

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

Summary results of the  
Purebred Dog Health Survey  
for Norfolk 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%.

## Norfolk Terriers

A total of 598 forms were sent out and 233 were returned, representing 458 live dogs. This breed had a 39.0% response rate (233/598) and it represented 1.70% of all returns (233/13,741).

### Mortality data

A total of 189 deaths were reported and this represents 1.19% of all deaths reported in the survey (189/15,881). The median age at death for Norfolk Terriers was 11 years (min = 1 year and 6 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 Norfolk 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 Norfolk Terriers.

Cause of death	N	%	Most common specific causes in descending order
1 Cardiac	78	41.3	Heart failure; heart attack; MVD; heart defect unspecified
2 Old age	24	12.7	Old age & age combinations
3 Cancer	21	11.1	Ttype unspecified (liver, bladder); carcinoma (unspecified);
4 Combinations	10	5.3	
5 Urologic	9	4.8	Kidney failure; kidney disease unspecified
6 Gastrointestinal	8	4.2	Pancreatitis; haemorrhagic gastroenteritis (HGE)
7 Cerebral vascular	6	3.2	Stroke or cerebral vascular accident
8 Hepatic	6	3.2	Liver failure (chronic > acute); liver disease unspecified
9 Endocrine	5	2.6	Diabetes mellitus; Cushings disease
10 Trauma	5	2.6	Road traffic accident; unspecified
11 Respiratory	3	1.6	Respiratory disease unspecified; respiratory failure
12 Neurologic	2	1.1	Seizures
13 Other	2	1.1	Uncodeable
14 Perioperative	2	1.1	
15 Reproductive	2	1.1	Pyometra
16 Portosystemic shunt (PSS)	1	0.5	
17 Collapse	1	0.5	
18 Drowning	1	0.5	
19 Immune mediated	1	0.5	AIHA
20 Sudden death	1	0.5	
21 Unknown	1	0.5	
Total	189	100.0	

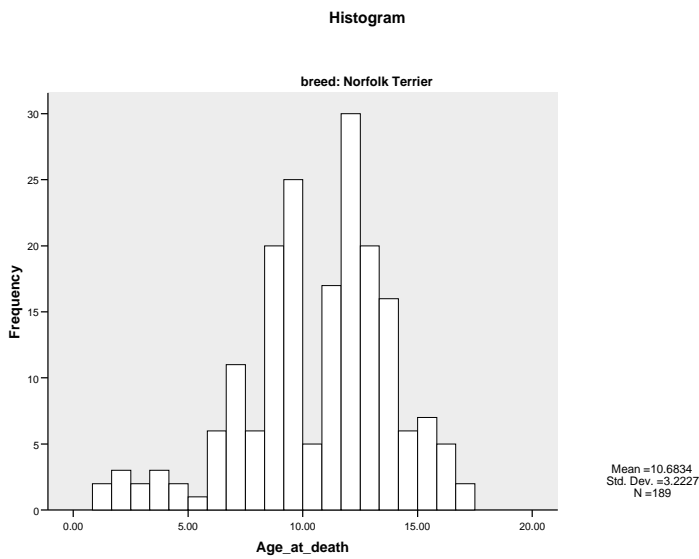


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 189 Norfolk Terrier deaths with age at death reported.

