CIRRUS HD-OCT from ZEISS

How to read the reports

ZEISS CIRRUS™ HD-OCT analysis reports offer clinically relevant qualitative and quantitative information in an easy-to-read format. Analysis results can be printed, viewed via CIRRUS Review Software, or integrated with other instrument data through the FORUM® Eye Care data management system. This guide explains the various areas of each report and the valuable information it provides for your clinical assessment.

This guide is intended to help provide basic information, it is not intended to replace your User Manual.

Index

AngioPlex OCT Angiography

ZEISS CIRRUS HD-OCT

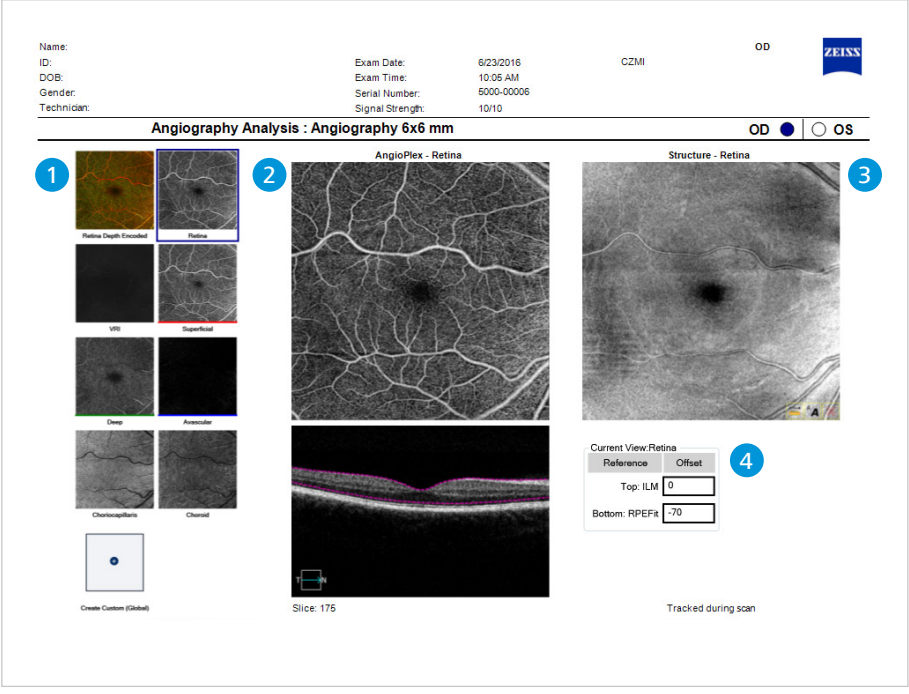
Three angiography scan patterns allow visualization of retinal and choroidal vasculature without the need for contrast dye injection. Depth-encoded data enables viewing of individual capillary plexuses in isolation, providing complementary information to conventional angiography.

1. **Preset Maps** display different layers of retinal and choroidal blood flow based on predefined segmentation. The Superficial, Deep, and Avascular maps are combined to generate the Retina Depth Encoded map, with each layer displayed in a different color.

2. **Angiography *En face* image** displays blood flow as a bright signal, whereas dark areas represent no flow, or flow too slow to detect. The B-scan below shows the corresponding segmentation (magenta lines).

3. **Structural *En face* image** is displayed alongside the angiography *En face*, and can be used to rule out the presence of artifacts.

4. **Layer Reference tool** allows for the adjustment of the top and bottom layers of the displayed map.

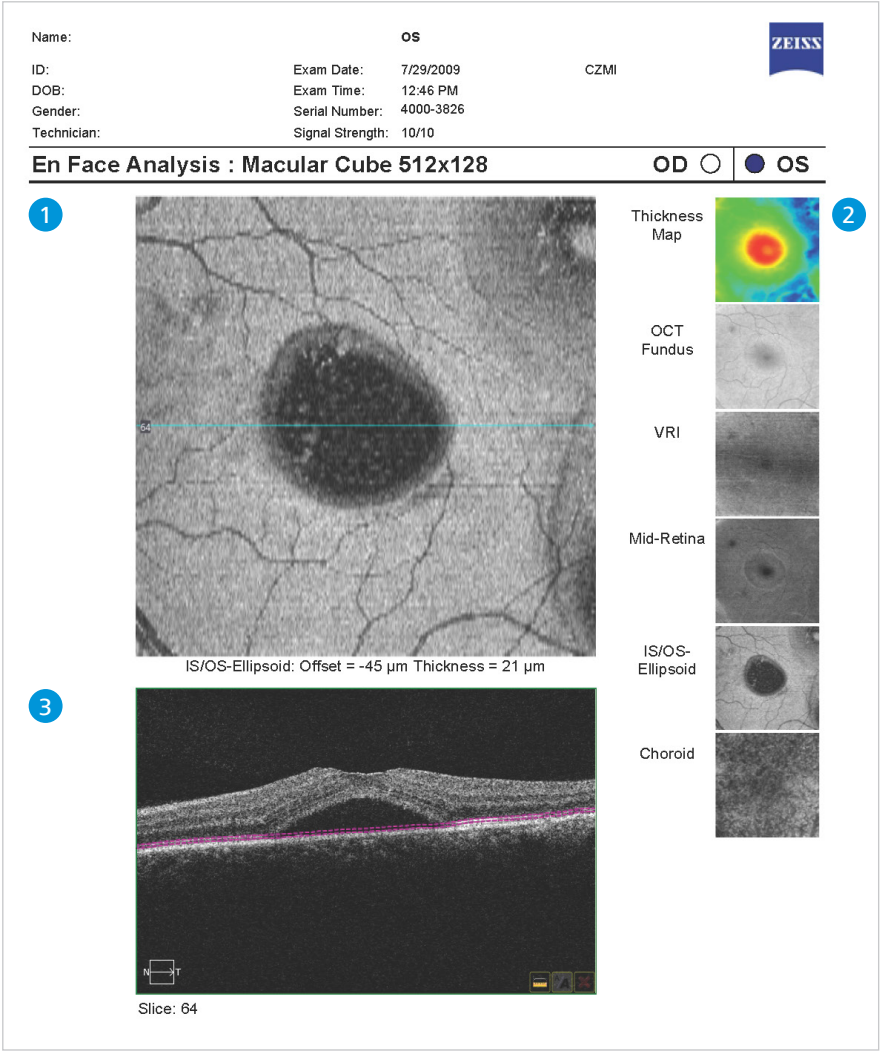


En face Analysis

ZEISS CIRRUS HD-OCT

The *En face* Analysis allows visualization of the OCT structural images in an *En face* view. Preset views are provided for different retinal and choroidal layers. These views display the layers in isolation to assist in the assessment of retinal structural changes.

1. ***En face* image** represents an average signal intensity value for each A-scan location through the defined depth of the slab. The cyan line represents the slice location of the B-scan in [3].
2. **Preset** displays show different sections of retinal and choroidal tissue based on predefined segmentation. Each different section may show disruption depending on the disease.
3. **B-Scan** shows the currently displayed slab segmentation (magenta lines).



Advanced RPE Analysis

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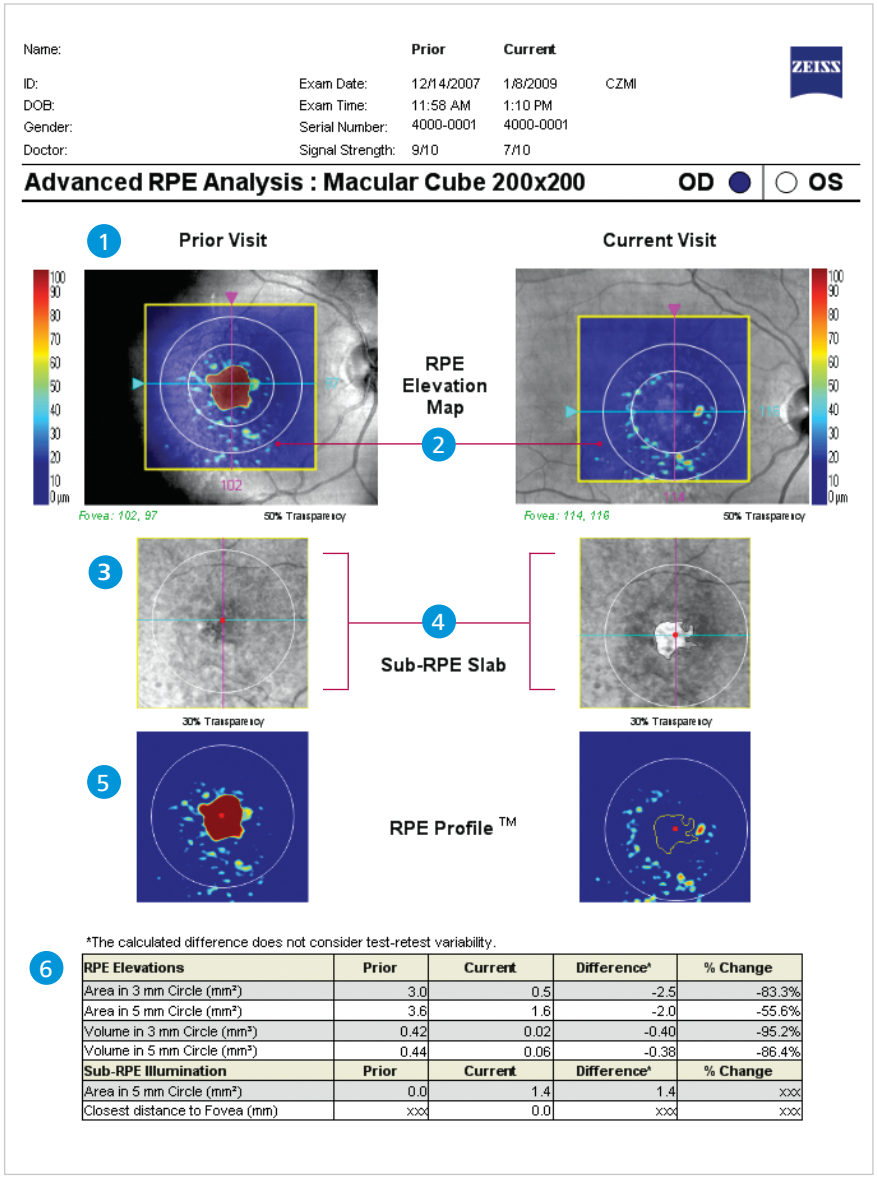
Based on the Macular Cube 512x128 or 200x200 scan, this analysis provides information on RPE elevation (area and volume) and Sub-RPE illumination (area and distance to fovea) for both the current and prior visits.

1. **RPE Elevation Map** overlaid on fundus image. Note: The minimum RPE elevation that the software will include in the quantitative result is 19.5 µm.
2. **Circles on the RPE Elevation Map** 3 mm and 5 mm in diameter, centered on the fovea location.
3. **Sub-RPE Slab,** an *En face* image of the reflectivity of tissue beneath Bruch's membrane. The automatic Sub-RPE illumination segmentation is shown with an outline.
4. **Fovea location coordinates.**
5. **RPE Profile™,** a map that combines the RPE Elevation Map and the areas of Sub-RPE illumination identified by the software, outlined in yellow.
6. **Table of values,** including assessment of change versus prior period.



