

# Mast Cell Tumors in Cats

A Brief Guide • Part of the Educational Pet Disease Series from Lap of Love

## Signs & Symptoms

### Initial Symptoms

- Inability to exercise and/or play
- Difficulty getting comfortable
- Mild to severe weight loss
- Stomach ulcers
- Inappetence and nausea
- Vomiting and diarrhea

### Intermediate Symptoms

- Coughing
- Reclusive behavior
- Trouble breathing
- Panting
- Unthrifty coat
- Abdominal pain

### Advanced Symptoms

- Abnormal bleeding
- Pacing and yowling
- Slow wound healing
- Sudden collapse
- Seizures
- Ulcerated red masses

### Crisis Situations Requiring Immediate Medical Intervention

- Difficulty breathing/panting
- Unable to walk
- Blue gums and/or tongue
- Sudden collapse
- Uncontrollable vomiting/diarrhea
- Crying in pain

## What Is It?

Mast cell tumors (MCT) represent a commonly diagnosed cancer formed from specialized cells (mast cells) within the body that respond to inflammation and allergens. Within the feline population, MCTs most commonly arise on the skin accounting for 20% of all feline skin tumors. However, the tumor can affect organs such as the spleen, liver, chest, stomach, gastrointestinal tract, and bone marrow. Once formed, the MCT populates malignant cancerous mast cells that contain granules of chemicals called histamines that are released into the body causing serious systemic illnesses. The release of granules can occur spontaneously or by agitation of the tumor leading to problems that include swelling and redness around the tumor, an inflammatory response causing shock, issues with blood pressure, and stomach ulcers. Due to the unpredictable nature of MCTs, the appearance and characteristics are not consistent. Once formed, their behavior is also unpredictable; some grow slowly for months then quickly become large, others appear suddenly. As a malignant cancer, MCTs can spread to other areas (metastasize), most commonly the lymph nodes, liver, and spleen. Fortunately, approximately 90% of feline skin MCT are benign, and cats typically display minimal signs other than the primary mass. The less common feline forms, MCT of the organs (liver, spleen) causes significant systemic illness such as depression, weight loss, vomiting and carries a grave prognosis. Siamese cats are over-represented and a genetic mutation has been documented as the cause for the increased risk in this breed.

## Diagnosis

The first step in diagnosing a MCT of the skin (the most common form) is typically with a fine needle aspirate and cytology. A small needle is placed in the mass and a few cells are aspirated (removed) from the tumor, put on a slide, then reviewed by your veterinarian and/or sent out to pathology for review. It is a quick procedure that can typically take place during an office visit. In some cases, a biopsy or removal of the mass may be needed for an accurate diagnosis. A specific grading system is determined by the biopsy results. Grading starts at grade I (low grade), then grade II, or grade III (high grade) tumors. Further diagnostics including abdominal ultrasound, bone marrow aspirate, chest x-rays, lymph node biopsy and blood work to determine the full extent of the disease.

## Treatment and Management

For many cats, surgical removal of the mass (if possible) is usually the first step and can sometimes result in a cure, if the cancer has not spread and the tumor removal was complete. If the MCT is a low-grade tumor (grade I and some grade II) surgery with complete removal is often fully curative. If complete removal was not obtained, then therapy after surgery can be effective in treating the remaining MCT, however research of treatments for felines is currently limited. If the tumor is medium to high grade or has already spread, then a combination of chemotherapy and radiation therapy is often the best option. Prednisone, Pepcid, and Benadryl are also used to control some of the signs that occur secondary to the chemical release from the mast cells. Anti-nausea and pain medications can also be used as needed.



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continued from page 1

## Prognosis

Cats with the skin form of MCT can thrive for years after receiving the appropriate therapy. Surgery for most skin MCT and emerging options for chemotherapy combined with targeted therapies are showing great promise. Cats with the organ form of MCT, those already showing systemic signs, and those with tumors that reappear or grow quickly generally have a guarded prognosis. Consultation with your veterinarian and a referral to consult with a board certified veterinary oncologist is the best way to learn of your options and develop a plan tailored for your cat, whether that involves aggressive treatment or simply palliative care.

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## Management Tips

### Consider providing:

- Easily accessible food and water
- Ramps/stairs to common areas
- Access to "safe" quiet areas
- Warm, soft sleeping areas
- Modifying slippery surfaces to increase traction
- Creative stimulation that does not require strenuous activity
- Compounded medications in easy to deliver and/or tasty form
- Wet food to increase water intake
- Mild activity, no rough play

### Try to:

- Be consistent with medications
- Track appetite, bowel movements, breathing, weight, urination, etc.
- Limit stress (kids, noise)
- Manage weight with diets
- Keep up with preventative care
- Provide multiple litter boxes
- Feel all over for new lumps weekly and measure and mark the sizes
- Check any new mass ASAP

Before your pet's condition becomes unmanageable or they are losing quality of life, it is important to begin end-of-life care discussions. Learn about pet hospice care and/or euthanasia services in your area so you are prepared.