

platelets after centrifugation (spinning) of blood — it's usually buff in color.

"Most solitary mast cell tumors found on the skin of cats behave in a benign manner," Dr. Balkman says. "However, cats are more likely than dogs to get primary visceral (internal) mast cell tumors in their spleen."

**Surgical Removal.** Most feline skin MCTs are removed surgically, and this is usually curative. A single round of surgery can remove the entire problem.

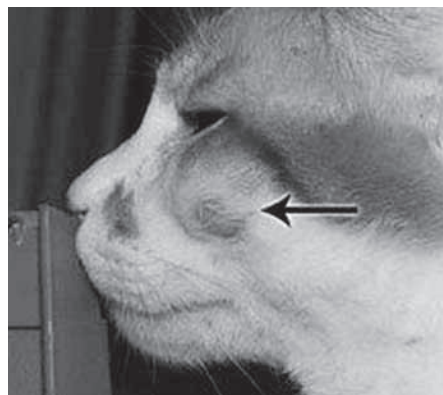
Cats with internal MCTs can face more complex treatment. Surgical intervention is often indicated. Treatment for splenic MCT often involves splenectomy — the removal of the spleen. Although the procedure is invasive, its effectiveness is well established. "Cats can do quite well, with survival times being over a year in many cases," Dr. Balkman says.

As previously noted, non-surgical therapy options for feline MCTs also continue to be explored, although published research regarding effectiveness is still limited. The chemotherapy agent lomustine, often recommended for malignant MCTs, has the common side effect of bone marrow suppression. This can lead to a low-white blood cell count and increased susceptibility to infections in cats, Dr. Balkman says.

Tyrosine kinase inhibitors, approved for use in dogs, are increasingly being used in an off-label capacity for cats often in conjunction with surgery; and

this mode of therapy may be effective for feline MCT. Common side effects include diarrhea and decreased appetite, although a lowering of white blood cells and increased protein loss through the kidneys can also occur.

"These drugs should be considered true chemotherapy agents, and it is very



Jan Hall, BVMS, ACVD

**Mast cell tumors** are most commonly seen in the skin of the head or neck.

important that patients receiving these drugs be monitored routinely via physical exam, blood work and urinalysis," Dr. Hume says. "For owners with pets receiving these medications, it is also important that they communicate any abnormalities they note in their pet to the prescribing veterinarian."

**Preventing Effects.** In addition to chemotherapy, cats with MCTs typically receive antihistamines to help prevent side effects from mast cell degranulation

(the release of chemicals from within the cells), such as inflammation or stomach ulceration. Steroids are also useful in decreasing inflammation associated with the tumors.

The cost of diagnosis and treatment for MCTs depends on tumor location, number and progression. Fine-needle biopsy and cytology alone can cost approximately \$75, depending on the clinic. Surgery fees can range from \$250 to \$2,500, depending upon the complexity of the procedure. If chemotherapy is indicated, protocol and the size of the patient determine the cost, which often runs \$300 to \$700 per month. Any additional imaging, such as chest X-rays or ultrasound, would be an additional \$200 to \$300.

"If owners feel the options presented to them are not feasible, they should consider what is financially feasible and work with their cat's veterinarian to determine an appropriate course of action within their means. It does not have to be an all-or-nothing approach," Dr. Hume says, adding that many clinics offer payment plans and financial support.

Likewise, owners of cats diagnosed with MCTs should not despair. Many cats with skin MCTs live years with appropriate therapy. And although internal MCTs are more complex and invasive, the right combination of therapies enables many cats to live well over a year after diagnosis. As research into new drugs and novel therapies continues, that prognosis is likely to only improve. ❖

## House Soiling's Causes and Solutions

If you have a cat who fails to use the litter box consistently, you may want to alert his veterinarian to a new set of guidelines for preventing and treating the problem.

The American Association of Feline Practitioners and International Society of Feline Medicine have issued the comprehensive 21-page document in an effort to decrease the number of house-soiling

cats who are abandoned or relinquished to shelters, where, they say, "Many are euthanized as unadoptable."

The groups stress house soiling isn't due to spite toward the owner, but the cat's physical, social or medical needs being unmet. In fact, they replace the terms "inappropriate urination" with "house soiling" to avoid suggesting cat misconduct.

The guidelines cover medical and behavioral causes, methods to optimize litter box use, and ways to enrich the environment, such as providing opportunities for scratching, play and predatory behavior, and consistent human interaction.

The "2014 AAFP/ISFM Guidelines for Diagnosing and Solving House-Soiling Behavior in Cats" is available at [www.catvets.com/guidelines/practice-guidelines/house-soiling](http://www.catvets.com/guidelines/practice-guidelines/house-soiling). A brochure specifically for cat owners is forthcoming. ❖