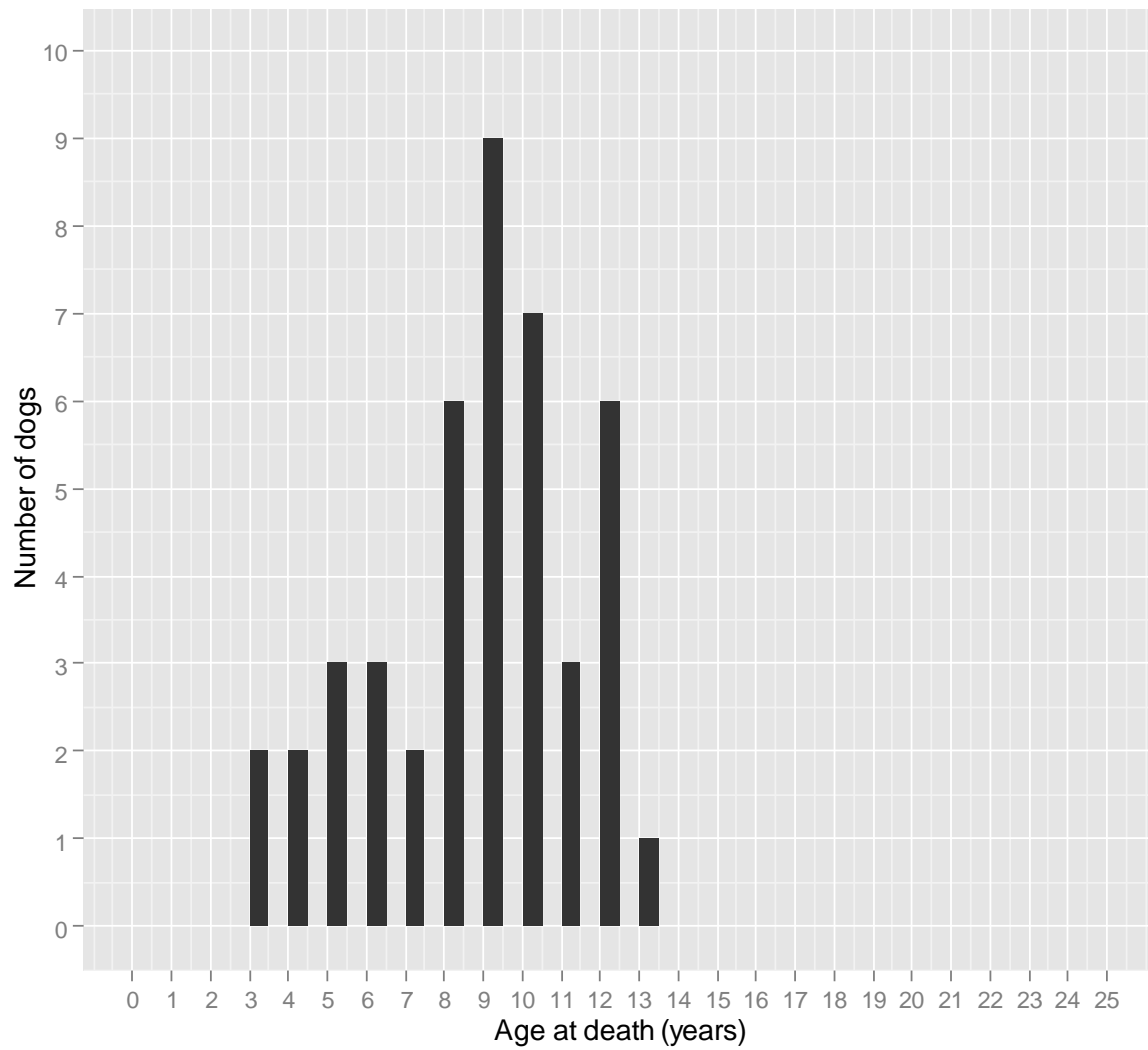# Leonberger

Pedigree Breed Health Survey

Forms were received representing 153 living dogs & 44 deceased dogs.
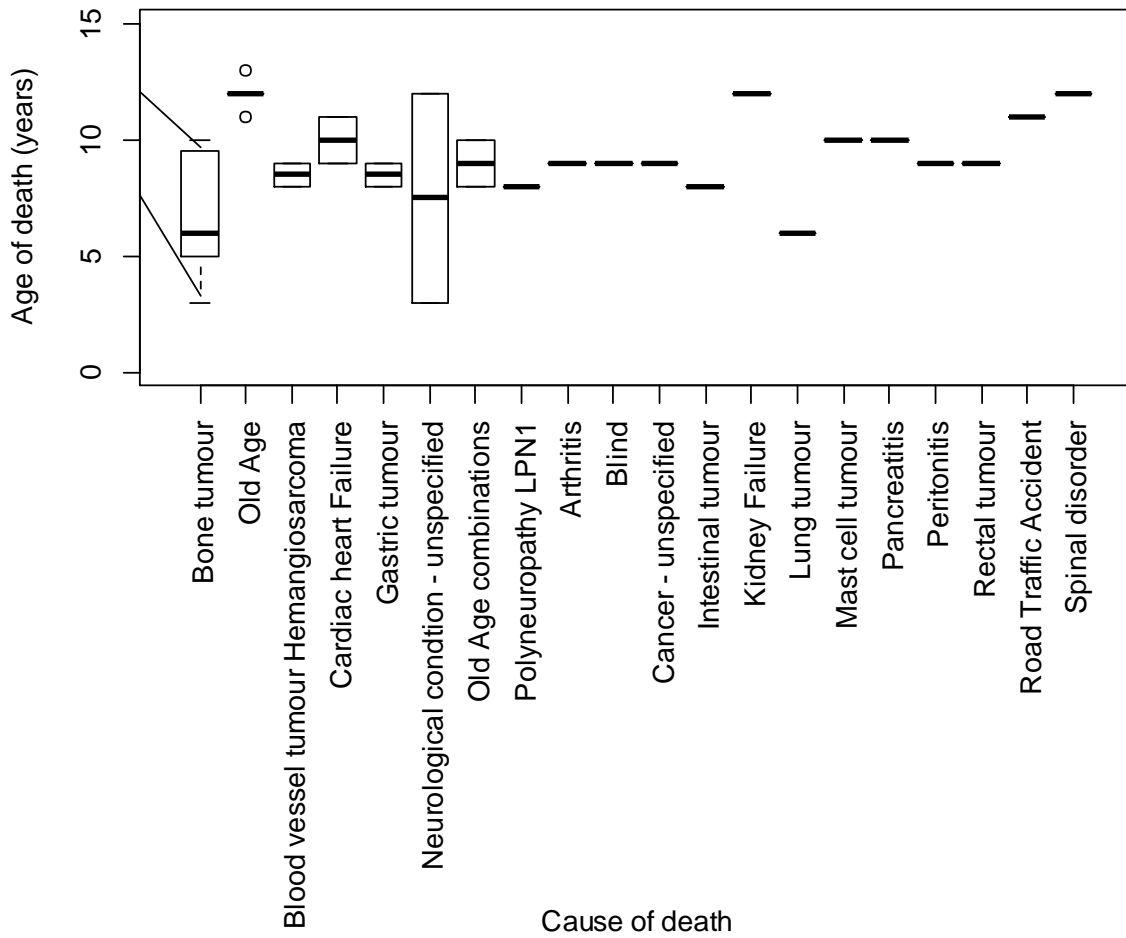
Mortality results

A total of 44 deaths were reported, representing 0.78% of all deaths reported in the Pedigree Breed Health survey. The median longevity for the Leonberger was 9 years (Figure 1). Table 1 shows the causes of death for the breed. Age at death is presented for the most common causes in Figure 2.

Table 1 The twenty most common causes of death/reasons for euthanasia (N = 44 deceased dogs).