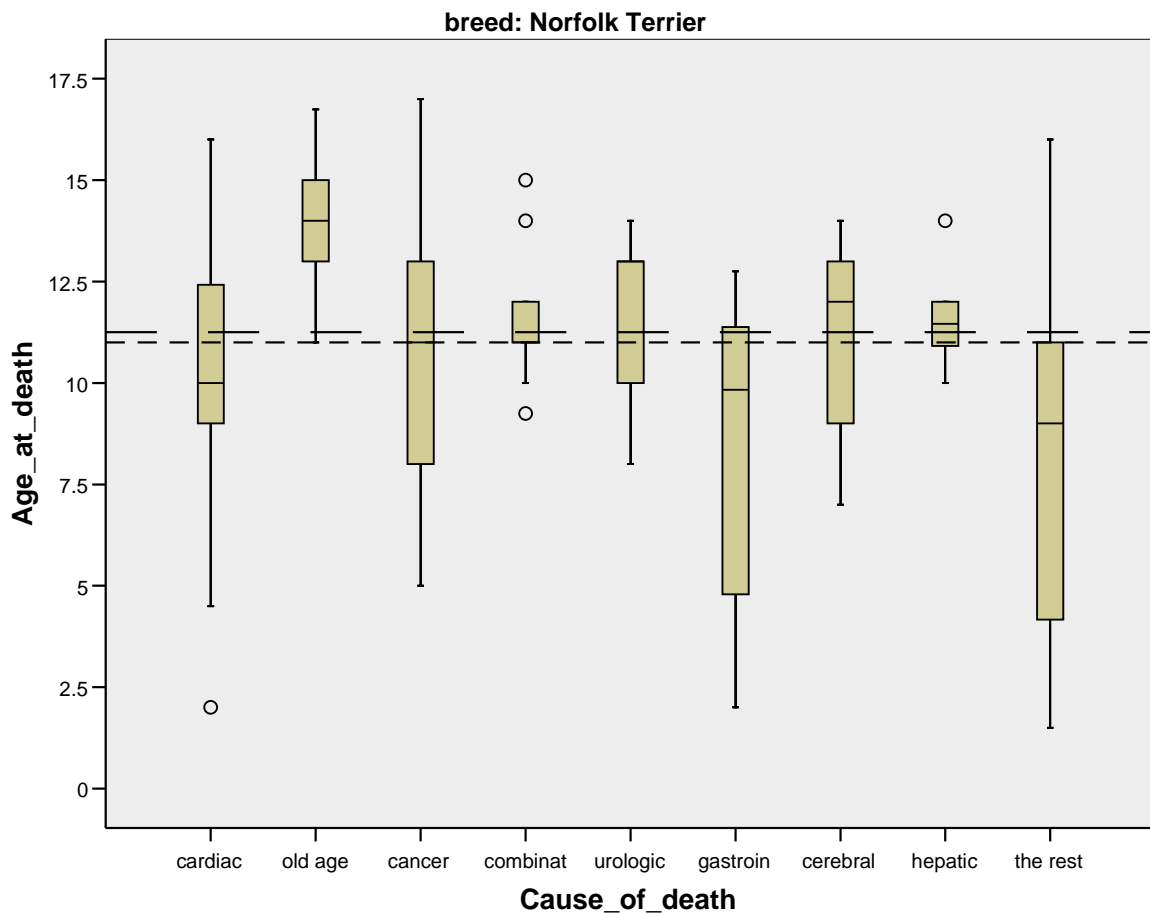


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in Norfolk Terriers (N=189). The dashed line (---) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for Norfolk Terriers. The solid line within each grey box represents the median age at death from the condition.

### Morbidity data

The median current age of the 448 live dogs with a reported age was 5 years (min=4 months, max=15 years and 5 months, Figure 3). Health information was reported for 458 live dogs of which 284 (62%) were healthy and 174 (38%) had at least one reported health condition, resulting in a total of 280 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=284) was 4 years and 3 months (min=4 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=163) was 6 years and 11 months (min=9 months, max=15 years and 5 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=260) was 3 years and 9 months (min= 1 month, max= 14 years, Figure 4). Table 3 shows the disease conditions for Norfolk Terriers. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for 458 Norfolk Terriers with reported gender and neuter status.

Gender	Neuter status		Totals
	Intact	Neutered	
Female	171	114	285 (62%)
Male	102	71	173 (38%)
Totals	273 (60%)	185 (40%)	458 (100%)

There was no association between gender and neuter status (P=0.8259).

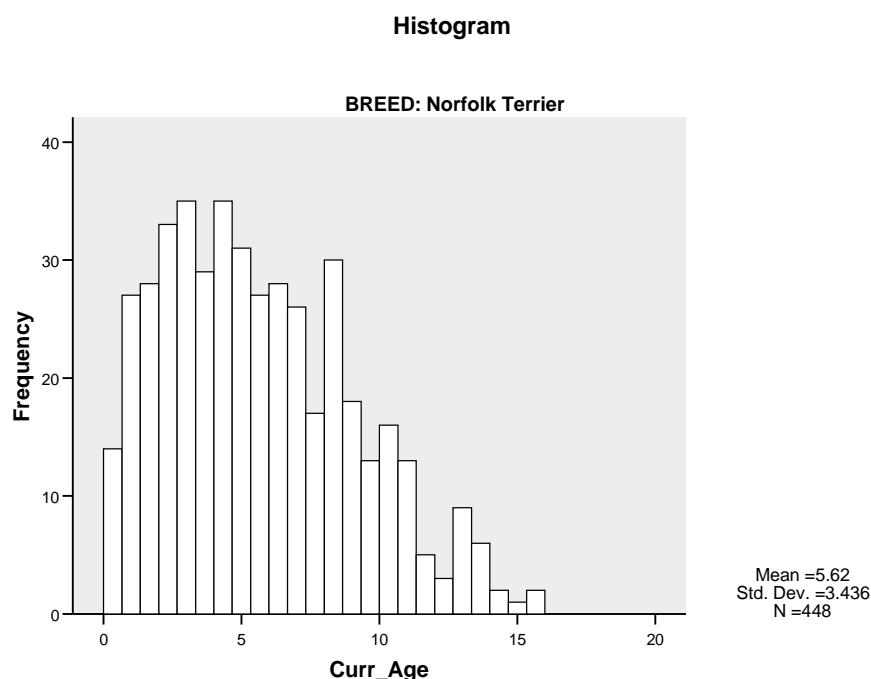


Figure 3. Histogram showing frequency of current age in years for the 448 live Norfolk Terriers with age reported.

