

Nasal Tumors in Cats and Dogs

Client Informational Handout



VETERINARY
MEDICAL CENTER

UNIVERSITY OF MINNESOTA

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Overview

Nasal tumors are relatively common in older dogs and cats and are typically malignant tumors that grow locally (within the nose) but have a low rate of metastasis (spread to other sites of the body such as lungs or lymph nodes). The most common types of nasal tumors in dogs include nasal carcinoma (adenocarcinoma, squamous cell carcinoma) and sarcoma (osteosarcoma, chondrosarcoma, fibrosarcoma) although other tumor types can develop. The most common tumor types in cats include carcinoma and lymphoma. There are many treatment options for nasal tumors and our goal is to ensure that you have the information necessary to make a decision moving forward that is “right” for you and your pet. Please note that the following information applies to most nasal tumors, except for cats with nasal lymphoma.

Clinical Signs

Most cats and dogs with nasal tumors present with nonspecific nasal signs such as sneezing, congestion, nasal discharge (which may be clear, yellow, watery, and/or thick), epistaxis (bloody nose), and noisy breathing (dogs in particular really like to breathe through their nose instead of their mouth). Occasionally other signs such as discharge from the eye or facial abnormalities may indicate a nasal tumor. These signs mirror those with non-cancerous nasal disease as both dogs and cats can develop allergic-type nasal disease as well.

Diagnosis

Several tests may be indicated in order to fully evaluate nasal disease, including blood work, advanced imaging (often times a CT scan provides the most useful information), rhinoscopy (placing a small camera up the nose) and biopsy. In order to definitively diagnose a nasal tumor, small pieces of tumor need to be collected and submitted for pathology. Following a diagnosis of a nasal tumor or in cases with a high suspicion of a nasal tumor, it is also standard to evaluate the lungs for evidence of metastasis (x-rays or CT scan) as well as the lymph nodes that drain the nose (fine needle aspirates to collect cells from the lymph nodes). Fewer than 10% of dogs with typical nasal tumors have spread of their disease but it changes the treatment approach and prognosis if there is metastasis.

Treatment Options & Prognosis

1. **Definitive-Intent Treatment for Long-Term Control:**

The treatment of choice for nasal tumors is definitive-intent conventional RT, which is typically administered daily Monday through Friday for 3-4 weeks in a row. Dogs and cats are anesthetized for RT (short acting anesthesia) and are welcome to stay in hospital through the week (home on weekends) or come in and out each day. A CT scan for RT planning is necessary prior to treatment so that a patient-specific plan is created to best target tumor tissue and avoid normal structures like the eyes and brain. Most pets do very well with RT but acute radiation effects (changes that occur during or shortly after radiation) may occur that affect the eyes, skin, and mouth. Acute effects typically occur by the last week of radiation and “peak” one week following completion of radiation, but heal within 2-4 weeks. Late radiation effects are side effects that develop months to years after radiation therapy and can include hair coat color change, skin pigmentation changes, and permanent dry eye and/or cataract formation. Every dog is different and risks of toxicity

vary. Our primary goal with RT is to improve quality of life while extending survival time; the median survival times are approximately 18 months for dogs treated with definitive intent RT, which implies that 50% of dogs will do better than this and 50% will do worse. Prognostic factors that may negatively influence outcome include certain subtypes of tumors (squamous cell carcinoma) and invasion into the braincase.

2. **Hypofractionated radiation therapy (stereotactic body radiation therapy [SBRT])**

While we know the most about conventional radiation therapy given in small doses each day over several weeks, we are interested in investigating the use of higher doses of radiation less frequently. Stereotactic ablative body radiation therapy (SABR) or stereotactic body radiation therapy (SBRT) refer to the use of high doses of radiation given in 3-5 fractions. Currently, we do not know if this provides equal control to conventional RT but it is an alternative option for owners wishing to consider a different approach. A CT is required for planning so that we can sculpt the radiation beams precisely to the tumor target. Not all dogs and cats are good candidates for this type of therapy; SABR/SBRT is likely optimal for small, very well defined targets. Depending on the radiation prescription, acute toxicity may be less severe than with conventional protocols. There is a risk of late radiation toxicity as the dose given at each treatment is very high. We do not have sufficient information yet to determine what the true rate of late toxicity is for our patients.

3. **Palliative radiation therapy:** Palliative radiation therapy involves larger doses of radiation given less frequently (typically once a day for 5 days or once a week for 4 treatments) to a relatively low dose overall. The likelihood for acute toxicity is very low as the goal is simply to improve quality of life for 3-7 months and decrease nasal symptoms. The response is not as durable as with definitive-intent protocols. Because a larger dose of radiation is given with each dose, there is a higher likelihood of late radiation toxicity in normal tissue, as higher doses of radiation preferentially damage normal tissue. Palliative radiation is something that can be pursued at any point in the disease process as the primary goal is to improve quality of life. As with definitive intent RT, a CT scan for radiation planning is required to create a patient-specific treatment plan.

4. **Medical therapy:** Chemotherapy, targeted drugs (toceranib phosphate) or other treatments may be available for your pet. Please discuss alternative options with your oncologist should you choose not to pursue RT.

5. **No further therapy:**

No additional therapy is also certainly an option and we will work with you and your pet so you can ensure your pet's quality of life remains good. The use of anti-inflammatory drugs and other anti-pain medications can sometimes make a big difference for a short period of time.

Following therapy, regardless of which therapy you choose, we strongly recommend routine recheck examinations with us so we can determine how well treatment is working. This helps us not only make good decisions for your pet's treatment but also helps other pets as we gather more information about how well our treatments work. For patients that undergo RT, we recommend repeat CT scans with a physical examination every 3 months for 18-24 months.

It is important to discuss all options with your oncology team as alternative treatments may be more appropriate for your pet. Please do not hesitate to let us know if you have questions or concerns.