iCare MAIA Family

The gold standard of microperimetry

For better perception icare

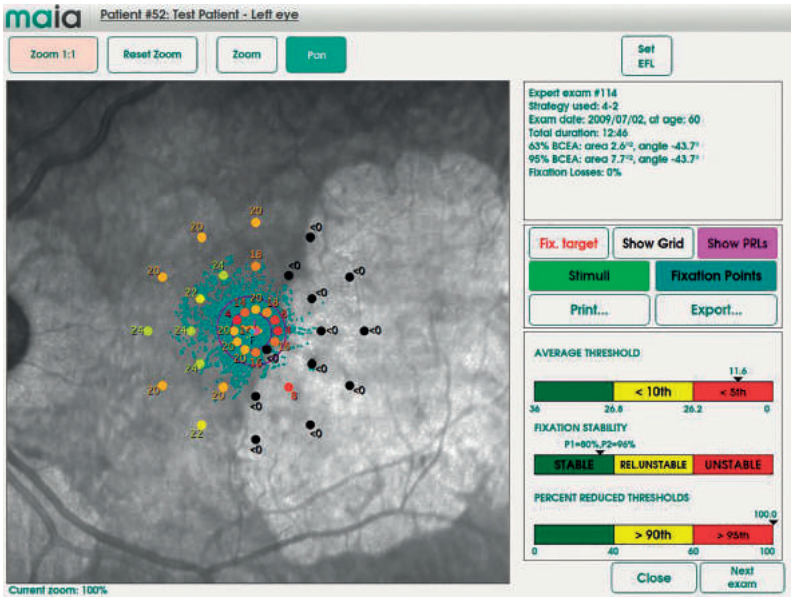
iCare MAIA Family
Microperimeters with confocal SLO

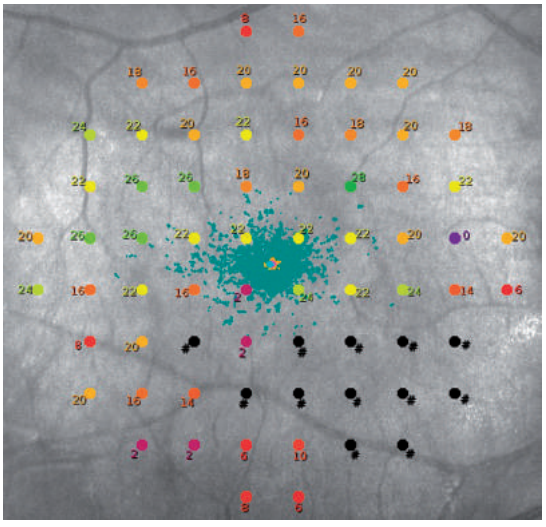
The iCare MAIA Family consists of two models, iCare MAIA and iCare S-MAIA. Both iCare MAIA models aid in the **detection and follow-up of diseases affecting the macula**, including but not limited to macular degeneration.

Macular structure-function analysis
Essential tool

Thanks to their combined structure-function analysis, the iCare MAIA models are essential tools for:

- Deriving correct diagnostic decision in a variety of retinal diseases
- Monitoring the progression of retinal pathologies
- Monitoring a treatment's efficacy
- Assessing macular function prior to cataract surgery
- Describing fixation characteristics prior to laser treatment
- Examining patients with unexplained vision loss
- Educating patients about their eccentric viewing





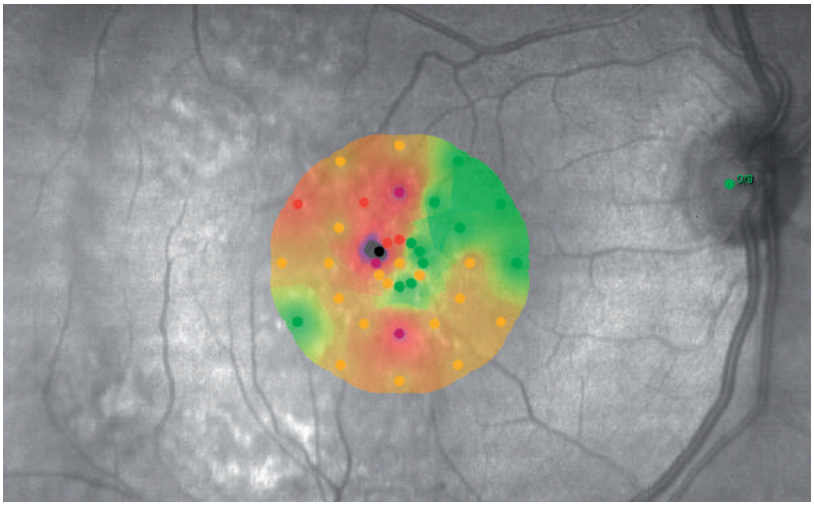
An example of a visual field test with 10-2 grid and 4-2 strategy (68 stimuli, full threshold).