RPE Elevations	Prior	Current	Difference*	% Change
Area in 3 mm Circle (mm²)	3.0	0.5	-2.5	-83.3%
Area in 5 mm Circle (mm²)	3.6	1.6	-2.0	-55.6%
Volume in 3 mm Circle (mm³)	0.42	0.02	-0.40	-95.2%
Volume in 5 mm Circle (mm³)	0.44	0.06	-0.38	-86.4%
Sub-RPE Illumination	**Prior**	**Current**	**Difference***	**% Change**
Area in 5 mm Circle (mm²)	0.0	1.4	1.4	xxx
Closest distance to Fovea (mm)	xxx	0.0	xxx	xxx

Macular Thickness Analysis

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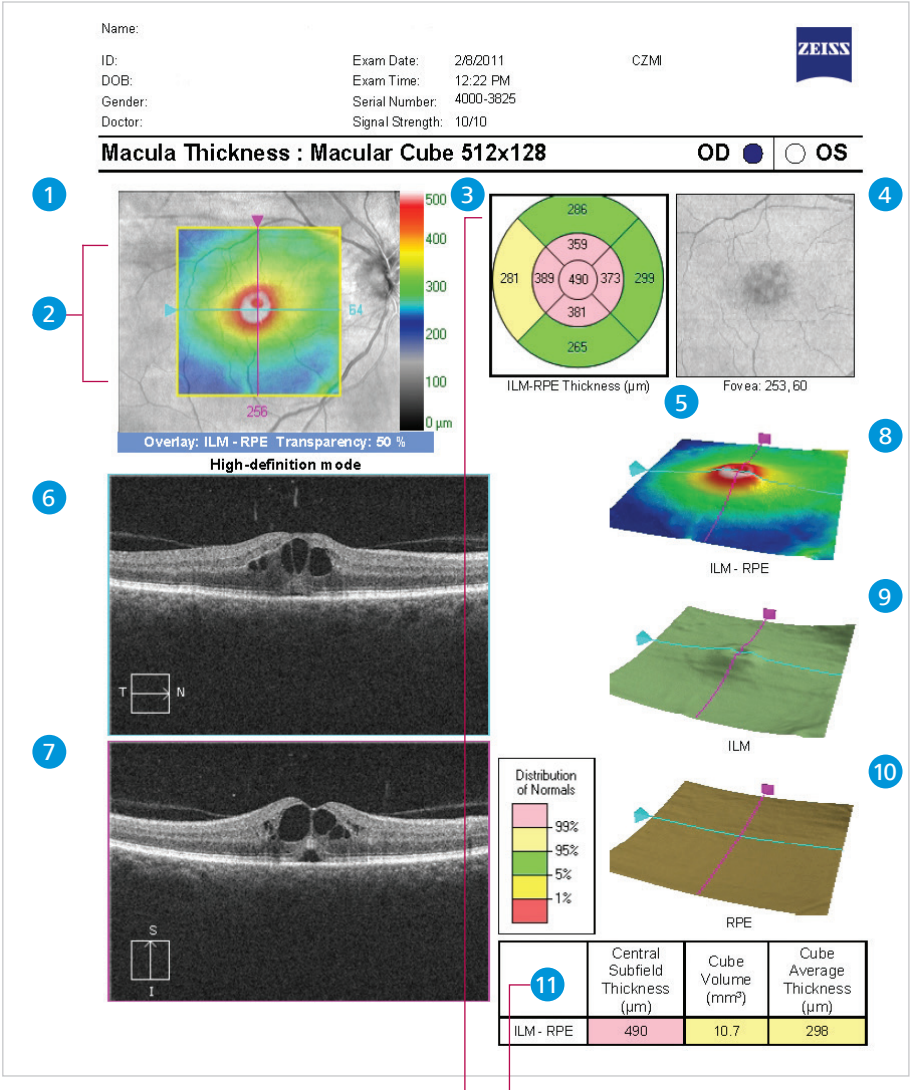
Based on the 6 mm x 6 mm data cube captured by the Macular Cube 512x128 or 200x200 scan, this analysis provides qualitative and quantitative evaluation of the retina.

1. **LSO fundus image** is shown here with a ILM-RPE retinal thickness map overlay.
2. **Slice navigator** enables a simultaneous view of a selected point on LSO image, OCT fundus image, retinal thickness map, layer maps, and OCT image displays.
3. **ETDRS grid** is automatically centered on the fovea with **Fovea Finder™**. Retinal thickness values, from ILM to RPE, in microns, are compared to normative data.
4. **OCT fundus image** is shown.
5. **Fovea Finder** enables precise placement of ETDRS grid.
6. Framed in blue, this image corresponds to the horizontal crosshair line of the fundus image above [1].
7. Framed in pink, this image corresponds to the vertical crosshair line of the fundus image above.
8. **3D macular thickness map** shows retinal thickness in a topographical display.
9. Segmented **ILM map**.
10. Segmented **RPE map**.
11. **Macular parameters**, compared to normative data.



Parameter	Normal Range*
Central Subfield	220.5 - 294.8
OuterTemp	239.3 - 278.6
OuterSup	254.1 - 293.8
OuterNas	263.8 - 312.5
OuterInf	245.7 - 286.4
InnerTemp	285.1 - 333.0
InnerSup	295.2 - 344.6
InnerNas	296.9 - 347.7
InnerInf	292.4 - 342.3

Parameter	Normal Range*
Average Thickness	257.1 - 295.0
Average Volume	9.39 - 10.75

Parameter	Normal Range*
Central Subfield	9.26 - 10.62

These values are based on a 71-year-old patient.

* Normal range is in micrometers.
See User Manual for more information on normative data.

Macular Change Analysis

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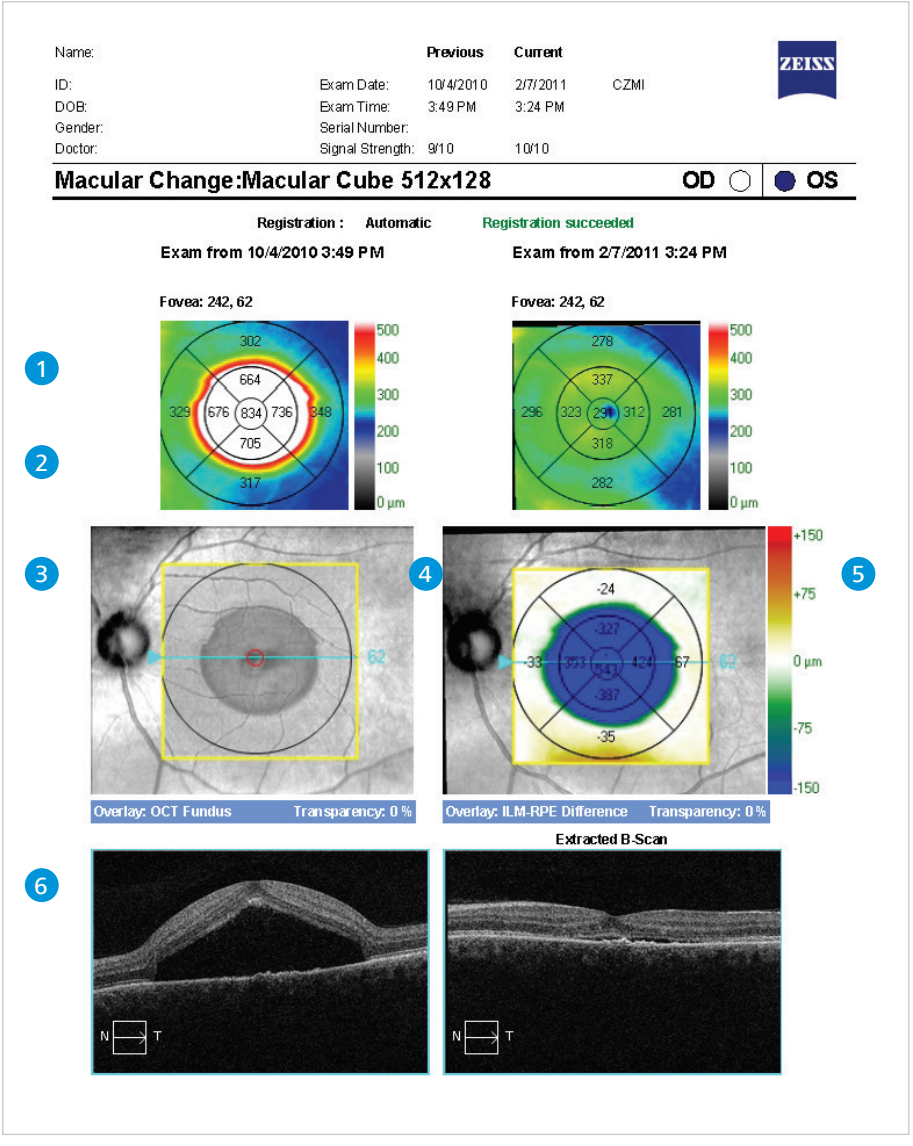
Change analysis can be performed with Macular Cube 512 x 128 or 200 x 200 scans. Post-acquisition registration and **Fovea Finder**™ ensures the repeatability of thickness measurements, even in subjects with AMD, DME or VRI disorders. Data is displayed for prior and current scans.

1. Macular thickness (ILM to RPE) over the 6 mm x 6 mm cube of data is displayed in color-coded map for both exams.
2. **Macular thickness** values are displayed for each sector of the ETDRS grid.
3. Placement of the cube scan is visualized on the **LSO fundus image**. The **Fovea Finder** feature automatically centers the analysis on the fovea.
4. **OCT fundus image** from follow-up exam is AUTOMATICALLY REGISTERED to previous.
5. **Change analysis map** shows difference from previous, in micrometers and represented in color.
6. A **B-Scan image** from the previous scan and a precisely registered image from the current scan are viewed side by side. Simultaneous visualization of corresponding images from the two scans is possible on screen in a movie mode, or by moving the slice navigators.



HD 1 line

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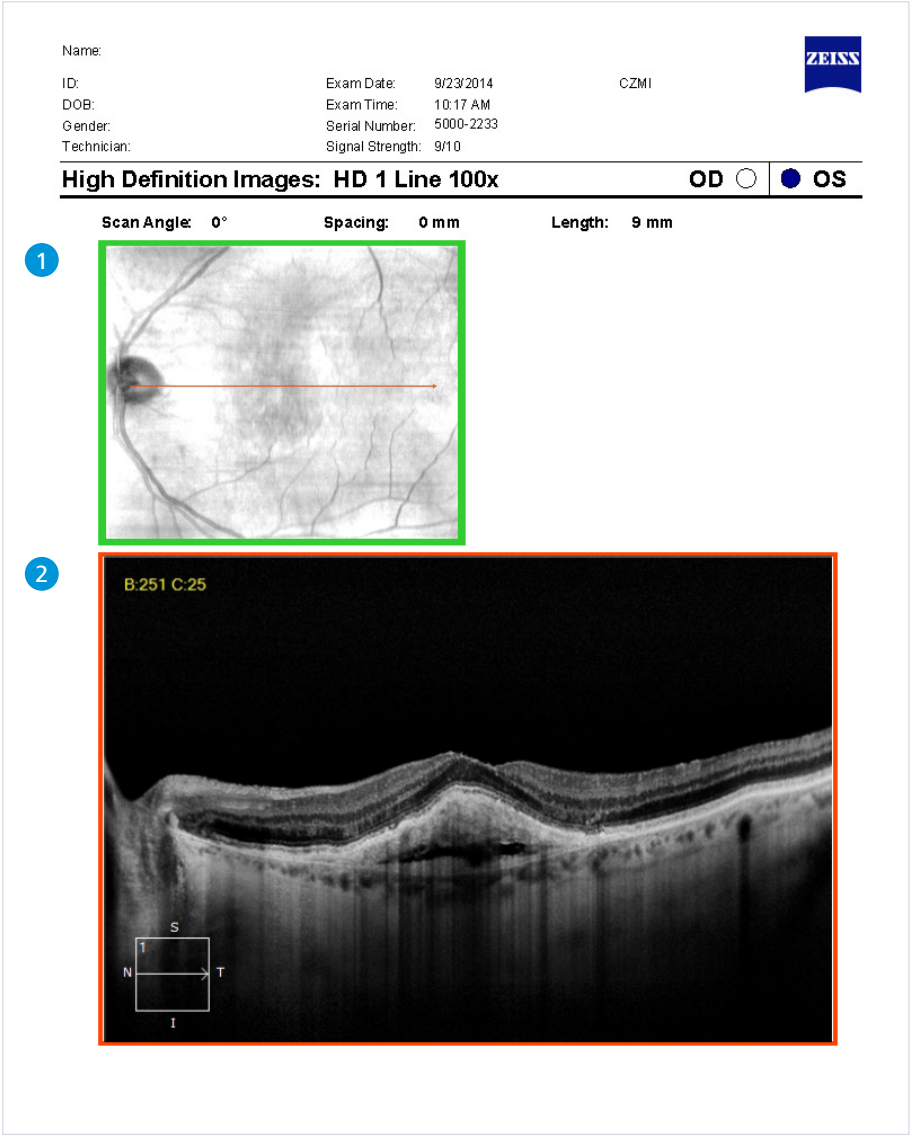
The HD 1 Line Raster scan protocol is composed of 100 averaged B-scans to provide a brilliant image that simultaneously highlights detail in the vitreous, retina, and choroid. **Selective Pixel Profiling**™ evaluates all of the pixel data to construct the best possible image.

