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Biometry OCT in SOCT software 8.0 version

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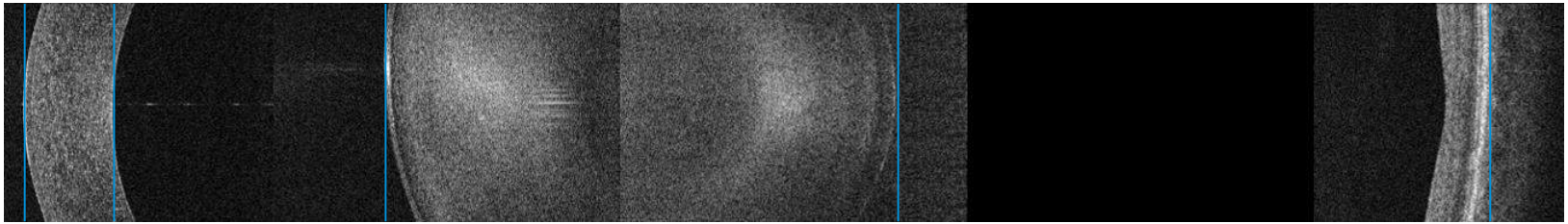
Biometry OCT

Biometry OCT

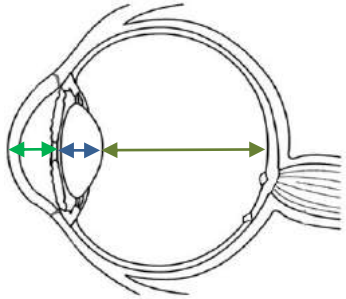
Innovative method of using the posterior OCT device to measure ocular structure along eye axis .

OCT-B based on measurements of the mutual position of individual eye elements.
The Eye elements are measured individually. System captures separate exams and measures distances between structures of eye elements.

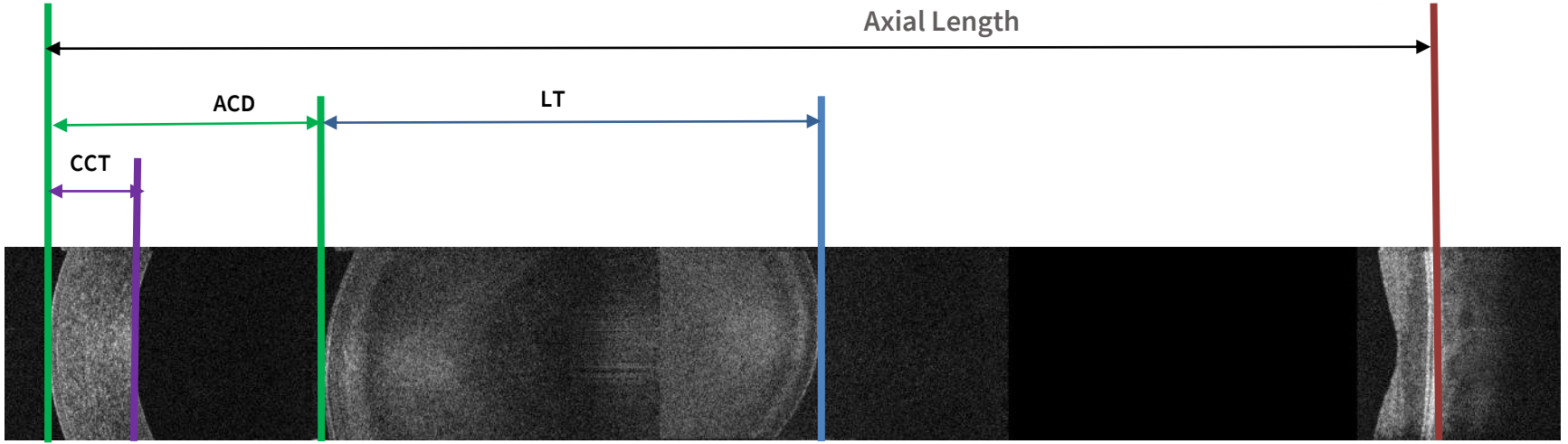


Biometry OCT

OCT Biometry provides:



- AL Axial Length SD +/- 0.032 mm
- ACD Anterior chamber depth SD +/- 0.037 mm
- LT Lens thickness SD +/- 0.038 mm
- CCT Cornea thickness SD +/- 6 um



Biometry OCT

2 Biometry programs:

- AL
  - AL.,CCT, ACD, LT parameter
- ACD
  - CCT, ACD parameter

Acquisition method:

