

## Nasal Tumor Treatment in Dogs

### Clinical Oncology Service

#### Ryan Veterinary Hospital of the University of Pennsylvania

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Tumors of the nasal passages and sinuses account for 1-2% of all cancers in dogs. These tumors tend to grow into surrounding tissues and can spread (metastasize) to other parts of the body. When they do spread, the most likely sites are the regional lymph nodes and lungs. If no treatment is done, dogs live an average of 3 to 5 months after being diagnosed. The current standard treatment for nasal tumors is radiation therapy. Dogs live an average of about 1 year with this treatment. However, most dogs eventually develop recurrence of their symptoms and die as a result of the nasal tumor. It is important to realize that any individual dog might do better or worse than this “average.”

At Penn Vet treatment consists of radiation given Monday through Friday for 4 weeks. In selected cases, chemotherapy may be recommended as well. Each radiation session requires a brief anesthetic period to insure that your dog does not move during the treatment. The entire treatment period (from when you arrive at Penn Vet to when you leave) takes about 2 to 3 hours. Your dog should have no food after 10 pm the night before a radiation treatment, but water should be available overnight. No topical medications should be placed on the radiated area the mornings of treatment.

Your dog will develop radiation dermatitis and mucositis, also known as radiation “burns,” starting during the 3<sup>rd</sup> to 4<sup>th</sup> week of radiation therapy and lasting for a total of about 3 to 4 weeks. The side effects are limited to the treatment field and will include the oral cavity (roof of the mouth is also the floor of the nasal cavity) and usually at least one eye (eyes sit directly in front of the nasal sinuses). There can be hair loss, redness, and oozing, particularly around the eyes. During this time, your dog will need to wear an Elizabethan collar **at all times** to prevent scratching or rubbing of the area. Topical medications for the skin and eyes are also prescribed. Additional medications that will likely be prescribed include antibiotics and pain medications. Your dog should be encouraged to eat soft, moist foods during the recovery period.

When the burns heal, the skin can range from pink and hairless, to pigmented with sparse white hair, to almost normal in appearance. Over months, tear production will slowly decrease in the affected eye(s), and your dog will need long term artificial tears supplementation to prevent “dry eye” symptoms, such as a pigmented cornea and thick, sticky eye secretions. The affected eye(s) within the treatment field may gradually lose vision over months to years. As a result of changes to the nasal passages caused by both the tumor and radiation, your dog will probably have a mild, persistent nasal discharge. There is a very small risk (less than 5% of cases) of serious complications that could require additional treatment, such as a non-healing skin wound.

There are also several palliative options that can help improve your dog’s quality of life but are not expected to significantly prolong survival. Depending on the tumor type, chemotherapy can be helpful in improving symptoms in some dogs. Alternatively, radiation therapy can be given as a palliative treatment once a week for 6 weeks, rather than the more intensive daily treatment described above. Anti-

inflammatory medications and antibiotics can also be helpful. These medications are routinely used in conjunction with the other treatment options mentioned above, but can also be used alone.

Common symptoms to be expected as a nasal tumor progresses include nose bleeds, mucus nasal discharge, noisy breathing, particularly at night, and bumps/swelling on the bridge of the nose, behind the eyes, or on the hard palate. Much less commonly, dogs may develop neurological symptoms such as lethargy or seizures. Most symptoms progress slowly over weeks to months, but some symptoms can become worse fairly quickly, such as nose bleeds or seizures.

Treatment of nasal tumors requires a large commitment of time, energy, and supportive care, as well as finances. Specific treatment options may not be the most appropriate choice for every dog or every owner. There are many factors beside medical ones that must be taken into consideration, and there is no “right” or “wrong” treatment decision, only what is best for your pet and family.