

## Information for Oncology Clients

### Intestinal Tumors in Dogs and Cats

Comprehensive Cancer Care Service

Ryan Veterinary Hospital of the University of Pennsylvania

Intestinal cancer is fairly uncommon in dogs and cats. Most intestinal tumors are in the large intestine (colon and rectum); although, some particular tumors (lymphoma) occur more commonly in the small intestines. Cancers that can occur in the intestines include adenocarcinoma, leiomyosarcoma, lymphoma, mast cell tumor, gastrointestinal stromal tumor (GIST), carcinoid, and rarely plasma cell tumor or hemangiosarcoma. The most common intestinal cancer in cats is lymphoma. Malignant tumors have the potential to spread to many areas of the body, including lymph nodes, other abdominal organs such as the liver, and lungs. Benign tumors, such as polyps and adenomas, can also occur. Adenomatous polyps are found more commonly in the rectum of dogs and the small intestines in cats. These benign tumors can be solitary or multiple. Even though they are benign, they can cause mechanical problems including obstruction of the intestinal tract.

The majority of animals with intestinal tumors are middle-aged to older. Some research has shown that male dogs and cats have a higher likelihood of developing intestinal tumors. Siamese cats have a higher risk for adenocarcinomas and lymphoma, and cats with feline immunodeficiency virus (FIV) or feline leukemia virus (FeLV) are predisposed to developing lymphoma. Certain dog breeds, such as Collies and German Shepherds, have been shown to have an increased risk for intestinal tumors, particularly adenocarcinoma.

Clinical signs usually seen with intestinal tumors include weight loss, decreased appetite, vomiting, diarrhea, and blood within the vomit or feces. Vomiting tends to occur more with tumors in the small intestine, while diarrhea or constipation can occur with tumors of the large intestine. An abdominal mass may sometimes be palpated by your veterinarian on physical examination. Some tumors can cause blockage (partial or complete obstruction) of the intestinal tract which requires immediate medical attention. There may be an accumulation of fluid within the abdomen (ascites), causing the abdomen to appear larger than usual. Malignant tumors will cause progressive illness and weight loss and some may spread (metastasize) before a diagnosis is made.

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The clinical signs associated with intestinal tumors are often related the gastrointestinal signs, and in the early stages are not distinguishable from a non-specific gastroenteritis or other non-cancerous intestinal problems. Imaging (x-rays and/or ultrasound) may be useful in detecting the tumor by finding a mass in the abdomen. Blood tests are not specific for these cancers but can sometimes indicate if the tumor is bleeding internally or if there is a loss of proteins or electrolytes. In order to further characterize the tumor, it is necessary to obtain a tissue or cytology sample of the tumor itself. Sometimes a needle sample (aspirate) can provide information, but a biopsy is often necessary to make a definitive diagnosis, especially if we are dealing with a carcinoma or a sarcoma. Various types of surgical sampling are available, like endoscopy (video scope into the stomach or colon) or exploratory surgery. However, endoscopic biopsies are not always diagnostic, and examination of a larger tissue sample is sometimes needed (via exploratory surgery). The advantage with an exploratory surgery is that the entire tumor may be removed as part of an excisional biopsy if deemed resectable. Other tests, such as chest x-rays and biopsies of other abdominal organs, may be recommended to look for evidence of spread of the cancer.

Treatment for most solid tumors involves surgical removal of the tumor. Surgery is generally recommended if a tumor is causing obstruction of the intestinal tract or if the tumor has resulted in perforation of the intestines. If the tumor cannot be completely removed during surgery, there is an increased risk for the intestines to not heal appropriately (dehiscence), and this leakage of intestinal content into the abdominal cavity can result in serious infection, known as a septic abdomen. This is a life-threatening condition and necessitates emergency surgery.

For cancers such as lymphoma, surgery may not be recommended if the cancer involves multiple areas and a diagnosis can be obtained through a fine needle aspirate. Instead, this cancer is more commonly treated with chemotherapy. Chemotherapy may be recommended for other cancers, including mast cell tumor, plasma cell tumor, or those that have metastasized. Your veterinarian can provide more information about chemotherapy if this is recommended for your pet. Special diets or other medications may be recommended depending on the individual patient's clinical signs.

The prognosis associated with intestinal tumors depends on the specific tumor type, the grade (degree of aggressiveness seen on histopathology) and stage (how far it has spread) of the tumor.

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Low risk tumors such as cecal gastrointestinal stromal tumors may be effectively treated with surgical resection alone, while patients with high grade intestinal lymphomas have a poor long term survival despite chemotherapy treatment.

The oncologist will review your dog's or cat's biopsy, staging results and discuss the various treatment options with you. Other than for lymphoma, the effectiveness of systemic chemotherapy has not been fully evaluated in dogs and cats with many of the other primary intestinal solid tumors. Nevertheless, systemic treatment including chemotherapy may still be an option in patients where surgery is not possible or adequate by itself to treat the tumor or prevent recurrence. The decision to pursue such treatments depends on the overall condition of the patient, the prognosis, the likelihood of resulting in a benefit, and your individual preferences.

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