Reviewer’s report

Title: Predictive risk factors for lymph node metastasis in patients with resected Non-small cell lung cancer: A case control study

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Reviewer: Micaheol rolf Mueller

Reviewer's report:

This is a retrospective study trying to evaluate the risk for any lymph node metastasis in patients with resected non-small cell lung cancer. A total of 200 patients received anatomical lung resection mainly by lobectomy over a period of 10 years. The authors conclude, that patients with centrally located tumours and higher T factors should undergo precise preoperative and intraoperative assessment of nodal involvement.

This paper has significant limitations not only due to its retrospective nature. The number of patients included in this study does not allow for relevant statistical analyses, particularly multivariate or subgroup analyses. Including a limited number of patients from a quite long period carries the risk of changing staging and treatment strategies. Particularly the availability and expertise in invasive mediastinal staging by bronchoscopy will be an issue.

You describe a median number of dissected lymph nodes of 25 with a range of 6-69. It is very likely that this high number results from counting fragmented lymph nodes rather than complete lymph nodes. The number of dissected lymph nodes was detected as a predictive factor for lymph node metastasis in resected NSCLC, which may be influenced by this fact and of course by the completeness of mediastinal lymph node dissection.

The role of tumour size and location as a predictor of nodal involvement has been extensively studied in the past and actually has resulted in the current TNM classification and international guidelines for staging and treatment. You have mentioned the ESTS guidelines on preop mediastinal staging and in your discussion you propose an algorithm which is already part of these guidelines. According to these guidelines you mention, that patients with tumours exceeding 3 cm or with a central location should undergo EBUS/EUS and even mediastinoscopy in patients with suspected mediastinal nodal involvement after negative EBUS. How many of your patients underwent invasive mediastinal staging over the whole period? Which patients did not undergo invasive preoperative mediastinal staging?

Describing your surgical strategy in systematic nodal dissection for left-sided tumours you include the removal of stations 2, 3 and 4 on the left side. Please explain your technique.
In summary I appreciate the work you had with analysing your data, but they do not contribute to the existing evidence from the literature and may be very valuable to further guide your local standard operative procedures.

**Level of interest**
Please indicate how interesting you found the manuscript:

An article of limited interest

**Quality of written English**
Please indicate the quality of language in the manuscript:

Acceptable

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