Employee Training
Breastfeeding Patient Recommendations

Clinical procedures should include an advisory concerning breastfeeding that establishes a process that assures that patients who are breastfeeding are identified prior to radiopharmaceutical administration. Additionally 10 CFR 35.75 (b) and (d) http://www.nrc.gov/reading-rm/doc-collections/cfr/part035/full-text.html#part035-0075 contains requirements that breast-feeding patients receive proper written instruction if the total effective dose equivalent to a nursing infant or child could exceed 100 mrem (1 mSv).

These written instructions must include guidance for the parent as well as potential consequences if instructions are not followed. A record of these instructions must be kept for three (3) years per 10 CFR 35.2075(c) http://www.nrc.gov/reading-rm/doc-collections/cfr/part035/full-text.html#part035-2075 if the total effective dose equivalent from continuous feeding could result in a dose exceeding 500 mrem (5 mSv) per 35.2075(b). http://www.nrc.gov/reading-rm/doc-collections/cfr/part035/full-text.html#part035-2075

NUREG-1556 Volume 9, Revision 1 Table U3 notes "Activities of Radiopharmaceuticals that Require Instructions and Records When Administered to Patients Who are Breast-Feeding an Infant or Child" http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1556/v9/r1/sr1556v9r1.pdf
has been available for all accounts as a guide for providing recommended duration of interruption of breastfeeding times. Additionally, trigger activities of radiopharmaceuticals are listed that would require instructions and records when administered to patients who are breast-feeding.

However, the NRC table has been criticized for being difficult to interpret. In this regard, MPC has provided an alternate table for the recommendation of breast-feeding interruption times and activity triggers adapted from the NUREG Table U3 and Stabin and Brietz (J:Nucl Med 2000; 41:863-873).

Please note: When no cessation is recommended, mothers should still restrict contact with the child to avoid unnecessary exposure to the child.

Please contact your physicist if you have questions regarding this matter.

Radiation Safety Officer _____ **Administrator** _____

Date: _____ **Date:** _____

Recommended Breast Feeding Interruption Schedule

Radiopharmaceutical	Activity which Require Instruction	Activity which Require Record	Recommended Breast-Feeding Interruption Time
I-131 NaI	0.0004 mCi	0.0002 mCi	Complete cessation
I-123 NaI	0.5 mCi	3 mCi	Complete cessation
I-123 OIH	4 mCi	20 mCi	No cessation
I-123 MIBG	2 mCi	10 mCi	48hr/10 mCi [2] 12hr/4 mCi
I-125 OIH	0.08 mCi	0.4 mCi	No cessation
I-131 OIH	0.30 mCi	1.5 mCi	No cessation
Tc-99m DTPA	30 mCi	150 mCi	No cessation
Tc-99m MAA	1.3 mCi	6.5 mCi	12.6 hr/4 mCi
Tc-99m Pertechnetate	3 mCi	15 mCi	24hr/30 mCi 12hr/12 mCi
Tc-99m DISIDA	30 mCi	150 mCi	No cessation
Tc-99m Glucoheptonate	30 mCi	170 mCi	No cessation
Tc-99m HAM	10 mCi	50 mCi	No cessation
Tc-99m MIBI/Myoview	30 mCi	150 mCi	3hr/30 mCi[1] 6hr/60 mCi[1]
Tc-99m MDP	30 mCi	150 mCi	No cessation
Tc-99m PYP	25 mCi	120 mCi	No cessation
Tc-99m RBC In-Vivo Labeling	10 mCi	50 mCi	12hr/ 20 mCi [2]
Tc-99m RBC In-Vitro Labeling	30 mCi	150 mCi	No cessation
Tc-99m Sulfur Colloid	7 mCi	35 mCi	6hr/12 mCi
Tc-99m DTPA Aerosol	30 mCi	150 mCi	No cessation
Tc-99m MAG3	30 mCi	150 mCi	No cessation
Tc-99m WBC	4 mCi	15 mCi	48hr/5 mCi [2] 12hr/2 mCi
Ga-67 Citrate	0.04 mCi	0.2 mCi	1 month/4 mCi 2 weeks/1.3 mCi 1 week/0.2 mCi
Cr-51 EDTA	1.6 mCi	8 mCi	No cessation
In-111 WBC	0.2 mCi	1 mCi	1 week/0.5 mCi
Tl-201 Chloride	1 mCi	5 mCi	96hr/<3 mCi [2] 2 weeks/3 mCi [1] Complete Cessation/>5 mCi

The duration of interruption of breast-feeding is selected to reduce the maximum dose to a newborn infant to leas than 1 millisievert (0.1 rem), although the regulatory limit is 5 millisieverts (0.5 rem). The actual doses that would be received by most infants would be far below 1 millisievert (0.1rem). Of course, the physician may use discretion in the recommendation, increasing or decreasing the duration of interruption.

1. Adapted from US Nuclear Regulatory Commission, NUREG-1556, Volume 9, Appendix U; Table U.3 and NUREG-1492.
2. Stabin and Breitz. Journal of Nuclear Medicine 2000; 41: 863-873

INSTRUCTIONS TO PATIENTS WHO ARE BREAST-FEEDING

I confirm that I am breast-feeding a child and that I will adhere to the waiting period listed below. During this waiting period, I may express breast milk, but I will discard this milk and will not feed it to a child.

I understand that a portion of the radioactive material which I have received can be found in breast milk and that if I breast-feed during the delay time, my child will receive an unnecessary radiation dose. If I have received I-131 and breast-feed against recommendations, my child may suffer thyroid damage.

Signature: _____ Date: _____

Radiopharmaceutical: _____ Administered Dose: _____

Time to wait before resuming breast-feeding: _____

Reference Recommended Breast Feeding Interruption Schedule