Reviewer's report

Title: A Modified TNM Staging System for Non-Metastatic Colorectal Cancer Based on Nomogram Analysis of SEER Database

Version: 0 Date: 17 Jul 2017

Reviewer: George Karagkounis

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In this study, the authors are using the SEER database to identify the optimal grouping of T and N classifications into a staging system in terms of prognosis. This is a well executed study that confirms what was previously reported, i.e. that the current AJCC staging system overestimates the importance of N and underestimates the importance on T on patient survival. There are a couple of points that the authors need to clarify and/or elaborate:

1. My major criticism is the continuous referral to the previously published T-plus system. The authors argue that they used the methodology described in this manuscript to improve on their previously reported T-plus system. Therefore, this manuscript would become more direct and clear by focusing on the Nomo-staging system alone and compare that to the AJCC system, which is the standard. Having repeated three-way comparisons that include the T-plus system does not add something novel, is confusing and in the opinion of this reviewer, detracts from what is new in this manuscript.

2. Why did the authors decide to proceed with 5 stage groups, as opposed to 7 (similar to the AJCC staging)? Currently, the AJCC has a IIA, IIB and IIBC, yet the decision was made to group them into one. While this is not necessarily a flaw, it would be worth explaining the exact rationale.

3. The number of patients in each stage, both for the AJCC system and for the Nomo-system should be detailed to offer an estimate of how stages are distributed in each individual system.

4. The study's conclusions are clearly limited by the lack of long term follow-up for most patients. Even though this is mentioned as a limitation, it should be emphasized in the conclusions too. 3 year survival may be too short to definitively assess this system in colon cancer.

5. The authors, during their previous study on T-plus staging, used a Chinese cohort for validation. Did they attempt the same for this system? The generalizability of these findings is difficult to establish without validation.
6. Some references need to be edited. Ref 4 does not appear to be relevant to what is cited in the text.

7. In Figure 2, the survival of the entire population appears to be much worse in the first 2 panels compared to the third one. In fact, while 4 out of 5 stages in figure 2 reach 50% survival, this does not occur with any of the stages in figure 3. How do the authors explain this? Again, perhaps having the number at risk could clarify this.

8. In figures 2 and 3, some survival curves appear to end at/near 50 months, at the same time point for multiple stages and in multiple systems. Is that inherent to the follow-up data available by SEER?

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.

Yes

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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