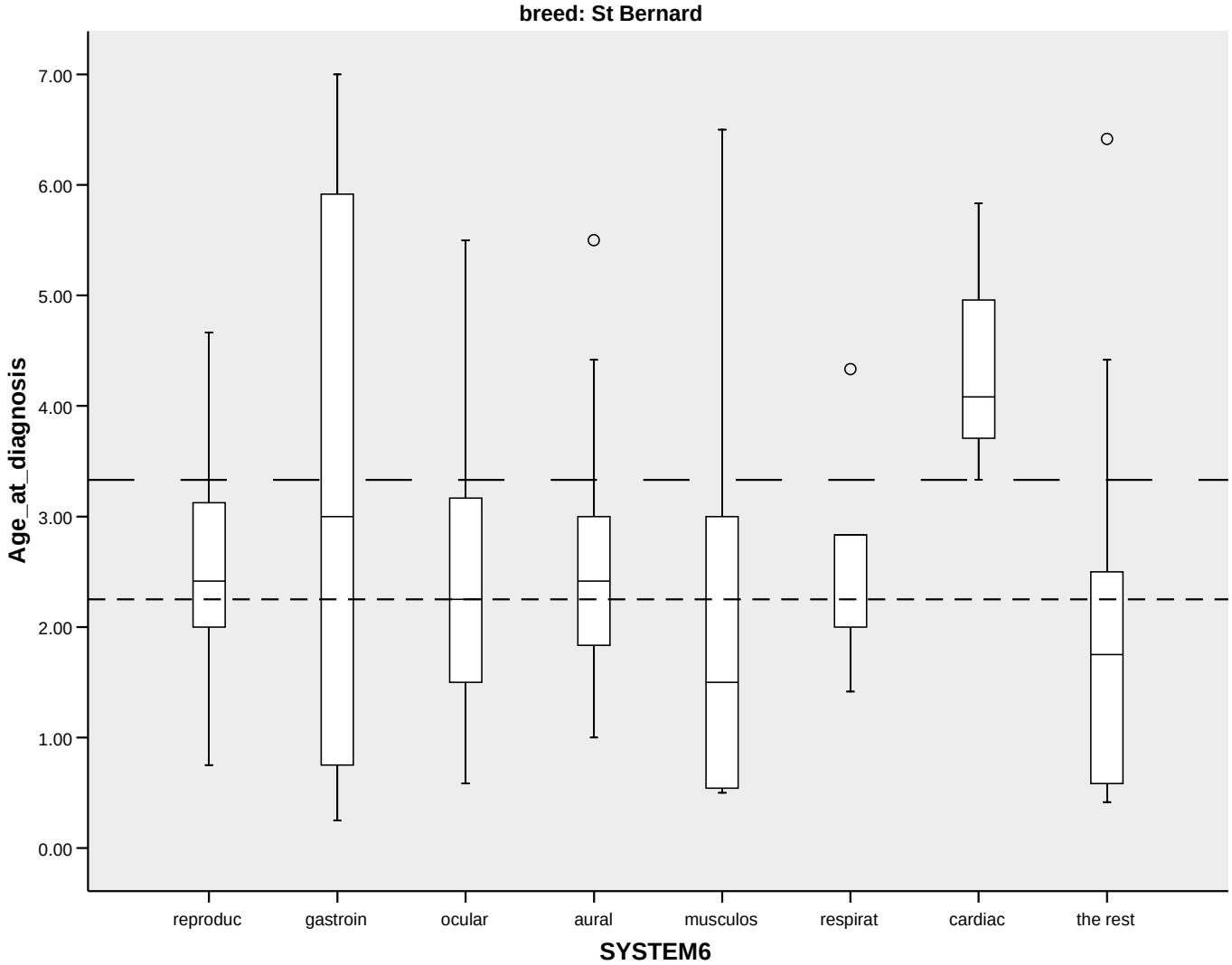


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the St Bernard breed (N=44 dogs with 77 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the St Bernard breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the St Bernard breed.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Reproductive	12	15.6	Dystochia (uterine inertia>physical blockage); infertility; pyometra; spontaneous abortion
2	Gastrointestinal	11	14.3	Gastric dilatation/volvulus (GDV); diarrhoea; weight loss; vomiting; infection (unspecified)
3	Ocular	11	14.3	Entropion; red eye; corneal ulcer; cherry eye; glaucoma
4	Aural	10	13.0	Otitis externa; aural haematoma; excessive ear wax
5	Musculoskeletal	7	9.1	Arthritis (hips=shoulders=unspec); CLR; CHD; OCD (shoulder); lameness (unspecified)
6	Respiratory	6	7.8	Kennel cough; rhinitis
7	Dental	4	5.2	Retained puppy teeth
8	Cardiac	3	3.9	Arrhythmia; dilated cardiomyopathy
9	Neurologic	3	3.9	Seizures; chronic degenerative radiculomyelopathy (CDRM)
10	Urologic	3	3.9	Cystitis
11	Immune mediated	2	2.6	Gluten-sensitive enteropathy; flea allergy
12	Unknown	2	2.6	Undiagnosed illness
13	Behaviour	1	1.3	Unspecified
14	Benign neoplasia	1	1.3	Unspecified (leg)
15	Dermatologic	1	1.3	Pyotraumatic dermatitis
	Total	77	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for Staffordshire Bull Terriers

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Staffordshire Bull Terriers

A total of 833 forms were sent out and 132 were returned, representing 325 live dogs. This breed had a 15.8% response rate (132/833) and it represented 0.96% of all returns (132/13,741).

Mortality data

A total of 117 deaths were reported and this represents 0.74% of all deaths reported in the survey (117/15,881). The median age at death for Staffordshire Bull Terriers was 12 years and 9 months (min = 1 year and 2 months, max = 17 years and 2 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Staffordshire Bull Terriers. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Staffordshire Bull Terriers.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	52	44.4	Type unspecified (stomach); carcinoma
2	Old age	23	19.7	Old age & age combinations
3	Cardiac	8	6.8	Heart failure; disease (unspec); cardiomegaly; MVD
4	Urologic	6	5.1	Kidney failure (chronic>acute)
5	Cerebral vascular	3	2.6	Stroke or cerebral vascular accident
6	Combinations	3	2.6	
7	Neurologic	3	2.6	Seizures
8	Unknown	3	2.6	
9	Behaviour	2	1.7	Aggression
10	Collapse	2	1.7	
11	Gastrointestinal	2	1.7	Colitis; exocrine pancreatic insufficiency
12	Perioperative	2	1.7	
13	Poisoning	2	1.7	
14	Endocrine	1	0.9	Cushings disease
15	Hepatic	1	0.9	Liver failure
16	Musculoskeletal	1	0.9	Dislocated hip
17	Reproductive	1	0.9	Pyometra
18	Respiratory	1	0.9	Bronchitis
19	Trauma	1	0.9	Road traffic accident
	Total	117	100.0	

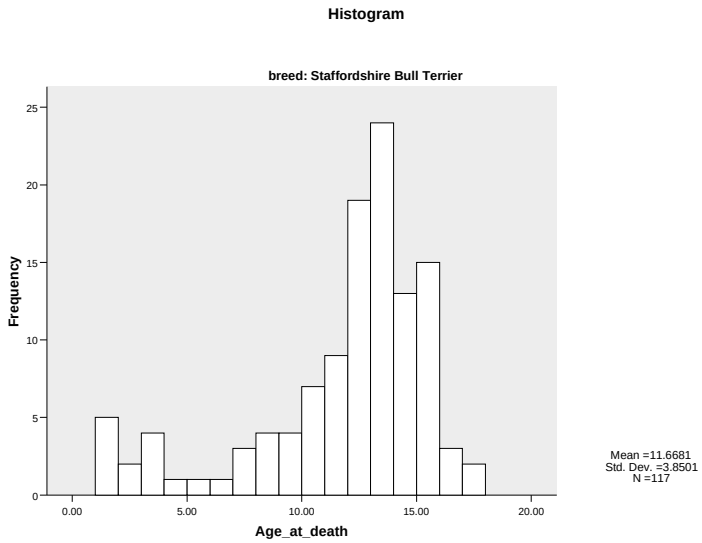


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 117 Staffordshire Bull Terrier deaths with age at death reported.

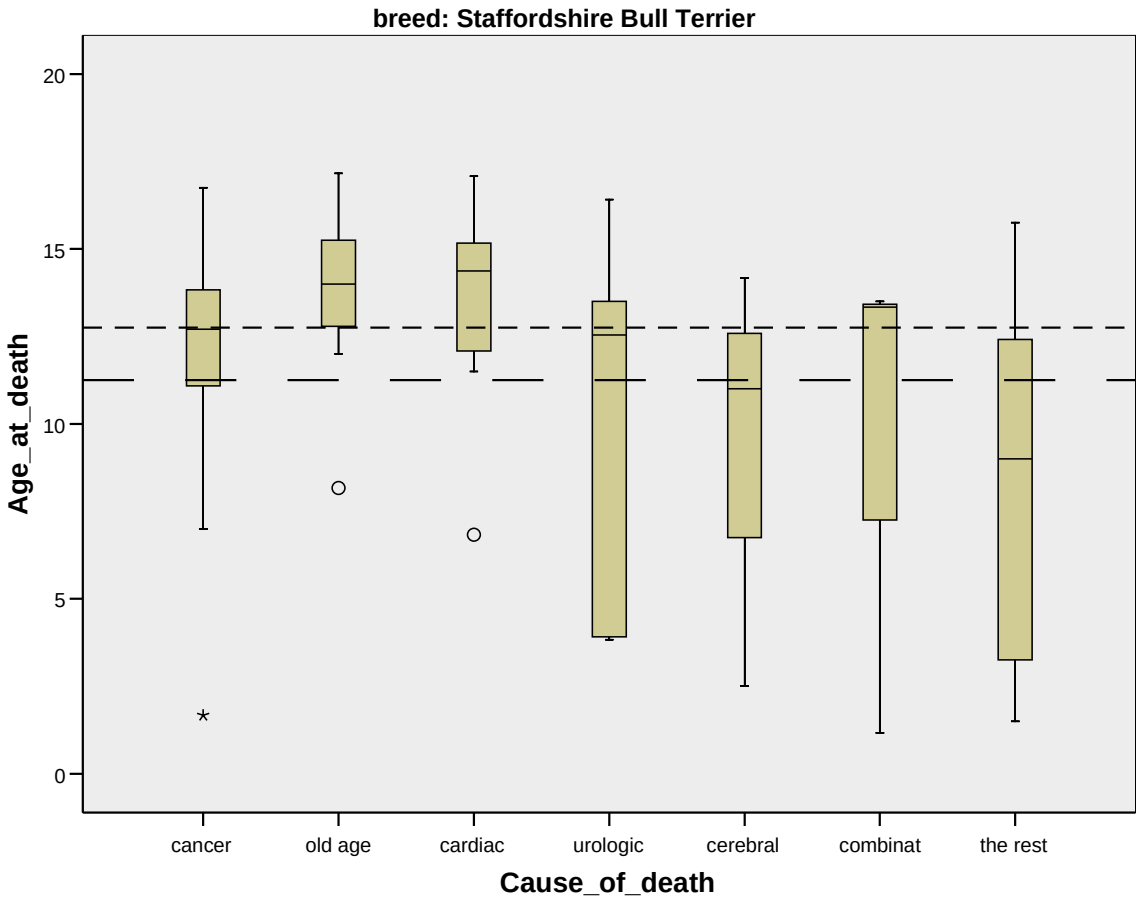


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Staffordshire Bull Terriers (N=117). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Staffordshire Bull Terriers. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 323 live dogs with a reported age was 4 years and 2 months (min=2 months, max=17 years and 3 months, Figure 3). Health information was reported for 325 live dogs of which 206 (63%) were healthy and 119 (37%) had at least one reported health condition, resulting in a total of 181 reported conditions with a median of 1 condition/dog (min=1, max=6).

The median current age of all healthy dogs with a reported age (N=206) was 3 years and 1 month (min=2 months, max=17 years and 3 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=118) was 6 years and 9 months (min=4 months, max=15 years and 10 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=180) was 2 years (min= 3 months, max= 15 years and 5 months, Figure 4). Table 3 shows the disease conditions for Staffordshire Bull Terriers. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 324 Staffordshire Bull Terriers with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	119	81	200 (62%)
Male	114	10	124 (38%)
Totals	233 (72%)	91 (28%)	324 (100%)

Significantly more females were neutered (P<0.0001).

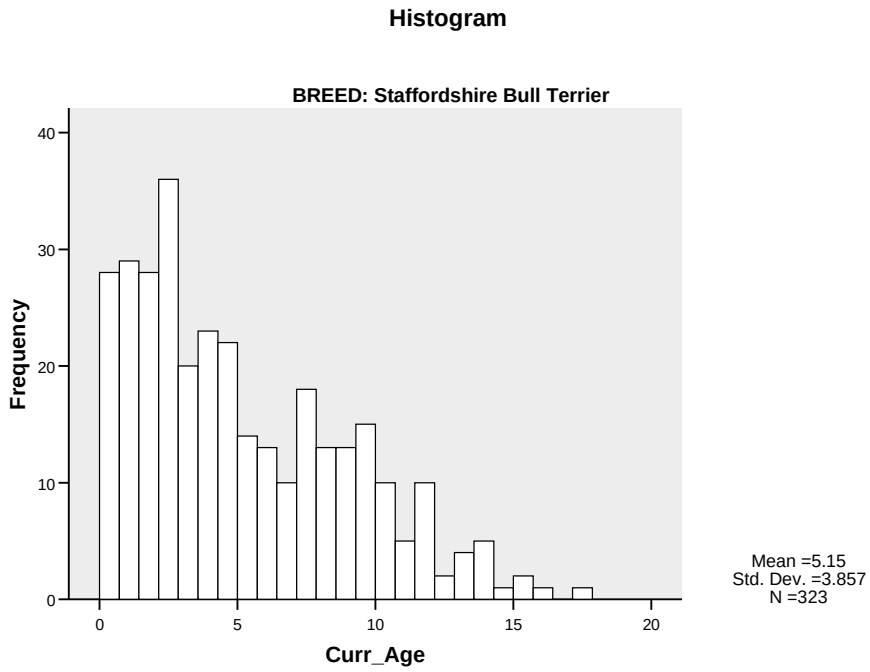


Figure 3. Histogram showing frequency of current age in years for the 323 live Staffordshire Bull Terriers with age reported.

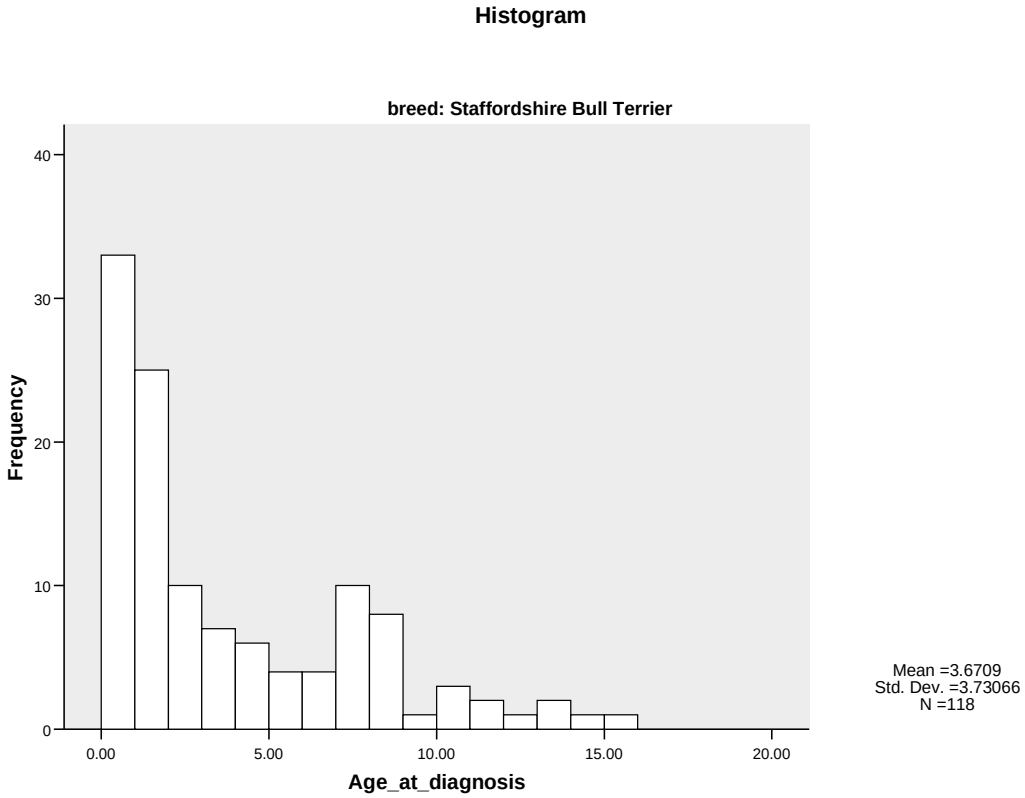


Figure 4. Histogram showing frequency of age at diagnosis for the 118 Staffordshire Bull Terriers with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

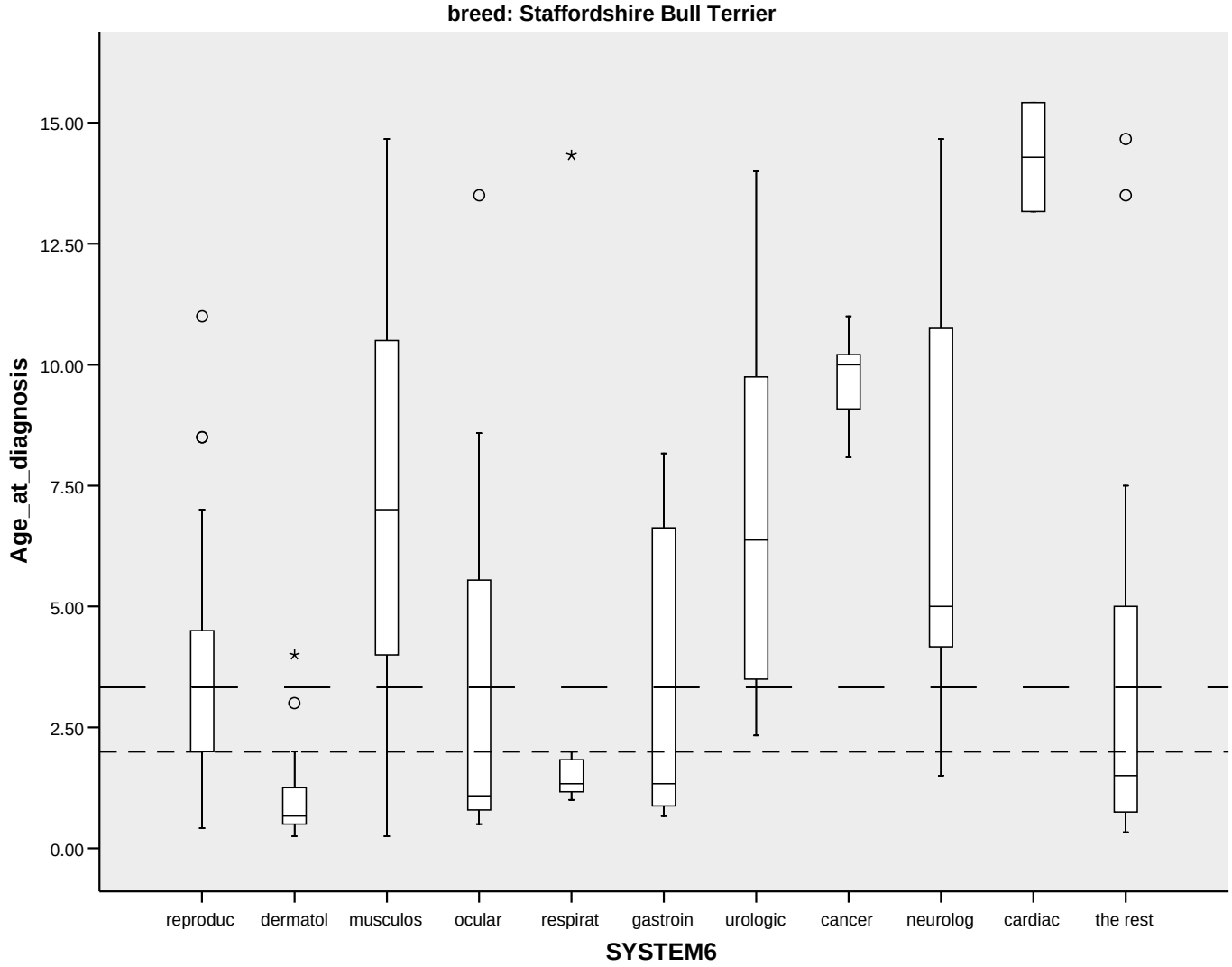


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Staffordshire Bull Terriers (N=118 dogs with 180 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Staffordshire Bull Terriers. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Staffordshire Bull Terriers.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Reproductive	42	23.2	Pyometra; false pregnancy; irregular heat cycles; eclampsia; prostatomegaly
2	Dermatologic	34	18.8	Mites (demodex>sarcoptes=unspecified); dermatitis; atopy
3	Musculoskeletal	27	14.9	Arthritis (hindlimb>forelimb=hip=stifle>rest); CLR; DJD
4	Ocular	12	6.6	Cherry eye; corneal ulcer; distichiasis; epiphora; blindness; conjunctivitis
5	Respiratory	9	5.0	Kennel cough; noisy breathing; breathing difficulties (unspecified)
6	Gastrointestinal	8	4.4	Colitis; diarrhoea; vomiting; chronic gastroenteritis; pancreatitis
7	Immune mediated	8	4.4	Flea allergy; gluten-sensitive enteropathy; unspecified; nut allergy; dust mite allergy
8	Urologic	8	4.4	Cystitis; cystouroliths (unspecified=struvite); incontinence
9	Cancer	7	3.9	Type unspecified (mammary); lymphoma; spindle cell tumour (neck muscle); carcinoma
10	Dental	7	3.9	Retained puppy teeth; defect other than extra teeth; extra teeth; dental disease
11	Neurologic	7	3.9	Seizures; deafness; IVDD (unspecified)
12	Trauma	3	1.7	Unspecified; spine
13	Unknown	3	1.7	Undiagnosed illness
14	Cardiac	2	1.1	Heart murmur unspecified
15	Endocrine	2	1.1	Cushings disease
16	Cardiopulmonary	1	0.6	Pulmonary oedema
17	Hepatic	1	0.6	Chronic liver disease
	Total	181	100.0	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for Sussex Spaniels

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Sussex Spaniels

A total of 191 forms were sent out and 60 were returned, representing 121 live dogs. This breed had a 31.4% response rate (60/191) and it represented 0.44% of all returns (60/13,741).

Mortality data

A total of 42 deaths were reported and this represents 0.26% of all deaths reported in the survey (42/15,881). The median age at death for Sussex Spaniels was 11 years and 2 months (min = 1 year and 1 month, max = 16 years and 6 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Sussex Spaniels. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Sussex Spaniels.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	8	19.0	Type unspecified (mammary)
2	Old age	8	19.0	Old age & age combinations
3	Cardiac	6	14.3	Heart defect unspecified; heart failure; cardiomegaly
4	Behaviour	2	4.8	Aggression; unspecified
5	Combinations	2	4.8	
6	Gastrointestinal	2	4.8	Gastric dilatation/volvulus (GDV)
7	Neurologic	2	4.8	Seizures; meningitis
8	Senility	2	4.8	
9	Trauma	2	4.8	Unspecified
10	Cerebral vascular	1	2.4	Stroke or cerebral vascular accident
11	Endocrine	1	2.4	Cushings disease
12	Hepatic	1	2.4	Acute liver failure
13	Other	1	2.4	Uncodeable
14	Perioperative	1	2.4	
15	Poisoning	1	2.4	
16	Respiratory	1	2.4	Pneumonia
17	Sudden death	1	2.4	
	Total			

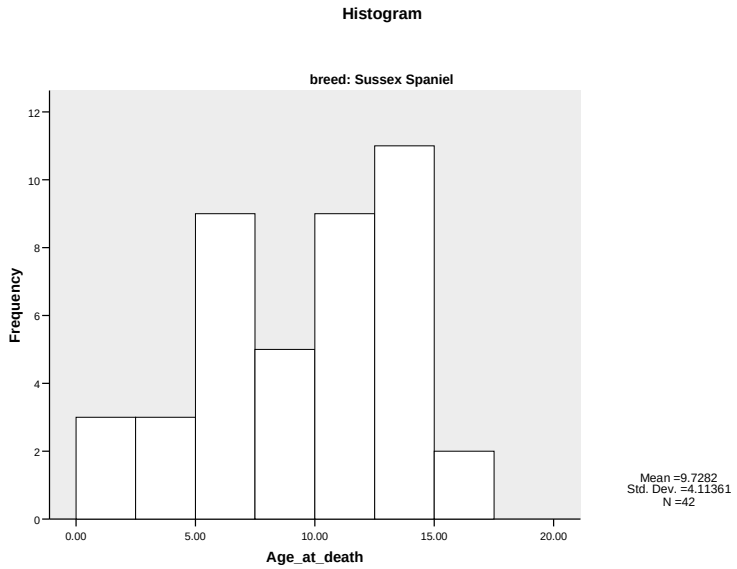


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 42 Sussex Spaniel deaths with age at death reported.

