2000 BMDCA HEALTH SURVEY

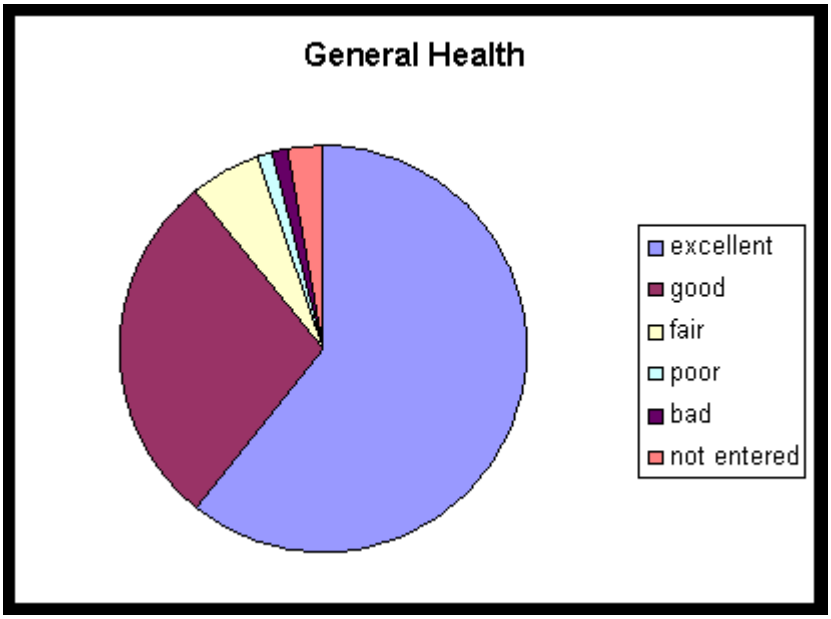
SUMMARY OF DATA

This health survey was designed to tell us the frequency of various diseases in our breed, help us learn the life span of Bernese, and serve as a record of the state of the breed's health in 1999. The survey was used by Dr. George Padgett, a Professor of Veterinary Pathology and researcher in canine genetics, for his presentation in Wisconsin at the 2000 National Specialty. This report summarizes the data.

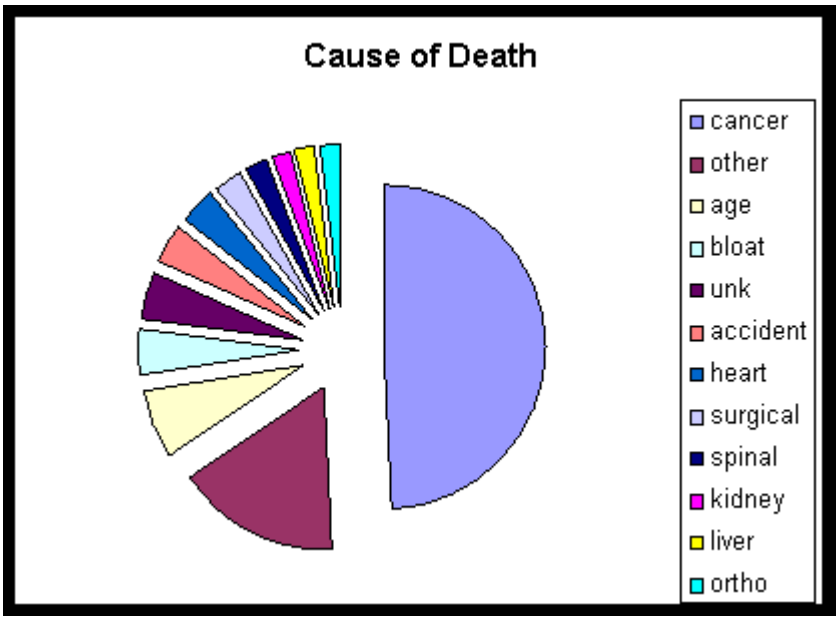
Introduction:

The BMDCA conducted a breed-wide health survey from August, 1999 through January, 2000. During that time 1322 surveys had adequate information and were included in the Summary, only ten surveys submitted had inadequate information for inclusion in the Summary. 1063 surveys were completed on dogs alive in 1996-1997 for inclusion in Dr. George Padgett's talk at the 2000 National Specialty.