Testing with iCare MAIA
Uncompromised functionality and reliability

iCare MAIA is regarded as the gold standard of microperimetry. Retinal images are acquired by confocal Scanning Laser Ophthalmoscopy (SLO). The high-quality **confocal SLO-based active retinal tracker** enables accurate, real-time compensation for eye movements.

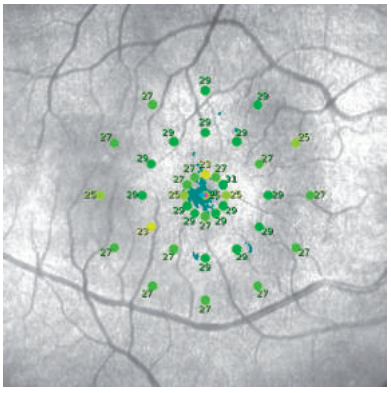
iCare MAIA performs microperimetry tests with supra and full-threshold strategies, and follow-up tests to monitor functional progression. Each exam provides a measure of retinal sensitivity and fixation analysis. The Follow-Up function will anatomically register follow-up tests to the baseline tests.

The confocal SLO technology ensures that eyes with pupils down to 2.5 mm and cataracts are tested effortlessly, precisely, and accurately.

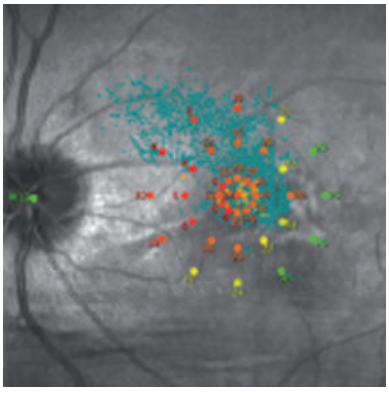


A supra-threshold test, used to examine pathologic patients, measuring 4 levels of sensitivity (0 dB, 5 dB, 15 dB, 25 dB). Typical duration (37 stimuli) is about 3 min per eye.

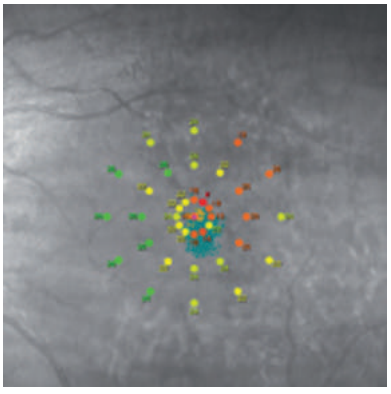
Clinical examples



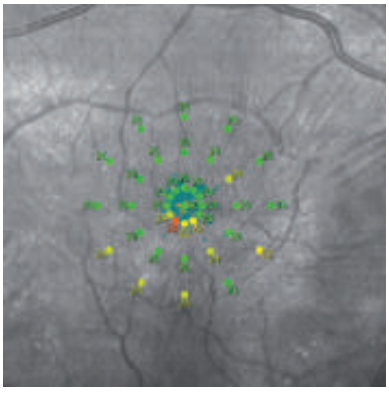
Early AMD
Reduced retinal sensitivity in localized macular areas can be correlated with the appearance of early stage AMD.



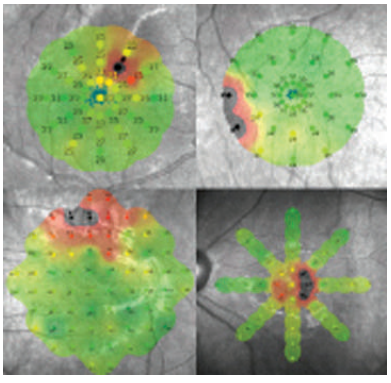
Severe AMD
The PRL has shifted over a low sensitivity area causing unstable fixation and visual discomfort.



