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**NLM Citation:** Drugs and Lactation Database (LactMed®) [Internet]. Bethesda (MD): National Institute of Child Health and Human Development; 2006-. Oxaliplatin. [Updated 2023 May 15].
**Bookshelf URL:** https://www.ncbi.nlm.nih.gov/books/


# Oxaliplatin

Revised: May 15, 2023.

CASRN: 61825-94-3

## Drug Levels and Effects

### Summary of Use during Lactation

Most sources consider that mothers receiving antineoplastic therapy should not breastfeed, especially with alkylating agents such as oxaliplatin.[1] In one patient, platinum was found in breastmilk for at least 65 days after her last dose. The exact form and toxicity of platinum that might be excreted into breastmilk are not known. The nursing infant would receive any platinum compounds orally rather than intravenously and oral absorption of oral platinum compounds by infants is not known. Chemotherapy may adversely affect the normal microbiome and chemical makeup of breastmilk.[2] Women who receive chemotherapy during pregnancy are more likely to have difficulty nursing their infant. The manufacturer recommends that women should not breastfeed during treatment with oxaliplatin injection and for 3 months after the final dose, which is consistent with findings of platinum in the milk of one patient.

### Drug Levels

*Maternal Levels.* A lactating patient with stage 3a colorectal cancer received chemotherapy including oxaliplatin 130 mg/sq m (200 mg) infused every 4 weeks. She was also receiving capecitabine 1 gram/sq m twice daily by mouth for the first 2 weeks of the 21-day cycles. The patient was breastfeeding a 7-month-old infant until chemotherapy was begun. Milk platinum concentrations 34 and 65 days after treatment were 7.8 and 10.3 mcg/L, respectively.[3]

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

### Effects in Breastfed Infants

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

### Effects on Lactation and Breastmilk

A telephone follow-up study was conducted on 74 women who received cancer chemotherapy at one center during the second or third trimester of pregnancy to determine if they were successful at breastfeeding

postpartum. Only 34% of the women were able to exclusively breastfeed their infants, and 66% of the women reported experiencing breastfeeding difficulties. This was in comparison to a 91% breastfeeding success rate in 22 other mothers diagnosed during pregnancy, but not treated with chemotherapy. Other statistically significant correlations included: 1. mothers with breastfeeding difficulties had an average of 5.5 cycles of chemotherapy compared with 3.8 cycles among mothers who had no difficulties; and 2. mothers with breastfeeding difficulties received their first cycle of chemotherapy on average 3.4 weeks earlier in pregnancy. Of the 3 women who received a regimen containing the similar drug, cisplatin, 1 had breastfeeding difficulties.[4]

## 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. Krutsch K, Adams K, Shinwari M, et al. Persistence of oxaliplatin transfer into human milk: A case report. Breastfeed Med. 2023;18:395–9. PubMed PMID: 37093108.
4. Stopenski S, Aslam A, Zhang X, et al. After chemotherapy treatment for maternal cancer during pregnancy, is breastfeeding possible? Breastfeed Med. 2017;12:91–7. PubMed PMID: 28170295.

# Substance Identification

## Substance Name

Oxaliplatin

## CAS Registry Number

61825-94-3

## Drug Class

Breast Feeding

Lactation

Milk, Human

Antineoplastic Agents

Platinum Compounds