



## Intestinal Mass Removal

### What are intestinal tumors?

- The intestine is the portion of the digestive tract between the stomach and the anus. It is divided into two major sections: small intestine and large intestine.
- Most food products are absorbed in the small intestine while the large intestine is responsible for absorption of water and excretion of solid waste material.
- The average age at which intestinal tumors are diagnosed ranges between 10-12 years for cats and 6 to 9 years for dogs.
- There are many different types of intestinal tumors, including **lymphoma**, **adenocarcinoma**, **mast cell tumor**, and **leiomyosarcoma**

### How common are intestine tumors in cats and dogs?

- Intestinal tumors account for less than 10% of all tumors in dogs and cats and their incidence increases with age in both dogs and cats.

### What are the symptoms of intestine tumors in cats and dogs?

- The symptoms indicative of intestinal tumors include weight loss, diarrhea, vomiting, anorexia, and less frequently black colored stool and anemia.
- The clinical symptoms often relate to the location of the tumor along the gastrointestinal (GI) tract. For example, vomiting is associated with lesions in the upper region of the GI tract whereas weight loss is associated with lesions in the small intestine.

## How is the diagnosis made?

- Upon the presentation of the above symptoms, the veterinarian will typically perform a **series of tests**, including physical exam to look for any masses that may be felt, blood tests, chemistry profile and imaging studies.
- **Imaging studies** can include plain X-rays, contrast radiography, and/or abdominal ultrasound. The ultrasound studies can localize the tumor, evaluate whether the cancer has spread to other nearby organs, and guide biopsy.
- **Ultrasound** may also be helpful in distinguishing between malignant and non-malignant intestinal disease based on the thickness of the intestinal wall.
- The most definitive way to confirm/rule out intestinal tumors is to perform a medical procedure called **endoscopy**. It is a minimally invasive diagnostic procedure that assesses the interior surfaces of an organ like intestine by inserting a tube into the body. The instrument may have a rigid or flexible tube and not only provide an image for visual inspection and photography, but also enable taking biopsies which can then be sent to the lab for analysis.
- When non- and minimally invasive diagnostic tests fail to confirm a diagnosis, an exploratory surgery may be performed on pets with persistent symptoms.
- The **advantages** of abdominal exploratory are that the entire area can be directly visualized and full thickness biopsy samples can be taken but the **disadvantages** include the risks associated with any surgical procedure.

## Does cancer cause pain in pets?

- Pain is common in pets with cancer, with some tumors causing more pain than others. In addition to pain caused by the actual tumors, pets will also experience pain associated with cancer treatments such as surgery, radiation therapy or chemotherapy.
- Untreated pain decreases the pet's quality of life, and prolongs recovery from the illness, treatment or injury. It is, therefore, essential that veterinary teams that are taking care of pets with cancer should also play a vital role in educating pet owners about recognizing and managing pain in their pets.
- The best way to manage cancer pain in pets is to prevent it, a term referred to as preemptive pain management. This strategy anticipates pain ahead of time and administers pain medication before the pet actually experiences pain, thus ensuring the pet's maximum comfort.

## How important is nutritional support for pets with cancer?

- Cancer cachexia (a term referring to progressive severe weight loss) is frequently observed in pets with cancer. Pets with cancer lose weight partly because of lack of appetite and partly because of cancer-induced altered metabolism.
- Some of the causes for decreased appetite are related to the cancer itself (for example, tumors may physically interfere with food chewing, swallowing, and digestion process) and some may be related to the side effects of cancer treatment (for example, some chemotherapy drugs cause nausea and vomiting, and radiation therapy can cause mouth inflammation).
- Proper nutrition while undergoing cancer treatment is essential to maintain your pet's strength, improve survival times, quality of life and maximize response to therapy.
- Adequate nutritional support was shown to decrease the duration of hospitalization, reduce post-surgery complications and enhance the healing process. Additionally, pets with cancer need to be fed diets specifically designed to provide maximum benefit and nutritional support for the patient.

### **What are the treatment options for intestine tumors in cats and dogs?**

- With the exception of lymphoma, **surgery** is the primary treatment for intestinal tumors.
- There have not been enough clinical studies to determine whether **chemotherapy** following surgical treatment provides any benefit to the pets.
- **Radiation therapy** is not generally used for this particular disease due to concerns regarding possible damage to surrounding normal tissues in the abdominal cavity.

### **What are the surgery-associated risks for intestine tumors in cats and dogs?**

- The risks associated with surgery include life-threatening sepsis (a serious medical condition characterized by a whole-body inflammatory state caused by infection) and peritonitis (inflammation of the abdominal lining).

### **What is the prognosis for intestinal tumors in cats and dogs?**

- The prognosis for pets diagnosed with intestinal tumors will depend on a variety of factors, including the specific tumor type, the stage of the disease and whether the cancer has spread to other organs. For pets whose cancer has not spread to other organs, long-term survival is possible. It is estimated that approximately 40% of dogs with small intestinal tumors remain alive 1 year after diagnosis.

- Dogs diagnosed with **adenocarcinoma** and **leiomyosarcoma** have frequent metastases to lymph nodes and the liver.
- Dogs with small intestinal **adenocarcinoma** have shorter average survivals of 12 days without treatment and between 4-10 months with surgery.
- Dogs with **leiomyosarcoma** who survive surgery survive 1-2 years.
- For cats with **adenocarcinoma**, approximately 50% will metastasize to the local lymph nodes, 30% to the peritoneal cavity, and 20% or less to the lungs.
- Cats with small intestinal **adenocarcinoma** have a significant risk associated with surgical treatment but those who live 2 weeks after the surgery may experience long term control of the cancer.
- Cats with cancer in the large intestines have survival approximately 3.5 months for **lymphoma**, 4.5 months for **adenocarcinoma**, and 6.5 months for **mast cell tumor**.