This Summary is prepared by the Health Committee of the BMDCA and represents its interpretation of the data. The completed Summary, the raw data, and Dr. Padgett's presentation will appear on the BMDCA website in the near future and be published in a forth-coming issue of the Alpenhorn. This summary will be organized by general information, then by organ system for diseases with a high incidence rate, then diseases with low incidence rates and finally a summary of areas of research interests for the future. It is assumed that a disease with less than 1% incidence, 13 or fewer cases in the survey, are of low incidence and not statistically significant. This Summary will cover the entire survey with no special consideration given to the dogs in Dr. Padgett's subset of surveys.



- 1182 of 1325 (89%) dogs had good or excellent health
- only 35 dogs (3%) were in poor health



- 46 of 1042 dogs exposed to anesthesia (4%) had a moderate or severe reaction to the anesthesia

Longevity Breakdown: (ages are all in months)

Number dead: 261 **Average age** 84.43 **Autopsies:** 97 **Euthanized:** 168

Discounting the 10 accidental deaths, Average age 85.44 months, or 7.1 years

		MALES			FEMALES	
Total	118	**Average age**	76.61	142	**Average age**	91.58
Neutered	70	**Average age**	92.96	105	**Average age**	101.77
Intact	42	**Average age**	59.88	34	**Average age**	67.21
Bred	26	**Average age**	85.19	60	**Average age**	98.52

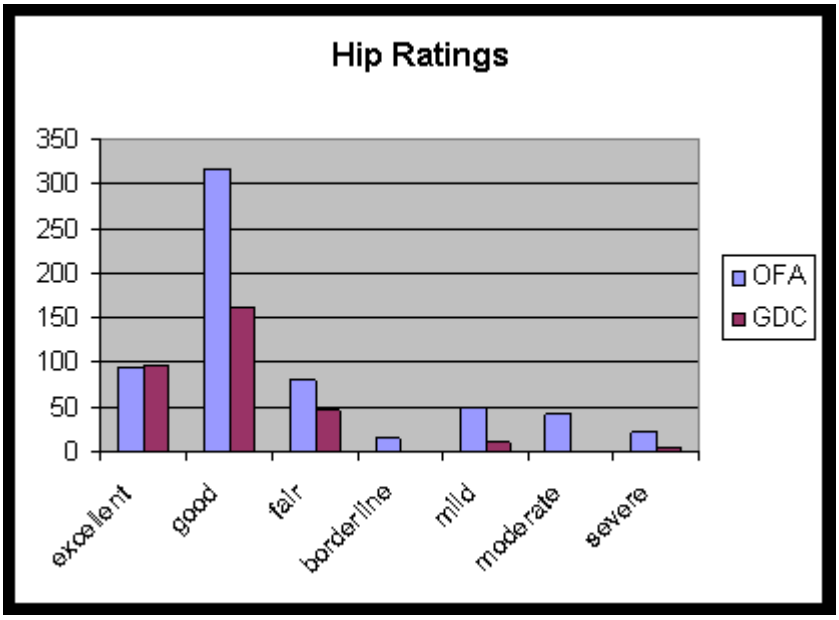
Death from	**Average age at death**	**males**	**females**
age	142.53	138.91	144.5
cancer	94.23	84.9	103.86

