Answer

The focus of this review was the diagnosis, treatment and follow-up of differentiated thyroid cancer (DTC), rather than evaluation of thyroid nodules. We do agree with Dr Giovanella that in the work-up of thyroid nodules TSH has to be the first test followed by scintigraphy in case of subnormal or suppressed TSH. FNAB should not be performed in autonomous nodules taking up I-131.

The value of post-surgical I-131 ablation in low or intermediate risk DTC (T1 and T2, up to 4 cm without evidence for metastases) is indeed controversial. A recent large study from France analyzed almost 1300 of such patients with DTC during a mean follow-up of 10 years and found no clear benefit of I-131 treatment regarding overall or disease-free survival [1]. In this study, 378 patients did not receive radioiodine treatment, and 45% of the entire population (n = 587) had unknown lymph node involvement. 19 recurrences were recorded (1,6% in those with I-131, and 1% in those who had surgery only) during the observation period. Although retrospective in nature, this study indicates that even patients with well-differentiated T2 DTCs may not benefit from I-131 treatment. Indeed, increasing evidence suggests, that the harms of treatment (secondary cancers) in this low-risk population may not be negligible [2].

Routine follow-up of DTC should include a clinical examination, measurement of TSH, fT4, thyroglobulin (using a sensitive assay and including Tg recovery), Tg-antibodies as well as neck ultrasound. Diagnostic I-123 scintigraphy has been evaluated in various studies with and without previous TSH stimulation and showed a sensitivity and specificity that precludes its use in routine clinical practice [3, 4]. This does, however, not exclude the application of this imaging modality in specific patients, such as those, where Tg measurement is not possible because of positive antibodies.

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References

1 Schvartz C, Bonnetain F, Dabakuyo S, Gauthier M, Cueff A, Fieffe S, et al. Impact on overall survival of radioactive iodine in low-risk differentiated thyroid cancer patients. J Clin Endocrinol Metab. 2012 May;-97(5):1526–35.
2 Gopalakrishna Iyer N, Morris L, Tuttle RM, Shaha AR, Ganly I. Rising Incidence of Second Cancers in Patients With Low-Risk (T1N0) Thyroid Cancer Who Receive Radioactive Iodine Therapy. Cancer. 2011; 117:4439–46.
3 Bravo PE, Goudarzi B, Rana U, Filho PT, Castillo R, Rababy C, et al. Clinical significance of discordant findings between pre-therapy (123) I and post-therapy (131)I whole body scan in patients with thyroid cancer. Int J Clin Exp Med. 2013;6(5):320–33.
4 Schlumberger M, Hitzel A, Toubert ME, Corone C, Troalen F, Schlageter MH, et al. Comparison of seven serum thyroglobulin assays in the follow-up of papillary and follicular thyroid cancer patients. J Clin Endocrinol Metab. 2007;92(7):2487–95.

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