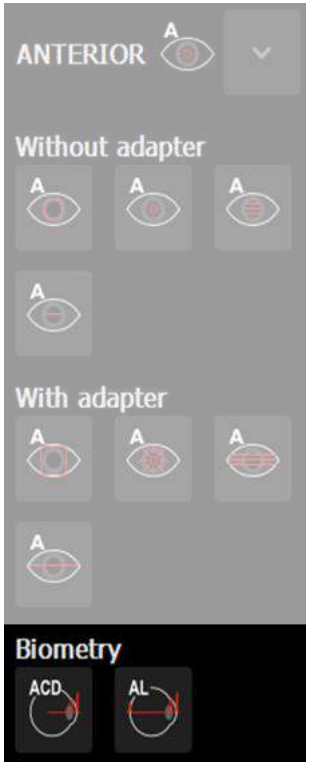
- Full Auto
- Auto

Number of repeats

- 5, 10, 15

Acquisition time

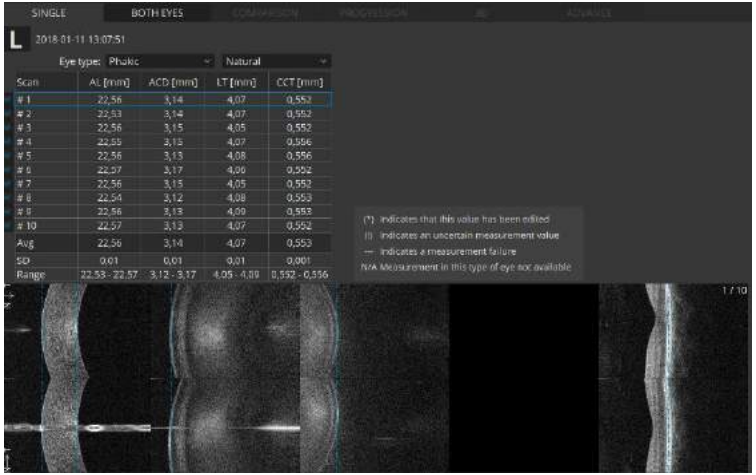
- 5 AL. full measurements ~ 4 sec



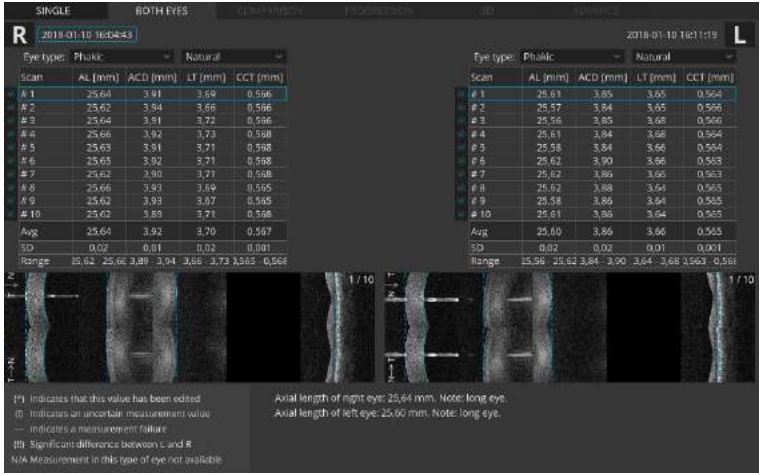
Biometry OCT

Analysis

Single view



Both eyes view



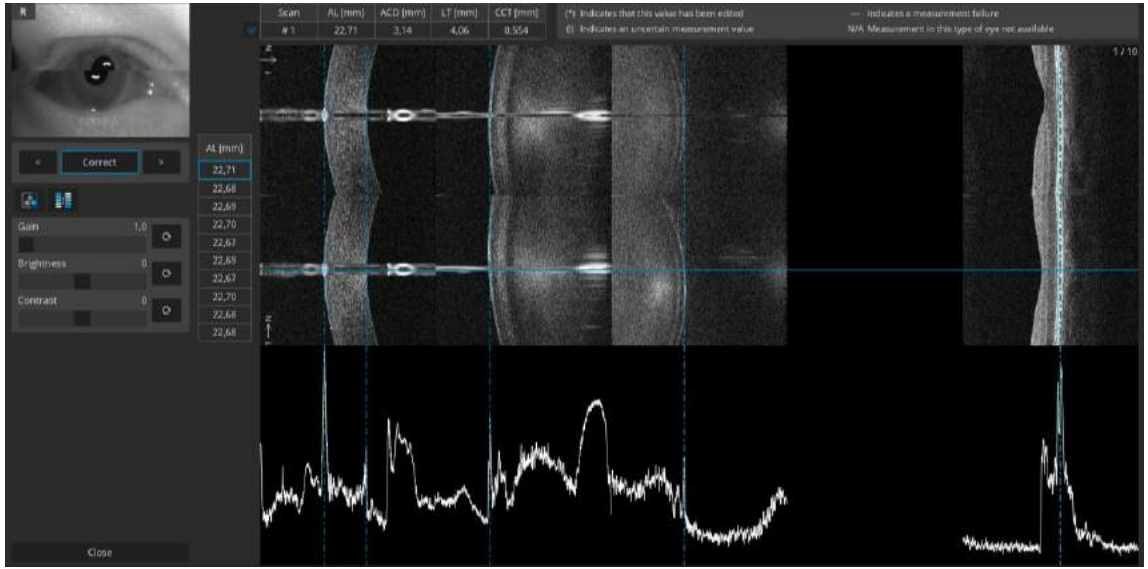
Result review window

- Single view and Both View
  - Results table
  - Result verification
  - Excluding deviated results
  - AVG and SD for measurements series

