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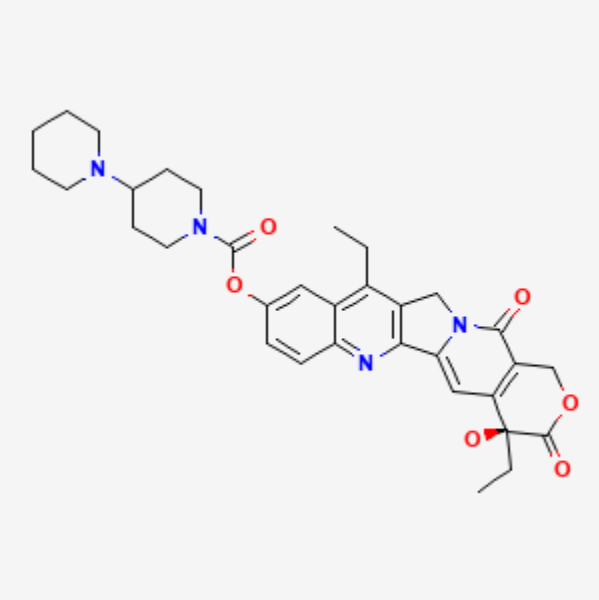
Irinotecan

Revised: August 16, 2021.

CASRN: 97682-44-5



Drug Levels and Effects

Summary of Use during Lactation

Limited data indicate that irinotecan is found in breastmilk for 2 days and its active metabolite is found in breastmilk for up to a week after a dose of 60 mg/square meter, although the highest amounts occur during the first 4 days after a dose. Higher maternal doses have not been studied and the oral absorption and toxicity in breastfed infants are not known. Based on this limited evidence, it appears that breastfeeding should be avoided for at least a week after a dose of irinotecan 60 mg/square meter. Higher dosages probably require a longer abstinence period. Some authors recommend discontinuing breastfeeding during irinotecan therapy.[1] 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.[3]

Drug Levels

Irinotecan is metabolized to the active metabolite, 7-ethyl-10-hydroxycamptothecin (SN-38), which is further conjugated with glucuronic acid.

Maternal Levels. A woman with cervical cancer discovered during pregnancy was treated with irinotecan 60 mg/square meter plus nedaplatin 80 mg/square meter. She had been nursing her infant prior to chemotherapy and collected morning breastmilk samples on days 2 to 7 following the first dose of irinotecan. Irinotecan was detectable in breastmilk on days 2 and 3 after the dose in concentrations of 399 and 60.21 mcg/L, respectively. Irinotecan was undetectable (<0.1 mcg/L) on day 4 and after. SN-38 was also measured, but not its glucuronide. SN-38 was highest in breastmilk on day 2, with a concentration of 3.9 mcg/L. Levels fell, but were still measurable on days 6 and 7, with concentrations of 0.16 and 0.2 mcg/L, respectively.[1]

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

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

References

1. Nakagawa J, Terui K, Hosoi K, et al. Passage of irinotecan and its active metabolite, SN-38, into human milk. J Clin Pharm Ther. 2016;41:579–82. PubMed PMID: 27477206.
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. 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

Irinotecan

CAS Registry Number

97682-44-5 86639-52-3

Drug Class

Breast Feeding

Lactation

Antineoplastic Agents

Enzyme Inhibitors

Topoisomerase I Inhibitors