Partner Veterinary
EMERGENCY & SPECIALTY CENTER

# Anal Sac Tumors in Dogs

Dogs have two small pouches on either side of their anus called anal sacs. They make an oily, brown fluid that is often expressed when a dog defecates and is thought to help dogs to identify each other and mark their territory. Tumors of the anal sacs in dogs are uncommon and almost always malignant. The most commonly diagnosed tumor is anal gland adenocarcinomas (also known as apocrine gland anal sac carcinoma adenocarcinoma or anal sac adenocarcinoma). In most dogs, these tumors occur only on one side, but some dogs can have tumors in both anal glands.

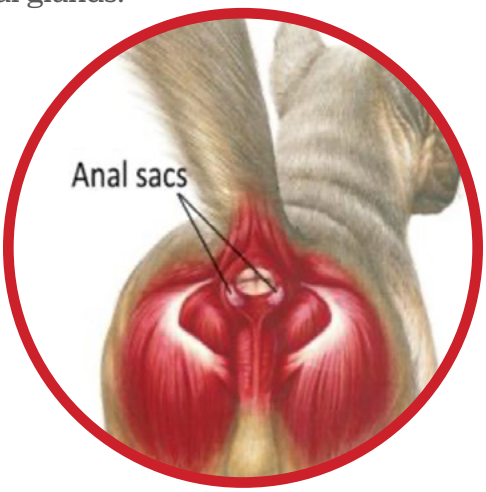


Image courtesy of dog health handbook

## Clinical Signs

These tumors can be found as an incidental finding on rectal examination at the time of their annual or biannual examination. More often, dogs are brought into the hospital for evaluation after clinical signs are noted. These signs can include straining to defecate, scooting, licking at the anal area, swelling along the perianal region and bleeding from the anal region.

These tumors can also be associated with an elevated blood calcium level in about 25% of patients. When the calcium is elevated in the blood, the most common symptoms include drinking and urinating more. If the calcium level is high enough, it can lead to muscle weakness, vomiting and loss of appetite. Elevated blood calcium levels can ultimately lead to kidney failure if gone untreated.

Image courtesy of MSPCA-Angell

# Diagnosis/Staging

Anal sac tumors are locally invasive and have a moderate rate of metastasis (when the cancer spreads to other areas of the body). The most common site of metastasis are the local lymph nodes. This cancer can also spread to the lungs and other abdominal organs although this tends to occur later in the course of the disease.

Staging tests are done to look for any evidence of metastasis. Staging tests include:

- An abdominal ultrasound to evaluate for disease in any of the abdominal organs, particularly the lymph nodes towards the back of the abdomen.

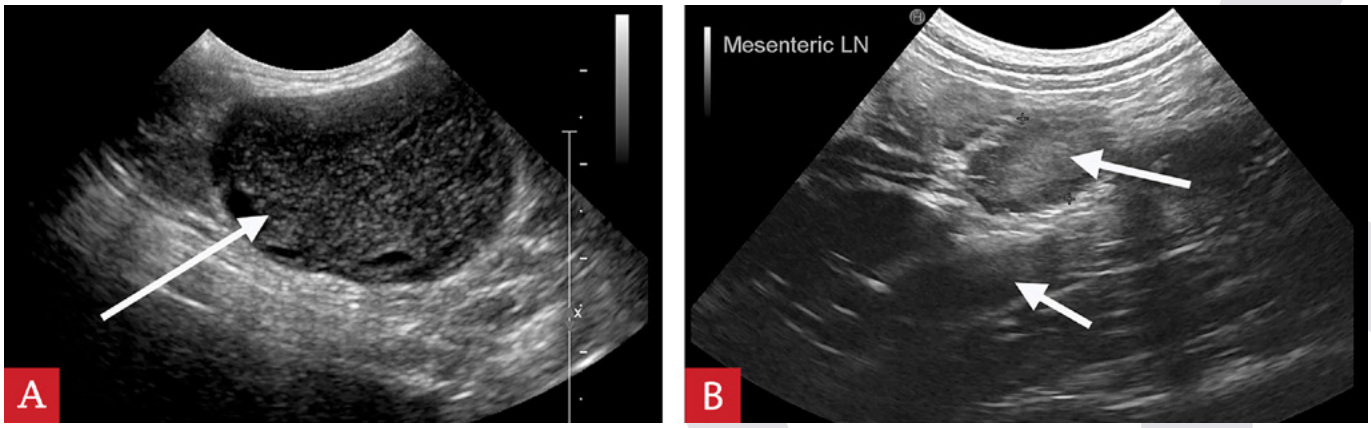


Image courtesy of Today's Veterinary Practice. Arrows show enlarged lymph nodes seen on ultrasound

- Chest radiographs will determine if there is any evidence of disease in the lungs.
- Blood work is recommended and consists of a CBC (which checks the red and white blood cells and platelets), a chemistry panel to look at organ function, and a urinalysis.
- Aspiration or biopsy of the mass is also a common part of staging to try and obtain a diagnosis.

