

CANINE MAST CELL TUMOURS

Mast Cell Tumours (MCT) are very common in dogs, but extremely rare in humans. Mast Cells are a special type of blood cell that is normally involved in the body's response to allergens and inflammation. Sometimes; these cells can become cancerous and develop into MCT. The most common locations for these tumours are in the skin. MCT can look and feel like anything, so it is impossible to know if a skin mass is a MCT without looking at cells under the microscope. MCT are malignant tumours that have the ability to regrow after conservative surgery, and may spread to other organs. Even though we know a lot about MCT, it can be difficult to predict how they will behave in an individual dog.

Mast Cells contain substances that can be released into the bloodstream and potentially cause systemic problems. These might include stomach ulcers, bleeding, and/or allergic reactions (anything from swelling around the tumour itself to life threatening shock). Therefore, we may treat our patients with antihistamines, antacids and corticosteroids as part of their therapy.

Cutaneous Mast Cell Tumours

The skin is the most common site for the MCT in the dog. These tumours are locally invasive and can also sometimes metastasise (spread) to other areas of the body. The most common sites of spread are the lymph nodes, bone marrow and spleen.

The initial evaluation of a dog with a MCT often includes biopsy or fine needle aspirate, complete blood count, serum chemistry profile, urinalysis, lymph node biopsy or aspirate and abdominal ultrasound (to look at the liver and spleen). In some cases, we may also do a bone marrow aspirate to look for Mast Cells there.

The pathologist assigns a "grade" to the tumour when it is examined under a microscope. We use the grade to help predict how the tumour will behave. This influences both the prognosis (outcome) and treatment plan. For example, low or intermediate grade tumours are unlikely to spread, so complete surgical removal of the tumour may be the only treatment required. High grade tumours have a high chance of spreading so we look very carefully for spread and consider using chemotherapy in conjunction with complete surgical removal.

Treatment Options

Treatment options for cutaneous MCT include surgery, chemotherapy and symptomatic treatment. Surgery is usually our first and best treatment choice. Because these tumours are invasive, the surgeon must remove the tumour with a large margin of normal appearing tissue both around and underneath the tumour to ensure complete removal. MCT are deceptive, and sometimes what we can see and feel sometimes represents only a small part of the tumour. Even when a large margin is taken, sometimes tumour cells are still left behind. When this occurs, additional treatment is needed; otherwise, there is a likelihood that the tumour will regrow, options in this case include further surgery or chemotherapy,

however, it may not always be possible to do more surgery because of the location of the tumour.

It is important to remember that surgery is a local treatment and has no effect on the spread of the tumour. Chemotherapy can be beneficial in delaying or preventing metastasis since it is a systemic treatment. The most commonly used protocol involves using 2 drugs (Vinblastine and Lomustine otherwise known as CCNU). This protocol alternates drugs over a 22 week period. Other chemotherapy options include use of prednisolone (a corticosteroid). The treatment options available to your pet will be discussed with you by your Oncologist. As mentioned above, we may prescribe additional medications to treat tumour related side effects. Please monitor your pet closely for any problems such as vomiting (especially if there is fresh blood in the vomited material), diarrhoea or a very dark or black stool (this is a sign of digested blood), or loss of appetite. If any of these signs occur we ask that you contact your Oncologist as soon as possible.

The prognosis for Cutaneous MCT depends upon several things, including the microscopic appearance (grade) of the tumour, location of the tumour, and the presence or absence of metastasis. Many of these tumours are successfully treated if there is no evidence of spread at the start of treatment. Any future "lumps" and "bumps" should be evaluated with an aspirate because some dogs that have had one MCT are at greater risk for the development of additional MCT. Early detection and removal of these tumours increase the likelihood of successful treatment.

For those MCT that have already spread or that occur in locations other than the skin, the prognosis is guarded. The goal of treatment for these patients is to attempt to shrink the tumours with chemotherapy, and to maintain a good quality of life for as long as possible by controlling symptoms caused by the presence of Mast Cells in the body.