
The results of a clinical validation study comparing Optos ultra-widefield imaging to Early Treatment Diabetic Retinopathy Study (ETDRS) protocol fundus photography, the gold standard for assessing severity of diabetic retinopathy, was completed and published in the American Journal of Ophthalmology.

ETDRS protocol seven standard field 30-degree color fundus photography (ETDRS photos) has long been the imaging benchmark for assessing diabetic retinopathy severity. This study reports that the Optos’ ultra-widefield non-dilated optomap images compared favorably with dilated ETDRS photos and dilated retinal examination in determining clinical severity of diabetic retinopathy and diabetic macular edema.

“Nonmydriatic ultrawide field images compare favorably with dilated ETDRS photography and dilated fundus examination (by a retinal specialist) in determining DR and DME severity: however they are acquired more rapidly.”


See how optomap will help you manage your diabetic patients.

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

Building The Retina Company
Nonmydriatic Ultra-wide Field Retinal Imaging Compared with Dilated Standard 7-Field 35-mm Photography and Retinal Specialist Examination for Evaluation of Diabetic Retinopathy

Silva, Cavellerano, Sun, Noble, Aiello
American Journal of Ophthalmology - 2012

This study validates Optos image quality for diabetic image assessment in the most stringent clinical study format.

optomap images had perfect agreement with the gold standard Early Treatment Diabetic Retinopathy Study (ETDRS) film for detecting diabetic retinopathy.

Non-mydriatic ultra-widefield images compared favorably with dilated fundus exam by a retinal specialist (MD) in determining diabetic retinopathy and diabetic macular edema severity.

- Sensitivity and specificity of ultra-widefield images for detecting and identifying diabetic retinopathy diagnosed on ETDRS photographs were 99% and 100%, respectively.

- optomap images were demonstrated to be “comparable with film, closely approximating or exceeding current standards for digital imaging with resolving power to detect most observable lesions.”

- “Exact diabetic retinopathy severity agreement between ultra widefield 100 imaging and ETDRS photography occurred in 84% with agreement within 1 level in 91%.” Demonstrating that Optos images are an effective tool for grading diabetic retinopathy.

- “Nonmydriatic ultra-widefield images exactly matched clinical examination results for diabetic retinopathy in 70% and were within 1 level in 93%.”

- The study shows 12-15% increase in exact agreement using Optos images compared to other published data on non-mydriatic cameras."