

*Operational Guide for*

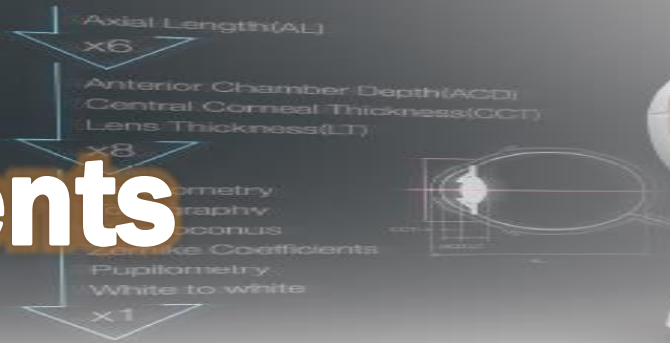
# HBM-1 / HTG-1



May 20<sup>th</sup>, 2024



# Contents



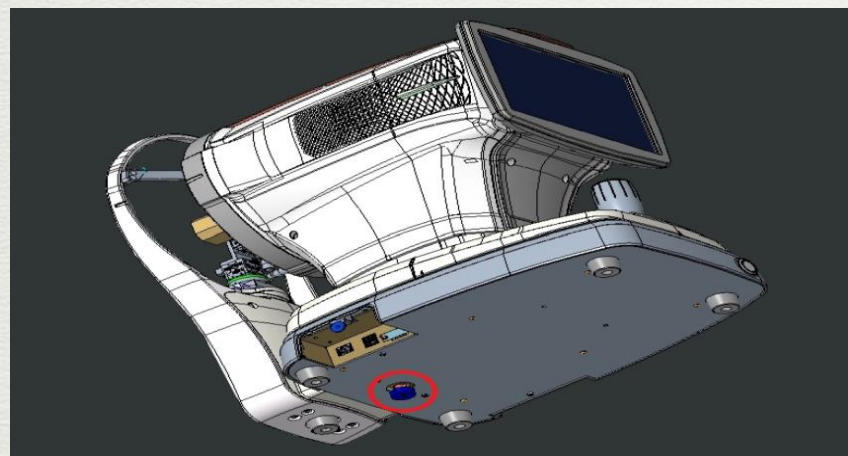
contents

- **Operation**
- **IOL Calculation**
- **Field test results**
- **Myopia management**
- **User Setup**
- **Q&A**

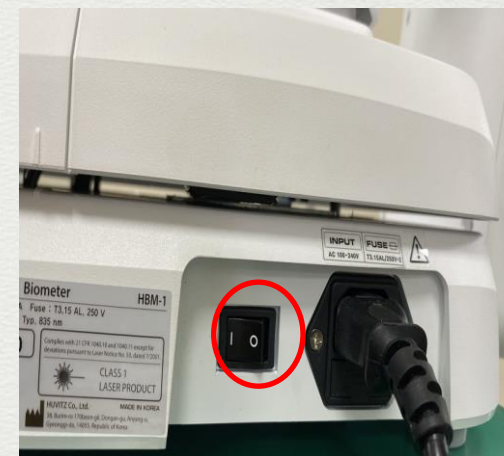


# How to activate HBM-1

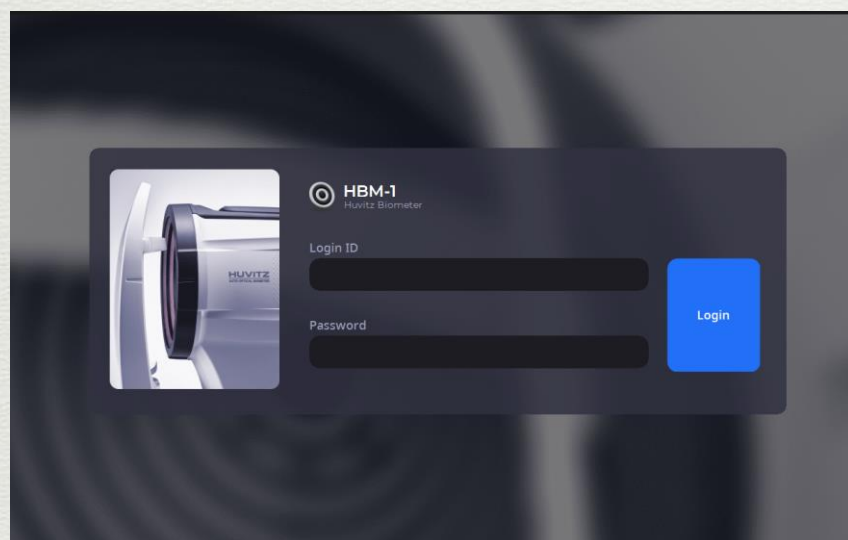
- ↓ Axial Length(AL) x6
- ↓ Anterior Chamber Depth(ACD)
- ↓ Central Corneal Thickness(CCT)
- ↓ Lens Thickness(LT)
- ↓ x8
- ↓ Zernike Coefficients
- ↓ Pupilometry
- ↓ White to white
- ↓ x1



