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ORAL SQUAMOUS CELL CARCINOMA IN CATS

Squamous cell carcinoma is the most common cancer that occurs in the mouth of middle-aged and older cats. This cancer can occur underneath the tongue, in the jaw bone or along the gums. The cause is unknown but there is suspicion that it may be caused by grooming potential cancer-causing substances off the fur. It is often a very aggressive, fast growing cancer.

Diagnosis

Common signs of squamous cell carcinoma in cats include difficulty eating, interest in food but refusal to eat, drooling, odor from the mouth and weight loss. Early cancer may appear as a tooth infection or inflamed gum tissue. A sample of the abnormal tissue must be examined under a microscope to diagnose squamous cell carcinoma.

Prevention

No prevention for squamous cell carcinoma in the mouth is currently known. Regular dental examination and cleaning may detect early tumors, and early treatment may be more successful.

Staging

Squamous cell carcinoma is a very aggressive tumor in the mouth but is slow to spread to other locations of the body. Tests may be done to determine how advanced the tumor is locally and to see if it has spread.

Radiographs (x-rays) of the mouth help determine whether the tumor is invading into a nearby bone. For some patients, a CT scan or MRI is necessary for more detailed information. Cats often require sedation or anesthesia to allow thorough examination of the mouth and to prevent movement during radiographs or other images of the mouth.

In addition to determining how advanced the disease is in the mouth, other tests are done to determine if the cancer has spread and the general health of the patient. These tests consist of a complete blood panel and urinalysis, chest x-rays and lymph node examination.

Treatment

Oral squamous cell carcinoma is not curable, but treatment may reduce the severity of clinical signs and add quality time to your cat's life.

Surgery may be an effective form of therapy for *very small* tumors. Unfortunately, most cancers that occur in the mouth are not detected until they become too large for successful removal. Squamous cell carcinoma is very invasive, and microscopic clusters of the cancer are

often left behind during surgery. These clusters begin to grow and the cancer causes further erosion and discomfort in the mouth.

Radiation therapy has been shown to slow the growth of this cancer in some patients. It is used to control the local disease and decrease pain. It may be delivered in two different protocols. The most aggressive and effective way to radiate a cat with oral squamous cell carcinoma is to give 12-18 small doses (called *fractions*) over a 3-5 week period. Each treatment requires that your cat remain completely still for several minutes, so a short-acting general anesthetic is given for each treatment. Side effects will occur and include ulceration of the tissue of the mouth (called *mucositis*). Oral rinses, soft foods and occasional topical numbing agents can reduce discomfort. Because cats are not eating well prior to radiation and many will stop eating due to the side effects, most cats require a feeding tube to complete the course of radiation. The side effects tend to resolve in 2-3 weeks. With this radiation protocol, the average control of the tumor is approximately 8-10 months.

Palliative radiation therapy is a less aggressive protocol associated with fewer side effects. Cats may only receive a total of 3-5 treatments. This protocol has been shown to decrease pain and provide some tumor control for about 4 months. Since this is a less intense protocol, most cats handle this type of radiation better and may not require a feeding tube. Combining palliative radiation with chemotherapy may offer improved benefits.

Chemotherapy is the use of medications to interrupt the growth of cancer cells. Chemotherapy is unlikely to eliminate the entire cancer, but it may reduce the size and discomfort of the cancer or simply slow its growth in some cats. You may be familiar with the side effects of chemotherapy in people. Fortunately, cats rarely experience the severe side effects seen in people. For instance, cats do not lose hair from chemotherapy, although their long whiskers may be lost.

Anti-inflammatory drugs / Pain medications may provide improved comfort and quality of life. **Piroxicam** has been shown to have some anti-cancer benefit in dogs with oral squamous cell carcinoma and is being evaluated in cats. This is given as a capsule once a day. It is also a first line pain medication. **Buprenex** (buprenorphine HCl) is a morphine-derived pain medication that is well tolerated by cats. It can be administered as a liquid or a transdermal ointment.

A combination of treatments may be the best choice for your cat. Treatments vary in cost, effectiveness, frequency of visits and side effects. As oncologists, we will help you decide which therapy is the best start for your cat.

Supportive Care

A feeding tube can be placed for home care in cats that require more nutrition than they can comfortably consume due to the tumor. Feeding tubes are easy to use and very well-tolerated by our patients. They are not meant to serve as life support, but they can improve quality of life for cats that still feel well but have difficulty eating. Cats with oral tumors tend to drool excessively and their saliva become thick and can irritate the skin. Since these cats often can no longer groom effectively, assistance to keep them clean is needed. Using a wash cloth or baby wipe as needed will help keep the cat comfortable and clean.