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Goal of Chemotherapy for Pets

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The goal of chemotherapy in our pet friends is vastly different than for that of humans. Many pet-owners don't want their furry friend to suffer through cancer treatment with the same negative experience that they have witnessed in friends and family members, and this concern is valid. Veterinarians feel that the treatment should not be worse than the disease.

In humans and animals, chemotherapy is medicine given to kill rapidly dividing cells, notably cancer cells. There are three major organ systems in the body that contain normal and healthy rapidly dividing cells; these three systems are the gastrointestinal tract, the bone marrow and the hair follicles. Chemotherapy medications do not differentiate between cancer cells and normal rapidly dividing cells, so these three systems are often negatively affected. This is why common side effects of chemotherapy are nausea, vomiting, inappetance and diarrhea, low red and white blood cells and loss of hair. Often, veterinarians and clients will tolerate lack of fur regrowth in areas that have been shaved for intravenous catheters, ultrasounds or surgical biopsy procedures.

Negative side effects on the gastrointestinal tract and bone marrow are not tolerated, however. Commonly, veterinary cancer specialists will prescribe anti-nausea medications to be given concurrently with the chemotherapy drugs, as well as mild narcotics for pain. When bone marrow suppression does occur, the chemotherapy protocol is often changed, whether by decreasing dosage or increasing the interval between injections, or by changing chemotherapy drugs completely.

Cancer cells can develop resistance to chemotherapeutic drugs, much like bacteria can to antibiotics. It is important in cancer treatment to prepare an initial attack that is deliberate and assertive in order to avoid this phenomenon. I counsel my clients that it is best to start treatment according to the veterinary oncologist's protocol, and to decrease or stop only if negative side effects are not tolerable, rather than to start with "just a little bit" of chemotherapy to see if it might work.

In human medicine, often the goal of cancer treatment is to cure the patient. In order to do so, all the rapidly dividing cells in the body are affected, and the patient often must suffer through the negative side effects. In veterinary medicine, however, the goal of cancer treatment is not to cure, but to get the patient into a stable state of remission. Remission occurs when there is physical shrinkage of a solid tumor or a noticeable decrease of measurable parameters (i.e., blood markers). In a state of remission, the patient is comfortable and enjoys a moderate to high quality of life, even if daily medications are necessary. The goal is to make the remaining time available as symptom-free as possible, and not necessarily to exceed average life expectancy for the patient.

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