



Canine Melanoma

What is melanoma?

Melanoma is a tumor of the *melanocytes*, melanin containing cells. The tumor behavior ranges from benign to malignant based on the tumor location.

What types of melanoma affect dogs?

Melanoma is generally classified based on the location in the body that the tumor originates. Tumors that affect the haired skin over most of the body are generally considered benign. Tumors affecting the digits, mouth, or *mucocutaneous junctions* (areas where the skin and mucous membranes meet) are considered much more aggressive with significant rates of metastasis. *Amelanotic melanoma* is specific form of melanoma that lacks the normal pigment (melanin) present in melanocytes.

What causes melanoma?

Cancer is caused by a combination of environmental and genetic factors. While certain breeds are predisposed to melanoma, a specific cause is usually not identified.

What clinical signs does melanoma cause?

A single mass is typically the first sign noted in most patients. The masses can be seen in any location in the body.

Clinical signs may include:

- Lameness
- Enlarged lymph nodes
- Difficulty eating or oral bleeding
- Palpable masses
- Respiratory difficulty

What laboratory changes does melanoma cause?

Most patients with melanoma have no laboratory abnormalities. In more advanced disease internal organ function may be affected.

What testing is recommended for melanoma patients?

In evaluating patients with melanoma, our primary concerns are to make certain there are no obvious *metastatic lesions* (spread of cancer) or other underlying diseases present that may affect treatment. Routine screening urinalysis, CBC and chemistry are performed to rule-out other underlying diseases. Thoracic radiographs are taken to



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evaluate for metastatic disease. Patients may also require ultrasound examination, mass aspirates or biopsy, or other more specific testing. For patients that undergo surgical removal of the mass, biopsy of the tumor will always be performed.

Most patients evaluated for melanoma will have the following tests:

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|------------------------|------------------------------|----------------|
| ■ Chemistry profile | ■ Complete Blood Count (CBC) | ■ Tumor biopsy |
| ■ Lymph node aspirates | ■ Urinalysis | ■ Chest X-rays |

What treatment options are available for melanoma patients?

Surgical removal is always the first step for patients with melanoma. Unfortunately, surgery alone is not effective as a sole treatment in patients with the more aggressive forms of disease. While chemotherapy has been used to treat melanoma, it is generally ineffective as adjuvant or primary therapy. Adjuvant radiation therapy has been useful in certain cases or oral melanoma, but it is not highly effective and recurrence is still likely. In recent years, post-diagnosis immunotherapy (vaccine) has been developed for melanoma. With the advent of these vaccines, survival times for patients with aggressive forms of the disease have increased significantly. While the melanoma vaccine can be costly, it is simple to deliver and generally causes few evident side effects. We are proud to offer this vaccine at SCVIM. The specific treatment plan will depend on the individual case and we will discuss the treatment options with you at the time of your appointment.

What is the prognosis with melanoma in dogs?

Melanoma carries a varied prognosis. The majority of cases that affect the haired skin have an excellent prognosis with complete surgical resection. Patients with oral, digital, or mucocutaneous tumors have a much more guarded prognosis with high rates of metastasis. With no treatment, animals often die or are euthanized within weeks to months of diagnosis because of progressive disease. With early surgical therapy and the addition of vaccine protocols, survival times are excellent and often measured in years. The prognosis depends on the history, clinical signs, and tumor location. We will discuss the specifics of your dog's case at the time of your visit.