

Chemotherapy for Cancer Treatment in Animals

Cancer is often a difficult disease to control and frequently requires a combination of treatments, including chemotherapy, surgery and/or radiation therapy. In general, chemotherapy is used to treat cancer that has or is likely to spread in the body.

What is chemotherapy?

Chemotherapy is drug therapy designed to kill or slow the growth of cancer cells. Many chemotherapy drugs are derived from natural substances, such as plants or trees, and are frequently the same drugs used in people.

What is the goal of chemotherapy?

The goal of chemotherapy is to control or eliminate the cancer, while still providing the highest quality of life to your pet. In general, chemotherapy drugs do not cure cancer; instead these drugs control cancer by killing cells and slowing progression of the disease.

How is chemotherapy given?

Most chemotherapy drugs are administered into a vein (intravenously; IV) or orally. In some cases, the drug may be injected into a body cavity, a muscle or even the tumor itself.

IV drugs (e.g. vincristine or doxorubicin):

Placement of an intravenous catheter is often required for safe administration of chemotherapy. After administration, the catheter is removed and a light bandage is placed, which may be removed in 1-2 hours. If you notice your pet licking at the injection site or this area is red or swollen, please contact a veterinarian on the oncology service immediately.

Oral drugs (e.g. cyclophosphamide or CCNU):

Oral drugs may be administered at home or in the hospital. If you are giving oral chemotherapy at home, please wear latex gloves and give all medications as prescribed. Do **NOT** crush or split pills or open capsules. When you are finished administering the pills, wash your hands thoroughly.

How often is chemotherapy given?

Some drugs are given daily, others weekly and some only every two to three weeks. Your time commitment will depend on the chemotherapy drug protocol decided upon by you and your veterinarian.

How long will my pet receive chemotherapy?

Many chemotherapy protocols involve a series of treatments, followed by a period of careful observation. In some patients with advanced disease, chemotherapy may be continued as long as it is controlling the cancer and the patient is tolerating treatment.

How should I handle body fluids while my pet is on chemotherapy?

Most chemotherapy drugs (or metabolites) are excreted in urine or feces for several days to a week following administration. Other drugs may be excreted over several weeks. It is recommended that you wear latex gloves and use disposable items (paper towels, diaper pads) whenever you are cleaning up your pet's excreta (urine, feces, vomitus). Any soiled clothing or bedding should be washed separately in hot water.

What happens when chemotherapy no longer controls the cancer?

While many cancers are initially sensitive to chemotherapy, the cancer may return weeks, months or years later due to development of chemotherapy resistance. Although other drugs may still be effective, your pet may ultimately develop resistance to all drugs. At this point, your pet's veterinarian will discuss how to keep your pet comfortable for the remainder of his/her life.

May my pet receive vaccinations while on chemotherapy?

Recent research suggests that pets can be safely vaccinated while receiving therapy. However, we recommend consulting with a veterinarian on the oncology service prior to resuming your pet's vaccination schedule.



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What sort of side effects may my pet have with chemotherapy?

Our goal is to provide your pet with the highest quality of life possible. Although pets receiving chemotherapy do not experience the same side effects as humans, it is important to recognize and treat side effects as early as possible.

Gastrointestinal Side Effects: These side effects most often occur within two to five days of treatment. Side effects may include reduced appetite, nausea, vomiting and/or diarrhea. Your pet will be sent home with medications to help prevent and control these side effects. These medications may include anti-vomiting (maropitant, ondansetron), stomach protectants (famotidine, omeprazole) and anti-diarrheal medications (metronidazole, loperamide). You will be given clear instructions on when and how to administer these drugs.

Bone Marrow Side Effects: Chemotherapy can temporarily reduce the release of important blood cells from the bone marrow, such as neutrophils and platelets. In most cases, you will not notice any changes in your pet. However, in some cases, a low neutrophil count may be associated with fever, lethargy and/or a decreased appetite. If this occurs, your pet will need antibiotics and, in rare cases, may need to be hospitalized. A complete blood count (CBC) is performed prior to each chemotherapy administration to monitor these cell counts. If they are low, treatment may be delayed for several days.

Hair Loss (alopecia): Hair loss is common in humans but rare in pets. It is seen mainly with breeds that have constantly growing coats (poodle, shih tzu, etc.). Cats generally do not lose fur, but may lose whiskers. Chemotherapy will slow re-growth of hair/fur in all pets, so grooming should be adjusted accordingly.

Other: Several drugs have unique side effects; some examples include heart toxicity associated with doxorubicin and irritation of the urinary bladder due to cyclophosphamide administration. Your pet's veterinarian will discuss how to prevent or manage these side effects as needed.

What should I do if my pet experiences side effects?

Although the previously listed side effects can occur in any patient receiving chemotherapy, in most cases these side effects are mild, easily treated with medications, and do not impact quality of life. Severe side effects requiring hospitalization are uncommon.

Please contact a veterinarian on the oncology service **IMMEDIATELY** if you observe any of the following:

- Your pet skips two or more meals
- Your pet has **ANY** vomiting or diarrhea
- Your pet is lethargic or has a rectal temperature greater than 102.5° F
- Your pet has any other signs that are worrisome to you.

There is a veterinarian on call at all times that can be reached by calling 614-292-3551. In many instances, the advising veterinarian may recommend starting additional supportive medications or having your pet evaluated by your local veterinarian. In more severe cases, your pet may need to be evaluated by an emergency veterinarian (at the Ohio State Veterinary Medical Center or an emergency veterinary facility closer to your home).