heart	61.23	56.14	70.12
bloat	58.27	62.05	41.25

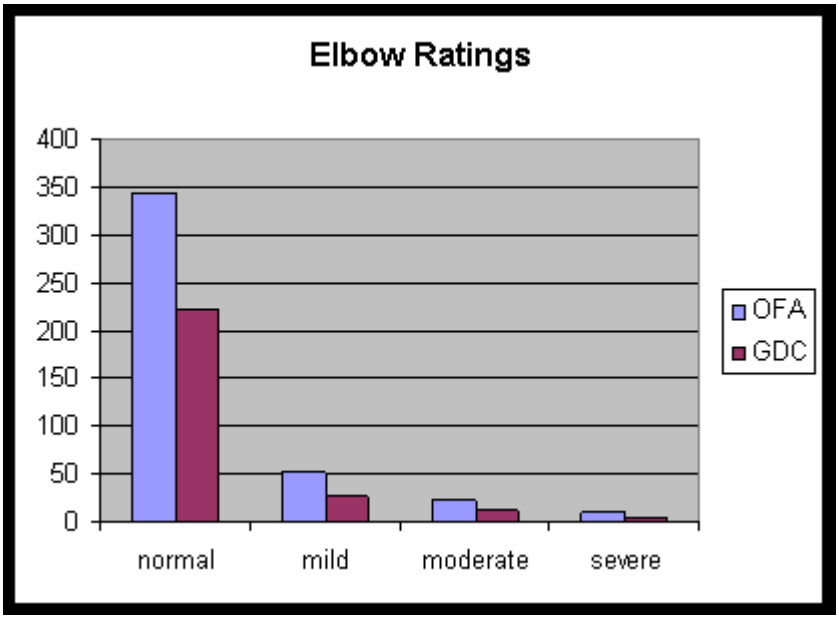
- 97 of 261 expired dogs had autopsies
- 163 of 261 expired dogs were euthanized
- 128 of 261 expired dogs died of cancer with 24 sarcomas and 45 histiocytic tumors
- only 18 of 261 expired dogs died of old age

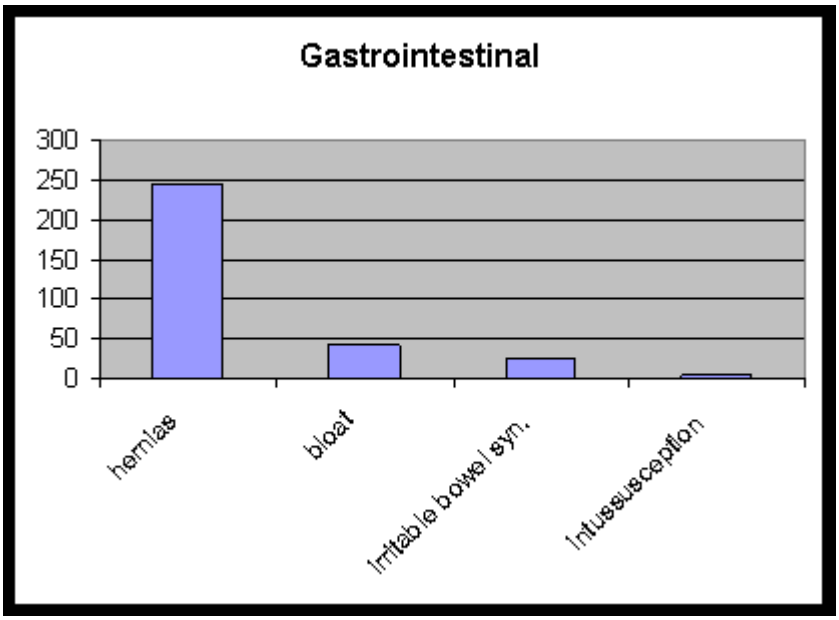
Bone/Joint:

- 998 of 1325 dogs (75%) had their hips evaluated, 805 of 1325 (61%) had their elbows evaluated
- 62 dogs had surgery for hip or elbow problems
- 76 of 1325 dogs (6%) developed Panostitis at an average age of 8 months
- 28 dogs (2%) developed OCD and 55 dogs (4%) developed ACL
- 143 dogs (11%) were diagnosed with arthritis at an average age of 4.3 years

