# TRANSITIONAL CELL CARCINOMA

VETERINARY SPECIALISTS OF NORTH TEXAS

#### WHAT IS TRANSITIONAL CELL CARCINOMA?

Transitional cell carcinoma (TCC) is a malignant tumor of the specialized cells that line the urinary tract. Transitional cell carcinoma can occur anywhere in the urinary tract, including the kidney, bladder or urethra. TCC is the most common form of urinary bladder cancer in the dog.

#### WHAT ARE THE SYMPTOMS OF TCC?

Symptoms of TCC include frequent urination, straining to urinate, and blood in the urine. In rare instances, the first symptom of TCC is an inability to urinate due to obstruction of the urinary tract by the tumor, or lameness secondary to bony metastases.

#### **HOW IS TCC TREATED?**

### Surgery

Most TCC's are not amenable to surgical resection due to their location within the urethra or neck of the bladder.

# **Radiation Therapy**

Radiation therapy has been evaluated for non-obstructed TCC we have very good results. If radiation therapy is indicated for your pet, the radiation oncologist will use careful planning and specialized tools to protect the vital structures in the pelvic region. Your pet's oncologist can discuss the benefits and risks of radiation therapy for your pet.

# Chemotherapy

Several chemotherapy drugs have shown some efficacy against canine TCC, including mitoxantrone, carboplatin, vinblastine and doxorubicin. Chemotherapy may help to control the size of the primary tumor, slow down growth, and delay the occurrence of metastatic disease. Most dogs tolerate chemotherapy well, with minimal side effects, and experience a good quality of life during treatment.

### Nonsteroidal Anti-inflammatory Drugs (NSAIDs)

NSAIDs have potent analgesic (pain-relieving) and anti-inflammatory effects. NSAIDs are given orally on a daily or every other day basis. NSAIDs alone will have a noticeable improvement in over eighty percent of cases. NSAIDs have been shown to have some anti-tumor effect against TCC. NSAIDs do not appear to directly kill tumor cells, but may enhance the ability of the immune system to help fight the cancer as well as inhibit blood vessel growth.

### WHAT IS THE PROGNOSIS?

The use of chemotherapy and radiation therapy both extend survival times and ability to urinate. Prognosis ultimately depends on the location of the tumor, stage, and treatments chosen, which your oncologist will be able to review with you after evaluation of your pet and testing.