



Veterinary Oncology

Many of the neoplastic diseases we encounter in veterinary practice require a multi-modality approach for successful outcome or even local tumor control. The three principle modalities are: surgery, radiation therapy and chemotherapy. Immunotherapy has many theoretical advantages, but to date, the only product commercially available is the canine melanoma vaccine. For this handout, chemotherapy will be the primary topic.

Principles of Canine Chemotherapy

Before chemotherapy is instituted, the patient should be fully evaluated and staged so that an accurate protocol and prognosis can be reviewed with the owner. The veterinarian and the owner should be knowledgeable and comfortable with the potential benefits and risks associated with this method of treatment.

The clinician must be familiar with specific indications, uses, dosage, timing, resistance and toxicity of the chemotherapeutic agents available.

Chemotherapy is indicated for a wide range of situations. The most common are lymphoma, leukemia, multiple myeloma and other neoplasms that have a high risk of metastasis (e.g. osteosarcoma, hemangiosarcoma and high-grade carcinomas). In most chemotherapy protocols, there is an induction phase. During the entire time on chemotherapy, the patient must be carefully monitored for toxicity. This includes owner's observations, physical exam findings, hematological abnormalities, changes in blood chemistry and radiographic changes.

Chemotherapy handling guidelines are important to the personnel, the owner and the veterinarian. There are special hoods worn while mixing chemotherapy agents; special handling is required when puncturing drug vials; gloves are worn to administer both injectable and oral chemotherapy drugs; and there are strict guidelines to safely dispose of containers, syringes, needles, catheters and soft chemotherapy waste (such as gowns, masks and chemo mats). OSHA has published guidelines for the proper handling of chemotherapy drugs and ancillary products.

Chemotherapy is an extremely important part of clinical oncology. There are many tumors that are successfully controlled. The clinician is responsible for choosing the protocol, communicating with the client, personnel safety and monitoring the patient for response to treatment and for any toxicity.