Biometry OCT

Analysis –Verification and correction

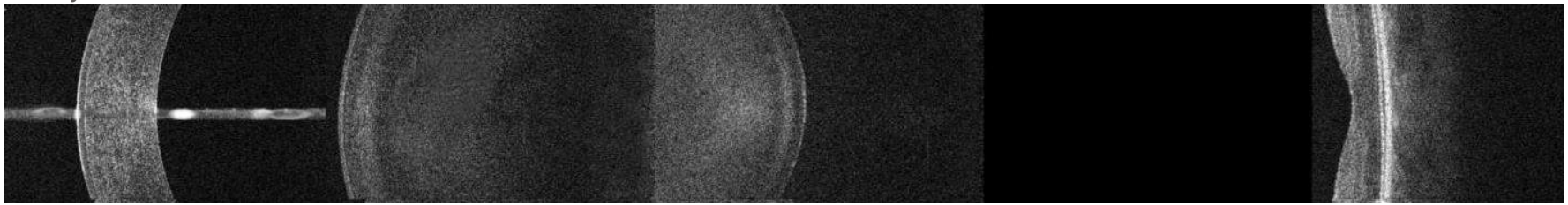
- Full screen view
  - Precise review of each measurement
  - Manual correction of boundaries
  - Echogram or precise manual alignment



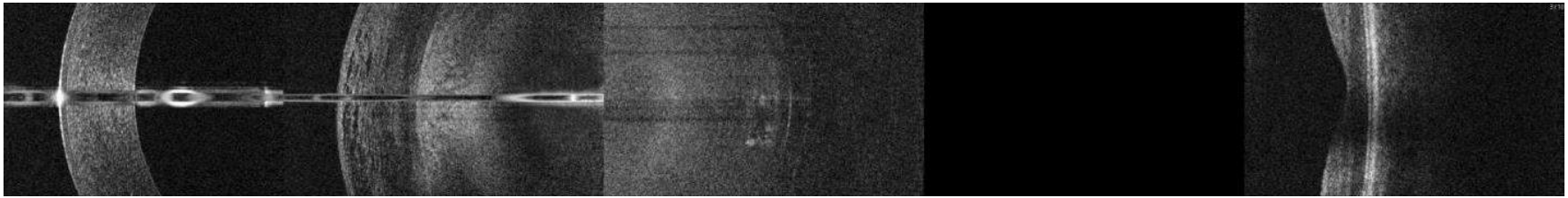
Biometry OCT

Biometrical measurement sample cases

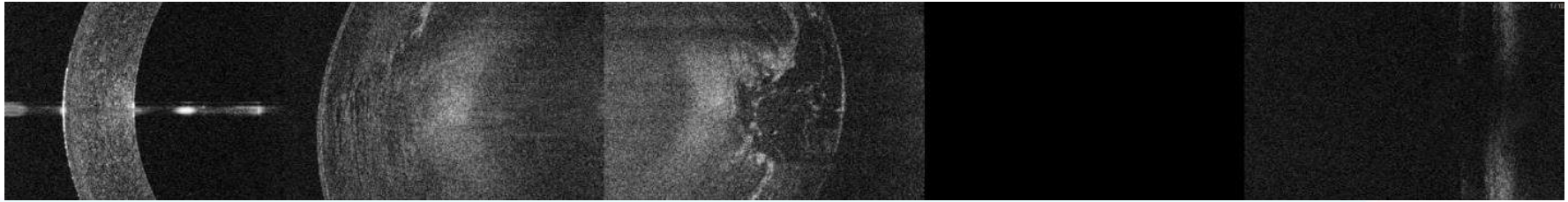
Healthy



Cataract



Dense cataract – still manual measurement is possible

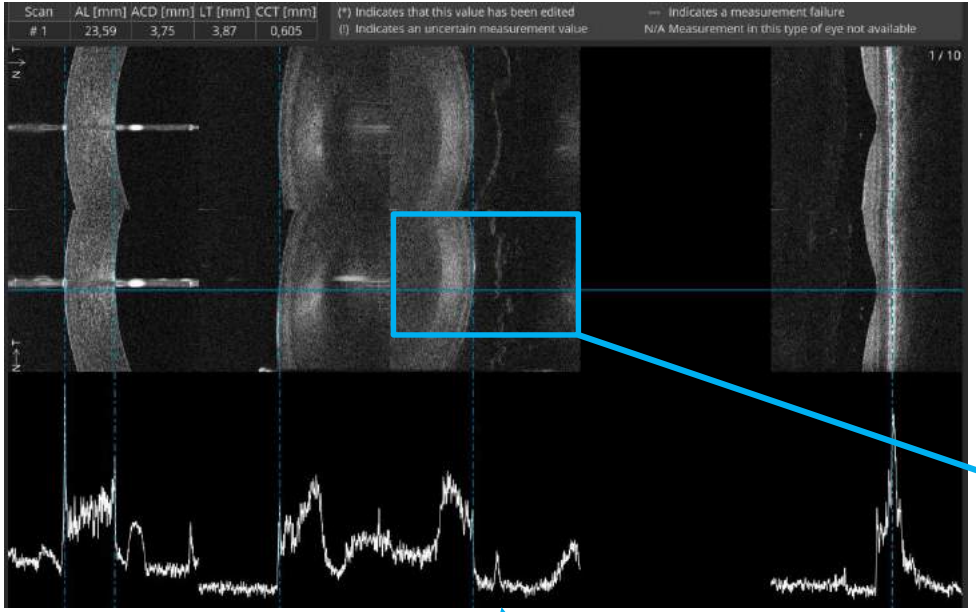


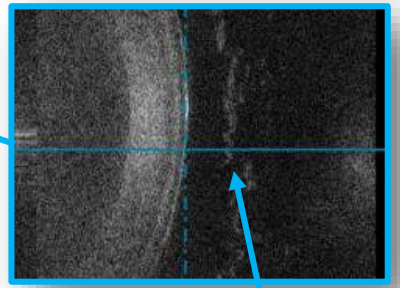
Biometry OCT

- Clinical use
  - Axial distances measurement
  - UBM verification
  - AL in monitoring Hi myopic eyes
  - ACD – management of glaucoma

