



ORAL SQUAMOUS CELL CARCINOMA IN CATS

INTRODUCTION

Squamous cell carcinoma (SCC), which arises from the cells lining the oral cavity, is the most common oral tumor encountered in cats and humans. While oral SCC has the potential to both aggressively invade local tissue and spread to other parts of the body, it is often the local effects of the tumor that cause the most problems. We do not know what causes SCC to occur in cats, but in humans it is associated with activities such as drinking alcohol, smoking, and chewing tobacco.

DIAGNOSIS AND STAGING

Many cats with oral SCC will display signs such as drooling, foul odor, bleeding from the mouth, or difficulty eating. Some cats may present with signs suggesting a dental problem, and SCC is diagnosed as an underlying cause of the dental disease. A diagnosis of SCC usually requires a **biopsy**. This is sometimes performed during routine dentistry, or can be performed using quick-acting injectable sedation or a very short anesthetic.

Prior to devising a treatment plan, some tests will often be performed to determine overall patient health, and if the tumor is localized to the primary site or whether there is any evidence of spread. These tests include blood tests evaluating blood cell number and organ function, a **fine needle aspirate** of the lymph node draining the tumor area, and **X-rays** of the lungs and/or tumor site.

TREATMENT AND PROGNOSIS

Whenever possible, surgery is the first line of defense for SCC. Unfortunately, due to the very small size of a cat's mouth and the relatively large size of the tumor when it is usually diagnosed, surgery is possible in less than 10% of cases. When surgery can be performed, very aggressive surgery, often removing parts of the upper or lower jaw, is recommended because of this tumor's ability to deeply invade bone and other deep structures in the mouth.

In cases where surgery is not possible or has been declined, another form of local therapy, radiotherapy can sometimes be used. This involves the local application of a powerful form of radiation directly onto the tumor area. By itself, radiotherapy is rarely associated with significant tumor shrinkage. However, it has the potential to decrease pain associated with the tumor, and especially when combined with other forms of therapy, may *increase* the likelihood of meaningful tumor shrinkage occurring. The radiotherapy protocol commonly recommended for SCC in cats consists of 4-6 weekly treatments, which can be administered on an outpatient basis. The total cost for all 4 treatments is \$1,200-1,800. Please consult the VETERINARY RADIATION THERAPY information sheet for additional information.

There are several chemotherapy drugs that have been studied for the treatment of SCC in cats. The drugs most commonly used are carboplatin, doxorubicin and mitoxantrone. The likelihood of a patient experiencing meaningful tumor shrinkage with these drugs is typically less than 10%, however more cats may experience mild tumor shrinkage, or their tumors may not grow for some period of time. These drugs are typically given once every 3 weeks, starting with 2 treatments and then determining whether it seems to be helping. Typical costs are between \$250 and \$375 per treatment, depending on the drug used. Chemotherapy is generally very well tolerated, with some cats experiencing mild side effects that usually go away by themselves. Less than 5% of cats experience severe side effects that would require hospitalization and supportive care. Should unpleasant side effects be noted, future doses of chemotherapy are reduced to decrease the likelihood of additional side effects occurring (See the handout CHEMOTHERAPY IN PETS for more information).

Another form of treatment that has the potential to be useful in treating SCC is the liquid aspirin-like drug meloxicam (Metacam). A related drug, piroxicam, which we cannot give to cats, is sometimes effective in dogs with SCC. Meloxicam could make other treatments, like chemotherapy and radiotherapy, more effective. In addition to its potential antitumor effects, meloxicam is a very strong analgesic (pain medication), and can be helpful in addressing the discomfort and mouth irritation that can be associated with oral SCC.

One of the most important issues to address in cats with SCC is the issue of nutrition. An inability to take in sufficient food and water, due to difficulty or pain eating/drinking, is the most common cause of poor quality of life and eventual euthanasia. If we are treating a cat with SCC who is eating or drinking poorly or losing weight, an esophagostomy or gastrostomy tube can be placed in the neck or abdomen. This is a very quick and simple procedure, which allows food, water and medications to be administered easily through the tube. These tubes can stay in as long as necessary, and should a cat later become more willing to eat, the tube does not interfere with the ability to take in food and water by mouth.

Unfortunately, we are able to cure very few cats with SCC. The goal with treatment is to do as much as we can to maintain an excellent quality of life for as long as possible.