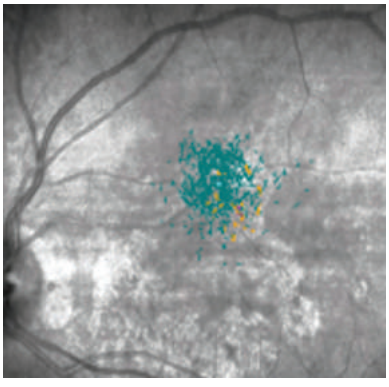
Macular Edema
Peri-foveal PRL and partially preserved macular sensitivity may indicate positive prognosis following treatment.



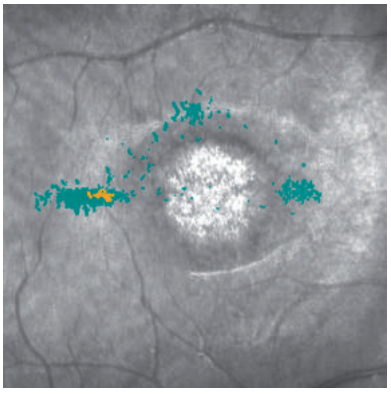
Macular Pucker
Traction lines, clearly visible on the SLO image, and localized functional losses explain reported visual discomfort.



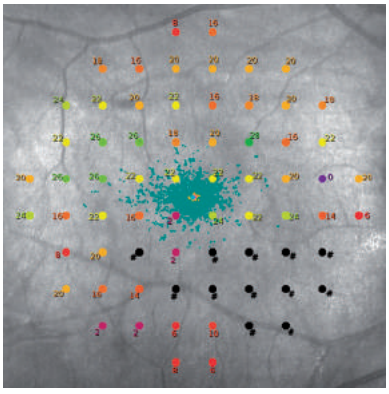
Interpolated color map
Interpolated sensitivity maps showing localized functional defects. Scotoma is represented in black.



Central Geographic Atrophy
The PRL has shifted in the superior hemi-field, with unstable fixation. This information is critical for eccentric viewing rehabilitation.



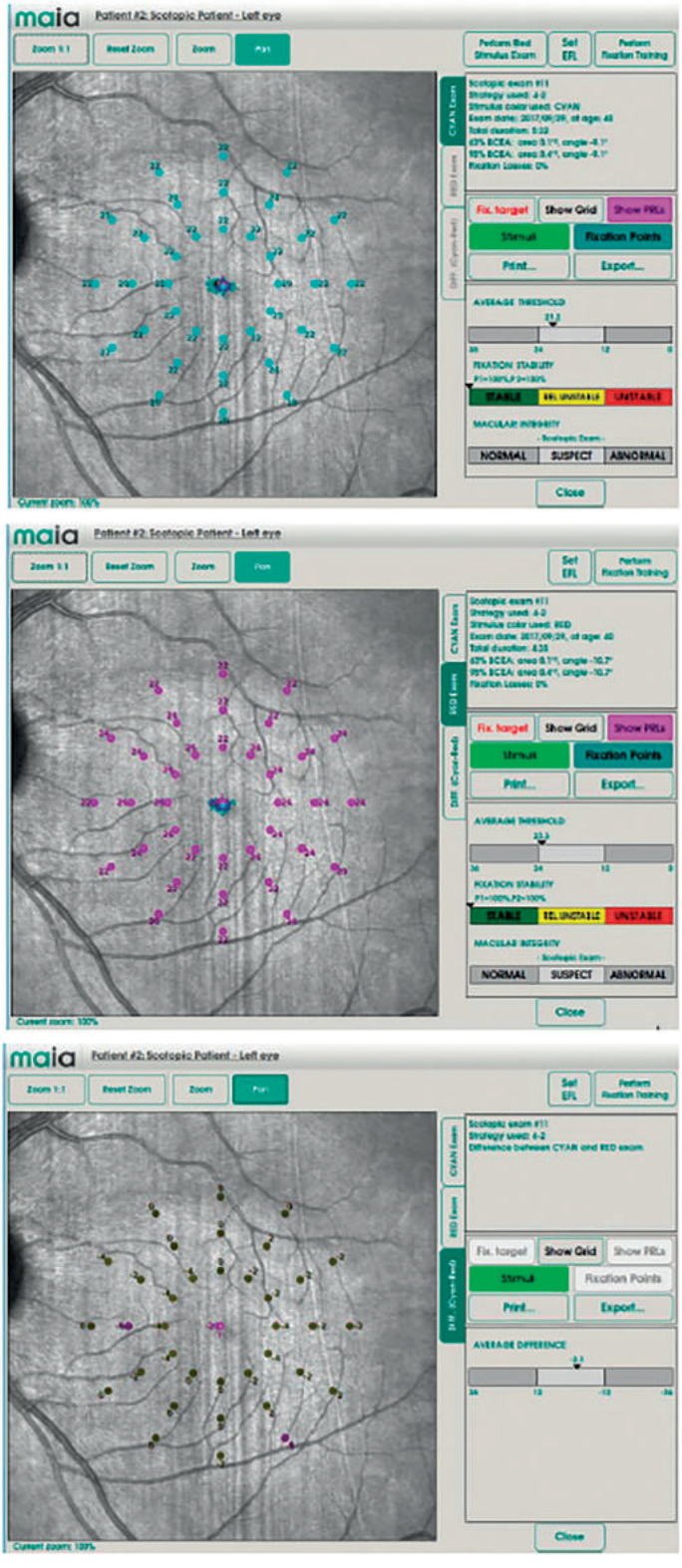
Stargardt's disease
Multiple PRLs may be relocated into a single region using iCare MAIA PRL training.



