



## **FELINE MAMMARY TUMORS**

Mammary cancer is the third most common cancer in the cat. The average age of cats presenting with mammary tumors is 10-12 years. Siamese cats appear to have twice the risk of developing mammary cancers than other breeds. Recent studies suggest that spayed female cats have a 40-60% lower risk of mammary cancer than intact females. There is a strong association with the use of synthetic progestins or estrogen-progestin combinations (i.e. Ovaban) and development of mammary tumors in the cat. Ninety percent of the mammary tumors in cats are malignant.

### **What are the clinical signs?**

Cats present with a firm mass in the mammary chain. The tumor may affect any or all of the mammary glands without predilection for a certain gland. More than half of cats will have multiple tumors in the mammary chain. Metastases, or spread, to the lungs occurs frequently and can cause fluid accumulation and respiratory difficulty.

### **How is it diagnosed?**

Fine needle aspirate and cytology may be helpful in differentiating nonmammary malignancies in the cat. However, as most mammary tumors in the cat are malignant, definitive mastectomy for diagnosis and treatment may be recommended. X-rays of the lungs prior to surgery are indicated to evaluate for metastatic disease.

### **How is it treated?**

#### Surgery

Mammary tumors in cats are frequently invasive. Radical mastectomy (i.e. removal of all glands on the affected side) is the treatment of choice as local recurrence is reduced with more aggressive surgery. Staged or simultaneous bilateral mastectomy is often recommended to lessen the potential for new mammary masses.

#### Chemotherapy

Because of the high rate of metastases, adjuvant chemotherapy is recommended in cats following surgery. Doxorubicin alone or in combination with cyclophosphamide has



been shown to induce responses in cats with measurable metastatic mammary carcinoma or unresectable masses. Chemotherapy as an adjuvant following mastectomy has been shown to extend survival times in high risk (aggressive) tumors.

### **What is the prognosis?**

The prognosis for mammary cancer in the cat is poor. Most studies indicate an average survival time of 10-12 months with surgery. The most significant prognostic factors include tumor size, extent of surgery and histologic grade. Cats with tumors larger than 3 cm in diameter will have an average survival of 4-6 months. Cats with tumors 2-3 cm in diameter will have an average survival of 2 years and cats with tumors smaller than 2 cm in diameter will have an average survival of 3 years. Radical mastectomy is beneficial in reducing local recurrence of tumor; however metastatic disease remains problematic. The more well-differentiated the tumor is on biopsy, the better the survival times; however the well differentiated tumors are relatively rare compared to the undifferentiated forms in the cat.