Reviewer’s report

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

Version: 0 Date: 12 Dec 2018

Reviewer: Rachel Chye

Reviewer's report:

Overall, this is an interesting study to investigate the available risk assessment models, i.e. Periodontal Risk Assessment (PRA), Therapy-Resistant Assessment (TRA) tool in predicting tooth loss secondary to periodontal disease during supportive periodontal treatment (SPT).

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.

- 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.

- 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.

- 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).
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Unable to assess

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
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I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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