



# Peak Veterinary Specialists

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## CHEMOTHERAPY

### WHAT IS CHEMOTHERAPY?

The use of a drug or chemical to treat any illness is chemotherapy, but this term commonly refers to the use of drugs in the treatment of cancer. The goal of chemotherapy in companion animals with cancer is to prolong a pet's life and to improve the pet's quality of life.

### HOW DOES CHEMOTHERAPY WORK?

Cancer can be defined as a rapid, uncontrolled growth of cells. Anticancer drugs work by blocking cell growth and division of these rapidly dividing cells. Different drugs interfere with different steps in these processes. In many cases, a combination of drugs is the most effective way to kill the cancer cells.

### HOW IS CHEMOTHERAPY ADMINISTERED?

Most anticancer drugs are given by mouth, by injection under the skin, or intravenous injection. The route chosen depends on the type of drug and the type of cancer.

### WHAT WILL MY PET'S TREATMENT SCHEDULE BE?

The length of time and frequency of drug administration depend on the kind of cancer being treated, the drug protocol used, and how well the therapy is tolerated in the patient. Treatment may be given daily, weekly or monthly.

### AM I AT RISK OF EXPOSURE TO THESE DRUGS?

Most anticancer drugs are very potent and must be handled with care. Some are "carcinogens" which means they can cause cancer with prolonged exposure. With orally administered drugs, it is important that the tablets or capsules are kept out of reach of children in childproof containers. When handling these drugs, the owner should wear latex or polyvinyl gloves to avoid unnecessary exposure. With oral and injectable drugs, the urine and feces of the animal may be contaminated with active drug compounds for several days after administration. Always avoid contact with the urine and feces of animals receiving chemotherapy. Wear latex or polyvinyl gloves to clean up accidents or the litter box. Rinse exposed surfaces well.

### WILL MY PET EXPERIENCE SIDE EFFECTS?

Veterinarians try to choose drug doses and combinations that cause the fewest side effects, but they can occur nonetheless. Ideally, the animal receiving chemotherapy does not even realize that he or she is ill. If they do occur, it is important that the benefits of treatment be weighed alongside the side effects experienced. Choosing chemotherapy for your pet is an individual decision.

### WHAT TYPE OF SIDE EFFECTS CAN OCCUR?

Side effects arise because the normal cells in the body are also exposed to the anticancer drug. As mentioned earlier, chemotherapy drugs target rapidly dividing cells; therefore, the normal cells of the body that are most susceptible to adverse effects are those that divide more quickly.

These cells are found in the bone marrow where blood cells and platelets are produced, the gastrointestinal tract, the skin, and the reproductive system. Consequently, potential side effects include low white blood cell count which puts a patient at greater risk of infection, low platelet count which reduces a patient's ability to form blood clots when necessary which may result in bleeding. Side effects also include vomiting and/or diarrhea, hair loss or skin color changes, and sterility. Rare side effects associated with specific drugs include allergic reaction, bladder discomfort, kidney damage, and heart failure.

### **WHAT ARE THE MOST COMMON SIDE EFFECTS?**

The most common side effects reported by owners vary depending on the drugs used and can range from none at all to severe. However, some of the more general effects can be decreased energy, reduction or loss of appetite, nausea, vomiting, diarrhea, and low white blood cell count. Unfortunately, there is no way to predict which pet will develop side effects or to what degree. The patient receiving chemotherapy needs to be monitored, and owners should call his or her veterinarian with signs of illness.