iCare COMPASS

Automated Tracked Perimetry

For better perception **icare**

iCare COMPASS
Bringing the visual field analysis to the next level

Automated Tracked Perimetry overcomes limitations in visual field testing when compared to Standard Automated Perimetry (SAP). iCare COMPASS® is an automated perimeter combined with an active retinal tracker and a scanning ophthalmoscope. This advanced technology provides retinal sensitivity and fixation analysis, as well as TrueColor Confocal imaging of the retina.

Benefits at a glance

- Fast
- Accurate and repeatable results thanks to the active retinal tracker
- Trial lens free operation
- Auto-alignment
- Easy to clean
- Patient can rest, close eyes, blink without operator interventions and data loss
- Confocal TrueColor fundus imaging

Visual field test
Full compatibility with SAP

As a perimeter, iCare COMPASS offers full compatibility with standard 24-2, 30-2 and 10-2 visual field testing with ZEST Fast, ZEST and full threshold strategies.

The iCare COMPASS also includes suprathreshold tests like the quick suprathreshold test able to check for visual field loss in as fast as 30 seconds.
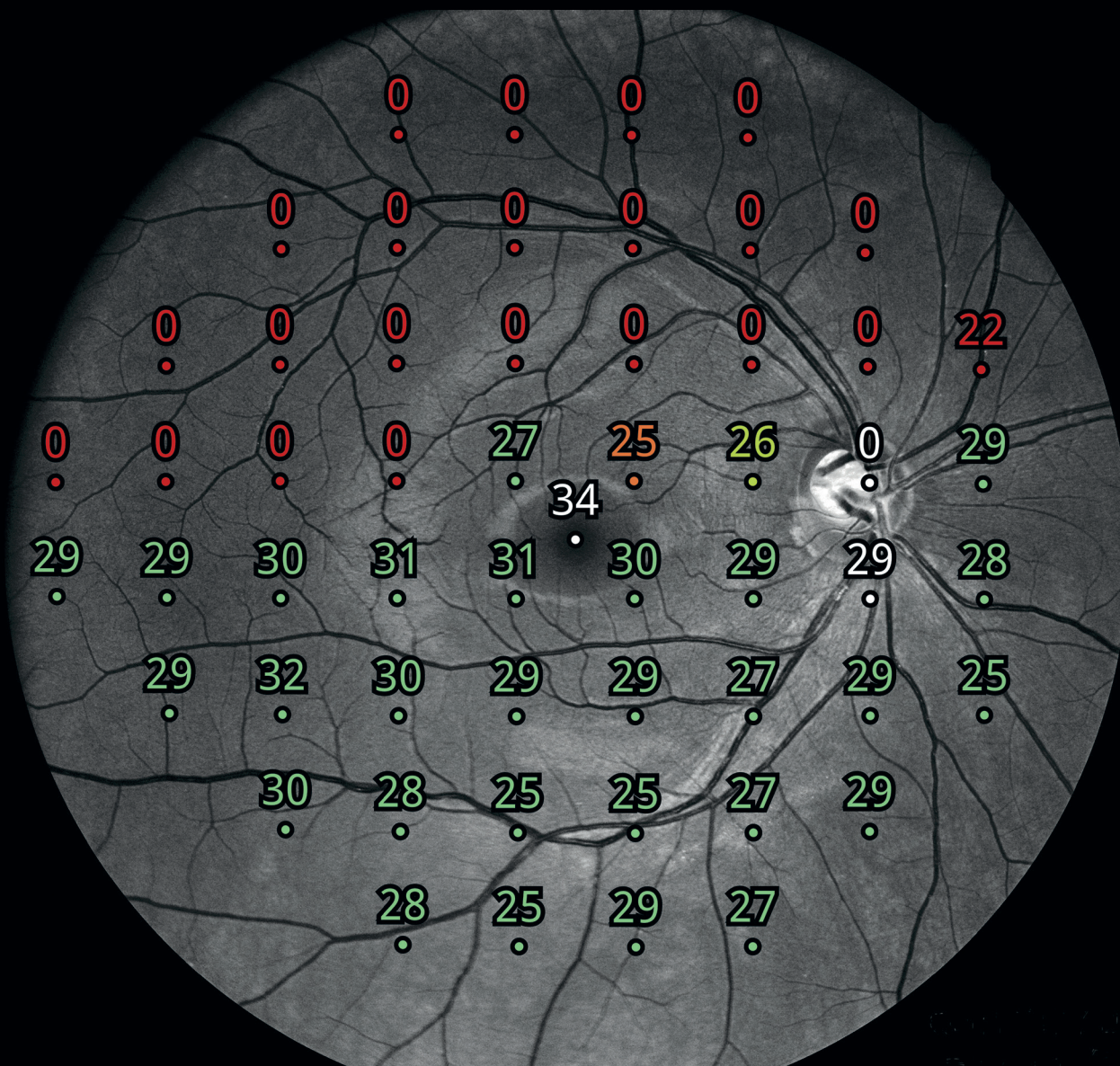

