OPEN PEER REVIEW

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As a new feature for progressing towards transparency, we decided to open a new window for all of our editors as well as authors titled "**Open Peer Review**". We hope by this new facility, our reviewers will be more motivated and authors will be more satisfied with the review process. We believe that publishing our peer review reports could make a transparent and clear environment for all our efforts within a journal, but not all reviewers tend to publish their comments.

What is "Open Peer Review" process?

An "Open Peer Review" process is making the details of all review process (including reviewers, associate editors, and EICs comments) as "Public" as it is agreed by EIC, Authors, and reviewers.

Advantages of "Open Peer Review" process

- More transparency, constructiveness and tactful comments of the peer review process: leads to an increase in the quality of reviews
- More motivations for all involved roles in the review process
- Authors' satisfactions from the review process: Increases honesty between authors and reviewers
- Education of both authors and new students
- Prevents reviewers from following their individual agendas and leading to the detection of reviewers' conflicts of interests

You can find out more at:
https://sites.kowsarpub.com/kowsar/knowledgebase/category/tree.html#opr.html

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Peer Review Report for "Survival Prediction in Patients with Colorectal Cancer Using Artificial Neural Network and Cox Regression"

Author(s): Samaneh Sabouri, Habibollah Esmaily, Soodabeh Shahidsales, Mahdi Emadi

Review Timeline:

Submit Date:	23 Jun 2018
Revised Date:	9 Oct 2019
Accepted Date:	15 Oct 2019

Revision (0)

Here, you can see the **Reviewers**, **Associate Editors** and **EICs'** comments from the beginning to the end of the revision process.

REFEREE: Associate Editor | **Revision** (0) — 15 Jul 2018

Dear EIC,
The manuscript is studied, and there are some comments which should be addressed by the author. According to the comments, the document needs major revision.
Kind regards,

REFEREE: EIC | **Revision** (0) — 16 Jul 2018

Dear Author,
Please revise your manuscript according to the associate editor's comments.
Thanks.

OPEN PEER REVIEW

Revision (1)

Reply to Reviewers

Ideally, the reviewing process can significantly improve the submitted manuscripts by allowing the authors to take into account the advice of reviewers. Author(s) must reply to all reviewers' comments in a separate Word file, point by point. A "**Reply to Reviewers**" document is submitted along with revised manuscript during submission of revised files, summarizing the changes that the authors made in response to the reviewers' comments. The responses to reviewers' comments specifies how the authors addressed each comment the reviewers made.

You can read the authors' responses to the reviewers' comments in the next page.

Response to Reviewer

Authors are very much thankful to the reviewer for his/her deep and thorough review and his/her constructive comments which have substantially improved our paper. Furthermore, we would like to appreciate you considering our manuscript timely, useful and interesting. Below, point-to-point responses to your thoughtful comments are provided. We hope that we have adequately addressed all the issues and that the new revision has improved the manuscript to a level of your satisfaction. Finally, we are really grateful for the time and energy you had expended generously on our behalf.

Reviewer one:

1. Please explain the criterion for using of 3 layers in MLP method.

In ANN, we have 3 layers: input layer, hidden layer and output layer. Researchers usually choose one hidden layer to avoid unnecessary complexity. In addition, more than 2 hidden layers are not recommended, so we chose one hidden layer to avoid complexity and over fitting.

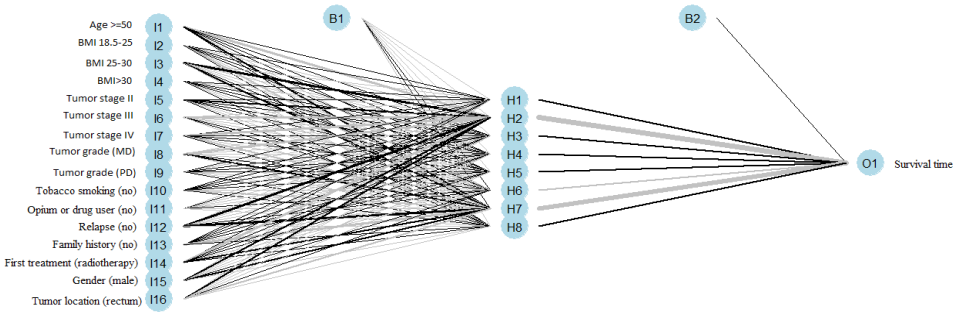
2. Why was checked 55 models for model selecting? And please describe for the number of nods.

