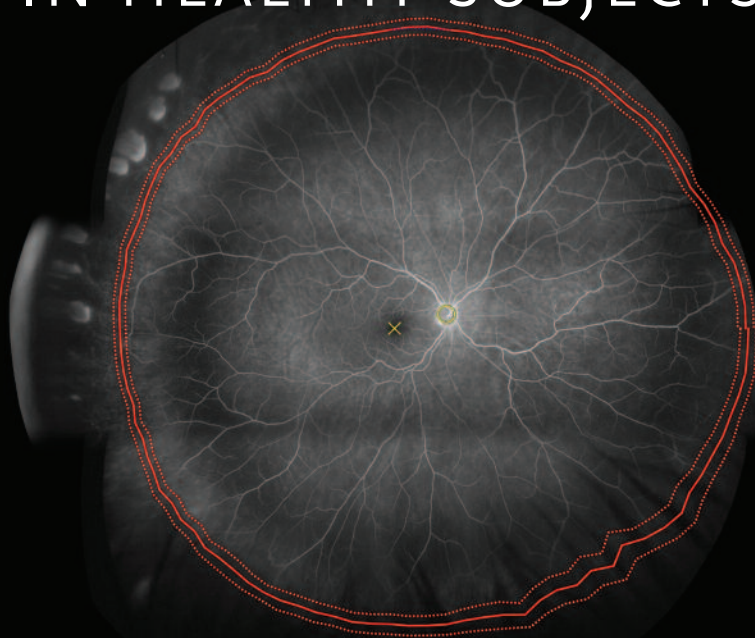


optomap

IDENTIFIES EXTENT OF RETINAL VASCULATURE IN HEALTHY SUBJECTS



A study published in *Ophthalmology* details the extent of perfused area in the healthy retina using measurements from optomap® *fa*.

The identification of peripheral retinal nonperfusion is thought to be of importance for the management of eyes with retinal vascular diseases such as retinal vein occlusion and diabetic retinopathy. Results from this study found that in a cohort of normal subjects, the mean radial surface distance from the center of the optic disc to the peripheral edge of the visible vasculature was 20.3 ± 1.5 mm and the mean area of the normal perfused retina was 977.0 mm².¹

The stereographic projection algorithm used in this study enabled the montaging of five 200° fields of view with correction of peripheral distortion and accurate quantification of the vascularized retina from UWF images¹. Previous reports have validated the ability of ProView™ software to correct peripheral distortion observed in ultra-widefield retinal images and provide precise and accurate measurements².

“With the increasing use of ultra-widefield imaging to evaluate and manage patients with retinal vascular disease, the normative data from this study may provide a useful reference when assessing the pathologic significance of findings in the setting of disease.”

Ophthalmology 2016¹

See how **optomap** will help you manage your patients.

For more information call **800-854-3039** or email **BDS@optos.com**

References:

¹ Singer et al. Ultra-widefield Imaging of the Peripheral Retinal Vasculature in Normal Subjects. *Ophthalmology* 2016

² Sagong et al. Assessment of Accuracy and Precision of Quantification of Ultra-Widefield Images. *Ophthalmology*. 20

Building *The* Retina Company

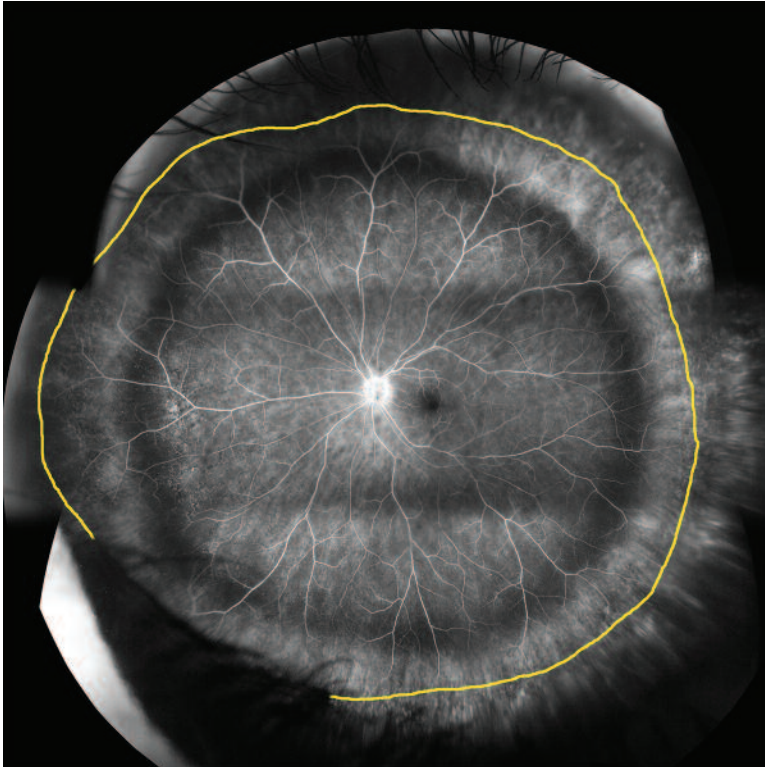


optos.com

CLINICAL SUMMARY

Ultra-widefield Imaging of the Peripheral Retinal Vasculature in Normal Subjects

Singer, Sagong, van Hemert, Kuehlewein, Bell, Sadda
Ophthalmology - 2015



optomap *fa* montaged image demonstrating the boundary of perfused retina

- 59 eyes of subjects with no ocular or systemic vascular disease were imaged using **optomap *fa***. Subjects were stratified by age in order to determine if age was a factor on extent of perfused retina.
- Analysis indicated that when using the center of the optic disc as the reference point, mean area of perfused retina was 977.0 mm² and distance to the peripheral vascular border was 20.3±1.4 mm².¹
- There were significant differences in the different quadrants with the order of temporal, inferior, superior, and nasal, with the distance being greatest in the temporal quadrant. It was found that there was no significant difference between right and left eyes or male and female participants.
- The distances to the perfused vascular border were significantly shorter in older individuals (≥60 years) than in younger subjects. This suggests that there may be a need to adjust the reference for normal perfused retinal area depending on the age.
- Previous studies reported the total retinal surface area to be 1133.8mm² and that retinal capillaries do not often reach the ora serrata. This study provides a map of the normal perfused retinal border. This map may have potential applications in quantitative studies of retinal vascular diseases, which have been reporting results as ischemic or leaking indices.¹
- The latest generation of Optos devices (*California*, *Daytona* and 200Tx) includes automated software tools for stereographic projection and registration that facilitate interdevice measurement comparisons.