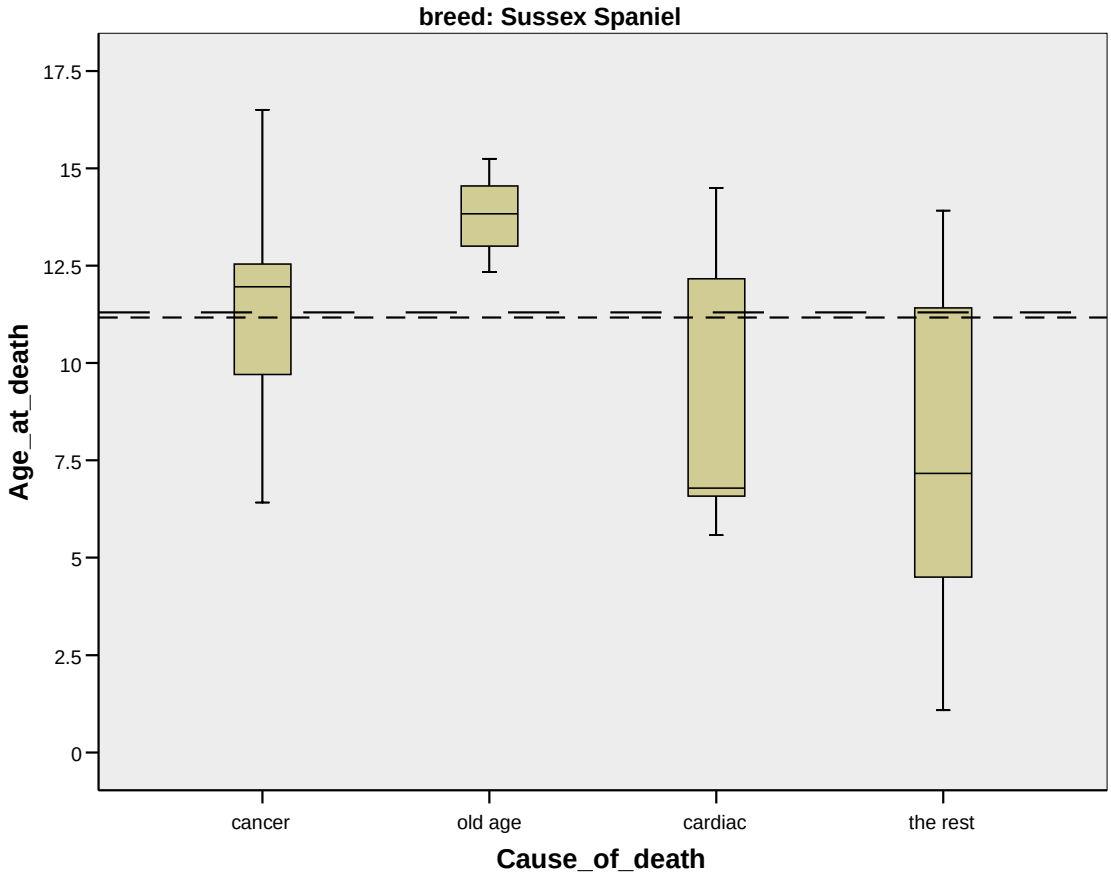


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Sussex Spaniels (N=42). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Sussex Spaniels. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 121 live dogs with a reported age was 5 years and 3 months (min=2 months, max=16 years and 11 months, Figure 3). Health information was reported for 121 live dogs of which 70 (58%) were healthy and 51 (42%) had at least one reported health condition, resulting in a total of 81 reported conditions with a median of 1 condition/dog (min=1, max=5).

The median current age of all healthy dogs with a reported age (N=70) was 4 years and 4 months (min=2 months, max=16 years and 11 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=50) was 6 years and 3 months (min=3 months, max=14 years). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=80) was 3 years and 6 months (min= 3 months, max= 13 years and 2 months, Figure 4). Table 3 shows the disease conditions for Sussex Spaniels. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 120 Sussex Spaniels with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	45	20	65 (54%)
Male	39	16	55 (46%)
Totals	84 (70%)	36 (30%)	120 (100%)

There was no association between gender and neuter status (P=0.8416).

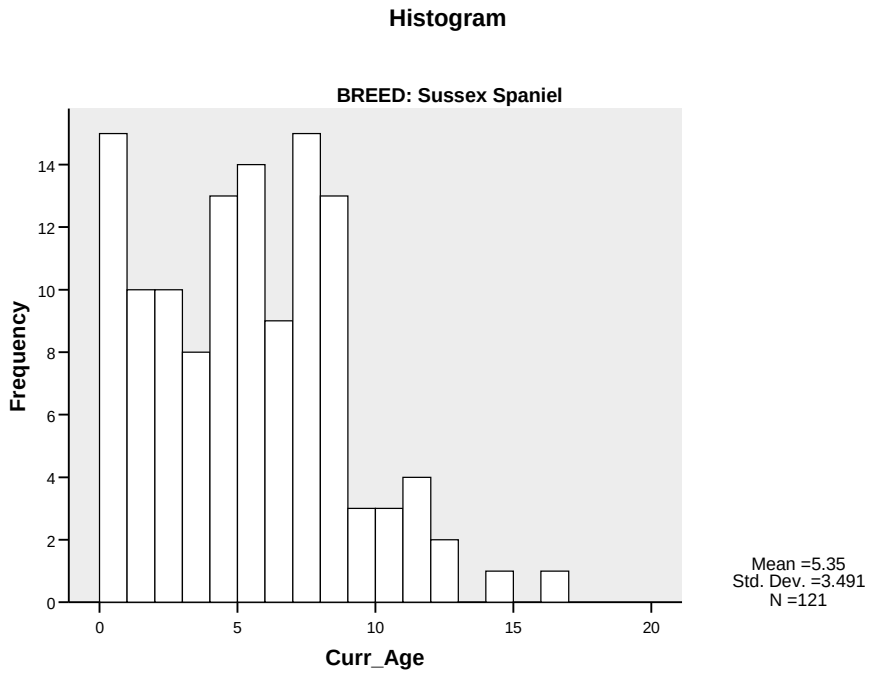


Figure 3. Histogram showing frequency of current age in years for the 121 live Sussex Spaniels with age reported.

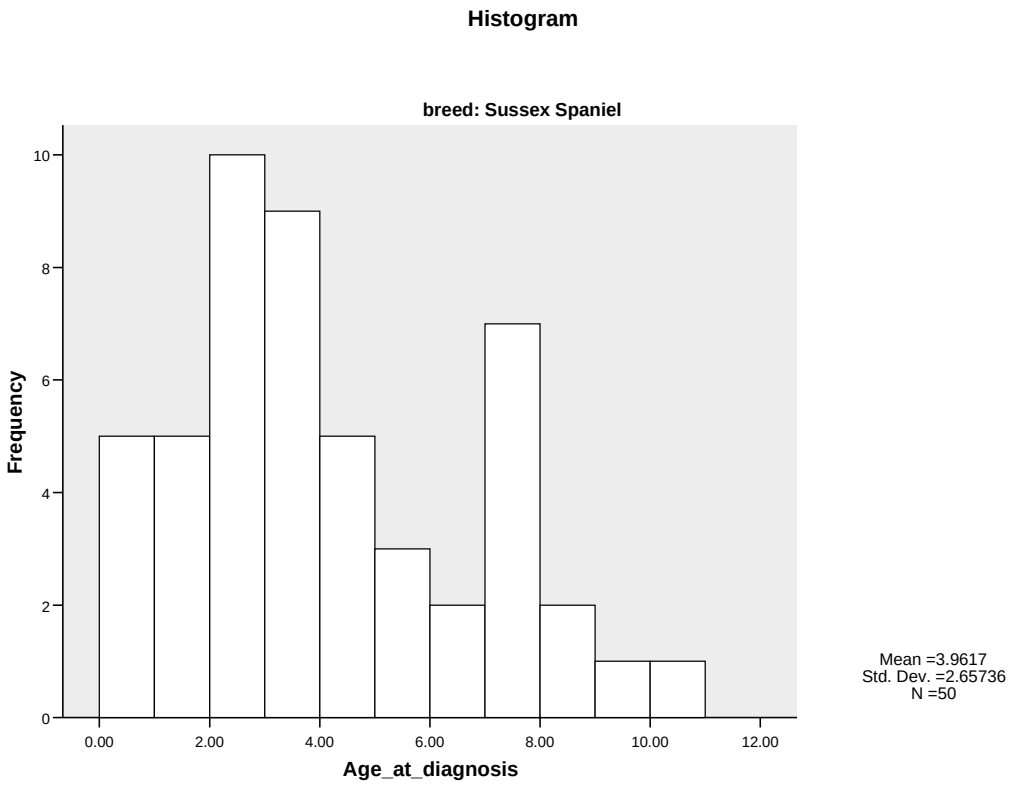


Figure 4. Histogram showing frequency of age at diagnosis for the 50 Sussex Spaniels with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

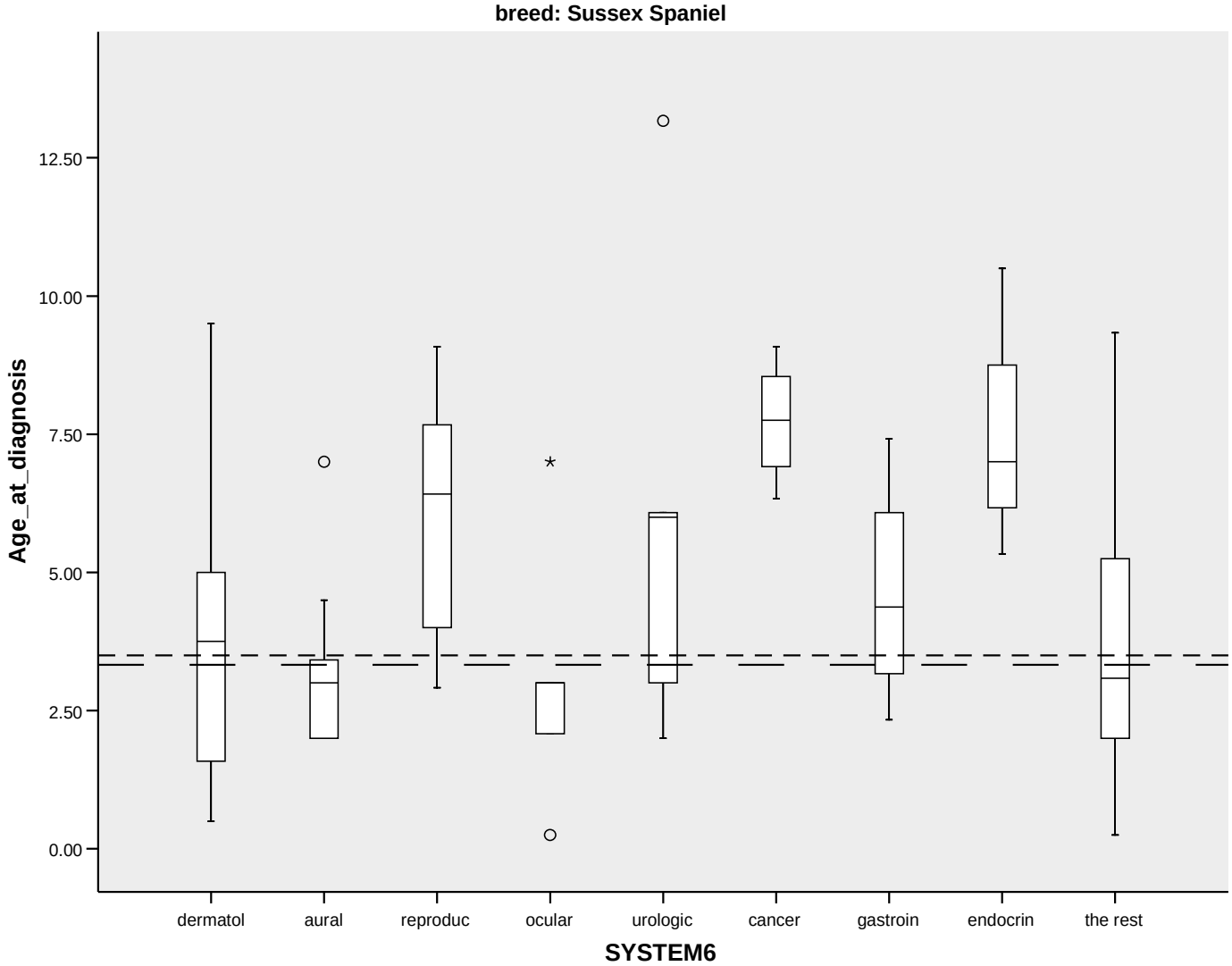


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Sussex Spaniels (N=50 dogs with 80 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Sussex Spaniels. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Sussex Spaniels.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Dermatologic	21	25.9	Pyotraumatic dermatitis; mites (sarcoptes>cheyletiella>unspecified); dermatitis; alopecia
2	Aural	11	13.6	Otitis externa
3	Reproductive	10	12.3	Infertility; prostatomegaly; pyometra; dystochia (uterine inertia); difficulty whelping
4	Ocular	5	6.2	Epiphora; ectropion; entropion
5	Urologic	5	6.2	Cystitis; cystinuria; incontinence
6	Cancer	4	4.9	Type unspecified (mammary>leg=womb)
7	Cardiac	4	4.9	Heart murmur (unspecified; without clinical signs); cardiomegaly; cardiomyopathy unspecified
8	Gastrointestinal	4	4.9	Gastric dilatation/volvulus (GDV); diarrhoea; bowel disorder unspecified
9	Musculoskeletal	4	4.9	CHD; brachygnathism; prognathism
10	Endocrine	3	3.7	Hypothyroidism; weight gain (unspecified)
11	Immune mediated	3	3.7	Atopy; other allergy (unspecified)
12	Neurologic	3	3.7	Seizures; IVDD (unspecified)
13	Benign neoplasia	1	1.2	Lipoma
14	Dental	1	1.2	Dental disease
15	Respiratory	1	1.2	Rhinitis
16	Unknown	1	1.2	Undiagnosed illness
	Total	81	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for the Swedish Vallhund breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Swedish Vallhund breed

A total of 71 forms were sent out and 16 were returned, representing 49 live dogs. This breed had a 22.5% response rate (16/71) and it represented 0.12% of all returns (16/13,741).

Mortality data

A total of 17 deaths were reported and this represents 0.11% of all deaths reported in the survey (17/15,881). The median age at death for the Swedish Vallhund breed was 14 years and 2 months (min = 4 years, max = 18 years and 10 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Swedish Vallhund breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Swedish Vallhund breed.

Cause of death		N	%	Most common specific causes in descending order
1	Old age	7	41.2	Old age & age combinations
2	Cancer	6	35.3	Type unspecified (liver); carcinoma; brain tumour
3	Neurologic	2	11.8	Seizures
4	Cardiac	1	5.9	Heart failure
5	Other	1	5.9	Uncodeable
	Total	17	100.0	

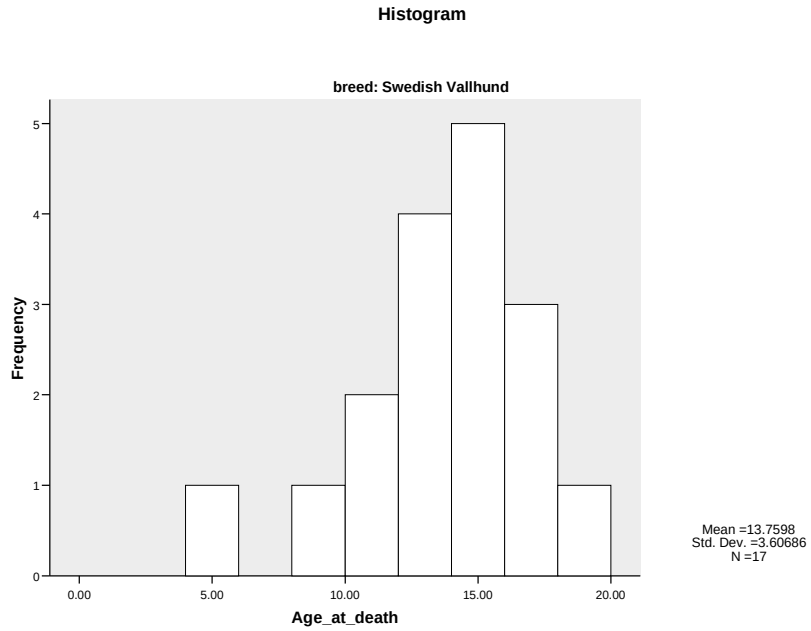


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 17 Swedish Vallhund deaths with age at death reported.

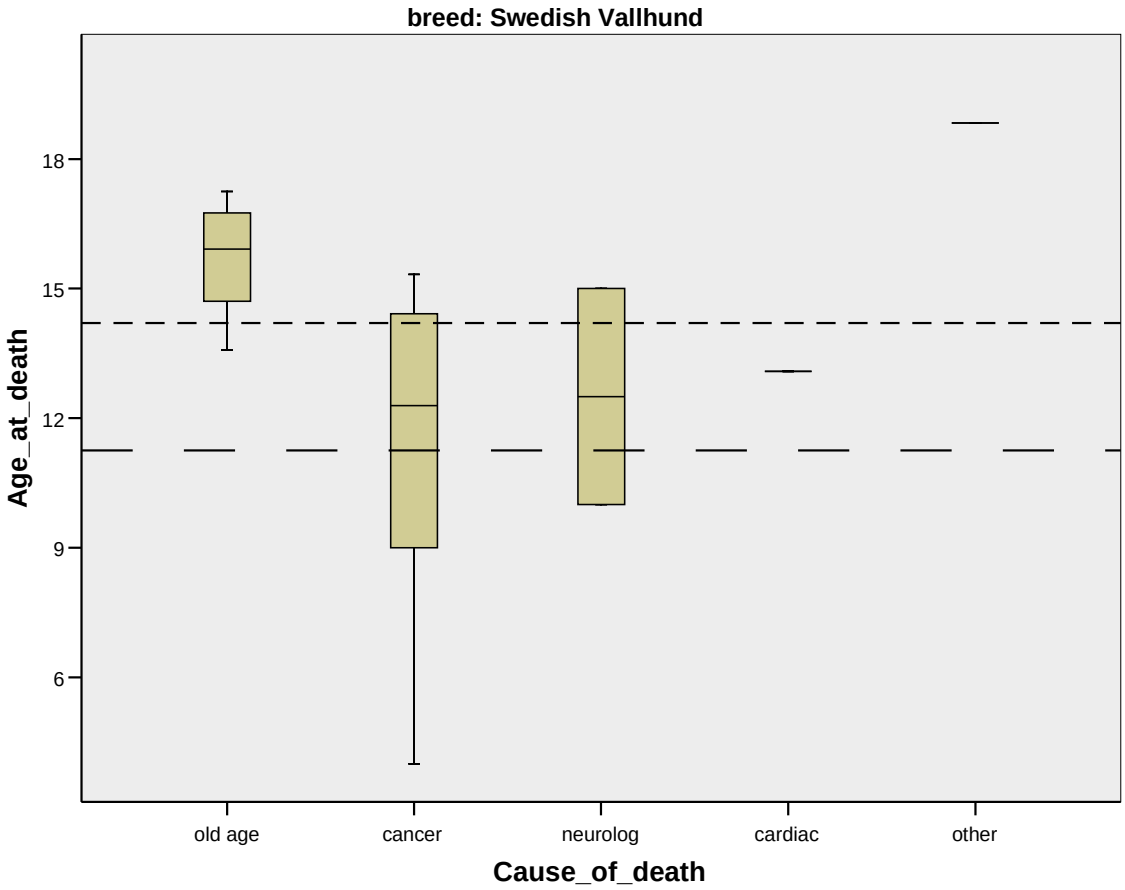


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the Swedish Vallhund breed (N=17). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the Swedish Vallhund breed. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 49 live dogs with a reported age was 5 years and 4 months (min=4 months, max=15 years and 11 months, Figure 3). Health information was reported for 49 live dogs of which 36 (73%) were healthy and 13 (27%) had at least one reported health condition, resulting in a total of 23 reported conditions with a median of 1 condition/dog (min=1, max=4).

The median current age of all healthy dogs with a reported age (N=36) was 3 years and 10 months (min=4 months, max=14 years and 5 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=12) was 11 years (min=5 years and 9 months, max=15 years and 11 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=22) was 7 years (min= 8 months, max= 15 years, Figure 4). Table 3 shows the disease conditions for the Swedish Vallhund breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for the 48 Swedish Vallhund breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	19	14	33 (69%)
Male	15	0	15 (31%)
Totals	34 (71%)	14 (29%)	48 (100%)

Significantly more females were neutered (P=0.0027).

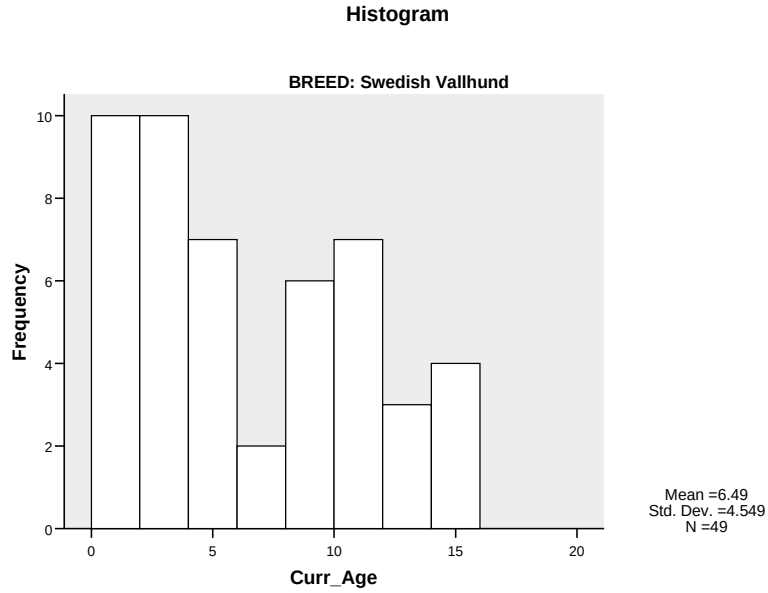


Figure 3. Histogram showing frequency of current age in years for the 49 live Swedish Vallhunds with age reported.

