

### **MOST COMMON CANINE CANCERS**

Learning your dog has cancer is a frightening experience, but according to the National Canine Cancer Foundation (NCCF), it is a diagnosis one out of every three dogs will receive during their lifetime. The good news is, about half of all canine cancers are treatable if they are caught early and several promising research studies are currently being conducted to help find a cure.



Cancer comes in many forms, including carcinoma, sarcoma, melanoma, lymphoma, and leukemia, and can occur at any age in both mixed breeds and purebreds. Listed below are the most common types of cancer affecting dogs and the signs to look for at home.

Early warning signs of cancer:

- Abnormal swelling
- A sore that does not heal
- Weight loss
- Loss of appetite
- Bleeding or discharge from any opening on the body
- Unpleasant or unusual odor
- Difficulty eating or swallowing
- Loss of energy
- Ongoing lameness or stiffness
- Difficulty breathing, urinating, or defecating

\*Information from the National Canine Cancer Foundation (NCCF)

**Lymphoma:** Lymphoma occurs in cells in the lymph nodes or bone marrow and is most commonly diagnosed in dogs between the ages of 6 and 9 years old. Lymphoma affects the dog's immune system and can spread rapidly if left untreated. It is classified in five progressive stages and treatment options vary depending on the stage. The first sign of lymphoma is typically a painless, swollen lymph node in the neck or behind the knees.

**Hemangiosarcoma:** Hemangiosarcoma is a malignant cancer of the blood vessels. It is more common in dogs than any other species. Hemangiosarcoma is commonly diagnosed in the spleen, liver, and heart, but can travel to any organ or occur just under the skin. Because there are no distinct early warning signs for hemangiosarcoma, many dogs are not diagnosed until the

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disease has reached its advanced stages. It is often seen in German shepherd dogs, golden retrievers, and other large breeds.

**Mast Cell Tumors:** Mast cell tumors are an extremely common form of cancer in older dogs and mixed breeds, as well as boxers, Boston terriers, Labrador retrievers, beagles, and schnauzers. Mast cells are found in the skin and other tissues, like the intestines or respiratory tract. They contain large amounts of histamines and enzymes that protect the body, but when tumors develop, that protection turns against the immune system. The first sign of a mast cell tumor is usually a lesion on the skin. Some mast cell tumors can also be uncomfortable and cause agitation.

**Melanoma: Melanoma:** a type of skin cancer that can be found in the nail beds, footpads, and eyes, but the vast majority of melanoma tumors start in the mouth or around the lips. Melanoma tumors are highly aggressive, growing deep into the skin to invade vital organs. The first sign of melanoma might appear as a swollen paw, an eye that drains, or a sore in or near the mouth.

**Osteosarcoma:** Osteosarcoma is cancer of the bone. Approximately 85 percent of osteosarcoma tumors are malignant, and grow very quickly. Osteosarcoma commonly affects large breeds between the ages of 4 and 7 years old, including Great Danes, Irish setters, Doberman pinschers, Rottweilers, German shepherd dogs, and golden retrievers. While osteosarcoma can occur in any bone, it most commonly affects the limbs. Initial signs of osteosarcoma may include swelling and lameness.

**Mammary Cancer:** According to the American College of Veterinary Surgeons (ACVS), mammary tumors are more common in female dogs that are either not spayed or were spayed after 2 years of age. About 50 percent of all mammary tumors are malignant and have metastasized, or spread to other areas of the body, by the time they are surgically removed. Signs of mammary cancer are often overlooked because the tumors appear as a small nodule on or around the dog's nipple; however, this type of cancer can also present itself as a painful tumor around the nipple.

Yale School of Medicine has developed a new vaccine that may help dogs with cancer. They have teamed up with the Veterinary Cancer Center in Norwalk, Connecticut for a clinical trial to test the vaccine on real cancer patients. The vaccine is injected into a dog with the goal of producing antibodies to fight cancer. Yale University tested this vaccine in the laboratory and found it was successful at targeting and shrinking malignant tumors. Now they hope to create the same results with dogs battling the disease.