

Vincristine

Vincristine (marketed under the brandname Oncovin) is a chemotherapy medication used to treat a number of types of cancer.

[Procarbazine](#), [lomustine](#), and [vincristine](#) (PCV) [chemotherapy](#).

It is given intravenously and works by inhibiting mitosis (stopping cells from dividing properly), causing the cells to die.

The drug accomplishes this by binding to the tubulin protein, stopping the cell from separating its chromosomes during the metaphase; the cell then undergoes apoptosis.

Because cancer cells divide more rapidly than healthy cells, they are affected more by the drug.

Most people experience some side effects from vincristine treatment.

Commonly it causes a change in sensation, hair loss, constipation, difficulty walking, and headaches.

It will likely cause harm to an infant if given during pregnancy.

Vincristine is on the World Health Organization's List of Essential Medicines, a list of the most important medication needed in a basic health system.

It was formerly known as leurocristine, sometimes abbreviated "VCR", and is a vinca alkaloid from the Madagascar periwinkle *Catharanthus roseus* (formerly named *Vinca rosea*).

Case series

Kim et al reviewed eight immunocompetent patients (five males/three females, mean age: 56 years) who received salvage PCV chemotherapy ([procarbazine](#) 60 mg/m², days 8 through 21: [CCNU](#) 110 mg/m², day 1: [vincristine](#) 2 mg, days 8 and 28) for recurrent [primary central nervous system lymphomas](#) (PCNSL) and two patients switched to PCV chemotherapy due to severe adverse effects of HD-MTX chemotherapy. Radiologic responses, survival, and adverse effects were analyzed.

Of the eight recurrent PCNSLs, three patients (37.5%) showed radiologic complete response, one patient (12.5%) showed partial response, and four patients (50%) showed progressive disease after PCV chemotherapy. Median progression free survival (PFS) from the first administration of PCV to relapse or last follow-up was 7 months (range 5-32 months) and median overall survival was 8 months (range 2-41 months). The two patients who switched to PCV chemotherapy showed PFS of 9 and 5 months from the beginning of PCV to relapse. The common side effects were thrombocytopenia, neutropenia, and peripheral neuropathy. There were 4 grade III or IV myelo-suppression, but no fatal complications, including severe hemorrhage or infection, were observed.

Salvage PCV chemotherapy has a moderate anti-lymphoma activity for recurrent PCNSLs after the HD-MTX-based chemotherapy with tolerable toxicity ¹⁾.

¹⁾

Kim YJ, Choe JH, Park JH, Hong YK. Efficacy of Procarbazine, Lomustine, and Vincristine Chemotherapy for Recurrent Primary Central Nervous System Lymphomas. *Brain Tumor Res Treat*. 2015

Oct;3(2):75-80. doi: 10.14791/btrt.2015.3.2.75. Epub 2015 Oct 30. PubMed PMID: 26605261; PubMed Central PMCID: PMC4656899.

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