1. Scan angle and length are adjustable. Parameters for the scan are indicated above the image. Location of the scan line is shown on the **LSO fundus image**.
2. B-scan is composed of **100 averaged line scans**. Utilizing **Selective Pixel Profiling** an optimal image is displayed.

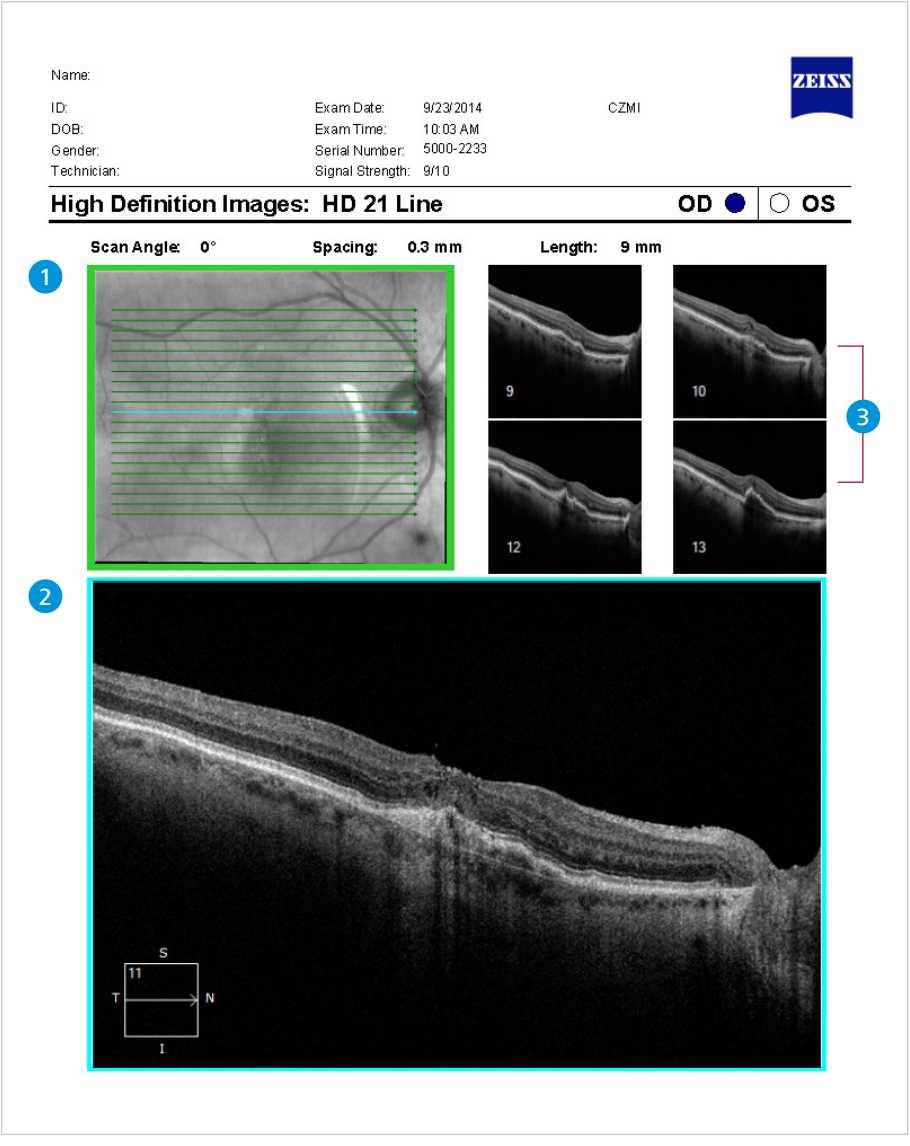


HD 21 line

ZEISS CIRRUS HD-OCT

The HD 21 Line Raster scan protocol generates high definition images covering most of the posterior pole where each of the 21 lines is scanned and averaged 8 times. Proprietary **Selective Pixel Profiling**™ evaluates all of the pixel data to construct the best possible image.

1. Scan angle and length are adjustable. Parameters for the scan are indicated above the image. Location of scan line is shown on the **LSO fundus image**.
2. The large B-scan image corresponds to the location of the blue line on the fundus image above.
3. The top 2 B-scan images represent the 2 lines above of the blue line. The bottom 2 B-scan images represent the 2 lines below the blue line.



RNFL and ONH Analysis

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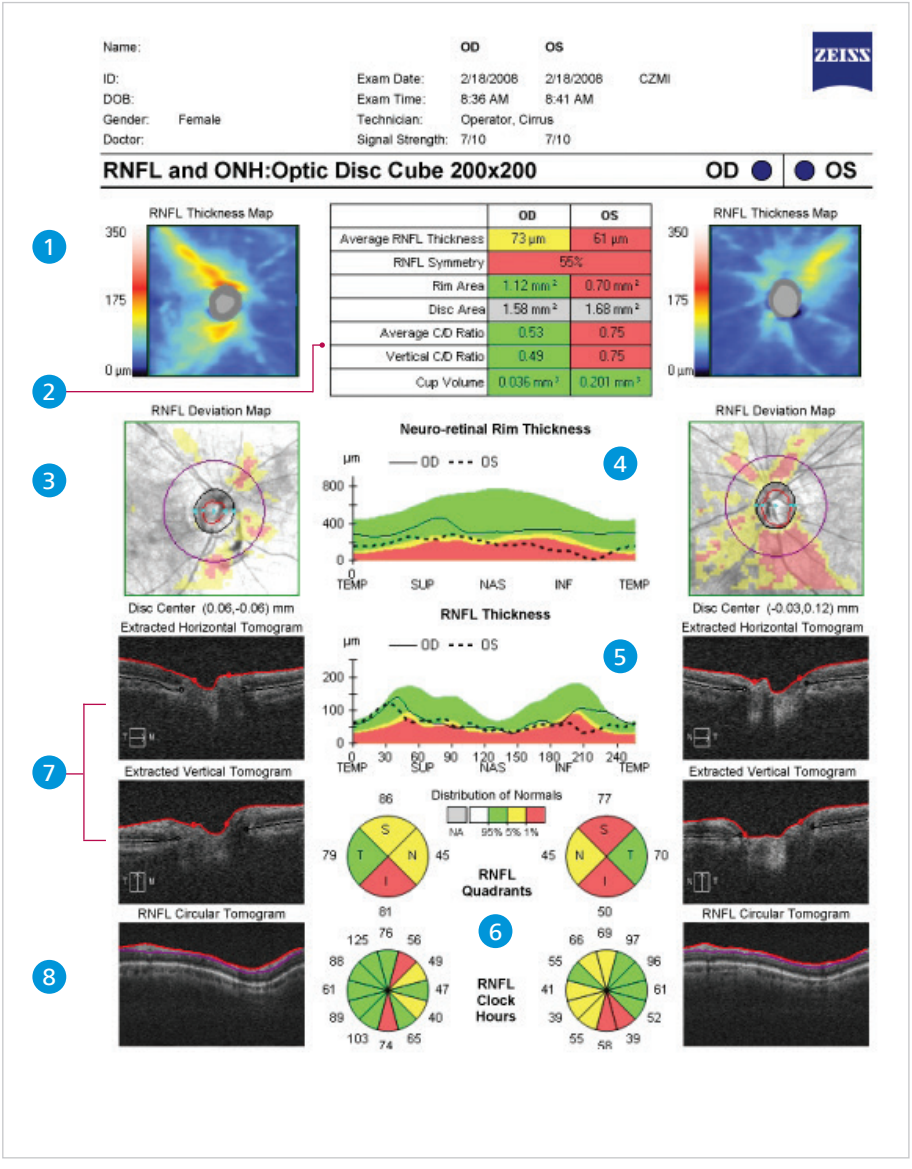
Based on the 6 mm x 6 mm data cube captured by the Optic Disc Cube 200x200 scan, this report shows assessment of RNFL and ONH for both eyes.

1. **Nerve Fiber Layer (RNFL)** thickness map is a topographical display of RNFL. An hourglass shape of yellow and red colors is typical of normal eyes.
2. **Key parameters**, compared to normative data, are displayed in table format.
3. **RNFL Deviation Map** shows deviation from normal. OCT *En face* fundus image shows boundaries of the cup and disc and the RNFL calculation circle.
4. **Neuro-retinal Rim Thickness** profile is matched to normative data.
5. **RNFL TSNIT graph** displays patient's RNFL measurement along the calculation circle, compared to normative data.
6. **RNFL Quadrant and Clock Hour** average thickness is matched to normative data.
7. **Horizontal and vertical B-scans** are extracted from the data cube through the center of the disc. RPE layer and disc boundaries are shown in black. ILM and cup boundaries are shown in red.
8. **RNFL calculation circle** is automatically centered on the optic disc and extracted from the data cube. Boundaries of the RNFL layer segmentation is illustrated.



RNFL and ONH Analysis

ZEISS CIRRUS HD-OCT

Key parameters, compared to Normative Data, are displayed in table and chart formats.

CIRRUS normative comparison for ONH parameters is based on the patient's age and disc size, and for RNFL it is based on the patient's age. For a particular age and disc size, the patient is expected to have rim volume, C/D ratio, etc. within certain ranges. Those parameters will be shaded red, yellow, green and white based on how they compare to normal ranges. Consequently, disc area values are not compared to normative data, and therefore shaded gray on the summary table. When the disc area is outside normal limits, normative data comparison is not applied. When there is no normative data available for comparison, the parameters are shaded gray instead of the green yellow, red shown in this example. The normative database is not available for patients under 18 years of age.

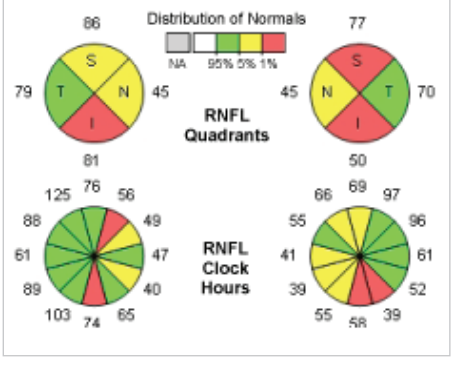
The Disc Area values of patients in the CIRRUS ethnically diverse normative database (see User Manual for details on the study) fell within these ranges: one third of patients had Disc Area values less than 1.58 mm², one third of patients had Disc Area values between 1.58 and 1.88 mm², and one third of patients had Disc Area values larger than 1.88 mm².

In the table of values, Rim Area, Average C/D Ratio, Vertical C/D Ratio and Cup Volume have a gray background color when the Disc Area is less than 1.3 mm² or greater than 2.5 mm². The normative data is not applicable because the database has insufficient number of subjects with the disc areas of these sizes.

Key parameters compared to normative data

	OD	OS
Average RNFL Thickness	73 µm	61 µm
RNFL Symmetry	55%	
Rim Area	1.12 mm²	0.70 mm²
Disc Area	1.58 mm²	1.68 mm²
Average C/D Ratio	0.53	0.75
Vertical C/D Ratio	0.49	0.75
Cup Volume	0.036 mm³	0.201 mm³

RNFL Quadrant and Clock Hours matched to normative data



The values below are based on a 69 year old patient.