24-2 test performed with iCare COMPASS.

Active Retinal Tracking
Increased reliability in case of fixation losses

Automated, continuous tracking of eye movements allows active compensation for fixation losses. Perimetric stimuli automatically reposition prior to and during projection based on the current eye position. Retinal tracking is at the heart of Automated Tracked Perimetry.
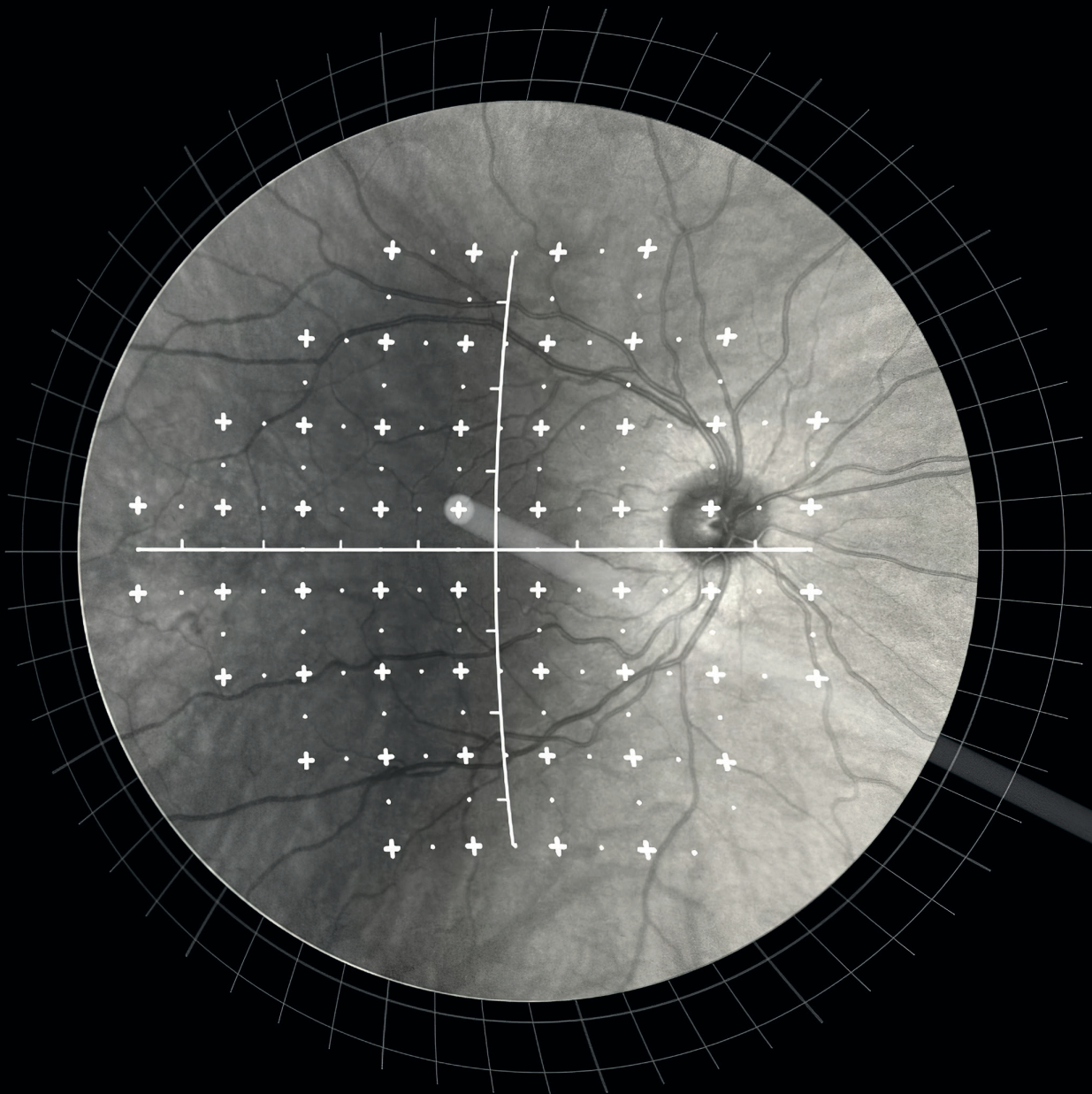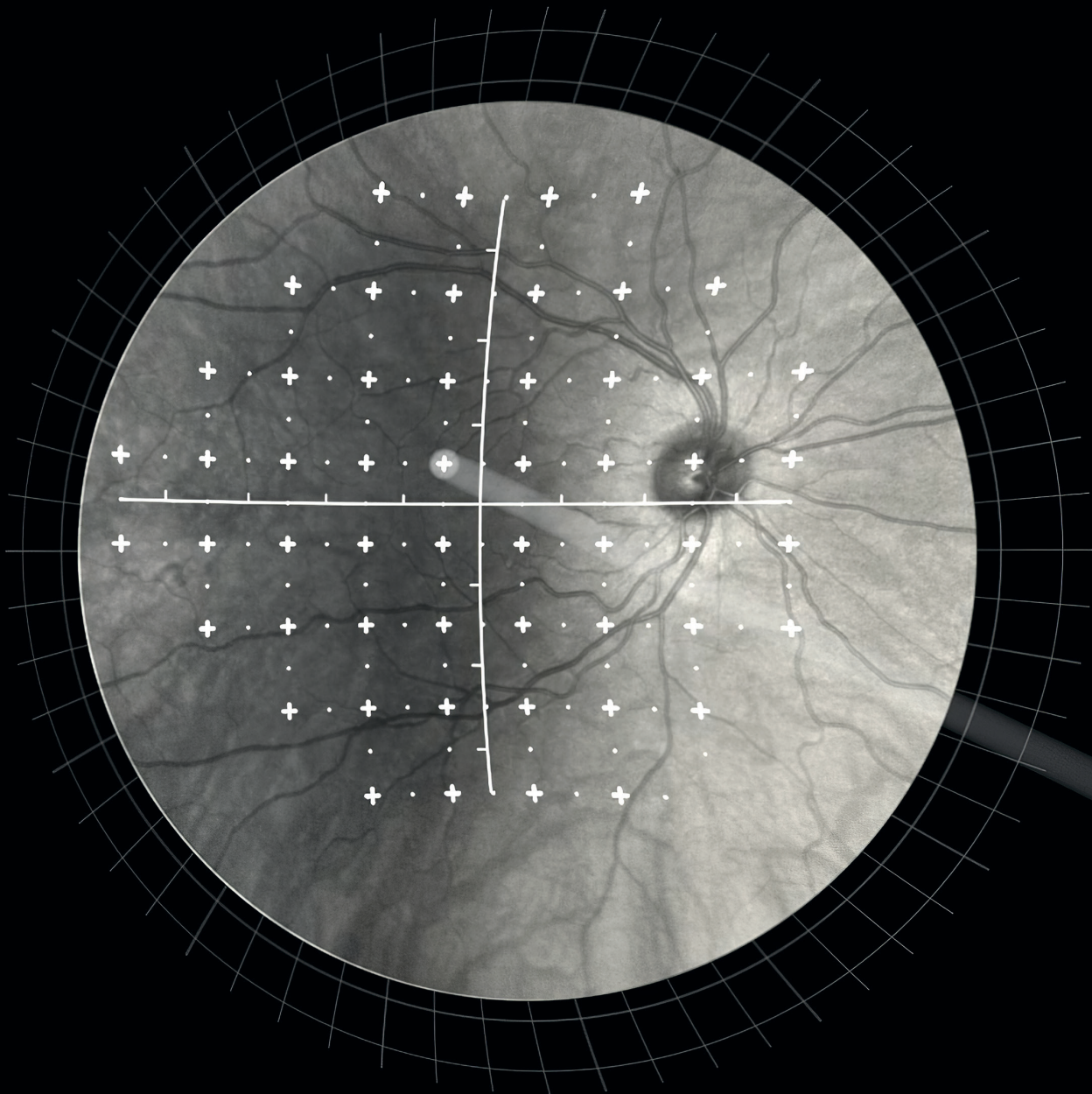
Active Retinal Tracking is critical to ensure accurate correlation between function (i.e. retinal threshold values) and structure (fundus image) as well as the reliability of visual field tests measured over time.

