

Dog Drug Cabinet

When cancer is suspected to have spread, veterinarians turn to drugs to kill the stray malignant cells in dogs.

Today
Doxorubicin: Kills cancer cells by stopping their ability to make new chromosomes, so they can't reproduce. Probably the most commonly used anti-cancer drug.
Cyclophosphamide: Disrupts genetic material, killing cancer cells. Has been used as a chemical shearing agent in sheep, so hair loss may be a side effect, mostly in Poodles and Old English Sheepdogs.
Mitoxantrone: Ends reproduction of cancer by stopping the manufacture of chromosomes and other genetic material. Used intravenously with fewer side effects than doxorubicin.
Tamoxifen: Blocks estrogen receptors and slows growth of certain estrogen-responsive tumors. Useful in humans, and may be useful in dogs. Will cause serious uterine infection in unspayed dogs.
Human T-cells: A line of human cells, cultured from a patient with leukemia, used experimentally in dogs suffering from advanced breast cancer. Called TALL-104, these "natural killer cells" have the potential to kill many types of cancer.

In the Future
Paclitaxel (Taxol): A compound derived from the bark of the Pacific Yew tree, it prevents the growth of tumor cells by stopping cells from dividing. Helpful in human breast cancer. In one study, veterinarians are placing a biodegradable pellet, or a "time capsule of chemotherapy," into surgical sites in dogs with breast cancer to try to prevent recurrence after surgery. If successful, this will be used in women in poorer nations who now have no treatments available after surgery.
Tangretin: An experimental drug that works on retinoid-x receptors found in some breast tumors. A rat study showed 77 percent of tumors regressed using it, compared with a third of tamoxifen-treated tumors, and suggests the two drugs may work even better when taken together.
Raloxifen: Used for osteoporosis in women, it shows promise in preventing human breast cancer. A head-to-head study comparing it with tamoxifen will begin this fall under the direction of the National Cancer Institute.
Thalidomide: Stops the formation of new blood vessels. When taken during early pregnancy, it causes serious birth defects, but because cancer growth relies on new blood supply, researchers are excited about its anti-cancer potential. Clinical trials are ongoing.