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# New guidelines for patients with thyroid nodules and differentiated thyroid cancer

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Designing a medically appropriate, cost-effective means of evaluating patients with nodular thyroid disease is a common clinical problem, especially as sensitive ultrasound is revealing many patients with one or more thyroid nodules. These nodules are extremely common in women, and their incidence increases with age; the prevalence of thyroid cancer in these lesions ranges from 7% to 15%, depending on the series. Recent estimates indicate some 23,000 new thyroid cancers are diagnosed yearly in the US. The recently published paper, 'Management guidelines for patients with thyroid nodules and differentiated thyroid cancer' by Dr David S Cooper and a committee of the American Thyroid Association is, therefore, quite timely (Cooper DS *et al.* [2006] *Thyroid* 16: 109–141).

Patients with the commonest thyroid malignancy, well-differentiated thyroid carcinoma (about 90% papillary–follicular), are often cured by their initial surgery and adjuvant radioiodine, despite the presence of cervical lymph-node metastases in 20–50%. Distinguishing these patients from the 15–20% with persistent disease is a major challenge, since mortality of about 5–10% will occur in the latter group. At least 2 decades would be required for definitive assessment of the value of a change in diagnostic or treatment strategy, so virtually all clinical studies of well-differentiated thyroid cancer are retrospective. A major contribution of the report is an up-to-date compilation of the literature, with the committee weighting each of its recommendations according to the quality of the supporting evidence.

A number of important issues are addressed: notably, the committee recommended that evaluation by ultrasound be increased. This will uncover clinically significant, nonpalpable nodules and can provide guidance for fine-needle aspiration (FNA) especially in patients with partially cystic or difficult-to-palpate lesions. The use of other radiological procedures before FNA is discouraged except when a suppressed serum TSH level points to autonomous thyroid function. The importance of an experienced cytopathologist examining an adequate FNA specimen is emphasized. For lesions that are neither clearly benign nor malignant, some centers can provide—using their prior experience—a specific cytological diagnosis linked to a risk of cancer. This provides more information than the term "indeterminate", as mentioned in the report.

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The 80–85% of patients at low risk for recurrence or persistence of papillary carcinoma after initial treatment can be followed with minimal TSH suppression, annual serum thyroglobulin measurements (if endogenous antibodies are not present), and neck ultrasound. Several studies cited show that if serum thyroglobulin levels are low (e.g. <2 μg/l) or undetectable when TSH levels are elevated and a neck ultrasound shows no abnormalities, the chance of persistent disease is sufficiently remote that normal—as opposed to supraphysiologic—levothyroxine replacement is appropriate. Definitive identification of such patients is the most important goal of the postsurgical evaluation, to ameliorate patient anxiety, avoid mild thyrotoxicosis, and reduce testing intensity. The management of those patients with persistent disease is also reviewed in detail by Cooper *et al.*, but is beyond the scope of these remarks.

The report concludes by listing important future research goals, including identifying agents for treatment of radioiodine-resistant disease and designing ways to monitor the 15–25% of patients who cannot be evaluated with thyroglobulin determinations because of endogenous antibodies. In addition, there is a need to define the best approach for patients with elevated serum thyroglobulin levels but no identifiable disease, and to prevent the long-term complications of radioiodine therapy. We all will benefit from the diligence of this committee in preparing this comprehensive report.

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