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## **CANINE LYMPHOMA**

### **What is lymphoma?**

Lymphoma is a cancer of white blood cells, which circulate through the blood and especially through a special circulatory system called the lymphatic system (made up of a complete network of lymphatic vessels and lymph nodes). This system is as extensive throughout the body as the venous and arterial bloodstreams. Normally the function of the lymphatic system is to filter out debris from dead cells and bacteria and produce antibodies against foreign substances encountered throughout the animal's life. In dogs, lymphoma is a rapidly progressive disease that, if left untreated, results in death within a relatively short time, usually a few weeks from the time of diagnosis.

### **What causes lymphoma?**

What causes a healthy cell to be transformed into a tumor cell is still largely unknown. Much research has been conducted in recent years concerning lymphoma. In cats and cows it is associated with infection by the feline leukemia and bovine leukemia viruses. In people and dogs a virus that causes lymphoma has not been identified.

### **What are the clinical signs?**

Lymphoma is recognized in several clinical forms (generalized, intrathoracic, skin, gastrointestinal, and leukemia). The most common sign is painless enlargement of the lymph nodes. Because of the disease affects the whole body, any organ system can be affected and non-specific signs such as depression, weakness, weight loss, loss of appetite, diarrhea or vomiting, and difficulty breathing can also be seen. Often dogs with lymphoma are slightly anemic. The liver and spleen can also be involved and enlarge in size.

### **Can lymphoma be cured?**

We are unable to cure canine lymphoma. However, the vast majority of dogs can be rendered free of any evidence of disease (placed into complete remission) for many months. Their quality of life during this period is generally excellent.



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## **What does treatment consist of?**

Because lymphoma affects every organ system in the dog, the entire body must be treated. This leaves chemotherapy as our most effective means of killing the rapidly growing and dividing cancer cells.

Some drugs are given intravenously and some orally. Many times a combination of drugs are given. If you have any questions regarding the scheduling of the drugs we have recommended, please make sure we address those questions.

## **Isn't chemotherapy more harmful than the disease?**

No. Any chemotherapy drugs we recommend provide benefits by their actions against the cancer cells that are expected to far outweigh any potential side effects associated with their use. We will try to outline the side effects you might see following chemotherapy and give you recommendations as to what can be done to monitor and prevent them. We would never recommend a treatment plan that is expected to be worse than the disease itself.

## **What is the life expectancy with treatment?**

It is impossible to predict how long your pet will live. We know from the hundreds of dogs that have been treated, that 75-80% will achieve a complete remission with a return to an excellent quality of life. We also know that this disease always comes back. The range of time it stays away the first time varies from 4 months to 2 years. The average is 6-8 months. At that time, about half of the dogs can be placed into remission again. Generally the second remission is shorter than the first. Sometimes a third, fourth, and even fifth remission can be achieved, but each is generally shorter than the last as the cancer cells become resistant to the chemotherapy just as bacteria become resistant to antibiotics. On average, with treatment, patients will live for approximately 1 year. However, every dog is an individual, and some will live much longer than this. Sometimes, additional diagnostic tests that tell us more about the location or type of lymphoma will also give us more information to help predict prognosis. Ultimately, the only way to know how well any specific patient will respond is to treat him or her.



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## **How will I know when it is time to say good-bye?**

We will help you with that difficult decision in any way we can. We will also do everything we can to make sure that it is not for many months to come. Nobody knows your pet better than you do and they will let you know when their quality of life is no longer acceptable. It is rarely anything specific. Trust yourself. Don't hesitate to ask all of your questions. We will work together as a team and the most important members are you and your pet.