Are We at the Dusk of Mediastinoscopy in Modern Clinical Practice?

To the Editor:
We read with great interest the article by Um et al.,1 reporting on a prospective trial in a tertiary referral center to compare the diagnostic performance of endobronchial ultrasound-guided transbronchial needle aspiration (EBUS-TBNA) with that of mediastinoscopy for nodal staging of patients with non–small-cell lung cancer (NSCLC).

Treatment and prognosis in lung cancer is critically dependent on stage. In the absence of distant metastases, mediastinal staging becomes vital for the correct management of NSCLC. By the way, according to recent American College of Chest Physicians and European Society of Thoracic Surgeons guidelines, minimally invasive endoscopic techniques are the first choice if local expertise with EBUS/endoscopic ultrasound (EUS) needle aspiration is available.2,3

Although mediastinoscopy is considered the diagnostic standard, several meta-analyses2,4 stated the diagnostic sensitivities of EBUS-TBNA range from 88% to 93%, comparable to those of traditional mediastinoscopy (78%) and video-assisted mediastinoscopy (89%).

In this setting, the abovementioned study strongly supports the diagnostic performance of EBUS-TBNA in mediastinal staging of cN1–N3 with a sensitivity and negative predictive value (NPV) of 88% and 85.2%, respectively, versus 81.3% and 78.8% of mediastinoscopy.

Accordingly, we wish to submit our reflections to foster brainstorming on the strategy for proper work up in mediastinal staging of NSCLC.

Recently, Evison et al.5 proposed and validated a risk stratification model for lymph nodes classified as negative by EBUS-TBNA. This model combined positron emission tomography (PET)-computed tomography and EBUS data to stratify patients into high and low risk for nodal malignancy. According to the authors, this model could aid lung cancer multidisciplinary teams in deciding which patients need further staging procedures after a negative EBUS and which not.

But staging pathway is heavily marked by local expertise and proficiency of EBUS operators.

So, while in referral center for NSCLC, EBUS-TBNA should be the first-choice procedure performed in nodal staging and more invasive mediastinoscopy should be reserved to fewer patients (those with a negative TBNA but high suspicion of malignancy according to PET-computed tomography/EBUS data—high-risk patients in Evison’s model—and multidisciplinary team decision), in case of less-experienced groups the sensitivity of EBUS could be lower. Therefore, mediastinoscopy is still recommended in this contest.

Are we at the dusk of mediastinoscopy in staging of cN1–N3 NSCLC in modern clinical practice in experienced center?

Or is mediastinoscopy still a diagnostic standard above all in cN0?

By the way, though recent guidelines also recommended nodal sampling in case of centrally located tumor with PET-negative nodes or in case of 5 mm nodes, the diagnostic performance of EBUS-TBNA is not yet proven in these. So mediastinoscopy could be an important validation tool of EBUS-TBNA results.

On the basis of the data reported, we would really appreciate the authors’ reflections and reaction on the impact of EBUS-TBNA in NSCLC staging and the role of mediastinoscopy on modern clinical practice.

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Reply to “Are We at the Dusk of Mediastinoscopy in Modern Clinical Practice?”

An Irresistible Trend

In Response:
At 2010, the lung cancer team of Samsung Medical Center agreed to begin the prospective study to directly compare the endobronchial ultrasound-guided transbronchial needle aspiration (EBUS-TBNA) with mediastinoscopy

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in nodal staging of non–small-cell lung cancer (NSCLC). We want to evaluate the accuracy of EBUS-TBNA and mediastinoscopy for nodal staging. The 2-year result of 138 consecutive patients was that EBUS-TBNA was superior to mediastinoscopy. Previous study to compare the EBUS-TBNA with mediastinoscopy showed no advantage to mediastinoscopy, and later prospective randomized trial showed that the accuracy of EBUS was similar to mediastinoscopy.

In addition, meta-analysis of 11 EBUS-TBNA studies reported the sensitivity of 93% and a specificity of 100%, which are superior to mediastinoscopy. There were meta-analysis papers for the complication rate, showing EBUS-TBNA of 0.05%, compared with mediastinoscopy of 2%. The cost-effectiveness of EBUS-TBNA was analyzed to be lower mean cost and greater mean quality-adjusted life years compared with mediastinoscopy.

There are increasing training opportunities for EBUS-TBNA. World Association of Bronchology and Interventional Pulmonology has actively spreading the educational activities around the world and American College of Chest Physicians (ACCP) and local Bronchology Societies. American Thoracic Society, European Respiratory Society, and ACCP recommend that 40 supervised procedures for initial training and 20 procedures per year to maintain competency. As the training activity of EBUS-TBNA are increasing, training accessibility will be better and better. ACCP and European Society of Thoracic Surgeons guidelines recommend that EBUS-TBNA should be first applied for nodal staging of NSCLC.

In conclusion, it is an irresistible trend that EBUS-TBNA is the first and the best procedure in the nodal staging of NSCLC.

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**Surgery and Survival of Patients with Diagnosis of Malignant Pleural Mesothelioma**

**To the Editor:**

The role of surgery in the management of malignant pleural mesothelioma (MPM) is a forum of alive and kicking discussion: survival advantages stay substantially unproven. To the best of our knowledge, the Mesothelioma and Radical Surgery (MARS) study, so far the only prospective randomized trial whose results have been published in the English literature, concluded a negative outcome of extrapleural pneumonectomy (EPP) in a limited case series. On these evidences, advocates for lung-sparing approaches (extrapleural decortication, EP/D) maintained that less invasive techniques had to be preferred, given the comparable results in terms of long-term survival in several retrospective cohorts and the better early postoperative outlook. In the study by Bovolato et al that we read with interest and wish to discuss herein, the decision to perform EPP or EP/D was based on a careful assessment of the patient’s operative risk, the tumor staging, and the likelihood of completeness of the operation. Albeit introducing the clinical staging as the tool to drive the surgical indication, locally advanced MPM patients were treated mainly with EPP; an advantage in terms of survival is reported in pathologic stage IV patients (survival 28 months after EPP versus 10.9 months EP/D; p, 0.002) but not in earlier stages. One can speculate that this advantage is because of the fact that a bigger residual tumor is left when performing less invasive operation in more advanced stages; however, this is an assumption worth of further and deeper investigation.

The ongoing dialogue in the scientific community would recommend surgery for MPM only in the setting of research trials. Now, given this level of uncertainty, indeed based on the not homogeneous data available and the mostly retrospective nature of the studies reported so far, it would seem that the role of EPP should be further and carefully discussed to substantiate its role in “debulking” advanced diseases—more efficiently than lesser operations—and/or treat, with curative intent, early ones.

In the study by Bovolato et al, the best prognosis was detected in those patients younger than 70 years, with epithelioid MPM, who had received chemotherapy, but data failed to show a statistically significant advantage of surgical treatment overall versus nonsurgical one. Surprisingly, no statistically significant interaction was detected between the type of treatment and the clinical stages in terms of overall survival; anyway, Table 1 of Bovolato et al shows that 51% and 38.9% of patients undergoing, respectively, EP/D and EPP had an unknown clinical stage, therefore setting a situation in which, likely, the extent of the surgical approach was decided intraoperatively. Correctly, the authors state the limits of clinical...