



# Why non-grasping-lymphadenectomy technique is necessary for lung cancer resection?

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Although lung cancer is the leading cause of cancer death throughout the world, localized non-small cell lung cancer may be curable by surgical resection. Some patients classified as clinical N0 based on preoperative imaging findings, actually have N2 disease, thus accurate nodal staging performed during the operation is important. Patients shown to be clinical N0 but with pathological N2 disease may be more eligible for resection, as surgery for those patients has been shown to result in favorable survival as compared to patients classified as clinical N2 and pathological N2. Although a previous randomized trial showed no advantage related to overall survival of lymph node dissection for patients with N0 or N1 disease as compared to lymph node sampling (1), many surgeons still consider lymph node dissection to be important.

Tumor rupture results in dissemination of cancer cells throughout the surgical field. Surgeons must pay attention to avoid that and usually conduct a lobectomy with combined resection of any adjacent structure invaded by cancer as an *en bloc* resection procedure. However, for lymph node dissection, directing grasping of a node sometimes results in its rupture. While most lymph nodes are not affected by cancer, some show metastasis. Two interesting reports noted that positive results of pleural lavage cytology samples obtained after lung and lymph node resection indicate a worse prognosis as compared to those obtained before the start of the operation (2, 3), indicating cancer cells spilling from a lymph node or tumor may have

effects on outcome.

In this study, Lin Ma and colleagues reported a non-grasping technique for *en bloc* mediastinal lymph node dissection performed with video-assisted thoracic surgery (VATS). They used endoscopic suction for lymph node dissection to avoid direct grasping of the lymph nodes and their possible rupture. The technique is speedy and convenient, and may be adequate to achieve a non-grasping lymphadenectomy for VATS. However, a possibly superior alternate method that avoids spillage of cancer cells during a lymphadenectomy is the so-called “wrapped lymphadenectomy” technique, which avoids touching not only the lymph node but also fat tissue around the node. Mediastinal fat tissue including a lymph node is surrounded by pleura, vascular sheath, and a tracheobronchial sheath. When that structure along with the sheath is removed, fat tissue will be included and spillage of cancer cells avoided.

Of course, though promising, the various non-grasping techniques proposed for use with a lymphadenectomy require continued development.

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## Footnote

*Conflicts of Interest:* The author has no conflicts of interest

to declare.

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