Reviewer’s report

Title: A hypothesized TNM staging system based on the number and location of positive lymph nodes may better reflect the prognosis for patients with NSCLC

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Reviewer: Andrew Arndt

Reviewer’s report:

I rather enjoyed this manuscript; I have the following questions and comments.

1. The objective statement in the abstract needs some language editing. Generally, a small amount of language editing is needed for the whole manuscript.

2. The "Patients and Methods" section of the abstract only discusses the statistical methods used, but does not at all mention which patients were included in the study. I would at least mention a querying of the SEER database for stage IA-IIIB patients between 2010 and 2015.

3. Unless it is just worded a bit awkwardly, the introduction seems to contend that upfront surgery with possible adjuvant chemotherapy and radiation is the first line treatment for all stage IIA-IIIA NSCLC. I would at least acknowledge the role of induction therapy for stage IIIA (N2) disease.

4. The authors acknowledge that "other treatment therapy affecting prognosis" was not available from the SEER database. The lack of information regarding neoadjuvant treatment for stages IIIA and IIB NSCLC that underwent resection is a fairly large limitation given that clinical staging information was incorporated into the inclusion criteria but pathologic information was ultimately incorporated into the prognosis and staging system. Surely a ypT1aN0 NSCLC that was originally IIIA behaves differently from a pT1aN0 NSCLC for which induction treatment was not indicated.

5. Can the authors explain their thoughts on why the standard TNM staging system failed to accurately stratify survival by stage grouping in their cohort of patients? For example, how is 2-year OS better for IIB than for IA NSCLC? This section of the paper is the crux of the argument, and I think it requires a more detailed look as to why these findings occur, as the TNM stage is a tool for stratifying survival.

6. How did the authors identify 0, 1-3, and 4+ positive lymph nodes as the meaningful cutoffs for grouping?

7. If stage IA patients do not actually have the best survival according to the conventional TNM system (as per point 5 above), how is nN = 0 a favorable prognostic factor in the revised staging rubric?
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.
Yes

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

Are the conclusions drawn adequately supported by the data shown?
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