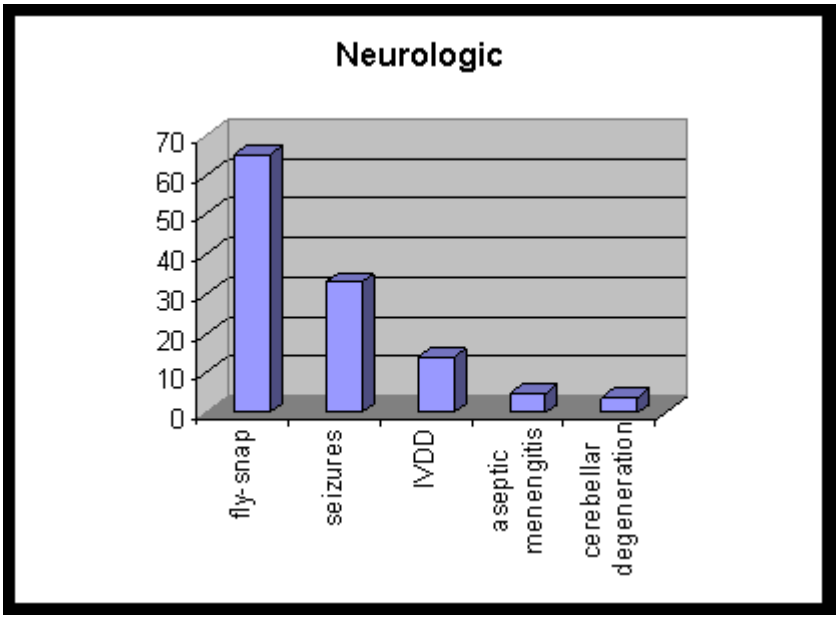


- 121 of 998 (12%) evaluated dogs had hip dysplasia of some extent
- the average PennHIP was 0.51 for both hips, as opposed to a mean of 0.56 from PennHIP
- 144 of 805 evaluated dogs (18%) had an elbow abnormality

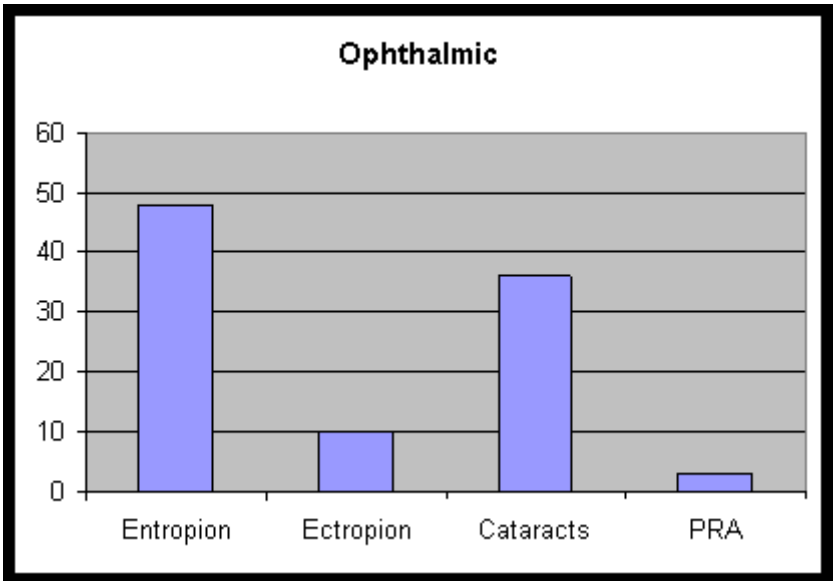




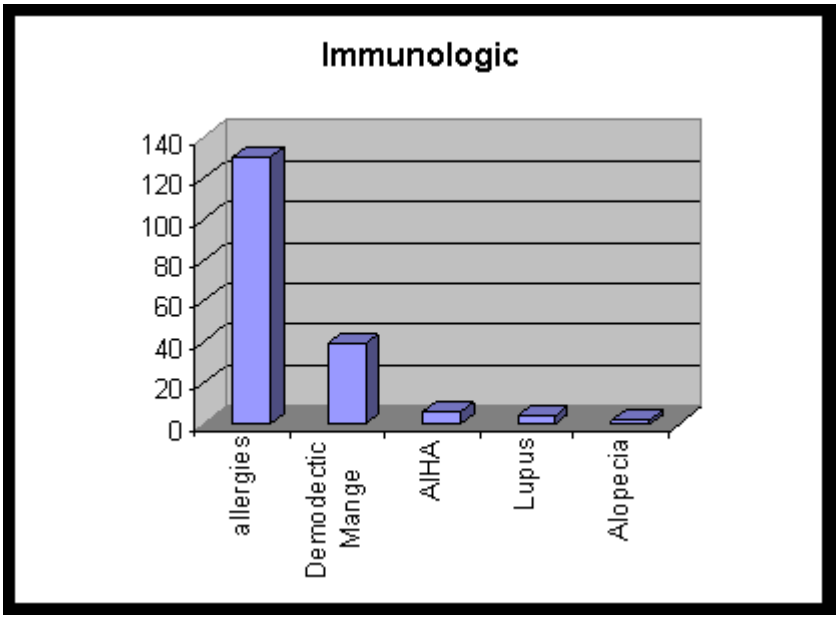
- 245 dogs (18%) had a hernia
- 43 dogs (3%) had 48 episodes of bloat
- average age of bloat was 4 years
- 20 dogs (42%) of dogs with bloat required surgery
- 11 dogs (23%) died from bloat