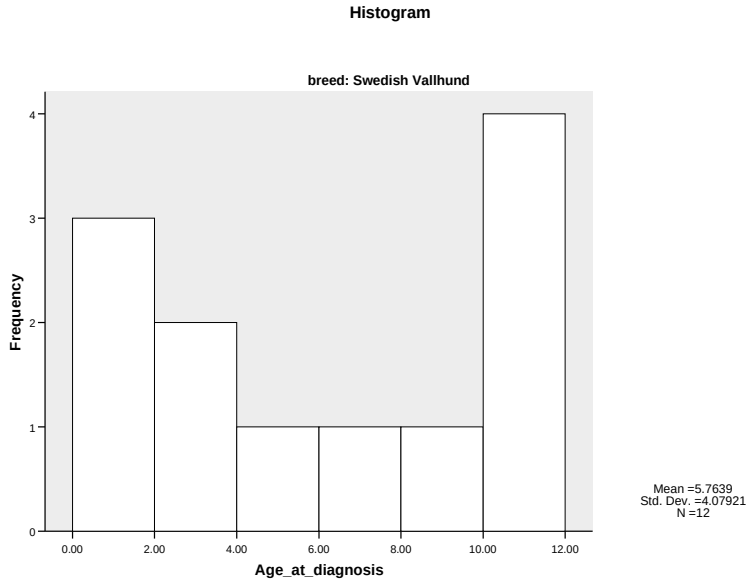


Figure 4. Histogram showing frequency of age at diagnosis for the 12 Swedish Vallhund breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

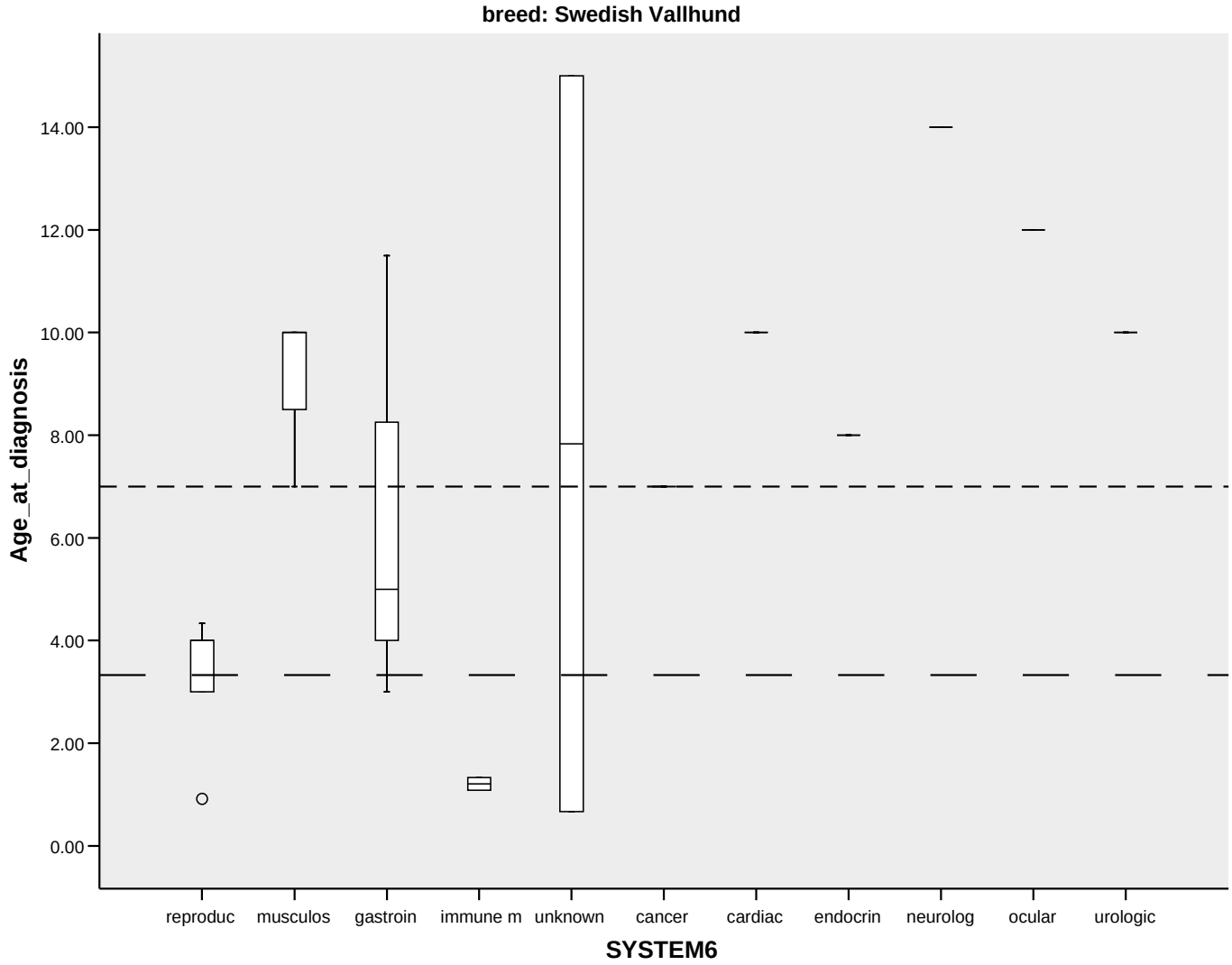


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Swedish Vallhund breed (N=12 dogs with 22 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Swedish Vallhund breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Swedish Vallhund breed.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Reproductive	5	21.7	Dystochia (uterine inertia=physical blockage); false pregnancy; infertility; irregular heats
2	Musculoskeletal	4	17.4	Arthritis (hips>elbows=forelimb)
3	Gastrointestinal	3	13.0	Foreign body obstruction; pancreatitis
4	Immune mediated	3	13.0	AIHA; skin disease (unspecified); allergy other (unspecified)
5	Unknown	2	8.7	Undiagnosed illness
6	Cancer	1	4.3	Unspecified (foreleg)
7	Cardiac	1	4.3	Arrhythmia
8	Endocrine	1	4.3	Hypothyroidism
9	Neurologic	1	4.3	Deafness
10	Ocular	1	4.3	Cataracts
11	Urologic	1	4.3	Incontinence (after spay)
	Total	23	100.0	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for the Tibetan Mastiff breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Tibetan Mastiff breed

A total of 60 forms were sent out and 23 were returned, representing 38 live dogs. This breed had a 38.3% response rate (23/60) and it represented 0.17% of all returns (23/13,741).

Mortality data

A total of 10 deaths were reported and this represents 0.06% of all deaths reported in the survey (10/15,881). The median age at death for the Tibetan Mastiff breed was 11 years and 11 months (min = 3 years and 7 months, max = 17 years and 2 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Tibetan Mastiff breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Tibetan Mastiff breed.

Cause of death		N	%	Most common specific causes in descending order
1	Old age	6	60.0	Old age
2	Cancer	1	10.0	Brain tumour
3	Respiratory	1	10.0	Pneumonia
4	Unknown	1	10.0	
5	Urologic	1	10.0	Kidney failure
	Total	10	100.0	

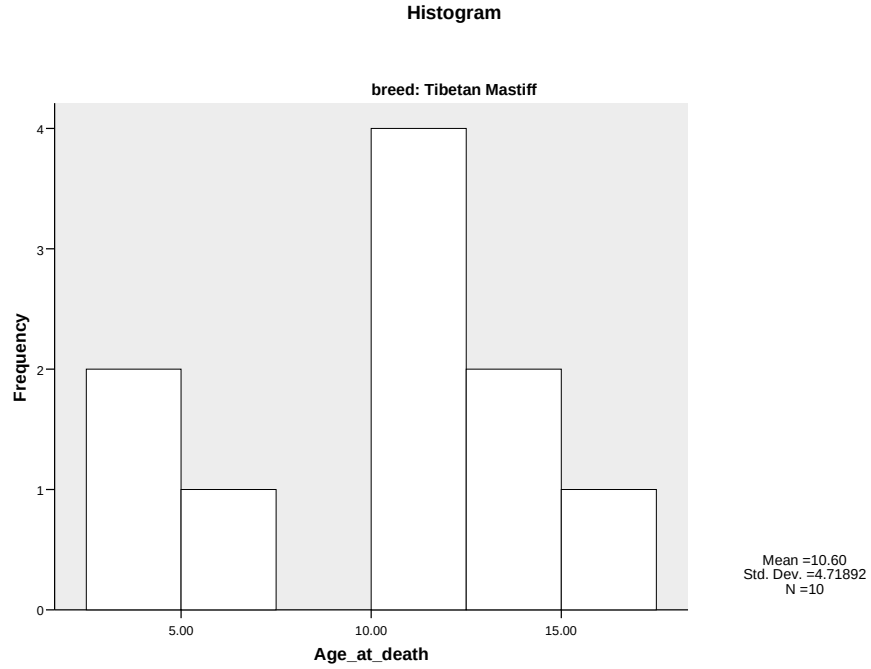


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 10 Tibetan Mastiff deaths with age at death reported.

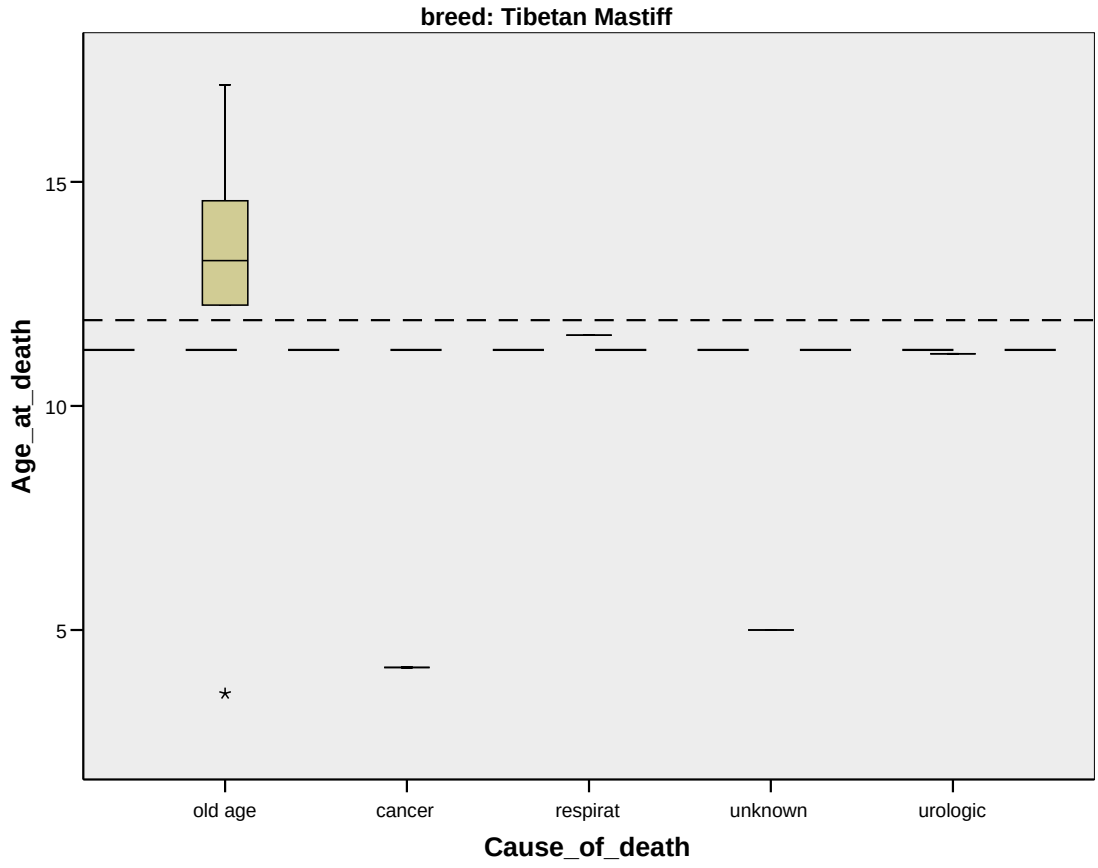


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the Tibetan Mastiff breed (N=10). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the Tibetan Mastiff breed. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 38 live dogs with a reported age was 3 years and 5 months (min=2 months, max=10 years and 2 months, Figure 3). Health information was reported for 38 live dogs of which 28 (74%) were healthy and 10 (26%) had at least one reported health condition, resulting in a total of 11 reported conditions with a median of 1 condition/dog (min=1, max=2).

The median current age of all healthy dogs with a reported age (N=28) was 3 years (min=2 months, max=9 years and 4 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=10) was 6 years and 8 months (min=1 year, max=10 years and 2 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=11) was 1 year and 7 months (min= 6 months, max= 9 years and 4 months, Figure 4). Table 3 shows the disease conditions for the Tibetan Mastiff breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 38 Tibetan Mastiffs with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	14	4	18 (47%)
Male	20	0	20 (53%)
Totals	34 (89%)	4 (11%)	38 (100%)

Significantly more females were neutered (P=0.0258).

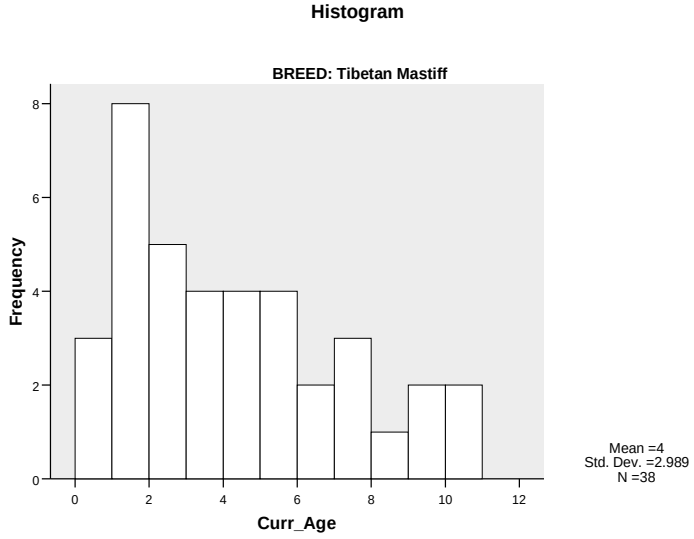


Figure 3. Histogram showing frequency of current age in years for the 38 live dogs of the Tibetan Mastiff breed with age reported.

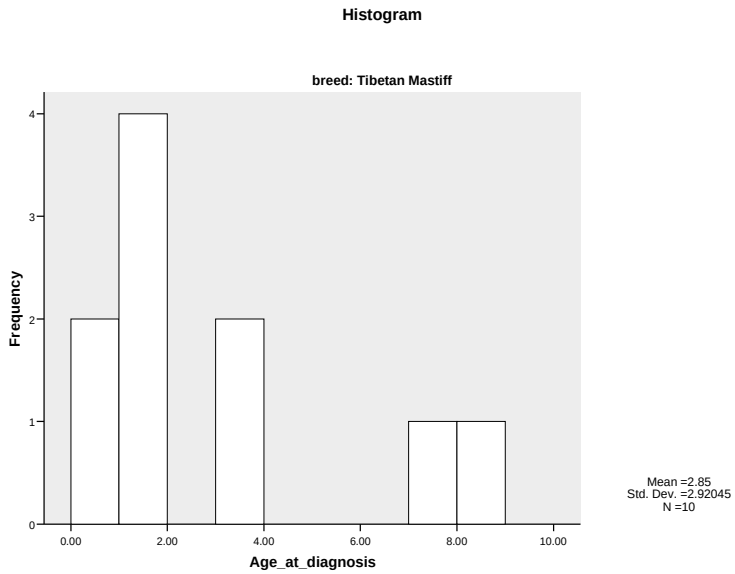


Figure 4. Histogram showing frequency of age at diagnosis for the 10 Tibetan Mastiff breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

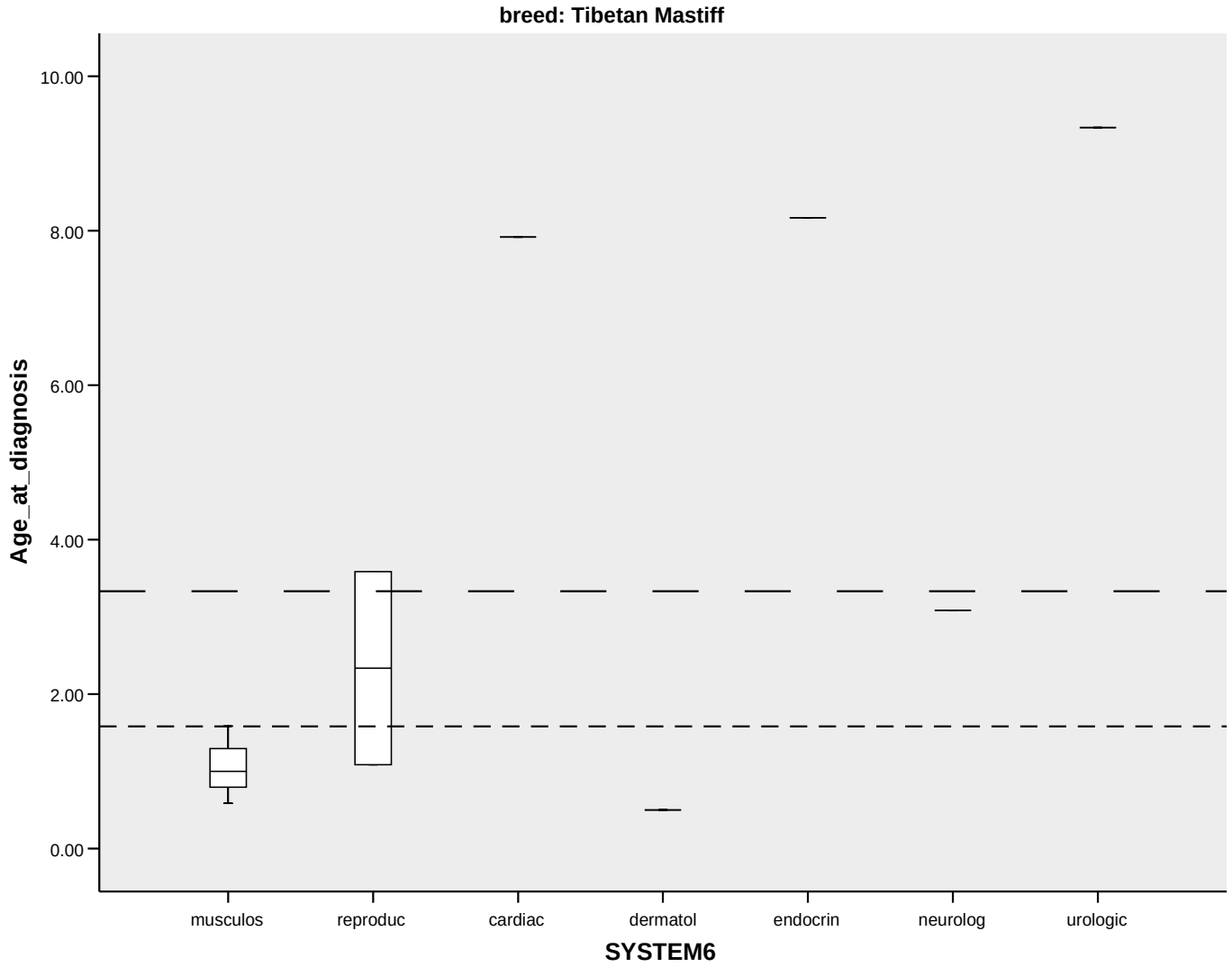


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Tibetan Mastiff breed (N=10 dogs with 11 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Tibetan Mastiff breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Tibetan Mastiff breed.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Musculoskeletal	4	36.4	Arthritis (forelimb); CLR; CHD; OCD (elbow)
2	Reproductive	2	18.2	False pregnancy
3	Cardiac	1	9.1	Heart murmur (unspecified)
4	Dermatologic	1	9.1	Follicular dysplasia
5	Endocrine	1	9.1	Hypothyroidism
6	Neurologic	1	9.1	Seizures
7	Urologic	1	9.1	Cystitis
	Total	11	100.0	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for Tibetan Spaniels

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Tibetan Spaniels

A total of 314 forms were sent out and 99 were returned, representing 379 live dogs. This breed had a 31.5% response rate (99/314) and it represented 0.72% of all returns (99/13,741).

Mortality data

A total of 125 deaths were reported and this represents 0.79% of all deaths reported in the survey (125/15,881). The median age at death for Tibetan Spaniels was 14 years and 5 months (min = 1 year and 6 months, max = 19 years and 1 month) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Tibetan Spaniels. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Tibetan Spaniels.

Cause of death		N	%	Most common specific causes in descending order
1	Old age	34	27.2	Old age
2	Cancer	29	23.2	Type unspecified (mammary, mouth); brain tumour
3	Cardiac	14	11.2	Heart failure; heart attack; arrythmia; valvular endocarditis
4	Neurologic	6	4.8	Seizures; unspecified
5	Cerebral vascular	5	4.0	Stroke or cerebral vascular accident
6	Combinations	5	4.0	
7	Senility	5	4.0	
8	Trauma	4	3.2	Road traffic accident; unspecified
9	Urologic	4	3.2	Kidney failure
10	Behaviour	3	2.4	Aggression; unspecified
11	Other	3	2.4	Uncodeable
12	Perioperative	3	2.4	
13	Hepatic	2	1.6	Liver failure
14	Reproductive	2	1.6	Pyometra
15	Drowning	1	0.8	
16	Gastrointestinal	1	0.8	Unspecified
17	Immune mediated	1	0.8	Unspecified
18	Infection	1	0.8	Viral (unspecified)
19	Internal bleeding	1	0.8	
20	Unknown	1	0.8	
	Total	125	100.0	

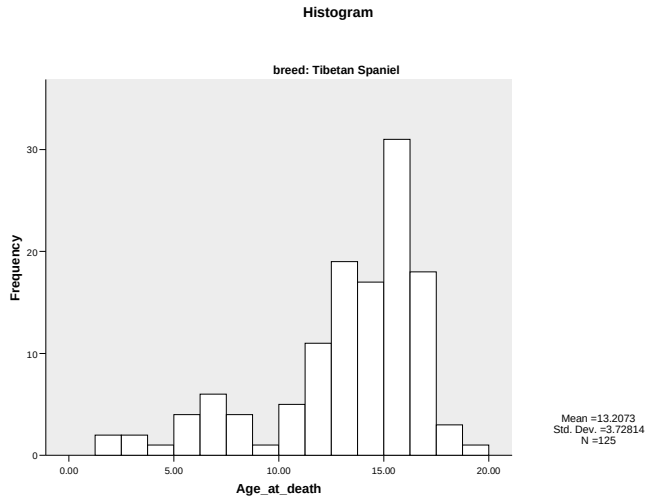


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 125 Tibetan Spaniel deaths with age at death reported.

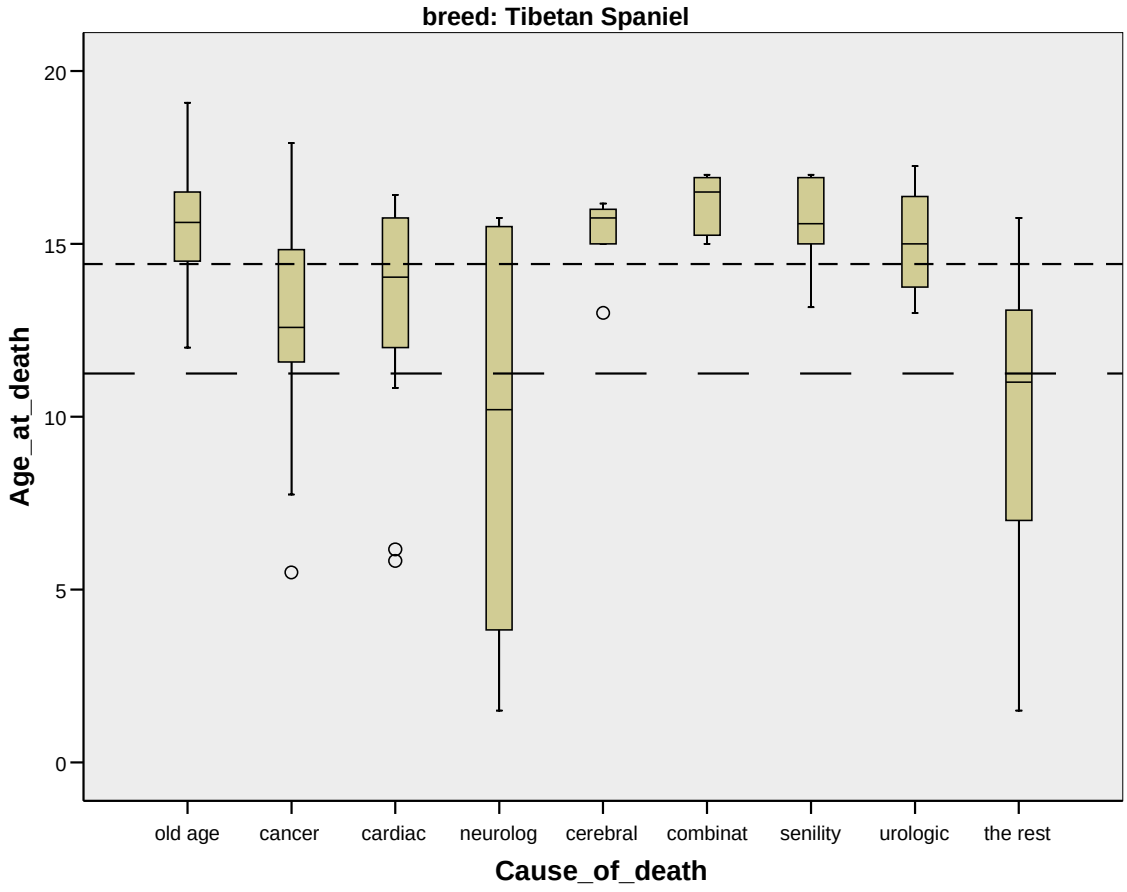


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Tibetan Spaniels (N=125). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Tibetan Spaniels. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 379 live dogs with a reported age was 6 years and 10 months (min=3 months, max=18 years, Figure 3). Health information was reported for 379 live dogs of which 250 (66%) were healthy and 129 (34%) had at least one reported health condition, resulting in a total of 194 reported conditions with a median of 1 condition/dog (min=1, max=5).

The median current age of all healthy dogs with a reported age (N=250) was 5 years and 11 months (min=3 months, max=18 years). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=121) was 9 years and 5 months (min=6 months, max=16 years and 9 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=180) was 5 years (min= 2 months, max= 15 years and 4 months, Figure 4). Table 3 shows the disease conditions for Tibetan Spaniels. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 378 Tibetan Spaniels with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	149	85	234 (62%)
Male	89	55	144 (38%)
Totals	238 (63%)	140 (37%)	378 (100%)

There was no association between gender and neuter status (P=0.7147).

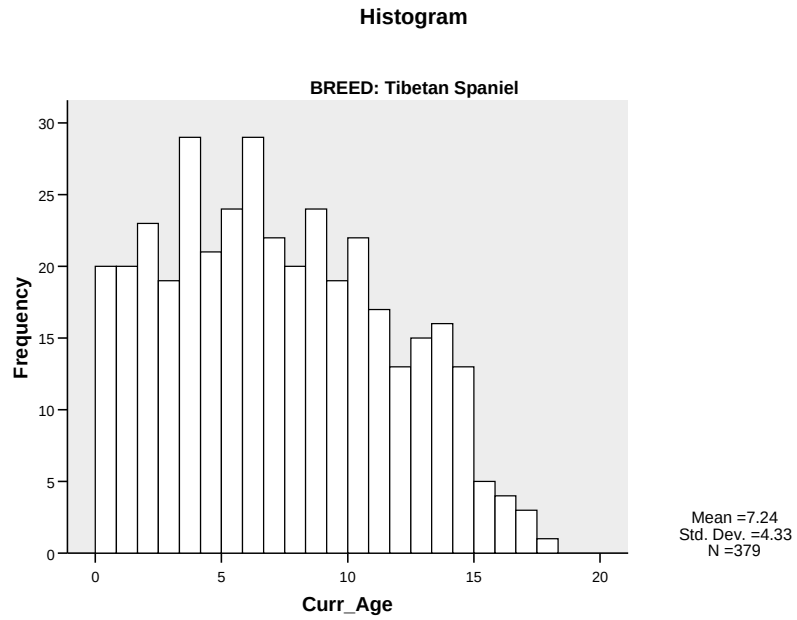


Figure 3. Histogram showing frequency of current age in years for the 379 live Tibetan Spaniels with age reported.

