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**Editorial comment**

**Clinical pathways: mediastinoscopy and mediastinal lymph node dissection**

**Keywords:** Lung cancer; Mediastinum

Mediastinal lymph node (MLN) staging is integral to the assessment and management of patients with operable non-small-cell lung cancer (NSCLC) and is necessary to achieve complete resection. Current guidelines suggest that mediastinoscopy should be performed regardless of the clinical N status in patients with stage Ib and greater, and that assessment of a minimum of three N2 nodes, in addition to the removal of regional N1 nodes, should be included during the anatomic resection of NSCLC [1]. A recent study by Amer and colleagues compared the staging accuracy of preoperative positron emission tomography (PET) with MLN dissection (MLND) during thoracoscopic lobectomy. In this study, video-assisted thoracoscopic surgery (VATS) MLND resulted in a change in pathologic stage in approximately 20% of patients, with 15% of patients upstaged and 5% downstaged. This study adds to the literature that supports the absolute necessity to confirm N-status with pathologic staging prior to assigning therapy: patients who are clinical stage III are sometimes stage I–II, and should not be denied surgical resection, and patients who are clinical stage I–II are sometimes stage III, and should receive induction therapy or definitive chemoradiotherapy.

The authors, however, seem to have ignored the data that support the use of mediastinoscopy prior to VATS lobectomy, even in clinical stage I disease [2–4]. In a study of 202 patients with clinical stage I NSCLC, the role of PET for MLN staging was challenged [3]. Of the 65 patients with positive results of PET, only 29 patients (45%) had positive results of mediastinoscopy in the corresponding nodal station. More importantly, of the 137 patients with a negative PET scan, 16 patients (12%) were demonstrated to have N2 or N3 disease. Thus, it is unclear why all patients in the study by Amer and colleagues were not offered mediastinoscopy [1].

The implementation of MLN dissection (as performed in this study) versus MLN sampling (MLNS) is still controversial; MLND may be associated with more accurate staging, but it is not clear whether it is associated with improved survival. This debate was recently addressed by the American College of Surgeons Oncology Group (ACOSOG) Z0030 trial, which assessed patients with clinical stage I NSCLC randomized to MLNS or MLND [5]. In this trial, there was no difference in survival, and MLND demonstrated an improvement in staging of only 4%. However, it must be noted that this trial mandated systematic sampling in all patients and included only early stage patients. In addition, the patients in this study, who underwent MLNS, underwent complete systematic sampling, as opposed to selective biopsies.

Finally, the authors support the use VATS MLND, which has been demonstrated to be as effective as MLND with thoracotomy in comparative studies. Of note, recent multi-institutional study compared the efficacy of MLND during lobectomy performed with thoracotomy or thoracotomy [6]. Overall, the majority of patients in both groups had at least three MLN stations assessed, and MLND with thoracotomy was as effective as thoracotomy as assessed by the number of N2 stations, the total number of LN stations resected, and the degree of upstaging and downstaging.
References


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