Reviewer's report

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

Version: 1 Date: 23 Apr 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 minor 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:

Overall the introduction, literature review, discussion are appropriate. Several statistical analyses were also made to support the study objectives. However, some statistical analyses were not clear or insufficient to achieve the study's aims.

REQUESTED REVISIONS:
1. The study stated that ""The positive lymph node rates for patients 20 to 39 years of age were significantly higher than in patients in the 8 reference group for early colon cancer."" However, for Table 1, we do not know which level of ago group
was used as reference group. Also since several age groups were defined, details of multiple age groups are needed. The reported general p-value is not sufficient.

2. For multiple regression analysis, we want to know the details of modeling process: which covariates were included and what methods were used for selecting variables and final model looks like. In Table 1, there are several significant demographic and clinicopathological characteristics of patients. These variables should be adjusted.

3. C-statistic = 0.633 is not large, which indicates that the predictive model is not good enough. A plot of observed probabilities against predictive proportion is needed to visualize the accuracy of the developed predictive model.

ADDITIONAL REQUESTS/SUGGESTIONS:
NA"

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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