

Cancer in Dogs

For owners

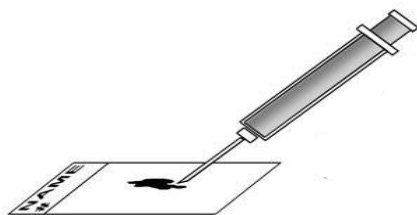


Introduction

Cancer is a very common diagnosis, affecting up to 1 in every 4 dogs during their lifetime. The most common cause of death or reason for euthanasia of dogs in the 2004 Kennel Club health survey was cancer overall and for many breeds. The most common cancers of dogs are mast cell tumours, lymphoma, haemangiosarcoma, soft tissue sarcomas, mammary tumours, osteosarcoma (bone cancer) and melanoma. Mast cell tumours are the most common skin cancer in dogs and these are more likely to affect older dogs; however, 70% of these tumours can be successfully treated with surgery and sometimes local radiotherapy. Lymphoma is the most frequent life-threatening cancer in dogs, accounting for up to 20% of all tumours and affecting as many as 24 out of every 100,000 dogs. Mammary tumours are one of the most common tumours found in older female dogs; however, spaying can dramatically reduce the risk of this cancer developing. Certain breeds have an elevated risk of developing particular cancers, suggesting that there is likely a genetic component or predisposition to cancer (Table 1 over page).

Clinical presentation

Cancer can occur in any body part or system and clinical signs are varied as a result. As well, many of the signs are shared by a large range of other diseases. Affected dogs may present with a lump or a mass lesion or non-specific signs that may include lack of appetite, reduced activity and weight loss. Cases present in many different ways depending on the organ(s) affected. Clinical signs may include vomiting, diarrhoea, a palpable mass in the abdomen or on the skin, lameness, unexplained bleeding, an enlarged lymph node or even simply bad breath due to a mass in the mouth.



Diagnosis

A thorough physical examination of the dog is always an essential part of the diagnostic process (or work-up) as it will determine which further tests will be required. Complete blood cell counts and biochemistry tests can help to reveal which organs are involved and whether there is any concurrent disease. Various imaging modalities, including radiographs, ultrasound studies and sometimes also CT or MRI scans may be helpful in determining the extent of the disease.

A diagnosis of cancer is usually based on histopathological examination of a sample that is obtained by a fine needle aspirate (FNA) or by a biopsy. Once the diagnosis of tumour type is made, further evaluation by a pathologist may be necessary to help establish the grade of the tumour as this will affect prognosis and treatment options.

Staging

Once a diagnosis of cancer has been established, the cancer should be staged. Staging is the process that determine to what extent the cancer has spread throughout the dog's body. The degree of spread will affect prognosis and may affect treatment options. Clinical staging using the TNM system to assess the primary tumour (T), including involvement of adjacent structures, metastasis to local and regional lymph nodes (N) and distant sites (M) should be carried out, as indicated by the biological behaviour of the tumour. The aim of staging is to ensure the best treatment possible is offered and to give a more accurate prognosis (expected outcome). Carcinomas, including mammary cancer, and mast cell tumours mainly undergo metastasis (spread) via the lymphatic system. Bone cancer tends to spread to the lungs. Blood tests, imaging scans, bone marrow and/or lymph node biopsies may be necessary procedures in staging.

What happens after a diagnosis of cancer is made?

Your vet will discuss with you the diagnosis and type of cancer as well as the prognosis and management plan. It is up to you to make an informed decision but it is the responsibility of your vet to tell you all the options.

To help remember what you are told, you may wish to take notes or have another family member or friend with you. You do not need to ask all your questions at once. You will have other chances to ask the veterinary surgeon or nurse to explain things that are not clear and to ask for more information.

Veterinary surgeons also consider the patient's age and general health. Sometimes the goal of treatment is not to cure the cancer but to maintain as normal a quality of life

as possible in your pet for as long as possible. In this case, the goal is to control the disease or to reduce clinical signs associated with the cancer for as long as possible. The treatment plan depends mainly on the type of cancer and the stage of the disease and it may change over time.

Before starting treatment, you may want another opinion about your pet's diagnosis and treatment plan. A second opinion is usually sought when there is doubt about the diagnosis whereas a referral is usually to seek specialist management of the case. Your veterinary surgeon may refer you to a specialist, or you may ask for a referral. Specialists who treat cancer include surgeons, medical oncologists and radiation oncologists.

Table 1. Elevated risk of developing particular cancers, by breed.

Type of cancer	Breeds with an elevated risk of developing this cancer
Histocytic sarcoma or Malignant Histiocytosis	Bernese mountain dog, flat-coated retrievers
Osteosarcoma (bone cancer)	Large breeds such as Rottweiler, great Dane, Irish wolfhound, greyhound, Saint Bernard, Doberman, German shepherd, Irish setter, golden retriever, Borzoi, Leonberger
Haemangiosarcoma (blood vessel tumours)	German shepherd, golden retriever.
Mast Cell Tumour (Skin tumours)	boxer, bull dog, bullmastiff, Boston terrier, Staffordshire bull terrier, Rhodesian ridgeback, Weimaraner, Labrador retriever, beagle, golden retriever
Lymphoma/leukaemia	boxer, bull mastiff, basset hound, Saint Bernard, Scottish terrier Airedale terrier, Bouvier des Flandres, Labrador retriever,
Melanoma	Chow Chow, golden retriever, Pekingese, poodle, Schnauzer, Scottish terrier, cocker spaniel
Mammary tumours	poodles, spaniels, Puli, English setter, pointer, dachshund, German shepherd, Maltese terrier, Yorkshire terrier
Brain tumour	golden retriever, boxer

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