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Comparison of Bruch's Membrane Opening-Minimum Rim Width among Those with Normal Ocular Health by Race

Lindsay A. Rhodes, Carrie E. Huisingh, Adam E. Quinn, Gerald McGwin, Jr., Frank LaRussa, Daniel Box, Cynthia Owsley, Christopher A. Girkin

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Purpose: To examine if racial differences in Bruch's membrane opening-minimum rim width (BMO-MRW) in spectral domain optical coherence tomography (SDOCT) exist, specifically between people of African descent (AD) and European descent (ED) in normal ocular health.

Design: Cross-sectional study

Methods: Patients presenting for a comprehensive eye exam at retail-based primary eye clinics were enrolled based on ≥1 of the following at-risk criteria for glaucoma: AD aged ≥ 40 years, ED aged ≥50 years, diabetes, family history of glaucoma, and/or pre-existing diagnosis of glaucoma. Participants with normal optic nerves on exam received SDOCT of the optic nerve head (24 radial scans). Global and regional (temporal, superotemporal, inferotemporal, nasal, superonasal, and inferonasal) BMO-MRW were measured and compared by race using generalized estimating equations. Models were adjusted for age, gender, and BMO area.

Results: SDOCT scans from 269 eyes (148 participants) were included in the analysis. Mean global BMO-MRW declined as age increased. After adjusting for age, gender, and BMO area, there was not a statistically significant difference in mean global BMO-MRW by race (P = 0.60). Regionally, the mean BMO-MRW was lower in the crude model among AD eyes in the temporal, superotemporal, and nasal regions and higher in the inferotemporal, superonasal, and inferonasal regions. However, in the adjusted model, these differences were not statistically significant.

Conclusions: BMO-MRW was not statistically different between those of AD and ED. Race-specific normative data may not be necessary for the deployment of BMO-MRW in AD patients.