



## Letter to the Editor Regarding: “Agreement Between Trend-Based and Qualitative Analysis of the Retinal Nerve Fiber Layer Thickness for Glaucoma Progression on Spectral-Domain Optical Coherence Tomography”

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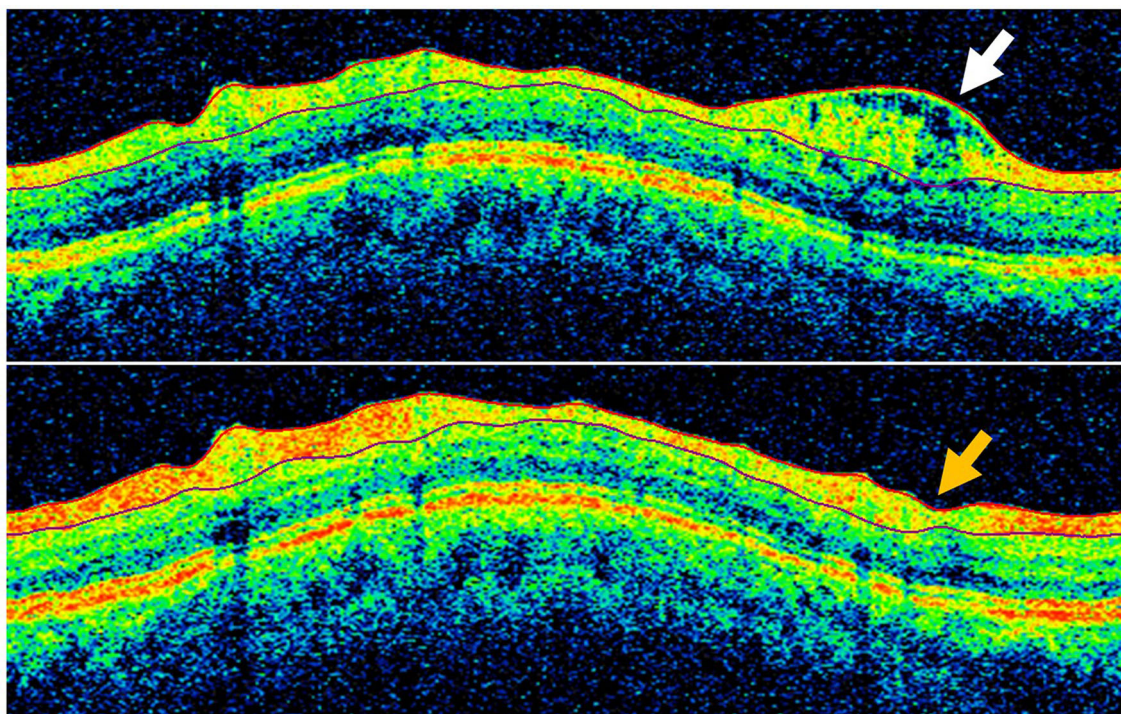
Dear Editor,

I read with great interest the article by Thompson et al. [1], regarding the detection of glaucoma progression by optical coherence tomography (OCT) retinal nerve fiber layer (RNFL) thickness analysis. The results of this study revealed that the presence of artifacts affected progression detection. As an example, the authors presented a case (Fig. 2) with an epiretinal membrane around the optic nerve head. In the figure legends, the authors commented: “However, the raw optical coherence tomography B-scans in the upper right panels demonstrate that this change is due to a decrease in traction from the epiretinal membrane, and is thus an example of false progression.” I agree that this change is a false

progression. I would like to suggest another possible cause of this phenomenon. In the fundus image, a prominent RNFL with thick striae around the optic nerve head is visible, and splitting of the RNFL with the presence of schisis cavities within the RNFL is found on the OCT B-scan images. These findings can be observed in conditions with peripapillary retinoschisis [2]. If the RNFL margins automatically identified by the OCT algorithm include the schisis cavity, it may cause RNFL thickening (Fig. 1) [2]. In the case presented in Fig. 2, RNFL thickening was observed in the first test (schisis cavity between the anterior and posterior RNFL borders), and the inner border of RNFL (red curved line) did not include the schisis cavity for the segmentation of RNFL in the most recent test. This change may be another cause of false RNFL thinning in this case.

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**Fig. 1** Cross-sectional retinal images obtained by optical coherence tomography (OCT) in a glaucomatous eye with peripapillary retinoschisis. When retinoschisis was present (top, white arrow), it was associated with a transient

increase in retinal nerve fiber layer thickness. Disappearance of retinoschisis (bottom, yellow arrow) induced a decrease in retinal nerve fiber layer thickness

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2. Hwang YH, Kim YY, Kim HK, Sohn YH. Effect of peripapillary retinoschisis on retinal nerve fibre layer thickness measurement in glaucomatous eyes. *Br J Ophthalmol*. 2014;98(5):669–74.