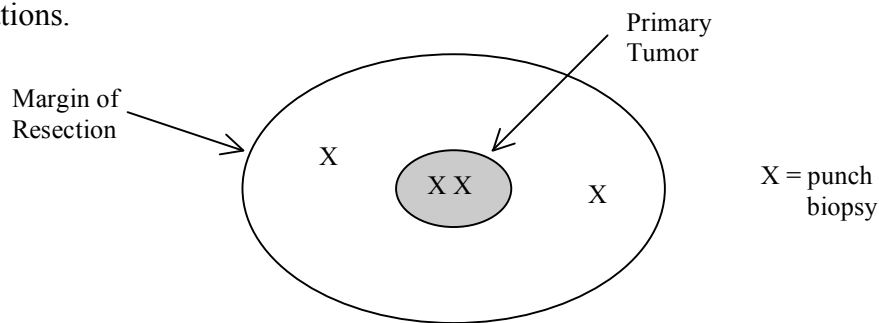


Analysis of the Prevalence of *c-Kit* Mutations in Canine Mast Cell Tumors

The purpose of the proposed study is to perform an extensive investigation into the prevalence of activating mutations in the proto-oncogene *c-kit* in canine mast cell tumors. We have found that 30-50% of Grade II and III mast cell tumors have a mutation in this gene. However, we do not know how common the mutations are in particular breeds. We also do not know how the presence of the mutation influences tumor behavior. However, we hypothesize that these mutations are associated with aggressive biologic behavior of the mast cell tumor. For the prospective study on *c-kit* mutations, samples of tissue from three separate locations are needed:

1. Primary tumor
2. Skin adjacent to the primary tumor
3. Normal tissue distant from the tumor (this can also be skin)

Very little tissue is needed for analysis. Typically, we need two 2 mm punch biopsies from the center of the primary tumor, two from the skin contained in the tumor resection, and two from distant locations.



It is important that when biopsy samples are obtained, tumor cells do not contaminate the normal tissue. Therefore, whenever possible, the distant biopsy should be performed first, then the biopsy of skin in the tumor resection, and last the tumor itself. Each specimen is placed into an individual red top tube and stored in the refrigerator until they are mailed. The tumor samples can be sent by regular mail (they do NOT need to be sent on ice) to the address at the end of these instructions.

In addition to analyzing the tumors for mutations, we will also need historical information on the patient and the tumor. This information is critical for final analysis of the data and correlation of mutations with biologic behavior of mast cell tumors, as well as for establishment of a mast cell tumor registry. There is a set of form pages that will need to be filled out with each submission. It is also important that we receive a copy of the final biopsy report. Depending on the number of tumor samples to be analyzed at any given time, we anticipate that information with regard to mutations will be provided within 2 weeks of tumor submission.

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Veterinarian Name _____

Clinic _____

Address: _____

Phone _____ Fax _____ E-mail _____

Owner Name _____ Patient Name _____

Age _____ Sex _____ Breed _____ Date of Birth _____

Anatomical location of the tumor _____

Size of tumor _____

How long was the tumor present prior to removal? _____

Please describe any clinical signs associated with the tumor:

Is this the first mast cell tumor removed from this patient? Yes No

If no, please provide additional information regarding previous tumors, including the grade of each tumor, location of each tumor, the approximate dates of removal, and any therapies other than surgery that were administered.

Did the patient have evidence of lymph node or distant metastasis at the time of tumor removal?
Yes No

If yes, please provide additional information with regard to the location of and extent of metastatic disease

Is this patient currently undergoing chemotherapy or radiation therapy? Yes No

If yes, please provide details regarding the current therapeutic protocol.

If the patient has a history of other tumors (non-mast cell related) or other disease processes, please describe below.

Veterinarian or owner: Please submit a copy of the biopsy report to Cheryl London (FAX to 614-292-6473)

Tumor grade _____

If you have any questions, feel free to e-mail the RRCUS Health and Genetics Cancer Liaison, Cynthia Willson, at pingoraRR@yahoo.com or at 919.309.7676.