Parameter	Normal Range*
Average RNFL Thickness	75.0 - 107.2
RNFL Symmetry	76% - 95%
Rim Area	1.03 - 1.69
Average C/D Ratio	0.64 - 0.21
Vertical C/D Ratio	0.62 - 0.21
Cup Volume	0.01 - 0.035

Parameter	Normal Range*
Temporal Quadrant	45.1 - 82.2
Superior Quadrant	88.9 - 136.7
Nasal Quadrant	50.0 - 86.2
Inferior Quadrant	89.4 - 138.3

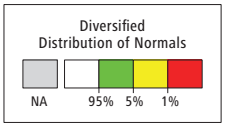
Clock Hour	Normal Range*
9	36.4 - 67.4
10	52.7 - 100.5
11	87.2 - 154.6
12	70.7 - 155.7
1	72.6 - 133.9
2	52.4 - 109.7
3	41.7 - 70.4
4	44.8 - 89.0
5	61.9 - 125
6	85.7 - 163.2
7	84.8 - 159.4
8	42.2 - 90.2

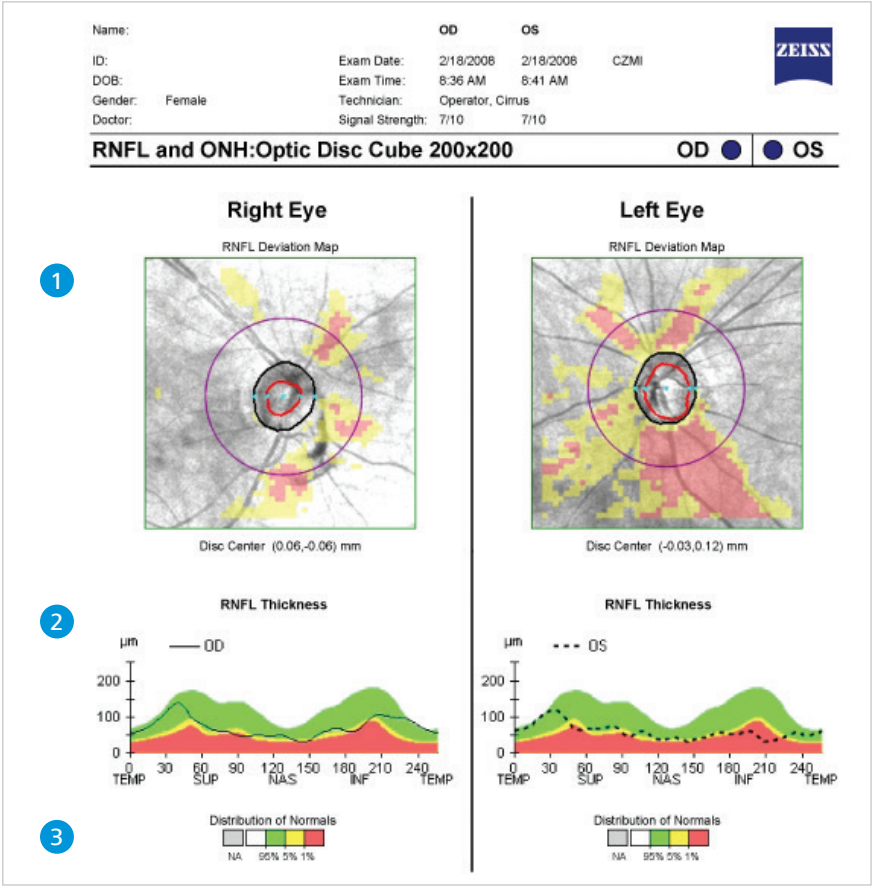
* Normal range is in micrometers. See User Manual for more information on normative data.

RNFL and ONH Analysis

ZEISS CIRRUS HD-OCT

1. **RNFL Deviation Map** facilitates discussion with patient.
2. **RNFL peripapillary thickness** profile is shown for each eye.
3. **Distribution of Normals:** The gray color shown in the legend represents "Not applicable." Values will be shown in gray when normative data is not applicable because the database has insufficient data to match with the disc area.





The Distribution of Normals color scheme is used for both the RNFL and the Optic Nerve Head analysis parameters. The table clarifies how the color scheme is used for each of the parameters.

Measurement	Matched to Normal Based On	Gray	White	Green	Yellow	Red
RNFL						
Average RNFL Thickness, RNFL Symmetry, RNFL Clock Hours, RNFL Quadrants, RNFL Thickness (graph)	Age	Gray shading does not apply to RNFL measurements	The thickest 5% of measurements fall in the white area (white > 95%).	90% of measurements fall in the green area (5%<green<95%).	The thinnest 5% of measurements fall in the yellow area or below (1%<yellow<5%, suspect).	The thinnest 1% of measurements: Measurements in red are considered outside normal limits (red < 1%, outside normal limits).
Optic Nerve Head						
Rim Area and Neuroretinal Rim Thickness (graph)	Disc Area and Age	ONH Normative Database is not applicable if: 1) The disc area is larger than 2.5mm² or smaller than 1.33mm², or 2) The Average or Vertical C/D Ratio is below 0.25, or 3) The ONH Normative Database license has not been activated.	The largest 5% of measurements fall in the white area (white > 95%).	90% of measurements fall in the green area (5%<green<95%).	The smallest 5% of measurements fall in the yellow area or below (1%<yellow<5%, suspect).	The smallest 1% of measurements: Measurements in red are considered outside normal limits (red < 1%, outside normal limits).
Average C/D Ratio, Vertical C/D Ratio, Cup Volume			The smallest 5% of measurements fall in the white area (white > 95%).	90% of measurements fall in the green area (5%<green<95%).	The largest 5% of measurements fall in the yellow area or below (1%<yellow<5%, suspect).	The largest 1% of measurements: Measurements in red are considered outside normal limits (red < 1%, outside normal limits).

ONH/RNFL Guided Progression Analysis (GPA)

ZEISS CIRRUS HD-OCT

With **Guided Progression Analysis**™ (GPA™), CIRRUS™ HD-OCT can perform event analysis and trend analysis of RNFL thickness and ONH parameters (e.g., Average Cup-to-Disc ratio). Event analysis assesses change from baseline compared to expected variability. If change is outside the range of expected variability, it is identified as progression. Trend analysis looks at the rate of change over time, using linear regression to determine rate of change.

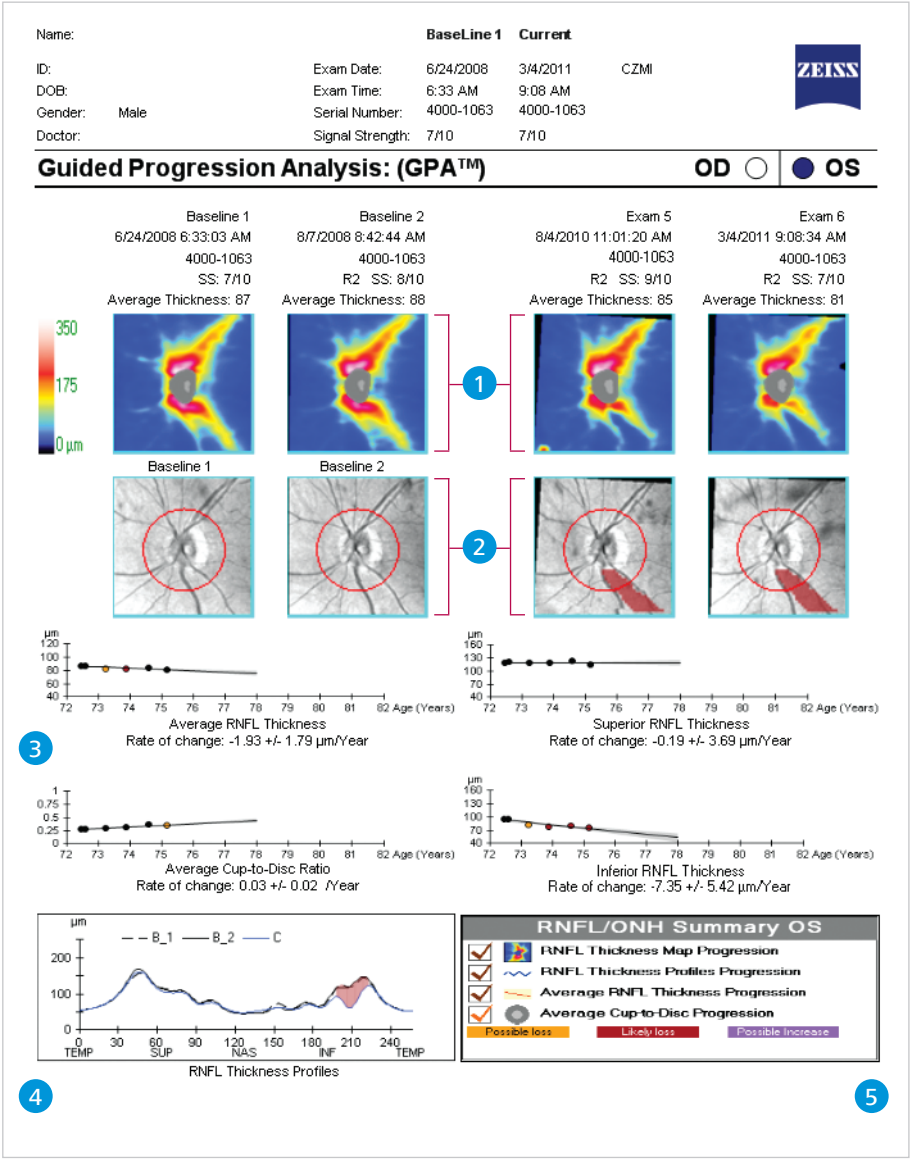
1. **RNFL Thickness Maps** provide a color-coded display of RNFL for two baseline exams and two most recent exams.

2. **RNFL Thickness Change Maps** demonstrate change in RNFL thickness. Up to 8 exams are automatically registered to baseline for precise point-to-point comparison. Areas of change are color-coded orange when first noted and then maroon when the change is sustained over consecutive visits.

3. **RNFL Thickness (Average, Superior, and Inferior) and Average Cup-to Disc Ratio** values are plotted for each exam. Orange marker denotes change when it is first noted. Maroon marker denotes change sustained over consecutive visits. Rate of change is shown in text.

4. **RNFL Thickness Profiles:** TSNIT values from exams are plotted. Areas of statistically significant change are color-coded orange when first noted and maroon when the change is sustained over consecutive visits.