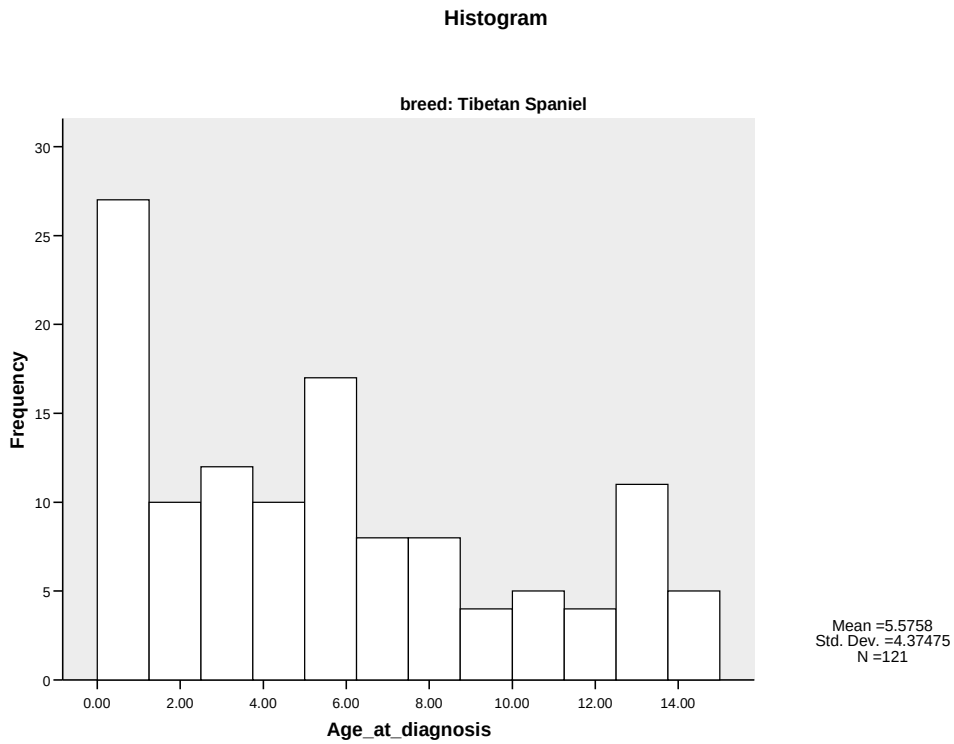


Figure 4. Histogram showing frequency of age at diagnosis for the 121 Tibetan Spaniels with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

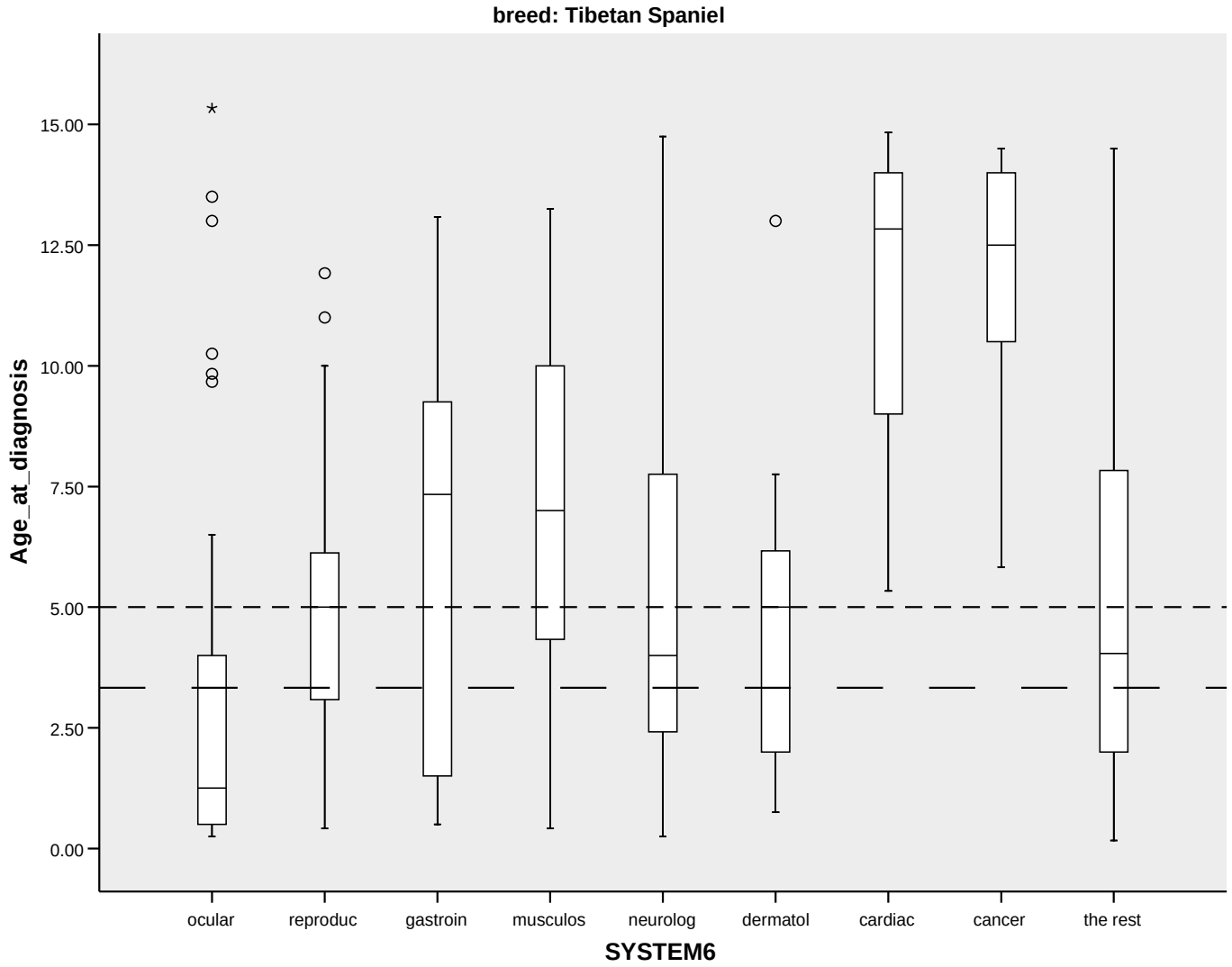


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Tibetan Spaniels (N=121 dogs with 180 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Tibetan Spaniels. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Tibetan Spaniels.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Ocular	36	18.6	Cherry eye; distichiasis; epiphora; corneal ulcer; cataracts; trichiasis
2	Reproductive	21	10.8	Infertility; false pregnancy; dystochia (uterine inertia=physical blockage); irregular heat cycles
3	Gastrointestinal	17	8.8	Colitis; Gastric dilatation/volvulus (GDV); vomiting & diarrhoea; vomiting
4	Musculoskeletal	17	8.8	Patellar luxation; arthritis (hips>rest); CLR
5	Neurologic	17	8.8	IVDD (unspecified>thoracic); seizures; deafness (unspecified>bilateral=unilateral); GME
6	Dermatologic	15	7.7	Dermatitis; sebaceous cysts; fading nose pigment; pyotraumatic dermatitis
7	Cardiac	13	6.7	Heart murmur (unspecified>rest); arrhythmia; cardiomegaly; CHF; heart valve condition
8	Immune mediated	11	5.7	Flea allergy; food allergy; other allergy (unspecified); gluten-sensitive enteropathy
9	Dental	9	4.6	Retained puppy teeth; dental disease; extra teeth
10	Respiratory	8	4.1	Kennel cough
11	Cancer	6	3.1	Type unspecified (mammary; teat; jaw)
12	Benign neoplasia	5	2.6	Lipoma
13	Urologic	5	2.6	Cystouroliths (unspecified); cystitis; haematuria; incontinence
14	Unknown	4	2.1	Unknown; undiagnosed liver disease
15	Aural	3	1.5	Otitis externa; ear mites
16	Anal gland	2	1.0	Anal sacculitis
17	Endocrine	2	1.0	Hypothyroidism
18	Other	2	1.0	Uncodeable
19	Trauma	1	0.5	Spine
	Total	194	100.0	

GME=granulomatous meningoencephalitis
CHF=congestive heart failure

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for Tibetan Terriers

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Tibetan Terriers

A total of 314 forms were sent out and 103 were returned, representing 280 live dogs. This breed had a 32.8% response rate (103/314) and it represented 0.75% of all returns (103/13,741).

Mortality data

A total of 95 deaths were reported and this represents 0.60% of all deaths reported in the survey (95/15,881). The median age at death for Tibetan Terriers was 12 years and 2 months (min = 6 months, max = 18 years and 3 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Tibetan Terriers. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Tibetan Terriers.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	30	31.6	Lymphoma; type unspecified; carcinoma; leukaemia
2	Old age	21	22.1	Old age & age combinations
3	Cardiac	9	9.5	Heart attack; heart failure; MVD; heart defect unspecified
4	Urologic	8	8.4	Kidney failure; kidney amyloidosis
5	Combinations	7	7.4	Deaf & blind; kidney failure; cardiac (various)
6	Hepatic	3	3.2	Liver failure; liver disease (unspecified)
7	Cerebral vascular	2	2.1	Stroke or cerebral vascular accident
8	Collapse	2	2.1	
9	Immune mediated	2	2.1	Unspecified
10	Other	2	2.1	Uncodeable
11	Behaviour	1	1.1	Unspecified behavioural problem
12	Endocrine	1	1.1	Cushings disease
13	Gastrointestinal	1	1.1	Colitis
14	Musculoskeletal	1	1.1	Hip dysplasia
15	Neurologic	1	1.1	Seizures
16	Respiratory	1	1.1	Choked
17	Systemic	1	1.1	Allergy to insect bite or sting or snake bite
18	Trauma	1	1.1	Attacked by dog
19	Unknown	1	1.1	
	Total	95	100.0	

MVD=mitral valve disease

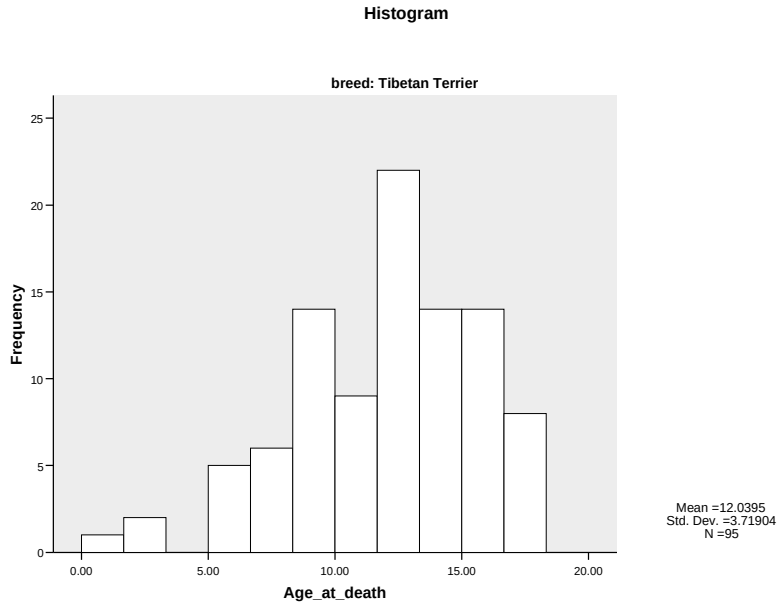


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 95 Tibetan Terrier deaths with age at death reported.

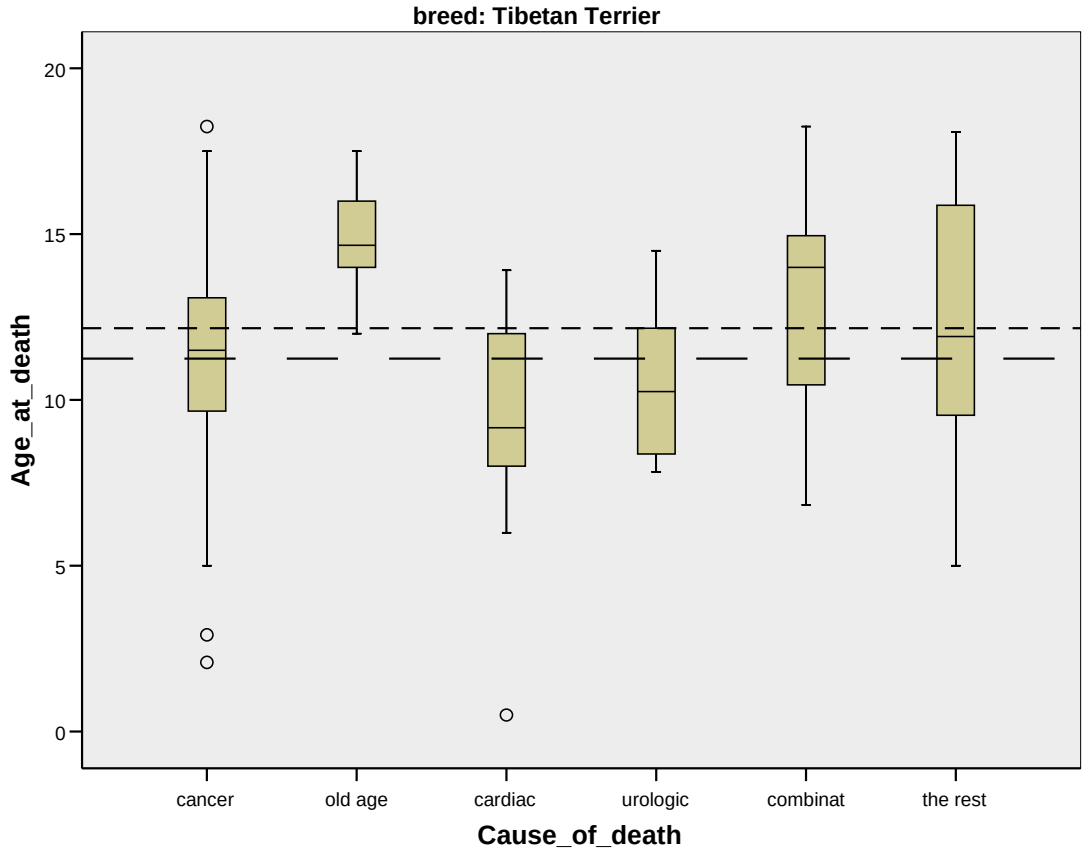


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Tibetan Terriers (N=95). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Tibetan Terriers. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 280 live dogs with a reported age was 5 years and 12 months (min=2 months, max=17 years and 5 months, Figure 3). Health information was reported for 280 live dogs of which 165 (59%) were healthy and 115 (41%) had at least one reported health condition, resulting in a total of 213 reported conditions with a median of 1 condition/dog (min=1, max=9).

The median current age of all healthy dogs with a reported age (N=165) was 4 years and 3 months (min=2 months, max=17 years and 5 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=106) was 8 years and 7 months (min=7 months, max=17 years and 5 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=196) was 5 years and 3 months (min= 3 months, max= 15 years, Figure 4). Table 3 shows the disease conditions for Tibetan Terriers. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 277 Tibetan Terriers with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	108	86	194 (70%)
Male	55	28	83 (30%)
Totals	163 (59%)	114 (41%)	277 (100%)

There was no association between gender and neuter status (P=0.1007).

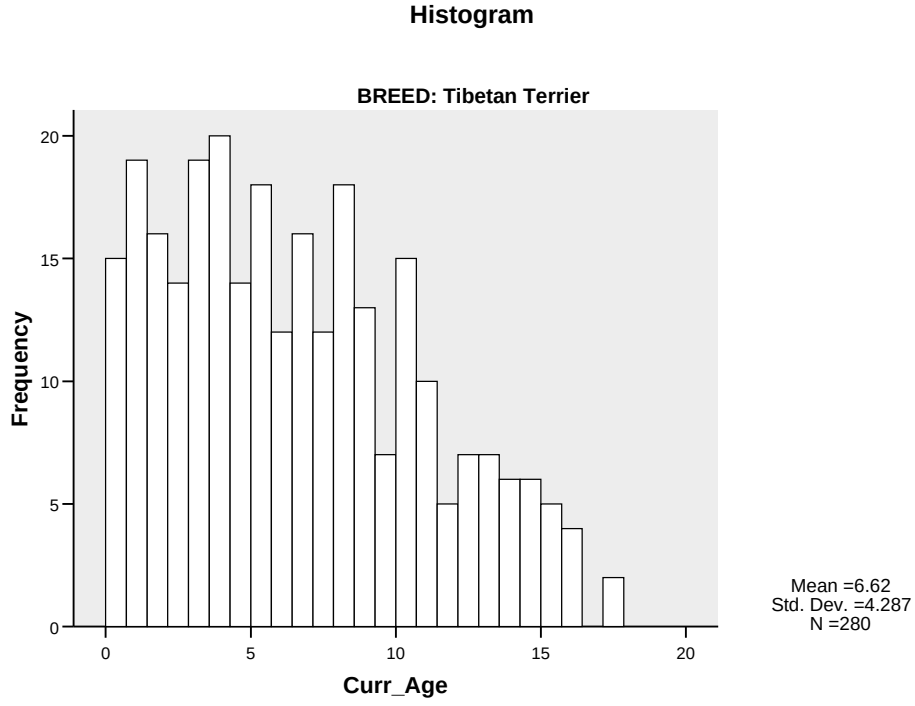


Figure 3. Histogram showing frequency of current age in years for the 280 live Tibetan Terriers with age reported.

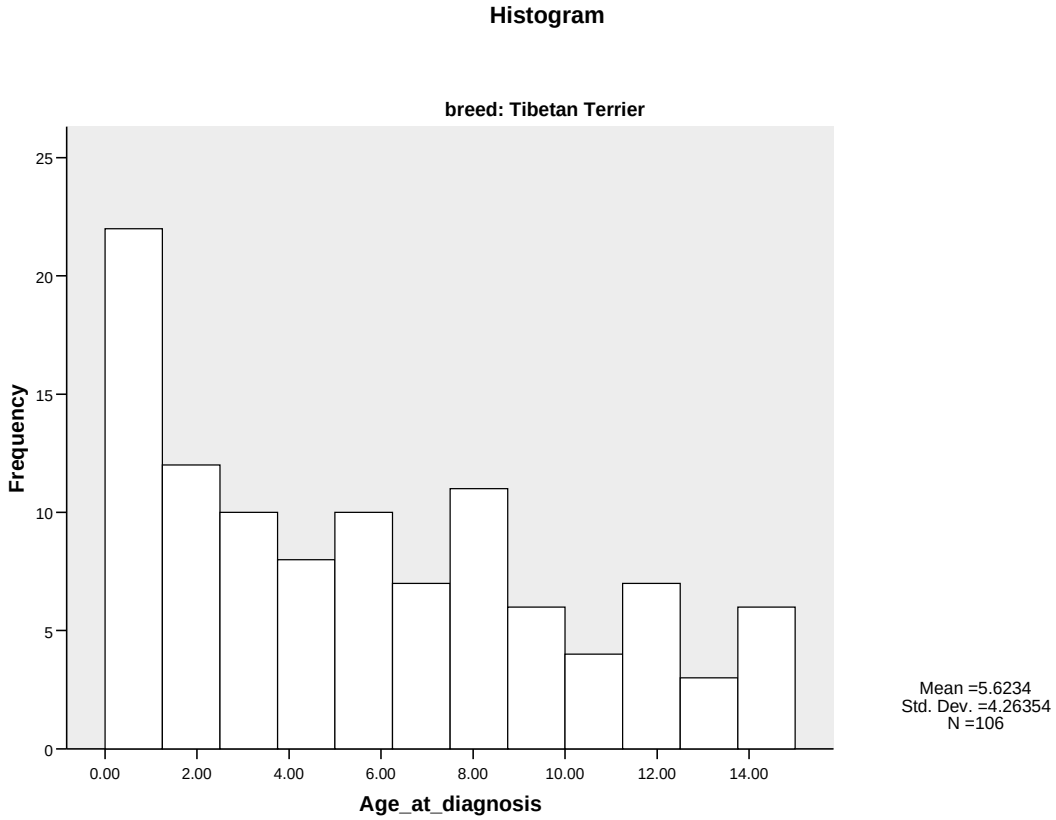


Figure 4. Histogram showing frequency of age at diagnosis for the 106 Tibetan Terriers with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

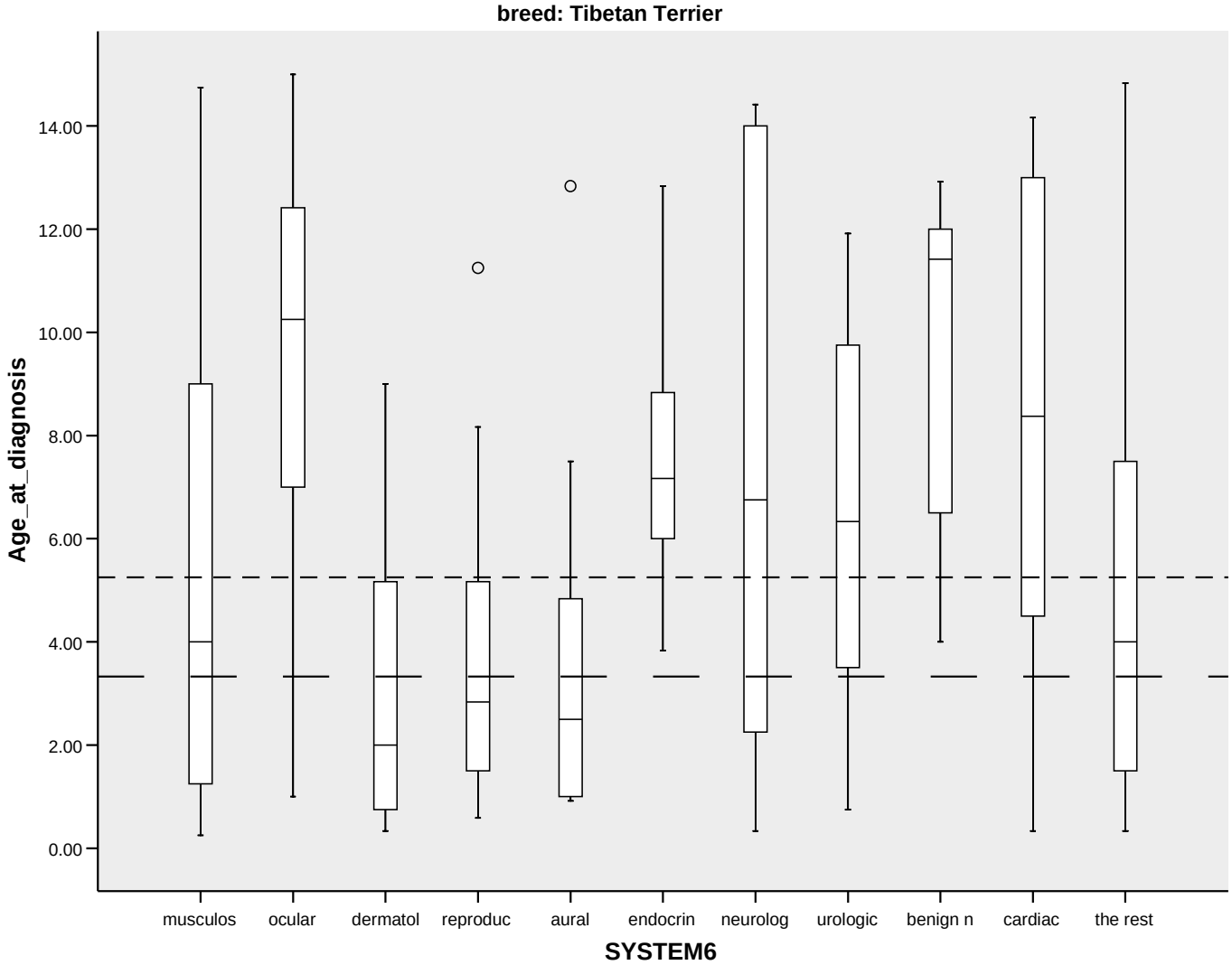


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Tibetan Terriers (N=106 dogs with 196 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Tibetan Terriers. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Tibetan Terriers.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Musculoskeletal	28	13.1	CLR; CHD; arthritis (hips>rest); patellar luxation
2	Ocular	27	12.7	Cataracts; KCS; night blindness; glaucoma; epiphora; PPM; corneal ulcer
3	Dermatologic	25	11.7	Dermatitis; mites (sarcoptes); seborrhoea; zinc-responsive dermatitis
4	Reproductive	22	10.3	False pregnancy; irregular heats; pyometra; dystochia (uterine inertia=physical blockage)
5	Aural	13	6.1	Otitis externa; ear mites; excessive ear wax
6	Immune mediated	13	6.1	Flea allergy; atopy; gluten-sensitive enteropathy; AIHA; food allergy; other (unspecified)
7	Endocrine	12	5.6	Hypothyroidism; hyperthyroidism; diabetes mellitus; unspecified; hair loss (undiagnosed)
8	Neurologic	12	5.6	Seizures; deafness; fibrocartilaginous embolism; vestibular disease; weakness
9	Urologic	11	5.2	Incontinence (unspecified>OHE); cystitis; cystouroliths (cystine=unspecified=struvite)
10	Respiratory	10	4.7	Noisy breathing; bronchitis; kennel cough; long soft palate; difficulty breathing
11	Benign neoplasia	9	4.2	Lipoma
12	Gastrointestinal	9	4.2	Colitis; campylobacter; inflammatory bowel diseas (IBD); pancreatitis; vomiting
13	Cardiac	6	2.8	Heart murmur (unspecified>without clinical signs)
14	Dental	5	2.3	Dental disease; retained puppy teeth
15	Trauma	3	1.4	Hindlimb; urinary tract (unspecified); other (unspecified)
16	Anal gland	2	0.9	Anal sacculitis
17	Behaviour	2	0.9	Unspecified
18	Cancer	2	0.9	Carcinoma (tail); unspecified (skin)
19	Other	1	0.5	Uncodeable
20	Unknown	1	0.5	Undiagnosed liver disease
	Total	213	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for the Weimaraner breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Weimaraner breed

A total of 1296 forms were sent out and 357 were returned, representing 558 live dogs. This breed had a 27.5% response rate (357/1296) and it represented 2.60% of all returns (357/13,741).

