Published in final edited form as:

Am J Ophthalmol. 2009 January ; 147(1): 186. doi:10.1016/j.ajo.2008.09.008.

Reply to Correspondence: Interpretation of Outer Retina Appearance in High Resolution OCT

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Dear Editor

We appreciate the interest of Drs. Byeon and Kang in our article.¹ Their representative OCT figure shows two lines beneath the inner segment (IS)/outer segment (OS) junction. They cite the article by Srinivasan that attributes the first line to the cone outer segment tips (COST).² They attribute the second line to the retinal pigment epithelium (RPE)/basement membrane (BM) boundary. Indeed, in our normal patients, the RTVue also shows two highly reflective lines associated with the RPE. It is possible that the inner line is associated with a photoreceptor-rpe junctional complex.

However, our patients are retinal dystrophy patients and there is only one line seen with the RPE. It would be speculative to state whether it is the photoreceptor outer segment or whether it is the apical RPE. The RPE itself is only a few microns thick. For normal subjects, the overall average of RPE thickness is 34+/- 4 microns thick. For dystrophy patients, the RPE is 26 +/-7 microns thick.

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Contributions to authors:

Analysis(JL, OT, AF, JH, DH), and interpretation of the data (JL, OT, AF, JH, DH); and preparation (JL, OT, AF, JH, DH), or approval of the manuscript (JL, OT, AF, JH, DH).

Statement about conformity with Author Information:

The University of Southern California IRB approved the research. Written informed consent was obtained for this study.

Financial Disclosures now or in the previous two years that might relate to this manuscript:

Dr. Huang has research grants, stock options, consulting relationship, travel support and potential patent royalty interest in Optovue, Inc. (Fremont, CA). Dr. Lim has received one honoraria for a lecture discussing the Optovue system. Dr. Ou Tan has received grant support from Optovue.

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We chose to use the inner RPE line and to call it the “inner RPE boundary”. We were using this term to define a parameter (ORL) which can be measured on all cases in order to measure outer versus inner retinal layer thickness. The overall conclusion of the paper is not changed by the choice to using inner RPE or the RPE BM as the point of reference. The bulk of the retinal thickness change between the normals and the controls is due to loss of outer retinal layers as compared to inner retinal layer thickness.

Sincerely,

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Acknowledgments

Funding/Support:

National Eye Institute of the National Institutes of Health R01 EY013516, EY495707 and EY03040, Research to Prevent Blindness, Age-related Macular Degeneration Research Fund, Optovue, Inc.

None.

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