5. **RNFL/ONH Summary** summarizes GPA analyses and indicates with a check mark if there is possible or likely loss of RNFL:



- RNFL Thickness Map Progression (best for focal change)
- RNFL Thickness Profiles Progression (best for broader focal change)
- Average RNFL Thickness Progression (best for diffuse change)
- Average Cup-to-Disc Progression (best for global change)

ONH/RNFL Guided Progression Analysis (GPA)

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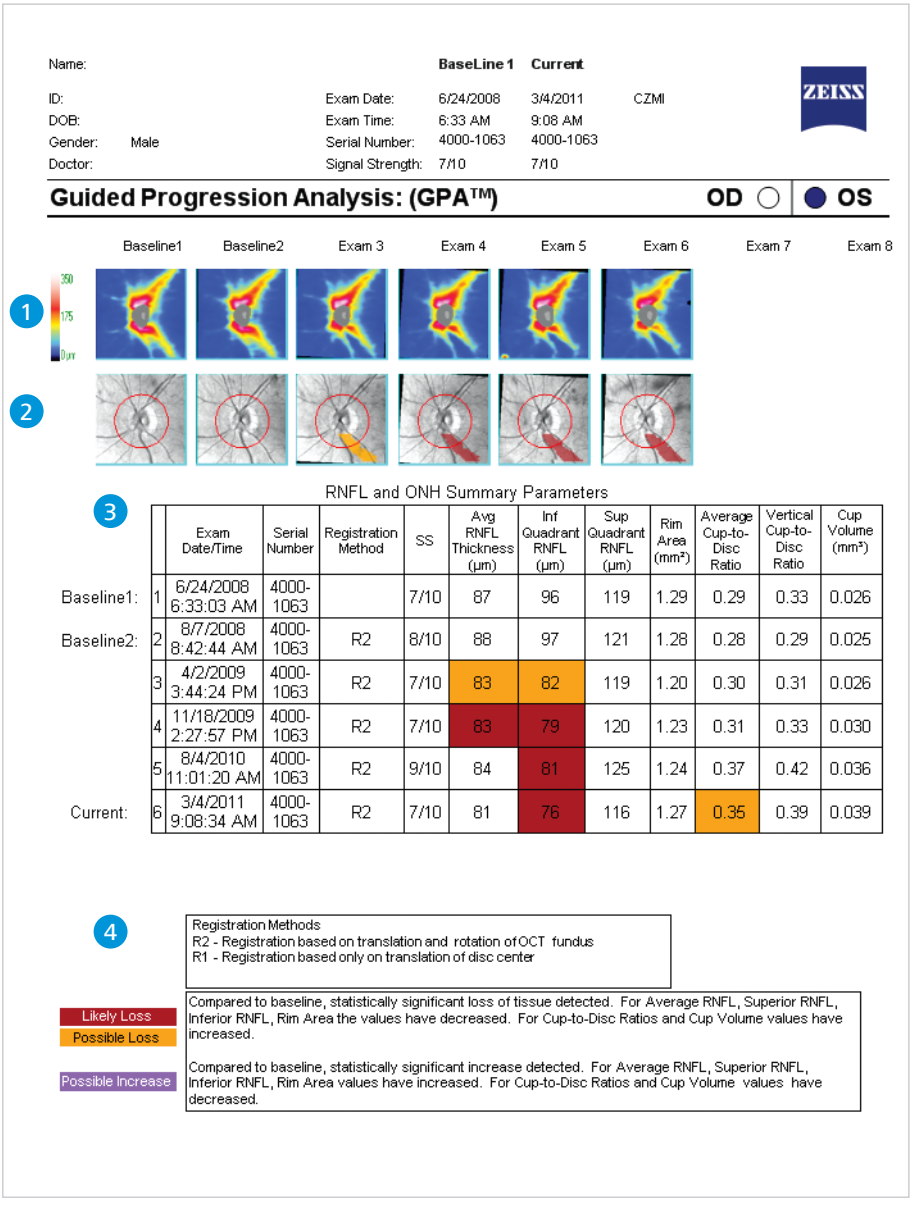
Printout includes an optional second page with table of values, including Rim Area, Disc Area, Average & Vertical Cup-to-Disc Ratio and Cup Volume. Each cell of the table can be color coded if change is detected.

1. **RNFL Thickness Maps** provide a color-coded display of RNFL for each exam, up to 8 including baseline.
2. **RNFL Thickness Change Maps** demonstrate change in RNFL thickness for up to 8 exams including baseline.
3. **Table of values** for each exam, up to 8 including baseline. For each exam there is information on exam date/time, registration method and signal strength. Values shown for RNFL thickness, Rim Area, Disc Area, Average & Vertical Cup-to-Disc Ratio and Cup Volume. Each cell of the table is color-coded if change is detected.
4. **Information** on abbreviations for registration methods and color coding.



Name:					BaseLine 1	Current							
ID:				Exam Date:	6/24/2008	3/4/2011	CZMI						
DOB:				Exam Time:	6:33 AM	9:08 AM							
Gender:	Male			Serial Number:	4000-1063	4000-1063							
Doctor:				Signal Strength:	7/10	7/10							

Guided Progression Analysis: (GPA™) OD ○ ● OS

Baseline1 Baseline2 Exam 3 Exam 4 Exam 5 Exam 6 Exam 7 Exam 8

RNFL and ONH Summary Parameters

		Exam Date/Time	Serial Number	Registration Method	SS	Avg RNFL Thickness (µm)	Inf Quadrant RNFL (µm)	Sup Quadrant RNFL (µm)	Rim Area (mm²)	Average Cup-to-Disc Ratio	Vertical Cup-to-Disc Ratio	Cup Volume (mm³)
Baseline1:	1	6/24/2008 6:33:03 AM	4000-1063		7/10	87	96	119	1.29	0.29	0.33	0.026
Baseline2:	2	8/7/2008 8:42:44 AM	4000-1063	R2	8/10	88	97	121	1.28	0.28	0.29	0.025
	3	4/2/2009 3:44:24 PM	4000-1063	R2	7/10	83	82	119	1.20	0.30	0.31	0.026
	4	11/18/2009 2:27:57 PM	4000-1063	R2	7/10	83	79	120	1.23	0.31	0.33	0.030
	5	8/4/2010 11:01:20 AM	4000-1063	R2	9/10	84	81	125	1.24	0.37	0.42	0.036
Current:	6	3/4/2011 9:08:34 AM	4000-1063	R2	7/10	81	76	116	1.27	0.35	0.39	0.039

Registration Methods
R2 - Registration based on translation and rotation of OCT fundus
R1 - Registration based only on translation of disc center

Likely Loss
Possible Loss
Possible Increase

Compared to baseline, statistically significant loss of tissue detected. For Average RNFL, Superior RNFL, Inferior RNFL, Rim Area the values have decreased. For Cup-to-Disc Ratios and Cup Volume values have increased.

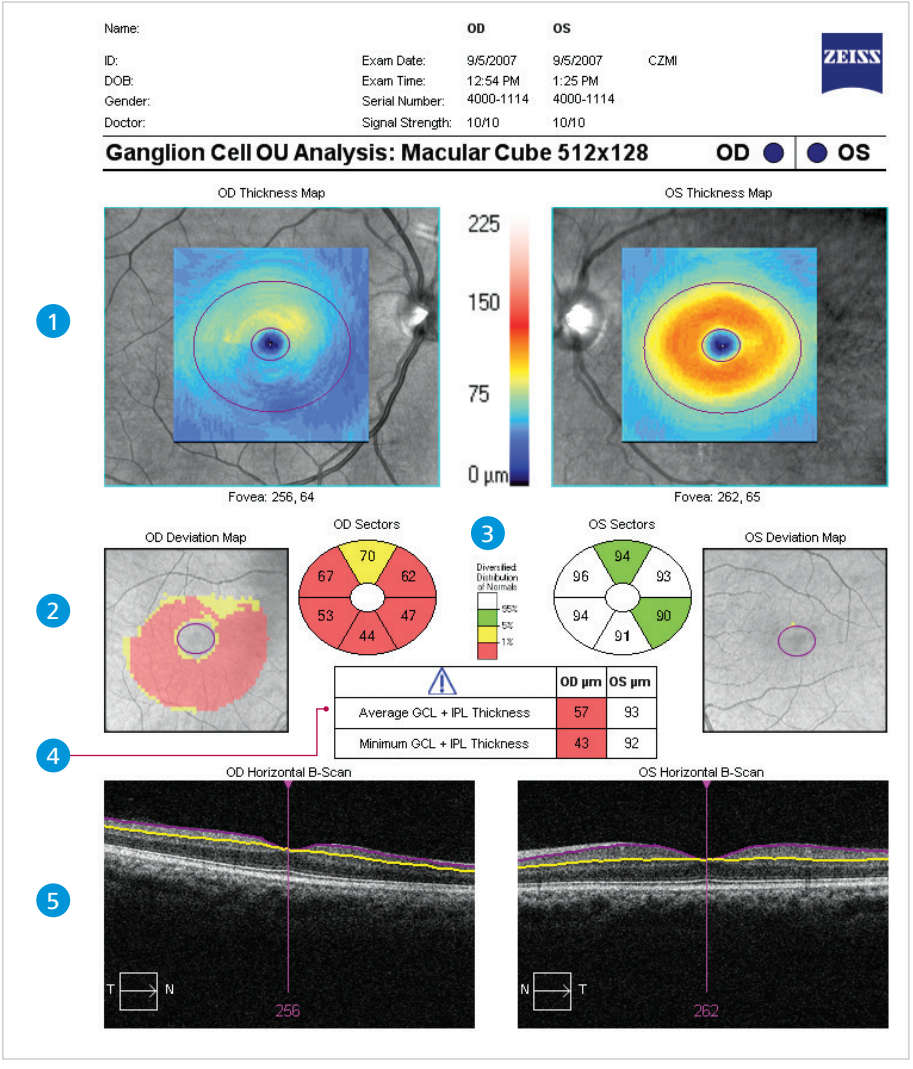
Compared to baseline, statistically significant increase detected. For Average RNFL, Superior RNFL, Inferior RNFL, Rim Area values have increased. For Cup-to-Disc Ratios and Cup Volume values have decreased.

Ganglion Cell Analysis

ZEISS CIRRUS HD-OCT

Based on the Macular Cube 512x128 or 200x200 scan, this analysis provides quantitative and qualitative evaluation of the ganglion cell layer (GCL) plus Inner Plexiform Layer (IPL).

1. **Maps** for GCL+IPL thickness are shown on fundus image. Also shown is the elliptical measurement annulus centered about the fovea.
2. **Deviation Maps** show deviations from normal for GCL + IPL thickness.
3. **Sector maps** divide the elliptical annulus of the Thickness Map into six regions. Values are compared to normative data.
4. **Thickness table** shows average and minimum thickness within the elliptical annulus. Values are compared to normative data.
5. **Horizontal B-scans.**



The values below are based on a 46 year old patient.

Parameter	Normal Range
Average Thickness	72.9 - 92.5
Minimum Thickness	70.6 - 90.3
Temporal-Superior Thickness	72.7 - 92.1
Superior Thickness	73.3 - 94.7
Nasal-Superior Thickness	73.4 - 94.8
Nasal-Inferior Thickness	70.9 - 92.9
Inferior Thickness	69.3 - 90.4
Temporal-Inferior Thickness	72.0 - 91.6

GCA Guided Progression Analysis (GPA) – Page 1

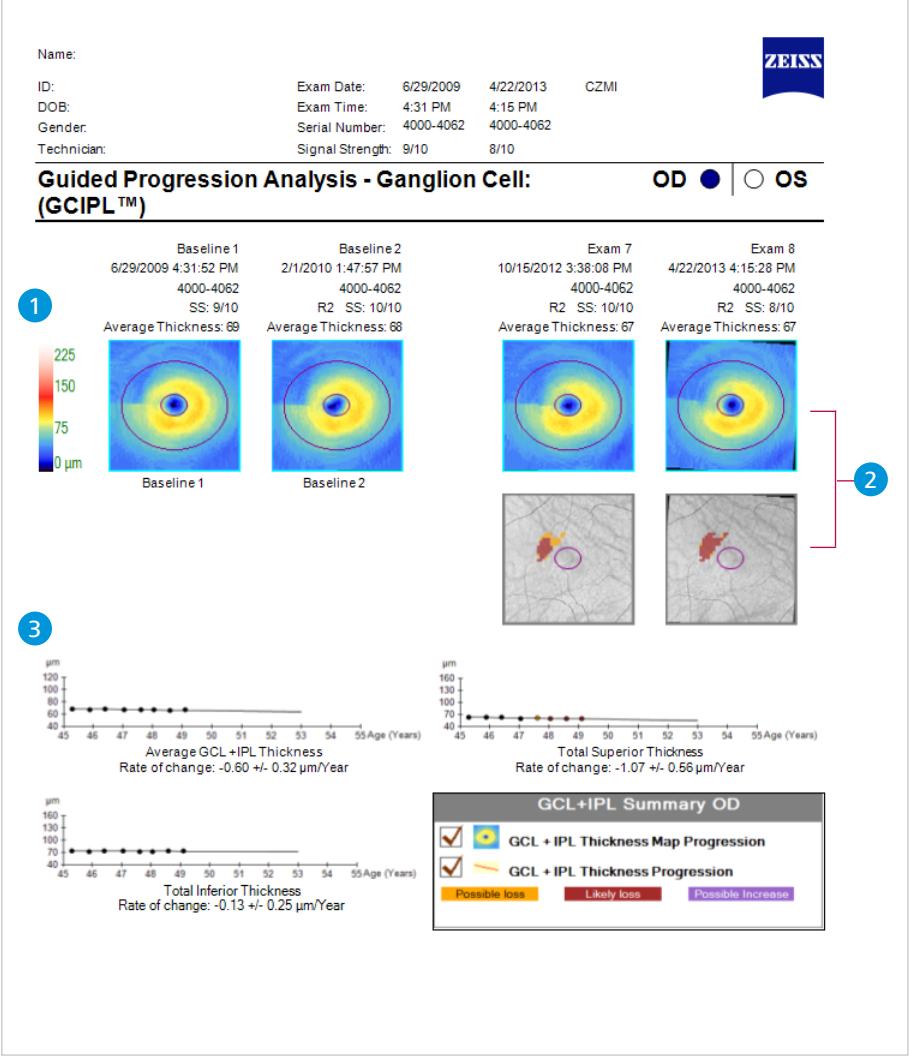
ZEISS CIRRUS HD-OCT

With **Guided Progression Analysis™** (GPA™), CIRRUS™ HD-OCT can perform event analysis and trend analysis of ganglion cell layer thickness. Event analysis assesses change from baseline compared to expected variability. If change is outside the range of expected variability, it is identified as progression. Trend analysis looks at the rate of change over time, using linear regression to determine rate of change.

