

Transitional Cell Carcinoma in Cats

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

Signs & Symptoms

Initial Symptoms

- Straining to urinate
- Bloody or pink tinged urine
- Licking the penis/vulva
- Hunched posture
- Painful when picked up
- Lethargic, sleeping more often
- Lack of grooming

Intermediate Symptoms

- Weight loss
- Increased urination
- Increased thirst
- Multiple urinary tract infections
- Matting/stops grooming
- Going outside the litter box
- Hairballs from over-grooming

Advanced Symptoms

- Hiding
- Decreased appetite
- Nausea/vomiting
- Diarrhea/constipation
- Overgrooming at the abdomen/
bald patches
- Urine scalding

Crisis Situations Requiring Immediate Medical Intervention

- Unable to pass urine at all
- Difficulty breathing/panting
- Unable to walk
- Blue gums and/or tongue
- Sudden collapse
- Uncontrollable vomiting/diarrhea
- Yowling in pain

What Is It?

Feline urogenital cancers are overall rare, and occur most frequently within the bladder. Transitional cell carcinoma (TCC), an invasive and malignant cancer, is the most common urinary system tumor reported in cats. TCC is categorized as either low grade or medium to high grade. Most cats suffer from high grade TCC, which aggressively invades into the muscle layers of the bladder wall. As the TCC grows, the mass can obstruct urine flow and can metastasize (spread to other areas) to lymph nodes and other organs. Unlike dogs, in cats the tumor tends to form at the "top" of the bladder, away from the urethra which tends to be more amenable to surgery. Less commonly, TCC can originate in the kidneys, urethra, and ureters. Cats frequently display symptoms including: straining to urinate, painful frequent urination, increased thirst and urination, bloody urine, licking at the genitals, abdominal pain, frequent urinary tract infections, and lethargy. The causes of TCC are genetic and environmental. Older male cats are over-represented and older generation flea and tick products, pesticides, and insecticides have been identified as environmental causes.

Diagnosis

Investigating urinary symptoms is broadly approached with a physical exam, urinalysis test, urine culture, basic bloodwork, and x-rays of the abdomen. Definitive diagnosis of TCC requires a tissue biopsy by surgery or cystoscopy (a scope inside the bladder that can assist with a biopsy). If TCC is confirmed, "staging" the tumor to determine the extent, spread, and degree of disease allows for appropriate treatment planning. Staging may include chest x-rays, abdominal ultrasound, CT scan, and other imaging techniques of the bladder to localize and measure the size of the TCC.

Treatment and Management

Symptomatic Care: As the TCC grows, it may block urine flow, which may require medical and/or surgical intervention. Options to restore urine flow include surgical and non-surgical stent (small tube) placement within the affected/blocked area of the urinary structure. Some cats may need a cystostomy tube, which connects the bladder directly to a small opening in the body wall. Cats with TCC are at high risk for developing urinary tract infections. Managing this risk requires frequent urinalysis and antibiotic therapy based on urine cultures.

Primary Treatment: Surgical removal of the cancerous mass is a possible, viable option if surgery does not require removal of an unreasonable amount of the bladder. Palliative, surgical de-bulking to restore urine flow and decrease symptoms is an option as well. Radiation therapy has been successful in controlling feline TCC, but may produce intolerable side effects. Most cats are treated with oral medications. Non-steroidal anti-inflammatory drugs (NSAIDs) have been shown to improve and stabilize TCC as a single therapy, though long term use can cause potential kidney toxicity. NSAIDs combined with IV chemotherapy drug have also demonstrated successful remission and stabilization of TCC. Metronomic chemotherapy, which involves at home daily oral medication at low doses intended for chronic cancer control but not cure, has shown promise. Ultrasound guided laser ablation (destruction) of tissue while not a cure, can increase quality of life, relieve an obstruction, and provide a non-invasive option for palliative therapy.



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Prognosis

The prognosis depends on the growth rate, local invasion, and location of the tumor. Unfortunately, feline studies are lacking. Treatment with an NSAID and chemotherapy agents currently provides the best option for remission and an average survival time of 4-8 months to a year. Approximately 20% of cats have detectable metastasis (spread) at the time of diagnosis which holds a poor prognosis. Regardless, TCC is considered a manageable disease that warrants a discussion with your veterinarian and consultation with a veterinary oncologist to form an individualized treatment plan.

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Management Tips

Consider providing:

- Easily accessible food and water
- Filtered water only
- A water fountain drinker
- Access to safe, quiet areas
- Warm, soft sleeping areas
- Traction on slippery surfaces
- Natural calming products
- Canned food instead of dry to increase water intake
- Prescription urinary canned or dry food

Try to:

- Be consistent with medication
- Have fresh water available at all times
- Track appetite, weight, urination, defecation, thirst, energy level etc.
- Track the good days vs. the bad days
- Limit stress (kids, noise)
- Use gentle handling at all times
- Clean litter boxes daily to monitor urine
- Shave fur around the genital/rectal area
- Groom frequently to avoid matting
- Use a medicated salve and/or powder from your veterinarian around raw areas
- Trim nails regularly
- Keep indoors

Before your pet's condition becomes unmanageable or their quality of life decreases, 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.