

Canine Oral Melanoma

WHAT IS ORAL MELANOMA?

Melanoma is a common oral tumor in dogs. It is a tumor of melanocytes, which are pigment producing cells. Oral melanoma is more common in cocker spaniels, chow chows, Scottish terriers, poodles, golden retrievers and dachshunds. Any breed can be affected and tumors can be found anywhere in the mouth, including the lip, gums, tongue and hard palate.

WHAT ARE THE CLINICAL SIGNS?

Owners may notice a tumor in their dog's mouth. Melanoma tumors can be pigmented (black) or non-pigmented (pink/flesh colored). Dogs can show increased salivation/drooling, difficulty eating/drinking, drop their food or chew on only one side of their mouth. They may show facial swelling and/or have a foul odor to their breath. Owners may see blood in their pet's food or water bowl or bedding.

If the tumor spreads to lymph nodes, there can be swelling under the jaw or along the neck. If it spreads to lungs, pets can show signs of lethargy, inappetence and difficulty breathing.

Some dogs show no signs, and a tumor is discovered during a routine exam or dental cleaning.

WHAT DIAGNOSTICS ARE PERFORMED?

A complete physical exam is necessary to examine your dog for outward and inward signs of disease. A diagnosis is confirmed with a biopsy or aspirate of abnormal tissue. Melanoma cells look similar to other types of cancer and additional testing may be required before treatment can be started.

A complete blood count, serum chemistry panel and urinalysis are done to determine if there are effects of the cancer on body functions as well as to ensure the patient is healthy enough to handle future treatments. Lymph nodes surrounding tumors or that are otherwise abnormal are sampled with an aspirate or biopsy to examine for spread of disease. Chest x-rays and abdominal ultrasound examine for spread in the lungs and internal organs. In some cases, advanced imaging including a CT scan or MRI are needed. The results of these tests determine the treatment options and prognosis.

TREATMENT OPTIONS

Surgery

Wide surgical resection is recommended for oral melanoma tumors. Tumors located along the gums and palate frequently invade into the underlying bone. In those cases, complete removal of the tumor requires removing the underlying bone. While this sounds aggressive, your dog can eat, drink and play with toys as usual. Regional lymph nodes are usually removed so they can be assessed for metastasis. Surgery is not recommended for dogs with advanced metastases.

Radiation Therapy

Radiation may shrink large tumors in preparation for surgery. Radiation can be done after surgery if the tumor was not entirely removed. It can also be used to palliate tumors too large for surgery, or when owners do not wish to pursue aggressive surgical procedures.

Chemotherapy

Chemotherapy is recommended for nearly all cases of oral melanoma despite a lack of data supporting that it improves patient outcomes. Chemotherapy is the treatment of choice for dogs with widespread disease. We use carboplatin, an injectable drug given every 3 weeks. This drug is well tolerated in dogs, but can cause gastrointestinal upset and temporarily lower white blood cell counts. Severe effects are unusual. Unfortunately, as in people, melanoma is a highly chemotherapy resistant disease.

Other Medical Therapies

Immunotherapy: A commercially available vaccine (Oncept®) is an option. One study showed dogs that were treated with surgery and Oncept® lived longer than dogs treated with surgery alone.

Non-steroidal anti-inflammatories (NSAIDS): Pre-clinical evidence suggests drugs in this class may be options for treating oral melanoma tumors in dogs and can be combined with chemotherapy or immunotherapy.

Treatment	Indication	Treatment schedule	Approximate cost*
Surgery	Localized tumors of the oral cavity or tumors with regional lymph node spread	Varies according to location and extent of disease	\$3,000 - \$5,000
Radiation Therapy	Non-resectable tumors, incompletely excised tumors	Weekly treatments for 4-6 weeks	\$2,000 - \$3,000 May require a CT scan prior to starting treatment
Chemotherapy: Carboplatin	Post-operatively for localized disease or cases of disseminated disease	Injectable chemotherapy every 3 weeks for 6 treatments	\$400 per treatment
Immunotherapy (Oncept ®)	Post-operatively for localized disease or disseminated disease	One vaccine every 2 weeks for a total of 4 vaccines. Boosters given every 6 months	\$500 per vaccine visit

*Cost estimates are based on individual appointments and overall cost is dependent on patient response, which does not include additional supportive care or hospitalization.

PROGNOSIS

Prognosis varies with stage of disease and extent of treatment. Stage is determined as follows:

T: Size of Primary Tumor	T1	< 2 cm
	T2	2 cm - 4 cm
	T3	> 4 cm
N: Regional Lymph Nodes	N0	No evidence of metastasis
	N1	Histologic/cytologic evidence of metastasis
	N2	Fixed Node(s)
M: Distant Metastasis	M0	No evidence of distant metastasis
	M1	Evidence of distant metastasis

Stage 1 = T1, N0, M0

Stage 2 = T2, N0, M0

Stage 3 = T2, N1, M0 or T3, N0, M0

Stage 4 = Any T, Any N, and M1

The average survival times for dogs with oral melanoma can vary, but with surgery alone, survival times are generally reported as:

Stage I: approximately one year

Stage II: approximately 6 months

Stage III: approximately 3 months

Stage IV: approximately 1 month

Remission rates with radiation therapy alone are up to 70% in some studies. However, recurrence of disease or more distant spread can occur following this type of therapy and survival times are often only in the range of 5-7 months.

WHAT ARE THE SIDE EFFECTS?

Side effects depend on treatment selected and the extent of disease and clinical signs.

Surgery carries risk of anesthesia, though this is minimal. Other risks include bleeding and complications from healing or infection.

Side effects of chemotherapy are infrequent and most commonly include temporary gastrointestinal upset such as vomiting or diarrhea or temporary lowered white blood cell counts. Decreased appetite and lethargy may also occur.

Radiation therapy includes the use of anesthesia during treatments and side effects include gastrointestinal upset (vomiting, diarrhea), local skin/tissue irritation and potential interference with surgical healing.

Side effects of immunotherapy are minimal but can be a localized skin irritation at the site of injection, transient fever and lethargy and discomfort at the injection site.

Your pet will be prescribed supportive medications for nausea (manifested by decreased appetite, or increased salivation, or drooling) and diarrhea for you to have on hand at home to use if necessary. It is best to be proactive with these medications and provide these as soon as signs are noted. Should you have any questions, your oncology team is available to assist and to develop a tailored plan for your pet.

HOW DO I PREPARE?

We understand this is a difficult time and we are here to support you and your pet by providing the options and care necessary. Selecting a therapy is not binding and can be adjusted to you and your pet's needs. During treatment sessions, you will be provided with updates and any recommendations depending on your pet's response.

GETTING STARTED

Once you have determined the best therapeutic option for your pet, you may work with our oncology team to develop an appointment plan.

Scheduling: Patients undergoing chemotherapy treatments must have a scheduled appointment prior to arrival:

- > Schedule your appointments at reception upon check out.
- > Drop offs are requested between 7:30-8:30 am.
- > Pick ups are requested by 4:30 pm.
- > No discharges are done from 2:30-3:30 pm as our oncology team is in rounds.