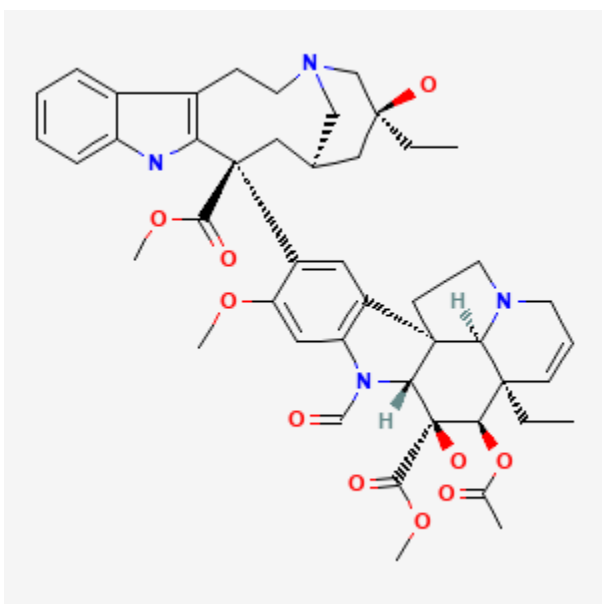




## Vincristine

Revised: February 15, 2023.

CASRN: 57-22-7



## Drug Levels and Effects

### Summary of Use during Lactation

Most sources consider breastfeeding to be contraindicated during maternal antineoplastic drug therapy.[1] It is probably impractical to resume breastfeeding after vincristine therapy because of the drug's long half-life. Chemotherapy may adversely affect the normal microbiome and chemical makeup of breastmilk.[2]

### Drug Levels

*Maternal Levels.* A woman was diagnosed with B-cell non-Hodgkins lymphoma at 4 months postpartum. She received R-CHOP therapy every 21 days for 6 cycles. It consisted of rituximab 375 mg/sq. m, cyclophosphamide 750 mg/sq. m, doxorubicin 50 mg/sq. m, vincristine 1.4 mg/sq. m (capped at 2 mg) plus prednisone 40 mg/sq. m

**Disclaimer:** Information presented in this database is not meant as a substitute for professional judgment. You should consult your healthcare provider for breastfeeding advice related to your particular situation. The U.S. government does not warrant or assume any liability or responsibility for the accuracy or completeness of the information on this Site.

**Attribution Statement:** LactMed is a registered trademark of the U.S. Department of Health and Human Services.

daily. She also received oral 300 mg of allopurinol daily during the whole therapy course. Milk samples were collected twice daily during the first 3 cycles then once daily for the remaining cycles for a total of 290 samples. Vincristine was not detectable in any samples. However, the assay method was relatively insensitive, so low levels of the drug might be present in breastmilk.[3]

*Infant Levels.* Relevant published information was not found as of the revision date.

## Effects in Breastfed Infants

In a 4-month-old, neutropenia was probably caused by cyclophosphamide in a mother 9 days after the last of 6 weekly doses of 800 mg cyclophosphamide intravenously, 2 mg vincristine intravenously and daily doses of 30 mg of prednisolone orally. Neutropenia persisted at least 12 days and was accompanied by a brief episode of diarrhea.[4] The contribution of vincristine to the neutropenia cannot be determined.

A woman was diagnosed with B-cell lymphoma at 27 weeks of pregnancy. Labor was induced at 34 4/7 weeks and treatment was begun with a standard regimen of rituximab, cyclophosphamide, doxorubicin, vincristine, and prednisone in unspecified doses on a 21-day cycle, starting on day 2 postpartum. She pumped and discarded her milk and fed her infant donor milk for the first 10 days of each cycle and then breastfed her infant for the remaining 10 days before the next treatment cycle. The 10-day period of breastfeeding abstinence was determined by using about 3 half-lives of vincristine. After completion of 4 cycles of chemotherapy, her infant was reportedly healthy and developing without any complications.[5]

## Effects on Lactation and Breastmilk

Relevant published information was not found as of the revision date.

## References

1. Pistilli B, Bellettini G, Giovannetti E, et al. Chemotherapy, targeted agents, antiemetics and growth-factors in human milk: How should we counsel cancer patients about breastfeeding? *Cancer Treat Rev.* 2013;39:207–11. PubMed PMID: 23199900.
2. Urbaniak C, McMillan A, Angelini M, et al. Effect of chemotherapy on the microbiota and metabolome of human milk, a case report. *Microbiome.* 2014;2:24. PubMed PMID: 25061513.
3. Codacci-Pisanelli G, Honeywell RJ, Asselin N, et al. Breastfeeding during R-CHOP chemotherapy: Please abstain! *Eur J Cancer.* 2019;119:107–11. PubMed PMID: 31437753.
4. Amato D, Niblett JS. Neutropenia from cyclophosphamide in breast milk. *Med J Aust.* 1977;1:383–4.
5. Hersey AE, Giglio P, Kurt H, et al. Diffuse large B-cell lymphoma during third-trimester pregnancy and lactation. *Obstet Gynecol.* 2020;135:383–6. PubMed PMID: 31923071.

## Substance Identification

### Substance Name

Vincristine

### CAS Registry Number

57-22-7

### Drug Class

Breast Feeding

Lactation

Milk, Human

Antineoplastic Agents

Antimitotic Agents