

# Canine Multicentric Lymphoma



## What is lymphoma, how is it diagnosed and categorized?

Canine lymphomas, also called lymphosarcomas, represent a group of the most commonly diagnosed cancers that form from white blood cells called lymphocytes. Lymphomas account for approximately 7-14% of all cancer diagnoses with the average dog affected between the age of 5-10 years old. Lymphoma most often affects lymph nodes but can also affect the liver, spleen, bone marrow, and other sites.

Lymphoma is typically diagnosed using aspirates collected from enlarged lymph nodes. In some cases,

diagnosis may require sampling of bone marrow or other organs, tissue biopsy, or molecular testing (flow cytometry, PARR).

Your veterinarian may recommend performing bloodwork (including a complete blood count, serum chemistry) and urine test to assess your dog's general health. Since lymphoma can affect any part of the body, imaging tests including chest radiographs (to look at the lungs, see if there is a mass inside the chest or any big lymph nodes inside the chest) and abdominal ultrasound (to look at the internal organs and gastrointestinal tract) may be recommended to assess the extent of disease. Test results may influence treatment recommendations or help anticipate potential complications. Most lymphomas are categorized into five stages, as well as substages, depending upon the extent of the disease in the body and the presence of clinical signs, respectively.

## What is the difference between B cell and T cell lymphoma?

Lymphoma can be characterized based on the type of lymphocyte (T cell or B cell) that becomes cancerous. This is called immunophenotyping. B cell lymphoma is more common, and dogs with this variant often achieve and maintain remission more readily than patients with T cell lymphoma. Because of this favorable response to treatment, survival times are longer for dogs with B cell lymphoma. Individual survival and treatment response are patient dependent, however. Some dogs with T cell disease achieve durable remissions, and some patients with B cell disease do not.

## What are the treatment options and prognosis?

Treatment selection depends on your goals, your pet's tolerance of visits, cost, and most importantly, quality of life.

Because high grade lymphoma is a disease affecting the whole body, chemotherapy is one of the treatments of choice. Options for treating lymphoma include chemotherapy (+/-), chemotherapy and radiation (+/- bone marrow transplant or half body radiation therapy), surgery with radiation therapy and alternative therapies such as herbal, nutritional and supplements if given safely. With most any type or stage of lymphoma, comprehensive and multi-modal supportive care is necessary.

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Another option is palliative therapy with steroids alone.

Prognosis is determined by the susceptibility of the cancer to the treatment elected. It is patient dependent with many dogs having a good initial response to treatment with the first months of treatment. The goal of chemotherapy will be to prolong your pet's lifespan and improve their quality of life.

Although highly effective, chemotherapy only rarely enable us to get a cure. With multi-drug therapy, dogs

with B cell lymphoma have an average survival time of 12 months and those with T cell lymphoma have an average survival of 6-9 months. Without chemotherapy, the prognosis for high grade lymphoma is poor (less than 2-3 months).

## What are the side effects of chemotherapy?

Chemotherapy tends to be well tolerated but may affect the gastrointestinal tract and the bone marrow (white blood cells, platelets). Side effects are treatment associated and most commonly include mild gastrointestinal upset (vomiting and/or diarrhea), decreased appetite and mild lethargy. Your pet will be prescribed medications to use as needed. It is best to be proactive with these medications and start them as soon as signs are noted.

## Concerns of chemotherapy for my pet:

Chemotherapy carries a negative impression especially with our understanding of its use in human medicine. Our approach to chemotherapy in veterinary medicine is different. As quality of life is imperative for our pets, doses are adjusted, and your pet is monitored closely to limit severe side effects. Though there is a risk of hospitalization, the majority of pets tolerate therapy well. Hair loss is rare except in certain breeds. Should you have concerns during therapy, speak with your oncologist.

*This information has been provided by the Veterinary Cancer Society. Please consult your veterinary oncologist, or your pet's primary care veterinarian, if you have any questions related to the information provided on this document.*