Mortality data

A total of 242 deaths were reported and this represents 1.52% of all deaths reported in the survey (242/15,881). The median age at death for the Weimaraner breed was 11 years and 2 months (min = 8 months, max = 18 years and 10 months) and this was lower than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Weimaraner breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Weimaraner breed.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	58	24.0	Type unspecified (liver); lymphoma; brain tumour
2	Gastrointestinal	36	14.9	Gastric dilatation/volvulus (GDV); foreign body obstruction
3	Old age	33	13.6	Old age & age combinations
4	Cardiac	28	11.6	Heart failure; heart defect unspecified; heart attack; cardiomyopathy
5	Neurologic	16	6.6	Seizures; spinal disease unspecified; spinal paralysis
6	Behaviour	9	3.7	Aggression
7	Combinations	9	3.7	
8	Perioperative	9	3.7	
9	Cerebral vascular	8	3.3	Stroke or cerebral vascular accident
10	Musculoskeletal	6	2.5	Arthritis; hip dysplasia; muscular dystrophy
11	Other	6	2.5	Uncodeable
12	Poisoning	4	1.7	
13	Urologic	4	1.7	Kidney failure (chronic > acute); incontinence
14	Hepatic	3	1.2	Liver failure; liver disease (unspecified)
15	Trauma	3	1.2	Unspecified
16	Unknown	3	1.2	
17	Immune mediated	2	0.8	Masticatory muscle myositis (MMM); unspecified
18	Respiratory	2	0.8	Pneumonia
19	Dermatologic	1	0.4	Anal furunculosis
20	Internal bleeding	1	0.4	
21	Reproductive	1	0.4	Pyometra
	Total	242	100.0	

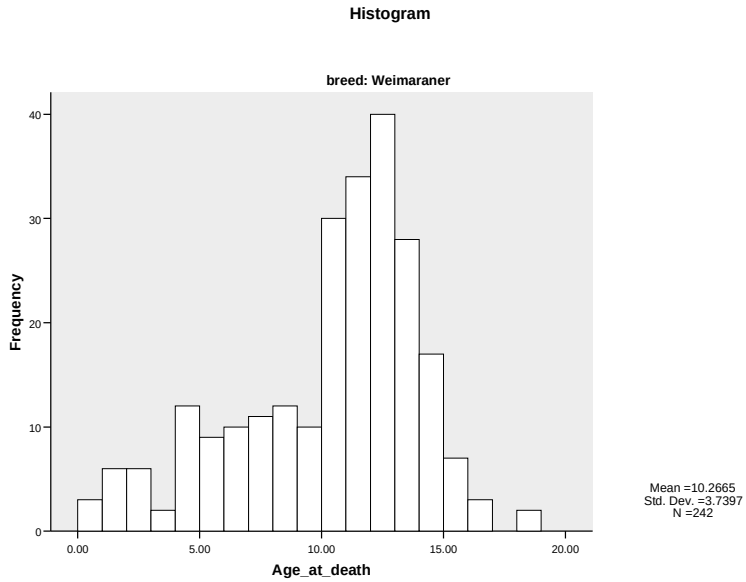


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 242 Weimaraner deaths with age at death reported.

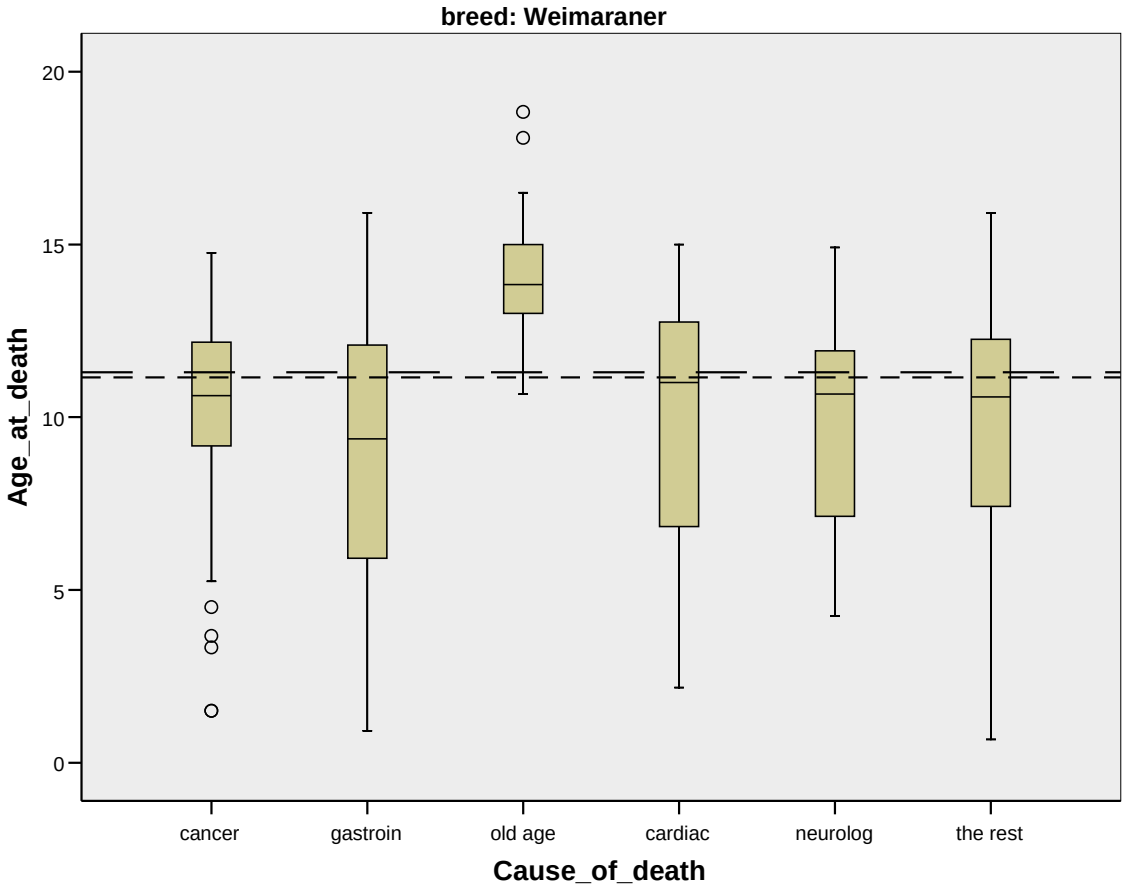


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the Weimaraner breed (N=242). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the Weimaraner breed. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 557 live dogs with a reported age was 5 years and 2 months (min=3 months, max=15 years and 1 month, Figure 3). Health information was reported for 558 live dogs of which 295 (53%) were healthy and 263 (47%) had at least one reported health condition, resulting in a total of 506 reported conditions with a median of 1 condition/dog (min=1, max=10).

The median current age of all healthy dogs with a reported age (N=295) was 3 years and 10 months (min=3 months, max=13 years). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=254) was 6 years and 10 months (min=5 months, max=15 years and 1 month). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=488) was 3 years and 6 months (min= 2 months, max= 14 years, Figure 4). Table 3 shows the disease conditions for the Weimaraner breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for the 551 Weimaraner breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	148	165	313 (57%)
Male	125	113	238 (43%)
Totals	273 (50%)	278 (50%)	551 (100%)

There was no association between gender and neuter status (P=0.2233).

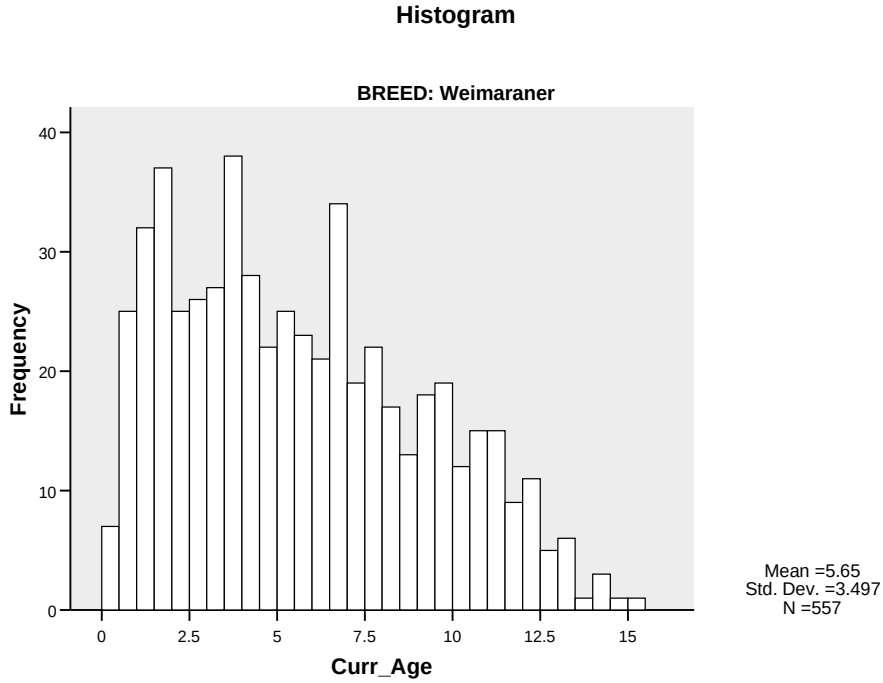


Figure 3. Histogram showing frequency of current age in years for the 557 live Weimaraner breed with age reported.

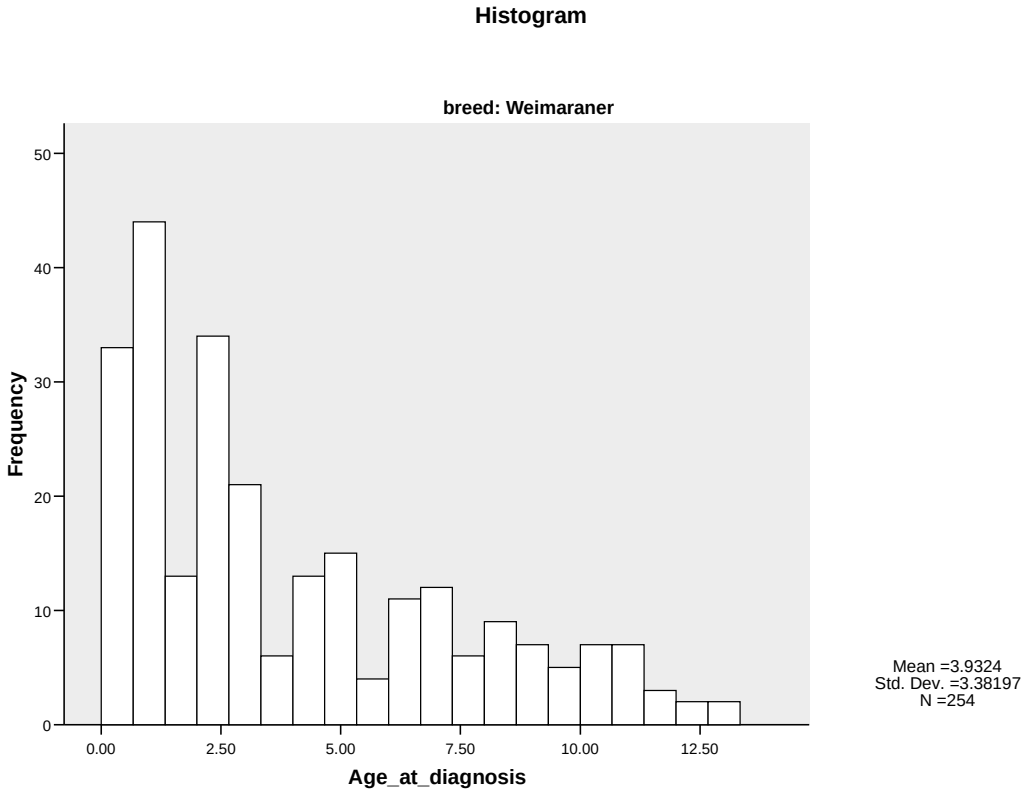


Figure 4. Histogram showing frequency of age at diagnosis for the 254 Weimaraner breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

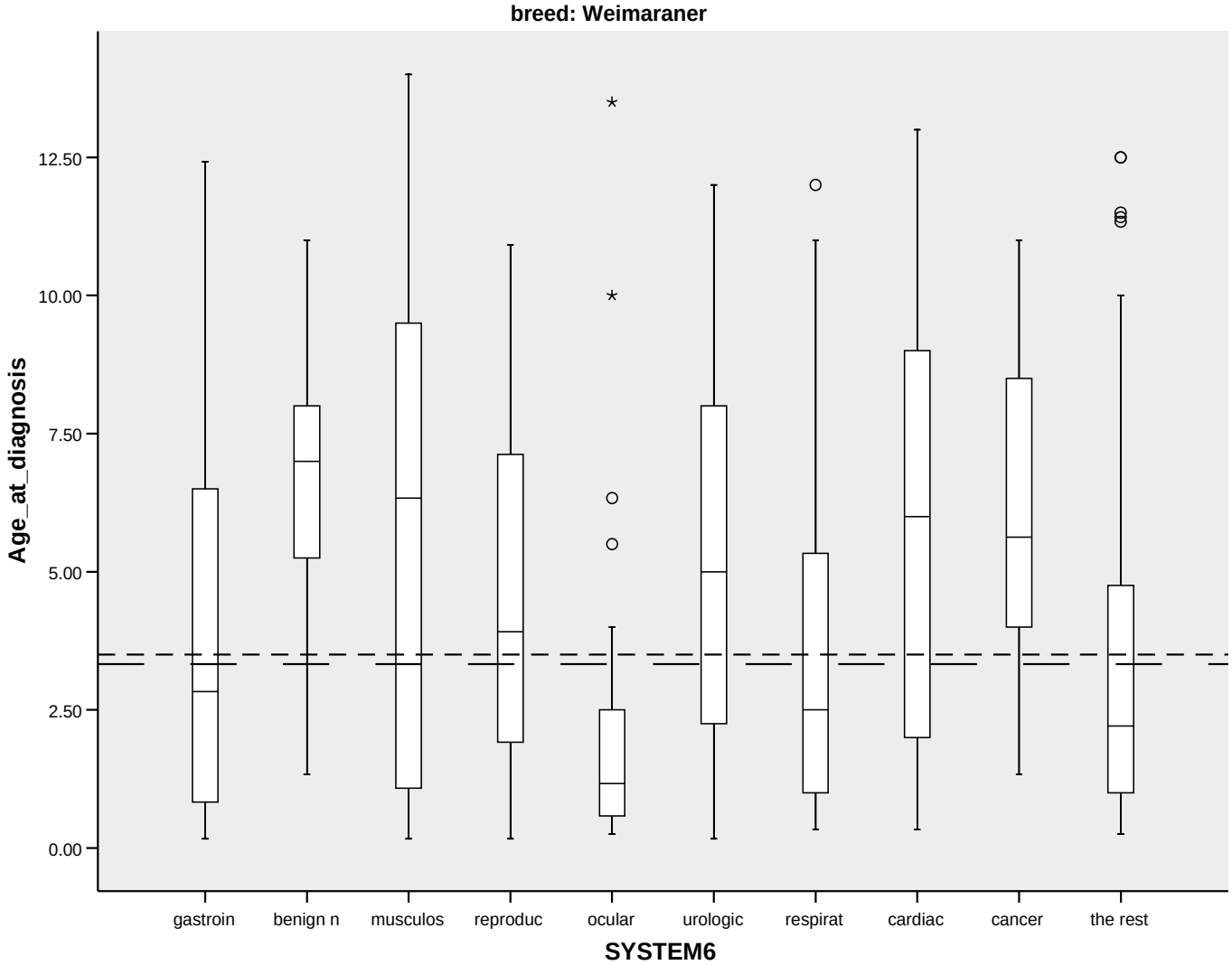


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Weimaraner breed (N=254 dogs with 488 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Weimaraner breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Weimaraner breed.

	Disease condition	All conditions N	All conditions %	Most common specific conditions in descending order
1	Gastrointestinal	82	16.2	Gastric dilatation/volvulus (GDV); colitis; diarrhoea; vomiting & diarrhoea; campylobacter
2	Benign neoplasia	48	9.5	Lipoma; cysts; histiocytoma; adenoma (anal); unspecified (axilla)
3	Musculoskeletal	47	9.3	Arthritis (hindlimb>hip=forelimb=hock=unspecified>rest); CHD; CLR; fracture; lameness
4	Reproductive	46	9.1	Pyometra; false pregnancy; prostatomegaly; vaginitis; cryptorchid; uterine inertia; metritis
5	Ocular	42	8.3	Distichiasis; buckled cartilage of 3rd eyelid; cherry eye; entropion; blocked tear duct
6	Immune mediated	36	7.1	Atopy; food allergy; gluten-sensitive enteropathy; allergy unspecified; dust mites
7	Urologic	36	7.1	Incontinence (unspecified>after spay); cystitis; haematuria; pyelonephritis
8	Respiratory	29	5.7	Kennel cough; coughing; bronchitis; constricted nostrils; laryngeal paralysis; pneumonia
9	Cardiac	21	4.2	Heart murmur (unspecified>without clinical signs>rest); dilated cardiomyopathy; arrhythmia
10	Cancer	20	4.0	MCT (unspecified>pinna>side>rest); unspecified (skin>rest); brain tumour; lymphoma
11	Dermatologic	19	3.8	Dermatitis; mites (demodex>sarcoptes=unspecified); alopecia; ringworm
12	Aural	17	3.4	Otitis externa; excessive ear wax
13	Neurologic	15	3.0	Seizures; deafness; meningitis; secondary seizures (brain trauma); Wobbler syndrome
14	Unknown	14	2.8	Undiagnosed illness
15	Trauma	8	1.6	Skin; unspecified; bladder; cornea; spine
16	Anal gland	6	1.2	Anal sacculitis
17	Other	6	1.2	Uncodeable
18	Dental	4	0.8	Defect other than extra teeth; dental disease
19	Endocrine	4	0.8	Hypothyroidism; diabetes insipidus
20	Behaviour	2	0.4	Unspecified
21	Haematopoietic	2	0.4	Von Willebrands disease (VWD); anaemia unspecified
22	Cerebrovascular	1	0.2	Stroke or cerebral vascular accident
23	Hepatic	1	0.2	Enlarged liver
	Total	506	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for the Welsh Corgi Cardigan breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Welsh Corgi breeds combined

A total of 416 forms were sent out and 95 were returned, representing 312 live dogs. These breeds had a 22.8% combined response rate (95/416) and represented 0.69% of all returns (95/13,741).

The Welsh Corgi Cardigan breed

Mortality data

A total of 53 deaths were reported and this represents 0.33% of all deaths reported in the survey (53/15,881). The median age at death for the Welsh Corgi Cardigan breed was 12 years and 2 months (min = 1 year, max = 16 years and 8 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Welsh Corgi Cardigan breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Welsh Corgi Cardigan breed.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	15	28.3	Type unspecified (mammary; spleen); leukaemia
2	Old age	13	24.6	Old age & age combinations
3	Neurologic	8	15.2	IVDD; discospondylitis; spinal paralysis; seizures
4	Combinations	4	7.6	
5	Cerebrovascular	2	3.7	Stroke or cerebral vascular accident
6	Cardiac	2	3.7	Heart attack; heart failure
7	Respiratory	2	3.7	Pneumonia; respiratory disease unspecified
8	Unknown	2	3.7	
9	Trauma	1	1.9	Road traffic accident
10	Urologic	1	1.9	Chronic renal failure
11	Hepatic	1	1.9	Chronic liver failure
12	Musculoskeletal	1	1.9	Arthritis
13	Other	1	1.9	Uncodeable
	Total	53	100.0	

Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 53 Welsh Corgi Cardigan deaths with age at death reported.

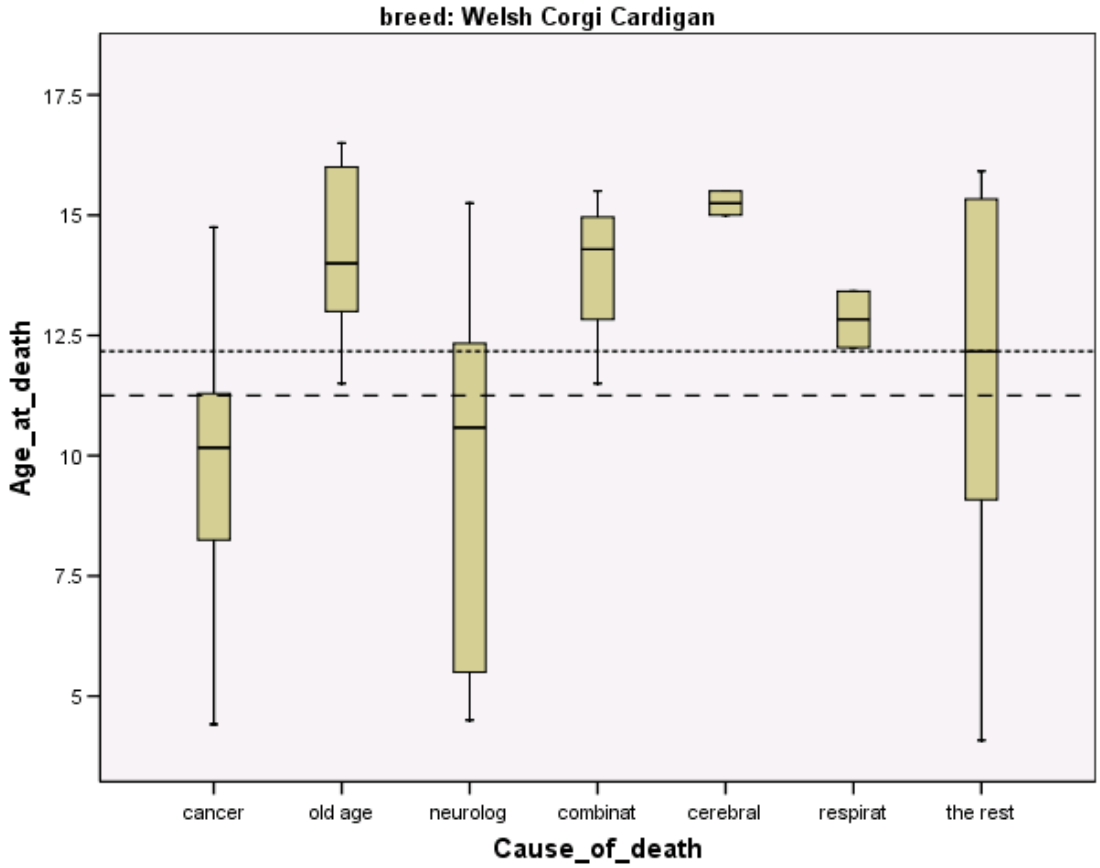


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the Welsh Corgi Cardigan breed (N=53). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the Welsh Corgi Cardigan breed. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 92 live dogs with a reported age was 6 years and 3 months (min=9 months, max=14 years and 11 months, Figure 3). Health information was reported for 92 live dogs of which 59 (64%) were healthy and 33 (36%) had at least one reported health condition, resulting in a total of 49 reported conditions with a median of 1 condition/dog (min=1, max=4).

The median current age of all healthy dogs with a reported age (N=59) was 4 years and 9 months (min=9 months, max=12 years and 7 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=33) was 8 years and 4 months (min=1 year and 7 months, max=14 years and 11 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=49) was 3 years (min= 2 months, max= 13 years, Figure 4). Table 3 shows the disease conditions for the Welsh Corgi Cardigan breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for the 91 Welsh Corgi Cardigan breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	37	21	58 (64%)
Male	28	5	33 (36%)
Totals	65 (71%)	26 (29%)	91 (100%)

Significantly more females were neutered (P=0.0326).

