Madison Veterinary Specialists

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Mast Cell Tumors

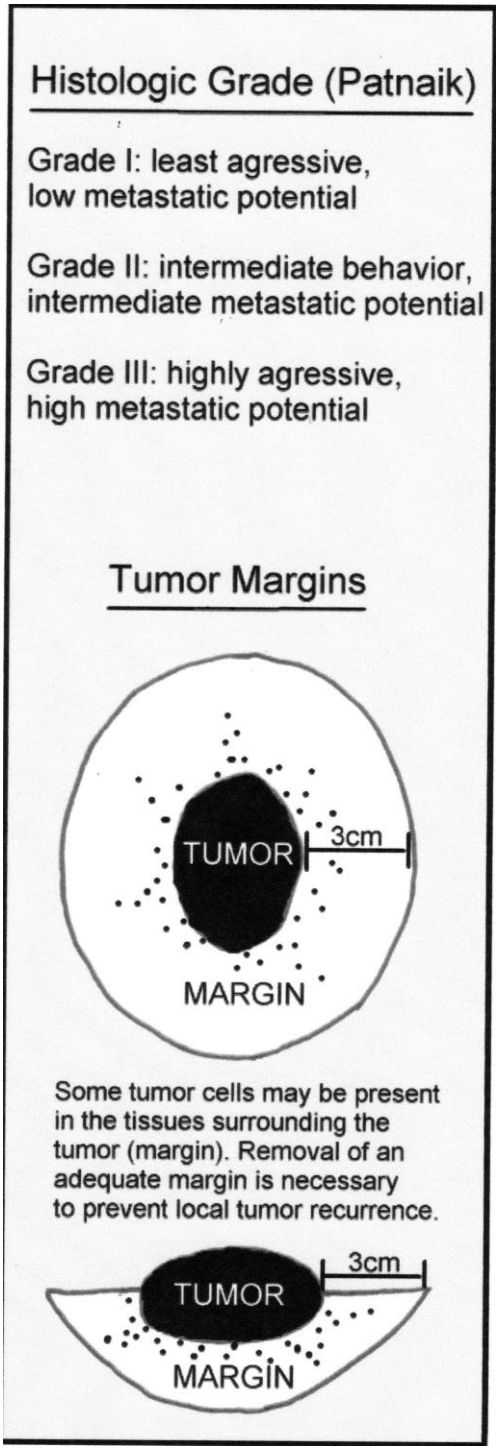
Mast cell tumors (MCT) are the most common malignant skin tumors in dogs. Normal mast cells are involved in the body's inflammatory response where they release granules (packets) that contain histamine, heparin and other inflammation inciting agents. Mast cell tumors have varied appearances and can appear as a growth on the skin or a lump under the skin. MCT can also occur within internal organs. Any pet can develop MCT, however some breeds (Boxers and Boston Terriers) are prone to forming MCT.

Diagnosis

A definitive diagnosis of MCT is made by obtaining a sample of the tumor and having it analyzed. A fine needle aspirate (FNA) is the aspiration (sucking up) of cells from the mass using a vaccine-sized needle. The cells are then sprayed on a slide and examined under a microscope for the presence of mast cells. A FNA can only determine if a MCT is present. It cannot predict tumor grade. A surgical biopsy (tissue biopsy) is taking an intact piece of tissue that is specially prepared and examined by a pathologist. A surgical biopsy will provide the histological grade of the tumor in addition to making a diagnosis. This is an important factor in determining the degree of malignancy, the amount of surgery required to remove the mass and the post-op prognosis. MCT are graded I, II, III with I being the least aggressive and III being the most aggressive.
Clinical staging is the process to help determine whether or not the tumor has metastasized (spread to other parts of the body). Complete staging includes blood work, chest x-rays, abdominal ultrasound and pathology analysis of a surgical biopsy.

Treatment

Treatment options depend on tumor location, grade and clinical stage of disease. Complete surgical excision is often curative and is the treatment of choice with grades I and II. The tumor is removed along with a 1-3cm encircling cuff of normal tissue to ensure complete tumor removal. The tumor and surrounding tissue (margin) are examined by a pathologist who will determine the tumor grade and if all of the tumor cells were removed. When an initial attempt to remove the tumor is unsuccessful, a second, deeper and wider surgical resection can be attempted. In situations where complete surgical removal is not feasible from the onset, simple surgical removal of just the tumor followed by radiation or chemotherapy is another option. Treating with radiation and / or chemotherapy alone is a palliative measure meaning it can reduce clinical signs and make the patient more comfortable for a period of time.



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