In the absence of Active Retinal Tracking, any shift in eye position occurring at the time of stimuli projection could easily produce artifacts. Without this mechanism, inaccurate sensitivity values can occur causing unreliable results.

Easy to use
No need for trial lenses

Traditional SAP is performed through refractive correction with trial lenses, which increases examination time and may induce artifacts. iCare COMPASS is equipped with an automatic refractive correction system (auto-focus), which removes the need for trial lenses and decreases examination time.

ZEST Fast
More time savings

The ZEST Fast strategy reduces the test time by 30% in glaucoma patients and 40% in individuals with healthy eyes compared to the ZEST strategy keeping the same accuracy and reliability. The ZEST Fast can be selected for the grids 24-2, 30-2 and 10-2.

Smart Progression Analysis
Excellence in follow-up

The Smart Progression analysis (SPA) feature is a comprehensive and illustrative follow-up report including analysis for 24-2, 30-2 and 10-2 grids. The analysis includes global MD or FPDI trend (like VFI), progression event, cluster MD trend (RNFL bundles) and a point-wise trend analysis. The SPA also includes a comparison of two baseline exams and the last follow-up with a grayscale, deviation map and TrueColor ONH images.
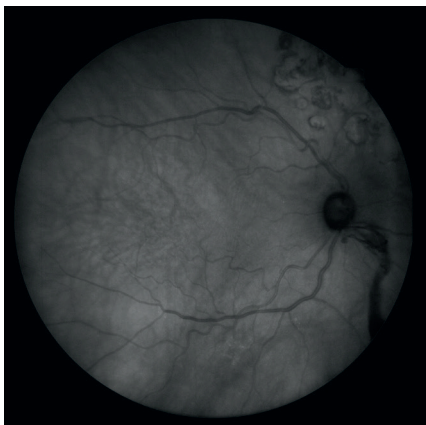
TrueColor Confocal Imaging
Enhancing diagnostic and prognostic capabilities in disease management

For the first time in a visual field test, iCare COMPASS provides 60° confocal images of the retina in different modalities: TrueColor, Infrared and Red-free. This fundus evaluation aids in assessment of eye diseases.

TrueColor Image

Infrared image

Red-free image

SmartMosaic
A wider horizontal view

The SmartMosaic* feature enables acquisition of high-resolution TrueColor images horizontally from the posterior pole to the periphery and creation of a seamless 100° montage.
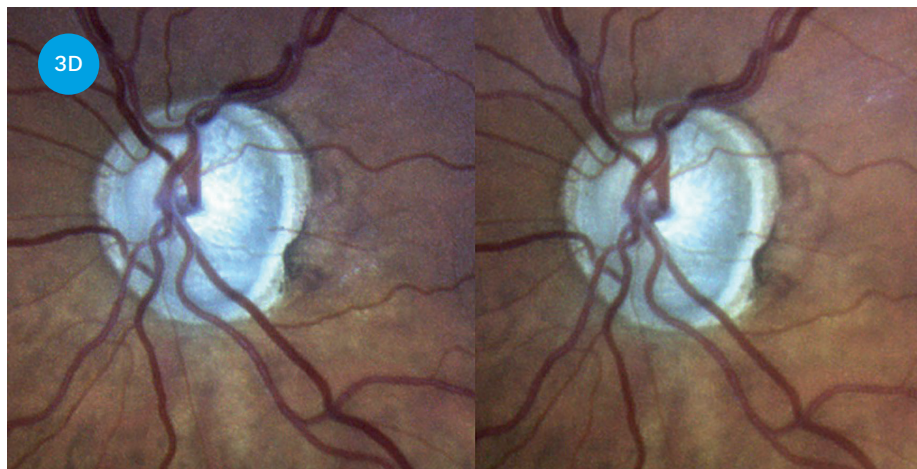

*Available under a SW license.

