



Indium In 111 White Blood Cells

Revised: October 15, 2023.

Drug Levels and Effects

Summary of Use during Lactation

Information in this record refers to the use of indium In 111 white blood cells (In 111 leukocytes) as a diagnostic agent. Breastfeeding should be interrupted temporarily after administration of high doses of In 111 leukocytes to a nursing mother. British authorities state that doses greater than 10 MBq should not be administered to breastfeeding patients, and at that dose and below, no interruption of breastfeeding is required.[1] US recommendations state that a period of 6 days of interruption of breastfeeding is recommended, irrespective of dose.[2] The duration of breastfeeding interruption depends on the dose administered (see table). During the period of interruption, the breasts should be emptied regularly and completely. If the mother has expressed and saved milk prior to the examination, she can feed it to the infant during the period of nursing interruption.[1,3] The milk that is pumped by the mother during the time of breastfeeding interruption can either be discarded or stored frozen and given to the infant after 10 physical half-lives, or about 28 days, have elapsed. After doses greater than 10 MBq, consideration of temporarily limiting close contact between the mother and infant.[1]

Mothers concerned about the level of radioactivity in their milk could ask to have it tested at a nuclear medicine facility at their hospital. When the radioactivity is at a safe level, she may resume breastfeeding. A method for measuring milk radioactivity and determining the time when a mother can safely resume breastfeeding has been published.[4]

Drug Levels

Indium 111 decays by electron capture with 173 keV and 245 keV gamma emissions and a physical half-life of 2.8 days.[2] The maximum effective half-life of In 111 white blood cells is 130 hours.[1]

Effects in Breastfed Infants

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

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.

Effects on Lactation and Breastmilk

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

References

1. ARSAC notes for guidance: Good clinical practice in nuclear medicine. Notes for guidance on the clinical administration of radiopharmaceuticals and use of sealed radioactive sources. 2020. Available at: <https://www.gov.uk/government/publications/arsac-notes-for-guidance>
2. Dilsizian V, Metter D, Palestro C, Zanzonico P. Advisory Committee on Medical Uses of Isotopes (ACMUI) Sub-Committee on Nursing Mother Guidelines for the Medical Administration of Radioactive Material. Final report submitted: January 31, 2019. 2019. Available at: <https://www.nrc.gov/docs/ML1903/ML19038A498.pdf>
3. Mountford PJ, Coakley AJ. A review of the secretion of radioactivity in human breast milk: Data, quantitative analysis and recommendations. Nucl Med Commun 1989;10:15-27. PubMed PMID: 2645546.
4. Stabin MG, Breitz HB. Breast milk excretion of radiopharmaceuticals: Mechanisms, findings, and radiation dosimetry. J Nucl Med 2000;41:863-73. PubMed PMID: 10809203.

Substance Identification

Substance Name

Indium In 111 White Blood Cells

Drug Class

Breast Feeding

Lactation

Milk, Human

Radiopharmaceuticals

Indium Radioisotopes

Diagnostic Agents