

Oncology Tips: Canine Transitional Cell Carcinoma (TCC)

THE NEWEST TIPS AND TIDBITS FROM THE VEC'S NEW ONCOLOGIST!

- Female dogs are affected 1.7 to 1.9 times more commonly than male dogs
- High risk breeds include Scottish terrier, Shetland sheepdog, Beagle and West Highland white terriers
- Common clinical signs are pollakiuria, stranguria and hematuria. Signs are typically either non-responsive or transiently responsive to antibiotic therapy. If you are treating a dog for uncomplicated urinary tract infection and clinical signs do not resolve, an abdominal ultrasound would be indicated
- Neoplastic cells may be present in the urine of 30% of dogs with TCC; a cytospin preparations from a fresh urine sample will conserve cells better, increasing the yield of urine cytology
 - Reactive epithelial cells can also have marked dysplastic changes, so any background can make neoplastic and reactive cells indistinguishable
- TCC occurs more commonly in the trigone of the bladder, and can invade the urethra and prostate
 - Rectal examination is essential in dogs with lower urinary tract signs!! Irregularities and masses in the urethra of female dogs and irregular and asymmetric prostate in male dogs can be palpated
 - Dogs with urethral involvement are at high risk of urinary obstruction, and educating clients to monitor the urine stream of their dogs is essential in these cases
- Treatment options for canine TCC range from conservative treatment with a non-steroidal antiinflammatory drug (NSAID), chemotherapy, surgery in selected cases, radiation therapy for either palliation or curative intent treatment, and urethral stenting
- Surgery alone is not considered curative, as many dogs develop multifocal TCC due to "field effect" – entire bladder undergoes malignant change
- The enzyme COX-2 is overexpressed in TCC compared to normal urothelium, and drugs targeting COX-2 can promote anti-cancer effects against TCC.
- Therapy with NSAID can be used in practice even without a confirmatory diagnosis of TCC. The following NSAIDs have been evaluated in the treatment of TCC:
 - Piroxicam: 18% tumor shrinkage (complete and partial), 53% stable tumor size, median survival of 6 months
 - Deracoxib: 17% tumor shrinkage (partial), 71% stable tumor size, median duration of response of 4.5 months
 - Firocoxib: 20% tumor shrinkage (partial), 33% stable tumor size, median duration of response of 3.5 months



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