Stereo Viewer technology
Detailed 3D visualization of the ONH

The unique 3D Stereo technology automatically captures two separate photos of the nasal field.

Remote Viewer software*
Seamless connectivity without the need for a dedicated application

iCare COMPASS offers embedded capabilities for network connectivity, for both remote **data review** and data backup. The Remote Viewer is a browser-based software that allows for an exam review from any network computer on the same local area network (LAN), without the need for a dedicated application.

The Remote Viewer provides image comparison tools, annotations, post-processing tools and more.
- Images taken at different visits can be compared by flickering (alternating) images facilitating the detection of morphologic changes over time
- Cup-to-disc ratio - can be viewed and stored
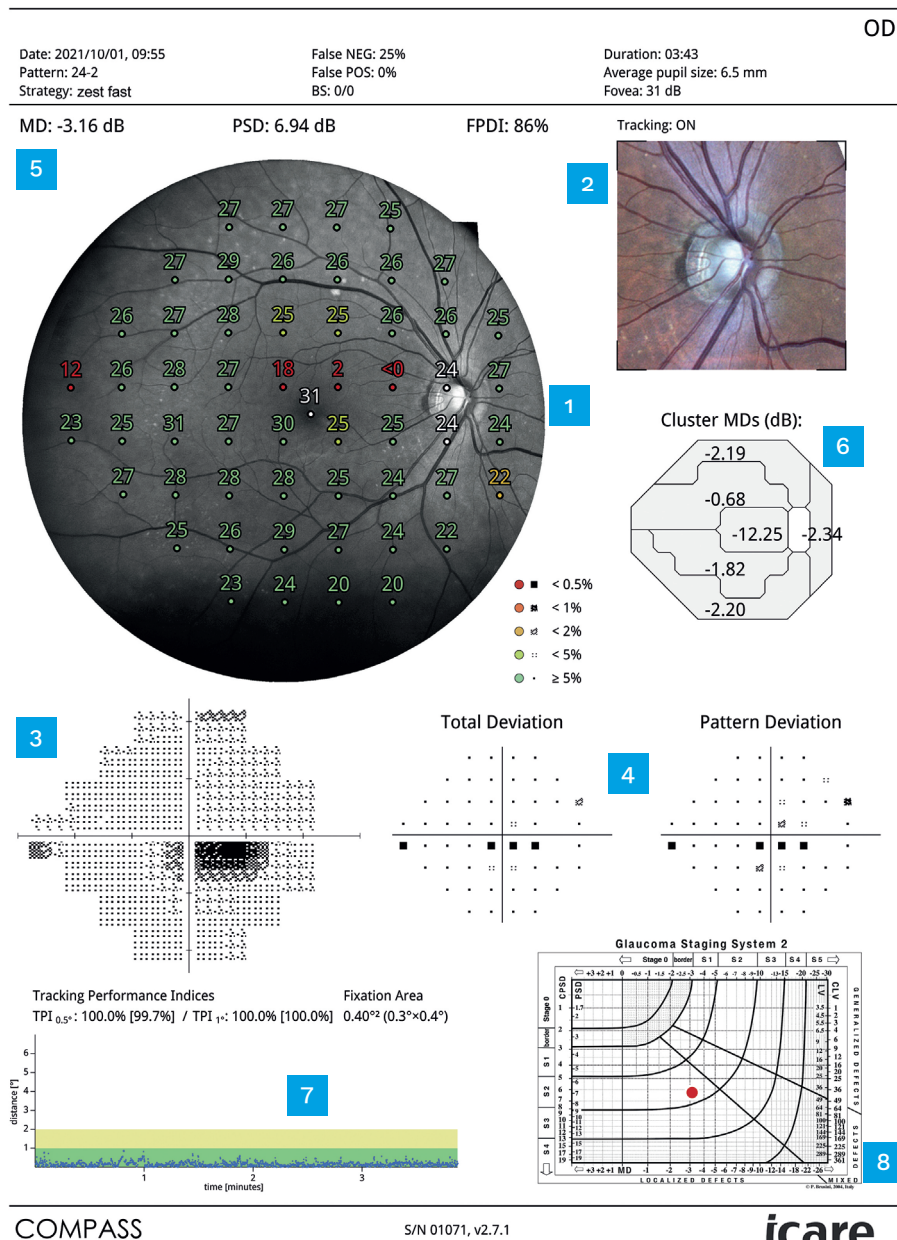- Side-by-side view of two images
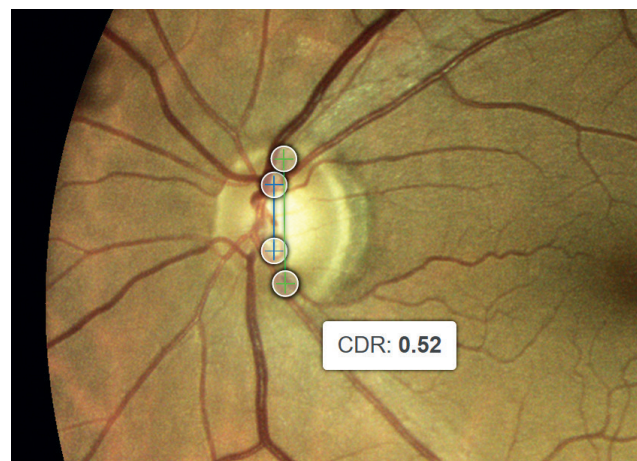
*Multiple concurrent accesses available under license.

