

Notes on “elastography for the diagnosis of high-suspicion thyroid nodules based on the 2015 American Thyroid Association guidelines: A multicenter study”

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We read with a great interest the research article entitled: ‘Elastography for the diagnosis of high suspicion thyroid nodules based on the 2015 American Thyroid Association guidelines: a multicenter study’ [1], April 2020. This updated research intended to cast light on the competency for malignancy estimation of elastography based on the 2015 American Thyroid Association (ATA) management guidelines [2], particularly regarding the cutoff size of 10 mm, in the Chinese population. They stated that the area under the curve (AUC) for elasticity score for the thyroid nodules ≥ 1 cm was higher than the ones < 1 cm with excellent sensitivity, accuracy, PPV, NPV, and good specificity (0.875 vs. 0.800, 95.0% vs. 90.4%, 85.9% vs. 74.4%, 85.2% vs. 69.9%, 87.8% vs. 84.2%, and 68.8% vs. 56.8%, respectively). The authors deduced that the strain elastography (SE) was being an effective technique for the prediction of malignancy concerning the thyroid nodules with high suspicion, 2015 ATA management guidelines, particularly in nodules ≥ 1 cm. The cutoff size of 10 mm for the thyroid nodules has been set by some recommendations on the size selection

criteria for ultrasonography (US)-guided fine-needle aspiration (FNA) (US-guided FNA). FNA is recommended for the nodules over 10 mm, solid and hypoechoic on US; the American Association of Clinical Endocrinologists (AAACE)/Associazione Medici Endocrinologi (Italian Association of Clinical Endocrinologists) (AME) [Grade B; BEL (best evidence level) 3]. The novel European Thyroid Imaging and Reporting Data System (EU-TIRADS) [3] proposed FNA for thyroid nodules > 10 mm, high-risk category (EU-TIRADS 5). The Society of Radiologists in Ultrasound (SRU) [4] suggested FNA application for the ones ≥ 10 mm, including microcalcifications. The 2009 ATA guidelines recommended that for the nodules ≥ 10 mm, possessing microcalcifications and hypoechoic solid natures, while it was offered for the nodules ≥ 10 mm with high to intermediate suspicion sonographic pattern by the 2015 ATA managements guidelines, the last ATA guidelines (Recommendation 8, IID). However, we recently studied whether the cutoff size 10 and 15 mm, as the largest diameters, are prepotentials for three diagnostic tools; SE, US-guided FNA

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cytology, and histopathology, May 2020. The outcomes on the basis of the size (≥ 10 and ≥ 15 mm) revealed no significance with AUC 0.531 and 0.623, respectively, regarding Tsukuba elasticity score (TES) 4&5. The AUC of TES 4&5 for over 15 was higher than over 10 which leads to the possible correlation between the cutoff size of 15 mm and TES 4&5. Eventually, we found SE might not be beneficial to discriminate benign and malignant thyroid nodules with a size over 10 mm [5].

Conclusively, this emerging contradiction may probably is derived from: i) the selected study population, which were the nodules ≥ 10 mm in greatest dimension, necessitating US-guided FNA, based on the last ATA management guidelines (i.e., intermediate&high suspicion), emerging from our study [5], while the ones ≥ 10 mm with high suspicion, based on 2015 ATA management guidelines, arising in Hairu and colleagues' study [1] and ii) the designated cutoff for TES for the statistical analyses was 3.5 in Hairu et al.'s study [1], while 4.0 in our study [5]. This issue merits further investigation. We thank Hairu et al. [1] for their valuable study.

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