Author’s response to reviews

Title: Predictive factors for tooth loss during supportive periodontal therapy in patients with severe periodontitis: A Japanese multicenter study

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Author’s response to reviews:

Dear Dr. Omar Kujan:

We appreciate the opportunity to address the reviewers’ comments and revise our manuscript. Below, please find our point-by-point responses to the reviewers’ comments. All page and paragraph numbers refer to locations in the revised manuscript.

Response to Reviewer 1:

Please find the following points to be clarified/included in the manuscript:

- Mean follow-up period during SPT for these 82 cohorts of 4.9 years to be mentioned in the Abstract, i.e. "...at least 1 year (mean=4.9 years) between 1981 and 2008". This allows the readers to understand that this study has a reasonable mean follow-up period during which the tooth loss was assessed.

Response: As requested, we added the mean follow-up period “(mean follow-up = 4.9 years)” in the Abstract (page 1, line 8).
- As a reader, I am interested to understand more about the therapy-resistant assessment tool (Under Background, Page 3 Line 8-13). Looking at the original manuscript is in Japanese language, I would suggest the authors to elaborate in more details about this assessment tool, i.e. at what level the reduction of deep probing depth would predict better retention of teeth during SPT.

Response: As suggested, we added information about the therapy-resistant assessment tool (page 3, lines 8-13).

- The "residue" probing depth of "≥5mm" is assessed as one of the six parameters according to PRA (Lang & Tonetti 2003). However, the data collected in this study was based on probing depth of "≥6mm" (Page 4 Line 14-15 & Table 1). If this study was to investigate the predictability of tooth loss during SPT using PRA, I would suggest data collection follow what have been outlined in the PRA model. Using a higher threshold for "residue" probing depth may underestimate the predictability of the PRA model.

Response: We thank the reviewer for this comment. We used the term “modified periodontal risk assessment (MPRA)” instead of “periodontal risk assessment (PRA)”. We also added the following explanation: “For MPRA, we modified the cut-off value of counting sites of PD from ≥5 mm to ≥6 mm [17] because subjects were restricted to those having severe periodontitis.” (page 3, lines 20-21). In addition, we added the following limitation: “Moreover, modification of cut-off values of PD from ≥5 mm to ≥6 mm might result in underestimation of the predictability of the PRA model. Because only patients with severe periodontitis were included and residual sites with PD ≥6 mm are known as incompletely treated sites [6], we modified the model.” (page 8, lines 17-21).

- Reference/s to be included for "No previous study, including this one, has identified a significant association with the number of sites with PD>=6mm" (Page 7 Line 2-3).

Response: We added references (page 7, lines 9-11).

Response to Reviewer 2:

This is a good paper in terms of the scientific content. However, the language could be simplified to make reading the paper easier. There are some very long sentences that can be broken down, and there are some terms that can be shortened. An example specialist periodontists has been
described as (periodontal disease specialist dentists). In my opinion, there is no need to use 4 words to describe specialist periodontists since this is a scientific oral health journal.

The study also mentions aggressive and chronic periodontitis. It would be interesting for the authors to make a comment on the significance of this, because this classification was abolished in June 2018.

Response: According to the reviewer’s comments, we revised long sentences (page 2, lines 16-20; page 3, lines 2-5; page 4, lines 18-24; page 5, lines 6-9, 11-16; page 8, lines 8-12, 12-17), and changed the term “periodontal disease specialist dentists” to “specialist periodontists” (page 3, line 30; page 6, line 30; page 8, line 10).

We also deleted information on aggressive and chronic periodontitis in the Method section and Tables 1 and 2.