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RESPONSE TO LETTER

# Peripapillary and Subfoveal Choroidal Thickness in Retinal Vein Occlusions [Response to Letter]

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## Dear editor

We appreciate the authors' comment to our manuscript.[1] Many studies have been performed to discover the most reliable method to measure choroidal thickness. Despite extensive research, a standardized choroidal thickness measurement technique remains undetermined.[2–7] The authors chose to use manual segmentation method, a technique with drawbacks, but used by several authors.[8] To reduce bias and error, choroidal thickness was performed independently by two trained OCT graders and measurements from the two graders were compared to assess intergrader reproducibility. Moreover, OCT scans in which the outer border of the choroid could not be correctly identified and scans without good-quality image were excluded. The authors understand the concerning's regarding figure 1, since the shadow effect of hard exudates might make the identification of outer border of the choroid difficult.

It is known that choroidal thickness might be affected by several factors, such as axial length. A negative correlation between choroidal thickness and refractive error was described.[9–11] The authors tried to mitigate this confounder by excluding patients with high refractive errors, defined by as a spherical equivalent superior to 6 diopters. In this paper, two types of analysis were performed: a longitudinal evaluation of choroidal thickness overtime and a comparison of choroidal thickness between patients with central and branch retinal vein occlusion. In the first analysis, a comparison was performed between eyes of the same patients. As none of the patients had significant anisometropia, the axial lengths bias is probably irrelevant in this analysis. In the second analysis, indeed the authors compared eyes with different axial lengths and, thus, they recognized that some confounders might be present.

Moreover, despite the scarce literature on the topic, our results are similar to results published by Kang et al that found a reduction in peripapillary and subfoveal choroidal thickness after retinal vein occlusion.[2] Further studies are needed to assess the choroidal thickness in patients with this retinal vascular disease.

To date, there is no standard choroidal measurement technique (manual or automatic). We agree that a standardized and objective method for choroidal assessment is needed, because it has been proved that the choroidal thickness varies in ocular and systemic diseases and might be a key biomarker.

## Disclosure

The authors report no conflicts of interest in this communication.

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