optomap
SHOWS EQUIVALENCE FOR
GLAUCOMA ASSESSMENT

Results from recently published clinical studies suggest that optomap® may play an essential role in glaucoma management[1, 2].

optomap ultra-widefield (UWF™) retinal imaging enables eyecare professionals to discover, diagnose, document and treat ocular pathology that may first present in the periphery. optomap is a high resolution single capture image of 82% or 200˚ of the retina. There is also an auto-montage optomap image which captures 97% of the retina or 220°.

One study found that overall glaucoma classification accuracy of detection of suspicion of glaucoma in SLO images is 93.9%. Currently, the gold standard tool for optic disc assessment is a clinical examination with dilated slit-lamp bio-microscopy carried out by a glaucoma specialist. These methods require manual post-imaging modifications that are time-consuming and subjective to image assessment by human observers. Therefore, it is necessary to automate this process. For efficiency, many clinics use traditional stereo fundus photo assessment of the optic disc and OCT to facilitate glaucoma detection.

Another study confirmed that optomap has almost perfect agreement with color digital stereoscopy when assessed by a glaucoma specialist[2].

"Our data suggest that ultra-widefield (UWF™) imaging may be suitable for diagnosing glaucoma in situations in which slit-lamp biomicroscopy or digital colour stereoscopy are not available[1]."

Ophthalmic Epidemiology, 2017

See how **opto**map will help you manage your glaucoma patients. For more information call **800-854-3039** or email **BDS@optos.com**

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optos®
**Building The Retina Company**

References:
[1] Quinn et al. Can UWF Retinal Imaging Replace Colour Digital Stereoscopy for Glaucoma Detection. Ophthalmic Epidemiology. 2017.
[2] Halee et al. Regional Image Features Model for Automatic Classification between Normal and Glaucoma in Fundus and Scanning Laser Ophthalmoscopy Images. J Med Syst. 2016

Can Ultra-widefield Retinal Imaging Replace Color Digital Stereoscopy for Glaucoma Detection?

A study in Ophthalmic Epidemiology, evaluated the potential use of UWF retinal imaging for glaucoma detection by evaluating the sensitivity of UWF in detecting pathological discs. It also investigated the reproducibility of vertical cup to disc ratio (VCDR). Additionally, authors reported on the agreement between UWF and the standard color digital stereoscopy (CDS) from the Northern Ireland Cohort for the Longitudinal Study of Aging (NICOLA)[1]. Previous studies have reported on the value of non-stereo fundus images to evaluate disc cupping stating no differences in diagnostic performance between monoscopic and stereoscopic images when detecting glaucoma.
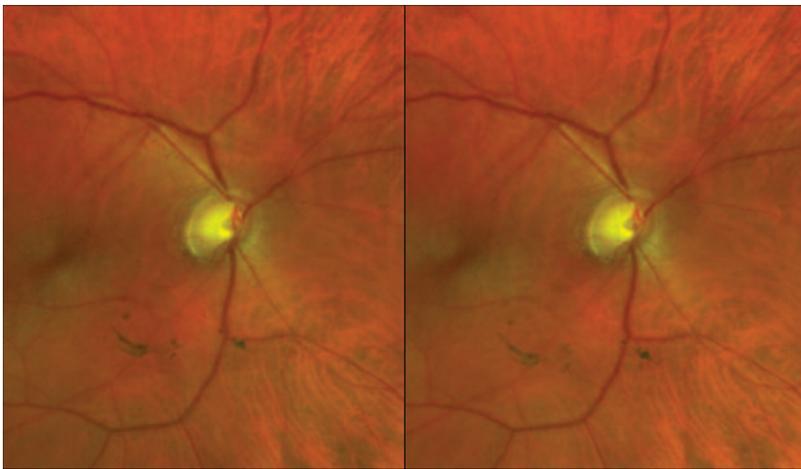
Stereo pair of optic nerve head images which can be viewed in Optos*Advance* using a stereo viewer for suspicion of glaucoma.

- This study demonstrated almost perfect agreement between color digital stereoscopy and the **opto**map when assessed by a glaucoma specialist[1].

- Grading of UWF **opto**map imaging has high reproducibility in evaluating vertical cup-to-disc ratio and agreement with stereoscopic optic disc imaging and may be suitable for glaucoma diagnosis in situations where color digital stereoscopy is not available[1].

- UWF **opto**map imaging may be suitable for diagnosing glaucoma in situations in which slit-lamp biomicroscopy or digital color stereoscopy are not available and further research about the comparative diagnostic performance of UWF and other imaging technologies may be warranted[1].

- An additional study in the Journal of Medical Systems, evaluated novel automatic glaucoma detection software and found glaucoma classification accuracy for traditional small-field fundus images is 94.4 % and accuracy of detection of suspicion of glaucoma in SLO images is 93.9 %[2].

- These results show that **opto**map can be used in conjunction with clinical examination methods to enhance the management of glaucoma.

References:
[1] Quinn et al. Can UWF Retinal Imaging Replace Colour Digital Stereoscopy for Glaucoma Detection. Ophthalmic Epidemiology. 2017.
[2] Halee et al. Regional Image Features Model for Automatic Classification between Normal and Glaucoma in Fundus and Scanning Laser Ophthalmoscopy Images. J Med Syst. 2016

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