1. **Ganglion Cell Layer plus Inner Plexiform Layer (GCL + IPL) Thickness Maps** provide a color-coded display of GCL + IPL thickness for the two baseline exams.

2. The top two images display the GCL + IPL thickness maps for the two most recent exams. Below the thickness maps are the progression maps where areas of change are color-coded orange when first noted and then maroon when the change is sustained over consecutive visits.

3. **Average Thickness, Total Superior Thickness, and Total Inferior Thickness** values are plotted for each exam. An orange marker denotes change when it is first noted. A maroon marker denotes change sustained over consecutive visits. Rate of change is shown in text.



GCA Guided Progression Analysis (GPA) – Page 2

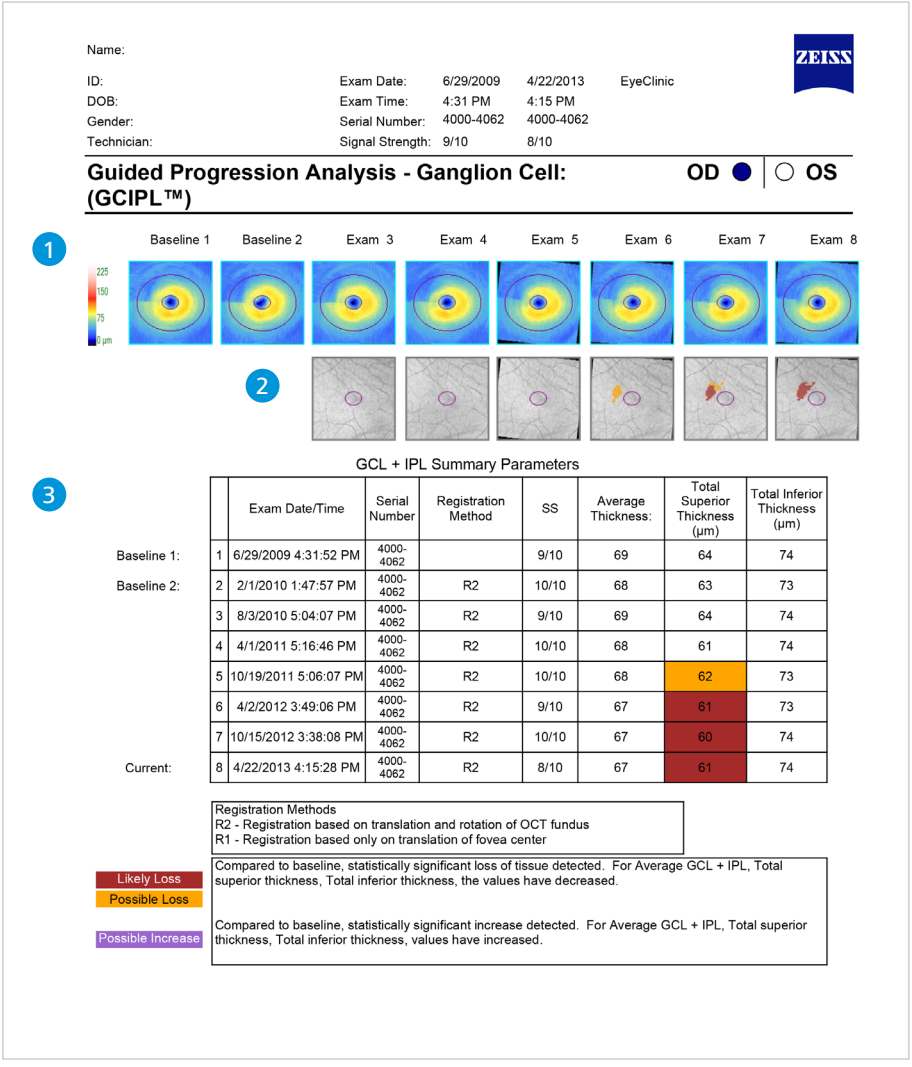
ZEISS CIRRUS HD-OCT

The GCA GPA report includes an optional second page with a table of values, including Average Thickness, Total Superior Thickness, and Total Inferior Thickness. Each cell of the table is color-coded if change is detected.

1. **Ganglion Cell Layer plus Inner Plexiform Layer (GCL + IPL) Thickness Maps** provide a color-coded display of GCL + IPL thickness for up to 8 exams (including baseline)

2. Up to 6 exams are automatically registered to baseline for precise point-to-point comparison. Areas of change are color-coded orange when first noted and then maroon when the change is sustained over consecutive visits.

3. This table includes numerical values for up to 8 exams (including baseline). For each exam there is information on exam date/time, registration method, and signal strength. Average Thickness, Total Superior Thickness, and Total Inferior Thickness values are shown. Each cell of the table is color-coded if change is detected.



Name:

ID:
DOB:
Gender:
Technician:

Exam Date:	6/29/2009	4/22/2013
Exam Time:	4:31 PM	4:15 PM
Serial Number:	4000-4062	4000-4062
Signal Strength:	9/10	8/10

EyeClinic

Guided Progression Analysis - Ganglion Cell: (GCIPL™) OD ● ○ OS

1

Baseline 1 | Baseline 2 | Exam 3 | Exam 4 | Exam 5 | Exam 6 | Exam 7 | Exam 8

225 150 75 0 µm

2

3

GCL + IPL Summary Parameters

		Exam Date/Time	Serial Number	Registration Method	SS	Average Thickness:	Total Superior Thickness (µm)	Total Inferior Thickness (µm)
Baseline 1:	1	6/29/2009 4:31:52 PM	4000-4062		9/10	69	64	74
Baseline 2:	2	2/1/2010 1:47:57 PM	4000-4062	R2	10/10	68	63	73
	3	8/3/2010 5:04:07 PM	4000-4062	R2	9/10	69	64	74
	4	4/1/2011 5:16:46 PM	4000-4062	R2	10/10	68	61	74
	5	10/19/2011 5:06:07 PM	4000-4062	R2	10/10	68	62	73
	6	4/2/2012 3:49:06 PM	4000-4062	R2	9/10	67	61	73
	7	10/15/2012 3:38:08 PM	4000-4062	R2	10/10	67	60	74
Current:	8	4/22/2013 4:15:28 PM	4000-4062	R2	8/10	67	61	74

Registration Methods
R2 - Registration based on translation and rotation of OCT fundus
R1 - Registration based only on translation of fovea center

Likely Loss
Possible Loss
Possible Increase

Compared to baseline, statistically significant loss of tissue detected. For Average GCL + IPL, Total superior thickness, Total inferior thickness, the values have decreased.

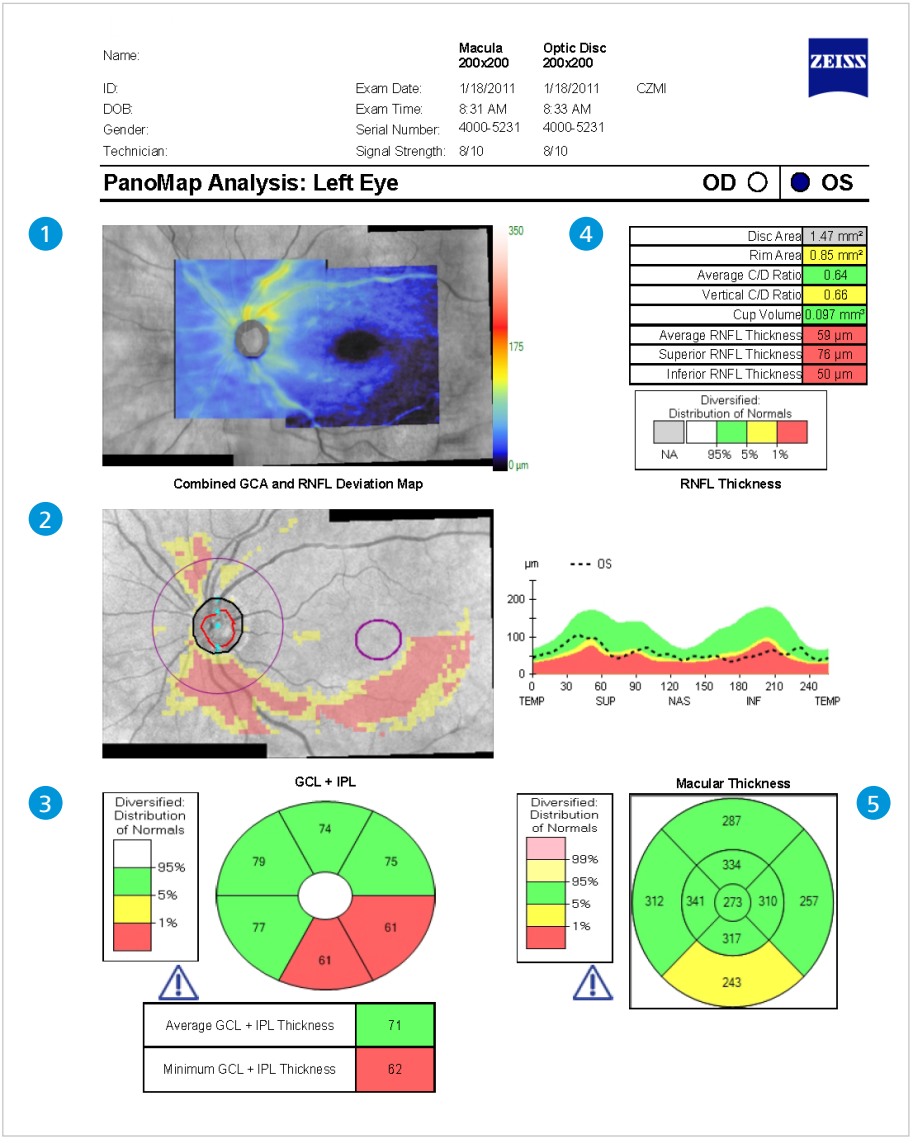
Compared to baseline, statistically significant increase detected. For Average GCL + IPL, Total superior thickness, Total inferior thickness, values have increased.

PanoMap Analysis

ZEISS CIRRUS HD-OCT

The **PanoMap™ Analysis** combines information from the Macular Cube and Optic Disc Cube scans, providing an integrated wide-field perspective for comprehensive analysis.

1. The **macular and optic disc LSO fundus images** are registered and combined. The system automatically finds and processes data from the most recent macular cube and optic disc cube scans acquired on the same day.
2. The **RNFL and GCA deviation maps** are registered and combined.
3. **ETDRS grids** are displayed for GCL + IPL thickness and macular thickness, colored-coded to correspond with normative data.
4. This table includes RNFL and optic disc parameters with normative data comparison.
5. **RNFL thickness graph** with normative data comparison.