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iCare COMPASS **reports**

Exam report

1 Automated Tracked Perimetry (dB) over Red-free image

2 Color image of ONH

3 Grayscale map

4 Deviation maps

5 Mean Deviation, Pattern Standard Deviation & Fundus Perimetry Deviation Index

6 Mean Deviation Cluster

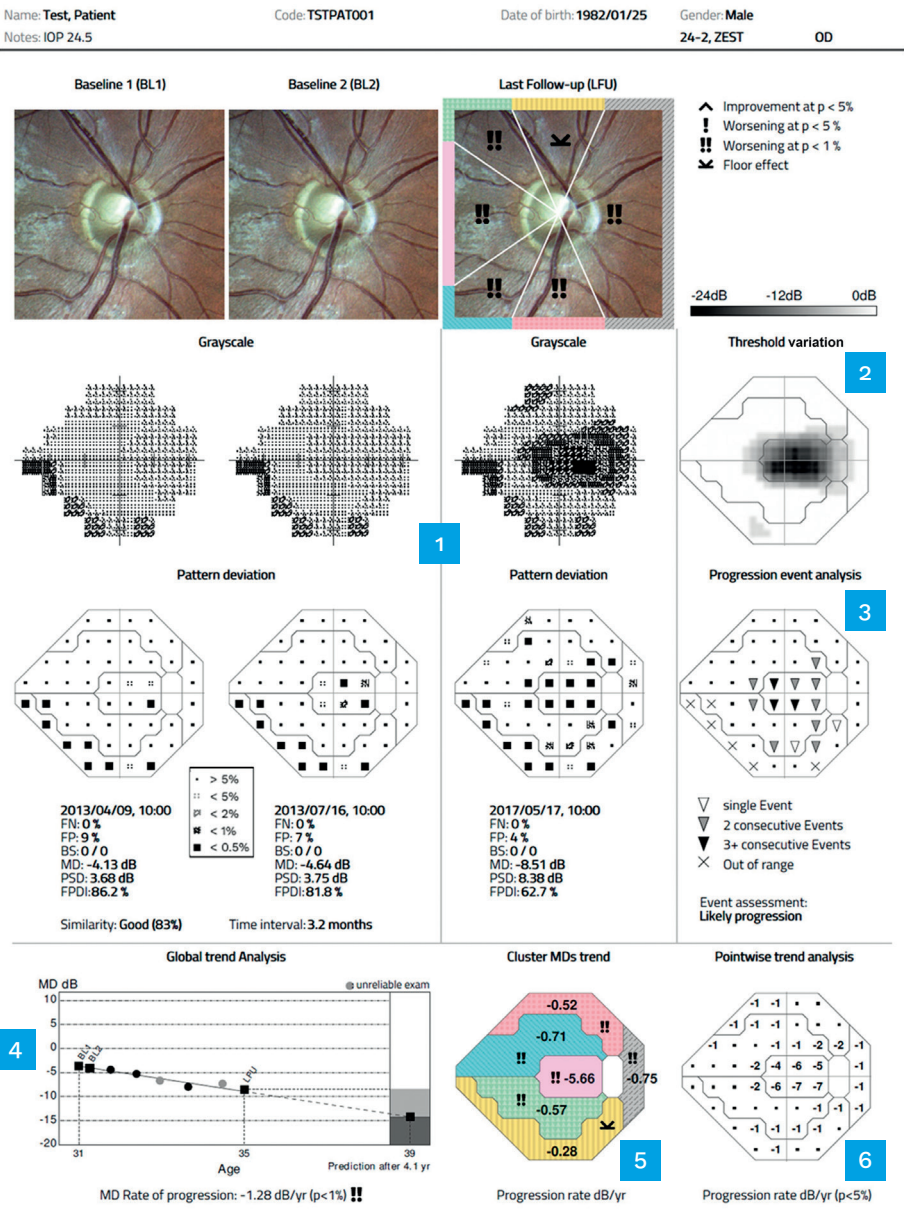**7** Fixation plot

8 Glaucoma Staging System 2

OD

Date: 2021/10/01, 09:55
Pattern: 24-2
Strategy: zest fast

False NEG: 25%
False POS: 0%
BS: 0/0

Duration: 03:43
Average pupil size: 6.5 mm
Fovea: 31 dB

MD: -3.16 dB   PSD: 6.94 dB   FPDI: 86%   Tracking: ON

Cluster MDs (dB):
-2.19
-0.68
-12.25   -2.34
-1.82
-2.20

Legend:
< 0.5%
< 1%
< 2%
< 5%
≥ 5%

Total Deviation   Pattern Deviation

Tracking Performance Indices   Fixation Area
$TPI_{0.5°}$: 100.0% [99.7%] / $TPI_{1°}$: 100.0% [100.0%]   0.40°² (0.3°×0.4°)

Glaucoma Staging System 2

COMPASS   S/N 01071, v2.7.1   icare

iCare COMPASS **reports**

Smart Progression Analysis Report (SPA)

1 Overview of two baseline tests and the last follow-up

2 Threshold variation

3 Progression event analysis with expected progression assessment

4 Global trend analysis with expected loss at 3-5 years

5 Cluster MDs' trend

6 Pointwise trend analysis

Technical data

iCare COMPASS	
Class and type of applied part	Class II, type B (according to IEC 60601-1)
Automated Tracked Perimetry	Projection field: 30° (radius) Background luminance: 31.4 asb Maximum luminance: 10000 asb Dynamic range: 0 - 50 dB Stimulus size: Goldmann III Stimulus duration: 200 ms Test strategies: ZEST, 4-2, ZEST Fast Threshold tests: 24-2, 30-2, 10-2 Suprathreshold testing Quick Suprathreshold testing Fixation control: 25 Hz automated retinal tracking Automatic pupil size measurement
