Reviewer’s report

Title: Young Age Increases the Risk for of Lymph Node Metastasis in Patients with Early Colon Cancer

Version: 0 Date: 12 Mar 2019

Reviewer: Research Square

Reviewer's report:

"STATISTICAL REVIEWER ASSESSMENT:

Is the study design appropriate for the research question (considering whether the analyzed population accurately reflects the design and whether you see any problems with control/comparison groups, e.g., likely confounders)?
No - there are minor issues

Are methodologies adequate and well implemented (considering whether assumptions are addressed and whether analyses are robust)?
No - there are major issues

Are the analyses adequately communicated (considering whether reporting details are adequate and whether figures and tables are well labeled and described)?
No - there are major issues

Does the interpretation accurately reflect the analyses without overstatement (considering whether limitations/bias are acknowledged and whether accurate descriptors, e.g., 'significant', are used)?
No - there are minor issues

Could an appropriately REVISED version of this work represent a statistically sound contribution?
Maybe - with major revisions

STATISTICAL REVIEWER COMMENTS:

The data sets are large, while the percentage of interest variable is relatively small. The study design was appropriate. However, the statistical analyses were not clear, more details of how the statistical analysis were are needed before publishing.

REQUESTED REVISIONS:
The study needs more detailed information on the following analyses and results: 1. For multivariate modeling, what variables were initially included in the analysis? What method was used for model selection or variable selection?
2. The Harrell's concordance index (C-index) was below 0.70, which suggests that the models were not sufficiently fit. How did the authors interpret them?

3. Table 1 The demographic and clinicopathological characteristics of patients. The appropriate statistical methods are needed to provide the P-values for the tests.

4. For Table 2 The risk factors of predicted lymph node metastasis, it seems that here age was used as a continuous variable. However, in the text, authors claimed that age was compared at different range. Also we do not know what reference level of age was used for the comparison here?

5. Figure 1, readers need to know the p-values for age comparison.

6. Figure 4 only had two legends, why have four lines?

ADDITIONAL REQUESTS/SUGGESTIONS:
See comments above

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.

No

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

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

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

Acceptable
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