

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	

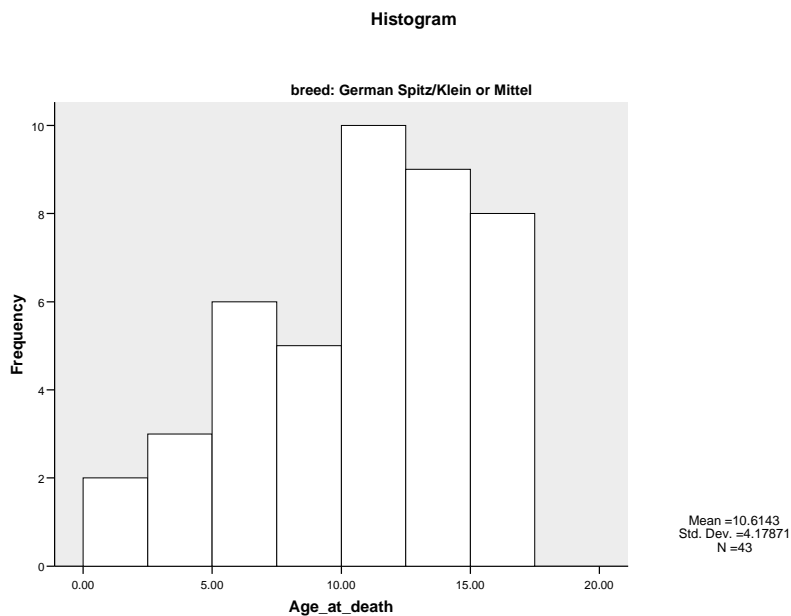


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 43 German Spitz deaths with age at death reported.

