Mast Cell Tumors in Cats

- Mast cell tumors are malignant (cancerous) masses that can occur anywhere in the body, but they are usually associated with the internal organs or the skin in cats.
- Tumors on the skin tend to occur around the head or neck and may be single or multiple, tan or pink masses.
- The internal form of these tumors can affect organs such as the spleen, liver, and intestines; mast cell tumors in bone marrow can lead to a systemic (affecting the whole body) form sometimes called mast cell leukemia.
- Diagnosis may require radiographs (x-rays), ultrasound examination, fine-needle aspirate (a cell sample), biopsy (a tissue sample), surgical removal, laboratory analysis of the mass, a complete blood count (CBC), and a chemistry panel.
- Surgical removal of the mass is the cornerstone of treatment, but radiation therapy, chemotherapy, and other medications may also be recommended.

What Are Mast Cell Tumors?
Mast cells are normally found throughout the body and are often involved in functions such as inflammatory and allergic reactions. Mast cell tumors are masses of these cells that have collectively become malignant (cancerous). No one knows exactly what causes normal mast cells to develop into malignant tumors. Mast cell tumors tend to be less common in cats than in dogs.

Although mast cell tumors can develop anywhere in the body, they are usually associated with the skin or the internal organs in cats. These tumors generally affect cats older than 4 years, and Siamese cats may be more susceptible.

What Are the Clinical Signs of Mast Cell Tumors?
Mast cell tumors in feline skin tend to be less aggressive than those in dogs, especially if there are just a few masses. The tumors may appear as single or multiple firm, tan or pink bumps, with associated hair loss or ulceration (development of a sore). A large number of skin masses may indicate that internal organs are also involved, which is a more serious condition. Siamese cats younger than 4 years may develop a type of mast cell tumor in the skin that resolves without treatment over a few months.

The visceral (internal) form of mast cell tumor occurs most commonly in the spleen. This form is more likely to metastasize (spread) to the liver, intestines, lungs, lymph nodes, and bone marrow. Mast cell tumors in bone marrow can lead to a systemic form sometimes called mast cell leukemia, which affects the whole body. Signs of visceral mast cell tumors may include anorexia (loss of appetite), vomiting, diarrhea, abdominal enlargement, lethargy (lack of energy), and difficulty breathing.

How Are Mast Cell Tumors Diagnosed?
Your veterinarian may recommend a number of tests to help determine if a mass is a mast cell tumor:

- **Fine-needle aspiration**: A needle is inserted into the mass (whether it is on the skin or an internal organ), and cells are extracted for examination under a microscope.
- **Complete blood count (CBC), chemistry panel, and urinalysis**: These tests will help your veterinarian assess your cat’s general health and, in some cases, provide clues about possible tumor spread to other organs in the body.
- **Radiographs (x-rays)**: Abdominal and/or chest radiographs may help identify masses and indicate if the tumor has spread within the body.
Common Conditions

- **Ultrasound examination:** This can provide a more detailed view of the mass and sometimes evidence of tumor metastasis.
- **Biopsy:** If a larger sample is needed than what is possible with fine-needle aspiration, your veterinarian may recommend a biopsy (tissue sample).

**Treatment and Prognosis**

Depending on whether the mass(es) are limited to the skin or other organs are involved, treatment may include:

- **Surgery:** Surgical removal of mast cell tumors, when possible, is the cornerstone of treatment.
- **Chemotherapy:** This may be recommended when tumors have metastasized, but there is limited information about the effectiveness of this treatment.
- **Radiation therapy:** For mast cell tumors that could not be completely removed with surgery, radiation therapy may help eliminate remaining cancerous cells in the localized area.
- **Other medications:** Your veterinarian may recommend additional medications to help relieve some of the secondary effects of these tumors.

The prognosis can depend on many factors. If the tumor is limited to the skin, shows no evidence of metastasis, and is completely excised with surgery, the prognosis can be very good. For internal tumors, or tumors with evidence of metastasis to other areas of the body, the prognosis may not be as good. Your veterinarian may recommend that you consult a veterinary oncologist (cancer specialist) for guidance about all of your options.

Since early diagnosis and treatment can improve the prognosis, it is important to check your cat’s skin regularly and consult your veterinarian immediately if your cat shows signs of illness.