Cytogenetic Investigation of Canine Soft Tissue Sarcomas and Histiocytic Malignancies

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INFORMED CONSENT FOR PARTICIPANTS

BERNESE MOUNTAIN DOG

Please initial the bottom of pages 1-6 to acknowledge that you have read and understand the content and complete pages 5 and 6. All six pages should be submitted to Dr. Breen with the samples being submitted.

1) Who is conducting the study ?

This study involves research being conducted by Dr. Matthew Breen at the College of Veterinary Medicine, North Carolina State University.

2) Why is this study being done ?

It has been established that non-random chromosome aberrations are characteristic of specific types of many different human cancers. The knowledge of such aberrations has identified areas of the human genome to be targeted for further research. In the dog the extent and identity of chromosome aberrations associated with specific cancers are still largely unknown. Soft tissue sarcomas in dogs are relatively rare, occurring at a frequency of approximately 1%. However, in certain breeds, such as the Flat-Coated Retriever and Bernese Mountain Dog, soft tissue sarcomas account for up to 50% of all malignant tumors and thus represent a serious health and welfare issue for those breeds. Histiocytic malignancies and hemangiosarcoma are also prevalent in these two breeds as well as Golden Retrievers, German Shepherds and Briards. These tumors are difficult to classify by conventional methods alone and so attention is required to develop improved modes of diagnosis. In human patients sarcomas have been demonstrated to be associated with specific chromosomal aberrations that have been shown to have both diagnostic and prognostic significance. This project is using major recent advances in canine molecular cytogenetics to identify recurrent chromosome aberrations associated with canine soft tissue sarcomas, in particular those of histiocytic origin. This project will identify areas of the canine genome associated with such cancers and further investigation of genes identified during the project.

Only Flat-Coated Retrievers, Bernese Mountain Dogs, Golden Retrievers, German Shepherds Briards and Australian Shepherds are eligible for inclusion into this study <u>without</u> prior approval of the P.I.

3) How will this study involve my dog ?

If your dog is diagnosed with a soft tissue sarcoma or histiocytic maligancy (diagnosis must be made by a licensed veterinarian) or is a first-degree relative (parent, sibling, offspring) of a dog diagnosed with a soft tissue sarcoma or histiocytic maligancy, we are asking for you to allow your dog to participate in this study.

For dogs diagnosed with a soft tissue sarcoma or histiocytic malignancy, participation will involve obtaining a small blood sample (10ml) and two samples of the tumor, one in formalin and one in a sterile container. All three samples will be used for research purposes. In general your veterinarian will take a sample of the tumor as part of the routine diagnostic procedure. We ask that some of this tumor be also sent to us for use in this study. We also require a copy of the official pedigree of your dog and a copy of any diagnostic pathology report relating to the tumor.

For dogs with a first-degree relative that has been diagnosed with soft tissue sarcoma, hemangiosarcoma or histiocytic malignancy, participation will require the submission of a small EDTA blood sample (10ml), which may be taken by your veterinarian during your dog's annual health examination, a copy of the official pedigree and a copy of the pathology report relating to the diagnosis of the tumor in the first degree relative (you should be able to obtain this from your veterinarian).

NO ADDITIONAL TISSUE WILL BE REQUIRED FROM RELATIVES OF CANCER PATIENTS UNLESS THEY LATER DEVELOP THEIR OWN SOFT TISSUE SARCOMA OR HISTIOCYTIC MALIGNANCY. AT THAT TIME WE ASK THAT YOU PLEASE CONTACT THE LAB TO NOTIFY US OF THE CHANGE IN HEALTH STATUS OF YOUR DOG AND ALSO TO CONSIDER SUBMITTING SAMPLES OF YOUR OWN DOG'S TUMOR AND BLOOD.

4) What is the possible discomfort or risk of allowing my dog to join the study ?

Participation in this study will pose no additional discomfort or risk to your dog beyond that associated with the elective surgical procedure for tumor biopsy or removal. There are no foreseeable risks to the health, comfort, or lifespan of your dog that may arise from the use of the donated cells and tissues in the laboratory.

5) What are the potential benefits, if any, from joining this study ?

Individual dogs will derive no direct benefit from participating in this study. Their care and treatment will be no different to that provided to cancer patients that are not included in this study. The results from this study may improve the outcome and quality of life of dogs with cancer in the future. Moreover, an improved understanding of the genetic basis of canine cancer may also lead to recommendations for judicious breeding practices and prevention strategies.

6) How long will the study continue ?

The study is part of an ongoing study and will continue until further notice.

7) What will happen to the information the study keeps on my dog?

Donation of blood and tumor tissues from your dog will remain strictly confidential. Any publication or communication of results of any and all experiments performed with these materials will protect the anonymity of the donor. Funding agencies may inspect the records for accuracy and scientific integrity.

8) What will happen if I change my mind ?

Allowing your dog to participate in this study is voluntary. However, by this consent, you agree to relinquish the rights to the cells, tissues, and any experimental results derived from their use for this study. If you decide later to withdraw your dog from the study we ask that you notify the Principal Investigator in writing and state the reasons for withdrawal.

9) Are there reasons why my dog may be excluded from the research?

If the investigators cannot confirm the diagnosis of soft tissue sarcoma using routine diagnostic procedures (analysis of the biopsy or additional special tests on the tumor), or if samples are acquired or shipped in a manner inconsistent with that described in the Procedures for Enrollment (attached), your dog may be excluded from the study. In addition, the principal investigator has the right to terminate this study at any time for any reason.

