Injection-site sarcomas or mammary tumors in cats

Blue Buffalo Clinical Trials Office CVM-ClinicalTrials@osu.edu

Surgery is the most common treatment used for skin and mammary cancer in cats. The pathologist determines whether surgery has removed all cancer cells many days after the procedure. We need rapid and accurate testing during surgery to detect residual cancer to decrease cancer recurrence and the necessity for repeated surgery or treatments.

Polarization-sensitive optical coherence tomography (PS-OCT) is an imaging technology that uses near-infrared light waves to generate real-time, high-resolution images of the microscopic structure of tissues, specifically looking at the organization of the tissues. We have performed some initial evaluations using this optical coherence tomography for detection of residual cancer, which has had very encouraging results.

Cats will undergo surgery to remove their tumor, following removal the tumor will be scanned with polarization sensitive optical coherence tomography to assess the surgical margins for residual cancer cells. The specimen will then undergo thorough histopathological assessment.

The overall purpose of the study is to evaluate a new imaging method to detect cancer cells left behind following the removal of injection-site sarcomas (FISS) and mammary tumors in client-owned cats undergoing surgery. This technology has been used successfully in human breast cancer surgery, providing microscopic assessment of surgical margins within minutes. Identifying a rapid and thorough imaging method to detect any remaining cancer cells during surgery for sarcomas especially FISS and mammary tumors will support targeted treatment management decisions and improve outcomes for cats and dogs with cancer.

Client Compensation:
Pet owners are financially responsible for all costs associated with evaluation and surgery. Each pet owner receiving surgery at OSU will receive $70 credit to their account to cover the costs of the histopathology evaluation.

Potential Medical Benefits:
This research will open the door to veterinarians having the technology to allow accurate real-time interpretation of surgical margins to minimize the necessity for additional surgeries or other treatments and decrease tumor recurrence.

Potential Medical Risks:
Risks associated with surgery and anesthesia.

What qualifies my pet for enrollment?

Inclusion Criteria:

Eligible patients (any breed of cat) must meet all the following:

- Have cytology or histopathology confirmation of soft tissue sarcoma or injection site sarcoma or mammary tumor.
- Undergo surgical excision of sarcoma or mammary tumor at OSU.

Exclusion Criteria:

- Other tumors suspected.

Diagnosis/Condition Being Studied: Injection-site sarcomas and mammary cancer in cats.

Intervention to Be Studied: Polarization-sensitive optical coherence tomography (PS-OCT)

Primary Outcome:
Accuracy in detecting residual cancer in cats following tumor removal.

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Primary Outcome Measure:
Polarization-sensitive optical coherence tomography (PS-OCT) is an imaging technology that uses near-infrared light waves to generate real-time, high-resolution images of the microscopic structure of tissues, specifically looking at the organization of the tissues. We have performed some initial evaluations using this optical coherence tomography for the detection of residual cancer.

Primary Outcome Endpoint:
Assessment of the accuracy of detecting residual cancer using PS-OCT (a new type of optical coherence tomography) in cats following tumor removal.

Contact:

Dr. Laura Selmic
Email: selmic.1@osu.edu

If you believe your pet may be eligible for this study, please fill out a pre-screening questionnaire.