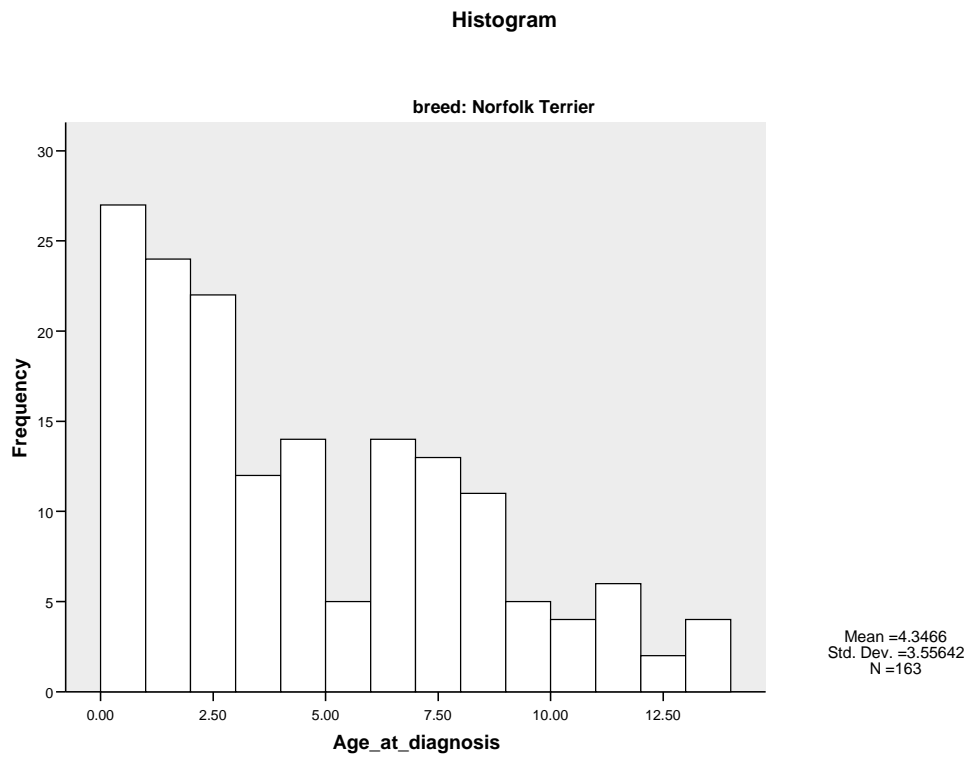


Figure 4. Histogram showing frequency of age at diagnosis for the 163 Norfolk Terriers with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

