Greater Swiss Mountain Dog Club of America
Breed Health Survey 2000 & 2001

GSMDCA Health Committee
October 2002

RESULTS AND DISCUSSION

Responses and Response Patterns

A total of 846 valid entries were submitted. To test for the systematic biases that can be introduced when using non-random sampling, we examined the stability of response patterns for the 20 most common conditions across 5 dates. Prevalence rates differed by 25% or less for 18 of the top 20 conditions. The remaining two conditions, chronic ear infections and splenic torsion, had changes of 38.2% and 59.7%, respectively. In both cases, a disproportionate number of Swissys with these conditions were entered late in the survey period. Readers should keep this response instability in mind when interpreting the data for chronic ear infections and splenic torsion. Appendix A provides detail on the calculation of response stability.

Sex and Reproductive Status

More females (444, 52.5%) than males (402, 47.5%) were entered. The reproductive status of 798 entries was indicated. Of these, 391 were intact (49.0%) and 407 (51.0%) were neutered. Table 1 shows reproductive status in more detail. A higher proportion of females (31.2%) than males (19.9%) were bred (p = .000).

Age of Swissys

Of the 846 entries, 775 (91.6%) were alive at the time of entry and 71 (8.4%) had died. For Swissys that were living, age was calculated based on June 2002, the approximate mid-point of the survey. The Swissys that were living ranged in age from 7 to 146 months (12 years, 2 months), with a median age of 42 months (3 years, 6 months). For Swissys that had died, the age of death ranged from 1 to 157 months (13 years, 1 month), with a median of 81 months (6 years, 9 months). One quarter of Swissys died before the age of 44 months (3 years, 8 months), another quarter died between the ages of 45 and 80 months (3 years, 9 months and 6 years, 8 months). Another quarter died between the ages of 81 months and 114 months (6 years, 9 months and 9 years, 6 months), and the final quarter between the ages of 115 months and 157 months (9 years, 7 months and 13 years, 1 month).

Table 1. Reproductive Status

		Intact, attempted breedings	Intact, no attempted breedings	Neutered, attempted breedings	Neutered, no attempted breedings	Total
Females	Frequency	74	132	54	150	410
	% of Females	18.0	32.2	13.2	36.6	100.0
Males	Frequency	55	130	22	181	388
	% of Males	14.2	33.5	5.7	46.6	100.0
Total	Frequency	129	262	76	331	798
	% of Total	16.2	32.8	9.5	41.5	100.0

Of the Swissys that had died, 37 were females (8.3% of the females) and 34 were males (8.5% of the males). The median age of death for females was 86 months (7 years, 2 months) and for males was 70 months (5 years, 10 months). Although the difference between the sexes in age at the time of death appears large, it was not statistically significant (p = .421) because of the small number of Swissys in each group and the wide variability in ages at the time of death.

Causes of Death

General causes of death are given in Table 2 and more specific causes of death are listed in Table 3. When “euthanasia” was listed as the cause of death without any other explanation, this was coded “unspecified.” When “euthanasia” was listed with an explanation, that explanation was coded as the cause of death. For two Swissys, two causes of death were listed. In these instances the cause of death is coded with the first listed cause for Table 2, but both causes are listed in Table 3.

The three most common known general causes of death, together accounting for approximately 70% of the deaths, were cancer (26.8%), gastrointestinal conditions (21.4%), and neurologic conditions (21.4%). The most common specific causes of death were bloat (6 Swissys), epilepsy (5), splenic torsion (4), unspecified cancers (4), and unspecified seizures that may or may not represent additional deaths from epilepsy (3).

For the four most common specific causes of death, we also determined the median age of death (of any cause) for Swissys with histories of these serious conditions. For 20 Swissys who had had cancer, the median age of death was 114 months (9 years, 6 months). For 15 Swissys who had had bloat, the median age of death was 112 months (9 years, 4 months). For 14 Swissys who had had splenic torsion, the median age of death was 110 months (9 years, 2 months). For 9 Swissys with idiopathic epilepsy, the median age of death was 45 months (3 years, 9 months).

Number of Conditions

A summary measure of overall health was created by adding up the number of conditions, excluding coloring conditions and reproductive conditions, for each Swissy. The median number of health conditions was 1.0; the mean was 1.6, and the range was from 0 to 11 conditions. Table 4 shows that more than one-quarter of the Swissys had no health conditions and more than half had one or fewer conditions. Not surprisingly, the average number of conditions increased with the age of the Swissy. The youngest quarter had an average of 0.9 conditions, the next quarter 1.4, the next quarter 1.7, and the oldest quarter had an average of 2.3 conditions. There was a significant difference in the average number of health conditions across age groups (p = .000), with the oldest groups having more health conditions than the younger groups.

Most Common Conditions

Table 5 shows the 20 most common conditions for all Swissys, with comments to help readers interpret some of the findings. The survey, Appendix B, is annotated with summary data for those who wish to view an overall "snapshot" of the survey findings, including those conditions that were not reported for any Swissys.

Table 2. General Cause of Death

Cause	Frequency	Percent
Cancer	15	26.8
Gastrointestinal	12	21.4
Neurologic	12	21.4
Kidney	5	8.9
Medical/Surgical	3	5.4
Other	3	5.4
Temperament	2	3.6
Orthopedic	2	3.6
Endocrine	1	1.8
Cardiac	1	1.8
Total	56	100.0

Table 4. Number of health conditions

Number of conditions	Frequency	Percent
0	239	28.3
1	261	30.9
2	151	17.8
3	85	10.0
4	57	6.7
5	23	2.7
6	9	1.1
7	10	1.2
8	6	0.7
9	3	0.4
11	2	0.2
Total	846	100.0

Table 3. Specific Cause of Death

Cause	Frequency	Cause	Frequency
Cancer, unspecified	6	Kidney, glomerulonephritis	1
Cancer, hemangiosarcoma	2	Kidney, kidney failure	1
Cancer, brain tumors	1	Kidney, mesangial proliferative glomerulonephritis	1
Cancer, kidney	1	Kidney, renal dysplasia	1
Cancer, lymphosarcoma	1	Kidney, underdeveloped kidneys	1
Cancer, malignant histiocytosis	1		
Cancer, mast cell tumor	1	Medical/surgical, drug reaction	1
Cancer, osteosarcoma	1	Medical/surgical, exsanguination after surgery	1
Cancer, spinal	1	Medical/surgical, surgical complications	1
GI, bloat	6	Other, drowned	1
GI, splenic torsion	4	Other, accidental	1
GI, unspecified	1	Other, Rocky Mountain Spotted Fever	1
GI, aspiration pneumonia due to megaesophagus	1		
		Temperament, euthanized	2
Neuro, seizures	3		
Neuro, epilepsy	3	Ortho, spinal arthritis	1
Neuro, stroke	2	Ortho, spinal degeneration and epilepsy	1
Neuro, epilepsy and wobblers	1		
Neuro, hydrocephalus	1	Endocrine, pancreatitis	1
Neuro, meningitis	1		
Neuro, spinal cord disease.	1	Cardiac, heart attack	1