**Anal Sac Adenocarcinoma Fact Sheet**

Anal sac adenocarcinoma, (also known as anal sac gland carcinoma and apocrine gland carcinoma of the anal sacs) is a malignant tumour of the anal sacs of the dog.

This is described as an uncommon tumour but we do seem to see a significant number of patients with this disease, no doubt partly due to this being a special interest in our clinic.

**What is anal sac adenocarcinoma?**

Anal sac adenocarcinoma arises as a primary tumour in the anal sac of the dog; these can be found by the anus, more or less at 4 o’clock and 8 o’clock (if the back end of the dog is imagined as a clock face). In a number of cases this is the only site where the tumour is growing, but in other cases they may spread to the lymph nodes or via the bloodstream to places like the lungs, liver and spleen. Sometimes these tumours are associated with the production of a hormone that causes excessive drinking and urination. In some circumstances this may be the only problem evident prior to diagnosis of the tumour.

**Evaluation**

In order to plan the most appropriate treatment, it is essential to determine the extent to which the tumour has spread. We need to know whether it has spread to the lymph nodes or to other organs. In addition, it is helpful to check patients’ blood calcium levels as this relates to the hormonal disturbance mentioned earlier. Presence or absence of spread is determined by x-rays and ultrasound examinations. These can usually be performed under light sedation. The treatment advice is then related to the location, size and number of tumours we need to treat.

*Right: enlarged medial iliac lymph nodes in a springer spaniel with anal sac adenocarcinoma.*

**Treatment and prognosis**
There are a number of treatment options available for the management of anal sac adenocarcinoma. Decisions are made on the basis of a number of factors, primarily the amount and location of tumour tissue as noted above.

For patients with small (less than 3cm diameter) primary tumours and no evidence that the tumour has spread, local surgical excision can be the most appropriate therapy. For patients where this proves difficult, or where the surgeon is concerned about the completeness of tumour removal, radiotherapy is used post-operatively to improve the tumour control. The average life expectancy for these patients following treatment at our clinic is three years and three months.

For patients with larger primary tumours but still no evidence of spread, chemotherapy can be used to attempt to shrink the tumour, allowing definitive excision to be performed with reduced risks of post-operative complications. Again, radiotherapy may be appropriate following surgery to improve the duration of the resulting complete remission. The average life expectancy for these patients in our clinic is two years.

Some patients have tumours which have spread to their regional lymph nodes but no further and in these cases the treatment plan is determined by whether those enlarged lymph nodes can be removed surgically or not. As always, our aim is always to achieve optimal quality of life first and foremost, and a good long and enjoyable life second. Therefore, if it is apparent that the enlarged lymph nodes can be excised without causing undue risk, they are removed. Subsequent surgery can be performed in these dogs to remove other lymph nodes that become enlarged months or even years into the future.

For these patients there is an average life expectancy of sixteen months. If the lymph nodes look like they cannot be removed in their entirety or without presenting the patient with undue risk, they can be left or managed by either chemotherapy or radiotherapy or sometimes by a combination of these. Sadly less than 50% of these patients live more than 12 months from the time of diagnosis, but as before, their quality of life is paramount during this time and measures are always being taken to ensure their well-being.

The final group of patients is the group with cancer that has spread throughout their body. Of course this is the worst case scenario but even in this situation patients can enjoy a normal quality of life for long periods of time with appropriate management.

**Final word**

Despite the gravity of a diagnosis of malignant cancer, some patients can enjoy an extremely prolonged period of complete normality and an excellent quality of life with appropriate therapy.