

Diagnostic Whole-Body Scan May Not Be Necessary for Intermediate-Risk Patients with Differentiated Thyroid Cancer after Low-Dose (30 mCi) Radioactive Iodide Ablation (*Endocrinol Metab* 2014;29:33-9, Eon Ju Jeon et al.)

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We want to thank the editors of *Endocrinology and Metabolism* for giving us the opportunity to publish our work, and have provided the following response to Prof. Jung's letter.

At present, thyroid nodules are common clinical problem. The prevalence of differentiated thyroid cancer (DTC) is dramatically increasing and a large number of clinical studies have been conducted. The American Thyroid Association (ATA) published revised guidelines on practice recommendations [1]. The ATA's long-term management guidelines suggest that diagnostic whole-body scan (WBS) at 6 to 12 months after remnant ablation may be of value in the follow-up of patients with high or intermediate risk of persistent disease. Low-risk patients with undetectable thyroglobulin (Tg) levels with negative anti-Tg antibody, and a negative ultrasonography do not require routine diagnostic WBS. Nevertheless, it is not clear whether diagnostic WBS provides any benefit to patients with intermediate-risk thyroid cancer after a complete surgical resection and initial radioactive iodine ablation.

As mentioned in the letter, TSH-stimulated Tg levels alone may not represent thyroid uptake on diagnostic I-131 WBS during short-term follow-up (1.17 to 8.17 years) considering the long-term survival of DTC patients in this study. However, the thyroid bed uptake on diagnostic I-131 WBS showed a sta-

tistically significant difference according to TSH-stimulated Tg levels in the absence of anti-Tg antibody ($P=0.008$). Serum Tg without antibody interference following thyroid hormone withdrawal or stimulation using recombinant human TSH has a high degree of sensitivity and specificity in detecting thyroid cancer after total thyroidectomy and remnant ablation [2]. Based on this evidence, diagnostic WBS may not be necessary for intermediate-risk patients with DTC after low-dose (30 mCi) radioactive iodide ablation. Recently, Rosario et al. [1] reported that diagnostic WBS can be avoided in patients with large tumors or extensions beyond the thyroid capsule or lymph node metastases, but who show no apparent disease upon initial radioactive iodine WBS and ultrasonography and whose serum Tg during levothyroxine therapy of <1 ng/mL and negative anti-Tg antibody after thyroidectomy and ablation for DTC. In addition, cervical ultrasonography is highly sensitive in the detection of cervical metastases even when stimulated Tg remains undetectable [4,5]. In this study, all four patients with recurrent cancer were diagnosed by ultrasonography and three recurrent patients showed stimulated serum Tg level (<2 ng/mL) and no uptake in diagnostic I-131 WBS.

As Prof. Jung mentioned, we feel that a prospective, long-

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term study is needed to further investigate the effect of the presence of thyroid remnant tissue in diagnostic WBS on recurrence and prognosis. We will keep tracing the recurrence of 17 patients with thyroid bed uptake and stimulated Tg below 2 ng/mL during long-term follow-up.

Thank you again for your interest and comprehensive comments on our paper.

CONFLICTS OF INTEREST

No potential conflict of interest relevant to this article was reported.

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