

Cancer in Companion Animals

The first step in dealing with cancer is understanding the basics – how we talk about it, evaluate it, and treat it. We will answer any questions you have to help guide you to the best treatment option for you and your pet.

Cancer terminology

Cancer, which can also be called malignancy or neoplasia, refers to uncontrolled and purposeless growth of cells. Since this growth can happen anywhere in the body, there are many types of cancer – it is not a single disease. The term, **tumor**, is a general word for cancer whether it is benign ("good" cancer) or malignant ("bad" cancer).

The terms **cancer**, **malignancy** and **neoplasia** are synonyms. Cancer is not a single disease since it can arise from any tissue in the body; therefore, there are many types of cancer. Some forms of cancer have the ability to spread to other sites in the body that are often far from the original site which is termed *metastasis*. Metastasis occurs when cancer cells enter the blood or lymph vessels and are then carried to other organs. Cancers with this type of behavior are considered *malignant*. Some cancers lack the ability to metastasize but may cause significant damage due to growth and invasion into local tissues. Cancers that do not metastasize and are not invasive are considered *benign*. However, some benign tumors may be locally invasive and even though these cancers won't spread to other sites they can cause serious problems for your pet just by its growth.

Oncology is the branch of medicine dedicated to the study of cancer and the doctors treating your pet are **oncologists**. Our job as oncologists are to help you understand your pet's diagnosis and work with you to make decisions about treatment. There are two branches in oncology; medical oncology and radiation oncology. Medical oncologists most commonly use drugs such as chemotherapy to treat cancer, while radiation oncologists use radiation. Some patients require multi-modality therapy with surgery, radiation and/or chemotherapy, in order to achieve success. In most situations chemotherapy involves systemic therapy (whole patient) and may be administered in several different ways such as subcutaneous injection (injection under the skin), oral, intravenous (into the vein) or intra-lesional (into the tumor). Generally, radiation therapy is a local treatment since the dose is delivered directly to the tumor region and spares other tissues, thus eliminating systemic bodily effects.

Evaluating your pet

Our first priority is to assess the extent of your pet's cancer, which is a process known as **tumor staging**. This information is vital for determining your pet's prognosis (i.e. the expected outcome as a result of the cancer), formulating a treatment plan, and then evaluate your pet's response to treatment.

Tumor staging usually includes: blood tests such as a complete blood count (CBC), to evaluate red and white blood cells and platelets, a chemistry profile, to evaluate your pet's organ function, urinalysis,

radiographs, which are X-rays to evaluate for possible metastasis to the lungs, and a tissue aspirate and/or biopsy. It is possible that we may repeat a test your primary veterinary has performed because of the changing nature of your pet's cancer. For some patients, we will recommend additional testing procedures that may include an ultrasound of the abdomen and/or the chest, specialized radiologic studies such as CT/MRI scan, contrast studies or nuclear scan, bone marrow aspiration, lymph node aspirate, endoscopy (direct examination of the stomach, colon or bronchi with a specialized scope), and immunologic studies. We are very thorough, however, it is important to realize that medicine is not an exact science and despite these staging procedures, it is possible that a small tumor may not be detected.

Once the tumor staging is complete, we will better understand your pet's cancer better so we can discuss your goals, treatment options, and possible outcomes for each option. Tumors that have metastasized extensively are not curable; therefore, the objective of therapy for these animals is **palliation**. Palliation is the relief of symptoms to help improve/maintain quality of life and possibly prolong life with minimal negative impact in a situation where long term control is not likely.

Cancer therapy

Treatment options for your pet may include surgery, chemotherapy and radiation therapy or a combination of one or more of those therapies. On occasion, due to the rarity or biological behavior of a particular tumor, a precise treatment recommendation may not be known. In an effort to test newer and hopefully more effective forms of therapy, you may be offered the option to enroll your pet in an *investigative clinical trial*. The purpose of such a trial is for clinicians to gain more knowledge about the specific type of treatment which may be of value to humans and other pets as well as hopefully providing a benefit to your pet. Ultimately, our recommendation will be based on both the tumor staging and our discussions with you.

Should you treat your pet?

Treating animals with cancer is not appropriate for every pet and/or family. It takes a strong commitment on the part of the family. Therapy requires frequent trips to the veterinary hospital and can be expensive although there can be numerous options available depending on the diagnosis and family's treatment goals. At AVIM&O we try to work with your family to develop a treatment protocol that accommodates the family's goals/concerns but still provides a reasonable treatment for the patient. For some forms of cancer, once treatment has begun it is never stopped during the animal's life (although the frequency of treatments may be decreased). Your oncologist cannot do it alone, so treating your pet is a team effort between us, your primary vet and you. It is important for you to present your pet for treatment precisely when requested to do so by your oncologist since the timing of cancer therapy is critical for obtaining an optimal outcome. In addition, medication to be given to your pet at home should be administered by you exactly as requested by your oncologist. Any abnormalities or problems you encounter should be reported to your oncologist promptly. Always feel free to ask questions as communication is key to ensuring the best treatment/outcome for your pet.

Keep in mind that your oncologist is as concerned about the quality of your pet's life as much as you. The goal of therapy is to keep your pet happy and minimize discomfort. Although some animals may experience transient discomfort from therapy, cancer treatment of most pets is accomplished without major distress or detracting from your pet's enjoyment of life. Your commitment to your pet and your oncologist's dedication to providing state-of-the-art care will allow you to work together to maintain your pet's quality of life.