

# ANIMAL EMERGENCY CENTER

Specialty Services

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[www.animalemergencycenter.com](http://www.animalemergencycenter.com)



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Dear Colleagues,

We are pleased to announce that Animal Emergency Center has begun offering a new Canine Melanoma Vaccine as a treatment option for canine oral melanoma. This vaccine was developed by Merial Limited and has been adopted into our melanoma treatment protocol. Canine Melanoma Vaccine is approved for use in dogs with stage II or III oral melanoma for which local disease control has been achieved through surgery and/or radiation therapy.<sup>1</sup> The vaccine, which uses a gene for human tyrosinase, stimulates an immune response against the canine melanoma cells that express tyrosinase.<sup>2</sup>

Historical median survival times for dogs with advanced stages of oral melanoma that are treated with conventional therapies (surgery and radiation therapy) are one to five months. In initial trials, this type of novel vaccine has resulted in significantly extended survival times for dogs with melanoma — 389 days is the median length.<sup>2</sup> Treatment with the vaccine consists of a transdermal injection in the medial thigh once every other week for four vaccinations. After the initial four doses dogs require a booster vaccination every six months.<sup>1</sup>

As our practice treats patients with this vaccine, we will be submitting data to Merial in accordance with the vaccine's conditional license requirements. Our hope is that you will refer melanoma patients to us so that we can consider them for this new treatment. Working together, we can provide this advanced medicine to deserving dogs.

**NOTICE:** The USDA has issued a conditional U.S. Veterinary Biological Product License for this therapeutic vaccine. This conditional license is a response to an application and assurance of safety and purity, and a reasonable expectation of efficacy based on initial trials.<sup>1</sup>

During the period of conditional licensure, additional research will be conducted to further support the safety and efficacy of the vaccine. Production under this license is in compliance with all regulations and standards applicable to such products.

Kind regards,

Dr. Rachel Reiman  
Medical Oncologist

<sup>1</sup>Vaccine product label.

<sup>2</sup>Bergman P.J. et al, Development of a xenogeneic DNA vaccine program for canine malignant melanoma at the Animal Medical Center. *Vaccine* 2006;24:4582-4585.

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### MALIGNANT MELANOMA IN DOGS

Dr. Rachel Reiman, Medical Oncologist  
Animal Emergency Center Specialty Services

Melanomas are tumors arising from pigment cells. In dogs, they most commonly occur on the skin, in the mouth, and on the toenails. While the majority of skin melanomas are benign in dogs, the majority of oral cavity, nail bed, footpad and mucocutaneous junction melanomas are malignant, with the potential to invade local tissue, to regrow after surgery, and to metastasize.

#### DIAGNOSIS AND STAGING

Most melanomas in the mouth or skin will present as dark, raised masses. In the mouth, they can be associated with drooling, foul odor, bleeding from the mouth, or dysphagia. Those occurring on the toenail can be associated with toe swelling, loosening of the affected toenail, or lameness on the affected leg. A diagnosis of melanoma will usually require a **fine needle aspirate** or **biopsy**. Some melanomas can be misleading because, although derived from pigment cells, they can be a normal, pinkish skin color.

Even with histopathology, diagnosis can be difficult because many melanomas do not produce much melanin and are often diagnosed as high-grade sarcomas if special stains haven't been used. Staging tests such as CBC, chemistry, three view thoracic radiographs, and fine needle aspirates of the regional lymph nodes should be performed prior to surgery.

#### TREATMENT AND PROGNOSIS

Surgery is the first line of defense for melanomas. Dogs who receive an aggressive surgery first (to minimize the likelihood of leaving microscopic tumor cells behind) may do better than those receiving conservative surgery. For oral melanomas a CT scan may be helpful for determining how extensive the tumor is and the likelihood of complete removal. The majority of dogs with malignant melanoma arising from a location other than the skin will develop problems related to tumor recurrence or spread (metastasis) in the future. The average survival time with surgery alone is approximately 1-5 months, with dogs with larger tumors or tumors that have spread to the lymph node more likely to fall short of this mark.

In cases where surgery is not possible or has been declined, radiation therapy can sometimes be used. This involves the application of a powerful form of radiation directly to the tumor area. Radiation therapy has the potential to shrink many large melanomas and may be able to delay or prevent local tumor regrowth if tumor cells have been left behind after surgery.

Another form of treatment that has the potential to be useful in delaying or preventing tumor spread is the use of the melanoma tumor vaccine. It is possible to stimulate an immune response against the melanoma cells. Studies performed in mice and humans, and previous studies performed in dogs with melanoma, suggest that this treatment is superior to treatment with surgery or radiation alone with a median survival of greater than 12 months. With tumor cell vaccination, dogs receive injections into the skin every other week for 8 weeks, then every 6 months thereafter. **Animal Emergency Center is proud to be one of only three sites in Wisconsin to be able to provide the melanoma tumor vaccine to pets.**

There is some indirect evidence that the chemotherapy drug **carboplatin** might have the ability to delay or prevent metastasis after surgery. This drug is given once every 3 weeks for a total of four treatments. Chemotherapy is generally very well tolerated, with some dogs experiencing mild side effects that usually go away by themselves. Less than 5% of dogs experience severe side effects that would require hospitalization and supportive care.

In cases where surgery is not possible, chemotherapy can sometimes shrink these tumors for varying periods of time.