

A PET/CT THAT IS NEGATIVE MAY BE A COST-EFFECTIVE MODALITY TO AVOID UNNECESSARY SURGERY FOR NODULES WITH NONDIAGNOSTIC CYTOLOGY

Giovanella L, et. al.

radioiodine scans (2). ¹⁸F-FDG-PET/CT also is useful, though somewhat limited, in the evaluation of thyroid nodules with suspicious features on ultrasound.

The ATA guidelines state that patients with nondiagnostic FNA should get a second FNA that is ultrasound-guided (2). The second FNA should be performed 3 months after the initial test (3). If the nodule is partially cystic with some suspicious characteristics, one may elect to follow the patient closely or recommend surgical excision, whereas a solid nodule should be more strongly considered for surgical evaluation after two nondiagnostic FNAs (2, 3). FNA is nondiagnostic in 5% to 20% of cases (4) and repeat FNA under ultrasound guidance may provide a diagnostic specimen in 75% of solid nodules and 50% of cystic nodules (5). A third ultrasound-guided FNA is less likely to be diagnostic.

Because only 6% to 20% of patients who have thyroid nodules with nondiagnostic FNA results have thyroid cancer (6, 7), the vast majority of the patients are subjected to unnecessary surgery to rule out malignancy. Negative results on ¹⁸F-FDG-PET/CT may be a cost-effective way to avoid unnecessary surgery.

— **Muhammad Salman ul Haq, MD**
Endocrinology and Diabetes Division
VA Greater Los Angeles
and Cedars-Sinai Medical Centers
Los Angeles, CA

— **Jerome M. Hershman, MD**

REFERENCES

1. Larson SM, Robbins R. Positron emission tomography in thyroid cancer management. *Semin Roentgenol* 2002; 37:169-74.
2. Cooper DS, Doherty GM, Haugen BR, Kloos RT, Lee SL, Mandel SJ, Mazzaferri EL, McIver B, Pacini F, Schlumberger M, et al. Revised American Thyroid Association management guidelines for patients with thyroid nodules and differentiated thyroid cancer. *Thyroid* 2009;19:1167-214.
3. Layfield LJ, Cibas ES, Gharib H, Mandel SJ. Thyroid aspiration cytology: current status. *CA Cancer J Clin* 2009;59:99-110.
4. Chow LS, Goellner JR, van Heerden JA. Nondiagnostic thyroid fine-needle aspiration cytology: management dilemmas. *Thyroid* 2001;11:1147-51.
5. Alexander EK, Heering JP, Benson CB, et al. Assessment of nondiagnostic ultrasound-guided fine needle aspirations of thyroid nodules. *J Clin Endocrinol Metab* 2002;87:4924-7.
6. Mitchell JC, Grant F, Evenson AR, et al. Preoperative evaluation of thyroid nodules with ¹⁸F-FDG-PET/CT. *Surgery* 2005;138:1166-74.
7. Orija IB, Piñeyro M, Biscotti C, Reddy SS, Hamrahian AH. Value of repeating a nondiagnostic thyroid fine-needle aspiration biopsy. *Endocr Pract* 2007;13:735-42.