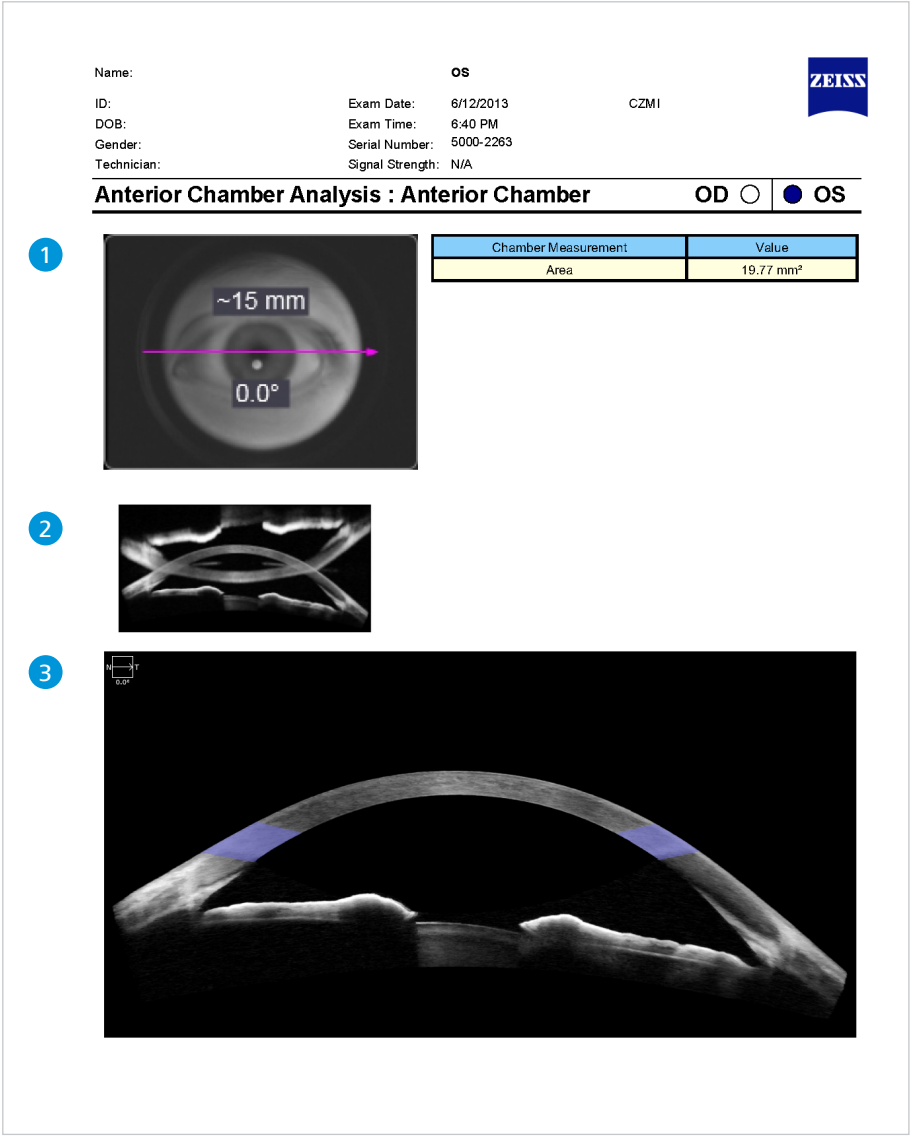


Anterior Chamber Analysis

ZEISS CIRRUS HD-OCT

This scan provides an overview of the entire anterior chamber, allowing assessment and documentation of the cornea, iridocorneal angles, and anterior chamber depth. This expansive 15.5 mm wide view of the entire anterior chamber helps identify patients at risk for angle closure glaucoma.

1. Location of the scan line is shown on the **iris image**. The length and angle of the scan are indicated. A table indicating the Chamber Area Measurement and the Value (mm^2) is also displayed.
2. **Anterior Chamber scan** is acquired using a full axial field of view that displays an image composed of both the true image data and an inverted mirror image.
3. **B-scan of the anterior chamber**. Note that the mirror artifact data intersects the true data at two places in the cornea. These areas appear as distinctive bars on the image.

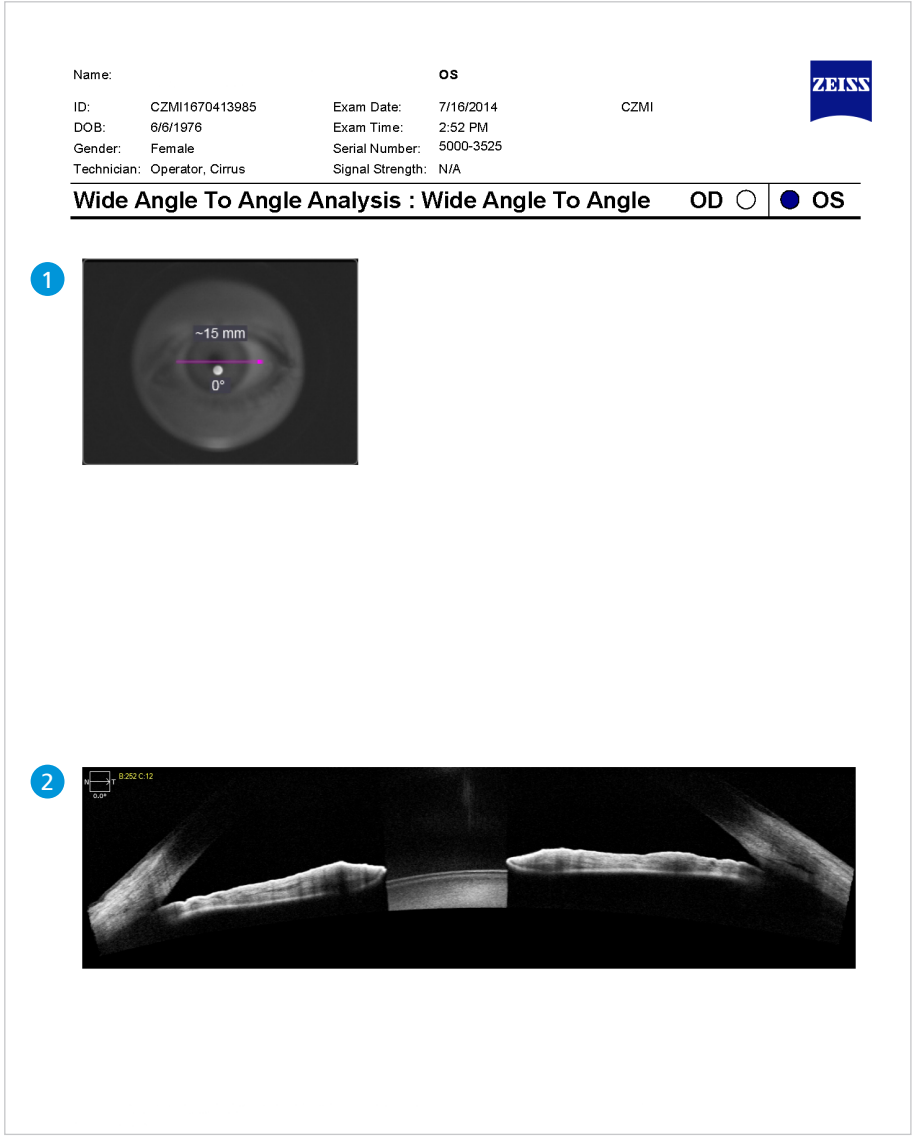


Wide Angle-to-Angle Analysis

ZEISS CIRRUS HD-OCT

The Wide Angle-to-Angle scan captures both iridocorneal angles in one scan. Compared to the Anterior Chamber scan, this scan provides higher resolution of the iridocorneal angles and iris configuration for glaucoma evaluation.

1. Location of the scan line is shown on the **iris image**. The length and angle of the scan are indicated.
2. **High-resolution B-scan** of the iridocorneal angles and iris.



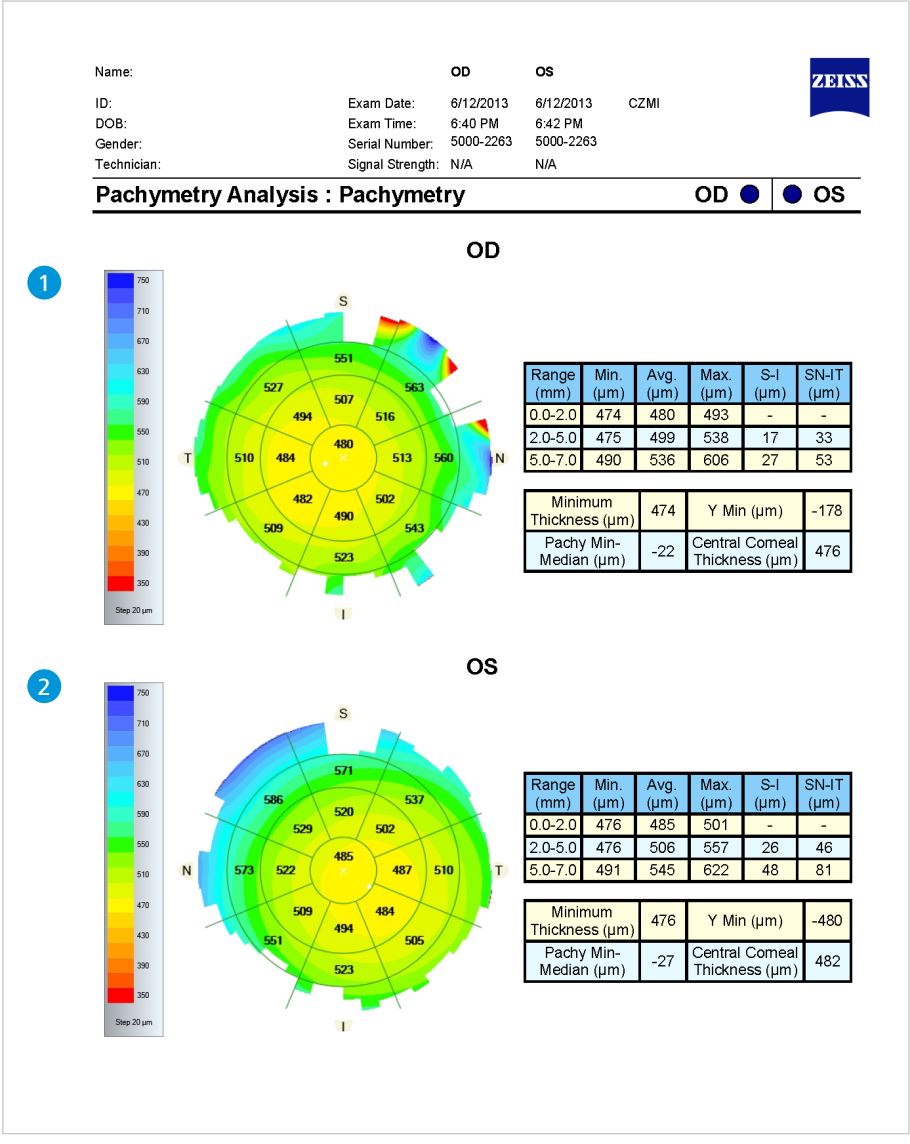
Pachymetry Analysis

ZEISS CIRRUS HD-OCT

The Pachymetry scan uses 24 radial scan lines to generate a color-coded map of the cornea. Pachymetry measurements as well as epithelial thickness measurements are available as part of this analysis.

1. **Pachymetry Map** displays corneal thickness measurements for different zones. The central ring has a diameter of 2 mm, the second ring a diameter of 5 mm, and the outer ring a diameter of 7 mm. The "X" shows the location of the vertex. The white dot shows the location of minimum corneal thickness.

2. **Data tables** show the values of each zone, and also include measurements such as S-I (which is calculated by subtracting the inferior value from the superior value).

