

Feline Mast Cell Tumor

**What is a mast cell?**

A normal mast cell is part of our immunologic defense system against invading organisms. They particularly help fight against parasites and are found in tissues that interface with the external world such as the skin, respiratory system or intestinal tract. They do not circulate throughout the body.

The mast cell possesses granules that are released against the parasite and signal other immune cells that there is a problem. Sometimes mast cells are stimulated by antigens that are of similar shape or size as parasitic antigens. These "next best" antigens are usually pollen proteins and the result is an allergy. Instead of killing an invading parasite, the mast cell’s biochemicals produce local redness, itching, swelling and other symptoms we associate with allergic reactions.

**And the mast cell tumor?**

These kinds of tumors are made up of many mast cells that release toxic granules, creating allergic symptoms such as redness, swelling or itching. Mast cell tumors typically affect older cats; one study found the average age was 10 years.

Pathologists divide mast cell tumors into two forms: well-differentiated and poorly differentiated. The well-differentiated tumor is generally more benign in its behavior, while the poorly differentiated tumor behaves more malignantly.

Mast cell tumors in cats are also classified by their location: cutaneous (located in the skin) and visceral (located internally).

**What kind of testing is necessary?**

* **Basic blood work**: A basic blood panel is part of the evaluation process. This will show any limitations to kidney or liver function, which is necessary to know prior to surgery. It also will detect any circulating mast cells in the blood or anemia that might be related to the tumor.
* **Local lymph node aspiration**: The lymph nodes near the site of the tumor are sometimes aspirated if they are found to be large or the doctor wants to see if tumor cells have potentially spread.
* **Aspiration of the spleen**: The spleen is an organ of the lymphatic system. The presence of a tumor in the deeper lymphatic organs, such as the spleen and abdominal lymph nodes, can be assessed for the presence of mast cells.
* **Radiographs (X-rays) and/or ultrasound**: If the doctor feels an enlarged spleen or if the cat is having any systemic signs, radiographs and/or ultrasound imaging may be recommended. While the mast cell tumor does not spread to the lungs the way other tumors do, it is helpful to radiograph the lymph nodes in the chest to assess the size and help determine the extent of tumor spread.

**How are mast cell tumors treated?**

* **Cutaneous form**: The skin form of the feline mast cell tumor typically arises around the head and neck and lesions may be solitary or multiple. In this case, the treatment of choice would be surgical excision. If surgical excision is incomplete, radiation therapy as a follow-up is generally successful at cleaning up any leftover cells.
* **Visceral form**: As you might guess, mast cell tumors located internally are more serious than those located in the skin. The most common organs involved are the spleen, liver and intestine. Vomiting, appetite loss and weight loss are the most common symptoms associated with these tumors. As with the cutaneous form, surgery is the treatment of choice; no single chemotherapy protocol is particularly successful above the others.
* **Splenic mast cell tumor**: Removal of the spleen can lead to a rapid recovery for your cat. The median survival rate after splenectomy is 14 months (versus four to six months if the spleen is left in place). This is not to say that the cat is cured with splenectomy, but this procedure will free the cat from the bulk of the mast cells quickly and allow some time until the tumor regrows.