- Benefits
  - Extends the use of Standard OCT
  - OCT Biometry provides exact measured boundaries of ocular structures
  - Manual correction of boundaries which is not available in Gold standard
  - Verification and precise correction for non typical cases
  - Precise IOL detection for pseudo phakic eyes

Biometry OCT

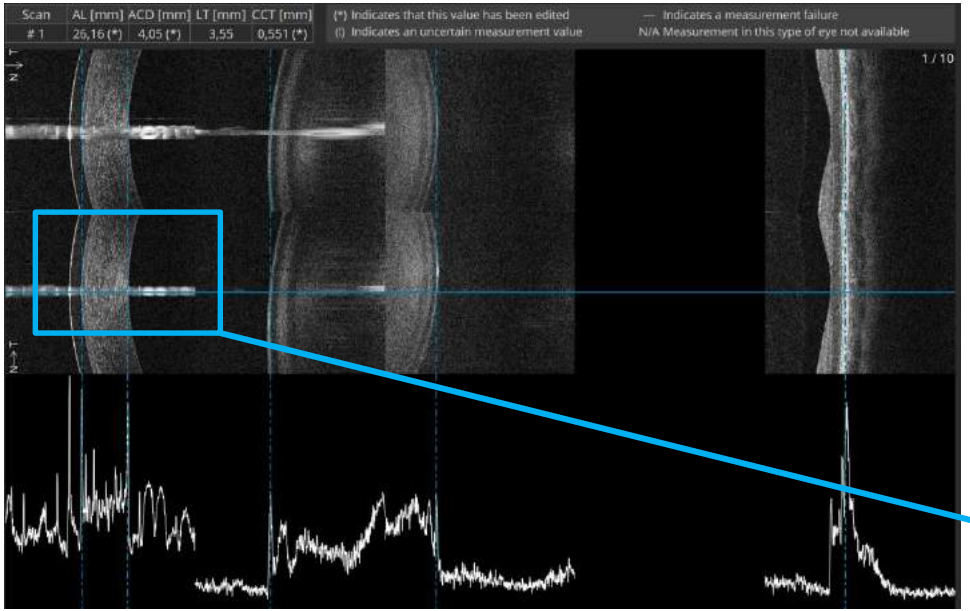




Male, 37 y/old
Healthy

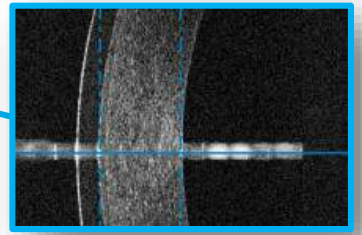
Healthy subject with visible peak in the vitrous behind the crystalline lens Berger space and vitrous

Biometry OCT

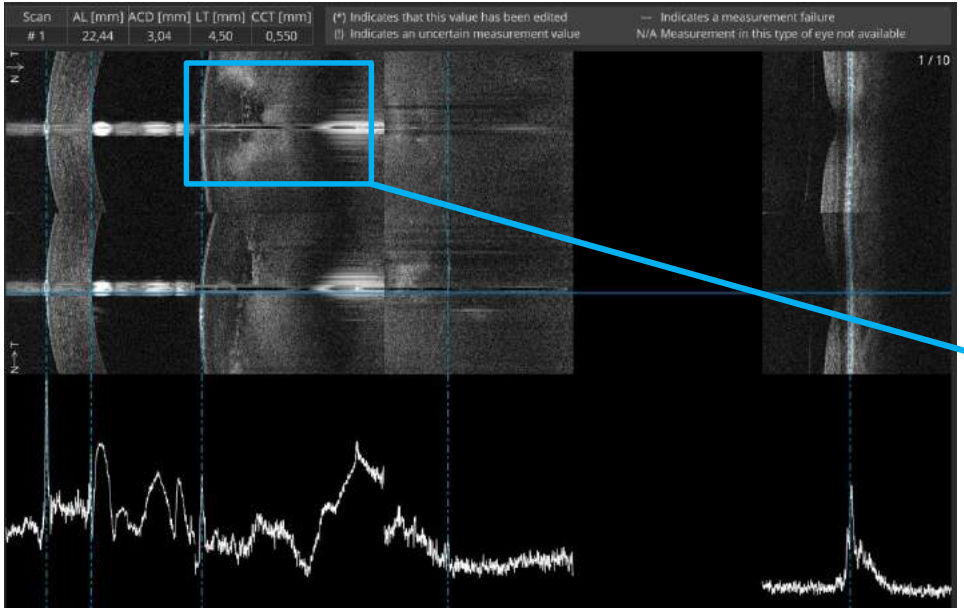


Male, 24 y/old
Healthy

Patient with contact lens on the cornea – Only REVO is able provide correct measurement.
All other devices cannot detect the lens.

