



# Letter to the Editor Regarding “Validation of Ultrasound and Computed Tomography-Based Risk Stratification System and Biopsy Criteria for Cervical Lymph Nodes in Preoperative Patients With Thyroid Cancer” and “Validation of CT-Based Risk Stratification System for Lymph Node Metastasis in Patients With Thyroid Cancer”

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We were deeply impressed by the recent publication of two papers, “Validation of Ultrasound and Computed Tomography-Based Risk Stratification System and Biopsy

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Criteria for Cervical Lymph Nodes in Preoperative Patients With Thyroid Cancer” and “Validation of CT-Based Risk Stratification System for Lymph Node Metastasis in Patients With Thyroid Cancer” [1,2]. These papers provided valuable findings on preoperative lymph node (LN) evaluation in thyroid cancer. However, as we apply these findings into clinical practice, we have encountered the possibility of the biopsy criteria becoming broader. We write this letter to ask for the authors’ opinions to optimize biopsy criteria.

Despite its small sample size, the study by Jeon et al. [1] found that suspicious LNs smaller than 3 mm showed a 100% malignancy risk, and they suggested performing fine-needle aspiration (FNA) for suspicious LNs regardless of size. In the study by Roh et al. [2], they conducted FNA of indeterminate or suspicious LNs irrespective of size to determine the extent of surgery. Considering these, it seems that FNA should be performed for suspicious LNs even if they are smaller than the biopsy criteria recommended by the Korean Society of Thyroid Radiology [3]. Are the authors currently conducting routine FNA for all LNs showing suspicious findings? If there are any criteria for exclusion, please explain them.

Regarding the FNA of indeterminate LNs, Jeon et al. [1] reported that indeterminate LNs smaller than 5 mm had a higher malignancy risk compared to indeterminate LNs larger than 5 mm (37.9%–66.7% vs. 0%–22.7%). Another study by Chung et al. [4] also reported that the size of indeterminate LNs was negatively associated with LN metastasis. Jeon et al. [1] stated that a biopsy may not be routinely required for large indeterminate LNs. Roh et al. [2] proposed a modified LN classification that excluded heterogeneous enhancement on CT as a diagnostic criterion, and claimed that this classification had a better diagnostic performance than the K-TIRADS classification. Considering the results of these studies, it appears that the biopsy criteria for indeterminate LNs may need to be revised. However, there is a concern that expanding the biopsy criteria for indeterminate LNs may lead to unnecessary biopsies. Could the authors provide their opinions on how to optimize the biopsy criteria for indeterminate LNs?

In the study of Roh et al. [2], all LNs with calcification on CT were pathologically confirmed as metastases. However, calcified LNs can also occur due to benign conditions such as tuberculosis, sarcoidosis, amyloidosis, and prior infections [5]. Do the authors believe that biopsies should

be performed on all LNs showing calcification on CT? If there are any exclusion criteria, could you explain them? In conclusion, these papers are expected to play a valuable role in establishing the criteria for LN biopsy in patients with thyroid cancer. To optimize criteria for clinical practice, we have posed several questions, and we look forward to the authors' insightful responses.

#### Conflicts of Interest

The authors have no potential conflicts of interest to disclose.

#### Author Contributions

Conceptualization: all authors. Formal analysis: Hunjong Lim. Supervision: Jung Suk Sim. Validation: Jung Suk Sim. Writing—original draft: Hunjong Lim. Writing—review & editing: all authors.

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#### REFERENCES

1. Jeon YH, Lee JY, Yoo RE, Rhim JH, Lee KH, Choi KS, et al. Validation of ultrasound and computed tomography-based risk stratification system and biopsy criteria for cervical lymph nodes in preoperative patients with thyroid cancer. *Korean J Radiol* 2023;24:912-923
2. Roh YH, Chung SR, Baek JH, Choi YJ, Sung TY, Song DE, et al. Validation of CT-based risk stratification system for lymph node metastasis in patients with thyroid cancer. *Korean J Radiol* 2023;24:1028-1037
3. Ha EJ, Chung SR, Na DG, Ahn HS, Chung J, Lee JY, et al. 2021 Korean thyroid imaging reporting and data system and imaging-based management of thyroid nodules: Korean Society of Thyroid Radiology consensus statement and recommendations. *Korean J Radiol* 2021;22:2094-2123
4. Chung SR, Baek JH, Choi YJ, Sung TY, Song DE, Kim TY, et al. Risk factors for metastasis in indeterminate lymph nodes in preoperative patients with thyroid cancer. *Eur Radiol* 2022;32:3863-3868
5. Eisenkraft BL, Som PM. The spectrum of benign and malignant etiologies of cervical node calcification. *AJR Am J Roentgenol* 1999;172:1433-1437