Reviewer's report

Title: Segmentation Error in Spectral Domain Optical Coherence Tomography measures of the retinal nerve fibre layer thickness in Idiopathic Intracranial Hypertension

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Reviewer: Christoph Kernstock

Reviewer's report:

In the manuscript entitled "Segmentation Error in Spectral Domain Optical Coherence Tomography measures of the retinal nerve fibre layer thickness in Idiopathic Intracranial Hypertension", the authors provide a valuable reference point for the clinically relevant and well known segmentation errors of the Spectralis OCT algorithm in severe papilloedema. While the manuscript is written concisely, there are several comments that I would like to point out:

1. The punctuation needs rework to improve readability, there are many inconsistencies regarding
   - Citation-brackets after vs. before full stop. e.g. page 5, line 12 (...papilloedema. [2] Commercially…) vs line 29 (...thickness [2-4]. Autosegmentation…)
   - spaces between number and unit, e.g. page 6, line 18 "38.7kgm-2" vs "51.3 kgm-2"
   - spaces before and after Hyphen, e.g. page 9, line 12 ("76 - 581µm") vs. page 9, line 14 ("83-391µm")
   - At several locations the space is just missing, e.g. page 9, line 12: "...median176µm…” or page 9, line 19: "...125 µm)pre segmentation…”
   - inconsistent underlining of references (page 16ff)

2. Page 5, line 41: Please change to read "...to evaluate the extent and…” (delete "of")

3. For statistical analysis, RNFL area was used, but in clinical routine, RNFL thickness is the usual parameter. Are the results also significant when using thickness instead of area?

4. Page 6, line 57: Can you explain the relevance of "absence of posterior vitreous detachment" as criterion for this study?

5. Page 7, line 41: Please change to read "...automatically identifies the layer border and allows for manual correction of the segmentation."
6. Text/detailed explanation for figure 2 and figure 3 is missing
7. Figure 3 should also show post-resegmentation-correction images
8. Page 9, line 41: Please correct to read "Qualitative assessment…"
9. Page 12, line 19: Please correct "in deed" to "indeed"
10. Page 12, line 22: Please correct to read "... disagree on where to draw the margins"
11. Page 12, line 56: Please add a reference regarding decreased error due to the eye tracking system
12. Page 13, line 14: Please change "it's" to "its"
13. Page 13, line 27: Figure 3 does not show the paradigm the authors mention in the text
14. Page 13, line 39: was -> were
15. Page 13, line 51: Please change to read "...monitoring in IIH, hence recognition…"

16. As already shown in the IIHTT study for Zeiss Cirrus OCT, from clinical experience volumetric scans are less prone to artifacts in case of severe papilloedema also for Heidelberg Spectralis OCT. I would suggest the authors provide a clear recommendation to use volume scan pattern for assessment of papilloedema in the discussion instead of merely mentioning this finding of the IIHTT only regarding Cirrus OCT (page 10, line 46).

**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.

Yes

**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?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.
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