



## **APOCRINE GLAND ADENOCARCINOMA OF THE ANAL SAC**

Anal sac apocrine gland adenocarcinomas develop in the pouch-like anal sacs located on either side of the anus. These tumors may be discovered as very small masses, found only after careful rectal examination, or as large masses that protrude under the tail. They may ulcerate through skin or cause difficulty defecating. One in four patients will have increased levels of calcium in the blood stream, known as hypercalcemia. Excess calcium causes increased thirst, decreased appetite, vomiting, weakness and may irreversibly damage the kidneys. These tumors invade the normal tissues surrounding the anal sac and will eventually spread to lymph nodes or other organs in more than half of patients. The sublumbar lymph nodes, which are located between the spine and colon, are the most common site of spread (or *metastasis*). The lungs are another potential site for this cancer to metastasize.

### **STAGING TESTS**

Several tests are used to evaluate patients with anal sac adenocarcinomas. Radiographs are used to examine the lungs, ultrasound is performed to evaluate the lymph nodes and other internal organs, and blood and urine tests check for increased calcium levels and kidney function. Ultrasound can also assist collecting tissue samples from the lymph nodes for more thorough analysis. The life span for patients with either high calcium or metastasis may not be as good as for patients without these findings.

### **TREATMENT**

Treatment for anal sac adenocarcinoma targets both the original tumor and sites where the disease can spread. Local treatment involves surgery and radiation therapy, while chemotherapy is used for more far-reaching effects throughout your pet's body.

**Surgery** is recommended to remove the local tumor. Surgery involves removing a wide margin of tissue surrounding the tumor to ensure that no cancer cells are left behind. Complete removal (excision) may not be possible for large tumors without risking fecal incontinence. If we find enlargement of the sublumbar lymph nodes, we may recommend removal of these as well.

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**Radiation therapy** may be highly effective if the tumor cannot be entirely removed without risking incontinence. The beam must be precisely aimed, requiring a short period of anesthesia for each treatment. Lymph nodes can also be treated with radiation. Radiation is used as daily treatments over approximately four weeks. Patients will have temporary side effects, but these symptoms disappear after two to three weeks. We will not hesitate to use supportive measures to minimize any short term side effects.

**Chemotherapy** uses drugs to directly kill the tumor cells. Chemotherapy is recommended to help control both local and metastatic disease. Several drugs are beneficial against anal sac adenocarcinoma. These medications typically do NOT cause significant side effects in dogs. For instance, dogs do not lose hair from chemotherapy, unless they are terriers, poodles, or English sheepdogs. Chemotherapy may interrupt the normal replacement of cells that line the digestive tract and the white blood cells that form in the bone marrow to help our bodies fight infection. When chemotherapy drugs affect these normal cells, symptoms can range from a mild, temporary decrease in appetite to loose stools, vomiting, and fever. Again, most dogs have NO symptoms. *Our philosophy is that cancer patients should feel better, not worse, from their therapy.*

### **PROGNOSIS**

Combinations of surgery, radiation therapy and chemotherapy are recommended for most patients with anal sac adenocarcinoma. The best life expectancy is seen in patients with small tumors limited to the anal sac and normal calcium levels which are treated aggressively. Overall, the literature reports survival times of 18 to 31 months, depending on a variety of factors. As individuals, each of our patients will have a slightly different response and outcome. Your Veterinary Cancer Group oncologist will discuss your pet's condition in detail, as well as all of the available treatment options to ensure your pet receives the best care possible. Our goal is to maintain the best quality of life possible.

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