

# Revisiting optimal needle size for thyroid fine-needle aspiration cytology: not much finer, less non-diagnostic?

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Optimal needle size for thyroid fine-needle aspiration (FNA) cytology has not been established distinctly and conclusively in thyroidology to-date. The literature on the subject is scarce. We read with respect the research article, entitled: “Optimal needle size for thyroid fine-needle aspiration cytology<sup>1</sup>.” Tanaka et al.<sup>1</sup> declared to utilize two different sizes, 22- and 25-gauges, of needles for the FNA procedures. The authors reported the nondiagnostic/unsatisfactory rates of 22- and 25-gauge needles were being as 18.5% and 21.0%, respectively. Nevertheless, we currently reported the possible efficacy of nodule size of 10- and 15-mm in the greatest dimension, as the cutoff points, on three diagnostic tools; (i) strain elastography (SE), (ii) ultrasonography-guided FNA (US-FNA) cytology, and (iii) histopathology<sup>2</sup>. We had utilized just 27-gauge fine-needle (Hayat, 2 ml 3P 27-G, 0.40×50 mm, Istanbul, Turkey) by performing US-FNA for a total of 425 cases with 500 thyroid nodules by the surgeon-performed ultrasonography (SUS), based on the revised American Thyroid Association (ATA) management guidelines for patients with thyroid nodules and differentiated thyroid cancer [i.e. low, intermediate, and high suspicion nodules; 2015 ATA management guidelines for adult patients with thyroid nodules and differentiated thyroid cancer] for the duration of 3 years and 2 months<sup>2,3</sup>. This is a considerable and novel ‘SUS-based’ US-FNA thyroid study for the specific and also ‘well-accepted crucial’ size cutoffs of 10- and 15-mm in endocrine surgery, endocrine pathology, and thyroidology, to-date<sup>2</sup>. To this end, the cytopathologic evaluation of the cases had been performed based on The Bethesda System for Reporting Thyroid Cytopathology (TBSRTC), 1st ed.<sup>4</sup> and our FNA cytology outcomes for non-diagnostic/unsatisfactory cytology were revealed as 9.0%<sup>2</sup>. Moss et al.<sup>5</sup> reported in a systematic review and meta-analysis that the regular and coordinated thyroid FNA should be performed with

smaller needle gauges, 24–27-gauges, without aspiration, routinely. In addition, we very recently introduced and suggested a novel terminology, in this sense, termed as “minimally invasive FNA; MIFNA” and “minimally invasive thyroid FNA; Thy MIFNA” involving 27-gauge fine-needle with topical and local anesthetic agents administration with the reasonable rates of nondiagnostic cytology, TBSRTC<sup>6,7</sup>.

Of note, we recommend opting for Thy MIFNA with 27-gauge fine-needle to practice US-FNA procedure for indicated suspicious thyroid nodules with reasonable low rates of Category I (TBSRTC, 1st and 2nd eds.) and probably low severity of pain. To this end, we also recommend wielding facilitating pre- or periprocedural local, even topical anesthetic agents toward US-FNA for the thyroid nodules<sup>2,6,7</sup>. As a matter of fact, this issue merits further investigation.

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## AUTHORS’ CONTRIBUTIONS

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