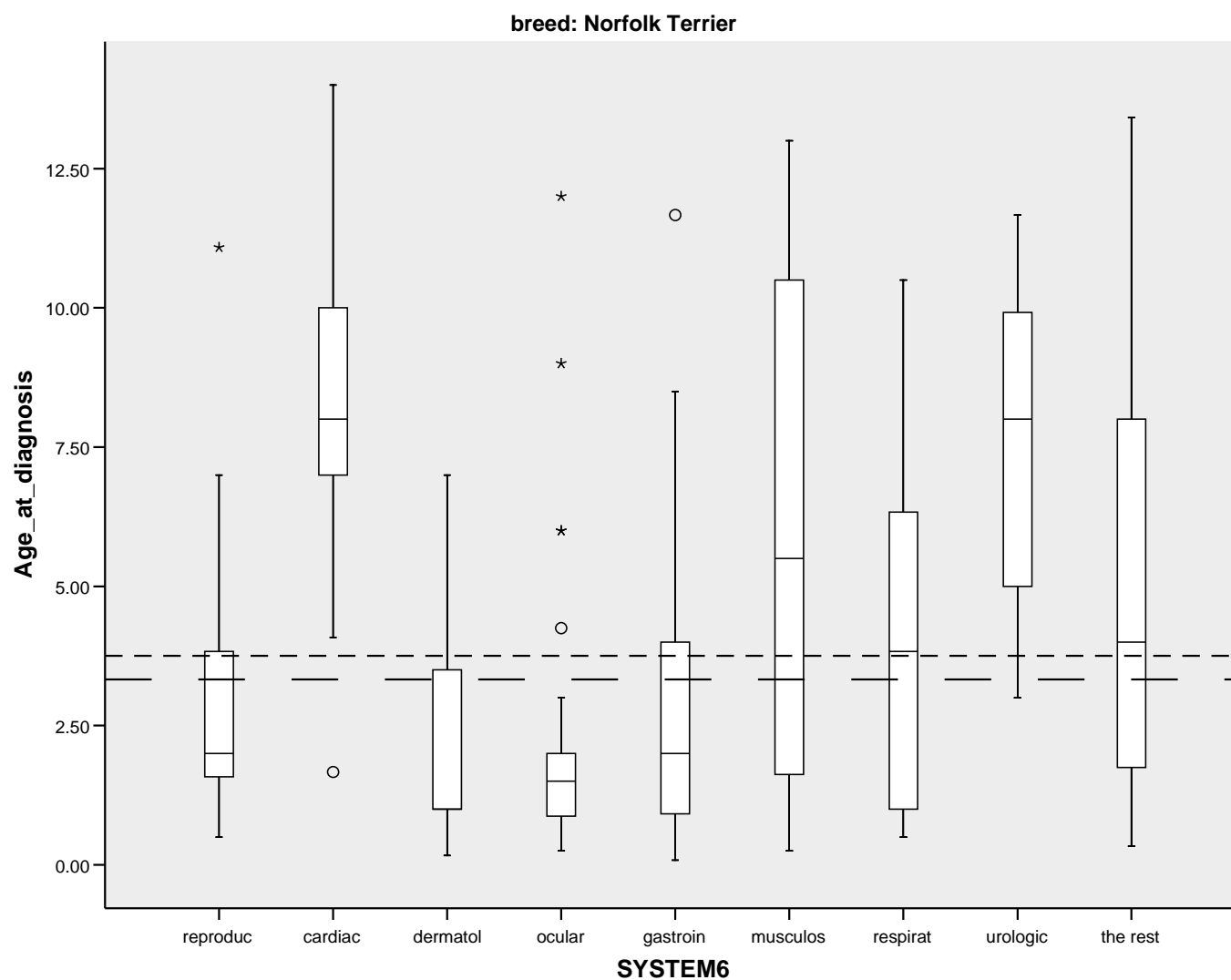


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for Norfolk Terriers (N=163 dogs with 260 conditions with age reported). The dashed line (---) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for Norfolk 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 Norfolk Terriers.

Disease condition	All conditions		Most common specific conditions in descending order
	N	%	
1 Reproductive	53	18.9	False pregnancy; infertility; pyometra; dystochia (physical blockage>uterine inertia)
2 Cardiac	42	15.0	Heart murmur (unspec>without clinical signs>grade 3=grade 4>rest); arrhythmia
3 Dermatologic	32	11.4	Mites (cheyletiella>demodex); dermatitis
4 Ocular	31	11.1	Epiphora; KCS; blocked tear duct; cherry eye; conjunctivitis; cataracts; red eye
5 Gastrointestinal	26	9.3	Gastroenteritis (unspecified>acute=haemorrhagic); colitis; pancreatitis
6 Musculoskeletal	24	8.6	Arthritis; CLR; brachygnathism; patellar luxation; avascular necrosis FH; CHD
7 Respiratory	15	5.4	Noisy breathing; long soft palate; coughing
8 Urologic	13	4.6	Cystouroliths (unspecified>calcium oxalate=cystine); cystitis
9 Immune mediated	8	2.9	Flea allergy; food allergy; other allergy (unspecified)
10 Dental	7	2.5	Dental disease; retained puppy teeth; extra teeth
11 Endocrine	5	1.8	Cushing's disease; diabetes mellitus; hypoparathyroidism; weight gain
12 Hepatic	5	1.8	Portosystemic shunt (PSS)
13 Neurologic	5	1.8	Deafness; seizures; IVDD
14 Benign neoplasia	4	1.4	Lipoma; histiocytoma (skin); unspecified
15 Cancer	2	0.7	Leukaemia; type unspecified (mouth)
16 Cardiopulmonary	2	0.7	Coughing; pleural effusion
17 Other	2	0.7	Uncodeable
18 Unknown	2	0.7	Undiagnosed illness
19 Anal gland	1	0.4	Anal sacculitis
20 Trauma	1	0.4	Ocular (eyeball)
Total	280	100.0	

avascular necrosis FH=femoral head or Legg Calve Perthes disease