Cause of death	Number of cases	Proportion (%)
Bone tumour	15	34.09
Old Age	5	11.36
Blood vessel tumour Hemangiosarcoma	2	4.55
Cardiac heart Failure	2	4.55
Gastric tumour	2	4.55
Neurological condtion - unspecified	2	4.55
Old Age combinations	2	4.55
Polyneuropathy LPN1	2	4.55
Arthritis	1	2.27
Blind	1	2.27
Cancer - unspecified	1	2.27
Intestinal tumour	1	2.27
Kidney Failure	1	2.27
Lung tumour	1	2.27
Mast cell tumour	1	2.27
Pancreatitis	1	2.27
Peritonitis	1	2.27
Rectal tumour	1	2.27
Road Traffic Accident	1	2.27
Spinal disorder	1	2.27

Figure 1: Histogram of the longevity for 44 reported deaths: overall median age at death was 9 years (minimum= 3 years, maximum= 13 years); mean age at death was 8.59 years

Figure 2: Box and whisker plot of age at death in years for the twenty most common causes of death (N=44). The solid line within each box represents the median age of 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

Morbidity results

The 153 live Leonbergers represented 0.35% of total dogs in the survey. The median age of live dogs for the breed was 4 years (Table 2). Of the 153 Leonbergers which the survey covers, 97 had reported no conditions and 56 reported affected by at least one condition(min = 1 condition(s), max = 8 conditions), giving a total of 126 incidents of conditions.

The gender, neuter status and age of neutering summary statistics for Leonbergers are shown in Table 3. There were 113 dogs with responses for Body Condition displayed in Table 4.

The median age the dogs were first affected by a condition was 4 years (min = 0 years, max= 12 years, Figure 3). The ages for the most common conditions is displayed in Figure 4. Table 5 shows the frequency of occurrence of all reported disease conditions for the Leonberger.

Table 2: The summary statistics for the dogs' current age when survey was completed
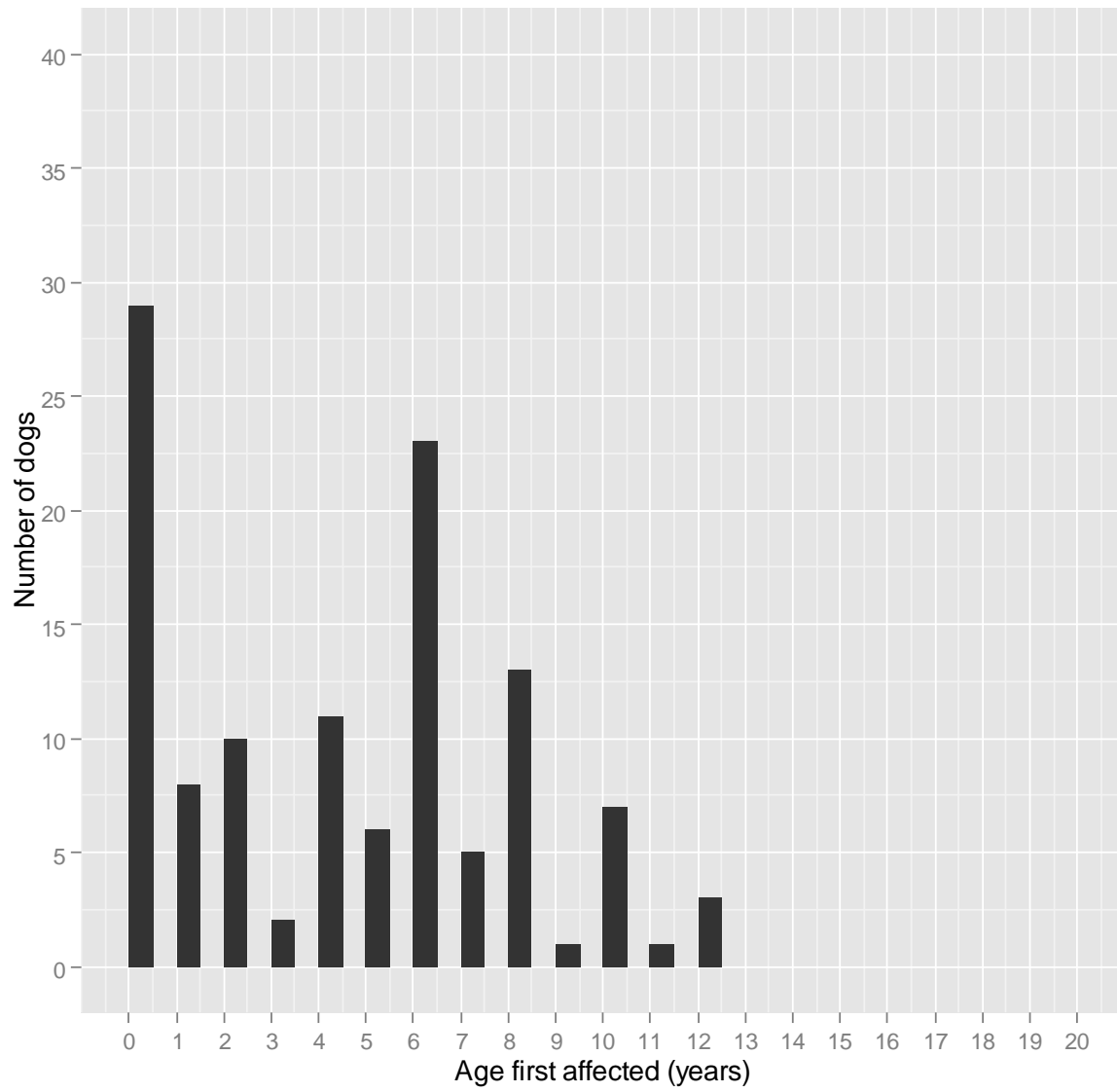
Number of Dogs	Mean age (years)	Median age (years)	Min age (years)	Max age (years)
153	4.80	4	0	13

