

Peer review file

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Reviewer A:

Comment 1: Although this is a surgery with a small number of institutions in Switzerland, their results are valuable for readers in other nations.

Reply: Thank you

Comment 2: Their preference of surgery in multi-station disease is different than the survey conducted by NCCN, where only 47.6% recommend surgery. Also, multi-zonal nodal disease are preferentially treated with surgery. Can these discrepancies be explained by more representation of surgeons in this study?

Reply: We agree with this observation, but this is simply what our clinical reality seems to be. In our case it was not caused by a higher representation of surgeons, as we actually had a rather balanced ratio of 12 radiation oncologists and 11 surgeons involved in this decision-making analysis. Another interesting finding in our study was that even among radiation oncologists the preference for surgery was rather high. We were careful to only select a single leading surgeon and radiation oncologist per center – otherwise we would have had the additional problem of institutional biases – we know that in certain hospitals the multidisciplinary discussion plays a larger role than in others.

Reviewer B:

Comment 1:

This manuscript is an analysis of the results of a questionnaire and has no scientific basis.

Reply: The manuscript represents a patterns in decision-making among surgeons and radiation oncologists and demonstrates areas of consensus and discrepancies. The scientific approach is highlighted by a clear and objective methodology. It is the first of its kind investigating decision-making for N2 Stage III NSCLC patients involving both radiation oncologists as well as thoracic surgeons with a high participation rate. We believe this manuscript contributes scientifically in areas of patterns of care, decision-making, the role of patient preference as well as guideline adherence.

Comment 2: It is no permissible to select treatment without regard to evidence-based and RCT-based guidelines, and this paper is not suitable to be accepted to TLCR.

Reply: The statement is an oversimplification. In many cases for Stage III N2 NSCLC, most guidelines provide multiple options (as high-level evidence supporting the choice of one treatment over another is missing). This is why we were interested in finding out which of these choices are selected and under which conditions. In daily clinical routine there are various criteria influencing the decision-making approach, often even criteria not explicitly investigated in randomized clinical trials. The aim of this work was to identify which disease characteristics are applied in current clinical practice and how they impact decision-making in clinical routine.

Comment 3: Why are oncologists (internal medicine) not included in this study?

Reply: This paper deals with question surgery vs. radiotherapy, thus the main questions are related to the operability of the tumor, the size of the radiation field and modality specific side effects. It is common practice in tumor boards for a surgeon to recommend for or against surgery and a radiation oncologists to recommend for or against radiotherapy. While other specialists are involved in the tumor board (medical oncologist, radiologist, nuclear medicine specialist, pathologist..) they, in our view, typically do not play a major role in the selection of local treatment of Stage III N2 disease.

Comment 4: At this time, the treatment for NSCLC with N2 should be considered for each patient based on the guidelines.

Reply: Of course, however the guidelines recommend multiple options, see response to issue 2. Also please consider viewing: Putora, P. M., Leskow, P., McDonald, F., Batchelor, T., & Evison, M. (2020). International guidelines on stage III N2 nonsmall cell lung cancer: surgery or radiotherapy?. *ERJ open research*, 6(1).

Comment 5: There is no mention about genetic test results by main tumor biopsy, and it is unknown whether histological diagnosis has been performed for lymph nodes suspected of metastasis.

Reply: All participating centres were asked to provide their recommendations and decision criteria for the management of preoperatively diagnosed stage III N2 NSCLC. It was an open question to all participant. This is very relevant to the methodology as we wanted to avoid pre-defining clinical scenarios or specific criteria. As genetic tests were not mentioned as a decision criterion relevant for this question, it was not part of our analysis. Also the question about histological diagnosis performed for lymph nodes suspected of metastasis was not mentioned by the participant, thus, it was not discussed in the paper. While results of genetic testing may be relevant for the selection of specific systemic therapies or potentially provide insight into prognosis, they are not relevant to the selection between surgery and radiotherapy in clinical practice.

Comment 6: There is no conclusion that will be a novel finding.

Reply: The manuscript presents patterns in decision-making among surgeons and radiation oncologists and demonstrates areas of consensus and discrepancies. Consensus and discrepancies were evaluated with the objective consensus methodology. It is an innovative approach investigating decision-making for N2 Stage III NSCLC patients involving both radiation oncologists as well as thoracic surgeons with a high participation rate. We believe the manuscript is of special value as the objective approach enabled us to obtain an unbiased description of decision-making among the specialists (the study was not aimed to create or enforce a consensus). The manuscript provides valuable insight into clinical decision-making with a high impact on treatment selection, as expected differences between specialists were observed, with this manuscript, we are able to visualize and quantify these. This information is relevant for interdisciplinary discussions and may serve to improve understanding between specialists.