# Lymphoma

### What is lymphoma?

Lymphoma is a cancer of a particular type of white blood cell called a lymphocyte. Lymphocytes are found throughout the body in the blood stream and in various tissues and they act to fight infection. The lymph nodes or 'glands' are comprised mostly of lymphocytes. Lymphoma occurs when lymphocytes grow and divide in an uncontrolled fashion and invade normal tissues preventing them from functioning normally. The most common type of lymphoma affects the lymph nodes. Other tissues such as the liver, spleen, intestines, kidneys, bone marrow, eyes, nose, nervous system and lungs can also be involved.

#### What treatment is possible?

Chemotherapy is the treatment of choice for lymphoma because the cancer cells tend to be spread throughout the body. Surgery and radiotherapy are generally not helpful but are occasionally useful in some patients in conjunction with chemotherapy.

The goal of chemotherapy is to induce a complete 'remission' by killing most of the cancer cells. 'Remission' means that all the symptoms of the cancer have temporarily disappeared. Animals who are in complete remission appear normal by all tests. They have no masses or lumps and should be completely well in themselves. However it is important to understand that some cancer cells do still survive and eventually these cells grow and the cancer becomes evident again. When this happens the animal is said to be out of remission, or to have relapsed.

## Will my pet experience side effects with chemotherapy?

It is possible for animals to experience side effects with chemotherapy but these are generally mild and either resolve spontaneously or with minimal treatment. The clinician looking after your pet will always try to choose the combination of drugs that will cause the fewest side effects, whilst being the most effective. The aim is that the pet should feel as well as possible and our experience is that most patients do not seem to feel unwell whilst receiving chemotherapy. The potential for drug related side effects must always be balanced against the benefit of the chemotherapy and the consequences of the cancer itself.

#### What is the outlook (prognosis)?

Although chemotherapy does not cure lymphoma, it can extend the duration and quality of life of lymphoma patients. Around 80-90% of dogs with lymphoma achieve complete remission, with an average survival of 1 year. 25% of dogs live for 2 years.

For cats, fewer achieve complete remission (about 50%), and the average survival tends to be 7-10months, but even cats who only achieve partial remission still feel a lot better on treatment according to their owners. When an animal comes out of remission, it is sometimes possible to induce a second remission using a different combination of drugs, but not all animals will respond to this 'rescue' therapy and the risk of side effects tends to be higher. Eventually the cancer cells do become resistant to all chemotherapy drugs and the cancer then progresses. Sadly, further treatment at this point does not help.

This information sheet has been adapted from a client information sheet by Rosenberg in Ettinger's Textbook of Veterinary Internal Medicine, 5<sup>th</sup> edition

