Author's response to reviews

Title: A screening instrument to identify ulcerative colitis patients with the high possibility of current non-adherence to aminosalicylate medication based on the Health Belief Model: a cross-sectional study

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Author's response to reviews: see over
Magdalena Morawska,

Executive Editor,

BMC Gastroenterology

Dear Dr. Morawska,

We thank you for your kind e-mail dated Oct 7, 2014, with regard to our manuscript entitled, “A risk assessment instrument to identify ulcerative colitis patients at high risk of non-adherence to aminosalicylate medication based on the Health Belief Model: a cross-sectional study (MS: 6370911291413506), together with the comments from the reviewers. We are pleased to hear that you are interested in our manuscript for publication in BMC Gastroenterology.

We found the reviewers’ questions very interesting and useful. Accordingly, we made extensive revisions to the text (marked in bold and underlined). We have attached a point-by-point reply to the reviewers’ comments below.

Thank you again for your comments on our paper. I trust that the revised manuscript is suitable for publication in BMC Gastroenterology and we look forward to hearing from you at your earliest convenience.

Yours sincerely,

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RESPONSE TO THE EDITOR:

We revised the text, as follows, according to the suggestions.

**Comment:** Please include all full names of the ethics committees that approved the study, they should be listed in the Methods section.

Response:

As recommended, we changed the following text in the Methods section, from:

“The study was approved by the Ethics Committee of each hospital from which participants were recruited.” (p.7, line 98 - 100)

To

The study was approved by the Ethics Committees of Yokohama City University Medical Center, University of Tokyo, and Social Insurance Central General Hospital. (p.7, line 105 - 107)

**Comment:** Please move all email address of all authors on the title page.

Response:

We moved the authors’ addresses from Mail address (p.19, line 334 - 336) to the title page, as suggested (p.1, line 13 - 16).

**Comment:** Please include all authors in Authors Contribution section.

Response:

In the Author’s contribution section, we changed the following text from:

“AK designed and performed the study, analyzed the data, and drafted the manuscript. MT, MN, and
RK participated in designing the study, analyzed the data, and helped draft the manuscript. RS and NY participated in designing the study and helped draft the manuscript. NYM supervised the study and manuscript writing. All authors take responsibility for the contents of the final manuscript.”  
(p.18, line 315 - 319)

to

AK designed and performed the study, analyzed the data and drafted the manuscript. MT, MN and RK participated in designing the study, analyzed the data and helped draft the manuscript. RS, NY and SM participated in designing the study and helped draft the manuscript. NYM supervised the study and manuscript writing. All authors take responsibility for the contents of the final manuscript.  
(p.19, line 330 - 334)

In addition, we found mistakes in Abstract and Methods section. We are very sorry, but we changed the following text from:

“Non-adherence was observed in 129 (29.6%) of the 429 enrolled subjects.”  
(p.2, line 29)

To

Non-adherence was observed in 127 (29.6%) of the 429 enrolled subjects.  
(p.2, line 36)

\[
\text{D}_{\text{miss}} = (\text{D}_{\text{miss-pt}} + \text{D}_{\text{miss-diff}})\]

(p.8, line 119)

to

\[
\text{D}_{\text{miss}} = (\text{D}_{\text{miss-pt}} + \text{D}_{\text{pres-diff}})\]

(p.8, line 127)
RESPONSE TO REVIEWER 1:

We wish to express our appreciation for the reviewer’s insightful comments. We have written the reviewer’s comment in italics and written our response to it below.

Comment: Discretionary Revisions: Was the correlation between non-adherence and the current disease activity and duration of UC examine? These information would be interesting to know.

Response:

Thank you for your comment. We hypothesized that there were significant relationships between non-adherence (a dependent variable) and other variables (independent variables), including disease activity and duration of UC (Figure 1). In this cross-sectional study, there was no significant association between current non-adherence and duration of UC [Odds ratio=1.20, 95% CI=0.76-1.86, p=0.44] (Table 1). We couldn’t evaluate disease activity by using some kind of disease activity index. However, visible bleeding was used as a surrogate marker for disease activity, and absence of visible bleeding was found to be significantly associated with non-adherence [Odds ratio=2.54, 95% CI=1.33-4.86, p<0.01] (Table 2). Visible bleeding was used as one of the items in our screening instrument.

Thank you once again for your comments on our paper.
RESPONSE TO REVIEWER 2:

We wish to express our appreciation for the reviewer’s insightful comments, which have helped us to significantly improve our paper. We have written the comments in italics, followed by our responses to each comment. In our manuscript, we have used bold and underlined font to show the parts that were revised.

Comment: My only point is that (although you clearly recognize it in the paper) the instrument you design should be validated in:

a) A prospective trial in your population with previous definition of activity etc

Response:

Thank you for your comment. This study was a cross-sectional survey and the instrument we developed can be used to identify patients with the high possibility of current non-adherence rather than predicting the risk of future non-adherence. If our instrument was developed to predict future non-adherence, a prospective study in patients in whom risk factors were identified in advance would be needed for validation. As we stated in the paper, we would like to conduct further research using this instrument to confirm its practical validity regarding whether or not it is in fact useful in identifying high risk populations. However, we thought that it might be a good idea to prospectively verify whether the instrument will predict future non-adherence.

Therefore, we added the following text in the revised manuscript:

Finally, we developed the instrument to identify patients with a high possibility of current non-adherence, rather than predicting the risk of future non-adherence. Further prospective research would be needed to evaluate its ability to predict future non-adherence. (p.17, line 301 - 304)

We also changed the following text from:

“Finally, we set a cut-off point to identify as many non-adherent subjects as possible.” (p.16, line 286 – p.17. line 287)
Third, we set a cut-off point to identify as many non-adherent subjects as possible. (p.17, line 297 - 298)

In addition, we revised some words in the title, abstract, keywords, text, tables and figure legends in order to make our research design more clear. Mainly, we revised “non-adherence” to “current non-adherence”, “risk” to “possibility” and “risk assessment instrument” to “screening instrument”.

**Comment:** My only point is that (although you clearly recognize it in the paper) the instrument you design should be validated in:

- **b) One or several trials in different populations**

**Response:**

We completely agree with your comment. Therefore, as we have stated in the paper, “We should evaluate the validity of this risk assessment instrument under different circumstances and among different groups of patients to confirm its generalizability.” (p.16, line 277 - 279)

**Comment:** The other minimal problem is that a reference standard method (Morisky scale, for instance) could have been useful to compare with other trials; although I acknowledge that the reference method used in your work seems to be valid, as shown in another small group.

**Response:**

While we could have used other standard instruments, such as the Morisky scale, the scale is a self-reported questionnaire indicating patient-reported adherence, as is our screening instrument. Therefore, we believed that it would be better to verify the validity using instruments other than self-reported questionnaires.

Thank you again for your comments on our paper. I trust that the revised manuscript is suitable for publication.