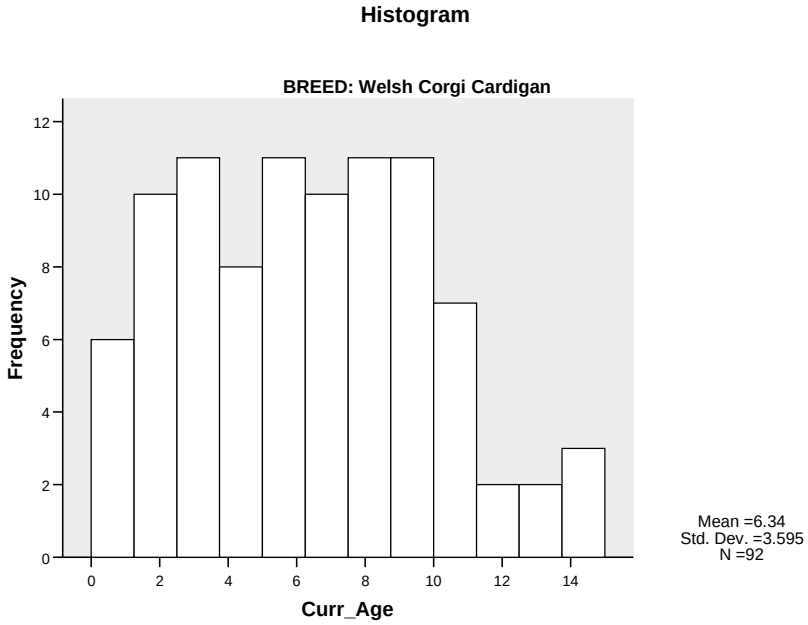


Figure 3. Histogram showing frequency of current age in years for the 92 live Welsh Corgi Cardigan breed with age reported.

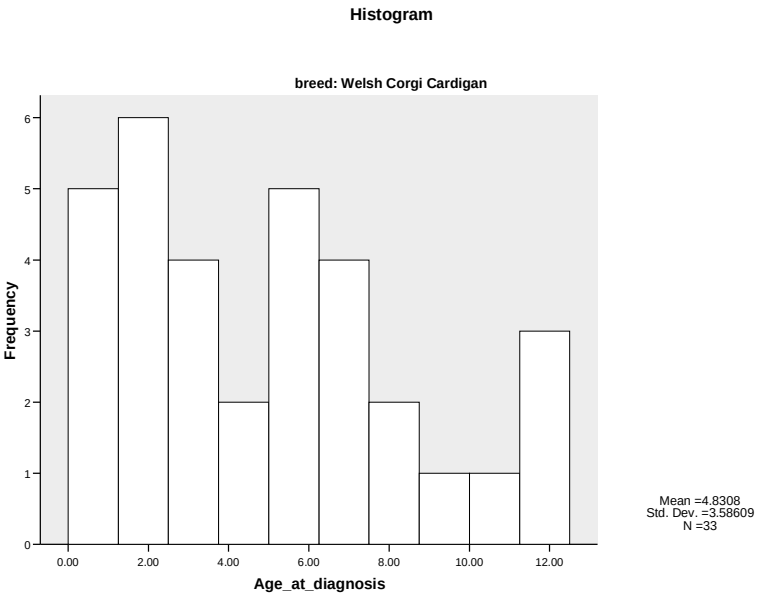


Figure 4. Histogram showing frequency of age at diagnosis for the 33 the Welsh Corgi Cardigan breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

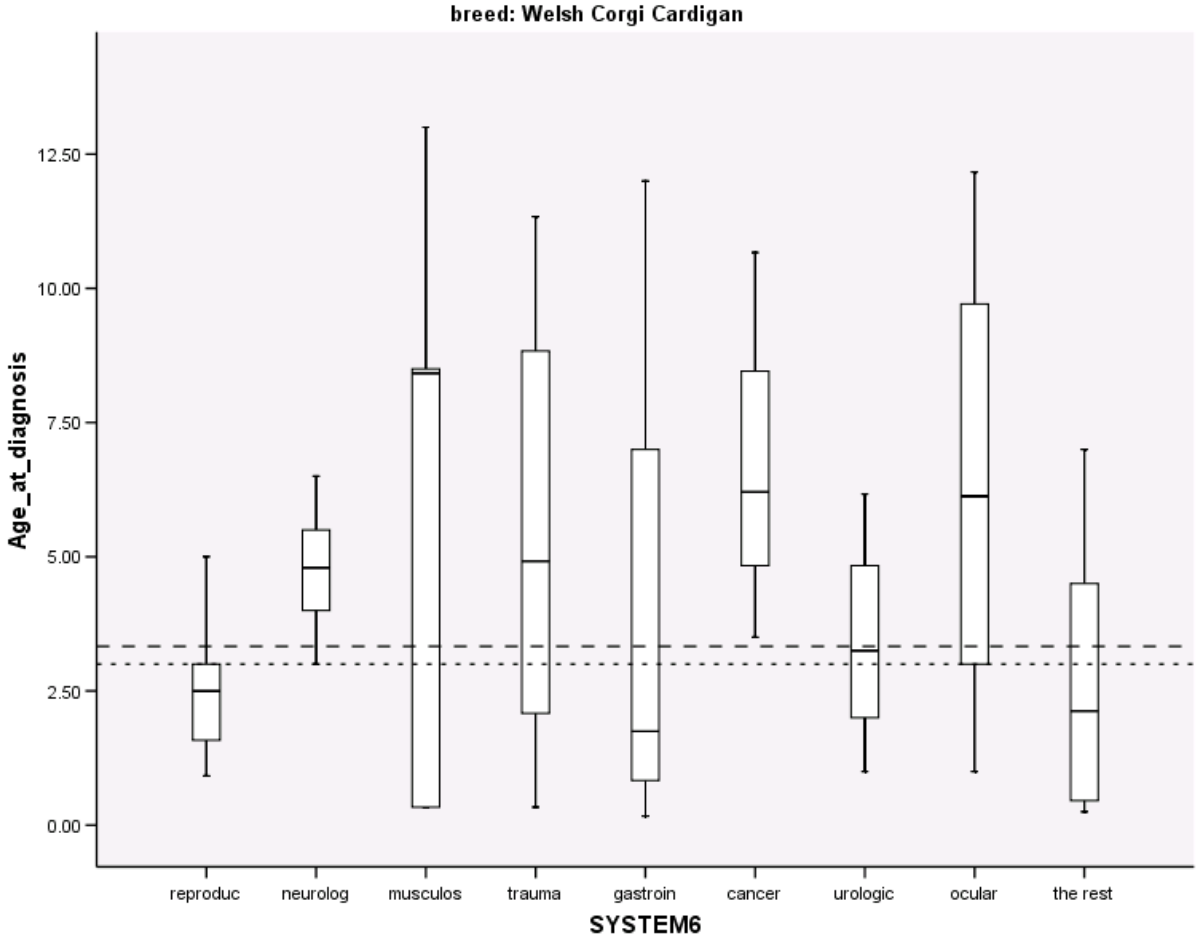


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Welsh Corgi Cardigan breed (N=33 dogs with 49 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Welsh Corgi Cardigan breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Welsh Corgi Cardigan breed.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Reproductive	9	18.4	Caesarean section; irregular heat cycles; vaginitis; false pregnancy; infertility; stuck puppy
2	Neurologic	6	12.2	IVDD (lumbar=unspecified); seizures
3	Musculoskeletal	5	10.2	Arthritis (hindlimb=spine=unspecified); panosteitis; bone malformation (unspecified)
4	Trauma	5	10.2	Cornea; forelimb; head or jaw; spine; other (unspecified)
5	Gastrointestinal	4	8.2	Diarrhoea; colitis; EPI
6	Cancer	4	8.2	Carcinoma (mammary); unspecified (mammary; flank)
7	Urologic	4	8.2	Cystitis; cystinuria; haematuria; incontinence (OHE)
8	Dermatalogic	3	6.1	Pyotraumatic dermatitis; fading nose pigment; recurrent pyoderma
9	Ocular	3	6.1	Cataracts; red eye; corneal ulcer
10	Immune mediated	2	4.1	Food allergy; gluten-sensitive enteropathy
11	Other	2	4.1	Uncodeable
12	Benign neoplasia	1	2.0	Cyst (neck)
13	Unknown	1	2.0	
	Total	49	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for the Welsh Corgi Pembroke breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

The Welsh Corgi breeds

A total of 416 forms were sent out and 95 were returned, representing 312 live dogs. These breeds had a 22.8% combined response rate (95/416) and represented 0.69% of all returns (95/13,741).

The Welsh Corgi Pembroke breed

Mortality data

A total of 116 deaths were reported and this represents 0.73% of all deaths reported in the survey (116/15,881). The median age at death for the Welsh Corgi Pembroke breed was 12 years and 3 months (min = 4 years and 1 month, max = 16 years and 6 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Welsh Corgi Pembroke breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Welsh Corgi Pembroke breed.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	33	28.5	Unspecified; type unspec (mammary; prostate; liver)
2	Old age	26	22.4	Old age and age combinations
3	Urologic	10	8.6	Kidney failure (chronic>acute); urethral obstruction
4	Cardiac	9	7.7	Heart attack; heart failure; disease (unspecified)
5	Neurologic	9	7.7	Spinal paralysis; seizures; meningitis
6	Other	6	5.2	Uncodeable
7	Cerebrovascular	5	4.3	Stroke or cerebral vascular accident
8	Trauma	3	2.6	RTA; spinal injury
9	Perioperative	3	2.6	Post-operative
10	Combinations	2	1.7	Blindness & renal failure; cancer (stomach & kidneys)
11	Hepatic	2	1.7	Liver disease (unspecified); chronic liver failure
12	Gastrointestinal	2	1.7	Gastric dilatation/volvulus; unspecified
13	Immune mediated	2	1.7	MMM; autoimmune (unspecified)
14	Respiratory	1	0.9	Pneumonia
15	Collapse	1	0.9	
16	Infection	1	0.9	Kidney infection
17	Internal bleeding	1	0.9	
	Total	116	100.0	

Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 116 Welsh Corgi Pembroke deaths with age at death reported.

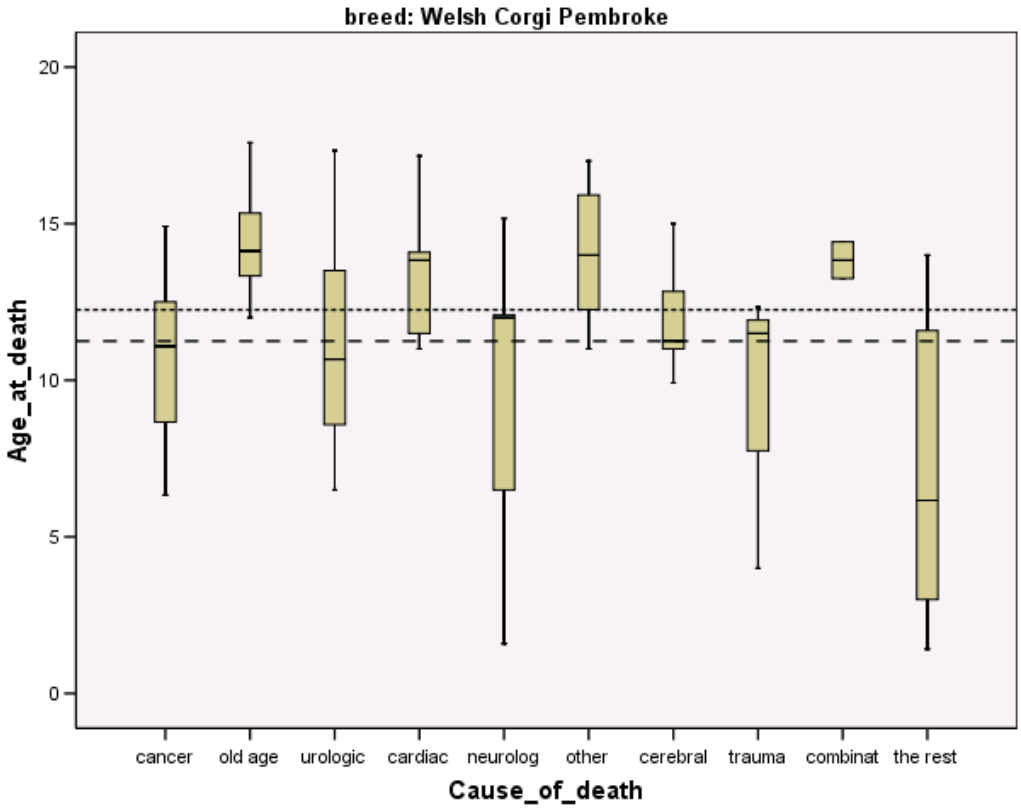


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the Welsh Corgi Pembroke breed (N=116). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the Welsh Corgi Pembroke breed. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 218 live dogs with a reported age was 4 years and 3 months (min=1 month, max=16 years and 10 months, Figure 3). Health information was reported for 220 live dogs of which 147 (67%) were healthy and 73 (33%) had at least one reported health condition, resulting in a total of 95 reported conditions with a median of 1 condition/dog (min=1, max=4).

The median current age of all healthy dogs with a reported age (N=147) was 3 years and 2 months (min=3 months, max=16 years and 10 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=71) was 6 years (min=1 month, max=16 years). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=91) was 4 years (min= 1 month, max= 15 years, Figure 4). Table 3 shows the disease conditions for the Welsh Corgi Pembroke breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for the 220 Welsh Corgi Pembroke breed with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	115	34	149 (68%)
Male	59	12	71 (32%)
Totals	174 (79%)	46 (21%)	220 (100%)

There was no association between gender and neuter status (P=0.3130).

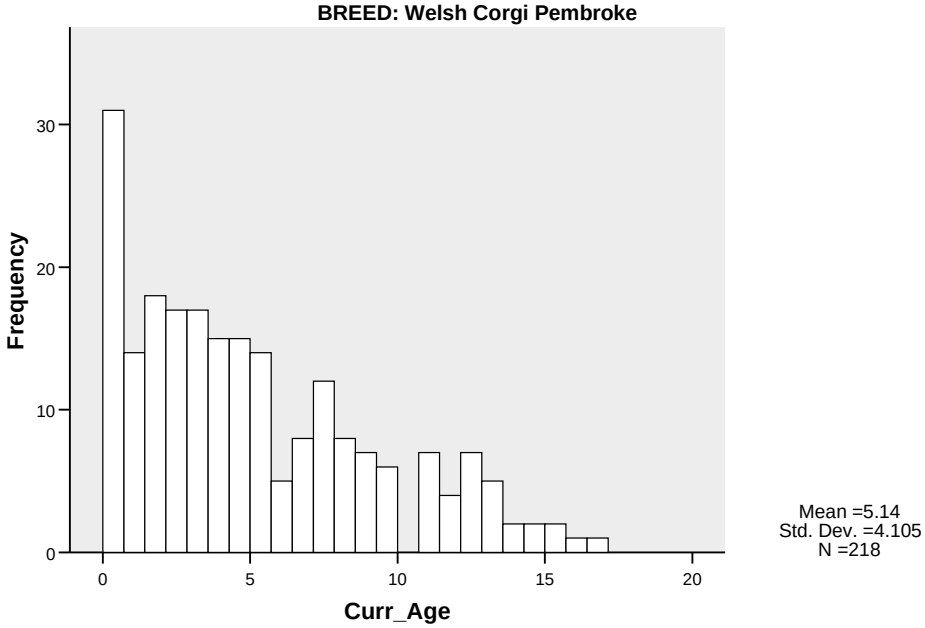


Figure 3. Histogram showing frequency of current age in years for the 220 live Welsh Corgi Pembroke breed with age reported.

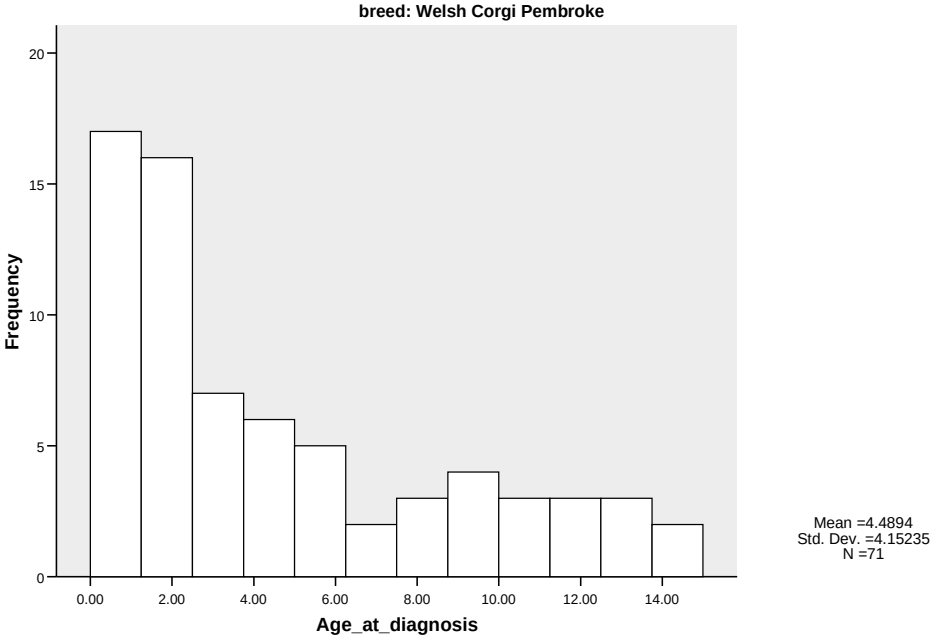


Figure 4. Histogram showing frequency of age at diagnosis for the 71 Welsh Corgi Pembroke breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

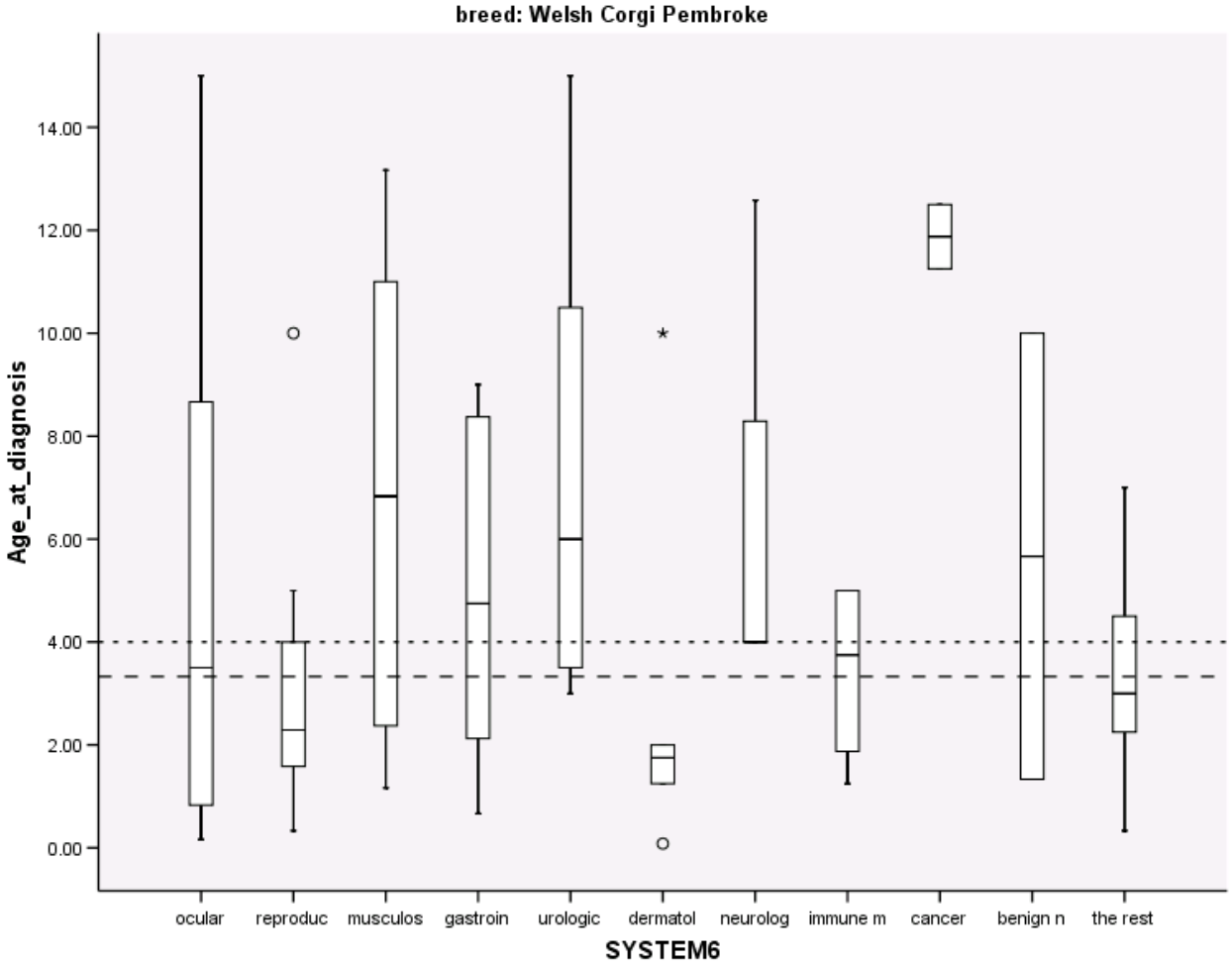


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Welsh Corgi Pembroke breed (N=71 dogs with 91 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Welsh Corgi Pembroke breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Welsh Corgi Pembroke breed.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Ocular	25	26.6	Epiphora; corneal ulcer; blocked tear duct; cataracts; conjunctivitis; trichiasis
2	Reproductive	18	19.1	Irregular heat cycles; cryptorchid; infertility; pyometra
3	Musculoskeletal	11	11.7	Arthritis (hindlimb=shoulder>forelimb=other); lameness; CLR; CHD; fracture (forelimb)
4	Gastrointestinal	8	8.5	Colitis; bacterial overgrowth; campylobacter; diarrhoea; E. coli infection; IBD; vomiting
5	Urologic	7	7.4	Cystouroliths (unspecified>struvite); cystitis; incontinence
6	Dermatologic	6	6.4	Pyotraumatic dermatitis; mites (cheyletiella); sebaceous cyst; dermatitis
7	Neurologic	4	4.3	Seizures
8	Immune mediated	4	4.3	Dust mite allergy; food allergy; gluten-sensitive enteropathy; other (unspecified)
9	Cardiac	2	2.1	Heart murmur (unspecified); persistent ductus areriosus (PDA)
10	Respiratory	2	2.1	Long soft palate; noisy breathing
11	Cancer	2	2.1	Carcinoma (throat); MCT (rib cage)
12	Benign neoplasia	2	2.1	Lipoma; cyst (neck)
13	Trauma	1	1.1	Unspecified
14	Anal gland	1	1.1	Anal sacculitis
15	Unknown	1	1.1	Undiagnosed illness
	Total	94	100.0	

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for Welsh Springer Spaniels

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Welsh Springer Spaniels

A total of 560 forms were sent out and 190 were returned, representing 363 live dogs. This breed had a 33.9% response rate (190/560) and it represented 1.38% of all returns (190/13,741).

Mortality data

A total of 157 deaths were reported and this represents 0.99% of all deaths reported in the survey (157/15,881). The median age at death for Welsh Springer Spaniels was 12 years and 7 months (min = 1 year and 5 months, max = 17 years and 7 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Welsh Springer Spaniels. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Welsh Springer Spaniels.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	42	26.8	Carcinoma (mammary, bladder); type unspecified (mammary)
2	Old age	29	18.5	Old age & age combinations
3	Cerebral vascular	22	14.0	Stroke or cerebral vascular accident
4	Urologic	12	7.6	Kidney failure (chronic > acute)
5	Neurologic	9	5.7	Vestibular syndrome; seizures; IVDD
6	Cardiac	7	4.5	Heart failure; heart attack; defect (unspecified)
7	Combinations	5	3.2	Multiple organ failure
8	Ocular	5	3.2	Glaucoma; blindness
9	Hepatic	4	2.5	Liver failure (chronic>acute); disease (unspecified)
10	Trauma	4	2.5	Unspecified; road traffic accident
11	Behaviour	3	1.9	Aggression
12	Gastrointestinal	3	1.9	Gastric dilatation/volvulus (GDV); pancreatitis
13	Other	2	1.3	Uncodeable
14	Reproductive	2	1.3	Pyometra
15	Unknown	2	1.3	
16	Collapse	1	0.6	
17	Endocrine	1	0.6	Hypothyroidism
18	Internal bleeding	1	0.6	
19	Poisoning	1	0.6	
20	Respiratory	1	0.6	Respiratory disease unspecified
21	Senility	1	0.6	
	Total	157	100.0	

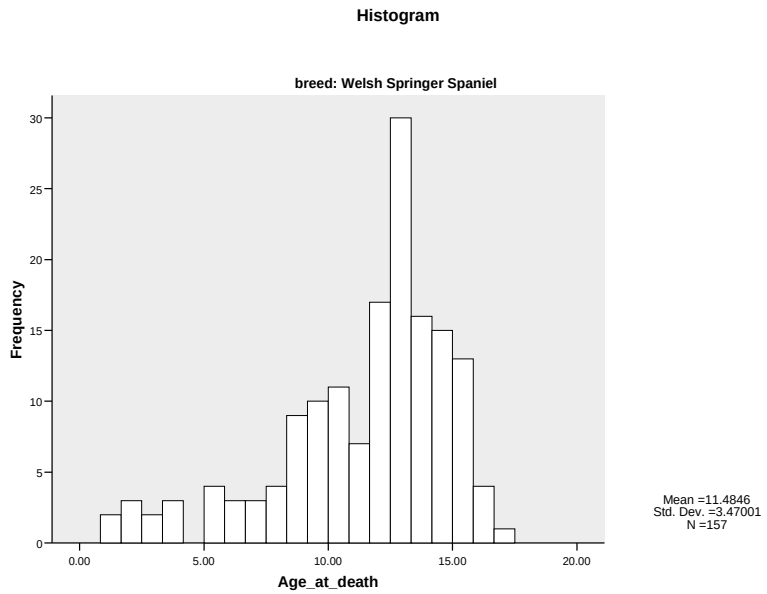


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 157 Welsh Springer Spaniel deaths with age at death reported.

