

# Vincristine (Oncovin)

BRAND NAMES: VINCASAR PFS, ONCOVIN, and generic

## BACKGROUND

Vincristine is an extract of the periwinkle plant, which has been used to treat cancer for many decades. It works by binding to proteins (called “tubulin”) that are required for cell division. Because tumor cells divide much faster than all of the other cells in the body, tumor cells are much more susceptible to damage from vincristine than other cells in the body. Vincristine also interferes with several other metabolic processes within cells that are required for cell division.

## HOW THIS MEDICATION IS USED

This medication is used to treat a variety of tumors in dogs, as well as auto-immune destruction of a particular type of blood cells called platelets, which are responsible for clotting the blood when needed. Vincristine can only be given by intravenous injection. This is not a medication that one would use at home.

## SIDE EFFECTS

In general, vincristine is very well tolerated, especially by dogs. Vincristine is much easier on the bone marrow than many other chemotherapy drugs used for cancer in pets. Vincristine usually increases the number of platelets in blood. This is a side effect that causes no problems in the patient. In fact, it can help if the tumor is causing platelets to be lower than normal. In the rare case that vincristine might suppress the bone marrow, signs you might see include fever, general lethargy and depression, bruising or bleeding (including bloody diarrhea), etc. Please call your veterinarian ASAP if you observe any of these problems after vincristine is given.

If any of the vincristine leaks outside the vein, it can damage the tissues surrounding the vein. Your veterinarian will show you where the injection was given. Please watch this site carefully over the next week for any redness, swelling, sores, or discharge. If you see any of these problems, contact your veterinarian ASAP.

Rarely, vincristine can cause disease of the peripheral nerves to the legs, feet, etc., called “neuropathic” or “neurotoxic” effects. Neuropathic symptoms can include stumbling and tripping over the feet, decreased spinal nerve reflexes, or constipation. Cats can sometimes have loss of appetite caused by constipation.

Like many chemotherapy drugs, vincristine should not be used in pregnant or nursing dogs or cats, or in male pets to be used for breeding.

Very rarely, a cat who receives vincristine will become severely ill (won't eat for many days, vomiting and diarrhea, severe depression, and even possible death). Vincristine should not be administered again to cats who have this adverse reaction.

## INTERACTIONS WITH OTHER DRUGS

Drugs that inhibit a chemical called “p-glycoprotein” can increase toxicity of vincristine, including cyclosporine (a drug that suppresses the immune system and is used for allergies), verapamil (a heart drug), phenothiazines (sedatives including acepromazine and Thorazine), and ketoconazole (antifungal).

Some other drugs can interact with this medication so tell your veterinarian about any drugs or foods that you currently give your animal. Do not give new foods or medications without first asking your veterinarian. Modified Live vaccines should never be given to any animal on cancer chemotherapy.

## **CONCERNS AND CAUTIONS**

Vincristine should not be used in dogs or cats with severe liver disease, extremely low white blood cell counts, infection, or pre-existing disease of the nervous or muscular system. Reduced dose can be used in pets with mild to moderate liver disease. A 50% dose reduction should be considered if a blood value called bilirubin is elevated above 2.0 mg/dl.

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