Partner Veterinary
EMERGENCY & SPECIALTY CENTER

Chemotherapy in Small Animals

Chemotherapeutic drugs (anticancer drugs) are used in the treatment of a variety of cancer types in pets. In order to treat you pet, we need to first understand what type of cancer they have and how far it has progressed. This information will help us recommend the best treatment protocol (type of drugs, dose and schedule) to use for each individual patient. We will explain and discuss our recommendations with you, including any potential side effects and limitations.

When do we choose chemotherapy?

There are some diseases for which chemotherapy is the primary treatment method such as lymphoma while there are others for which chemotherapy is used along with radiation and/or surgery.

Chemotherapy can also be used in those situations for which other treatment options do not exist. The following is a list of situations where chemotherapy may be recommended for your pet

- Tumors that are sensitive to chemotherapy
- Multicentric disease (tumors occurring at more than one site)
- Metastatic disease (cancer that has already spread)
- Non-resectable disease (tumors that cannot be removed surgically)
- As follow-up therapy after surgery and/or radiation therapy when we are treating tumors that usually metastasize (spread) in the course of the disease
- As follow-up therapy after surgery when the tumor has not or can not be completely removed

What are chemotherapy side effects?

Most dogs will tolerate their chemotherapy well and have minimal side effects. Significant side effects are seen in roughly 10% of patients treated. These may include nausea, vomiting, loss of appetite, diarrhea, extreme tiredness, low white blood cell counts and/or infection. Side effects generally occur within the first week of treatment (3-5 days for GI and 7-10 for low white blood cell counts). These signs typically resolve within 24-48 hrs and sometimes without any treatment. Hair loss or slow hair growth may also occur in certain instances although this is not a big issue in our patients. Adriamycin can cause dose cumulative damage to the heart muscle if administered more than a certain number of times; however, by limiting the number of treatments and monitoring the heart, the risk of heart damage is very low. Cytoxan can cause irritation to the bladder wall in a small percentage of dogs. If this occurs, you will see changes in urination such as blood in the urine, straining to urinate and/or frequent urination.

Bone marrow suppression may cause a drop in the white blood cell count resulting in an increased susceptibility to infections. This can happen 7-14 days after treatment depending on the drug administered. Complete blood counts (CBC's) are obtained on a regular basis to monitor the white blood cell count. Animals with low white blood cell counts that are asymptomatic (experiencing no symptoms) are often placed on prophylactic oral antibiotics. Animals with evidence of a systemic

infection (sepsis, weakness) may require supportive care including intravenous fluids and antibiotics for 24-48 hours depending on the situation.

Gastrointestinal signs may be mild, moderate or severe. These side effects may occur two to five days after chemotherapy treatment. Oral anti-nausea and/or anti-diarrheal drugs may be prescribed and many times are all that is needed to help your pet feel better. For mild and moderate signs, withholding food and changing the diet to bland foods may help as well. Although infrequent, some dogs may develop severe vomiting or diarrhea requiring hospitalization and fluid therapy.

10% of all pets receiving chemotherapy will experience the more signifiacnt side effects described above and 1% will require hospitalization or experience life threatening side effects.

For those who do experience the more severe side effects, proper management results in most animals recovering uneventfully within a few days. If an animal experiences severe side effects, we will lower the next dose of that drug, skip that drug entirely, change to a different drug in an attempt to avoid future complications, or discontinue therapy alltogether.

Fortunately, side effects are uncommon and if seen, are usually mild. This can include transient nausea, lethargy, reduced appetite and/or diarrhea for 1-2 days after treatment. If your pet is treated with drugs known to cause side effects, we will give you instructions on what to do if and when there is a problem.

How are the drugs given? How often are treatments? How long do treatments last?

This will vary depending on the type of cancer and drugs being used. Some of the drugs used are oral medications (pills) that you give at home while others are brief injections or intravenous infusions that are given at the hospital. In most cases, chemotherapy is done on an outpatient basis during a recheck appointment so that most patients are only at the hospital for 1-2 hours. There are a few chemotherapy agents that need to be given as an infusion over 4-8 hours. Your doctor will discuss scheduling appointments based on the chemotherapy protocol to be used.

The duration of each chemotherapy protocol depends on the type of cancer and stage of the disease. Some animals require chemotherapy for the rest of their lives while in other cases treatment may be discontinued within a period of months if the cancer is in remission (i.e. there is no detectable evidence of disease). Chemotherapy is usually resumed when there is tumor recurrence.

If we are treating a patient that has visible disease (as in a measurable mass or lymph node), we will need to treat this patient for 4-6 weeks before being able to determine if a particular drug is effective. If the drug does not seem to be effective against the cancer your oncologist will discuss other treatment options.

What can you expect from chemotherapy?

Based on veterinary literature and our years of personal experience working in the field of oncology (from what we know about a variety of cancers in pets) we may be able to give you a prognosis regarding life expectancy with and without treatment. However, in a lot of instances this information is not known and can be difficult to predict. In most cases, we are not able to cure our cancer patients but may be able to provide palliative therapy with treatment - prolonging your pet's life and slowing down the progression of disease while your pet maintains a good quality of life at home. Regardless of the type of treatment pursued, we always consider your pet's quality of life to be the most important factor when providing treatment options.