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Long-Term Outcomes Following Thermal Ablation of Benign Thyroid Nodules as an Alternative to Surgery: The Importance of Controlling Regrowth (*Endocrinol Metab* 2019;34:117-23, Jung Suk Sim et al.)

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I read with interest the recent article by Sim and Baek [1], who reviewed the importance of regrowth following thermal ablation of benign thyroid nodules. They suggested the concept of the initial ablation ratio (IAR), defined as the ablated volume divided by the initial total volume before thermal ablation, as a way to predict future regrowth. They also suggested arterial-first ablation followed by marginal venous ablation to prevent marginal regrowth of a viable nodule. They also proposed using a hydro-dissection technique for nodules undergoing ablation adjacent to a critical structure to obtain a safety margin for thermal injury.

Thyroid nodules usually grow very slowly. Their review showed that a substantial number of nodules grew by more than 20% to 50% in volume within 1 year after treatment. I would like to suggest that we can predict the regrowth rate of ablated nodules not only by the IAR, but also by the previous growth rate of the thyroid nodule recorded before thermal ablation. If this is true, we can inform patients that they may need multiple rounds of thermal ablation or recommend surgery if they do not want multiple procedures.

Some ablated nodules with rapid regrowth might be malignancies undetected by fine needle aspiration and/or core needle biopsy. This raises the question of whether there are any experiences or reports of patients who received thermal ablation, but eventually showed rapid regrowth, and delayed surgery proved the nodule to be malignant?

My final question approaches the issue from a somewhat different point of view. Some patients with a large thyroid nodule have multiple medical conditions, which makes clinicians reluctant to recommend diagnostic surgery under general anesthesia, even if the biopsy result of their nodule shows an indeterminate malignant potential. Sim and Baek [1] suggested that recent advances in thermal ablation techniques may enable thorough ablation of thyroid nodules. In the opinion of the authors, what is the likelihood that thorough ablation of follicular variant papillary thyroid carcinoma and/or follicular carcinoma, which we cannot diagnose before surgery, could yield a similar effect to that of partial diagnostic thyroid surgery, with respect to prevention of future metastasis?

Many meticulous techniques have been introduced for thyroid nodule management, such as standardization of thyroid cytopathology, introduction of genomics for diagnosis, and high-resolution ultrasonography, and for avoiding surgery or ensuring that surgery is performed accurately. If we could properly establish the significance of—and countermeasures against—regrowth after nodule ablation, thermal ablation of the thyroid will be

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more widely accepted as part of the standard approach for management of thyroid nodules.

CONFLICTS OF INTEREST

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

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