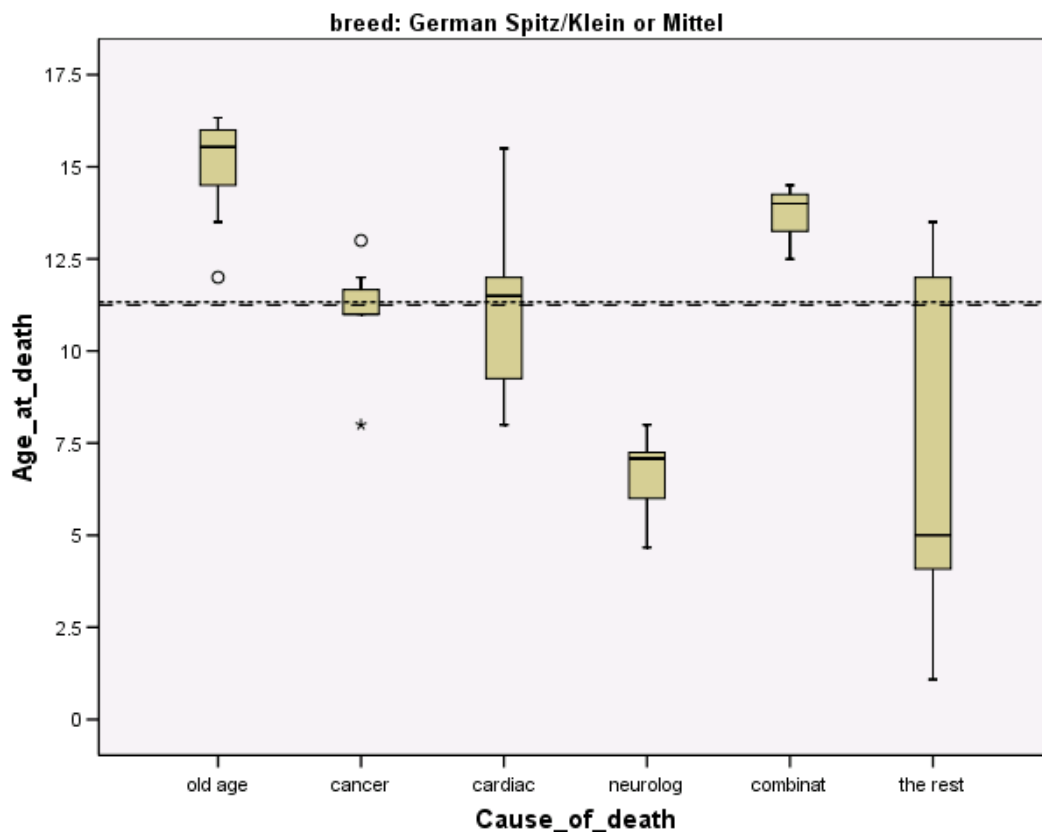


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the German Spitz breed (N=43). The dashed line (---) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the German Spitz breed. The 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.

Gender	Neuter status		Totals
	Intact	Neutered	
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).

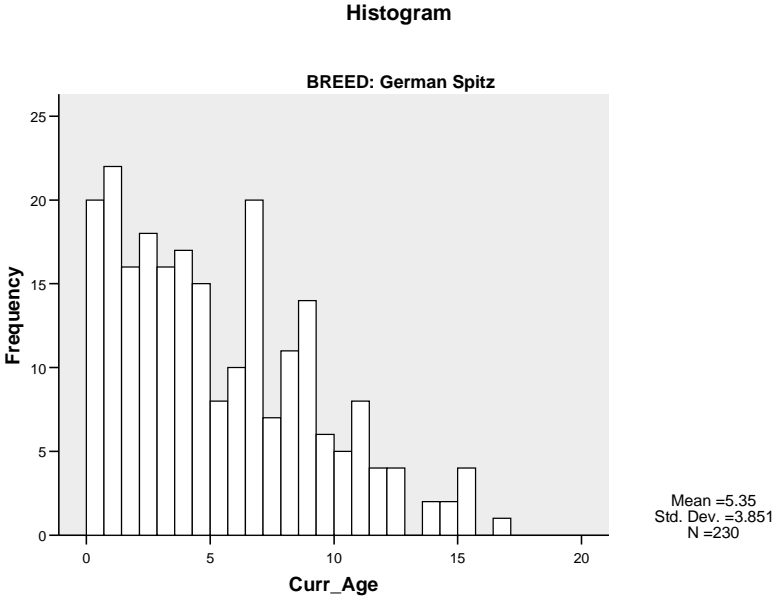


Figure 3. Histogram showing frequency of current age in years for the 230 live German Spitz breed with age reported.

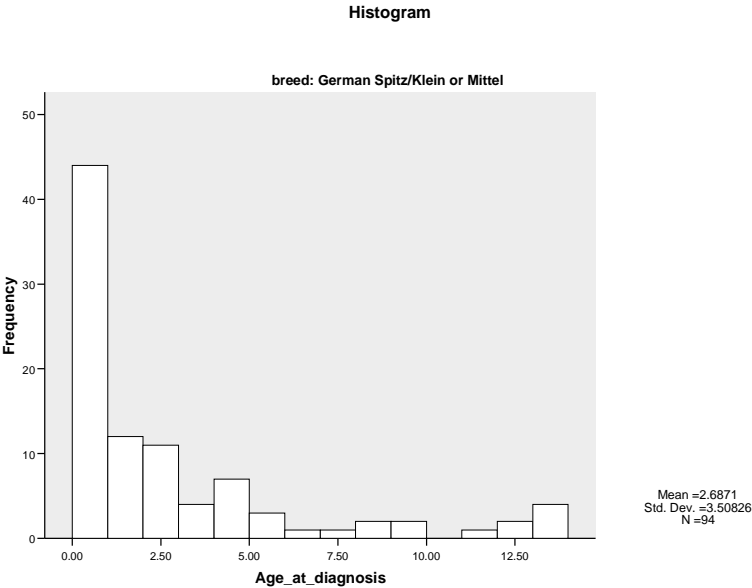


Figure 4. Histogram showing frequency of age at diagnosis for the 94 German Spitz breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

