

Canine Bladder Cancer

What is Bladder Cancer?

Dogs can develop a cancer of the urinary bladder called transitional cell carcinoma (TCC). This is the most common bladder tumor in dogs and forms from the cells lining the bladder wall. Transitional cell carcinoma of the urinary bladder is a locally invasive tumor and has a moderate rate of spread to other areas of the body (typically 11-40% of cases). Bladder TCC in dogs most commonly develops within the trigone of the bladder, near where the urethra and bladder connect. Consequently, surgical removal of the mass is usually not feasible.

What are the signs of TCC?

The most common clinical signs of bladder cancer include straining to urinate, frequent urination, and blood in the urine. These signs are also seen with urinary tract infections. It is common for these signs to improve temporarily with a course of antibiotics as many dogs with bladder tumors have a concurrent bladder infection, but antibiotics will not treat the underlying tumor.

How is TCC diagnosed?

The diagnosis of bladder cancer involves several different tests, starting with samples of the urine and blood to evaluate overall health. Then, the bladder and urethra are evaluated most commonly by non-invasive abdominal ultrasound. If a mass is found, a biopsy will be obtained. This is usually completed by inserting a catheter into the urethra and bladder and dislodging a small piece of the tumor. Alternatively, a small camera may be passed into the bladder to obtain a sample. In general, 85% of the time a biopsy will result in a definitive diagnosis. Sometimes enough abnormal cells will be seen in the urine that the biopsy is not necessary. Sometimes additional tests will be needed if the biopsy is not clear. Since bladder TCC has a moderate rate of spread, staging tests including a full abdominal ultrasound to assess the local lymph nodes and chest x-rays to assess the lungs, are recommended prior to developing a treatment plan.

Treatment of TCC

Treatment of any cancer involves controlling local disease, as well as preventing (or slowing down) the development of disease spread. Since surgery is not a viable treatment option in most cases of TCC, we recommend systemic chemotherapy to slow down both tumor growth and spread of cancer cells to other areas of the body. The chemotherapy agent we typically start with is a drug called mitoxantrone. Mitoxantrone is administered in conjunction with Piroxicam, a non-steroidal anti-inflammatory medication that has been shown to have anti-cancer properties and also decreases pain and inflammation associated with the tumor. A recent study revealed that 35% of animals being treated with combined Mitoxantrone and Piroxicam showed a measurable decrease in tumor size, while another 45% exhibited stable disease (no evidence of tumor growth). These effects typically last 6-12 months, or longer. Chemotherapy is given as an intravenous injection once every 3 weeks. Generally, we administer a total of 4-8 treatments; however, this will depend on how the tumor responds to treatment.

In addition to chemotherapy, another treatment option that can be considered is palliative radiation therapy that is aimed at alleviating pain, inflammation, and discomfort associated with the tumor. This treatment is utilized if other treatments have failed or if we are concerned about a urinary tract obstruction due to tumor growth (i.e. a ureteral or urethral obstruction).

In the event the urethra becomes blocked and your pet cannot urinate, a surgical stent can be placed within the urethra to offer temporary relief.