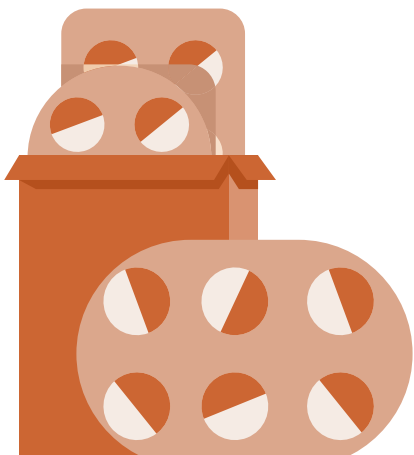


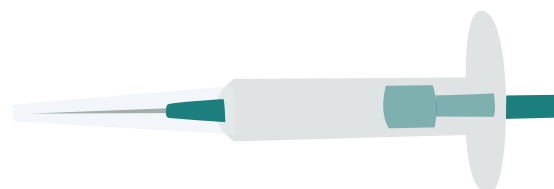
A Vet Tech's Guide to the Top 10 Chemotherapy Drugs



Drugs	Indications	Administration	Side Effects	Monitoring	Additional Notes
Carboplatin	Anal sac adenocarcinoma Squamous cell carcinoma Pulmonary carcinoma Nasal carcinoma Osteosarcoma Injection-site sarcoma	IV Local treatment (drug-impregnated beads, intralesional injection)	Myelosuppression GI effects (especially in small dogs receiving high doses)	CBC	
Cisplatin	Squamous cell carcinoma Transitional cell carcinoma Ovarian carcinoma Nasal carcinoma Thyroid carcinoma Osteosarcoma	IV, with simultaneous fluid diuresis to reduce nephrotoxicity Local treatment (drug-impregnated beads, intralesional injection)	Myelosuppression Nephrotoxicity Vomiting Fatal pulmonary edema in cats	CBC Kidney values	DO NOT USE IN CATS!
Chlorambucil	Chronic lymphoid leukemia (dogs) Low-grade lymphoma (cats)	Oral Low doses q1-2days or high doses q3-4wks (pulse therapy)	Myelosuppression, especially thrombocytopenia Seizures in cats receiving high-dose pulse therapy Liver toxicity (rare)	CBC	
Cyclophosphamide	Lymphoma (dogs & cats)	Oral or IV	Myelosuppression, especially neutropenia Hemorrhagic cystitis (may be preventable by administering furosemide after administration) GI upset	CBC	May be less effective in pets with decreased liver function (requires hepatic activation)



Drugs	Indications	Administration	Side Effects	Monitoring	Additional Notes
Doxorubicin	Lymphoma (dogs) Osteosarcoma Hemangiosarcoma Soft tissue sarcomas Mammary carcinoma	IV Infuse slowly: rapid administration may cause anaphylaxis Restrain carefully and monitor throughout administration to minimize extravasation risk	Severe vesicant effects with extravasation Myelosuppression, especially neutropenia GI effects (vomiting, colitis) Cardiac toxicity (cumulative over lifespan) Nephrotoxicity, especially in cats	CBC Kidney values (cats only)	Any degree of extravasation, no matter how small, requires treatment with dexrazoxane
L-asparaginase	Lymphoma (very effective in dogs, less effective in cats)	SC or IM administration	Anaphylaxis (signs may include vomiting and urticaria) Myelosuppressive (not alone, but is when given in conjunction with vincristine) Pancreatitis (rare)		Premedication with antihistamine may decrease reaction risk
Lomustine (CCNU)	Lymphoma (dogs and cats) Mast cell tumors Histiocytic sarcoma Brain tumors	Oral administration	Neutropenia (typically occurs at 5-7 days post-treatment in dogs, timing variable in cats) Hepatotoxicity in dogs (potentially irreversible) Nephrotoxicity (rare) Pulmonary fibrosis in cats (rare)	CBC	Crosses the blood-brain barrier



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Mitoxantrone	Lymphoma (dogs) Transitional cell carcinoma Anal sac adenocarcinoma	IV administration	Myelosuppression, especially neutropenia Colitis Vesicant effects with extravasation (less severe than doxorubicin)	CBC	Some veterinarians give high-fiber diet and metronidazole, to reduce colitis
Vinblastine	Mast cell tumors (dogs) Lymphoma (cats and dogs) Transitional cell carcinoma	IV administration	Myelosuppression, especially neutropenia GI effects (less than vincristine) Vesicant effects with extravasation (less severe than doxorubicin)	CBC	Premedication with antihistamine may decrease reaction risk
Vincristine	Lymphoma (cats and dogs) Transitional cell carcinoma Transmissible venereal tumor	IV administration	Myelosuppression, especially neutropenia Anorexia (likely secondary to ileus, more common in cats than dogs) Peripheral neurotoxicity in humans (not observed in pets)	CBC	May increase platelet count in some pets; sometimes used to treat ITP



About the Author

Cathy Barnette is a practicing small animal veterinarian, freelance writer, and contributor to VetPrep and VetTechPrep. She is passionate about both veterinary medicine and education, working to provide helpful information to veterinary teams and the general public. In her free time, she enjoys spending time in nature with her family and leading a Girl Scout troop.