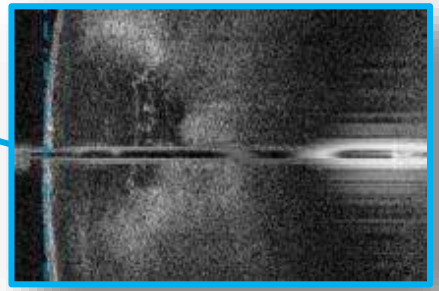


Biometry OCT

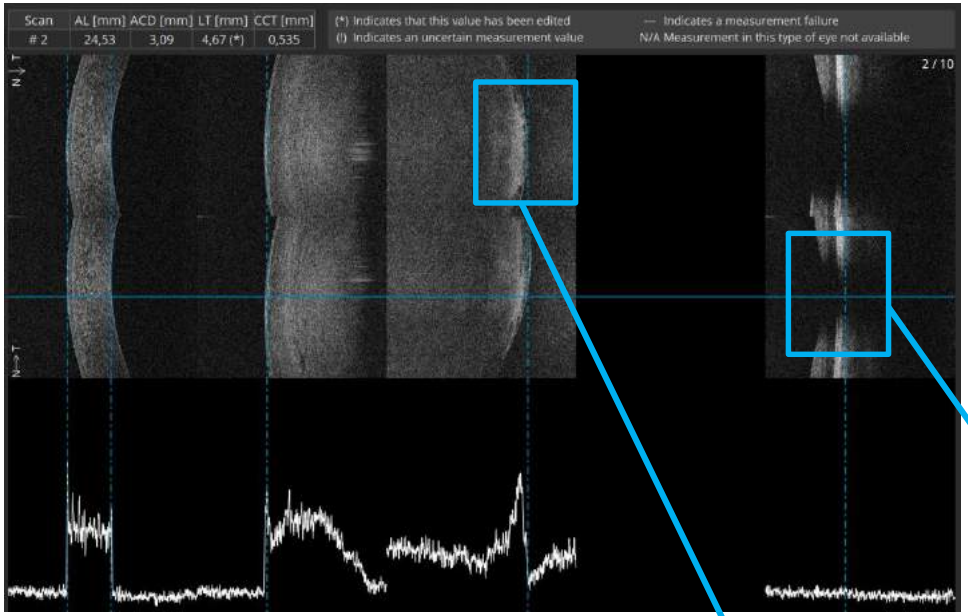


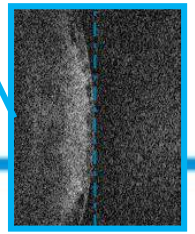
Female, 67 y.

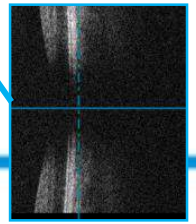
Cataract



Biometry OCT







Female, 40 y/old

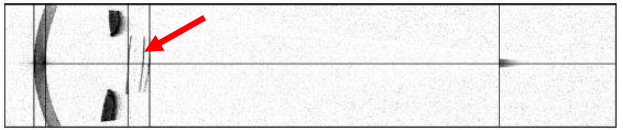
Cataract over posterior lens capsule

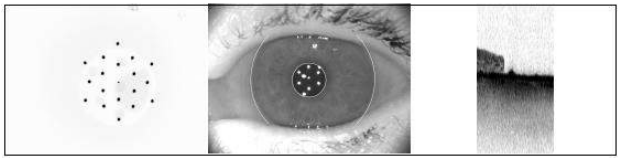
B-OCT™ Verification

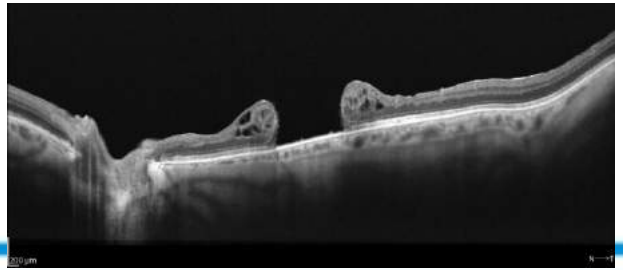
Analysis	OS left

Measurement values			Keratometry values			
AL:	22.47 mm	(SD = 8 µm)	n: 1.3375			
ACD:	4.50 mm	(SD = 13 µm)	SE:	45.85 D		(SD = 1 µm)
LT:	0.95 mm	(SD = 25 µm)	K1:	44.90 D	@ 158°	(SD = 4 µm)
			K2:	46.85 D	@ 68°	(SD = 3 µm)
			Δ D:	-1.95 D	@ 158°	

Central corneal thickness			WTW and pupil values (CW-Chord)			
CCT:	524 µm	(SD = 4 µm)	WTW:	12.0 mm	Ix: -0.4 mm	Iy: +0.2 mm
			P:	3.3 mm	Px: +0.0 mm	Py: +0.2 mm





