Lymphoma, Gastrointestinal

ABOUT THE DIAGNOSIS

Lymphoma (also called lymphosarcoma, Hodgkin's disease, and non-Hodgkin's lymphoma) is a type of cancer caused by malignant white blood cells called lymphocytes. These cells of the immune system are designed to be mobile and active throughout the body. However, it is possible for these cells to become cancerous and to congregate in malignant tumors most commonly in the lymph nodes (lymph glands), spleen, liver, or bone marrow, but potentially in any organ of the body. This accumulation of cancerous lymphocytes in tissue is the definition of lymphoma.

Lymphoma can grow into any region of the body and distribute itself widely, or just in sections of another organ. This is typical of lymphoma of the intestinal tract: sometimes all that can be found is a mild thickening, but when the tissue is looked at microscopically (from a biopsy or aspirate), then the malignant lymphocytes are identified.

In order to help predict the course of lymphoma, as well as guide treatment and therapy, people have developed some standards to further classify malignancy in immune cancers. Historically, the guidelines were the size and maturity of the cells in addition to the tissue or tissues that were affected. Small, more mature cells generally are slower-growing and are associated with longer survival times. Large, more immature cells tend to be faster-growing and are associated with shorter survival times. Unlike lymphoma of dogs and peripheral lymphoma of cats, gastrointestinal large cell lymphoma seems to become drug resistant faster.

In the recent past, great efforts have been made to help identify the cellular type of lymphocyte using special analyses of biopsy or aspirate tissue. This information may aid veterinarians to better guide treatment and prognosis. This technology can also help identify clones of immune cells (cancerous) versus a normal immune response, therefore allowing us to diagnosis cancer at an early and more treatable stage.

Cats: Gastrointestinal lymphoma, small cell type, is a common cancer of older cats (average 9 to 11 years). The diagnosis is made based on biopsy samples of the stomach or intestine; it is not possible to identify gastrointestinal lymphoma through a blood test or ultrasound or other noninvasive means. Even with biopsy, it can be hard to tell the difference between inflammatory bowel disease and small cell lymphoma. Small cell lymphoma of the intestine of cats is a mild form of malignancy, and with treatment, cats typically live with minimal or no symptoms for a long time, even years. By contrast, large cell lymphoma of the intestine of cats is more aggressive, and survival on the scale of weeks to months, even with extensive treatment, is the average. The distinction between the two is made by the pathologist that examines the biopsied intestinal tissue microscopically, and more importantly, by the response to treatment.

Dogs: In dogs, gastrointestinal lymphoma tends to be an aggressive and difficult-to-control tumor, unless it is confined to a single, small, and well-defined area within the intestine (focal). Here as well, the diagnosis can only be made based on biopsy samples of the stomach or intestine. Biopsy samples are obtained either through an endoscopy procedure (faster, better tolerated, and minimally invasive, but tissue samples are smaller [rice grain size] and occasionally are insufficient for the pathologist to provide a definitive answer), or through abdominal surgery (more invasive, requires longer recovery, but larger samples mean the likelihood of an ambiguous or uncertain biopsy result is much less). Treatment involves surgery if a single focal area of abnormality is identified, but unfortunately this situation is uncommon. More typically, dogs with gastrointestinal lymphoma have diffuse lymphoma throughout the digestive/gastrointestinal system, and the required treatments are injections and pills of anticancer medications (chemotherapy).

LIVING WITH THE DIAGNOSIS

The goal of therapy is to improve and restore good quality of life. This is aimed at extending your pet's life by reducing or removing the cancer burden. There are different chemotherapy protocols or plans. These plans use different types and strengths of medications, as well as different dosages of the same drugs. Plans should be chosen by your veterinarian with guidance from you as to your expectations. The more aggressive the treatment is, the more likely the treatment will reduce the cancer burden; unfortunately, this comes with an increased risk of chemotherapy-related problems and side effects. Reducing treatment to the levels of few or no side effects reduces the likelihood of treatment-related problems but also may only keep the cancer away for a shorter period of time.

Initial response to chemotherapy can be an important marker for success and survival. Cats that respond well to the first treatment tend to have longer survival times. It should also be noted that researchers have documented that cats in general tolerate chemotherapy well. They do not lose their hair, they are often noted to be active, eat well, and generally appear healthier than before starting chemotherapy. Regardless of the plan chosen and the approach taken, a pet with gastrointestinal lymphoma usually receives long-term, and possibly lifelong, therapy. This means regular administration of oral medications at home, often including multiple pills, liquids, and so forth given on a daily basis. Some pets are tolerant of this (and some more so when they are not feeling well), and with other pets any oral medication is out of the question because of their unwillingness to take it. Be sure to discuss medication compliance with your veterinarian when the subject of treatments comes up; there are various tricks, such as Pill Pockets that carry the pills in a flavorful treat, or compounding, where the medications are transformed into a chicken, tuna, or beef-flavored syrup, that can help with medication administration at home. Some medications may simply need to be given by injection at the veterinary hospital, to reduce or avoid oral administration altogether.

