postpartum and was breast feeding her infant prior to the scanning dose. Her private physician took her off of thyroid replacement therapy 5 wk prior, anticipating the scanning procedure. Two years earlier she had a total thyroidectomy for papillary carcinoma of the thyroid gland. A tiny focus of thyroid tissue in the right thyroid bed with 0.2% uptake at 72 hr was ablated with 29 mCi of ^{131}I. Since we would not administer ^{131}I for scanning while the patient was breast feeding, she elected to stop breast feeding since she and her physician did not want to delay the whole-body scan. A 5 mCi of ^{131}I dose was given orally, and whole-body scans were performed at 72 hr. At this time no uptake was noted in the anterior neck. However, marked accumulation of the radioiodine was noted in both breasts (Fig. 1).

Besides the thyroid gland, iodide is also trapped by the salivary glands, gastric mucosa, the choroid plexus, the ciliary body of the eye and the mammary glands (*4*). The mammary gland is the only one of these tissues which binds iodine; diiodotyrosine is formed in the mammary gland, but thyroxine and triiodothyronine are not. We feel uptake of radioiodine by breasts in the postpartum and/or lactating breasts is a physiologic function and does not represent ectopic thyroid tissue in the breasts.

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REPLY: We were fortunate to have the opportunity to review the case report of Dr. G.R. Baeumler and Dr K.G. Joo and their comments regarding the discussion of our recent report on ectopic thyroid (*1*). Of particular interest is their observation of prominent bilateral breast uptake of radioiodide in a thyroidectomized patient who had taken prior ablative radioiodide therapy for thyroid carcinoma. In this patient, who is 4 mo postpartum, and who had stopped breast feeding prior to radioiodide, as the authors state, much of the uptake demonstrated is caused by the well known capacity of the breast to concentrate and secrete radioiodide in milk (*2–6*). The differential diagnosis would certainly include metastatic thyroid carcinoma as pointed out in a similar case (*5*). The considerable asymmetry of the uptake projecting over the chest on the right and on the left and also clearly seen on the left lateral view raises the question of pulmonary as well as pericardial metatases. The therapy dose of ≲30 mCi iodine-131 (^{131}I) as this patient received (29 mCi ^{131}I) is typically insufficient to ablate extracervical metastases (*7*).

There are several other points about the mammary uptake of radioiodide that may aid in the differential diagnosis of iodide accumulation over the thorax. If the individual anatomy is suitable, use of breast binder or different positioning of the patient would demonstrate shift of breast activities (*5*). Another method is detection and quantitation of the radioiodine in the breast secretions where its persistence is rather brief (*4,6*). Advantage may be made of this rapid release from the physiologic areas in comparison to other thyroidal tissues by performing serial scans or uptakes.

With reference to Duongs' case (*8*), we must admit that evidence in favor of our statement that the ectopic thyroid tissue in the breasts produced hyperthyroidism, is quite inconclusive. We were struck by the high breast uptake of radioiodide which could be explained if she was lactating but one could only assume that she was. The disappearance of the breast uptake with the concomitant demonstration of normal uptake of the thyroid is very interesting. Though not mentioned, one can guess that the patient probably discontinued breastfeeding. There is diversion of administered radioactive iodine from the thyroid gland to the milk in lactating women (*9*). Potter and Chaikoff had presented experimental evidence of lowered thyroidal uptake by diversion of the radioiodide (^{131}I) into milk in their studies with lactating compared to nonlactating rats (*10*).

The organic binding of radioiodine appears to occur after the milk has been secreted by the alveolar cells during autoincubation in the gland. In certain species, that is, man and cow, there is very little if any organic binding of iodine in the mammary glands; if present, very little mono-iodotyrosines are produced (*11,12*). Surveying the literature, we are not aware of diiodotyrosines being produced in human milk.

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Error in Table

TO THE EDITOR: We noticed some errors in data in the final version of our article "Excretion of Radionuclides in Human Breast Milk After Administration of Radiopharmaceuticals," *J Nucl Med* 26:1085-1090, 1985.

The errors appear in Table 1 for the radiopharmaceuticals [^{99m}Tc]plasmin, [^{99m}Tc]DTPA, and [^{99m}Tc]MDP. The conclusion and recommendations given by us are, however, not affected by the wrong data given in Table 1. The correct Table 1 is shown below. Also, on page 1087 under the heading "Technetium-99m plasmin, DTPA, and MDP," the figure 1.5-2.0% *should be* $1.1 \cdot 10^{-2}$-0.9%.

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TABLE 1
Absorbed Dose to Child per MBq Given to Mother

Radio-pharmaceutical	Number of patients	Effective half-life hours: Mean value	Effective half-life hours: Range	Total fraction of injected activity excreted in breast milk: Mean value	Total fraction of injected activity excreted in breast milk: Range	Effective dose equiv. mSv Mean	Stomach wall mGy Mean	Thyroid mGy Mean
[^{99m}Tc]MAA	6	3.7	3.3–4.5	$3.2 \cdot 10^{-2}$	$0.4–5.2 \cdot 10^{-2}$	$0.9 \cdot 10^{-2}$	$11.0 \cdot 10^{-2}$	$3.2 \cdot 10^{-2}$
$^{99m}TcO_4^-$	1	3.2	—	$10.8 \cdot 10^{-2}$	—	$3 \cdot 10^{-2}$	$36 \cdot 10^{-2}$	$10.8 \cdot 10^{-2}$
[^{99m}Tc]plasmin	2	3.2	2.2–4.1	$0.5 \cdot 10^{-2}$	$0.03–0.9 \cdot 10^{-2}$	$1.5 \cdot 10^{-3}$	$1.7 \cdot 10^{-2}$	$0.5 \cdot 10^{-2}$
[^{99m}Tc]DTPA	1	3.7	—	$1.5 \cdot 10^{-4}$	—	$0.4 \cdot 10^{-4}$	$5 \cdot 10^{-4}$	$1.5 \cdot 10^{-4}$
[^{99m}Tc]RBC	1	7	—	$6.1 \cdot 10^{-5}$	—	$1.7 \cdot 10^{-5}$	$2 \cdot 10^{-5}$	$6.1 \cdot 10^{-5}$
[^{99m}Tc]MDP	2	4.3	3.5–5.1	$1.9 \cdot 10^{-4}$	$1.1–2.7 \cdot 10^{-4}$	$0.5 \cdot 10^{-4}$	$6 \cdot 10^{-4}$	$1.9 \cdot 10^{-4}$
[^{125}I]Hippuran	1	4.8	—	$2.4 \cdot 10^{-2}$	—	1.7	0.03	55
[^{131}I]Hippuran	6	4.5	2.2–5.8	$2.8 \cdot 10^{-2}$	$1.8–4.9 \cdot 10^{-2}$	7.0	0.23	227
[^{51}Cr]EDTA	2	6	5–7	$4.0 \cdot 10^{-4}$	$1.5–6.5 \cdot 10^{-4}$	$1.6 \cdot 10^{-4}$	$1.2 \cdot 10^{-4}$	—