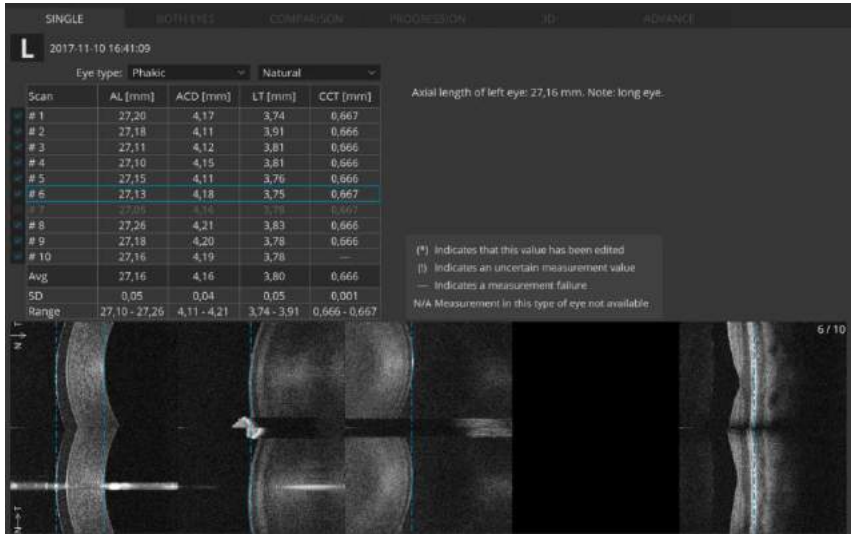


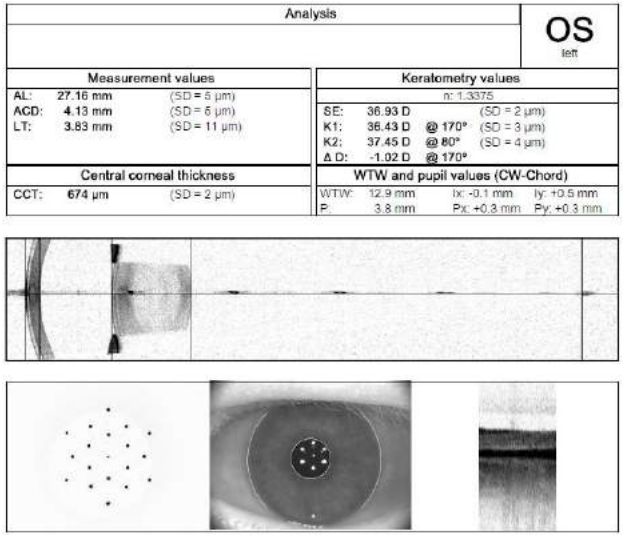
Female, 68 y.

Patient with Macular hole after PPV treatment

IOL 700 LT measurement error

B-OCT™ Verification



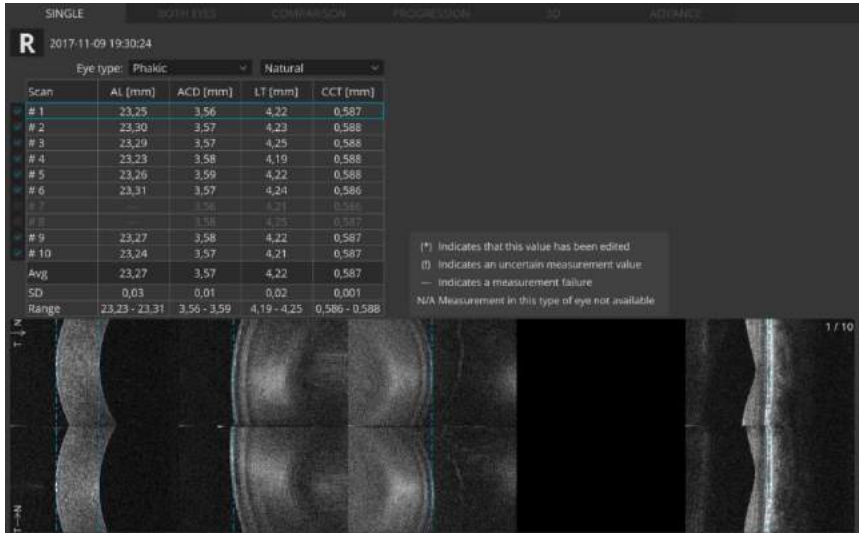


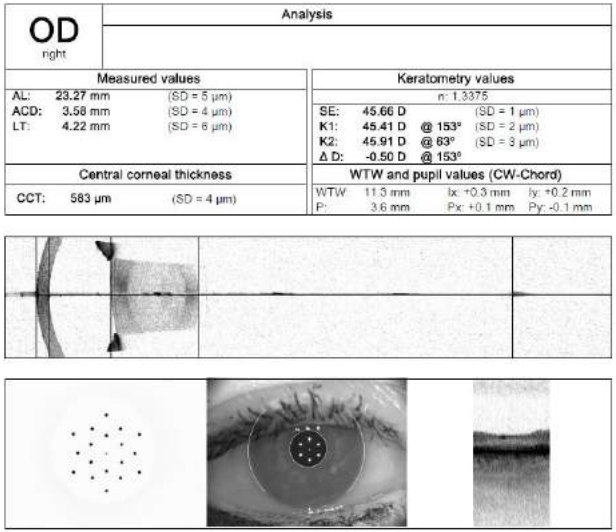
	IOL 700	REVO NX
AL [mm]	27,16	27,16
ACD [mm]	4,13	4,16
LT [mm]	3,83	3,80
CCT [mm]	0,674	0,666

Patient:
Male, 40 y.
Contact lens on the cornea, myopic patient.