Most pets with gastrointestinal lymphoma will have eventual recurrence of symptoms. The symptoms may be mild and self-resolving, or may be more generalized, which can justify an unplanned recheck visit with your veterinarian to be sure a serious complication has not arisen. Whether the symptoms are vomiting, diarrhea, or simply decreased appetite and weight loss, recurrence generally involves symptoms similar to those seen originally. In addition, the medications that are being given can also cause some if not all of the same symptoms. Therefore, follow-up with periodic rechecks by your veterinarian is important. The rechecks may be able to differentiate drug side effects from recurrence of disease, or they may need to just change therapy and monitor results of the change. Either way, you should feel comfortable discussing how treatment is going at home, and your impressions of your pet's quality of life during illness and treatment, with your veterinarian.

TREATMENT

Small cell gastrointestinal lymphoma of cats often responds well to oral chemotherapy combinations. Oral corticosteroids such as cortisone given daily or twice daily are typical, in addition to one of a couple of other oral chemotherapy medications given less frequently (twice weekly, once every 4 weeks, etc., depending on the drug chosen). Oral corticosteroids are given in the lowest amount that remains effective because long-term use at high doses can cause excessive weight gain, gastrointestinal irritation and ulceration, thin skin, and diabetes mellitus. Typical oral chemotherapeutics have the potential to suppress the immune system, can cause gastrointestinal irritation and ulceration, or can cause decreases in red and white blood cells. Your veterinarian should monitor treatment responses and should provide you with a plan for rechecks and follow-ups to minimize the risk of significant side effects and to catch such side effects early if they should occur.

For animals with more aggressive forms of gastrointestinal lymphoma, or animals that fail to respond well to therapy, or when signs of the cancer have returned, it is very reasonable to consider humane euthanasia (putting to death via lethal injection). Your veterinarian can help you discuss the outlook for your pet in order for you to make an informed choice as to what is in the best interest of both your pet and your family.

DOs

- Understand the important steps in treating any dog or cat thought to have lymphoma:
  - Confirmatory testing—is it lymphoma or not?
  - Once lymphoma is confirmed, a decision on treatment is needed (Try it to see if it works, or not at all? If going ahead with treatment, will it be complete, including chemotherapy, in order to try for the greatest chance of beating the cancer back or minimal, in order to provide some short-term benefit?).
  - If relapse occurs and the lymphoma comes out of remission, how long to continue with treatment?
  - These questions are essential, and you should not hesitate to discuss them with your veterinarian both initially and throughout the period of treatment if you choose to pursue one.
- Realize that chemotherapy is different in humans versus pets and that dogs and cats rarely have any of the severe side effects that humans do.
- Realize that it is all right to start chemotherapy and see how it goes. If there is no improvement early on, the likelihood of successful long-term treatment is reduced significantly. Just because a chemotherapy plan is designed for 6 months of treatment, for example, does *not* mean every animal that starts the treatment has to go through all 6 months regardless of how he or she is feeling.
- Your pet's quality and quantity of life are dependent on you. You give medications, follow up as recommended by your veterinarian, and are watchful of side effects. Your participation in treatment can make all the difference.
- Decide in advance what standards would influence you to euthanize your pet. Stand by these standards, and try not to make emotional or fear-driven decisions in "the heat of the moment." Deciding these standards in advance can help enormously if a situation arises that requires you to make tough decisions.

DON'Ts

- Do not give up because of one bad day, but rather, be aware of overall trends. Have there been several bad days lately? Does this one bad day make you realize that your pet has not been himself/herself for quite some time? If so, then there is reason to question whether to continue, but if it is a single "off" day, things may be totally different a short while later.

WHEN TO CALL YOUR VETERINARIAN

- Recurrence of symptoms (vomiting, diarrhea, decreased appetite, weakness, pallor, excessive drinking, excessive urination, fever, or weight loss) should be discussed with your veterinarian.
- Your veterinarian should provide you with specific symptoms and side effects based on the drugs prescribed. If not, you should feel comfortable calling and requesting them.

SIGNS TO WATCH FOR

- Enlargement of lymph nodes. Your veterinarian or the staff can help you learn how to check these periodically.
- Vomiting, diarrhea, decreased appetite, excessive drinking, excessive urination, weight loss. Some of these symptoms may be expected as a result of medications (e.g., prednisone, furosemide), so be sure to ask your veterinarian about whether to watch for these as expected medication-related effects or symptoms worthy of concern.

ROUTINE FOLLOW-UP

- Generally once per week for the first several visits, then more widely spread out depending on the particulars of your pet's situation and response to treatment.
- Usually, with chemotherapy, every visit begins with a blood test. This is an important precaution that looks for the early signs of intolerance to chemotherapy. The blood test may show that the white blood cell count is normal, and treatment can continue as planned. On the other hand, the blood test may show that the white blood cell count is low, which is one of the earliest clues that a previous dose of chemotherapy may have been more than could be handled. This tells the veterinarian that, even though symptoms may not be present and the dog or cat is happy and active and eating well, chemotherapy should probably be reduced in amount, delayed, or skipped altogether in order to let the body process all of the previous chemotherapy and be ready for the next treatment. In other words, the prechemotherapy blood test is important for every visit since it is a precautionary measure.

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