

Cancer Terminology

This is a guide to common cancer terms you may read or hear during your pet's visit to the MedVet Cincinnati Medical Oncology service.

Cancer Stage and Staging Tests

Cancer stage refers to the extent of cancer within a pet's body. Some pets have one localized tumor with no evidence of cancer elsewhere in their body, while others are diagnosed with additional sites of cancer (metastasis). Staging tests include imaging tests (typically X-rays of the chest and ultrasound of the abdomen) and needle samples from lymph nodes or organs (such as the liver or spleen). During the course of treatment, we typically recommend periodic re-staging tests to monitor a pet's cancer.

Tumor Grade

The grade of a tumor is determined by the pathologist evaluating the biopsy. Tumor grade provides an indication of how a tumor will behave, with Grade I-II/low grade tumors having less aggressive features, and Grade III/high grade tumors having features that are more aggressive (a higher potential for recurrence and/or metastasis).

Metastasis

Metastasis refers to cancer spread from the site of the original tumor to other locations in the body (such as lymph nodes, the lungs, or other internal organs). The metastatic rate (or metastatic potential) of a tumor refers to the likelihood that metastasis would occur with that particular tumor type or tumor grade.

Benign vs. Malignant Tumors

A benign tumor is localized, will not metastasize, and is typically cured with complete surgical removal.

A malignant tumor has more aggressive behavior. It is locally invasive and has the potential for metastasis to other sites in the body.

Fine Needle Aspiration and Cytology

To sample lymph nodes, tumors, or organs, we often perform fine needle aspiration (FNA), during which a thin needle is placed into the mass to withdraw a small number of cells. These cells are spread on a microscope slide and evaluated by a pathologist (cytology).

Biopsy and Histopathology

A biopsy involves surgery to sample a portion of a tumor, or the entire tumor, to submit the tissue for more extensive microscopic evaluation (histopathology). This is more invasive than fine needle aspiration and often requires heavy sedation or general anesthesia. More information is gained from a biopsy, including the tumor grade and surgical margins.

Surgical Margins

During cancer surgery, the goal is always to remove a margin of normal tissue around the tumor to ensure that all microscopic tumor cells have been removed. After surgery is performed, the tissue removed (biopsy) is evaluated by a pathologist who measures the surgical margins.

- **Complete** – Complete surgical margins indicate that the entire tumor has been removed with wide margins, and it is unlikely that the tumor will grow back in that spot.
- **Narrow** – Narrow surgical margins indicate that the margin is complete, but that tumor cells extend very close to the margin, and it is possible that microscopic tumor cells remain at the surgical site. Local tumor regrowth may be a risk.
- **Incomplete** – Incomplete surgical margins indicate that tumor cells extend to or past the margin of removed tissue, and that microscopic tumor cells likely remain at the surgical site. Tumor regrowth is a risk in these cases.

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Localized Cancer Treatments

Surgery and radiation therapy are forms of localized cancer treatment used to treat tumors in pets.

- Surgery – Surgical removal of a tumor is typically the best treatment option for localized tumors. Surgery typically involves a single procedure performed under general anesthesia.
- Radiation therapy – Radiation therapy is often recommended when surgery is not possible (due to the size or location of the tumor), or it may be recommended after surgery in cases of incomplete surgical margins. Radiation therapy may allow us to treat a larger area than we could remove with surgery. Radiation typically involves multiple treatments and each treatment requires general anesthesia.

Systemic Cancer Treatments

For tumors with a high metastatic rate (and for cancers that affect multiple areas in the entire body, such as lymphoma), systemic treatment is commonly recommended following localized cancer treatments.

- Chemotherapy – Chemotherapy involves intravenous or oral medications given in hospital or at home.
- Immunotherapy – Immunotherapy involves treatments such as the melanoma vaccine that induce a systemic immune response to help fight cancer.

Remission Status

At a pet's recheck evaluations, we assess the remission status of their cancer through physical examination and re-staging tests.

- Complete Remission/No Evidence of Disease – This status indicates that a pet's cancer is not detectable on physical examination, imaging tests, and/or cytology.
- Partial Remission – This status indicates that a pet's cancer is responding to treatment and has reduced in size, but the tumor is still present within the body.
- Stable Disease – This status indicates that treatment is preventing further tumor growth, and the tumor measures stable in size.
- Progressive Disease/Relapse – This status indicates that a pet's cancer has reoccurred or grown larger since the last evaluation, and typically additional or alternative treatment is recommended.

For more information about cancer staging for dogs and cats, contact MedVet Cincinnati directly at 513.561.0069 or visit medvet.com.