

The Journal of
Thoracic and Cardiovascular Surgery

Mediastinal lymph node dissection for non-small cell lung cancer

Mark S. Allen

J Thorac Cardiovasc Surg 2005;130:241-242

The online version of this article, along with updated information and services, is
located on the World Wide Web at:

<http://jtcs.ctsnetjournals.org/cgi/content/full/130/2/241>

The Journal of Thoracic and Cardiovascular Surgery is the official publication of the American Association for Thoracic Surgery and the Western Thoracic Surgical Association. Copyright © 2005 American Association for Thoracic Surgery

Mediastinal lymph node dissection for non-small cell lung cancer

Mark S. Allen, MD

See related article on page 433.

The report by Yoshimasu and associates¹ is an analysis of 58 patients, selected from a pool of 308, who underwent surgical intervention for primary lung cancer at their university. As an alternative to complete mediastinal lymphadenectomy at the time of pulmonary resection, they sampled one lymph node from each of three stations. They justify this partial dissection by citing a previous study that showed this method to be 94.5% accurate. The authors conclude that this limited dissection of the three stations “seems more practical and convenient” than sentinel lymph node mapping. Additionally, they conclude their findings validate limited mediastinal lymph node dissection.

Because the American College of Surgeons Oncology Group (ACOSOG) Z0030 study, a randomized trial that looked at more than 1000 patients and compared lymph node sampling with lymph node dissection, found no increase in morbidity or mortality from lymph node dissection, there seems little benefit to limiting a mediastinal lymph node dissection.² The status of thoracic lymph nodes is the main determinant of outcome for a patient with a resectable lung cancer. Without lymph node involvement, cure rates of 70% to 90% can be expected. With lymph node involvement limited to the N1 lymph nodes, a 40% to 50% 5-year survival can be expected. Unfortunately, N2 lymph node involvement portends a poor 5-year survival. Thus accurate mediastinal nodal staging is critical to predicting long-term survival. Furthermore, with the recent finding that patients with N1 or N2 involvement are helped by postoperative chemotherapy, incomplete or inaccurate nodal staging could potentially prevent some patients from receiving beneficial postoperative chemotherapy.³

Removing a few lymph nodes from selected nodal stations on the basis of what lobe the cancer is in adds confusion and complicates an operation. Because there is not an increased risk of complications from a mediastinal nodal dissection, all of the mediastinal lymph nodes should be removed.

As thoracic surgeons specializing in lung cancer treatment, we should encourage complete lymph node resection during pulmonary resections for lung cancer. The disturbing report by Little⁴ presented at the recent Society of Thoracic Surgeons meeting in January of 2005 highlights the need for change. He reviewed the pattern of surgical care in more than 11,000 patients with lung cancer. Analysis revealed that only 34% of patients had any lymph node biopsy. That is not a typographical error. No lymph nodes were sampled in 66% of patients undergoing pulmonary resection for lung cancer! Before we try to decide whether we should sample three stations, do a sentinel lymph node dissection, or do some other limited resection, we should encourage surgeons to be sure that all patients surgically treated for lung cancer have at least some lymph nodes examined. Whether a complete mediastinal lymphadenectomy will improve long-term survival awaits the result of the ACOSOG multicenter trial. This will likely take 4 to 5 years, while follow-up

From the Department of Surgery, Mayo School of Medicine, Rochester, Minn.

Received for publication March 5, 2005; accepted for publication March 25, 2005.

Address for reprints: Mark Steven Allen, MD, Department of Surgery, Mayo School of Medicine, Rochester MN 55905 (E-mail: allen.mark@mayo.edu).

J Thorac Cardiovasc Surg 2005;130:241-2
 0022-5223/\$30.00

Copyright © 2005 by The American Association for Thoracic Surgery

doi:10.1016/j.jtcvs.2005.03.037

matures. In the meantime, patients deserve to have lymph nodes removed to obtain an accurate diagnosis and potentially higher cure rates.

References

1. Yoshimasu T, Miyoshi S, Oura S, Hirai I, Kokawa Y, Okamura Y. Limited mediastinal lymph node dissection for non-small cell lung cancer according to intraoperative histologic examinations. *J Thorac Cardiovasc Surg.* 2005;130:433-7.
2. Allen MS, Darling G, Pechet T, et al. Morbidity and mortality of major pulmonary resections in patients with early stage lung cancer: initial results of the randomized prospective ACOSOG Z0030 trial. Abstract presented at Society of Thoracic Surgeons 41st Annual Meeting; Tampa: January 24-26, 2005.
3. Scagliott GV, Novello S. Current development of adjuvant treatment of non-small cell lung cancer. *Clin Lung Cancer.* 2004;6(suppl 2):S63-70.
4. Little AG. TS Evaluation Study Group. Patterns of surgical care of lung cancer patients. Abstract presented at: Society of Thoracic Surgeons 41st Annual Meeting; Tampa: January 24-26, 2005.

The Journal of Thoracic and Cardiovascular Surgery Conflict of Interest Policy

To assure fairness to authors submitting work for consideration in *The Journal of Thoracic and Cardiovascular Surgery*, a mechanism exists for managing conflicts of interest. The editor and each of the section editors complete a "Conflict of Interest" form that identifies any and all relationships with commercial and other academic entities. When the editor has a potential conflict because of a relationship with another entity or author, the editor appoints an alternate editor from among the section editors or editorial board members who assumes the entire responsibility for final decisions on the manuscript in question. The editor does not read the reviews that are submitted nor engage in discussing the manuscript prior to the final decision. When the conflict of interest involves a section editor, a "guest section editor" is appointed who fills the role normally played by the conflicted section editor. All members of the editorial board and reviewers are asked to indicate any conflict of interest when they agree to review a manuscript.

Mediastinal lymph node dissection for non-small cell lung cancer

Mark S. Allen

J Thorac Cardiovasc Surg 2005;130:241-242

Continuing Medical Education Activities

Subscribers to the Journal can earn continuing medical education credits via the Web at
http://cme.ctsnetjournals.org/cgi/hierarchy/ctsnetcme_node;JTCS

Subscription Information

This article cites 2 articles, 1 of which you can access for free at:
<http://jtcs.ctsnetjournals.org/cgi/content/full/130/2/241#BIBL>

Citations

This article has been cited by 3 HighWire-hosted articles:
<http://jtcs.ctsnetjournals.org/cgi/content/full/130/2/241#otherarticles>

Subspecialty Collections

This article, along with others on similar topics, appears in the following collection(s):
Lung - cancer
http://jtcs.ctsnetjournals.org/cgi/collection/lung_cancer

Permissions and Licensing

General information about reproducing this article in parts (figures, tables) or in its entirety can be found online at:

http://www.elsevier.com/wps/find/supportfaq.cws_home/permissionusematerial.

An on-line permission request form, which should be fulfilled within 10 working days of receipt, is available at:

http://www.elsevier.com/wps/find/obtainpermissionform.cws_home/obtainpermissionform

The Journal of
Thoracic and Cardiovascular Surgery