Dear OncoLink “Ask The Experts,”

Our 9-yr-old dog has been diagnosed with lymphoblastic leukemia. He is currently on 2 mg/day of Leukeran and 20 mg/day of prednisone.

His most recent CBC showed almost normal platelets and hematocrit of 22%.

His lymphocytes were originally 100,000, came down to 9,000 after 2 wks on leukeron, but have now gone back up (we don't have the exact numbers). Can he stay on these drugs indefinitely? What can we expect? Does this cancer go into remission? Is there anything else (within reason - we won't make the dog suffer) that can be done?

Lili Duda, VMD, Section Editor of the OncoLink Veterinary Oncology Menu, responds:

Chronic LYMPHOCYTIC leukemia (CLL) usually occurs in older dogs and is a condition in which mature (i.e., "normal"-looking) lymphocytes reproduce rapidly in the body (including the bone marrow). This results in very elevated circulating lymphocyte counts on CBC blood tests. CLL is often found "accidentally" when blood work is being performed for other reasons. The condition usually progresses slowly, and is often not treated until either the dog becomes symptomatic (with lethargy being the most common sign), or the circulating lymphocyte count is quite high. Dogs are typically treated with an oral maintenance chemotherapy protocol with drugs such as prednisone and chlorambucil (Leukeran), along with periodic monitoring of blood cells counts and physical examinations. Most dogs do ultimately progress over the course of months to years and develop involvement of lymph nodes, spleen, and liver. Occasionally, there will be progression to a LYMPHOBLASTIC crisis, in which the lymphocytes become increasingly immature, or "blastic", and the disease takes on a more aggressive course. It is not possible to predict how long your dog can remain on the maintenance medications before the disease progresses, but it could be some time.

LYMPHOBLASTIC leukemia (or lymphoblastic crisis) is comparable in many ways to stage V lymphoma in dogs. This is a condition in which there is a rapid production of immature lymphocytes, known as lymphoblasts, within the body. A stage V (five) lymphoma means that these cancerous cells have infiltrated the bone marrow and are present in the circulation. The cells are also typically found in lymph nodes throughout the body, along with the spleen and liver. Other sites, such as the gastrointestinal system, can also be involved. Lymphoma is typically treated with a combination chemotherapy protocol that involves both injectable drugs as well as oral medications. There is typically an "induction phase" where chemotherapy is more intensive, and then a maintenance phase that is used once patients are in remission. There are several prognostic factors (including stage and substage), and a variety of chemotherapy protocols. In general, about 80% of dogs go into a clinical remission, and in those dogs, the average survival is about 1 year. Please see the information posted elsewhere on OncoLink about lymphoma in dogs.

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