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Open Peer Review (OPR)

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

Iranian Journal of Radiology
Article DOI: 10.5812/iranjradiol.85703
Published in: Iranian Journal of Radiology: 16(4); e85703

Peer Review Report for "Value of CT-Based Texture Analysis in Preoperative Prediction of the Grade of Gastrointestinal Stromal Tumors Compared to Conventional CT Imaging"

Author(s): Caiyue Ren, Shengping Wang, Shengjian Zhang, Zhaoxia Jiang

Review Timeline:

Submit Date: 24 Oct 2018
Revised Date: 26 Aug 2019
Accepted Date: 4 Sep 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) — 2 Nov 2018

Dear EIC,
Thanks for submitting the manuscript " The value of CT-based texture analysis in preoperatively predicting the risk grade of gastrointestinal stromal tumors: comparing with conventional CT imaging " to Iranian Journal of Radiology. I feel that it has potential for publication, after reviewing process and some minor revisions.
Sincerely,

REFEREE: Reviewer | **Revision** (0) — 25 Nov 2018

Dear AE,
Thank for submitting the manuscript to our journal. The definition of texture analysis parameters is not so clear. The manuscript could be accepted for publication in our journal with minor revision.
Thanks.

REFEREE: Reviewer | **Revision** (0) — 26 Nov 2018

Dear AE,

1. It is better that in abstract result mentioned numerical result .for example prevalence of group1 vs group 2 with p value=?
2. Please organized the abstract into 5 sections, 1- Background, 2- Objectives, 3- Patients and Methods or (Materials and methods), 4- Results, and 5-Conclusions.
3. What is your type of study? Experimental study, Cross sectional, cohort, case-control, clinical trial, systematic review, or … please mentioned it in the method section.
4. According to inclusion and exclusion criteria (not include in study), how many subject included and how many excluded? please mention in main text
5. What was your sample size formula? What is your expected power? please mention in main text
6. Discuss more about your sampling strategy? The structure of your sampling is so vague and understandable.
7. What are the data extract's center characteristics? is it governmental or private, is it referral or not referral and so on, discuss more about it
8. The Code and date of ethical approval should be mentioned in main text. Also ethical considerations should be mentioned with more detail
9. According to the publisher policy you must mention 6 sections (1- COI orConflict of interest, 2- Ethical Code, 3- Ethical Considerations, 4- Clinical Trial Registration, 5- Patient's Consents, 6- Funding Support) in the main text. Please check that these 6 sections reported in main text.
10. Please mention the city and country of study in method section
11. How many observers did you have? if you had more than one observer, you must mention agreement index like kappa coefficient (write in method section)
12. What strategy did you use for verification bias?
13. Did you use parametric or nonparametric AUC? Did you check normal assumption, please mention it
14. There are some spelling and grammatical errors in the text. Please correct them
15. Your sample size is so low. Why did not you use exact method like bootstrap and Jackknifing method for reporting pvalue and CI
16. The main text is too long. Please decrease main text.
17. The novelty of your work must be discussed

Thanks.

REFEREE: Associate Editor | **Revision** (0) 23 Feb 2019

Dear EIC,

Based on the reviewers' comments the article needs revision.

Thanks.

REFEREE: EIC | **Revision** (0) 24 Feb 2019

Dear Author,

The reviewers' comments are mentioned. Please correct the details as mentioned above carefully according to reviewers' request.

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.

Dear editors:

Thank you very much for your valuable opinions and suggestions. We also feel deeply sorry for the inconvenience brought to you by not knowing the submission process. We have made corresponding revisions according to the recommendations of the reviewers, and the modified parts have been presented in red font in the revised manuscript. We hope that the revision is acceptable and look forward to hearing from you soon.

With best wishes.

Below are point-by-point responses to specific comments and reviewers.

Replies to specific comments listed in the file "Manuscript ID: 85703| Iran J Radiol, rev [0] | Manuscript Needs Major Revision"

1. ***Reviewer 1:*** definition of texture analysis parameters is not so clear.

   Answer: Thank you for this comment. We have added information of texture analysis parameters in method section of the revised manuscript (Page 4, lines 125 to 129) as follows: A total of 29 features were extracted automatically including: a) 2 shape parameters; b) 4 histogram parameters; c) 4 conventional parameters; d) 6 gray-level co-occurrence matrix (GLCM) parameters; e) 11 grey level run length matrix (GLRLM) parameters; f) 2 neighborhood gray-level different matrix (NGLDM) parameters. In addition, we have supplemented the detailed definition of texture parameters in Appendix Table A of the revised manuscript.

2. ***Reviewer 2:***

1) It is better that in abstract result mentioned numerical result. for example, prevalence of group1 *vs.* group 2 with p value=?

Answer: Thank you for making this important point. We have added detailed differences between the two groups in abstract result of the revised manuscript (Page 1, line 27 to 30).

2) Please organized abstract in 5 sections, 1- Background, 2- Objectives, 3- Patients and Methods or (Materials and methods), 4- Results and 5-Conclusions.