Fundus Imaging	Field of view: 60° (diameter) and 100° horizontal montage of three images (SmartMosaic*) Bi-focal Stereo Image of the ONH Sensor resolution: 5 Mpixel (2592x1944) Light source: infrared (825-870 nm) and white LED (440-650 nm) Imaging modalities: color, infrared, red-free Resolution: 17 μm
Other features	Automatic operation: auto-alignment, auto-focus, auto-retinal tracking, auto-pupil tracking, auto-exposure, auto-capture Non-mydriatic operation: minimum pupil size 3 mm Working distance: 28 mm Auto-focusing adjustment range: -12D to +15D Tablet operated, with multi-touch, color display Ethernet connection DICOM support, modality worklist Hard drive: SSD, 480 GB or higher
Remote Viewer	Manual cup to disc calculation (on color picture) Flickering Side by side view of two images
Dimensions	Weight: 25 Kg / 55 lbs Size (WxDxH): 360 mm x 620 mm x 590 mm / 14.2" x 24.4" x 23.2"
Electrical requirements	Rated voltage: 100-240 VAC, 50-60 Hz Power consumption: 80 W

*Available under a SW license.

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 age-related 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.

CE 0123

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 World Australia
Level 9, 276 Flinders Street
Melbourne Victoria 3000,
Australia
Ph. +61 3 85927079
infoAU@icare-world.com

Icare USA, Inc.
8601 Six Forks Rd., Ste 310
Raleigh, NC 27615
Ph. +1 888.422.7313
Fax +1 877.477.5485
infoUSA@icare-world.com

www.icare-world.com

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