



NASAL TUMORS

Nasal tumors make up ~1% of all cancers seen in dogs. It is thought that long-nosed breeds or dogs living in urban environments are at higher risk for the development of nasal tumors. Nasal tumors are seen less commonly in the cat.

The majority (two-thirds) of nasal tumors are carcinomas. Sarcomas make up the remaining tumor types. Lymphoma may also be seen in the nasal cavity; it occurs more commonly in cats than in dogs. Nasal tumors occur more commonly in older animals.

What are the signs of a nasal tumor?

Symptoms include an intermittent and progressive history of discharge and bleeding from one or both nostrils. Facial deformity can be seen in some cases. Improvement of signs is often noted with symptomatic treatments such as antibiotics, antihistamines and steroids, which often delays diagnosis. On rare occasions, animals may present with only neurologic signs due to direct invasion into the brain cavity.

How are nasal tumors diagnosed?

Other diseases of the nasal cavity such as fungal infections, foreign bodies, and allergies have symptoms similar to nasal tumors. Thus, a definitive diagnosis of intranasal cancer requires a tissue biopsy. Systemic bleeding disorders caused by low platelet numbers or clotting factor disorders may also manifest as nasal bleeding. Routine bloodwork and clotting times will rule out bleeding disorders and assess your pet's overall health prior to biopsy of the nasal cavity.

X-rays of the nasal passage may be helpful in providing a presumptive diagnosis of intranasal cancer and locate the area within the nasal cavity that will yield a good biopsy. Rhinoscopy may be helpful in determining the presence of a mass and in procuring a tissue sample. However, rhinoscopy may not identify tumors in the caudal portion of the nasal cavity.

Computerized tomography (CT) is an ideal test in the diagnosis of intranasal cancer. CT can indicate the presence of a tumor and the extent of the tumor, especially as it relates to invasion into the brain cavity and around the orbit of the eye. A tissue biopsy can be planned based on the location of the tumor identified from the CT. A nasal biopsy is easily procured by passing a forceps up the nostril and into the tumor. Mild to moderate bleeding is expected and usually subsides within minutes. You may notice increased discharge from the nose that may be blood tinged for several days following the biopsy. Some patients may have increased nasal congestion or noise for several days following the biopsy.

Once a diagnosis of a nasal tumor is made, X-rays of the lungs are recommended to evaluate for metastasis. Needle aspirates of the local lymph nodes may also be recommended if the lymph nodes are abnormal in size or consistency.



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How are nasal tumors treated?

Dogs and cats with nasal tumors usually present with a relatively advanced stage of the cancer in a critical location near the brain and eyes. Invasion into bone often occurs early and curative surgery is not possible. Chemotherapy alone yields only a 30% response rate and responses are short-lived.

Radiation therapy remains the standard of care in dogs and cats with intranasal cancers. Radiation therapy has the advantage of treating the entire nasal cavity, including bone extension. Radiation therapy will result in improvement or resolution of clinical signs in the majority of patients, with remission times ranging from 9-15 months, with an average of 12 months. Radiation therapy is performed on a daily basis, Monday through Friday, for 3 weeks. General anesthesia is required to keep your pet perfectly still while radiation therapy is administered. Patients are closely monitored during anesthesia. The eye on the same side as the nasal tumor is included in the treatment field. When possible, the opposite eye is completely or partially blocked from radiation. Decreased tear production is seen in some patients and may require daily eye medications. A cataract will eventually develop over the next 6 months to 1 year and will limit vision. Please see the Radiation Therapy handout for more detailed information.

Stereotactic radiation therapy (cyberknife, gammaknife, SRT) is a new and innovative radiation technique which uses special equipment to position the patient and precisely deliver radiation to the tumor. The advantages are shorter treatment time (3 doses vs. 15 doses), improved tumor control and decreased side effects. SRT is available at Colorado State University as well as other academic and private practices.

Palladia, a tyrosine kinase inhibiting chemotherapy, has shown efficacy in preliminary studies in patients with nasal carcinoma. This is an oral chemotherapy that is administered at home. Side effects are minimal. Other chemotherapy drugs that may have some benefit include doxorubicin and carboplatin.

Piroxicam, a nonsteroidal anti-inflammatory medication has been beneficial in reducing pain and inflammation caused by nasal tumors. Piroxicam also has immune-modulating and anti-tumor effects and may be used in combination with the other therapies.

Chinese herbal therapy has been beneficial in reducing symptoms, slowing progression of the tumor and improving overall quality of life for patients with nasal tumors. Many patients will enjoy good quality of life for 12-18 months with this approach.



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What is the prognosis for nasal tumors?

Nasal cancer in dogs and cats is not curable. However, patients undergoing radiation therapy can achieve clinical remission with good quality of life. Chemotherapy and herbal therapy can help slow progression of the tumor and maintain good quality of life for average of 1 year.

The prognosis of nasal sarcomas is better than that of carcinomas, and adenocarcinomas respond better than squamous cell carcinoma. Dogs and cats with significant extension into the brain have a poorer prognosis, average survivals are only 4-6 months, even with radiation therapy.

Lymphoma of the nasal cavity responds well to both radiation therapy and chemotherapy. Response is often complete and may be permanent. Survival times in patients with nasal lymphoma following radiation therapy or chemotherapy are often 2 years or longer. Some patients with nasal lymphoma that receive only radiation therapy may develop systemic lymphoma months to years after radiation treatment.