10) Are there costs that I will be expected to pay?

You will be responsible for all the customary charges from your veterinarian, including those incurred for diagnosis and treatment of your dog. The study has no funding to pay for any portion of your dog's treatment or additional tests. Owners who choose to donate blood and the surgically-removed tumors from their animals will have no financial obligations to NCSU-CVM for use of these materials for the research investigations described herein. You will be responsible for ensuring that the blood and tumor samples are sent to Dr. Breen by overnight courier and the cost associated with this.

11) How many dogs will be included in this study?

We anticipate recruiting at least 100 eligible tumor samples, and paired blood samples, together with their relatives, during this study.

12) What will my dog's blood and tumor sample be used for?

The tumor sample submitted in formalin will be used to verify the diagnosis and stage of the tumor. The tumor sample submitted in a sterile tube will be used obtain tumor DNA and tumor cells, which will allow us to identify chromosome aberrations associated with the tumor. The DNA obtained from the blood sample will act as a normal reference sample for that animal and will also be used to identify inherited risk factors. This will help us identify genes that impact the prognosis to conventional treatments and will generate information that may lead to strategies for prevention, as well as to development of new, more effective treatments.

13) For how long will my dog's samples be used?

In addition to using your sample(s) for this study, we would like to be able to use your dog's samples for future studies for which they qualify and also to share your samples with other researchers who are funded by animal health-related organizations and who also seek to improve the health of dogs and humans. These studies may include assessment of new genes that may be unknown at this time and development of treatments based on characteristics peculiar to these tumors.

Please indicate below (with your initials) your decision regarding the use of your samples. We encourage you to check both options so that maximum benefit for canine health may be derived from the availability of samples from your dog.

_____ I approve the use of my sample(s) for this study, as well as for future studies by Drs. Breen and Cullen.
_____ I approve the sharing of my sample(s) with other P.I.'s, who are funded by health-related organizations to improve the health of dogs and humans.

14) How will the identity of my dog's samples be protected?

The identity of dogs that participate in this study will not be shared with any registry. The Investigators will comply with all the customary practices sponsoring agencies to protect the identity of every dog that participates in the study. However, you can choose to waive this and allow the Investigators to include your dog's call name (without identifying last name or kennel name) and/or picture to be included in newsletters or other informational materials.

_____ I approve the use of my dog's name and/or picture for newsletters, web-based information, or other informational materials.
_____ I do not approve the use of my dog's name and/or picture for newsletters, web-based information, or other informational materials.
_____ I reserve the right to approve the use of my dog's name and/or picture for newsletters, web-based information, or other informational materials. If the need arises, I agree that the Investigators may contact me to explain the nature of the materials and I may choose to allow disclosure of my dog's name and/or picture at that time.

15) With whom do I speak if I have questions about the study?

To obtain more information about this study, please contact Dr. Matthew Breen, the Principal Investigator of the study, preferably via e-mail at info@BreenLab.org

or by telephoning the Canine Genomics Cancer Submission Line at **919-513-1466**,

or by regular mail at College of Veterinary Medicine, North Carolina State University, 1060 William Moore Drive, Raleigh, 27607.

We will endeavor to reply to your e-mail/call within 24 hours.

NOTE: Bernese Mountain Dog owners are encourages also to contact the BMD Breed Liaison, Pat Long at pat@bmdinfo.com

I, _____ (enter name) have read this Consent Form. and the nature of the research have been made clear to me. I have been given a copy of this form. I have had an opportunity to ask questions about the project and understand that I can ask questions at any time. I agree to allow my Bernese Mountain Dog named _____, to participate in this study. Furthermore, I agree to donate to Dr. Matthew Breen of the College of Veterinary Medicine at North Carolina State University blood and tumor tissues removed from my dog during the normal course of diagnosis and treatment for its disease. I understand that these tissues will be used in studies of canine cancer, and would otherwise be discarded. I also understand that by signing this Consent Form, I give up all future claims to these tissues and any experimental results that may be derived from their investigational use. If I have any questions or problems that I feel are related to the study, I can contact the Principal Investigator whose name is on this form.

Signature of Owner or Agent _____

Date ____ / ____ / _____ Breed of dog BERNESE MOUNTAIN DOG

Call Name of dog _____

AKC Registration number _____

Sex of dog _____ Date of birth ____ / ____ / _____ Age at submission _____

Name and address of owner (please print clearly)

Telephone : ( ) Fax: ( ) E-mail:

Initials _____

PLEASE COMPLETE EITHER SECTION A OR B

A. My dog is being submitted as a cancer patient YES / NO (please circle as appropriate) with a diagnosis of (please check appropriate box)

- ☐ Soft tissue sarcoma
- ☐ Histiocytic malignancy (Malignant histiocytosis, histiocytic sarcoma)

B. My dog is being submitted as a _____ (please enter relationship to dog in study already)

of _____(please enter name of the dog already in this study)

Person Obtaining Consent _____
(Attending veterinarian or representative)

Date ____ / ____ / ____

Name and address of Veterinarian (please print clearly)

Telephone : ( ) Fax : ( ) E-mail:

PLEASE RETURN THIS FORM AND ALL SAMPLES TO:

Breen-Lab Soft Tissue Sarcoma Project
NCSU College of Veterinary Medicine
CVM Research Building (Room 330)
1060 William Moore Drive
Raleigh, NC 27607
Tel. 919-513-1466
Fax: 919-513-7301