

Cancer in Companion Animals
Clinical Oncology Service
Ryan Veterinary Hospital of the University of Pennsylvania

Terminology

Cancer is a disease caused by the uncontrolled growth of cells in the body. The terms *cancer*, *malignancy*, and *neoplasia* are used interchangeably. Cancer is not a single disease, but can arise from any tissue within the body. There are many forms of cancer, some of which have the ability to spread to other areas in the body. Cancer spread can occur via the blood or lymphatic system, which carry cancer cells to other tissues and organs. Cancers which spread to other areas of the body are deemed *malignant*. When cancer spreads in this fashion, it is said to *metastasize*. Metastatic spread of cancer can lead to significant problems and illness which can limit an animal's quality of life, and potentially cause death. Some cancers lack the ability to spread beyond their initial site, but can still cause significant damage due to invasion into and destruction of local tissues. Tumors that do not metastasize and are not invasive are considered to be *benign*. The term *tumor* is a general word for cancer, and can signify either a benign or malignant process. The veterinarians treating your animal at Penn Vet are specifically trained in the treatment of oncology.

Tumor evaluation and staging

The initial steps in treating your animal's cancer involve determining the extent of the tumor within the body. This information is vital in determining your pet's *prognosis* (expected outcome) and formulating a treatment plan. Determining the tumor burden or extent requires several methods, which typically include blood tests (e.g., blood count, chemistry profile), urine sampling, x-rays, ultrasound, and tissue sampling via needle aspiration or biopsy. In many instances, some or all of these tests will have been performed by your primary care veterinarian to obtain a diagnosis. Some of these tests may need to be repeated at Penn Vet due to the changing nature of your pet's illness. As indicated, additional testing procedures may include advanced imaging (e.g., CT, MRI), bone marrow aspiration, ultrasound and or x-rays, and additional blood or urine tests. The collective process of obtaining this information to ascertain the extent of cancer is referred to as *tumor staging*. It is important to realize that medicine is not an exact science – despite these staging procedures, very small tumors may not be detected, and assessment of internal organ involvement may be difficult in certain scenarios.

Once tumor staging has been completed, your veterinarian will be better informed to discuss treatment options for your pet. The goals of such therapy will also be discussed at length. Tumors that have metastasized extensively are often not curable. The focus for animals with incurable tumors shifts to *palliative therapy*, which can provide significant improvement or relief of tumor-related pain or other symptoms and possibly prolongation of life.

The first consultation with an oncologist can be long; the oncology service takes pride in answering all the questions and concerns an owner may have prior to initiating treatments. We understand that it can be a difficult decision and a big undertaking, both in terms of time commitment, financial commitment and emotional commitment. But we believe that a well-informed owner is a more effective owner, and in partnership with the oncologists he/she can help make the best decisions and adjustments in your pet treatment protocol as we move forward.