In REVO NX it is possible to modified detected boundary position
In IOL it is not possible to modify detected boundaries.

B-OCT™ Verification



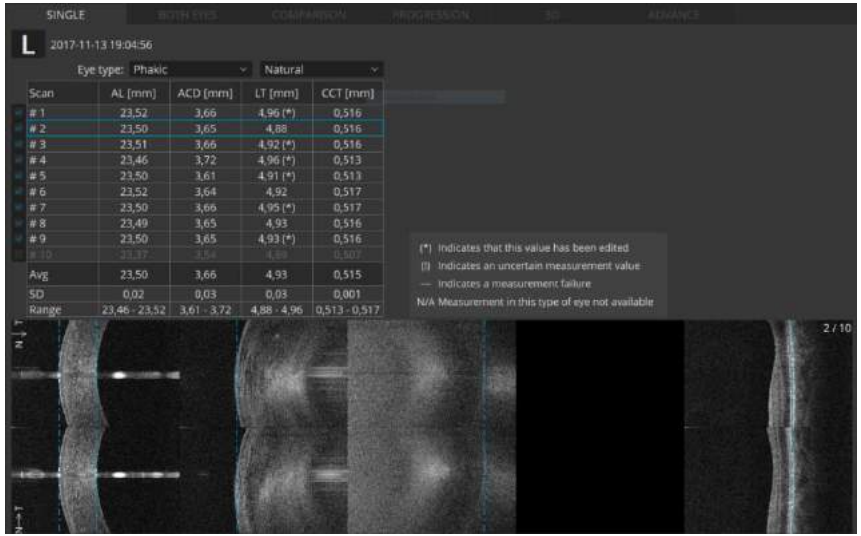


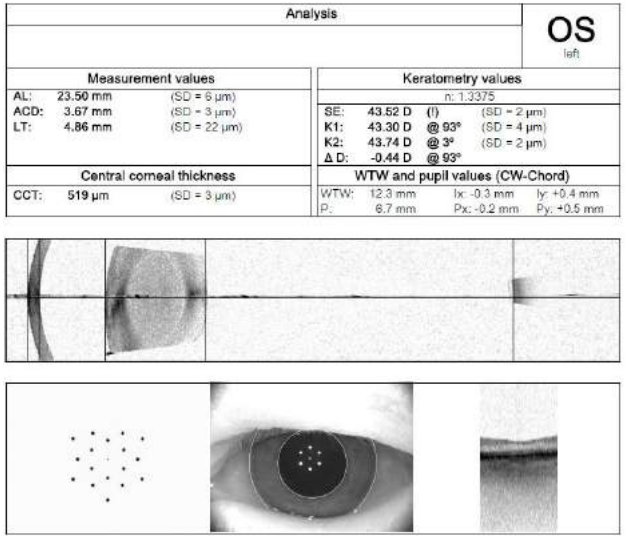
	IOL 700	REVO NX
AL [mm]	23,27	23,27
ACD [mm]	3,58	3,57
LT [mm]	4,22	4,22
CCT [mm]	0,583	0,587

Female, 50 y.