Answer: We have reorganized the abstract section as you requested in the revised manuscript (Page 1, lines 5 to 8, line 13).

3) What is your type of study? Experimental study, Cross sectional, cohort, case-control, clinical trial, systematic review or … please mentioned it in method section.

Answer: We have supplemented the type of this study in method section of abstract in the revised manuscript (Page 1, line 13).

4) According to inclusion and exclusion criteria (not include in study), how many subjects included and how many excluded? please mention in main text

Answer: Thank you for your comment. The inclusion, exclusion criteria and patient recruitment of this study were presented in **Fig.1**. We also have supplemented the patient data in the revised manuscript based on your suggestion (Page 3, lines 82 to 87).

5) What was your sample size formula? What is your expected power? Please mention in main text

Answer: First, we admit that the sample size of this study is small. The number of variables is large (n=36; 29 + 7) for the study cohort. As a rule, there should be ten cases for each independent variable for a regression analysis that suggest that here a much larger cohort is needed (at least 360 cases). Totally 873 patients with histologically confirmed GISTs from January 2011 to September 2017 were selected for this study. After multiple exclusions, 168 patients were included in the final analysis (**Fig.1**). This is one limitation of our study. We have clarified this point in the discussion section (Page 7, lines 243 to 246). We will continue to expand the sample size in future research.

6) Discuss more about your sampling strategy? The structure of your sampling is so vague and understandable.

Answer: Thank you again. An internal validation using a simple split strategy was performed to ensure the validity of the results. After simple randomization, the entire dataset was separated into a large subset comprising 70% of the entire cohort and a small subset comprising 30% of the cohort for Lasso training and validation, respectively. The function of simple random sampling in R is sample (). The features selection was based on the training group. The AUC results were based on the validation group. We have added this information in the methods section of the revised manuscript (Page 4, lines 146 to 147).

7) What are the data extract's center characteristics? is it governmental or private, is it referral or not referral and so on, discuss more about it

Answer: The data of this study was extracted from our hospital and could be referral in the case of concealment of patient information. We have clarified this detail in the revised manuscript (Page 3, lines 82 to 84).

8) The Code and date of ethical approval should be mentioned in main text. Also, ethical considerations should be mentioned with more detail

Answer: This was a retrospective study and approved by our institutional review board. We have added detailed information on ethical code and considerations in the methods section and the end of the revised manuscript (Page 3, lines 80; Page 10, lines 366 to 372).

9) According to the publisher policy you must mentioned 6 sections (1- COI or Conflict of interest, 2- Ethical Code, 3- Ethical Considerations, 4- Clinical Trial Registration, 5- Patient's Consents, 6- Funding Support) in main text. Please check that these 6 sections reported in main text.

Answer: Thank you for this comment. We have supplemented the above 6 sections in the end of revised manuscript (Page 9 to 10, lines 361 to 377).

10) Please mention the city and country of study in method section

Answer: We have made the correction in the revised manuscript. The text now reads as follows: "A total of 873 patients with pathologically confirmed GISTs in Fudan University Shanghai Cancer Center, China from January 2011 to September 2017 were selected for this study" (Page 3, lines 82 to 84).

11) How many observers did you have? if you had more than one observer, you must mention agreement

Answer: There were two observers for this study. We have clarified this point and added the agreement index in the revised manuscript (Page 4 to 5, lines 159 to 162; Page 5, lines 171 to 174).

12) What strategy did you use for verification bias?

Answer: We use the Hosmer-Lemeshow goodness-of-fit test for verification bias. P>0.05 indicates insignificant deviance from the theoretical perfect calibration (Fig.5) (Page 4, lines 155 to 158).

13) Did you use parametric or nonparametric AUC? Did you check normal assumption, please mention it.

Answer: Thank you for making this important point. We have supplemented the results of nonparametric AUC of the two prediction models in the Table 3 of the revised manuscript. The z and p-values of Mann-Whitney test were 1.85 and 0.06, respectively.

14) There are some spelling and grammatical errors in the text. Please correct them

Answer: I am very sorry for the spelling and grammatical errors in this text. We have carefully proofread the text and highlighted changes in the revised manuscript.

15) Your sample size is so low. Why did not you use exact method like boot strap and Jackknifing method for reporting p-value and CI

Answer: Thank you for your insightful comments. As explained in our answer to

question **5)** above, a small sample size is one limitation of this study, and larger population is needed to confirm our findings. We also have clarified this point in the discussion section. Bootstrap and Jackknifing are universal resampling methods. But we admit that we are not proficient in using these two methods. To learn and apply more about these two methods and compare with the methods in this study is a primary goal of our future research.

16) The main text is too long. Please decrease main text.

Answer: We have reduced the number of words in the revised manuscript on the premise of guaranteeing the original intention.

17) The novelty of your work must be discussed

Answer: Thank you for reminding us of this important point. We have rewritten the novelty of this study in the discussion section of the revised manuscript according to the suggestion (Page 5, lines 195 to 196).

