occurrence of residual splenic tissue is an even more frequent observation, due to the compensatory growth of residual splenic cells, including accessory spleens. An important message of the paper by Lebtahi et al. is that the nuclear physician performing Octreoscan, in particular in splenectomized patients, should be aware that a positive somatostatin receptor scintigraphy in the abdominal region arising from the presence of accessory spleens may be much more common than previously thought and is, therefore, of considerable differential-diagnostic relevance.


## REFERENCES

1. Lebtahi R, Cadiot G, Marmuse JP, et al. False-positive somatostatin receptor scintigraphy due to an accessory spleen. *J Nucl Med* 1997;38:1979–1981.
2. Reubi JC, Waser B, Horisberger U, et al. In vitro autoradiographic and in vivo scintigraphic localization of somatostatin receptors in human lymphatic tissue. *Blood* 1993;82:2143–2151.
3. Reubi JC, Waser B, Friess H, Krenning EP, Büchler M, Laissue J. Regulatory peptide receptors in goiters of the human thyroid. *J Nucl Med* 1997;38:266P.
4. Kwekkeboom DJ, Assies J, Hofland LJ, Reubi JC, Lamberts SWJ, Krenning EP. A case of antibody formation against octreotide visualized with $^{111}$In-octreotide scintigraphy. *Clin Endocrinol* 1993;39:239–243.
5. Robbins SL. *Robbins pathologic basis of disease*. 5th ed. Philadelphia, PA: W.B. Saunders; 1994.



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**REPLY:** We agree that the visualization of an accessory spleen is due to the presence of specific somatostatin receptors in this tissue and that the hot spot due to such an ectopic organ is physiological. We discussed this point in our paper. However, when the results of somatostatin receptor scintigraphy lead to surgery, they must be considered false positive for a tumoral site. The "false positive" designation refers to clinical data management and not to biological considerations.


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## Costs Versus Charges

**TO THE EDITOR:** The *Newsline* article "Future of Nuclear Medicine, Part 2: Assessment of the U.S. Diagnostic Radiopharmaceuticals Market (2001–2020)" (*1*) is very important but repeats a fundamental error regarding the costs of nuclear medicine procedures. On page N23 in the discussion of market restraints on the growth of the field, the article states that "Nuclear Medicine procedures are not inexpensive.... Prices for Nuclear Medicine diagnostic procedures range from $1500 to $6000. This compares to about $50 for an x-ray, for example." The article then proceeds to try to justify the high cost of the nuclear medicine procedures.

A basic problem with this analysis is that most nuclear medicine procedures are not very expensive and do not need this form of justification. According to the 1997 fee schedule, Medicare pays $204.03 for a bone scan (78306: professional AND technical components combined). Even a stress/redistribution thallium scan is only reimbursed $515.96 (plus a small amount for the radiopharmaceutical).

The root of the problem is the failure to distinguish between *charges* and *costs*. I may charge $1,500 for a stress thallium scan; but I accept $500 as full payment. If I try to explain why a study is worth $1500, my reasoning becomes tortuous and not very effective. It is much easier to provide the cost/benefit justification for a test if I say that it only "costs" $515.

I recognize that there are nuclear medicine procedures that will need payments of more than $1000, but this is not the bulk of our work. We must recognize that the "cost" of a nuclear medicine procedure is the payment we receive, not the bill we send out. It will be very hard for us in a cost conscious world to justify our continued existence if we use the wrong numbers in our self-analysis.


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## REFERENCES

1. Future of Nuclear Medicine, Part 2: assessment of the U.S. radiopharmaceuticals market. *J Nucl Med* 1998;39(3):N20–N25.


## Concerns About Risks of Irradiation During Pregnancy

**TO THE EDITOR:** We read with interest the article by Berg et al. (*1*). They describe the case of a pregnant woman who underwent, at 8 and 20 wk gestation, radiodiagnostic tests with $^{99m}$Tc and with $^{131}$I followed by 500 MBq $^{131}$I for thyroid ablation to treat hyperthyroidism. As the authors mention, "data on Japanese atomic bomb-survivors exposed in utero at fetal ages 8–15 weeks suggest the possibility of a non-threshold-type response for the induction of severe mental retardation by radiation" (*2*).

The fetal thyroid was ablated because of a 600 Gy absorbed dose. The mother was brought to a slightly hyperthyroid situation with substitutional therapy. It is known that fetal hypothyroidism cannot be excluded even with substitutional therapy (*3*). It is reported that 8% of 449 patients with congenital hypothyroidism have major congenital anomalies (*4*).

Considering these two major complications, our duty is to inform the patient clearly about the uncertainty of the outcome and to leave the choice between continuation or interruption of her pregnancy to the patient. We have no right to encourage the patient to continue her pregnancy, with the actual knowledge on the influence of radioactivity on fetal and child development.

Moreover, we find it difficult to accept the decision of the Swedish National Board of Health that states that none of the physicians involved should be accountable, since the physicians had four opportunities to perform a simple pregnancy test on this woman.

It would also be interesting to know which neuropsychological tests were carried out to evaluate the mental capacity of the child involved. Without this reference, the mere reporting of the outcome lacks persuasiveness.

Most importantly, we disagree with the conclusion of the article that after three radiodiagnostic tests and radioiodine therapy, in the 8th and 20th wk of gestation, termination of pregnancy is not justifiable. Currently, there is very limited experience on this subject.


## REFERENCES

1. Berg GEB, Nyström EH, Jacobsson L, et al. Radioiodine treatment of hyperthyroidism in a pregnant woman. *J Nucl Med* 1998;39:357–361.
2. Recommendations of the international commission on radiological protection. *Ann ICRP* 1991;21:1–201.
3. Sugrue D, Drury MI. Hyperthyroidism complicating pregnancy: results of treatment by antithyroid drugs in 77 pregnancies. *Br J Obstet Gynaecol* 1980;87:970–975.
4. Grant DB, Smith IK, Fuggle PN, et al. Congenital hypothyroidism detected by neonatal screening: relationship between biochemical severity and early clinical features. *Arch Dis Child* 1992;67:87–90.



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