

THE IMPACT OF THE NUMBER OF HARVESTED CENTRAL LYMPH NODES ON THE LYMPH NODE RATIO: A STUDY OF PAPILLARY THYROID MICROCARCINOMA WITHOUT HISTOLOGICALLY DEFINED EXTRACAPSULAR SPREAD

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Background/Purpose: The purpose of this study was to analyze the impact of lymph node harvest on the lymph node ratio (LNR).

Methods: We prospectively enrolled 116 PTMC patients who underwent total thyroidectomy and bilateral central lymph node neck dissection (CND). Patients who had extracapsular spread or lymphovascular invasion in the final pathologic result (including minimal ECS) were excluded. The patients were stratified into 4 subgroups based on the number of retrieval nodes: first quartile 1-3; second quartile 4-6; third quartile 7-9; and fourth quartile ≥ 10 . A LNR ≥ 0.081 (mean LNR) was defined as high LNR, and LNR < 0.081 as low LNR.

Results: The mean number of retrieved lymph nodes in the central compartments was 6.81. The mean number of metastatic lymph nodes in the central compartments on pathology was 0.57. There was a significant association between the number of retrieval nodes and LNR. Large number of retrieval nodes, primary tumor size in the pathologic report ≤ 5 mm, and young age were significantly associated with high LNR. Multivariate analysis confirmed that the number of retrieved lymph nodes in the central compartments was risk factor for high LNR ($p = 0.029$, odds ratio 2.91). The rate of vocal fold palsy and hypoparathyroidism was not different between the high LNR and low LNR groups.

Discussion & Conclusion: The more number of retrieved lymph nodes during CND, the better chance of clearing metastatic nodes in the level VI.