

NEWS FROM THE WORLD OF ONCOLOGY

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Canine Thyroid Cancers

Thyroid tumours are uncommon in dogs, with the vast majority being malignant. Thyroid neoplasia is a disease of middle-aged dogs with a median age of onset between 9 and 11 years. No sex predilection is noted but Boxers, Golden Retrievers and Beagles appear to be at increased risk. The most common clinical sign is the development of a neck mass.

The majority of thyroid tumours are non-functional. As measured by T4 levels, only 10% of dogs are noted to have functional tumours at the time of diagnosis.

Thyroid tumours are usually carcinomas and are either follicular or parafollicular in origin. Follicular tumours are most common. Parafollicular tumours originate in the C-cells of the thyroid. C-cell tumours have a lower metastatic potential compared to follicular tumours. C-cell tumours can be differentiated from follicular tumours by positive staining for calcitonin and chromogranin-A.

Once a thyroid mass is diagnosed, staging to include three view chest radiographs and local lymph node aspiration should be completed. The lungs and regional lymph nodes are the most common sites for the development of metastatic disease. Abdominal ultrasound should also be considered. This disease is highly metastatic with a metastatic rate of 35% at diagnosis, increasing to 80% at the time of death.

There are two factors that are of key importance when attempting to assess the outcome of therapy for canine thyroid tumours. The first is the degree of invasion. Tumours are assessed to be non-invasive if they are freely movable at the time of diagnosis. Surgery is the hallmark of therapy for the treatment of thyroid tumours. When a tumour is freely moveable, the median survival time is 3 years following surgery, whereas with invasive tumours the expected survival time following surgery would be 6-12 months. Radiation therapy is recommended to locally treat invasive tumours. With this therapy, the expected survival time is about one year.

The second key factor in determining prognosis is tumour volume. Metastatic rate is directly related to tumour volume. When the tumour volume is less than 20cm³, the metastatic rate is 14%. When the volume is between 21 and 100cm³, the metastatic rate is 74%. A metastatic rate of 100% is seen in dogs with tumours greater than 100cm³.

Several chemotherapy drugs have been demonstrated to be effective in adjunctively treating this disease. I will recommend chemotherapy treatment for most thyroid tumours but certainly for all invasive, large volume or incompletely resected tumours. New research has investigated the use of radioactive iodine (¹³¹I). It appears that this is a valid form of treatment for this disease. However, access to therapy can be difficult as the doses of radioactive iodine needed to treat a dog is significantly greater than the dose used to treat hyperthyroid cats.

Dr. Kevin Finora is a board certified Oncologist and Small Animal Internist. He sees patients Wednesday (including evenings) to Saturday at VEC/RC South. Please do not hesitate to contact Dr. Finora if you have any cancer related questions.

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