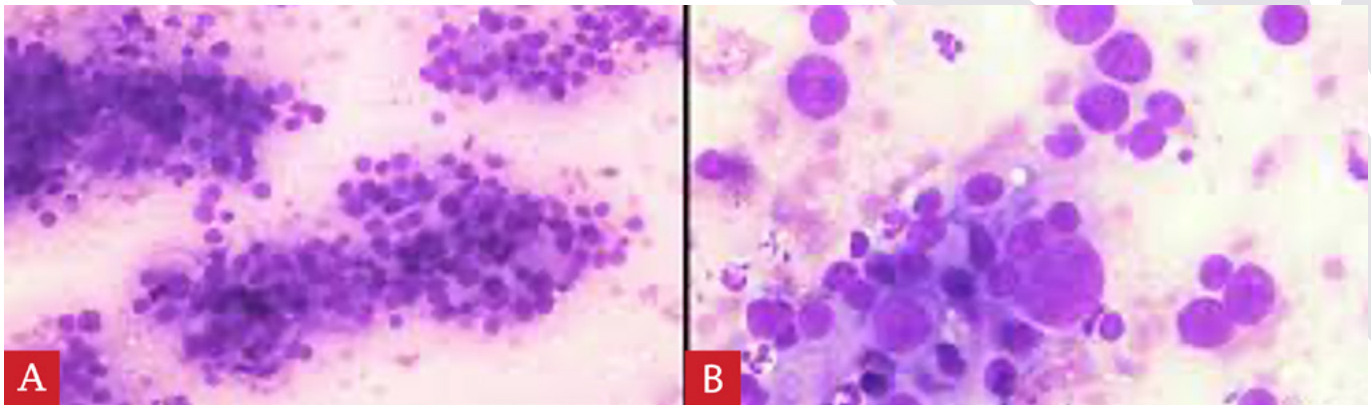


Image courtesy of science direct.com. Image of aspirate from anal sac adenocarcinoma

- In some patients a CT scan may be warranted to assess the extent of disease prior to surgery.

# Treatments

***Surgery***

This is the treatment of choice for tumors that are amendable to surgical excision. However, given the location of these tumors, it is uncommon that we obtain wide enough margins around the tumor making the risk of recurrence a concern. Due to this, surgery may be combined with radiation therapy.

If there is evidence of metastasis to the lymph nodes, these can be removed at the same time although this can be a more complicated surgery.

***Radiation therapy***

There are two different ways that radiation therapy can be used depending on whether surgery is an option.

For those dogs where the tumor was removed but the margins are incomplete, full course radiation therapy may be indicated. This type of radiation therapy involves the use of 15-20 treatments administered Monday through Friday for 3-4 consecutive weeks. The lymph nodes under the spine are also treated regardless of whether they are visible or excised. Although this approach is more aggressive, it is more likely to provide long term control of this cancer.

For those dogs whose tumors cannot be removed and/or have enlarged lymph nodes under the spine, we can use a modified course of radiation therapy which we call palliative radiation therapy. This involves the use of 3-6 doses of radiation therapy with treatments administered once a week. The goal of this treatment is to improve comfort and quality of life rather than controlling the disease long term.

***Chemotherapy***

Chemotherapy may also be advised due to the moderate potential for metastatic disease. This is most often used in addition to surgery and radiation therapy but can be used as a sole treatment. The most commonly used drugs for this type of cancer are mitoxantrone and Palladia.

- Mitoxantrone is administered intravenously as an outpatient once every 3 weeks for 4-6 treatments when combined with surgery. Side effects of mitoxantrone may include vomiting, diarrhea, nausea and/or lethargy but in most patients the side effects are self limiting. The risk of a significant side effect is low (<10%). Patients will need to have a CBC (complete blood count) done 7-10 days after the first treatment to check the white blood cell count. This helps us to determine if adjustments in the dose are needed. Every patient will have a CBC performed at the time of each treatment and then a chemistry panel to check organ function once every 2-3 doses.

- Palladia was initially designed to treat a different tumor called mast cell disease in dogs, but it has been found to be effective in other cancers including anal sac tumors. Palladia is an oral chemotherapy drug (tyrosine kinase inhibitor) that is administered by owners at home. Although Palladia is not a traditional chemotherapy drug, the side effects are similar to other more traditional chemotherapy agents. They can include vomiting, diarrhea, nausea, a decreased white blood cell count and protein loss from the kidneys (rare). The length of treatment for this drug has not been established but patients are often treated for a minimum of 6 months provided that there are not any significant side effects, and their disease does not progress. Patients will need blood work performed every other week for the first month, then once a month along with a urinalysis once every 2-3 months.

- Chemotherapy with either mitoxantrone or palladia can also be used without surgery and radiation therapy, although the long-term outcome is thought to be shorter.

***Prognosis/Outcome***

Although anal sac tumors are considered to be aggressive, many dogs can live a reasonable length of time with a good quality of life with treatment. In some cases, we find that these tumors are slow to progress and patients have only minor issues from the cancer for a prolonged period of time. If there are issues such as straining to defecate, we can look at using stool softeners or laxative type medications. If the blood calcium level is elevated, we can sometimes lower it with prednisone or bisphosphonates to a level that dogs remain relatively symptom free.

Dogs that can have surgery (with or without follow-up radiation therapy and chemotherapy) can live 18+ months on average.

Dogs that are not able to have surgery but receive a palliative course of radiation therapy and chemotherapy can live 6-12 months and sometimes longer.

First and foremost, the goal of any treatment is to provide our patients with a good quality of life. Although there is the potential for side effects during treatment, these side effects are transient, and we expect our patients to have a normal quality of life during and after treatment.

If your pet has been diagnosed with an anal sac adenocarcinoma, a consultation with your veterinary oncologist will provide you with the best treatment options for your pet.