Glaucoma
Advanced stages of glaucoma may threaten central fixation. iCare MAIA can be used to assess the rate of disease progression.

iCare S-MAIA for scotopic testing
For early diagnosis and research of AMD

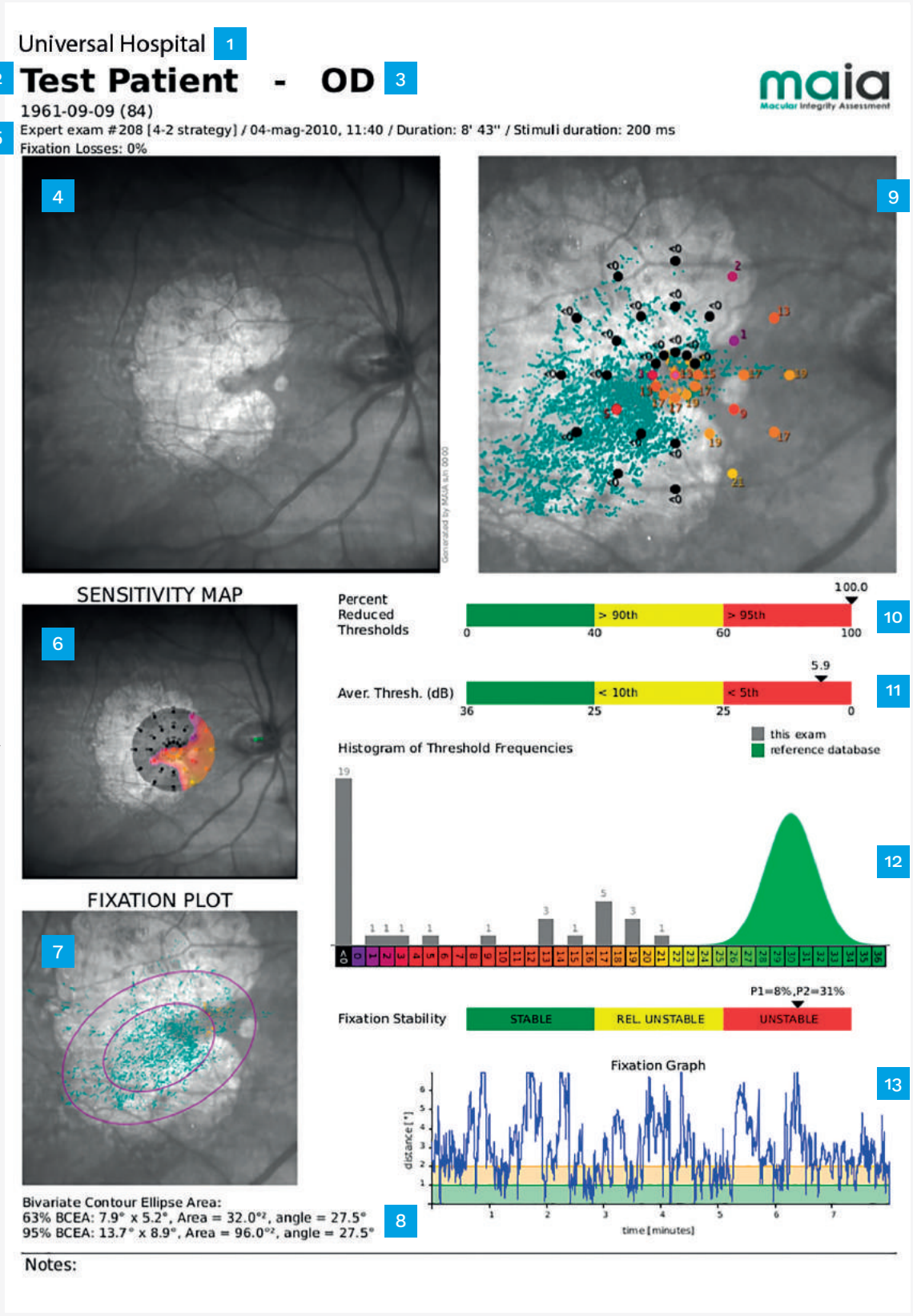
iCare S-MAIA is the model that also performs scotopic tests. In the scotopic mode, the color of the projected stimuli can be selected between cyan and red. The cyan scotopic test aims to stimulate the rod photoreceptors and to measure their sensitivity. The red scotopic test aims to measure the response of the red cone photoreceptors, without any interference due to the response of the rods.



