CANINE ORAL TUMORS (NON-MELANOMA)

What are oral tumors?

Oral tumors are relatively common in dogs and include malignant melanoma (covered in a different handout), squamous cell carcinoma, fibrosarcoma, acanthomatous epulis, osteosarcoma, and chondrosarcoma.

What are the symptoms?

Most dogs will present with a mass in the mouth noticed by the owner. Tumors that occur in the back of the mouth are not often seen by the owner, but patients will present for facial swelling, bad breath, excessive drooling, bleeding from the mouth, weight loss, or difficulty eating or drinking.

How are they diagnosed?

Sedation or anesthesia is often required for a thorough examination of the mouth. This can be particularly important for tumors located in the back of the mouth or on the tongue. X-rays of the affected area of the mouth may assist in determining the extent of disease and to help evaluate for surgical resection. However, apparently normal X-rays do not rule out bony invasion. CT or MRI scan is often valuable in evaluating the extent of oral tumors for surgery and/or radiation treatment, particularly for those involving the maxilla (upper jaw) or caudal portions of the mandible. Ultimately, a biopsy of the lesion is necessary for a definitive diagnosis. Depending on the tumor type and potential for metastases (spread), examination of the draining lymph nodes and chest X-rays may be indicated.

How are they treated?

Surgery

Surgery is the mainstay of treatment for oral tumors. Many of these tumors will have extensive bone invasion and surgery to remove the affected jaw bone (mandibulectomy/maxillectomy) is necessary to achieve adequate margins. For most

dogs, preservation of appearance and function is good and patients return to good quality of life following surgery.

Radiation therapy

Radiation therapy is indicated for dogs as an adjunct to surgery when aggressive surgical excision fails to remove all microscopic tumors. Radiation therapy may be used as a primary treatment for nonresectable acanthomatous epulidides. Radiation therapy is administered Monday through Friday daily for 3-4 weeks, depending on tumor type. General anesthesia is required for treatment to keep the patient still. Side effects are primarily local and may include transient mucositis (sore, inflamed gums), drooling, and or bad breath.

Radiation therapy may also be used as palliation for pain in large nonresectable tumors. Palliative radiation therapy is performed once weekly for 4 consecutive weeks. Please refer to the handouts on radiation therapy for more detailed information.

Chemotherapy

Chemotherapy may be indicated for oral tumors, such as osteosarcoma, that have the potential for metastases. If chemotherapy is indicated for your pet, your pet's oncologist will discuss options and potential side effects with you.

What is the prognosis?

Prognosis largely depends on the type of tumor, location in the oral cavity, completeness of excision and potential for metastases. Tumors that are located in the rostral (front) of the oral cavity are easier to remove with wide margins. Tumors in the back of the oral cavity present a greater challenge for surgical removal and additional therapy such as radiation is often needed.

Fibrosarcoma -Low grade oral fibrosarcomas that are diagnosed early and can be completely removed with aggressive surgery may have a good long term prognosis. If the tumor cannot be completely removed with surgery, radiation therapy is warranted and the long term prognosis is guarded with an average of 8 months remission. Chemotherapy is often not considered to be effective for low grade fibrosarcomas. A syndrome of "histologically low grade, but biologically high grade" fibrosarcomas is seen in young dogs, particularly retriever breeds. This is an aggressive cancer that grows rapidly and is very invasive. In most instances, the tumor is very advanced at diagnosis

and not surgically resectable. Palliative treatments offer only a short term survival of 1-3 months.

Squamous cell carcinoma -Low grade squamous cell carcinomas that can be completely removed with surgery have a good long term prognosis as the metastatic potential is very low. Tumors that occur in the back of the oral cavity often cannot be completely removed with surgery and local recurrence as well as metastatic rate is high. Radiation therapy following surgery may help improve remission time.

Osteosarcoma -Osteosarcomas have a moderate potential for metastases, although the metastatic rate of the osteosarcomas of the jaw is believed to be less than that of osteosarcomas of the leg. Even with complete surgical excision, chemotherapy is recommended with a 50% 1 year survival.

Acanthomatous epulis- This tumor is not reported to metastasize. Either aggressive surgical excision or radiation therapy is often curative.