

Canine Anal Sac Apocrine Gland Adenocarcinoma (Anal Sac Tumors)

Client Informational Handout



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Overview

Anal sac apocrine gland adenocarcinoma (ASAC) arise from apocrine sweat glands near the anal sacs. Benign tumors of the anal sacs are extremely rare, thus tumors affecting the anal sac should be considered malignant until histopathology “proves” otherwise. Other tumors (perianal adenoma or perianal adenocarcinoma) can affect the tissue around the anus, so ASAC must be differentiated from these tumors since the treatment is different. While it is common for one anal sac to be affected, bilateral tumors can occur. ASAC tends to behave in a locally aggressive manner but they often metastasize (spread) to local draining lymph nodes and less commonly can spread to the lungs, liver, spleen, and bone. Hypercalcemia (high calcium in the blood) is associated with some ASAC because the tumor cells can disrupt normal calcium regulation.

Clinical Signs

Increasingly, ASAC is detected on routine rectal examination performed during a thorough physical examination. These tumors tend to be smaller at diagnosis and do not often cause clinical signs. For dogs with larger tumors, clinical signs can include difficulty passing a normal bowel movement which can cause straining and distress, pain when having a bowel movement, altered shape or consistency to a bowel movement (often ribbon-like stools), licking or chewing at the anus, and occasionally blood or discharge from the anus. For dogs with metastasis, signs are typically nonspecific and may include vomiting, diarrhea, inappetence, and decreased activity levels. For pets with hypercalcemia, symptoms can include increased drinking, increased urination, and weakness/tremors.

Diagnosis & Staging

Definitive diagnosis of ASAC requires biopsy and histopathology although fine needle aspiration and examination (cytology) of cells from the mass can yield a high likelihood of diagnosis. Full clinical staging, where your pet is evaluated for evidence of metastasis or associated syndromes like hypercalcemia, typically includes complete blood count, serum chemistry profile, urinalysis, thoracic and abdominal imaging (x-rays, ultrasound and/or CT scan), and aspiration cytology of any abnormal findings if feasible. Additional tests to investigate hypercalcemia are also sometimes recommended.

Treatment Options and Prognosis

Definitive-Intent Treatment for Long-Term Control:

1. Surgery is the mainstay of treatment for canine ASAC and surgery to remove the primary tumor and regional lymph nodes (if indicated) is first-line therapy. Small tumors (< 1-2 cm) may be adequately (completely) removed with surgery alone, however margins are difficult to assess because these tumors form in close proximity to the rectum and anus. General risks of surgery include discomfort after the procedure, bleeding during surgery, postoperative infection (rare), dehiscence (falling apart of the incision), inability to completely remove the tumor, and dysfunction with a bowel movement (rare). Prognosis can be challenging to estimate with surgery alone but can range from 6 months to 24 months depending on your pet's presentation.

2. Definitive-intent radiation therapy (RT) is recommended following surgery, as local tumor regrowth after surgery is high. For dogs that cannot undergo surgery, definitive-intent RT is also an option although we know less about how effective this will be in bulky disease. RT is administered to both the anal sac site and the draining lymph node region. RT is administered under general anesthesia, however we use fast acting anesthetic agents so that our patients maintain good quality of life between treatments. Definitive RT consists of daily radiation treatments that are administered Monday through Friday for 4 weeks – dogs are welcome to stay with us or come in and out of the hospital each day. A RT-planning CT scan is required so that a specialized radiation plan is designed to target the tumor and lymph nodes while limiting radiation dose to normal tissues like the intestines, bladder and spinal cord. Radiation is generally very well-tolerated by most dogs and the small radiation doses each day help to minimize acute toxicity like radiation burn. It is common for dogs to experience some redness and irritation to the large intestine and anus by the end of therapy. Acute radiation effects occur during and shortly after the course of radiation and can include a sunburn-type reaction to the anus that can progress to moist desquamation, diarrhea, straining to defecate, and discomfort. Our radiation and medical oncology team works with you to make sure that dogs undergoing treatment remain comfortable. We often recommend lukewarm shallow baths and anti-pain medications to help control radiation effects and maintain good quality of life. Acute side effects normally heal within 2-3 weeks of completion of radiation. Late radiation effects, or permanent, irreversible changes that occur within the irradiated tissue can occur but with our newer protocols and radiation technology, rarely negatively affect quality-of-life. Common late effects include haircoat color change (usually to white), thickened skin (lichenification), or permanent or patchy hair loss (alopecia) in the irradiated skin. Fewer than 5% of our patients experience significant side effects like colonic stricture (narrowing of the colon that can make defecation difficult), colonic fibrosis and rupture, or secondary tumor formation in the irradiated field. Definitive intent radiation (daily radiation for 4 weeks) prescribes low daily doses of radiation, which decrease the risk of late radiation effects. While prognosis is always challenging to predict for an individual patient, we know that ASAC is a radiation responsive tumor. For dogs that undergo surgery and RT (with or without chemotherapy), the median survival times are approximately 2-2.5 years; this implies that 50% of dogs will do better than this while 50% will do worse. We do not have sufficient information to know how effective definitive-intent RT without surgery is but we expect most dogs to live greater than 1 year. For some dogs that have tumors that are not amenable to surgery, RT may be able to shrink a tumor sufficiently so that surgery is possible.
3. Chemotherapy is aimed at targeting and killing any circulating cancer cells that may result in metastasis. To date, there is no evidence that chemotherapy improves outcome for dogs with anal sac adenocarcinoma, however chemotherapy is theoretically indicated as we know that a subset of dogs will develop metastasis. Your oncologist will further discuss chemotherapy or targeted options with you.

Palliative-Intent Treatment:

1. **Surgery** alone, if feasible, may be offered in a palliative setting to try and reduce signs such as inability to have a bowel movement. In some cases, surgery is able to remove enough of an anal sac mass or large lymph node to improve quality of life even if the entire tumor cannot be removed.

2. Palliative RT involves the use of larger radiation doses but a few number of treatments compared to definitive-intent RT. Palliative RT can alleviate clinical signs secondary to a tumor (difficulty passing a bowel movement, pain, signs from hypercalcemia, etc). Radiation given as a palliative treatment typically involves radiation once daily for 5 days in a row or once weekly for 4 treatments but some variations may occur depending on your pet's presentation. The goal with palliative radiation is to improve quality of life for as long as possible; because the overall dose is low, acute toxicity is uncommon. However, larger doses of radiation are used which preferentially damage normal tissue, therefore there is a higher likelihood of late radiation toxicity such as fibrosis, stricture, or necrosis (tissue damage). While it is unusual that pets will develop severe late effects with palliative intent RT, the longer a pet lives (the better he or she does with palliative RT), the more likely it is for late effects to develop. The duration of palliation is difficult to predict but dogs can have responses ranging from 3-9 months.
3. Chemotherapy or targeted therapy (tyrosine kinase inhibitors) inhibitors may provide palliation for tumors that cannot be resected. Your oncologist can discuss these options with you.

Monitoring:

No further therapy is always an option and we will continue to work with you and your pet to ensure that your pet is as comfortable as possible. Palliative options will almost always remain an option even if you initially elect not to pursue therapy.

Following therapy, regardless of which therapy you choose, we strongly recommend routine recheck examinations with us so we can determine how well treatment is working. This helps us not only make good decisions for your pet's treatment but also helps other pets as we gather more information about how well our treatments work.

It is important to discuss all options with your oncology team as alternative treatments may be more appropriate for your pet. Please do not hesitate to let us know if you have questions or concerns.