- 14 dogs (1%) had intervertebral disc disease
- 33 dogs (2.5%) had a seizure disorder
- 65 dogs (5%) had fly-snap syndrome
- meningitis was uncommon



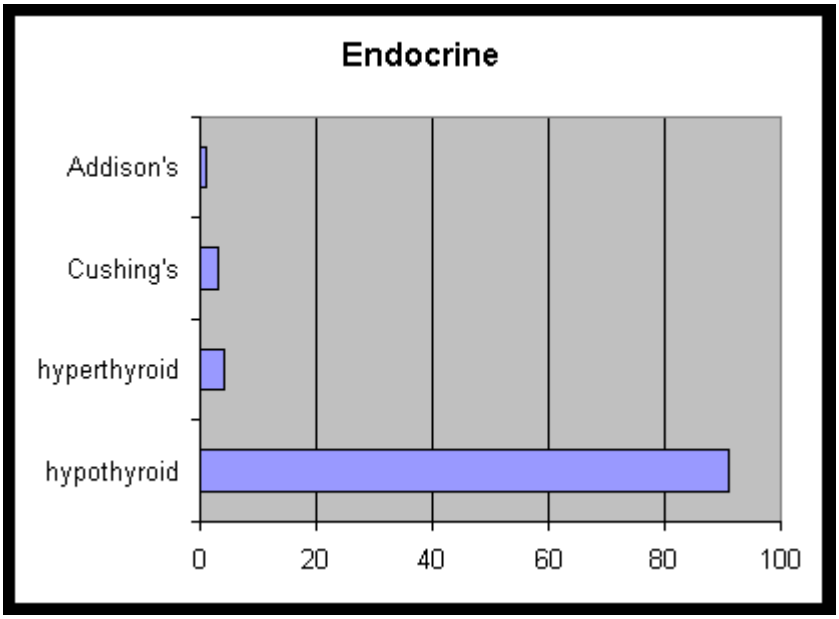
- 45 dogs (3%) had entropion-there were a total of 49 surgeries for entropion
- only 364 dogs (28%) had eye exams
- 36 dogs of 364 examined (10%) had cataracts



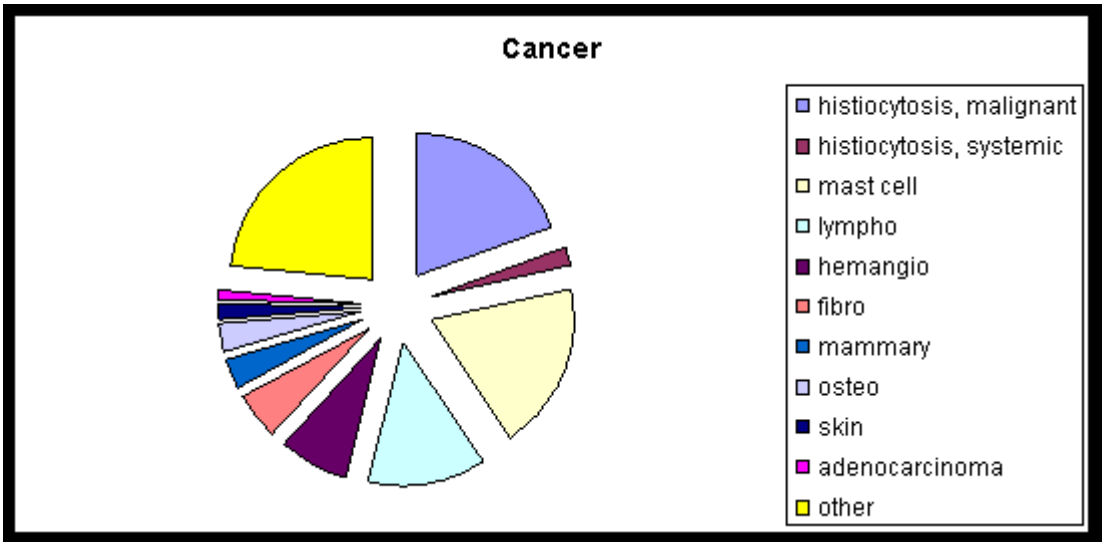
- 130 dogs (10%) had some allergy
- SLE and autoimmune hemolytic anemia were uncommon

