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Insights from the 77th annual meeting of the American Thyroid Association

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I recently attended the annual meeting of the American Thyroid Association in Phoenix, AZ, where a number of new clinical insights were discussed. Several presentations dealt with pregnancy and thyroid disease. Of special interest was a draft of the Endocrine Society Clinical Practice Guidelines for the Management of Thyroid Diseases during Pregnancy, presented by Leslie DeGroot (Chicago, IL). The summary highlighted the potential association between untreated maternal hypothyroidism and adverse effects on fetal cognitive development. The summary concluded that aggressive case-finding, rather than screening of all pregnant patients for hypothyroidism, is still the standard of care. In this issue of the journal (pp 216–217), the Practice Point discussion by Stagnaro-Green on the recent article by Vaidya *et al*. addresses the limitations of this compromise approach, which identified only 70% of pregnant women with elevated TSH levels. Levothyroxine therapy to normalize TSH is recommended for pregnant women with primary hypothyroidism since the potential benefits outweigh the risks. In a related presentation, Naoko Momotani (Tokyo, Japan) reviewed her extensive experience of pregnant women with Graves' disease. When sufficient antithyroid drugs were provided to return the mother's free endogenous T_4 levels into the normal range, 23 of 102 infants had low free T_4 and/or elevated TSH at birth. With less-aggressive therapy (free T_4 values maintained slightly above normal), no infants had subnormal free T_4. This evidence supports the currently recommended conservative strategy for managing patients. Paolo Beck-Peccoz (Milan, Italy) reported encouraging preliminary results with the monoclonal antibody, rituximab, in patients with active Graves' ophthalmopathy. This agent reduced clinical activity scores effectively, with minor adverse effects; further randomized studies should, therefore, be instigated.

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A large part of the meeting discussed thyroid nodules or cancer, topics that are addressed by several of the articles included in this issue of the journal. The management of patients with an 'indeterminate' cytological diagnosis (found in about 20–30% of nodule aspirates) is problematic, since the prevalence of cancer in such patients is only slightly higher than that in all patients with nodules. Yuri Nikiforov (Pittsburg, PA) indicated that molecular tests were beneficial for such patients since mutations in *BRAF* and *RET* oncogenes virtually always indicated malignancy. Stephanie Fish (Philadelphia, PA) reported that 20% of 171 patients with follicular neoplasm diagnosed by aspiration cytology (often included in the indeterminate category) had malignancy. The only ultrasound criterion associated with even a modestly increased risk of malignancy in these patients was a partial or absent halo around the nodule.

Carole Spencer (Santa Monica, CA) suggested that a sensitive serum thyroglobulin assay (that detects 0.1 ng/ml) might preclude the need for TSH stimulation when patients are evaluated for persistent thyroid carcinoma. In agreement with this concept, Robert Smallridge (Jacksonville, FL) reported that a serum thyroglobulin level <0.1 ng/ml (measured by such an assay) during TSH suppression was predictive of a TSH-stimulated thyroglobulin of <2 ng/ml in 78 of 80 patients. Many groups are reporting encouraging experiences with protein kinase inhibitors in patients with disseminated medullary carcinoma or papillary or follicular malignancies that no longer respond to radioiodine. Effective therapies with minimal adverse effects would certainly be a welcome addition to our therapeutic arsenal for these challenging illnesses.

This brief overview captures only some of the highlights of a very stimulating meeting topped off by this writer's first visit to the magnificent Grand Canyon.