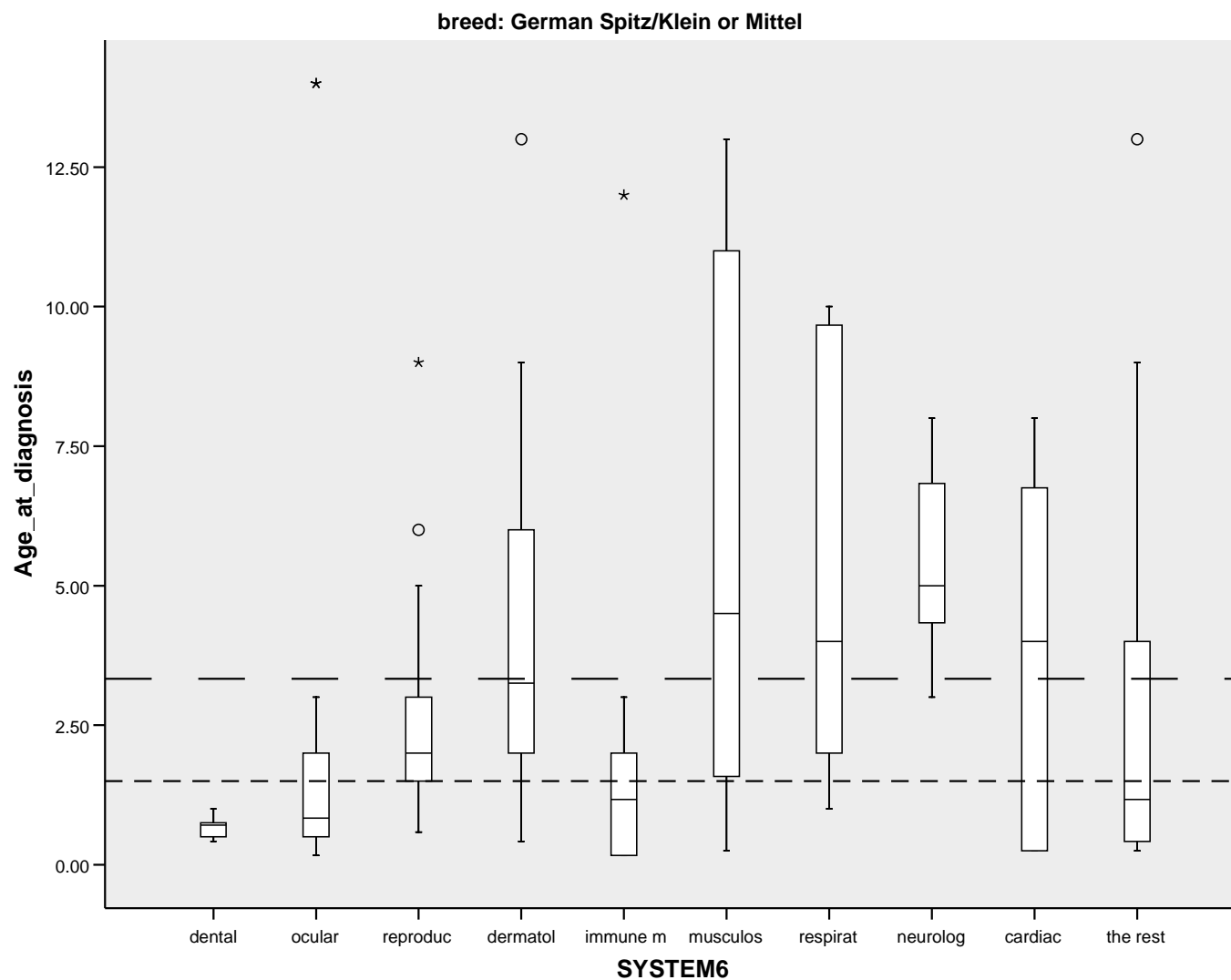


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the German Spitz breed (N=96 dogs with 137 conditions with age reported). The dashed line (---) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) 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.

Disease condition	All conditions		Most common specific conditions in descending order
	N	%	
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	