

CANINE MALIGNANT MELANOMA

Malignant melanoma is a cancer arising from the cells in the tissues that produce pigment (black coloration). This is a fairly common tumor in dogs and mostly seen in dogs that are dark in color. Breeds that are at higher risk are miniature poodles, dachshunds, Scottish terriers, cocker spaniels, chow chows, and golden retrievers. Melanoma can occur in many areas of the body in dogs, with the oral cavity most commonly seen. This cancer can also occur around the nailbeds of the toes and in the skin less commonly. This cancer has variable behaviors depending on the location and other features of the tumor.

For oral melanoma, the tumors can occur on the tongue, gingiva around the teeth, or along the lips. The tumors can appear as nodules or masses and can often be dark in coloration. Patients may present with a visible tumor, indications of mouth pain, bleeding from the mouth, halitosis, drooling, loss of appetite, or facial/jaw swelling. Oral melanoma tumors often grow quickly, invade locally into nearby tissues, and have a high potential for spread (metastasis) to the local lymph nodes and the lungs. A diagnosis for this cancer can be made with a needle aspirate or a tissue biopsy of a tumor. After a diagnosis is made, we recommend full staging evaluation (performing several tests to identify any evidence of spread of the cancer cells) since the oral form of melanoma has a very high risk for metastasis (80-90%). We use chest radiographs to look for evidence of metastasis to the lungs, potentially an ultrasound or CT scan of lymph nodes deep in the neck to examine them for any irregularities (for tumors located in the back part of the mouth), and needle aspiration (needle sample of cells) from the lymph nodes under the chin (submandibular lymph nodes) to look for evidence of metastasis.

The primary treatment recommendations for oral malignant melanoma include wide surgical excision or radiation therapy and follow-up with the Oncept melanoma vaccine to attempt to reduce the risk of metastatic disease. Feasibility for surgical excision for these tumors is quite variable depending on the location of the tumor. We recommend consultation with a board-certified surgeon to help determine if the primary tumor can be surgically removed. More detailed imaging (ie. CT scan) may be recommended prior to surgery to evaluate the full extent of the tumor and determine if surgery would be able to completely excise all of the tumor. If the tumor is arising along the teeth and jaw bones, surgery may involve removing all the gum tissue in the tumor area along with a portion of the jaw underneath the gums (called a partial mandibulectomy or partial maxillectomy). Most patients return to normal function and ability to eat on their own after recovery from surgery. Another tissue biopsy would be performed with the surgery to determine if the tumor is completely removed. Some tumor locations may be more amenable to surgery (ie. lip tumor), while other locations have minimal options for surgical excision (hard palate, tongue, etc) depending on the tumor size.

Following complete surgical removal of a tumor, we often recommend follow-up treatment with the Oncept melanoma vaccine. The melanoma vaccine works best in the setting of microscopic disease after complete excision of the primary tumor and any metastatic lymph nodes. The vaccine is designed to induce an immune response against the melanocytes. It can take several weeks for an immune response to become evident and for the vaccine to begin working. This makes the vaccine ideal for dogs with complete surgical removal of the tumor and/or affected lymph nodes. It has minimal effect on bulky (measurable) tumors that cannot be surgically removed, or in patients that already have metastasis present. The vaccine has very minimal side effects including mild bruising at the injection site, and very rarely depigmentation or allergic reaction.

If the tumor cannot be surgically removed, palliative radiation therapy treatment may be recommended to attempt to kill the cancer cells in the area and slow their growth. Radiation therapy is not available at the Animal Cancer Center of Texas, but a referral can be provided for you to the nearest facility if this is recommended for your pet.

Chemotherapy is not extremely effective against melanoma and is most often used for palliation of metastatic or non-surgical disease. Chemotherapy could be attempted to slow the progression of a non-operable tumor or with the presence of metastasis, although less than 20-30% of patients will respond to this therapy and the response is often short-lived.

For digital melanoma (tumors arising from the nailbed/toes), patients may present with a wound or swelling around the end of the toe or potentially have loss of the entire toenail. X-rays of the toes may be performed and show evidence of bony destruction in this area. A diagnosis is most commonly made with a tissue biopsy. Staging tests are also recommended with this form of cancer although the metastatic rate is not as high (approximately 50-60% risk with digit malignant melanoma) as with oral melanoma. These tests include needle aspiration from the draining lymph nodes and chest radiographs to look for evidence of metastasis to the lung. For the digital melanoma, the primary surgical treatment is removal of the entire digit (toe) to ensure complete excision of all cancer cells. We also recommend follow-up treatment after surgery with the Oncept melanoma vaccine.

For cutaneous melanoma (those arising from the skin), tumors may appear as raised or irregular flat nodules or masses in the skin that are often dark in color (pigmented). The majority of melanomas arising in the skin are benign with a lower percentage having more aggressive and metastatic behavior. There are features in a tissue biopsy that are evaluated to help determine if the tumor may have a more aggressive and malignant behavior. If the tumor is determined to be malignant, we recommend staging tests, wide surgical excision, and follow-up with the Oncept melanoma vaccine as discussed with other aggressive forms of malignant melanoma.

Please remember that each patient is an individual and can have variable presentations of their cancer and their response to treatment. Specific details and recommendations for your pet can be discussed in detail during a consultation with the oncologists at the Animal Cancer Center of Texas.