Role of Thoracoscopic Lymph Node Staging for Lung and Esophageal Cancer

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Dr. Krasna provides a well-illustrated review of the applications of thoracoscopy in lung and esophageal tumors. These include: staging of tumors; diagnosis of indeterminate pulmonary nodules; definitive resections of various tumors, especially in cases of poor reserve; and diagnosis and treatment of malignant pleural disease [1]. However, there remains considerable disagreement among thoracic surgical oncologists over the proper applications of these techniques.

Roles in Lung Cancer
The thoracoscopic option is very useful as an additional staging tool in non-small-cell lung cancer when node sampling in areas inaccessible to mediastinoscopy is desired (such as levels 5 to 11, as the author describes). Thoracoscopy is a better option than the Chamberlain procedure because it permits the evaluation of all of these levels with less morbidity, at least in patients capable of tolerating single lung anesthesia. In the past, we routinely performed thoracoscopy prior to thoracotomy, primarily as a training tool. Now, however, we use thoracoscopy only selectively in the staging of lung cancer. Aside from the evaluation of lymph nodes, thoracoscopy is useful for ruling out pleural seeding. Chest wall invasion is accurately predicted by a history of localized pain [2] and CT confirmation of tumor overlying the area. With the exception of the use of thoracoscopy to rule out more extensive disease, precluding curative in-continuity pulmonary/chest wall resection, we can see no benefit from thoracoscopic visualization of an otherwise resectable tumor. We, like Krasna, have also found thoracoscopy useful in determining whether tumors thought to invade mediastinal structures (T4) by CT criteria truly do so or, as is more frequently the case, merely abut the mediastinal pleura (T3) [2]. Thoracoscopy is very useful in the diagnosis and treatment of malignant pleural effusions (T4). Pleural biopsies and fluid cytologies frequently fail to confirm the diagnosis even in cases of gross tumor nodules visible at subsequent thoracoscopy. Thoracoscopic parietal pleurectomy, now our preferred procedure for the treatment of malignant pleural effusion, may be performed at the time that the diagnosis is confirmed [3].

Roles in Esophageal Cancer
In esophageal cancer, it has been difficult to compare exclusively surgical series with those in which other forms of treatment preceded, or substituted for, resection because of the limitations of nonsurgical staging. Krasna's proposed thoracoscopic/laparoscopic staging provides (almost) the same staging accuracy as surgical staging and allows for the placement of an enteral feeding tube prior to either neoadjuvant or nonsurgical therapies. Such thorough staging may help us answer questions about the relative efficacy of treatment options. It is especially applicable in situations in which treatment options vary depending on the findings determined by these measures. Thoracoscopy is probably the most sensitive and specific means of T- and N-staging, but it is by no means standard staging, and is not likely to become accepted as such as long as many surgeons are unconvinced of the ability of neoadjuvant treatments to improve the results achieved by surgery alone. Other oncologists also regard resection as "standard care," believing that the roles of other therapies remain to be clarified by protocols not yet completed [4]. An alternative to more invasive and expensive staging of esophageal cancer is to accept less accurate clinical staging methods; for example, the use of endoscopy, perhaps with endoscopic ultrasound; CT; and selected special studies based on physical examination, review of systems, and...
routine laboratory studies. As in the International Federation of Gynecologists and Obstetricians (FIGO) staging system used for gynecologic tumors, end results would be reported based on clinical staging, without regard to subsequently discovered surgical findings. This would allow for comparison of results of primary surgical treatment with neoadjuvant or nonsurgical therapies, as is done by those treating carcinoma of the cervix, for example [5].

**Summary**
In summary, thoracoscopy is useful in specific situations for the staging of lung cancer and for the diagnosis and treatment of malignant pleural effusions. It also is an investigational tool in multidisciplinary or nonsurgical treatments of esophageal cancer. Thoracoscopy will not become "standard" for the staging of esophageal cancer until it is demonstrated that the additional expense of nonsurgical or extrasurgical treatments improves outcome.

**References:**


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