iCare MAIA Printout

iCare MAIA contains a reference database for the quantitative comparison of retinal sensitivity to the corresponding normal ranges. iCare MAIA provides a detailed printout with all the collected information.

1. Clinic name
2. Patient info
3. Examined eye
4. SLO image of fundus
5. Exam info
6. Interpolated sensitivity map over full SLO image
7. Fixation Plot over zoomed SLO image and PRL identification
8. Bivariate Contour Ellipse Area indices
9. Sensitivity values (dB) and PRL over zoomed SLO image
10. Color Code Percent Reduced Thresholds*
11. Color coded Average Threshold (assessment with color coding only in the mesopic mode)
12. Histogram of Threshold values (grey) compared with normal distribution (green, only in the mesopic mode)
13. Fixation graph describing amplitude of eye movements vs. time



*Color coded Macular Integrity Index (only in mesopic mode) is used outside of the USA instead of Percent Reduced Thresholds.

Benefits at a glance

Smooth and straightforward operation thanks to high-quality retinal tracking.
Patients with cataracts and media opacities can be examined.
Eyes with small pupils down to 2.5 mm can be examined without dilation.
Great sensitivity (in mesopic and scotopic, threshold range 36 dB).
Cyan and red stimuli for scotopic testing.

Technical data

iCare MAIA Family	
Fundus Perimetry	Projection field: 30° x 30° Tracking speed: 25 Hz Stimuli size: Goldmann III Background luminance: 4 asb (<0.0001 asb in the S-MAIA scotopic mode) Maximum luminance: 1000 asb (8 asb in the S-MAIA scotopic mode) Stimuli dynamic range: 36 dB
Fundus Imaging	Line scanning laser ophthalmoscope Field of view: 36° x 36° Digital camera resolution: 1024 x 1024 pixel Optical resolution on the retina: 25 microns Optical source: infrared super luminescent diode (850 nm) Imaging speed: 25 fps Working distance: 33 mm
Other features	Non mydriatic operation (minimum pupil diameter: 2.5 mm) Auto-focus (-15D to +10D) Automatic OD/OS recognition
Dimensions	Weight: 23 kg (50.7 lbs) Size (WxHxD): 348 mm x 580 mm x 600 mm / 13.7” x 22.8” x 23.6”
Power requirement	Rated voltage: 100-240 VAC, 50-60 Hz Power consumption: 300 VA
Laser classification	Class I Laser Product according to IEC 60825-1

iCare. For better perception.

iCare is a trusted partner in ophthalmic diagnostics, offering physicians fast, easy-to-use, and reliable tools for diagnosis of glaucoma, diabetic retinopathy, and macular degeneration (AMD). Our product assortment includes automated TrueColor imaging devices, perimeters and handheld rebound tonometers.

We believe that ophthalmic care must be accessible, effortless, and reliable, and we aim to establish the next level of eye care.

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Centervue S.p.A.
Via San Marco 9H
35129 Padova, Italy
Ph. +39 049 501 8399
info@icare-world.com

Icare Finland Oy
Äyritie 22
01510 Vantaa, Finland
Ph. +358 9 8775 1150
info@icare-world.com

Icare USA, Inc.
4700 Falls of Neuse Rd. Ste 245
Raleigh, NC. 27609
Ph. +1 888.422.7313
Fax +1 877.477.5485
infoUSA@icare-world.com

www.icare-world.com

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