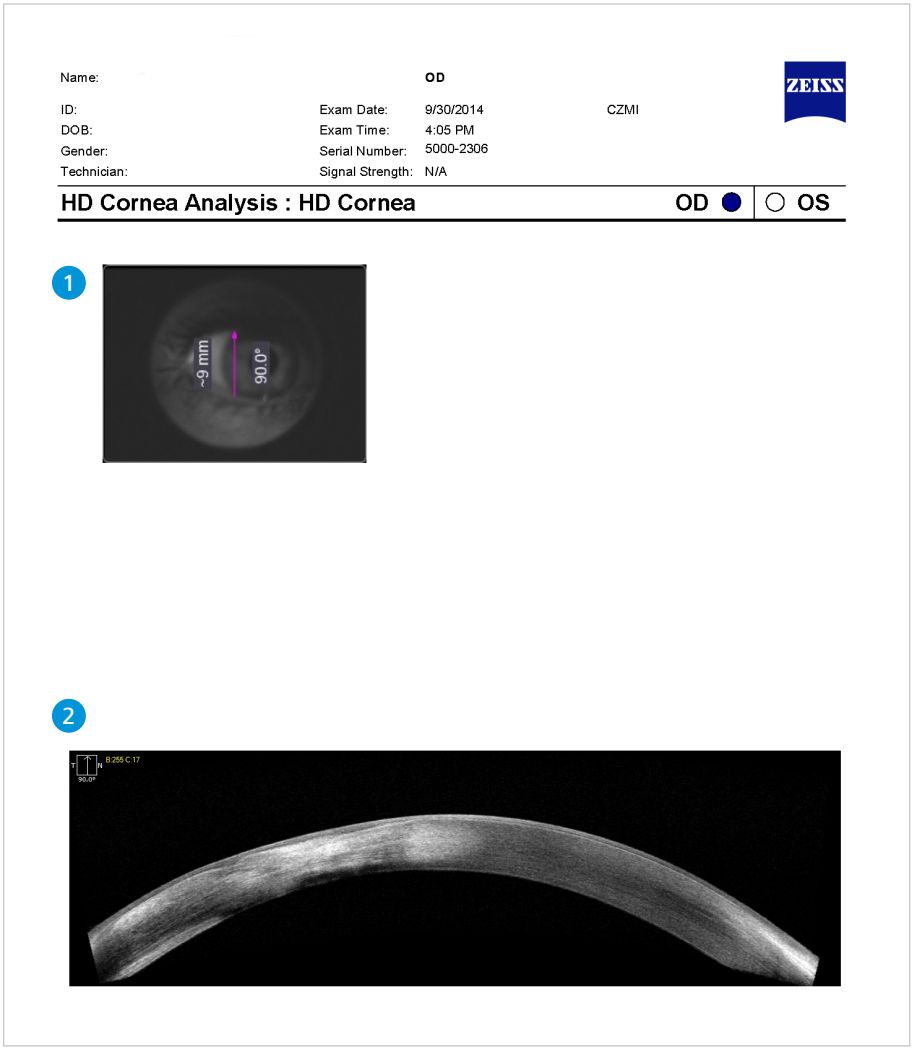


HD Cornea

ZEISS CIRRUS HD-OCT

The HD Cornea scan generates a single high-definition image which can be used for the assessment and documentation of the corneal health and pathology.

1. The Scan angle is adjustable. Parameters for the scan are indicated in the image. Location of scan line is shown on the **iris image**.
2. The B-scan is composed of **20 line scans**. The scan is 9.0 mm in length when oriented horizontally, and has a depth of 2.0 mm.



HD Angle

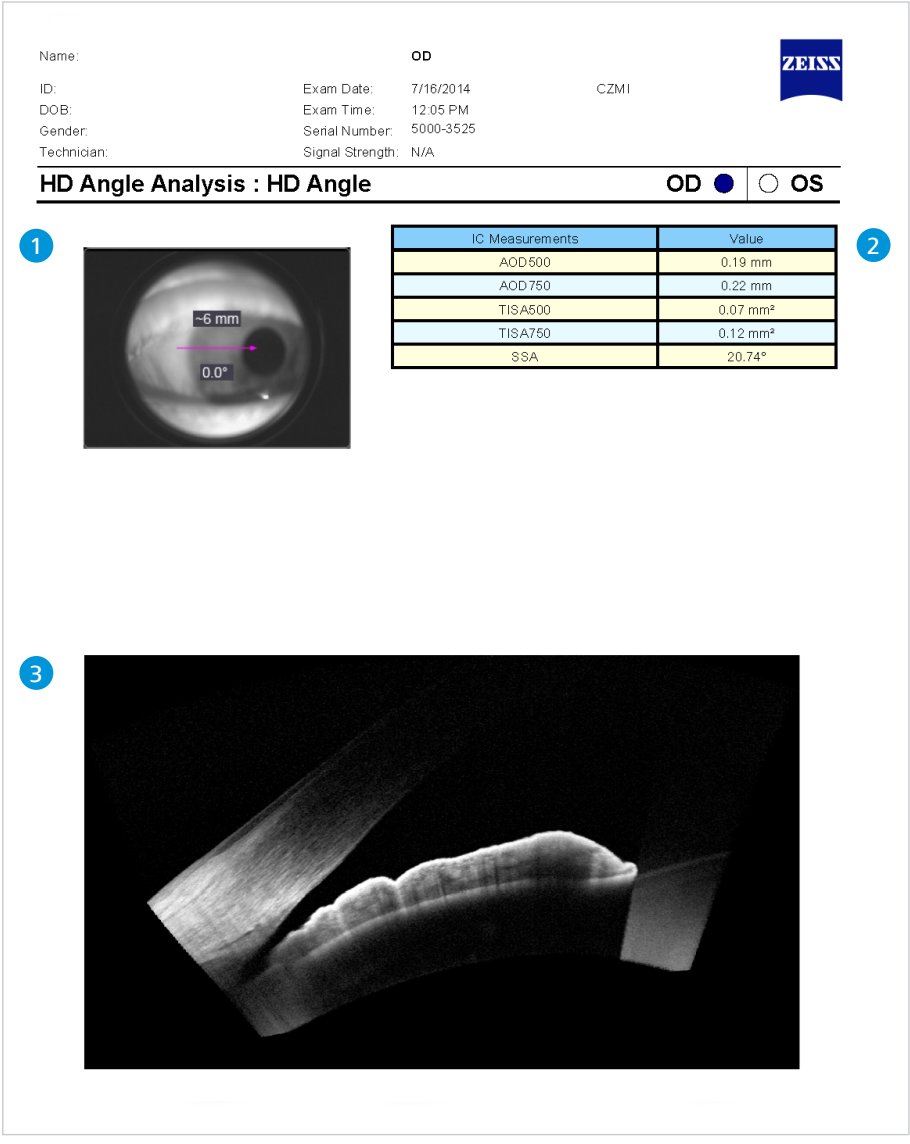
ZEISS CIRRUS HD-OCT

The HD Angle scan generates a single speckle-reduced raster scan which is used for the assessment and documentation of the anterior chamber angle.

1. The Scan angle is adjustable. Parameters for the scan are indicated in the image. The location of the scan line is shown on the **iris image**.

2. **Iridocorneal (IC) Angle Tool** measurements include the angle opening distance (AOD) at 500 µm and 750 µm, trabecular iris space area (TISA) at 500 µm and 750 µm, and the scleral spur angle (SSA). These values are generated from the dimensions of the IC angle tool.

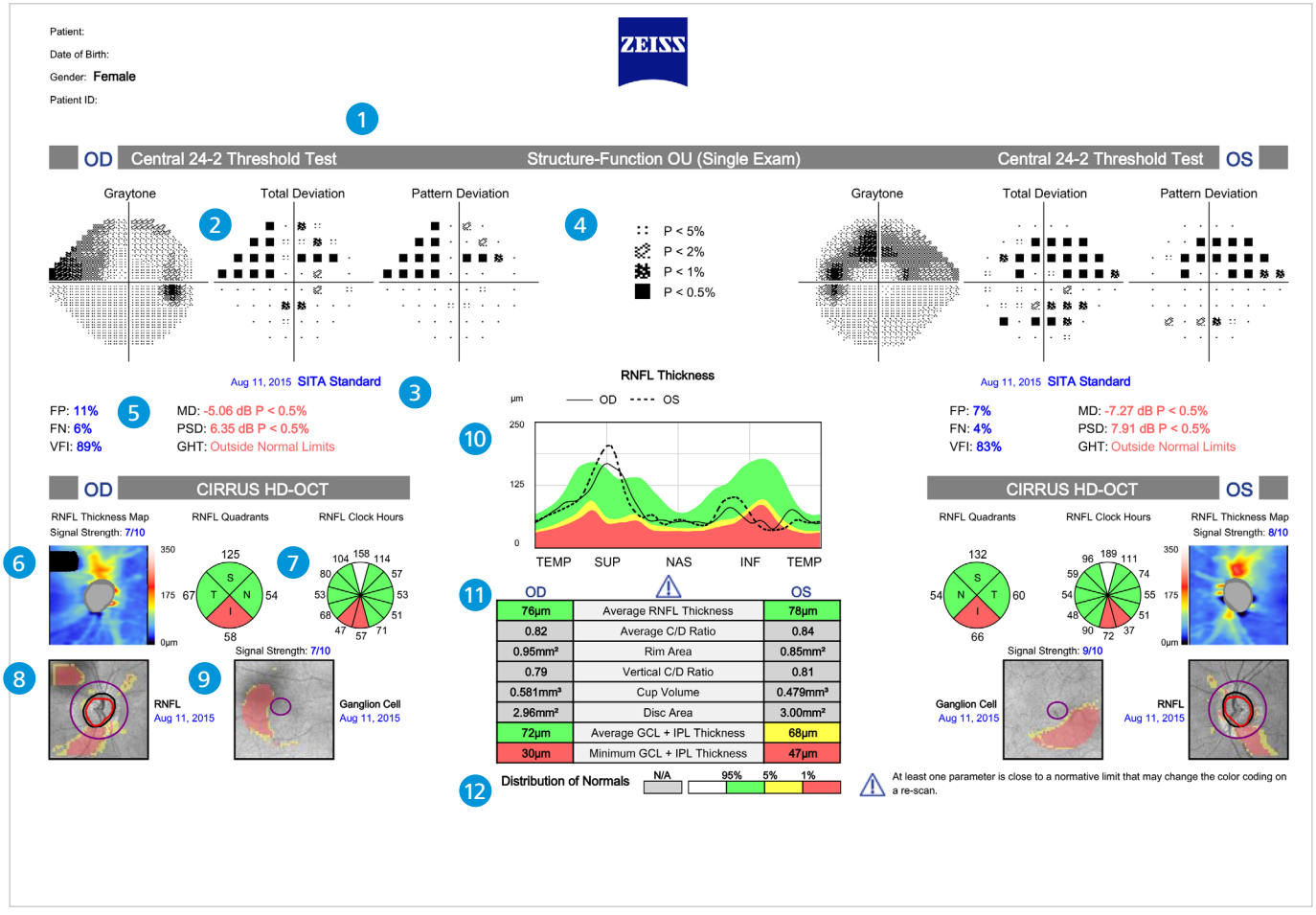
3. The speckle-reduced raster scan is composed of **20 B-scans**. The scan is 6.0 mm in length, and has a depth of 2.9 mm.



HFA–CIRRUS Structure-Function Report

ZEISS Glaucoma Workplace

Available exclusively with the ZEISS Glaucoma Workplace, the Structure-Function report is generated automatically from CIRRUS HD-OCT and HFA™ data. It provides a summary of structural and functional exams on a single page. Depending on the type of exam data available, different Structure-Function reports can be generated.



HFA Visual Field Section

1. HFA Test Pattern
2. HFA Graytone and Deviation Plots
3. HFA Test Strategy
4. Probability Legend
5. HFA Reliability and Global Indices

CIRRUS HD-OCT Section

6. RNFL Thickness Map
7. RNFL Quadrants and Clock Hours
8. RNFL Deviation Map
9. Ganglion Cell Deviation Map
10. RNFL Thickness Profile
11. RNFL and Optic Disk Parameters
12. Key to Distribution of Normals

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