  (Note: 2 cases of malignant histiocytosis first presented as AIHA)

- Thrombocytopenic purpura, Polyarteritis nodosa, IgM deficiency were not reported

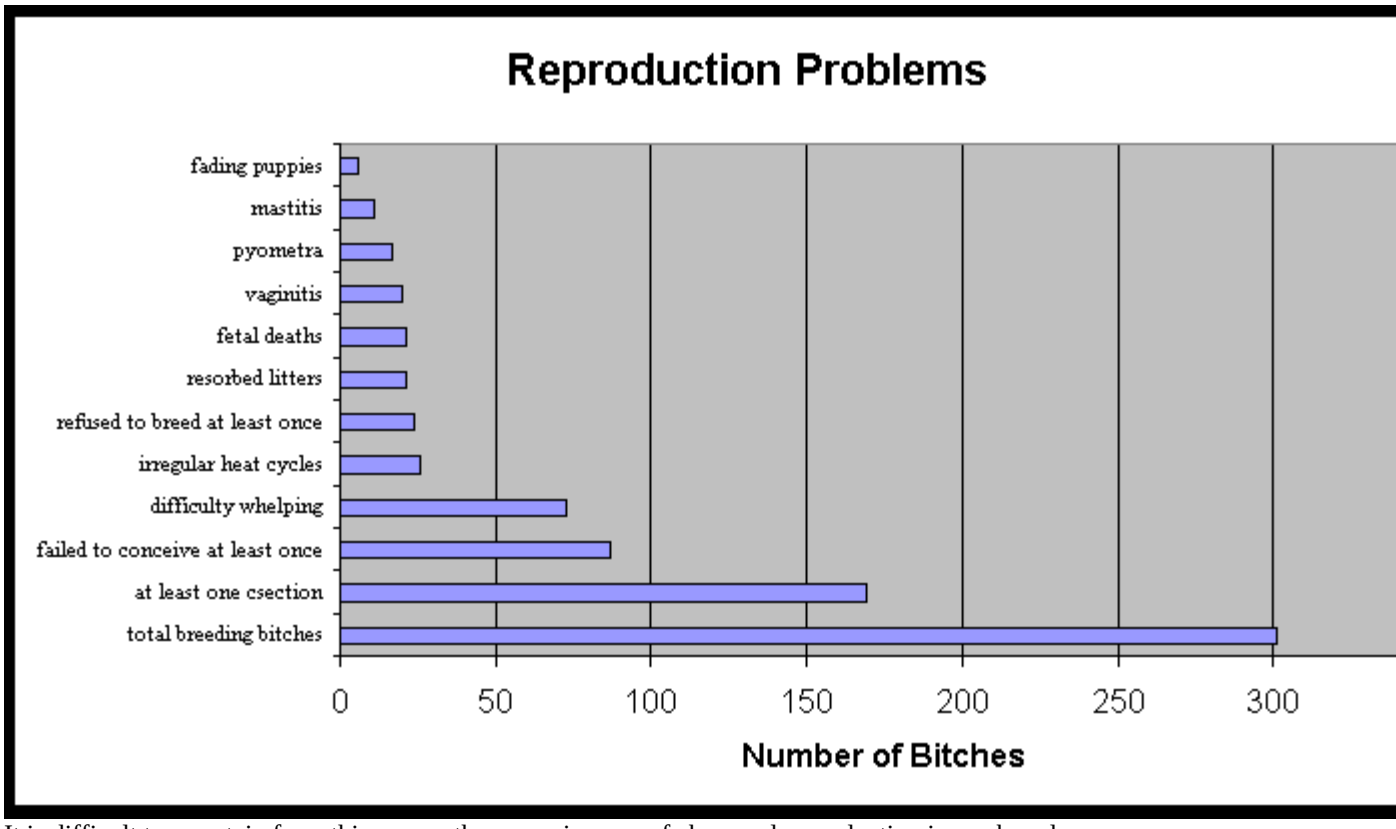


- 92 dogs (7%) had hypothyroidism
- endocrine diseases often associated with autoimmunity were uncommon



