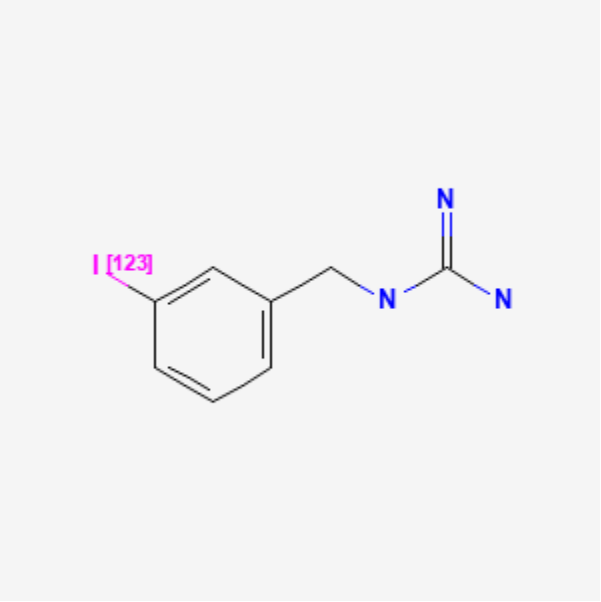
U.S. National Library of Medicine
National Center for Biotechnology Information

NLM Citation: Drugs and Lactation Database (LactMed®) [Internet]. Bethesda (MD): National Institute of Child Health and Human Development; 2006-. Iobenguane I 123. [Updated 2021 Mar 17].
Bookshelf URL: https://www.ncbi.nlm.nih.gov/books/

Iobenguane I 123

Revised: March 17, 2021.

CASRN: 76924-93-1



Drug Levels and Effects

Summary of Use during Lactation

Information in this record refers to the use of iobenguane I 123 (I 123 meta-iodobenzylguanidine; I 123 MIBG) as a diagnostic agent. The manufacturer recommends that mothers should pump and discard milk for at least 6 days based on the physical half-life of I 123, although discontinuation for 3.5 days would be more consistent with the effective half-life. However, a US Nuclear Regulatory Commission subcommittee has recommended that nursing need not be discontinued with doses up to 11 mCi.[1] If breastfeeding is discontinued and the mother has expressed and saved milk prior to the examination, she can feed it to the infant during the period of nursing interruption.[2-4] The milk that is pumped by the mother during the time of breastfeeding interruption can either be discarded or stored refrigerated and given to the infant after 10 physical half-lives, or about 5.5 days, have elapsed.

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.[5]

Drug Levels

I 123 is a gamma emitter with a photon energy of 159 keV and a physical half-life of 13.1 hours.[1] The maximum effective half-life of I 123 MIBG is 8.56 hours.[4]

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. Dilsizian V, Metter D, Palestro C, et al. 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. Available at: https://www.nrc.gov/docs/ML1903/ML19038A498.pdf
2. 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.
3. Early PJ, Sodee DB. Principles and practice of nuclear medicine. 2nd ed. St Louis Mosby-Year Book, Inc 1995:1380-1.
4. 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
5. 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

Iobenguane I 123

CAS Registry Number

76924-93-1

Drug Class

Breast Feeding

Lactation

Radiopharmaceuticals

Iodine Radioisotopes

Diagnostic Agents