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Revision (1)

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

REFEREE: Reviewer | **Revision** (1) — 2 May 2019

Dear AE,
Thanks for submitting the manuscript to our journal. Requested changes were made and the manuscript could be accepted for publication.
Thanks.

REFEREE: Reviewer | **Revision** (1) — 10 May 2019

Dear AE
After revising of the paper and answer our questions,the manuscript is now acceptable in my opinion.
Best Regards

REFEREE: Reviewer | **Revision** (1) — 1 Jun 2019

Dear AE,
In my idea, the paper is OK for publication.
Best Regards

REFEREE: Associate Editor | **Revision** (1) — 13 Jul 2019

Dear EIC,
According to reviewers' comments, this article is accepted.
Thanks.

REFEREE: Associate Editor | **Revision** (1) — 11 Aug 2019

Dear EIC,
The authors should respond to all comments one by one. Then, highlight any changes they make in the manuscript.
1- Would you consider this title for this manuscript, “Value of CT-Based Texture Analysis in Preoperative Prediction of the Grade of Gastrointestinal Stromal Tumors Compared to Conventional CT Imaging”
2- In the affiliations, please add the name of the city and country. In case there is a department name please add that too.

3-The phrase “risk grade” seems unfamiliar and unclear. Do you mean grade instead of risk grade? It seems that risk could be deleted from the phrase. Risk is included in the concept of grading. Please revise and clarify. If so, please read the manuscript and change all phrases accordingly.
4-In the abstract, results, you mentioned a P>0.05 that shows a statistically significant difference. Do you mean P<0.05. Please revise and clarify.
5-In the discussion, “We speculate that the results may be related to a higher degree of malignancy correlates with higher degree of tumor cell proliferation and more abundant blood supply.”
Do you mean, “We speculated that the results may be related to a higher degree of cell proliferation and higher blood supply compromise in tumoral tissue.”
If not, please clarify and rewrite this sentence so it does make sense.
6-The quality for figure 5 is not acceptable. Please include a clear quality image.
Thank you.

REFEREE: EIC | **Revision (1)** 13 Aug 2019

Dear Author,
Your article is reviewed by the reviewers carefully. According to their comments, this document needs minor revision. Please follow their comments as requested.
Thanks.

OPEN PEER REVIEW

Revision (2)

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.

Dear Prof. Kavous Firouznia:

Thank you again for your valuable opinions and suggestions. We have made corresponding revisions according to the recommendations of the associate editor 2, and the modified parts have been presented in red font in the revised manuscript. We hope that the revision is acceptable and look forward to hearing from you soon.

With best wishes.

Below are point-by-point responses to specific comments.

Replies to specific comments listed in the file "Manuscript ID: 85703| Iran J Radiol, rev [1] | Manuscript Needs Minor Revision"

Associate Editor 2:

1. Would you consider this title for this manuscript, "Value of CT-Based Texture Analysis in Preoperative Prediction of the Grade of Gastrointestinal Stromal Tumors Compared to Conventional CT Imaging"

Answer: Thank you for this comment. We would like to change the title to "Value of CT-Based Texture Analysis in Preoperative Prediction of the Grade of Gastrointestinal Stromal Tumors Compared to Conventional CT Imaging" of the revised manuscript according to your suggestion.

2. In the affiliations, please add the name of the city and country. In case there is a department name please add that too.

Answer: Thank you for your comment. We have supplemented the name of the city in materials and methods section of the revised manuscript (Page 2, line 82).

3. The phrase "risk grade" seems unfamiliar and unclear. Do you mean grade instead of risk grade? It seems that risk could be deleted from the phrase. Risk is included in the concept of grading. Please revise and clarify. If so, please read the manuscript and change all phrases accordingly.

Answer: Thank you for making this important point. We have revised all "risk grade" to "grade" of the revised manuscript.

4. In the abstract, results, you mentioned a P>0.05 that shows a statistically significant difference. Do you mean P<0.05. Please revise and clarify.

Answer: Thank you again. We have reconfirmed the original text and results in the abstract, "Calibration curves showed no statistically significant differences of the two models (p>0.05, respectively)". We have ensured its correctness.

5. In the discussion, “We speculate that the results may be related to a higher degree of malignancy correlates with higher degree of tumor cell proliferation and more abundant blood supply.” Do you mean, “We speculated that the results may be related to a higher degree of cell proliferation and higher blood supply compromise in tumoral tissue.” If not, please clarify and rewrite this sentence so it does make sense.

Answer: Yes. We have made the correction in the revised manuscript. The text now reads as follows: “We speculated that the results may be related to a higher degree of cell proliferation and higher blood supply compromise in tumoral tissue” (Page 6, lines 212 to 214).

6. The quality for figure 5 is not acceptable. Please include a clear quality image.

Answer: We feel sorry for this mistake. We will upload a required figure 5.

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Revision (2)

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** (2) 3 Sep 2019

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

REFEREE: EIC | **Revision** (2) 4 Sep 2019

Dear Author,
The document is reviewed carefully by the reviewers. According to their comments and your revisions as requested, this manuscript is accepted.
Thanks.