PERIPHERAL CHANGES FOUND IN 97% OF PATIENTS



optomap® has demonstrated the presence of wide-ranging AMD-like pathologic changes even in those without central sight-threatening macular disease.¹ 97% of patients with age-related macular degeneration (AMD) have peripheral retinal changes associated with AMD.²

- Results from recently published clinical studies suggest that ultra-widefield (UWFTM) **opto**map *color*, autofluorescence (*af*), fluorescein angiography (*fa*) and indocyanine green angiography (*icg*) imaging has confirmed the presence of pan-retinal AMD-like pathologic changes in subjects with AMD, even in those without central sight-threatening macular disease.
- The overwhelming majority of subjects investigated were determined to have hard, crystalline, and soft drusen; retinal pigment epithelial changes; choroidal neovascularization (CNV) and atrophy evidenced by hypoautofluorescence and hyperautofluorescence in the peripheral retina.

"The results of the 10-year followon of AREDS2 participants demonstrate the extensive and relentless progression of the AMD lesions. The disease is not confined to the macula but extensive throughout the retinal and its periphery."³

— IOVS, 2021

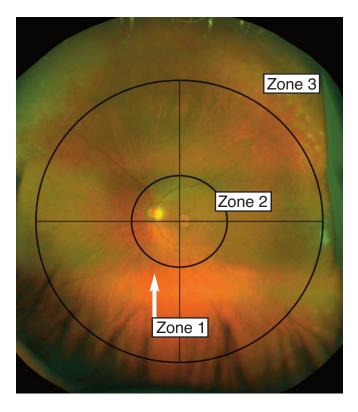
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CLINICAL SUMMARY

Peripheral Retinal Changes Associated with Age-Related **Macular Degeneration**



- In the OPERA study, 484 subjects underwent UWF optomap color and af imaging. For those with large drusen in the macular area, almost all of these cases also had drusen detected in the periphery, both zones 2 and 3. Drusen were found in 97% of eyes in Zone 2 and 77% of eyes in Zone 3. Super large drusen were found in 63% in Zone 2 and 39% in Zone 3.2
- The results of the 10-year follow-on of AREDS2 participants demonstrate the extensive and relentless progression of the AMD lesions.3
- In the previous publication¹, the Reykjavik Eye Study group found that the comparison of grading of macular abnormalities on UWF images with conventional digital fundus images (45°) showed no substantial differences between grading for AMD in the macula. UWF images were gradable in the macula, even those that fell short of grading standards on conventional fundus images. This is due to the capacity of laser beams to overcome problems with media opacities and because they have higher resolution in terms of sharpness and contrast than conventional color images.1
- Another recent study, looked at AMD subjects using UWF **opto**map *fa* and found that 84.59% had hyperfluorescent characteristics in which the main contributors were drusen, paving stone, and atrophic areas.4
- Other research has found that UWF optomap icg captured significant peripheral changes in 80% of AMD patients.5
- Age-related macular degeneration is best managed with multi-modal imaging and may be more than a "macular" condition but one that involves the entire retina.

Reference:

- 1. Lengyel et al. A Population-Based Ultra-Widefield Digital Image Grading Study for Age-Related Macular Degeneration-Like Lesions at the Peripheral Retina. Ophthalmology. 2015.
- 2. Chew et al. Peripheral Retinal Changes Associated with Age-Related Macular Degeneration in the Age-Related Eye Disease Study 2. Ophthalmology. 2017.
- 3. Progression of Age-Related Macular Degeneration measured by Ultrawidefield Imaging in the Age-Related Eye Disease Study 2 10 Year Follow-On. IOVS. 2021.
- 4. Vatavuk et al. Morphological and Angiographic Peripheral Retinal Changes in Patients with Age-Related Macular Degeneration. Ophthalmology Retina. 2017.
- 5. Kluflas. Feasibility and Clinical Utility of Ultra-Widefield Indocyanine Green Angiography. Retina. 2013.