Table 3: Gender, neuter status and age summary statistics for dogs where gender and neuter status was reported
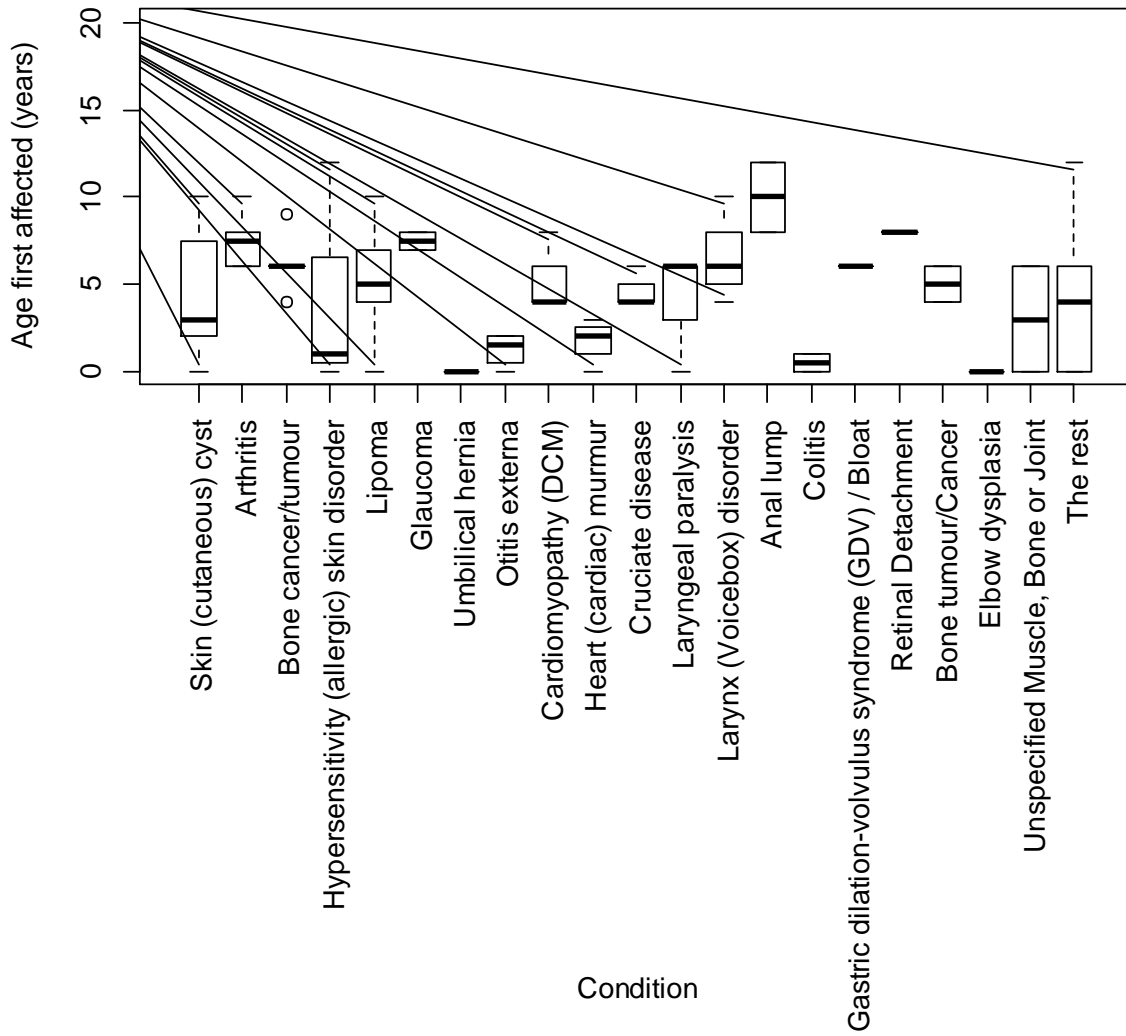
Sex	Neuter status	Age known	Count	Mean age neutered (years)	Median age neutered (years)	Min age neutered (years)	Max age neutered (years)
Female	Neutered	Yes	37	3.14	2	0	8
Female	Neutered	No	2	NA	NA	NA	NA
Female	Not neutered	No	45	NA	NA	NA	NA
Female	Unknown	No	1	NA	NA	NA	NA
Male	Neutered	Yes	23	2.26	1	0	8
Male	Not neutered	No	42	NA	NA	NA	NA
Male	Unknown	No	3	NA	NA	NA	NA

