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11<sup>th</sup> International Meeting on General Thoracic Surgery



Hospital  
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Sagrat Cor

10<sup>th</sup> International Workshop on Surgical Exploration of the  
Mediastinum and Systematic Nodal Dissection



5<sup>th</sup> Meeting of the Thoracic Oncology, Thoracic  
Surgery, Techniques & Transplant, Respiratory Nursing  
and Respiratory Physiotherapy Areas of the Spanish  
Society of Pneumology and Thoracic Surgery (SEPAR)



3<sup>rd</sup> Joint Meeting of the Spanish Society of  
Thoracic Surgery (SECT)



30<sup>th</sup> Congress of the "Asociación Iberoamericana  
de Cirugía Torácica" AICT



10<sup>th</sup> International Workshop on Surgical Exploration of the  
Mediastinum and Systematic Nodal Dissection



## VAMLA AFTER INDUCTION THERAPY

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The assessment of the objective tumour response after neoadjuvant therapy continues to be a diagnostic challenge. For this reason, the use of mediastinal downstaging as a criterion to select patients for operative treatment requires a reliable restaging method to assess pathologic tumor response before undergoing lung resection. According to current European Society of Thoracic Surgeons (ESTS) guidelines, histological confirmation of objective tumour response after neoadjuvant therapy is recommended [1].

Transcervical Lymphadenectomies achieve complete clearance of all mediastinal nodal stations explored and are considered the surgical staging procedures with the highest sensitivity (0.85-1) and negative predictive value (0.93-0.99) in the primary staging [2-5]. However, when focused in restaging after neoadjuvant therapy, VAMLA has not been analyzed and TEMPLA has reported a high sensitivity and negative predictive value, 0.95 and 0.97, respectively [6].

VAMLA allows exploring the right and left paratracheal, subcarinal, and hilar nodes (stations 2R, 2L, 4R, 4L, 7, 10R, and 10L)11, with the objective to achieve the complete removal of LNs and surrounding adipose tissue of all mediastinal nodal stations explored. We used the same technique described by Hürtgen et al. [7] for primary staging: First, the subcarinal nodal station was completely excised along the main bronchi, the pulmonary artery, and the oesophagus. In most cases, this dissection included the upper part of the paraesophageal nodes. Next, the superior vena cava and mediastinal pleura were exposed caudal to the brachiocephalic artery, and the right paratracheal nodes, including the fatty tissue, were completely removed down to the azygos vein and right main bronchus. Finally, the left paratracheal nodes were dissected and removed individually after a carefully identification of the left recurrent laryngeal nerve.

After more than 10 years performing VAMLA (mostly for primary staging [8]), we have analysed our preliminary results of mediastinal nodal restaging (n=41) demonstrating the same performance reported in the primary staging and a high rate of persistent N2 disease (29.3%). Technically, VAMLA requires the same anaesthetic considerations, patient positioning, and instruments used for mediastinoscopy in primary staging. Specific technical considerations for restaging were: the use of spreadable videomediastinoscope to enlarge the operative field,

allowing optimal exposure of the mediastinum and bimanual dissection; and the use of electrothermal tissue sealing devices to facilitate the dissection of adhesions and fibrotic tissue, to minimize haemorrhages, and to reduce the risk of injury of the left recurrent laryngeal nerve.

### References

- 1 De Leyn P, Doooms C, Kuzdzal J, Lardinois D, Passlick B, Rami-Porta R, et al. Revised ESTS guidelines for preoperative mediastinal lymph node staging for non-small-cell lung cancer. *Eur J Cardiothorac Surg* 2014;45:787-98. doi: 10.1093/ejcts/ezu028.
- 2 Witte B, Wolf M, Huertgen M, Toomes H. Video-assisted mediastinoscopic surgery: clinical feasibility and accuracy of mediastinal lymph node staging. *Ann Thorac Surg* 2006;82: 1821–7. doi: 10.1016/j.athoracsur.2006.05.042.
- 3 Turna A, Demirkaya A, Ozkul S, Oz B, Gurses A, Kaynak K. Video-assisted mediastinoscopic lymphadenectomy is associated with better survival than mediastinoscopy in patients with resected non-small cell lung cancer. *J Thorac Cardiovasc Surg.* 2013;146:774–80. doi: 10.1016/j.jtcvs.2013.04.036.
- 4 Zielinski M, Hauer L, Hauer J, Pankowski J, Szlubowski A, Nabiałek T. Transcervical extended mediastinal lymphadenectomy (TEMLA) for staging of non- small-cell lung cancer (NSCLC). *Pneumonol Alergol Pol.* 2011;79:196–206.
- 5 Call S, Obiols C, Rami-Porta R, Trujillo-Reyes JC, Iglesias M, Saumench R, et al. Video-assisted mediastinoscopic lymphadenectomy for staging non-small cell lung cancer. *Ann Thorac Surg* 2016;101:1326-33. doi: 10.1016/j.athoracsur.2015.10.073.
- 6 Zieliński M, Hauer L, Hauer J, Nabiałek T, Szlubowski A, Pankowski J. Non-small-cell lung cancer restaging with transcervical extended mediastinal lymphadenectomy. *Eur J Cardiothorac Surg.* 2010;37:776-80. doi: 10.1016/j.ejcts.2009.11.007.
- 7 Hürtgen M, Friedel G, Toomes H, Fritz P. Radical video-assisted mediastinoscopic lymphadenectomy (VAMLA)—technique and first results. *Eur J Cardiothorac Surg.* 2002;21:348-51. doi: 10.1016/s1010-7940(01)01125-3.
- 8 Call S, Reig-Oussedik N, Obiols C, Sanz-Santos J, Ochoa-Alba JM, Cabanillas LR, et al. Video-assisted mediastinoscopic lymphadenectomy (VAMLA): Mature results for staging non-small cell lung cancer with normal mediastinum. *J Thorac Cardiovasc Surg.* 2024:S0022-5223 (24) 00098-9. doi: 10.1016/j.jtcvs.2024.01.040.