

## Natural Course of Cytologically Benign Thyroid Nodules: Observation of Ultrasonographic Changes (*Endocrinol Metab* 2013;28:110-8, Dong Jun Lim et al.)

Dong Jun Lim, Ki Hyun Baek

Division of Endocrinology and Metabolism, Department of Internal Medicine, The Catholic University of Korea College of Medicine, Seoul, Korea

We have read Dr. Cho's letter regarding our article on the observation of ultrasonographic (US) changes in cytologically benign thyroid nodules [1] and are happy to respond to it.

We see many patients with benign nodules in daily clinical practice both before and after initial confirmation of benign cytology by fine needle aspiration (FNA), and usually follow-up with US. The most notable point is that, the more effort we invest in finding thyroid cancer in nodules, the more benign nodules were left behind in our clinics afterwards. One time benign cytologic results by FNA cannot be considered to safely eliminate the possibility of malignancy because false negativity is an inherent characteristic of FNA. Besides, it isn't clear whether or when we should perform repeat FNA on nodules with initially benign cytologic results. Therefore, a thorough understanding of the natural course of benign thyroid nodules is needed to establish an appropriate follow-up scheme. In this sense, our study showed US changes of benign nodules with suspicious features over a short-term period.

Partially concordant with our results, one article by Kwak et al. [2] indicated that repeat FNA of thyroid nodules with initial benign cytology is valuable only in growing nodules with suspicious US features, not in completely benign-appearing nodules. A more recent paper suggested that long-term follow-up of patients with cytologically-confirmed benign nodules is as-

sociated with increased repeat FNA and US without improvement in the malignancy detection rate, discouraging unlimited follow-up of benign nodules [3]. Derived from the above viewpoints, follow-up procedures for nodules with suspicious US features should be different from benign-looking nodules without suspicious US features, whether this includes more US or repeat FNA. However, this kind of protocol should be validated first with a long-term, well-designed prospective study.

Regarding the question of the age factor in our study raised by Dr Cho, the fact that younger age is associated with nodule growth in women may be more supported by the recent basic research of Xu et al. [4]. Our study used a more than 50% increase in nodule volume as a cut off, which varied from previous studies and might widen the differences of the effects of younger and older ages on nodule growth.

### CONFLICTS OF INTEREST

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

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**Corresponding author:** Ki Hyun Baek

Division of Endocrinology and Metabolism, Department of Internal Medicine, Yeouido St. Mary's Hospital, The Catholic University of Korea College of Medicine, 10 63-ro, Yeongdeungpo-gu, Seoul 150-713, Korea

**Tel:** +82-2-3779-1400, **Fax:** +82-2-780-3132, **E-mail:** drbkh@catholic.ac.kr

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