Commentary: Intraoperative lymph node assessment by robotic, video-assisted thoracoscopic surgery, and thoracotomy: None meet the international recommendations

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The article by Kneuert and colleagues¹ on the comparison of nodal upstaging, number of explored nodal stations, and number of excised lymph nodes in lobectomy by a robotic approach, video-assisted thoracoscopic surgery (VATS), or thoracotomy for clinical (c) N0 and N1 non-small cell lung cancer reveals relevant findings for everyday clinical practice. First, the rate of global nodal upstaging significantly differs among the 3 different approaches, being highest for thoracotomy and lowest for VATS. Second, the rate of N2 upstaging was similar among the 3 approaches. Third, more nodal stations were sampled in the thoracotomy group, although the number of resected lymph nodes was similar in the 3 approaches. These findings indicate that, from the staging point of view, thoracotomy still has some advantage over the endoscopic procedures, because patients undergoing thoracotomy have their tumors better staged; therefore, their prognosis will be more accurate, and postoperative decisions on adjuvant therapy will be more solidly made.

The detail in the number of sampled nodal stations and excised lymph nodes shows that although the total number of excised lymph nodes meets the international recommendations, the total number of nodal stations does not. When systematic nodal dissection was defined in a multidisciplinary and international meeting in 1996,² 2 standards were accepted: the complete removal of all mediastinal tissue (fat and lymph nodes) of the involved side and the hilar and intrapulmonary nodes or, alternatively, the removal of at least 6 lymph nodes, 3 from 3 mediastinal stations, always including the subcarinal, and 3 from the hilar and intrapulmonary stations. A few years later, when the definitions of complete, incomplete, and uncertain resections were proposed by the International Association for the Study

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Central Message

The emphasis on approach in the past 2 decades should not deter us from the oncologic principles of lung cancer resection, of which systematic nodal dissection is a fundamental component.

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of Lung Cancer, the alternative standard was qualified depending on tumor location, that is, the 3 mediastinal nodal stations to be sampled depended on the lobe of the primary tumor, always including the subcarinal station.³ These definitions are not merely the result of a theoretic elaboration. Their prognostic impact has been validated with the International Association for the Study of Lung Cancer database⁴ and with external data.⁵ In the article by Kneuert and colleagues,¹ the number of lymph nodes exceeds the minimum of 6 (mean of 11.8, 11.8, and 11.9 for robotic, VATS, and thoracotomy, respectively), but the number of sampled nodal stations do not meet the 6 recommended: 3.8, 3.6, and 4 for robotic, VATS, and thoracotomy, respectively). In addition, in approximately 15% to 22% of patients, depending on the approach, the subcarinal nodal station was not sampled. The immediate result of this suboptimal nodal staging is that some tumors do have nodal disease that remains unnoticed, and the prognosis derived from pathologic staging is inaccurate; the late result is that these patients with nodal disease, untreated because it is unknown, will have nodal recurrence, because it is the case even when lobe-specific systematic nodal dissection is performed.⁶

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