Reviewer's report

Title: Are there differences among operators in false-negative rates of endosonography with needle aspiration for mediastinal nodal staging of non-small cell lung cancer?

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Reviewer: Rosa María López-Lisbona

Reviewer's report:

In this retrospective study the authors evaluate the influence of operator-related factors in the false negative rate of EBUS/EUS-NA for the staging of NSCLC in 705 patients. They analyze the procedures of 6 different operators with the same training, but with different grades of experience and compare the false negative rate of individual operators and if there are changes according to accumulation of experience. They adjust the data for patient's characteristics and procedure-related factors. Finally, they conclude there are no differences between operators in false negative rates, but if the operators have completed a training curve.

This study is of interest since the importance in the training of the operators to improve and guarantee the good results in EBUS technique is well known. To know the influence of different operator-related factors in these results should be helpful for clinical practice.

I have a number of concerns regarding the design of this study

- By using the term "endosonography with needle aspiration" as "EBUS/EUS-NA", it is confused if all authors performed EBUS and/or EUS and/or EUS-B (with endobronchial scope) and this is not clear in the methods. But in the results (table 1), only in 69 patients the EUS was performed.

I would like to suggest that the procedure should be more standardized (if only a few operators performed EUS, include only EBUS) and analyze if the operator's experience is related to the realization of EUS and if that modifies the results.

- The authors do not specify the time from EBUS/EUS-NA mediastinal staging to the surgical intervention.

- It appears to be a study based in the operator's characteristics, but the authors don't describe the criteria followed by the different operators during the staging procedure (complete, systematic…) and neither if there were any changes in time related to the lack of experience at the beginning…
- Also the level of experience of each operator is not clearly determined (e-figure-1).

- There are some unclear points in the lymph node classification:

  o The definition of inaccessible LN is not correct according to the guidelines (Vilmann et al. Eur Respir J 2015): "EUS with real-time guided fine needle aspiration using the EBUS scope (EUS-B-FNA) can reach the following locations that are relevant to lung cancer diagnosis and staging: lung tumors close to the esophagus; mediastinal lymph nodes in stations 2L, 4L (high and lower left paratracheal nodes); station 7 (subcarinal node); stations 8 and 9 (nodes located in the lower mediastinum); and structures below the diaphragm, i. e., retroperitoneal lymph nodes close to the aorta and the celiac trunk, and tumors in the left liver lobe and the left adrenal gland". If you used the term EBUS/EUS-NA, the operators should be able to reach the 8 and 9 stations.

  o In relation to the unattempted accessible LN, the operator's criteria for not examined them should be further explain.

I have some comments about the results:

- There is a big amount of data reported in the results (text and different tables) that is not even mentioned in the methods.

- A description of the characteristics of each operator in the results is missed.

The authors have a big number of patients with a lot of data to analyze, but the design of the study should be focused to really answer the initial question. I truly encourage reviewing and reorganizing the data to the authors.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

No

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Unable to assess

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

No
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I recommend additional statistical review

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