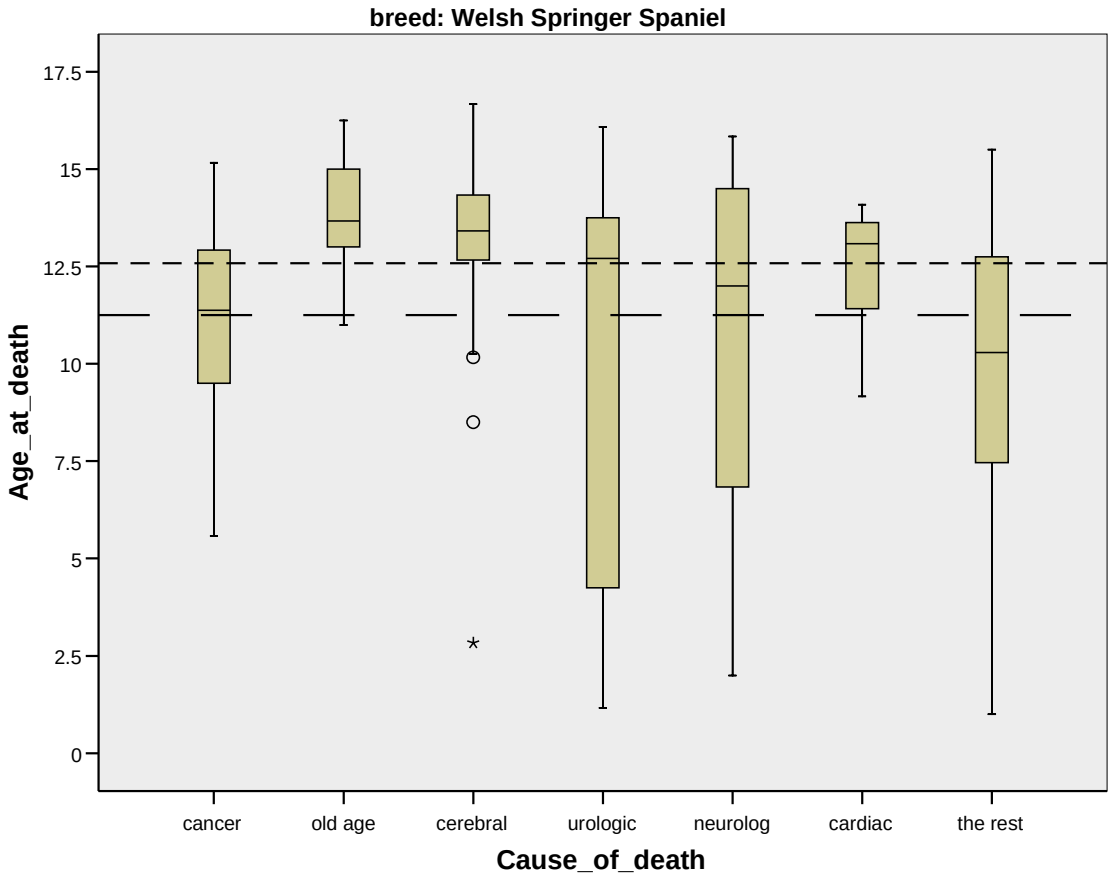


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Welsh Springer Spaniels (N=157). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Welsh Springer Spaniels. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 362 live dogs with a reported age was 5 years and 8 months (min=2 months, max=15 years and 4 months, Figure 3). Health information was reported for 363 live dogs of which 218 (60%) were healthy and 145 (40%) had at least one reported health condition, resulting in a total of 251 reported conditions with a median of 1 condition/dog (min=1, max=12).

The median current age of all healthy dogs with a reported age (N=218) was 4 years and 1 month (min=2 months, max=14 years and 4 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=134) was 7 years and 8 months (min=7 months, max=15 years and 4 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=237) was 4 years and 6 months (min= 2 months, max= 15 years and 3 months, Figure 4). Table 3 shows the disease conditions for Welsh Springer Spaniels. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 361 Welsh Springer Spaniels with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	181	56	237 (66%)
Male	101	23	124 (34%)
Totals	282 (78%)	79 (22%)	361 (100%)

There was no association between gender and neuter status (P=0.2676).

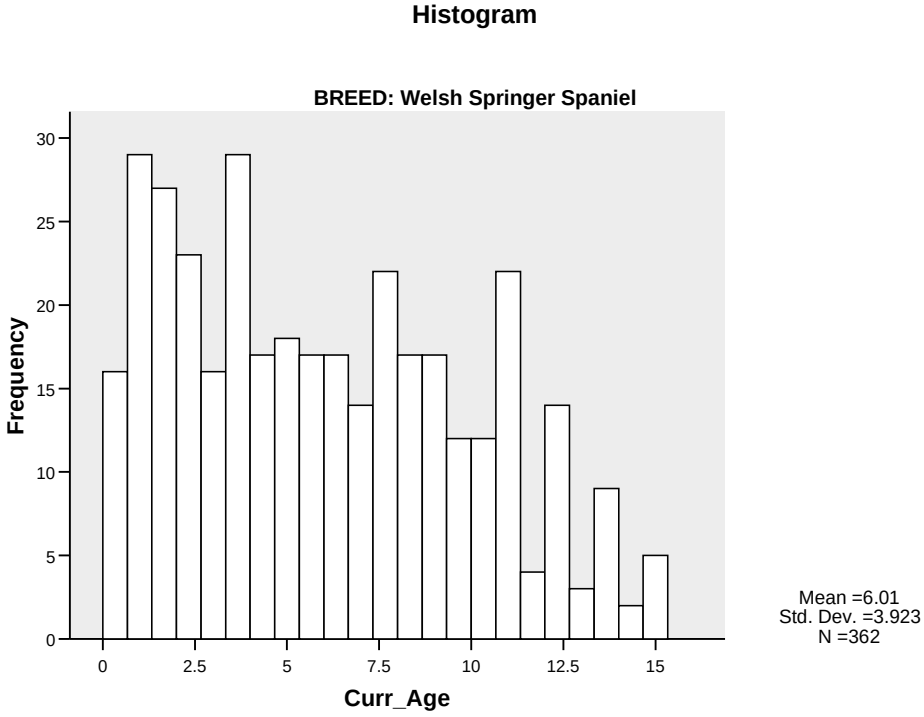


Figure 3. Histogram showing frequency of current age in years for the 362 live Welsh Springer Spaniels with age reported.

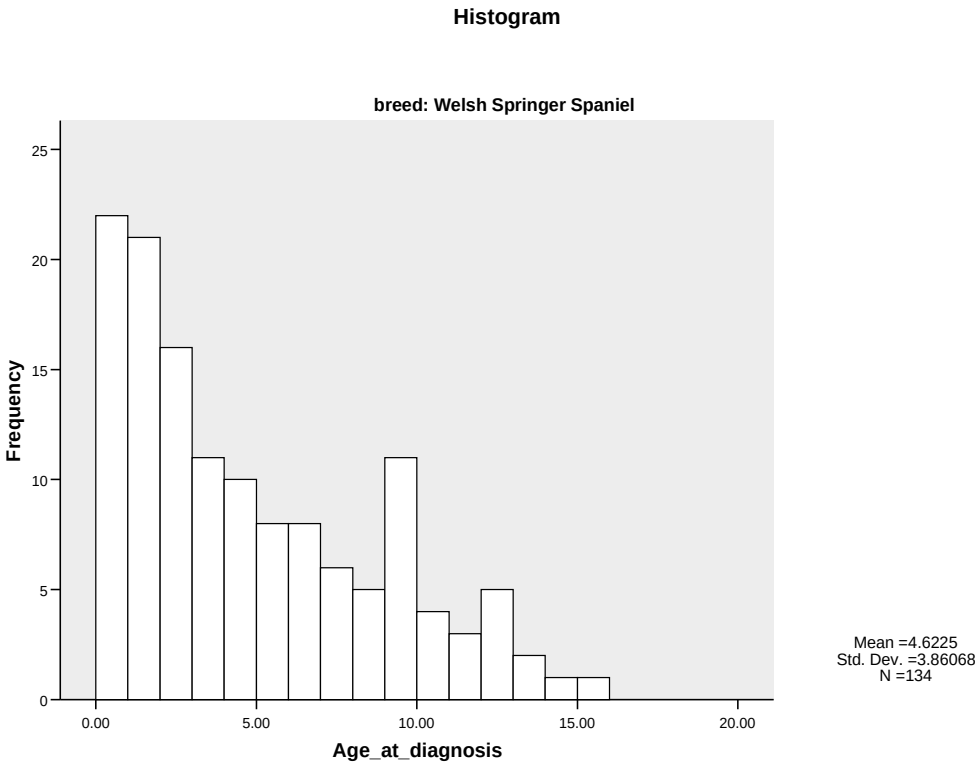


Figure 4. Histogram showing frequency of age at diagnosis for the 134 Welsh Springer Spaniels with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

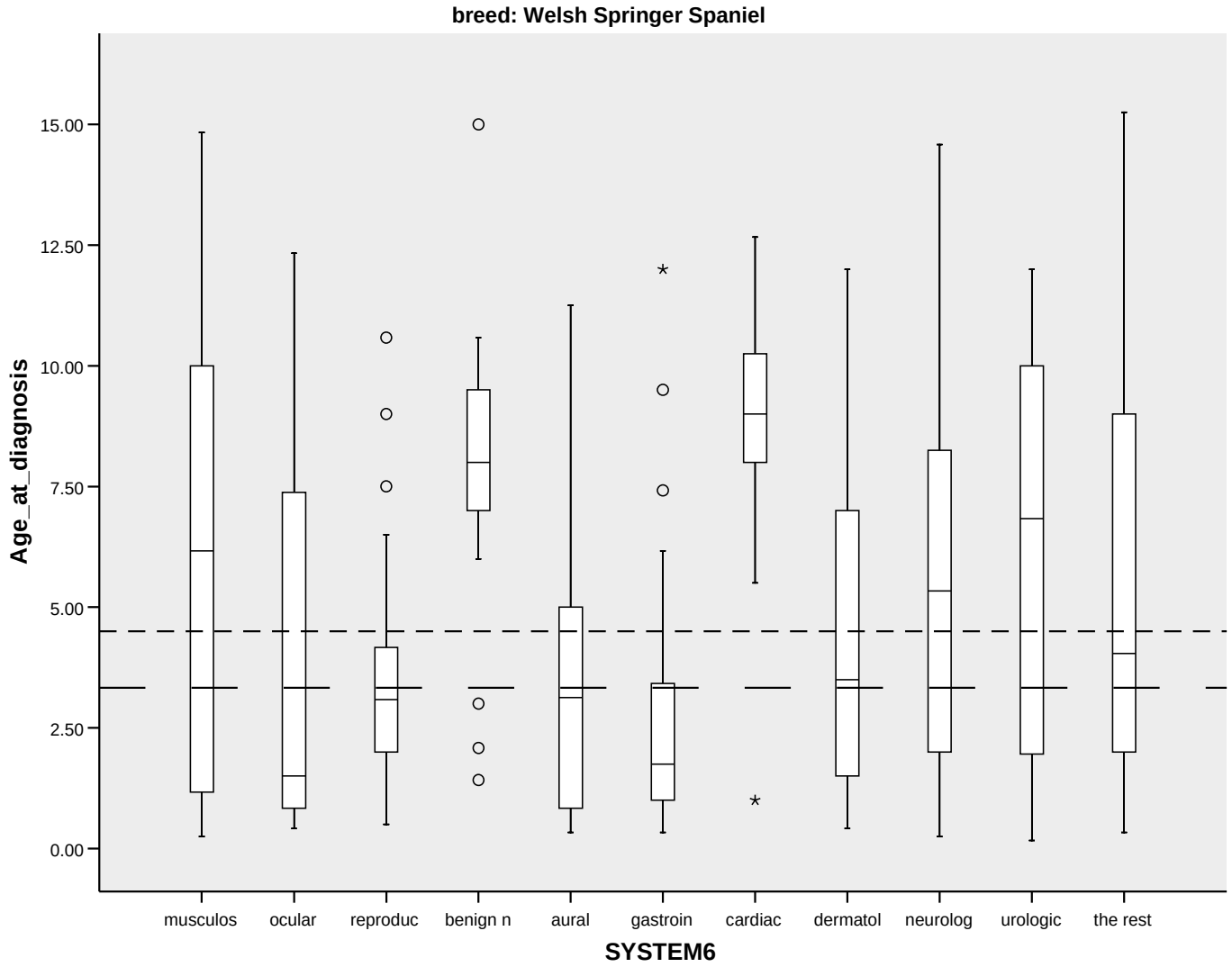


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Welsh Springer Spaniels (N=134 dogs with 237 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Welsh Springer Spaniels. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Welsh Springer Spaniels.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Musculoskeletal	31	12.4	Arthritis (unspecified>spine>hindlimb=hip>rest); CLR; CHD
2	Ocular	27	10.8	Distichiasis; glaucoma; epiphora; cataracts; blocked tear duct; conjunctivitis; trichiasis
3	Reproductive	26	10.4	Infertility; pyometra; cryptorchid; irregular heat cycles; uterine inertia; false pregnancy
4	Benign neoplasia	20	8.0	Lipoma; adenoma (mammary; abdomen); histiocytoma (skin)
5	Aural	17	6.8	Otitis externa; excessive ear wax; aural haematoma
6	Gastrointestinal	17	6.8	Colitis; campylobacter; diarrhoea; GDV; foreign body obstruction; pancreatitis; vomiting
7	Respiratory	14	5.6	Kennel cough; rhinitis; coughing; long soft palate; other (unspecified)
8	Cardiac	13	5.2	Heart murmur (unspecified>grade 1=grade 3.grade 5=without clinical signs); CHF
9	Dermatologic	13	5.2	Dermatitis; other (unspecified); mites (unspecified=sarcoptes)
10	Neurologic	13	5.2	Seizures; IVDD (cervical); rage syndrome
11	Urologic	11	4.4	Cystitis; incontinence (unspecified>after spay); renal failure (chronic=unspecified)
12	Immune mediated	9	3.6	Atopy; food allergy; dust mite allergy; other allergy (unspecified); vaccine damage
13	Endocrine	8	3.2	Hypothyroidism; weight gain (undiagnosed); Cushing's disease
14	Anal gland	6	2.4	Anal sacculitis
15	Trauma	5	2.0	Other (unspecified); lungs; spine
16	Cancer	4	1.6	Unspecified (mammary; forelimb); adenocarcinoma (anal gland); melanoma
17	Unknown	4	1.6	Undiagnosed illness
18	Cerebrovascular	3	1.2	Stroke or cerebral vascular accident
19	Other	3	1.2	Uncodeable
20	Dental	2	0.8	Dental disease; retained puppy teeth
21	Haematopoietic	2	0.8	Von Willebrands Disease (VWD); bleeding disorder unspecified
22	Behaviour	1	0.4	Unspecified
23	Cardiopulmonary	1	0.4	Pulmonary oedema
24	Hepatic	1	0.4	Acute liver failure
	Total	251	100.0	

CHF=congestive heart failure

Report from the Kennel Club/
British Small Animal Veterinary Association
Scientific Committee

Summary results of the Purebred Dog Health Survey for Welsh Terriers

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Welsh Terriers

A total of 238 forms were sent out and 66 were returned, representing 108 live dogs. This breed had a 27.7% response rate (66/238) and it represented 0.48% of all returns (66/13,741).

Mortality data

A total of 23 deaths were reported and this represents 0.14% of all deaths reported in the survey (23/15,881). The median age at death for Welsh Terriers was 12 years and 8 months (min = 6 months, max = 18 years) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Welsh Terriers. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Welsh Terriers.

Cause of death		N	%	Most common specific causes in descending order
1	Cancer	10	43.5	Type unspecified
2	Old age	5	21.7	Old age
3	Cerebral vascular	2	8.7	Stroke or cerebral vascular accident
4	Gastrointestinal	1	4.3	Pancreatitis
5	Hepatic	1	4.3	Liver failure
6	Perioperative	1	4.3	
7	Reproductive	1	4.3	Pyometra
8	Trauma	1	4.3	Road traffic accident
9	Urologic	1	4.3	Kidney failure
	Total	23	100.0	

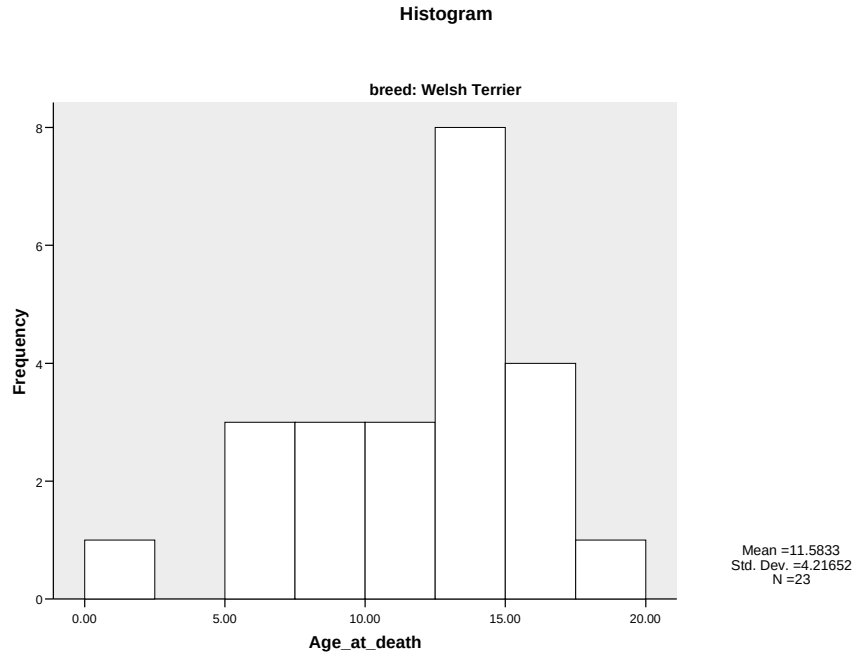


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 23 Welsh Terrier deaths with age at death reported.

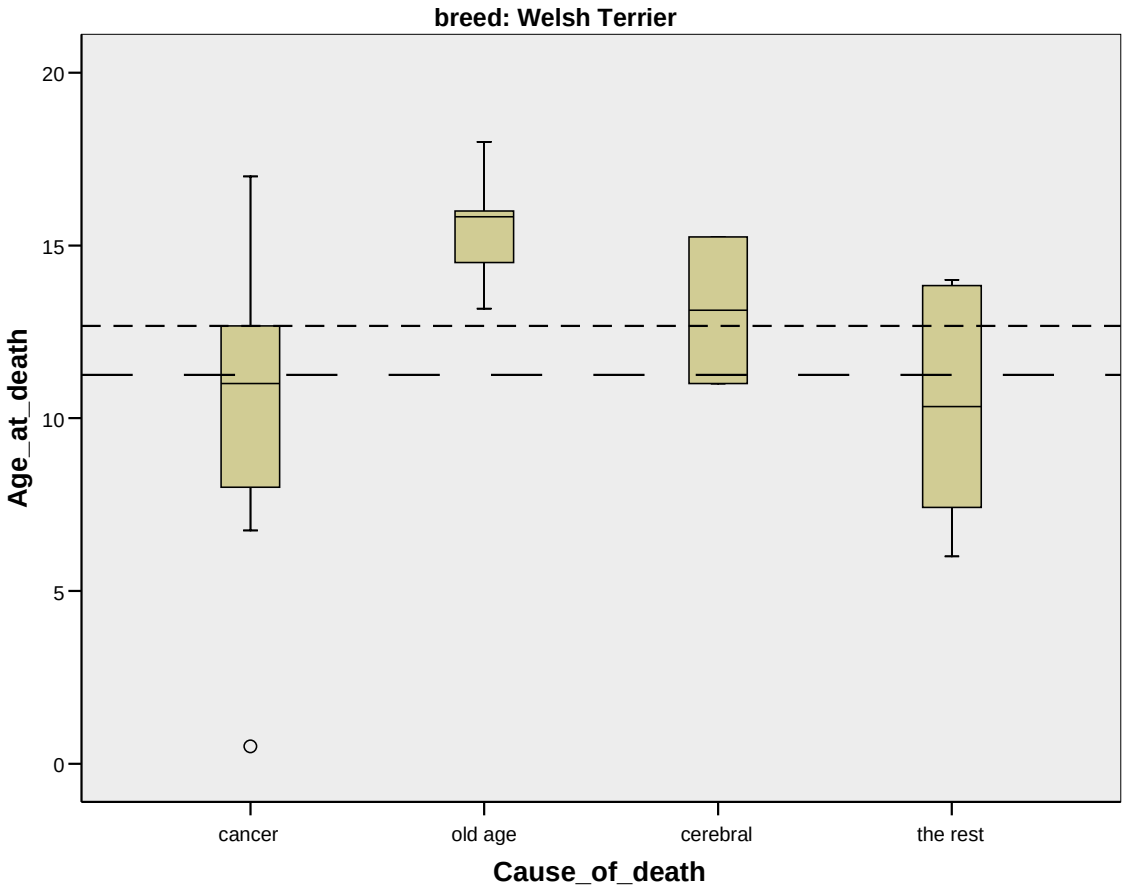


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Welsh Terriers (N=23). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Welsh Terriers. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 108 live dogs with a reported age was 3 years and 11 months (min=3 months, max=14 years and 9 months, Figure 3). Health information was reported for 108 live dogs of which 73 (68%) were healthy and 35 (32%) had at least one reported health condition, resulting in a total of 64 reported conditions with a median of 1 condition/dog (min=1, max=5).

The median current age of all healthy dogs with a reported age (N=73) was 2 years and 8 months (min=3 months, max=12 years and 3 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=31) was 5 years and 6 months (min=6 months, max=14 years and 9 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=60) was 2 years and 3 months (min= 2 months, max= 13 years, Figure 4). Table 3 shows the disease conditions for Welsh Terriers. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 107 Welsh Terriers with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	50	17	67 (63%)
Male	26	14	40 (37%)
Totals	76 (71%)	31 (29%)	107 (100%)

There was no association between gender and neuter status (P=0.2882).

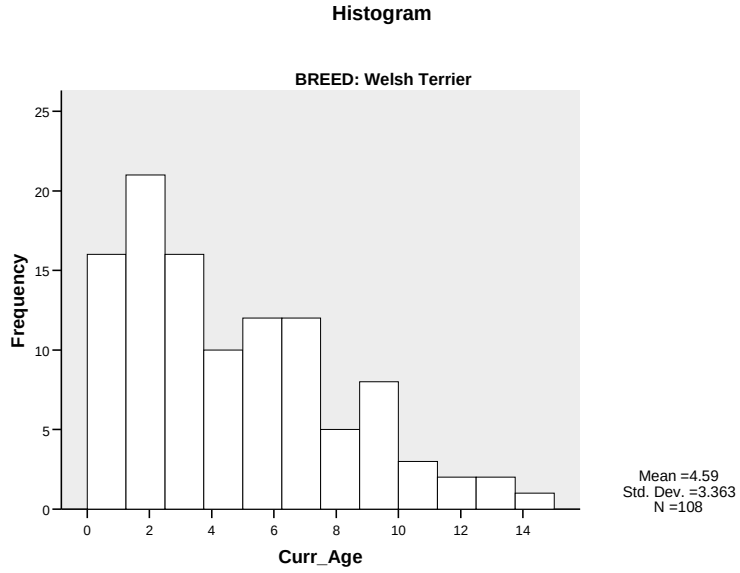


Figure 3. Histogram showing frequency of current age in years for the 108 live Welsh Terriers with age reported.

