

## **Anal sac (apocrine gland) adenocarcinoma**

Anal sac adenocarcinoma is a malignant tumour that occurs within the anal sacs, located beneath the skin on either side of the anus. These tumours arise from sweat glands within the lining of the sacs. These glands normally secrete a foul smelling liquid that coats the faeces or stool, similar to the scent glands found in skunks. Tumours of the anal sac are almost always malignant and tend to affect dogs over 8 years of age. As with most tumours in animals (and people) we do not know what causes them to occur.

### ***Clinical signs***

The most common presenting complaints include local irritation, bleeding, straining to defecate, scooting and licking of the anus. Often the tumour cannot be seen but occasionally there will be a visible mass or swelling around the rectum. In some patients enlarged internal lymph nodes can cause changes in stools (i.e. flat and ribbon-like) or straining to defecate. Approximately 25% of anal gland tumours can produce a hormone that results in increased blood calcium levels (hypercalcaemia). This can lead to increased water consumption, increased urination, weight loss, weakness or vomiting. Some anal gland tumours are discovered as incidental findings during routine examination.

### ***Diagnosis and staging***

To diagnose an anal sac tumour a fine needle aspirate or biopsy is performed. Once a diagnosis has been made further tests (staging) are recommended to screen for cancer spread to internal organs (these are called metastases). Anal sac adenocarcinomas can metastasise early and have often already spread to the abdominal lymph nodes before the diagnosis has been made. Reports vary, however the number of patients with visible spread at diagnosis ranges from 46-96%. Staging tests usually include an abdominal ultrasound or CT (with special attention paid to the lymph nodes that drain the anal sac area) and chest radiographs or CT. A double-body cavity CT is our most sensitive staging test and also allows assessment of lymph nodes within the pelvis that cannot be viewed with ultrasound. Blood tests (a complete blood count and biochemistry) and urinalysis are also performed to establish the general health of the patient prior to treatment.

### ***Treatment***

Treatment options include surgery, chemotherapy, targeted therapy, radiation therapy and symptomatic or palliative treatment. **Surgery** is a preferred treatment option as it can remove the source of discomfort. It involves removing the anal sac tumour and in some cases the internal lymph nodes at the same time. It can be difficult to remove the entire anal sac tumour given its close proximity to the anal sphincter. It is common that some residual cancer is left behind and further treatment modalities (chemotherapy, radiation) should be considered.

Some patients experience faecal incontinence after surgery, this can be transient, intermittent or permanent. Incontinence is more likely to be encountered with larger tumours. In these patients pre-operative chemotherapy or radiation may be warranted.

Surgery is not always used as part of the treatment protocol. For example, in patients with metastatic spread beyond the local lymph nodes or with large and invasive tumours, there may be little benefit in surgery. It can however, be utilised for palliation if the tumour is causing significant discomfort.

**Chemotherapy** is recommended for the high potential of metastatic spread associated with these tumours. It can also be used to target any residual cancer cells remaining at the surgery site. Even if there are no visible metastases seen with our staging tests, it does not mean that the cancer has not spread. There may be microscopic cancer cells that have metastasised.

Chemotherapy can also be used as a sole treatment for patients with tumours that cannot be removed with surgery or that have already metastasised.

Chemotherapy is generally well tolerated in animals, for more information please see handout – *Chemotherapy in animals*.

**Targeted therapy**, or Palladia, is a newer type of treatment that fights the cancer in a different way to traditional chemotherapy. Palladia is registered for a different canine cancer, however effects have also been seen in anal sac adenocarcinomas. This involves giving regular oral medications and is used in similar situations to chemotherapy. This treatment is preferably used in combination with surgery, chemotherapy (standard or metronomic chemotherapy) and/or radiotherapy rather than on its own.

**Radiation** therapy can also be used to treat anal sac adenocarcinoma. It is a local treatment only and does not treat distant metastatic disease. Access to radiation therapy in Victoria is limited and the type that may be most suitable for your pet (megavoltage) is only available in Sydney or Brisbane.

**Symptomatic and/or palliative treatment.** Treatment may be required for hypercalcaemia as persistently high circulating calcium may cause injury to the kidneys. This involves treatment with oral medication such as prednisolone or frusemide. These cause diuresis or increased urination which helps reduce the blood calcium concentration. Some animals may require a high fibre diet or stool softeners if they are having difficulty defecating.

Further palliative treatment advice is tailored to the individual patient and their specific circumstances.

### ***Prognosis***

The prognosis for anal sac adenocarcinoma depends on many factors including the size of the tumour, presence of metastases, whether the tumour can be surgically removed and whether or not the tumour is new or recurrent (i.e. regrowth of tumour previously removed). The team at AVC will discuss this with you based on your pet's situation.

### ***Follow up***

Following the completion of therapy we recommend periodic rechecks to screen for recurrence or metastasis. This will be tailored to each patient, depending on their response to treatment and their individual situation. Typically we prefer a revisit examination in 1 month and then every 3 months afterwards. Early detection of recurrence or metastases is beneficial as it allows prompt management or treatment.