Table 4: The body condition comment and the age of the dog when this comment was made

Body condition	Count	Mean age (years)	Median age (years)	Min age (years)	Max age (years)
No comment was made by vet	8	6.00	5.5	0	12
Normal	96	3.45	3	0	10
Somewhat overweight	3	3.33	4	0	6
Somewhat underweight	6	4.17	3	1	12

Figure 3: Histogram showing frequency of known age at diagnosis for the disease conditions reported

Figure 4: Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order. The solid line within each 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

Table 5: The most commonly reported disease conditions in descending order for the breed (N = 153 live dogs)

Condition	Number of cases of disease	Proportion (%)	Prevalence (%)
Skin (cutaneous) cyst	7	5.56	4.58
Arthritis	6	4.76	3.92
Bone cancer/tumour	5	3.97	3.27
Hypersensitivity (allergic) skin disorder	5	3.97	3.27
Lipoma	5	3.97	3.27
Glaucoma	4	3.17	2.61
Otitis externa	4	3.17	2.61
Umbilical hernia	4	3.17	2.61
Cardiomyopathy (DCM)	3	2.38	1.96
Cruciate disease	3	2.38	1.96
Heart (cardiac) murmur	3	2.38	1.96
Laryngeal paralysis	3	2.38	1.96
Larynx (Voicebox) disorder	3	2.38	1.96
Anal lump	2	1.59	1.31
Bone tumour/Cancer	2	1.59	1.31
Chronic Itching	2	1.59	1.31
Colitis	2	1.59	1.31
Cryptorchidism	2	1.59	1.31
Dermatitis	2	1.59	1.31
Elbow dysplasia	2	1.59	1.31

Proportion of morbidity as %= N/126 disease conditions, prevalence %= N/153 live dogs

Summary

From the dogs surveyed, most Leonbergers were not affected by a disease condition (63.40%). The most commonly reported disease condition in live dogs was skin (cutaneous) cyst. The most commonly reported cause of death was bone tumour.