

**PLEASE PLACE THIS SHEET IN THE FILE OF ANY FLAT-COATED RETRIEVER
OR BERNESE MOUNTAIN DOG PATIENTS FOR REFERENCE**

**Molecular Cytogenetic Investigation of Soft Tissue Sarcoma
Sample Submission Requirements**

In Flat-Coated Retrievers and Bernese Mountain Dogs, soft tissue sarcomas account for up to 50% of all malignant tumors and represent a serious health threat to these breeds. This project is using sophisticated methods in canine molecular cytogenetics to identify recurrent chromosomal aberrations associated with canine soft tissue sarcomas, in particular those of histiocytic origin. The project aims to identify areas of the canine genome associated with such cancers for further investigation at the sub-chromosomal level.

PARTICIPANT REQUIREMENTS:

Flat-Coated Retrievers and Bernese Mountain Dogs with known pedigrees can participate in this study. Dogs from other breeds require prior approval from the principal investigator. The affected dog can be male or female, intact or neutered. ***Dogs that have undergone chemotherapy or radiation treatment can NOT participate in this study.***

Send all samples to: Dr. Matthew Breen, Soft Tissue Sarcoma Project, NCSU College of Veterinary Medicine, CVM Research Building, 4700 Hillsborough Street, Raleigh, NC 27606
Phone: 919-513-1467(office), 919-513-1466 (lab). Fax: 919-513-7301. E-mail: CVM_K9Genomics@ncsu.edu.

INSTRUCTIONS TO VETERINARIANS

This study will not provide a pathology report, so a biopsy should be submitted to a regular pathology service for diagnosis. Please either fax a copy of the pathology report, or provide the owner with a copy of the pathology report to be sent. A definitive diagnosis is not a prerequisite for sample submission. If a soft tissue sarcoma is suspected, tumor samples will be accepted; Dr. Breen will determine whether the tumor qualifies for the study.

SPECIFIC INSTRUCTIONS FOR SAMPLE SUBMISSION:

•**Peripheral blood samples:** 10-20 ml of blood should be divided between at least two EDTA tubes and mixed well.

•**Non-fixed tumor samples:** Fresh, sterile, viable tumor samples are required for this study; the minimum size required is 5 mm x 3 mm x 3 mm. It is imperative that samples be obtained from viable areas, as necrosis will limit sample usage. In addition, adjoining areas of normal tissue should be avoided. Sterile, viable, tumor-specific tissue allows for the establishment of cell lines to be used for the analysis of chromosomal changes associated with carcinogenesis. This ***sample should be sent in a sterile tube***. Ideally, the tube should contain transport medium, which can be provided with sufficient notice; otherwise, the biopsy should be submitted in an empty sterile tube. ***Tubes must be labeled to indicate the origin of the tumor tissue*** (affected organ, etc.).

Collection of viable tissue requires exceptional attention to detail and aseptic technique. The excised, ***sterile tumor must be placed in a sterile container***, ideally containing sterile transport medium. If the tumor sample is too large to fit in the container, it can be cut into smaller sections using sterile instruments while the tumor is placed on a sterile surface (e.g., a sterile sponge or the surgical drape). The ***tissue must never contact a non-sterile surface*** (e.g., the operating table or the instrument table). ***Sterile saline is unacceptable as a transport medium*** because the lack of a pH buffer makes the solution acidify rapidly, diminishing the viability of the tissue.

•**Fixed tumor samples:** A piece of the tumor must be submitted in formalin so that independent pathology can be performed. As for the non-fixed sample, the minimum size is 5 mm x 3 mm x 3 mm. ***Fixed and unfixed samples must be matched (from the same tumor, organ, etc.), and tubes must be labeled with the area of origin.***

•**Shipping:** If blood is shipped separately from tumor samples, it can be sent by regular mail. If blood is shipped with the tumor samples, please isolate the blood tubes in a sealed, impermeable (e.g., Ziplock) bag. The tubes with fixed and non-fixed tumor samples should be placed on ice (or a suitable ice pack) immediately and shipped overnight (e.g., via Federal Express or DHL), observing all regulations for shipping viable tissues. Please contact Dr. Breen to advise that a parcel is being sent so that arrangements can be made for sample processing. Samples must be received within 24 hrs of shipping; samples must be shipped Monday-Thursday for Tuesday-Friday deliveries.

Supporting Documentation: A ***Consent Form and a 5-generation pedigree are required***; these can be sent separately from tumor samples.

For more information: For Flat-Coated Retrievers, contact FCR-Cancer-Support@yahoogroups.com.
For BMDs, contact Kevin Curran (BMDCA Health Committee Chair) at kcurran@tyler.net, phone 903-842-2150.

Sample Submission Checklist: ___ Fixed sample ___ Non-fixed sample ___ Blood tubes ___ Ice or ice packs

Supporting Documentation (can be submitted separately): ___ Consent Form ___ Pedigree