

# Southern California Veterinary Specialty Hospital

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## MALIGNANT MELANOMA

Malignant melanoma is the most common tumor in the mouth of the dog. Although only about 10% of patients have spread of the cancer to locations other than the mouth at the time of diagnosis, nearly 100% of dogs with this cancer will eventually die from new lesions in the lungs or other organ systems (metastasis). Therefore, the treatment of malignant melanoma must address two issues: eliminate or control the cancer at the original site in the mouth, and prevent metastasis.

### Staging

Staging includes a series of tests to determine the extent of the cancer. Radiographs (x-rays) of the mouth help determine whether the tumor is invading into nearby bone. For some patients, a CT scan or MRI is necessary for more detailed information. Most dogs require sedation or anesthesia to allow thorough examination of the mouth and to prevent movement during radiographs or other images of the mouth.

In addition to determining how advanced the disease is in the mouth, other tests are done to determine if the cancer has spread and the general health of the patient. These tests consist of a complete blood panel and urinalysis, chest x-rays and lymph node examination.

### Treating the Mouth

Surgery is the traditional treatment for melanoma. These tumors can be quite invasive and an aggressive surgery is the first line of therapy. The location and size of the tumor determines what type of surgical procedure needs to be done. Often melanomas are growing on or extending into the jaw bone or the roof of the mouth. To remove the tumor, a section of the jaw often needs to be removed. This type of surgery can be performed with only minor changes in your dog's appearance, and most dogs are comfortable and begin eating within 24 hours of the surgery.

Radiation therapy involves a series of 5-6 treatments, exposing the tumor to a high-energy radiation beam. The beam must be precisely aimed, requiring a short anesthesia for each treatment. Radiation therapy can be performed on tumors that are too large to be removed or for incompletely excised tumors. Around 60-70% of patients improve following the treatments. The length of improvement can range from a few weeks to several months.

### Prevention of Metastasis

Even with adequate local treatment of the cancer, most dogs with malignant melanoma eventually develop disease in new areas *even when no other disease is found at the time of diagnosis*. Metastatic disease may occur within months of the time of diagnosis.

**Chemotherapy** is used to prevent or delay spread of this disease to other parts of the body. The most common drug used is called Carboplatin. This drug is given by an intravenous (IV) injection every 3 weeks. Throughout the treatments, the tumor is monitored for local recurrence and/or spread by examining your pet and taking x-rays of the lungs.

Chemotherapy is the use of medications to interrupt the growth of cancer cells. These medications typically do NOT cause significant side effects. You may be familiar with the side effects of chemotherapy in people. Fortunately, animals tend to experience few in any of the severe side effects seen in people. However, side effects may occur and symptoms can range from a mild, temporary decrease in appetite to anorexia, loose stools, vomiting and fever. Again, most pets have no symptoms. *Our philosophy is that cancer patients should feel better, not worse, from their chemotherapy!*

**Immunotherapy** is currently being investigated to aid in slowing the progression of systemic disease for melanomas. A vaccination has been formulated that can stimulate the patient's body to destroy the abnormal melanoma cells. The vaccine is an alternative to chemotherapeutic drugs and is used in conjunction with surgery and/or radiation to treat the initial tumor. Local control with surgery and/or radiation is very important and is first and foremost in treating this disease. Once local control has been achieved, the vaccine can be initiated. With surgery and/or radiation therapy (i.e. local control) alone, survival times for most melanoma patients are 8 months or less. Dogs that have participated in the melanoma vaccine studies have significantly improved survival times, living greater than one year in most cases.

Initial treatment requires administration of four doses of vaccine, once every two weeks. After this initial series, dogs receive a booster dose every six months. The injection is administered in the skin, on the inside of the thigh. Based on observations made during administrations, dogs do not react to the vaccine in any way that would suggest the vaccine is any more painful than a traditional injection. A transient low grade fever or a small red welt at the injection site may be observed on some dogs. These symptoms usually disappear in 24 hours.

For more information on the melanoma vaccine, please visit:  
[http://www.petcancervaccine.com/us\\_home.shtml](http://www.petcancervaccine.com/us_home.shtml)

## **Other Melanomas**

### Digital (Toe) Melanomas

The second most common location for malignant melanomas is the toe. Digital melanomas are locally aggressive with a moderate (50-60%) risk of metastasis. Spread generally occurs to the lymph nodes and lungs. Treatment options include toe amputation +/- lymph node excision for local control and chemotherapy or immunotherapy for systemic control.

### Cutaneous (Skin) Melanomas

The majority of skin melanomas are benign and surgical excision can be curative. If the biopsy report reveals a more aggressive, skin form, chemotherapy or immunotherapy may then be considered.