

# VSSO Vision 2020 Scientific Abstract Submission

Please provide the following information in format as it would appear in a scientific journal

Lymph node metastasis in dogs with thyroid carcinoma – a retrospective study  
OT Skinner<sup>1</sup>, CHM Souza<sup>2</sup>, Kim DY<sup>3</sup>

<sup>1</sup>Department of Veterinary Medicine and Surgery, University of Missouri, Columbia, MO

<sup>2</sup>Department of Small Animal Clinical Sciences, University of Florida, Gainesville, FL

<sup>3</sup>Department of Veterinary Pathology, University of Missouri, Columbia, MO

## **Abstract:**

**Introduction:** Thyroid carcinomas can metastasize to lymph nodes; however, clinical staging of lymph nodes has been inconsistent in dogs. The purpose of this study was to retrospectively assess the rate of lymph node metastasis identified in dogs with thyroid carcinoma undergoing surgery.

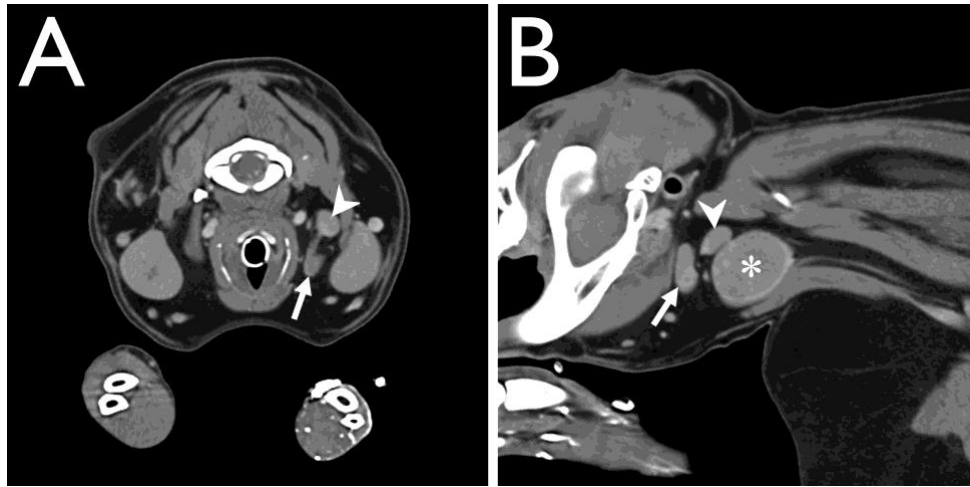
**Materials & methods:** Medical records between July 2015 and October 2019 at the Universities of Missouri and Florida were reviewed. Dogs that underwent thyroidectomy with concurrent elective medial retropharyngeal (MRP) lymphadenectomy +/- deep cervical lymphadenectomy were included. Tumor site, pre-operative staging, and histopathological findings were recorded.

**Results:** Twenty-two dogs were included with 26 total thyroid carcinomas. Primary tumors were lateralized in 19 dogs, bilateral in 2, and bilateral and midline ectopic in one dog. All dogs underwent ipsilateral MRP resection (including bilateral resection in dogs with bilateral tumors). Three contralateral MRP lymph nodes were excised from dogs with unilateral carcinomas. Four deep cervical lymph nodes and one superficial cervical lymph node were excised. Lymph node metastasis was identified in 10/22 dogs (45%), with 14 metastatic lymph nodes identified. All four deep cervical lymph nodes excised were metastatic. One contralateral medial retropharyngeal lymph node was identified as metastatic. Size of deposit could be classified in 13/14 metastatic lymph nodes.

Macrometastasis was detected in seven lymph nodes, micrometastasis in one, and isolated tumor cells in five nodes.

**Conclusions:** Regional metastasis was common in this population of dogs with thyroid carcinoma. Further prospective work is warranted to explore the rate and prognostic impact of lymph node metastasis in a larger population.

# VSSO Vision 2020 Scientific Abstract Submission



*Figure 1* – Transverse (A) and sagittal (B) plane reconstructions of a contrast-enhanced cervical CT in a dog with thyroid carcinoma. The left cranial deep cervical lymph node is indicated by white arrowheads. The left MRP lymph node is indicated by white arrows and the thyroid mass with an asterisk.