Diffusion weighted MR imaging in the differentiation between metastatic and benign regional lymph nodes in dogs with head and neck cancer

Purpose
To assess the ability of magnetic resonance imaging to differentiate between benign and metastatic lymph nodes

Background
Current methods of diagnosing and staging head and neck neoplasia in dogs are invasive, and the biopsy samples required to determine if the cancer has spread to surrounding lymph nodes can be difficult to obtain. This study aims to characterize the appearance of regional lymph nodes using diffusion weighted MR sequences in a group of canine patients with confirmed head or neck neoplasia, and evaluate the ability of these sequences to differentiate non-metastatic from metastatic lymph nodes. If successful, this method could provide a non-invasive diagnostic option that does not use ionizing radiation. Such a method of lymph node characterization could prove useful in the staging of tumors, leading to improved prediction of expected outcome and appropriate treatment recommendations.

Eligibility
• Must have a biopsy-confirmed diagnosis of non-lymphoma head or neck neoplasia.
• Must have at least one palpably enlarged mandibular and/or medial retropharyngeal lymph node. Palpably enlarged lymph nodes will be defined as those nodes deemed subjectively enlarged by two independent oncologists, and will measure greater than 1.5cm in the largest dimension.

Exclusion Criteria
Dogs with less than 6 weeks of expected survival or dogs with known cardiac, renal, or liver failure that would contraindicate general anesthesia

Study Design
Under general anesthesia, enrolled dogs will undergo magnetic resonance imaging and a lymph node biopsy and/or fine needle aspirate samples will be taken.

Compensation
An oncology consultation, lymph node biopsy, and MRI scan under general anesthesia will be provided to enrolled dogs at no cost. This imaging and consultation will provide owners with more information about their dog’s prognosis and potential treatment options.

Contact
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If your query is urgent, please call the Small Animal Hospital on (540) 231-4621 and ask for the oncologist on duty.