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ASO AUTHOR REFLECTIONS

ASO Author Reflections: Survival Outcomes between Patients with Hypermetabolic Non-small Cell Lung Cancer Undergoing Systematic and Lobe-Specific Mediastinal Lymph Node Dissection

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Complete systematic lymph node dissection (LND) has long been performed as standard surgical treatment. However, several previous studies have demonstrated detailed nodal spread patterns in surgically resected non-small cell lung cancer (NSCLC), and lobe-specific mediastinal LND is being widely recognized and performed more frequently, aiming for surgery with less burden on patients.[1–3] The prospective randomized clinical trial by the Japanese Clinical Oncology Group (JCOG1413) is ongoing based on these previous reports.[4] However, the optimal extent of LND for hypermetabolic tumors, which are associated with high rates of nodal disease, recurrence, or mortality, has not been elucidated.

The present study analyzed postoperative and survival outcomes between patients with high maximum standard uptake value (SUVmax) NSCLC undergoing systematic mediastinal LND and lobe-specific mediastinal LND, using a multicenter database and adjusted for preoperative factors to minimize patient selection bias.[5] We showed that, in the propensity-score-matched cohort (101 pairs), systematic LND dissected significantly more lymph nodes (20.0 vs. 16.0 nodes, $P = 0.0057$) and detected lymph node metastasis more frequently (53.5% versus 33.7%, $P = 0.0069$). Six (5.9%) patients in the systematic LND group had a metastatic N2 lymph node "in the systematic LND field" that lobe-specific LND could not dissect. The systematic LND group tended to have better prognosis than the lobe-specific LND group (5-year CSS rates, 82.6% versus 69.6%; 5-year RFI rates, 56.6% versus 47.3%).

Our study suggests that systematic LND could harvest more metastatic lymph nodes and provide better oncological outcome than lobe-specific LND in a cohort of hypermetabolic NSCLC patients. Systematic mediastinal LND should not be proscribed for patients with hypermetabolic NSCLC. Further investigations on the appropriate extent of lymphadenectomy for treatment of NSCLC are still needed.

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