Healthy

B-OCT™ Verification



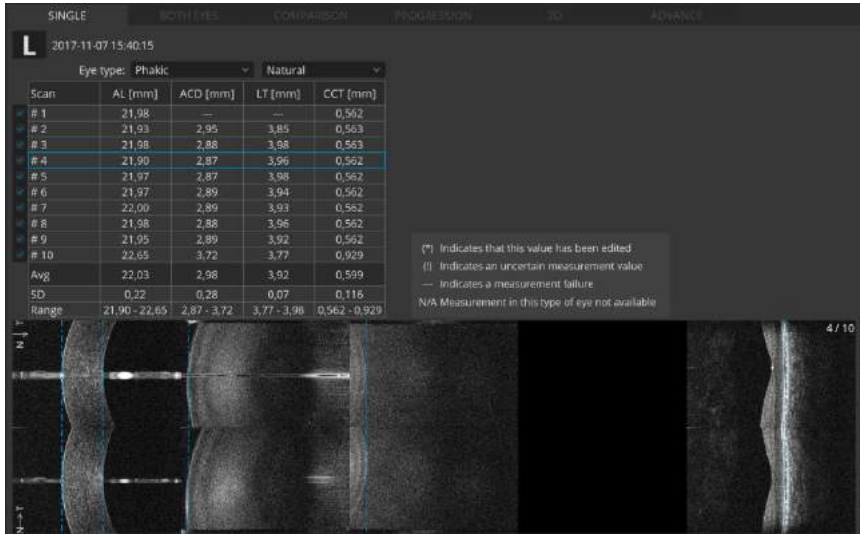


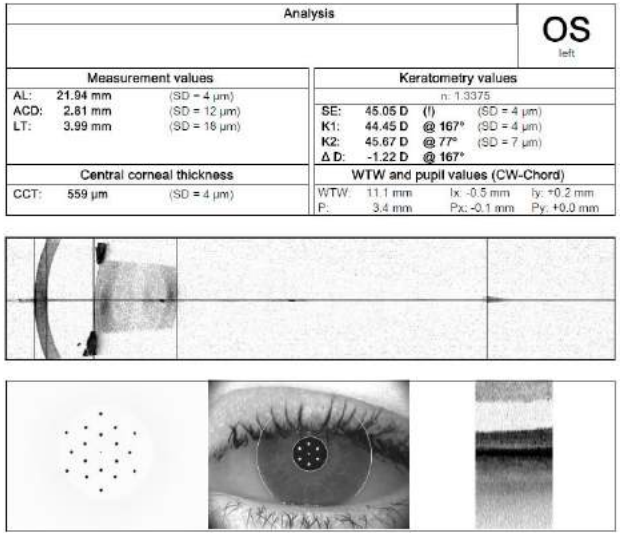
	IOL 700	REVO NX
AL [mm]	23,50	23,50
ACD [mm]	3,67	3,66
LT [mm]	4,86	4,93
CCT [mm]	0,519	0,515

Patient:
Male, 72 y.

Cataract

B-OCT™ Verification



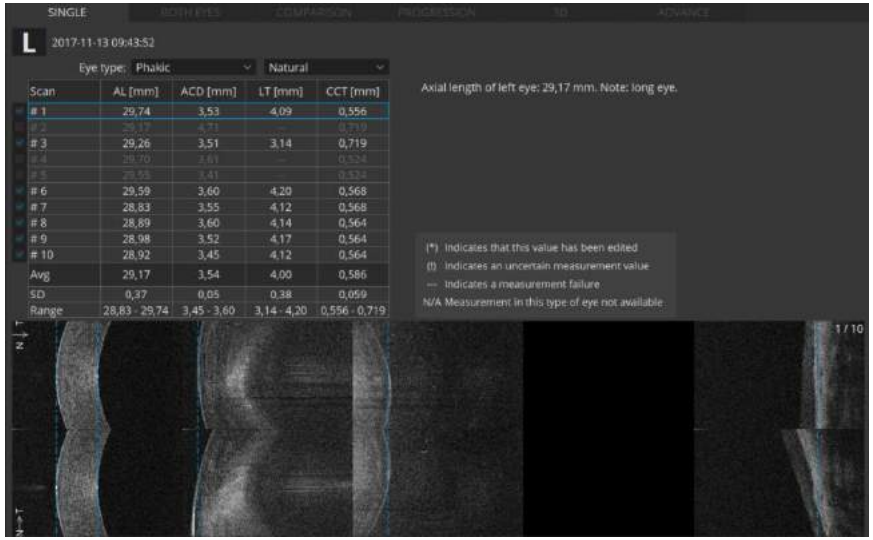


	IOL 700	REVO NX
AL [mm]	21,94	22,03
ACD [mm]	2,81	2,98
LT [mm]	3,99	3,92
CCT [mm]	0,559	0,599

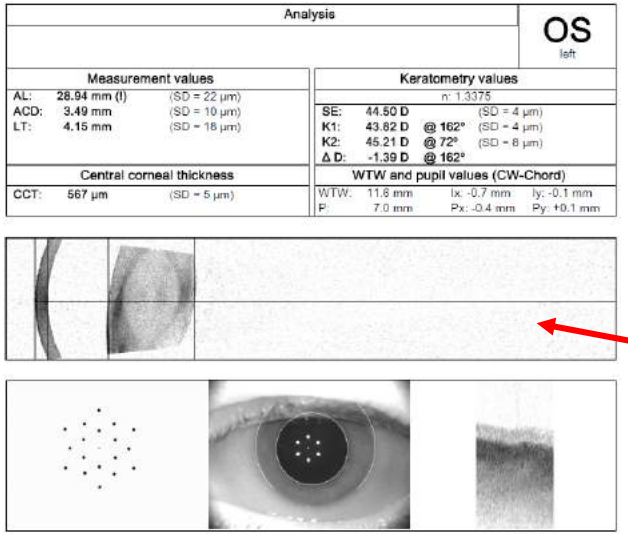
Female, 31 y.

Healthy

B-OCT™ Verification



Scan	AL [mm]	ACD [mm]	LT [mm]	CCT [mm]
# 1	29,74	3,53	4,09	0,556
# 2	29,17	4,71	---	0,719
# 3	29,26	3,51	3,14	0,719
# 4	28,70	3,61	---	0,524
# 5	29,53	3,41	---	0,524
# 6	29,59	3,60	4,20	0,568
# 7	28,83	3,55	4,12	0,568
# 8	28,89	3,60	4,14	0,564
# 9	28,98	3,52	4,17	0,564
# 10	28,92	3,45	4,12	0,564
Avg	29,17	3,54	4,00	0,586
SD	0,37	0,05	0,38	0,059
Range	28,83 - 29,74	3,45 - 3,60	3,14 - 4,20	0,556 - 0,719



	IOL 700	REVO NX
AL [mm]	28,94	29,17
ACD [mm]	3,49	3,54
LT [mm]	4,15	4,00
CCT [mm]	0,567	0,586

Patient:
Female, 55 y.
Cataract

The biggest difference in comaparison study
IOL does not show detected boundaries
Long eye ball AL~29mm

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