



FELINE LYMPHOMA

What is lymphoma?

Lymphoma is a cancer of the lymphatic system, which is a special circulatory system that is made up of a complex 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.

What causes lymphoma?

What causes a healthy cell to be transformed into a tumor cell is still largely unknown. In cats, some forms of lymphoma, such as mediastinal, are associated with viral infection, such as feline leukemia and feline immunodeficiency viruses. However, the most common form of lymphoma in cats, gastrointestinal, is not associated with viral infection.

What are the clinical signs?

Lymphoma in cats is recognized in several clinical forms: mediastinal, gastrointestinal, multicentric, renal, central nervous system, skin, and leukemia. Clinical signs depend upon the organ systems involved. Nonspecific signs such as depression, weakness, loss of appetite, diarrhea or vomiting, and difficulty breathing can be seen. Often weight loss is the only clinical sign in cats with gastrointestinal involvement. Young cats with lymphoma are usually leukemia virus positive and have mediastinal, leukemic, or nervous system lymphomas. Gastrointestinal lymphoma often affects older cats that are leukemia virus negative.

How is it diagnosed?

For cats with suspected lymphoma, a complete blood cell count, chemistry profile, urinalysis, and viral serology for feline leukemia and feline immunodeficiency viruses should be performed. Lymph node or involved organ biopsy via surgical incision or needle core is necessary to obtain a definitive diagnosis. For cats with suspected gastrointestinal lymphoma, either endoscopic guided biopsy or surgical, full thickness, biopsy may yield the diagnosis.

What is the treatment?



Because lymphoma is considered a systemic disease and it is possible for every organ system to be involved, the entire body must be treated. This leaves chemotherapy as our most effective means of killing the rapidly growing and dividing cancer cells. A combination of 3 drugs: cyclophosphamide, vincristine (Oncovin) and prednisone ("COP" protocol) are often used to treat lymphoma in cats. Other chemotherapy drugs such as doxorubicin and cytosine arabinoside may be added to the chemotherapy regimen based on your cat's anatomic site of lymphoma and response to the COP therapy.

Some cats may have a variant of lymphoma called small cell, lymphocytic lymphoma. This type of lymphoma is most often diagnosed in the gastrointestinal form of the disease. Small cell lymphocytic lymphomas tend to be a more slowly progressive disease and often respond better to chemotherapy combinations such as chlorambucil and prednisone.

What is the prognosis?

Lymphoma in cats is not a curable disease. However, many cats can achieve remission of their lymphoma and improvement in their quality of life with chemotherapy. Chemotherapy is well tolerated in cats. Please refer to the chemotherapy handouts for more detailed information.

Overall, 60-75% of cats will achieve remission with chemotherapy. Remission times range from 5-7 months. Approximately 25-30% of cats will survive 1 year. Cats with primarily peripheral lymph node involvement have a better prognosis with median remission times of up to 2 years. Cats infected with the feline leukemia virus have a worse prognosis, with remission times approximately half that of cats not infected with the feline leukemia virus. Cats with renal, nervous system, or mediastinal lymphoma have a worse prognosis, with remission times of 3-5 months.

For cats with gastrointestinal lymphoma, 50-65% of cats will achieve either a partial or complete remission with chemotherapy. Median survival times are 8-9 months for cats achieving a remission. Approximately 25-30% of cats that respond to chemotherapy will survive 1-2 years or longer. Cats with small cell lymphocytic lymphomas will often have a longer survival time, in part due to the slowly progressive nature of this disease. Cats with large granular cell or globule leukocyte variants of gastrointestinal lymphoma have a poor response to chemotherapy with survival times of only a couple of months.