- 53 dogs (4%) had some form of histiocytosis-50 (94%) were malignant
- 44 dogs (3%) had some mast cell tumor
- 31 dogs (2%) had lymphoma or lymphosarcoma
- 16% of all dogs had some kind of tumor

Cause of Death	Number of Dogs	Age in Months
Malignant histiocytosis	43	89.7
Lymphosarcoma	12	78
Hemangiosarcoma	7	113
Lymphoma	7	98.5
Osteosarcoma	6	93.3
Mast cell	5	81.7



It is difficult to ascertain from this survey the pervasiveness of abnormal reproduction in our breed. However, based on the information derived, there appear to be a significant number of animals who do not reproduce without a problem of some sort.

301 brood bitches had a total of 516 litters

- 56.1% (169) had at least one csection
- 28.9% of brood bitches failed to conceive (87 individuals a total of 166 times.)
- 24.2% of brood bitches had difficulty whelping due to primary or secondary inertia as well as malpositioned pups
- 8.6% of brood bitches had irregular heat cycles.
- 7.9% of brood bitches refused to breed
- 6.7% of brood bitches resorbed litters (21 bitches resorbed 23.5 litters.)
- 6.6% of brood bitches developed vaginitis
- 5.5% of brood bitches developed pyometra
- 3.5% of brood bitches developed mastitis
- among the 516 litters reported there were 21 fetal deaths and 6 fading puppies

109 breeding males

- 3.6% of the breeding males were sterile
- 7.2% of breeding males had abnormal sperm
- 14.6% of breeding males reported prostate problems. The breeding males with prostate problems represented 55% of the total reported prostate problems.

Breeders are encouraged to keep accurate records on details of breedings and whelpings which might be useful later if any specific area of reproduction appears to warrant further study due to suspected increase of incidence in the breed.

Notes:

Von Willebrand's disease give an excellent example of some of the challenges faced in interpreting the results of this survey. We had 8 reported cases out of 1322 dogs, which is a very low incidence. We had only 23 dogs tested for vWD, and 8 reported cases which might indicate a rate of vWD of 35% which is horrible. But it might be reasonable to assume that only people who have experienced vWD or who suspect it get the test done. So what can we conclude from these results? Probably very little other than vWD does exist in the breed. But with so few dogs tested, it is impossible to deduce more than that, other than the need for vigilance. We all need to learn more about the disease, how it is inherited, and what we can do to help prevent it from becoming a big problem in the breed.

The Health Committee has determined that the following are areas of concern and warrant an effort to study these diseases in Bernese Mountain Dogs:

1. age at death is too low
2. there is an excess of cancers in this breed particularly sarcomas, histiocytomas, mast cell tumors and lymphomas
3. hip and elbow disease continues to plague the breed even though a large percentage of dogs are being evaluated. OCD and ACL are also problems within the breed but to a lesser extent
4. Hypothyroidism
5. Reactions to anesthesia are significant. The exact nature of these reactions and their severity need to be further assessed.
6. The mortality rate from bloat is excessive. The incidence of bloat does not appear to be high but the rate of death and surgery are high. This may represent a lack of information on the part of dog owners and veterinarians and is an educational opportunity for the Health Committee.

The following are areas that have substantial incidence within the breed but are not felt to warrant an aggressive research effort at this time:

1. Fly snap syndrome
2. Panosteitis
3. Cataracts
4. Allergies-study of the nature of these allergies to look for trends may be warranted

The following diseases/syndromes have historically been associated with the Bernese Mountain Dog but had a very low incidence (<1%) in this survey. Whether this is due to underreporting or errors in historical assumptions can not be determined from the data submitted.

1. Spinal myelopathy
2. Cerebellar degeneration
3. Aseptic meningitis
4. Hypomyelination (Tremblers)
5. PRA
6. Lupus
7. VWD
8. Autoimmune hemolytic anemia
9. Wobblers
10. Renal disease