**Purpose**

- Apocrine gland anal sac adenocarcinoma is the most common malignant tumor of the anal sac in dogs. Currently, fine needle aspirates or histopathology with surgical removal of local lymph nodes is necessary to definitively diagnose tumor spread. Multiple imaging modalities have been used to evaluate for metastasis in anal sac adenocarcinoma, but no standardized approach has been established. The aim of this study is to determine whether the combination of computed tomography (CT) and positron emission tomography (PET) is more accurate for identification of tumor as well as tumor spread than CT alone.

**Participation Requirements**

- Dog diagnosed with an anal sac adenocarcinoma diagnosed in the anal sac or local lymph node with owners that are pursuing a CT scan for either surgical or radiation planning
- Dogs will need bloodwork, chest x-rays, and a physical examination done to determine eligibility.

**Procedures**

- A PET scan followed by a CT scan under anesthesia
- Sampling (either by fine needle aspirate or submission of surgically removed tissues for histopathology) of abnormalities identified on the PET and/or CT scan when possible

**NOTE:** The CT scan for surgical or radiation planning purposes and sampling of abnormalities are standard for this cancer type.

**Owner Responsibilities**

- Keep all scheduled appointments
- Allow your dog to stay overnight at the VMTH following the PET scan
- Cover costs associated with the overnight stay, baseline diagnostics prior to enrollment including obtaining a diagnosis and any additional recommended diagnostics (such as lymph node fine needle aspirates) or therapy such as surgery, radiation, and/or systemic therapy as well as patient care as these costs are not a part of this study.
- Cover medical costs if an adverse event does occur during the study

**Benefits**

- The study will cover costs of the CT and the PET scans as well as the associated anesthetic episode.
- Participation will give your dog access to the most advanced imaging techniques used to assess local tumor extent and lymph node spread.
- Trial results may add to what we know about the uses of the CT/PET combination and potentially limit unnecessary sampling and/or removal of lymph nodes if CT and PET are found to be accurate predictors of metastasis. This information would allow us to better guide medical care for your dog and future dogs affected with the same disease.