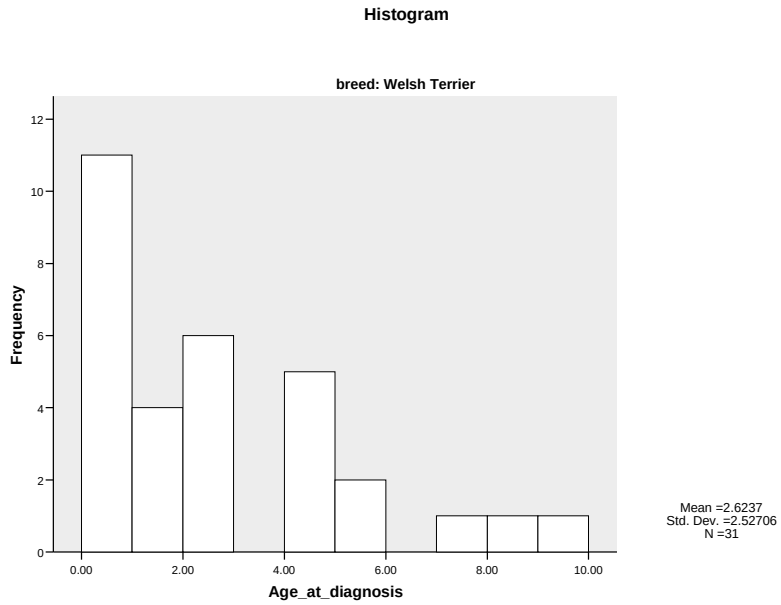


Figure 4. Histogram showing frequency of age at diagnosis for the 31 Welsh Terriers with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

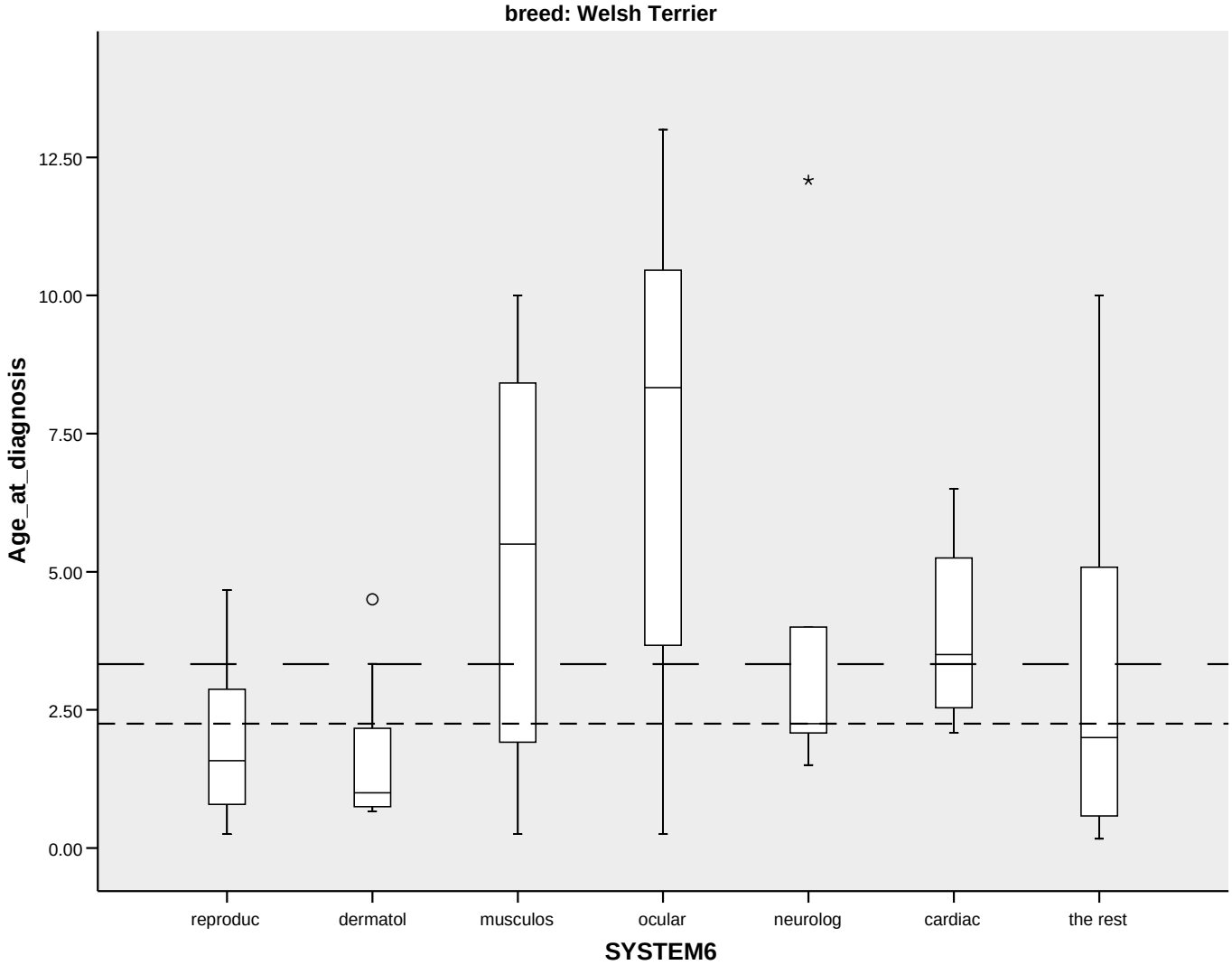


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Welsh Terriers (N=31 dogs with 60 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Welsh Terriers. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Welsh Terriers.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Reproductive	14	21.9	False pregnancy; infertility; cryptorchid; pyometra; difficulty whelping; polycystic ovaries
2	Dermatologic	7	10.9	Dermatitis; mites (demodex)
3	Musculoskeletal	7	10.9	CLR; strain or sprain; arthritis (forelimb; spine); lameness (hindlimb)
4	Ocular	7	10.9	Cataracts; glaucoma; conjunctivitis; KCS; entropion
5	Gastrointestinal	5	7.8	Campylobacter; colitis; diarrhoea; vomiting & diarrhoea; other (unspecified)
6	Neurologic	5	7.8	Seizures; deafness; secondary seizures (brain trauma); Shaker syndrome
7	Aural	4	6.3	Otitis externa; excessive ear wax
8	Cardiac	4	6.3	Heart murmur (unspecified=grade 1)
9	Immune mediated	2	3.1	Atopy; other allergy (unspecified)
10	Respiratory	2	3.1	Chylothorax; kennel cough
11	Other	2	3.1	Uncodeable
12	Urologic	2	3.1	Cystitis; cystouroliths (struvite)
13	Benign neoplasia	1	1.6	Adenoma (anal)
14	Cancer	1	1.6	Carcinoma (mammary)
15	Dental	1	1.6	Dental disease
	Total	64	100.0	

Report from the Kennel Club/ British Small Animal Veterinary Association Scientific Committee

Summary results of the Purebred Dog Health Survey for Whippets

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

Whippets

A total of 846 forms were sent out and 374 were returned, representing 1214 live dogs. This breed had a 44.2% response rate (374/846) and it represented 2.72% of all returns (374/13,741).

Mortality data

A total of 486 deaths were reported and this represents 3.06% of all deaths reported in the survey (486/15,881). The median age at death for Whippets was 12 years and 10 months (min = 2 months, max = 18 years and 2 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for Whippets. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for Whippets.

Cause of death		N	%	Most common specific causes in descending order
1	Old age	130	26.7	Old age & age combinations
2	Cardiac	67	13.8	Heart failure; heart defect unspec.; heart attack; cardiomegaly; MVD
3	Cancer	50	10.3	Unspecified; brain tumour; lymphoma; throat (unspec)
4	Urologic	31	6.4	Kidney failure (chronic>acute)
5	Trauma	28	5.8	Unspecified; road traffic accident; attacked by dog; spinal injury
6	Cerebral vascular	26	5.3	Stroke or cerebral vascular accident
7	Combinations	23	4.7	
8	Neurologic	23	4.7	Seizures; spinal disease (unspec); IVDD
9	Other	15	3.1	Uncodeable; unspecified:
10	Immune mediated	13	2.7	Unspecified; AIHA; thrombocytopaenia
11	Gastrointestinal	11	2.3	Gastroenteritis; pancreatitis; unspecified
12	Unknown	10	2.1	
13	Endocrine	9	1.9	Cushings disease; diabetes mellitus; Addisons disease
14	Hepatic	9	1.9	Liver failure (chronic>acute); cholangiohepatitis
15	Reproductive	6	1.2	Pyometra; prostatic disease
16	Behaviour	5	1.0	Unspecified; aggression; rage syndrome
17	Musculoskeletal	5	1.0	Arthritis; brittle bones from steroids; joint pain
18	Respiratory	5	1.0	Pneumonia; rhinitis; lung lobe torsion; respiratory failure
19	Senility	4	0.8	
20	Internal bleeding	3	0.6	
21	Sudden death	3	0.6	
22	Perioperative	2	0.4	
23	PSS	1	0.2	Portosystemic shunt
24	Collapse	1	0.2	
25	Dermatologic	1	0.2	Chronic skin infections
26	Drowning	1	0.2	
27	Ocular	1	0.2	Glaucoma
28	Poisoning	1	0.2	
29	Septicaemia	1	0.2	
30	Systemic	1	0.2	Allergy to insect bite or sting or snake bite
	Total	486	100.0	

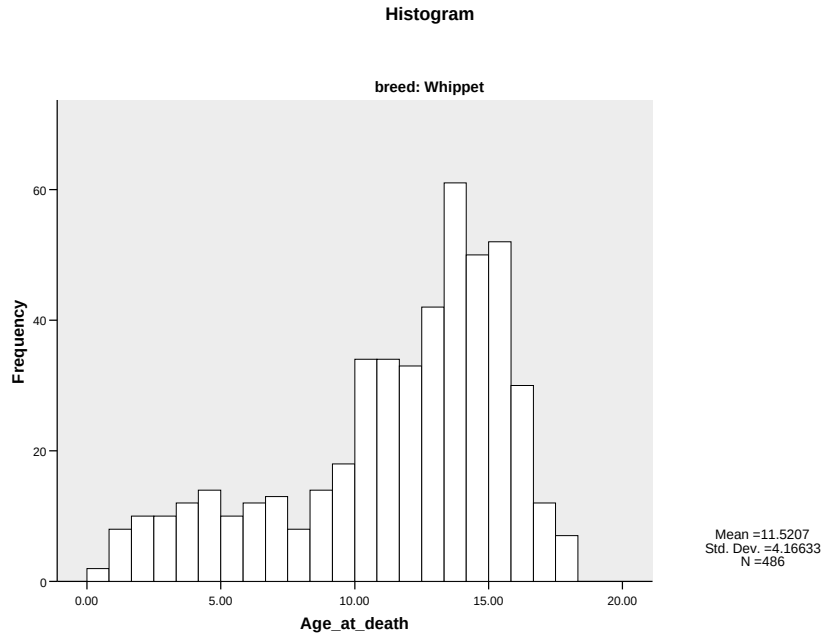


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 486 Whippet deaths with age at death reported.

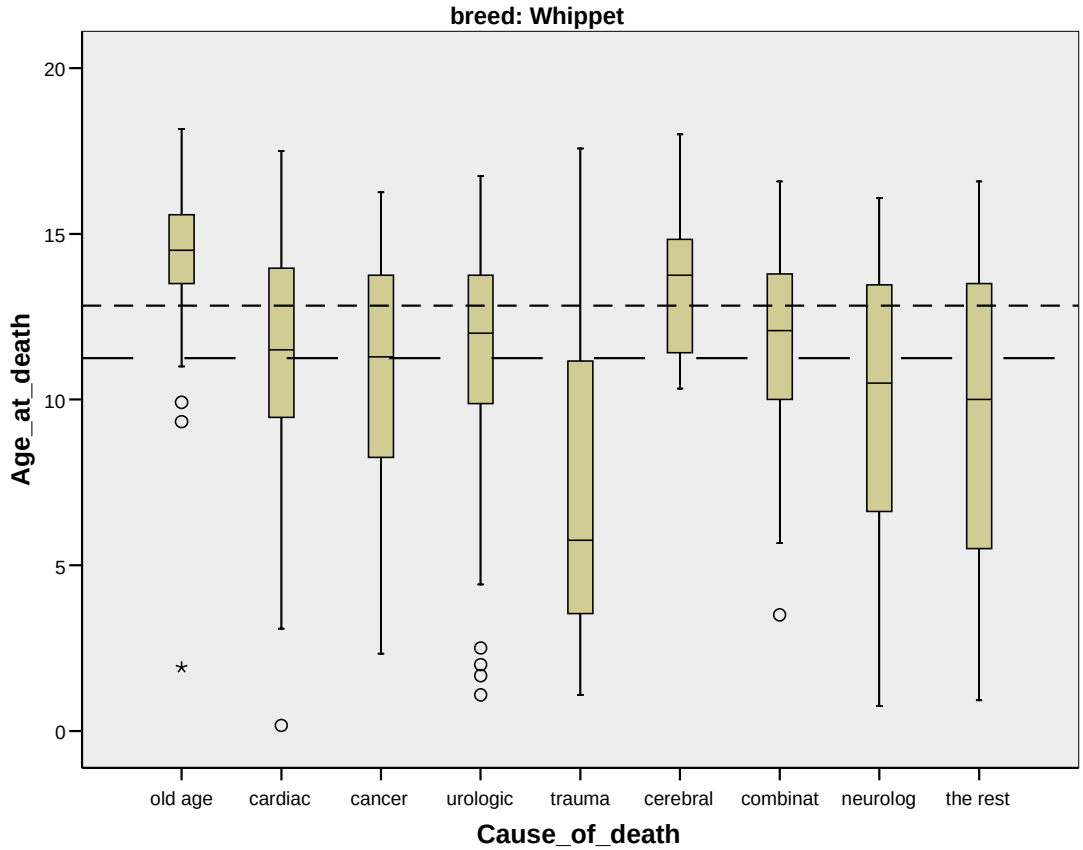


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Whippets (N=486). The dashed line (– – –) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Whippets. The solid line within each grey box represents the median age at death from the condition.

Morbidity data

The median current age of the 1212 live dogs with a reported age was 5 years and 0 months (min=2 months, max=16 years and 3 months, Figure 3). Health information was reported for 1214 live dogs of which 920 (76%) were healthy and 294 (24%) had at least one reported health condition, resulting in a total of 440 reported conditions with a median of 1 condition/dog (min=1, max=8).

The median current age of all healthy dogs with a reported age (N=920) was 4 years and 3 months (min=2 months, max=16 years and 3 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=283) was 8 years (min=6 months, max=15 years and 6 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=423) was 4 years and 11 months (min= 2 months, max= 15 years and 2 months, Figure 4). Table 3 shows the disease conditions for Whippets. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 1199 Whippets with reported gender and neuter status.

	Neuter status		
Gender	Intact	Neutered	Totals
Female	492	209	701 (58%)
Male	391	107	498 (42%)
Totals	883 (74%)	316 (26%)	1199 (100%)

Significantly more females were neutered (P=0.0013).

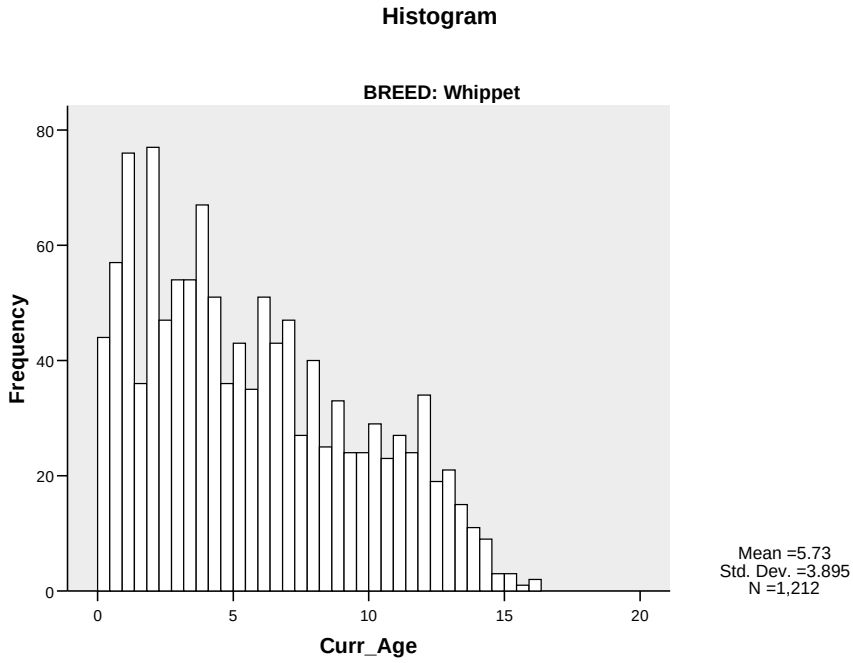


Figure 3. Histogram showing frequency of current age in years for the 1212 live Whippets with age reported.

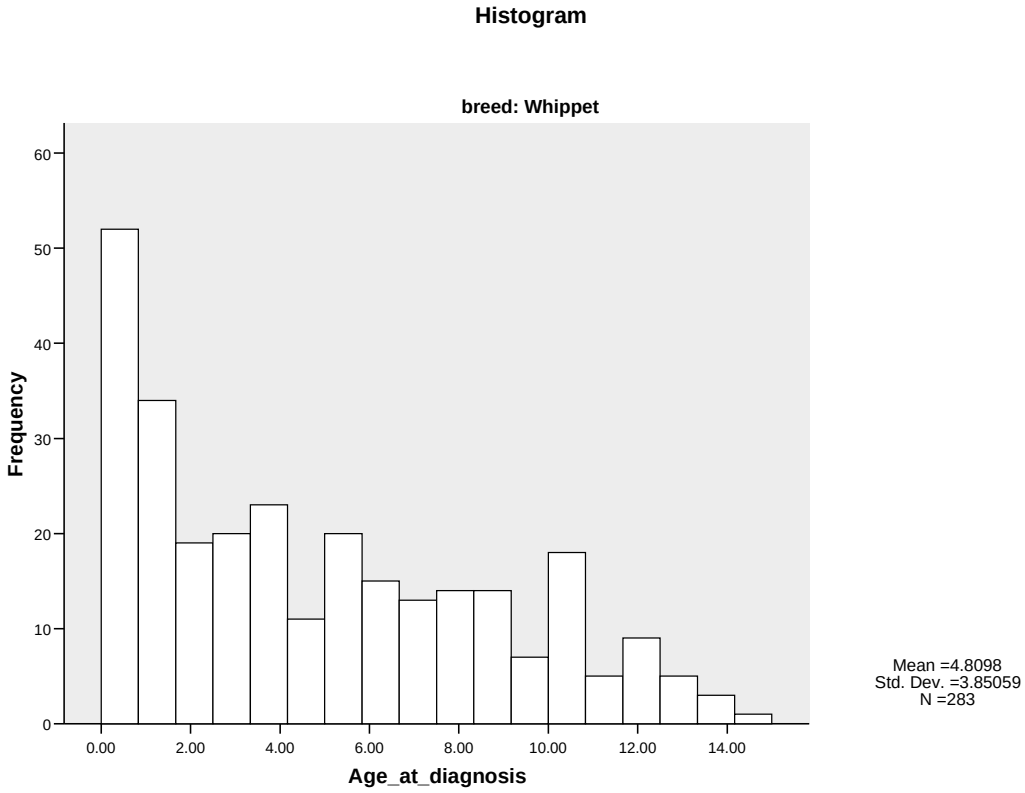


Figure 4. Histogram showing frequency of age at diagnosis for the 283 Whippets with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

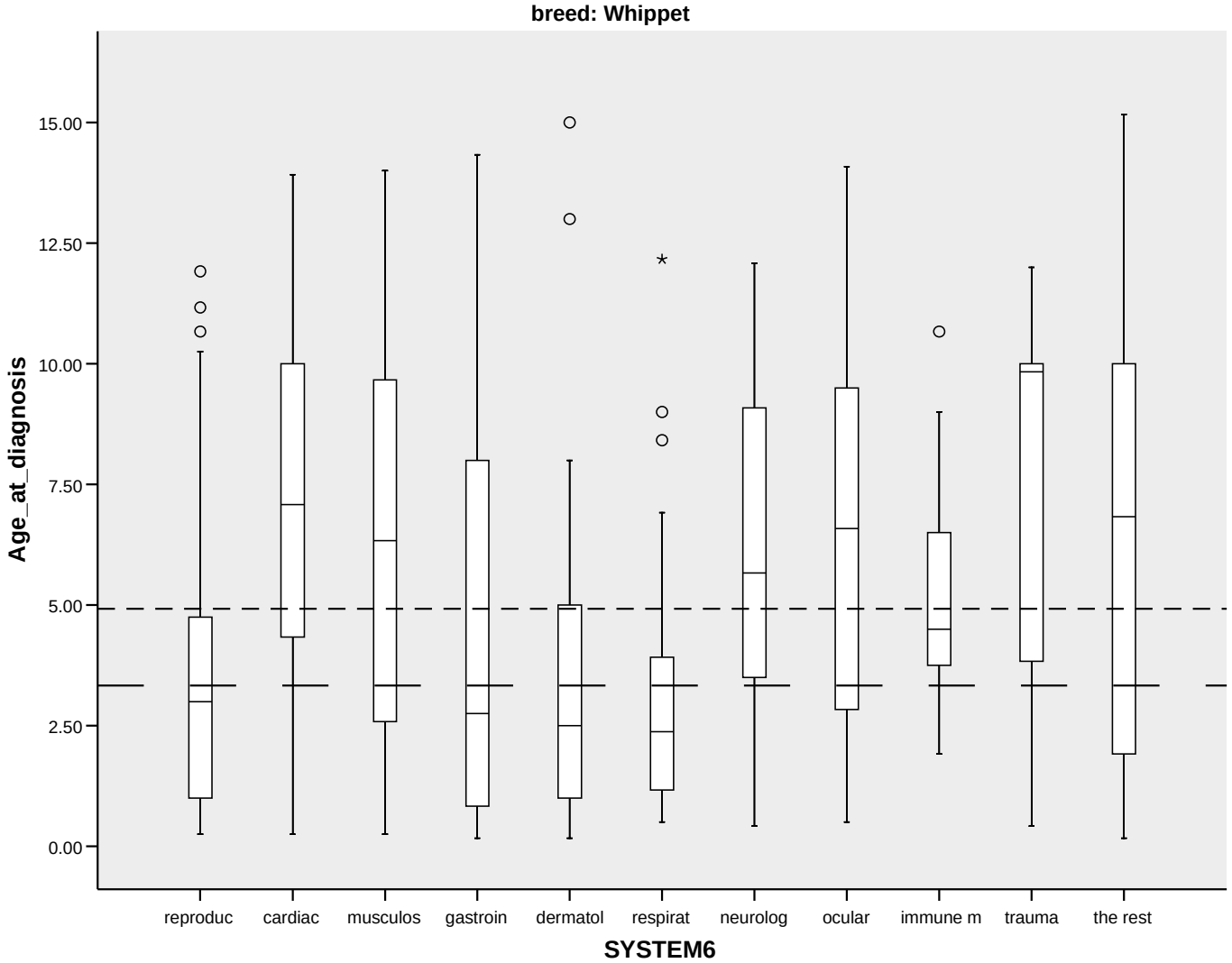


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Whippets (N=283 dogs with 423 conditions with age reported). The dashed line (– – –) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Whippets. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for Whippets.

		All conditions		
Disease condition		N	%	Most common specific conditions in descending order
1	Reproductive	78	17.7	Cryptorchid; pyometra; infertility; false pregnancy; dystochia (uterine inertia>physical blockage)
2	Cardiac	57	13.0	Heart murmur (unspecified>without clinical signs>grade 3>rest); CHF; MVD
3	Musculoskeletal	49	11.1	Arthritis (unspecified=hindlimb>shoulder>rest); fracture (forelimb>rest); lameness (forelimb)
4	Gastrointestinal	36	8.2	Colitis; pancreatitis; diarrhoea; IBD; gastric dilatation/volvulus (GDV); vomiting
5	Dermatologic	32	7.3	Alopecia; dermatitis; mites (cheyletiella); interdigital cysts; ringworm
6	Respiratory	31	7.0	Kennel cough; rhinitis; asthma; bronchitis; coughing; long soft palate
7	Neurologic	27	6.1	IVDD (cervical>unspecified>lumbar); seizures; meningitis
8	Ocular	24	5.5	Cataracts; epiphora; conjunctivitis; KCS; corneal ulcer
9	Immune mediated	18	4.1	Allergy other (unspecified); autoimmune disorder (unspecified); thrombocytopaenia
10	Trauma	14	3.2	Skin; other (unspecified); hind limb; spinal cord; forepaw; spine; tail; urinary tract
11	Urologic	13	3.0	Cystitis; incontinence; kidney stones (unspecified=struvite)
12	Cancer	12	2.7	Type unspecified; carcinoma (foreleg); myosarcoma (flank); spindle cell (skin of forelimb)
13	Benign neoplasia	10	2.3	Lipoma; cyst; histiocytoma (skin); adenoma (anal); haemangiopericytoma (hip)
14	Endocrine	10	2.3	Hypothyroidism; Addison's disease; hair loss (undiagnosed)
15	Unknown	9	2.0	Unknown; undiagnosed liver disease
16	Dental	7	1.6	Dental disease
17	Other	6	1.4	Uncodeable
18	Cerebrovascular	4	0.9	Stroke or cerebral vascular accident
19	Haematopoietic	3	0.7	Anaemia unspecified
	Total	440	100.0	

CHF=congestive heart failure