There is no rule about the number of nodes in hidden layer. It is commonly determined by trial and error; and we choose the best number using ROC curve.

In current study the model was fitted with decay parameter (an option in nnet package in R) of 0.1, 0.2, 0.3, 0.4 and 0.5 in hidden layer and the number of nodes were taken from 5 to 15. Therefore we tried 55 different models (5*11=55).

2. It is better to put the figure of final ANN model.

The final figure of ANN is not very informative because you can see only the number of nodes in hidden layer with no interpretation of related weights. But if you think it is better to have it in our essay, we can put it in our manuscript.



3. Why is reported only the survival time according to stage and its application was not mentioned in the study.

First, we describe our data (demographic factors, survival time). Reporting the survival time by the stage as the main factor associated with, was given to represent more information for readers.

4. The main goal of study is to determine the factor associated with survival time but it has been emphasized on method in abstract and conclusion.

As that was mentioned in the title (Survival Prediction in Colorectal Cancer Patients Using Artificial Neural Network and Cox Regression), two different methods were used for this purpose. It was worthwhile to investigate the accuracy of models in predicting associated factors; otherwise applying two different methods was useless.

6. Pleas identify binary responses in the method because the main response is survival time.

In ANN, the binary response was calculated using the status (death/censor). Patients who their status was death coded 1, otherwise they took code 0. (It is highlighted in the manuscript)

Reviewer two:

1. More epidemiologic information regarding CRC should be included in introduction.

More studies were included to the introduction.

2. How patients were follow (the time period? The way of extracting the information?) and how the event of death recorded?

It is mentioned in the part material and methods: from 2006 to 2011 using patient's medical records. The information of patients for their regularly checkup were available in their medical record. In some cases, that patients did not refer to the hospital more than six months, we made phone calls to gather their survival condition. (It is highlighted in the manuscript)

3. To estimate the accuracy of Cox, does all the covariate were in full model? Or the selected significant ones stay in the final model?

We utilized the backward conditional method with an inclusion criterion of 0.10 to enter and 0.15 to remove. So all the variable was included in the model at first and variables with p-value less than 0.15 were included in the final model.

4. However according to this data, ANN seems better than Cox, it would be considerable that, Cox could estimate the association of variable in term of HR. I suggest, authors provide more comments regarding this issue in conclusion. Because the final aim of survival analysis in not only prediction, but also estimating association.

However, the Cox model estimate the association of variable in term of HR but both models can be compared by their accuracy in prediction and also which variables are important in the model.

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REFEREE: Associate Editor | **Revision** (1) 3 Oct 2019

Dear EIC
Based on the authors' answers to the reviewers' comments, the reviewer(s) have recommended publication.
Kind regards.

REFEREE: EIC | **Revision** (1) 5 Oct 2019

Dear Author,
Please add the ORCID id of at least the first and corresponding authors in the authors section when submitting the revised manuscript. You can get an ORCID id from the ORCID website at https://orcid.org.
Thank you.

OPEN PEER REVIEW

Revision (2)

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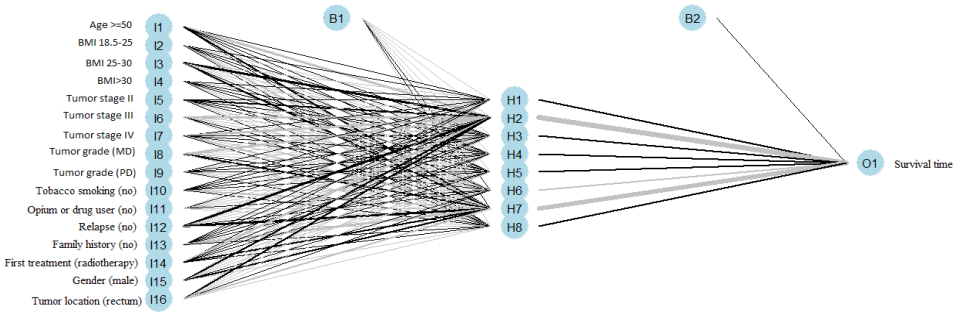
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REFEREE: EIC | **Revision** (2) 15 Oct 2019

Dear Author,
This is my pleasure to announce you that your article has been accepted by the editorial committee after peer review in the International Journal of Cancer Management (IJCM). Hopefully, it will be published in future issues.
Thanks.