



# Comparing the Use of Fluorescent Dyes in Surgery to Previously Reported Methods for Improving Lymph Node Staging in Dogs with Oral Cancer

Dr Michelle Oblak

## WHAT IS A VETERINARY CLINICAL TRIAL?

A veterinary clinical trial is a research study involving client-owned animals with the ultimate goal to advance animal and human health care! An interventional clinical trial allows us to measure outcomes through data and sample collection of a new or novel therapeutic approach compared to one that is standard of care. These studies evaluate new and improved ways to prevent, diagnose or treat diseases.

### What is Sentinel Lymph Node Mapping?

In the field of veterinary oncology, identification of metastatic disease (or spread) is critical for determining the extent of disease, prognosis, and developing treatment plans. Many cancers will metastasize to the local lymph nodes. The first lymph node that the tumour drains to is called the sentinel lymph node (SLN). By mapping the SLNs, we can identify and assess the draining lymph nodes of a tumour. This is critical for many cancer types, as metastasis occurs via the lymphatics. Failure to identify and assess the SLNs can lead to incomplete treatment, worse prognosis, and poor patient outcome.

### What is the Purpose of this Study?

Currently in veterinary patients, there are limited protocols in place to identify SLNs. The purpose of this study is to evaluate agreement between preoperative imaging and intraoperative techniques for identification of SLNs in canine patients with oral tumours. Development of these protocols are important as they can help to provide more accurate evaluation of the most important lymph node(s) and potentially decrease the number of lymph nodes surgically removed. The outcome of this study will inform follow-up treatment recommendations improving patient prognosis and outcomes for dogs diagnosed with oral tumours.

### INCLUSION CRITERIA

Dogs with a confirmed diagnosis of an oral tumour and interested in pursuing CT and surgery will be eligible for this study.

### EXCLUSION CRITERIA

Dogs with a metastatic disease and/or markedly enlarged (or confirmed metastatic) lymph nodes will not be eligible to participate in this study.

### Financial Incentives

During your dog's initial cancer staging, a more detailed computed tomography (CT) scan will be completed, at no additional cost, in order to more accurately evaluate the tumour.

In addition, the cost of the fluorescent dye and use of the specialized near-infrared (NIRF) camera will be covered by the study.

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After consultation with the OVC Oncology and/or Surgery service, your dog will undergo a routine CT scan under general anesthesia for staging and surgical planning. In addition to receiving a contrast agent intravenously, as is always performed for these cases, we will also inject a similar agent locally to perform a detailed CT Lymphangiogram to evaluate the lymph nodes and lymph vessels.

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Surgery will be booked within the week. During surgery, specialized dyes called indocyanine green (ICG) and methylene blue (MB) will be injected by the surgeon at the tumour site. These dye, in combination with a near-infrared fluorescence (NIRF) camera, will make the tumour and draining lymph nodes 'glow-in-the-dark.'

By comparing between visible light and what glows under NIRF, the surgeon will remove the tumour and any applicable SLNs.

Your dog will recover from surgery in ICU under careful monitoring.

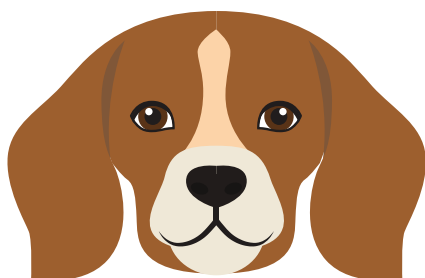


3

Approximately 24-48 hours after surgery, the standard timeline for postoperative patients, your dog will be discharged from the hospital. Postoperative care instructions and any necessary medications will be provided to you by your dog's clinician.

Collected samples will be assessed by a pathologist and compared to data obtained during surgery.

A follow up appointment will be booked at OVC 10-14 days after surgery to remove your dog's sutures. Results of this study including any publications will be provided to you, if interested.



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**Questions about this study?**  
**Please contact:**  
**[ovc.clinicaltrials@uoguelph.ca](mailto:ovc.clinicaltrials@uoguelph.ca)**