



## The Significance of Having an Excellent Patient's Comfort with Thyroid Core Needle Biopsy

Pierpaolo Trimboli, Luca Giovanella

Department of Nuclear Medicine and Thyroid Centre, Oncology Institute of Southern Switzerland, Bellinzona, Switzerland

To have an optimal patient's comfort during thyroid procedures is highly significant. The matter of tolerability of thyroid biopsy was investigated in current issue of this journal in the paper by Jeong et al. [1] entitled "A comparison of ultrasound-guided fine needle aspiration versus core needle biopsy for thyroid nodules: pain, tolerability, and complications."

Core needle biopsy (CNB) has gaining consensus in thyroidology due to its high reliability to discriminate cancers from benign lesions, even if conventional fine-needle aspiration (FNA) fails to achieve a diagnosis. Several papers showed that CNB has higher diagnostic performance when compared to FNA, because the microhistologic examination on CNB sample is more accurate than the cytologic assessment on FNA specimen. Of high importance in clinical practice, CNB was recently proven to diagnose those thyroid lesions with prior indeterminate FNA report [2], and this evidence could help us to avoid the diagnostic surgery in our patients. Also, the Task Force Committee of the Korean Society of Thyroid Radiology has developed the first guidelines on thyroid CNB with evidence-based recommendations [3], thus encouraging the diffusion of this biopsy. Recently, pathologic diagnostic categories of thyroid CNB are addressed [4].

Regardless of the above issues, several studies suggested the safety and tolerability of the CNB [5,6]; however, it is still limited. After those publications, the study by Jeong et al. [1] can hold a main role for clinical practice. There, the authors evaluated pain, tolerability, and complications associated with CNB in

comparison with FNA in 100 patients who were asked to fill in a questionnaire on pain score using a 10-cm visual scale. As the results, the median pain scores were similar for CNB and FNA, and the procedure was tolerable in 97/100 CNB cases and 100/100 FNA patients. Also, no major complications were recorded in both groups, and three minor complications were reported after CNB. This study confirms and extend the information previously reported [5,6]. In fact, Jeong et al. [1] found no differences in either pain or tolerability during both CNB and FNA and 20 minutes later, and recorded that CNB required fewer numbers of biopsies than FNA. Also, they analyzed the results in subgroups of operators with different experience levels and again found no significant differences in terms of pain, tolerability, or complications.

To date, we have reached solid evidence that CNB can play a main role in the assessment of thyroid nodules, especially in those with difficult diagnosis by FNA. This is related to the larger samples obtained by this biopsy with consequent higher diagnostic performance. Following the present study [1], we could consider that there is a higher evidence that CNB is not significantly different from FNA also seen from the patient's side. We encourage clinicians, not expert in CNB, to attend to CNB sessions in specialized centres to get an idea and then address their patients to this biopsy. This can avoid a diagnostic surgery in thyroid nodules with difficult FNA assessment, achieving high relevance in terms of cost saving.

**Corresponding author:** Pierpaolo Trimboli  
Department of Nuclear Medicine and Thyroid Centre, Oncology Institute of Southern Switzerland, Via Ospedale 12, Bellinzona 6500, Switzerland  
**Tel:** +41-91-8116446, **Fax:** +41-91-8116444,  
**E-mail:** pierpaolo.trimboli@eoc.ch

**Copyright © 2018 Korean Endocrine Society**  
This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (<http://creativecommons.org/licenses/by-nc/4.0/>) which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

## CONFLICTS OF INTEREST

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

## ORCID

Pierpaolo Trimboli <https://orcid.org/0000-0002-2125-4937>

## REFERENCES

1. Jeong EJ, Chung SR, Baek JH, Choi YJ, Kim JK, Lee JH. A comparison of ultrasound-guided fine needle aspiration versus core needle biopsy for thyroid nodules: pain, tolerability, and complications. *Endocrinol Metab (Seoul)* 2018;33:114-20.
2. Trimboli P, Giovanella L. Reliability of core needle biopsy as a second-line procedure in thyroid nodules with an indeterminate fine-needle aspiration report: a systematic review and meta-analysis. *Ultrasonography* 2018 Jan 2 [Epub]. <https://doi.org/10.14366/usg.17066>.
3. Na DG, Baek JH, Jung SL, Kim JH, Sung JY, Kim KS, et al. Core needle biopsy of the thyroid: 2016 Consensus Statement and Recommendations from Korean Society of Thyroid Radiology. *Korean J Radiol* 2017;18:217-37.
4. Jung CK, Baek JH. Recent advances in core needle biopsy for thyroid nodules. *Endocrinol Metab (Seoul)*. 2017;32:407-12.
5. Stangierski A, Wolinski K, Martin K, Leitgeber O, Ruchala M. Core needle biopsy of thyroid nodules: evaluation of diagnostic utility and pain experience. *Neuro Endocrinol Lett* 2013;34:798-801.
6. Nasrollah N, Trimboli P, Rossi F, Amendola S, Guidobaldi L, Ventura C, et al. Patient's comfort with and tolerability of thyroid core needle biopsy. *Endocrine* 2014;45:79-83.