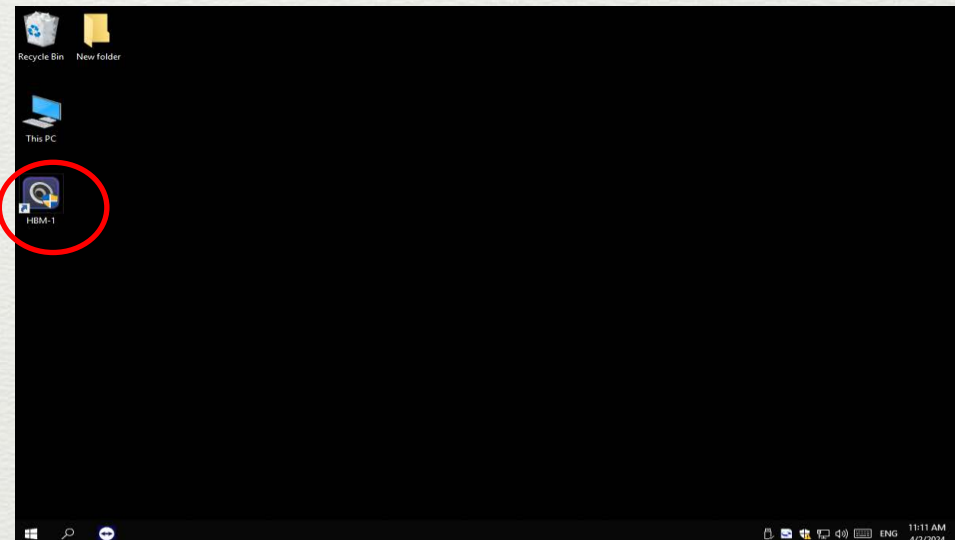
Unlock packing lock



Turn on Power



Insert ID/PW: huvitz / huvitz

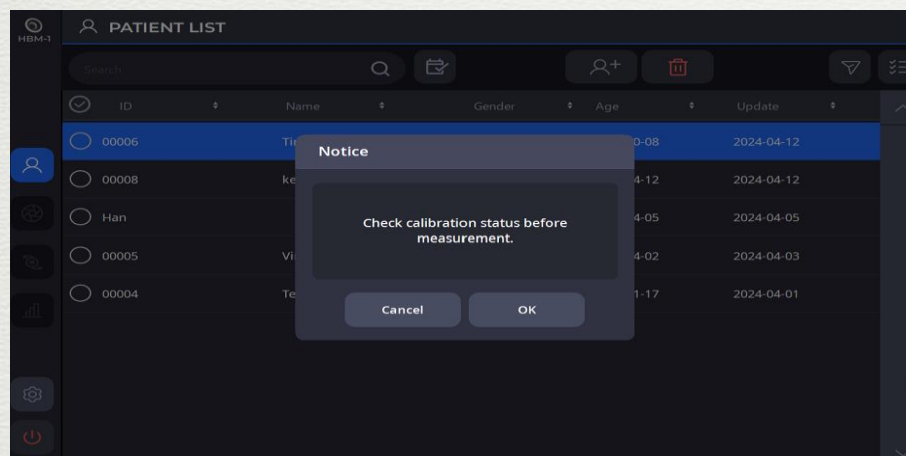


Run the Software

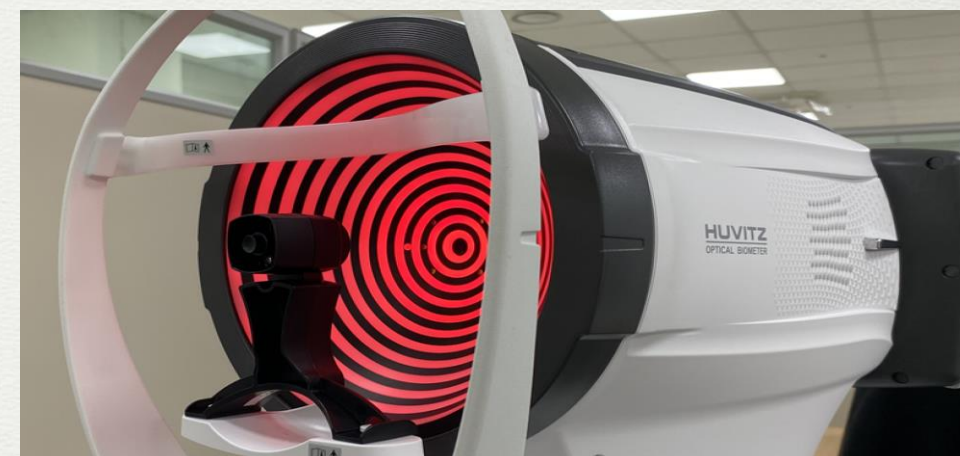
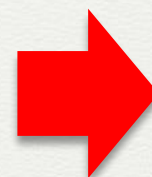


# How to activate HBM-1

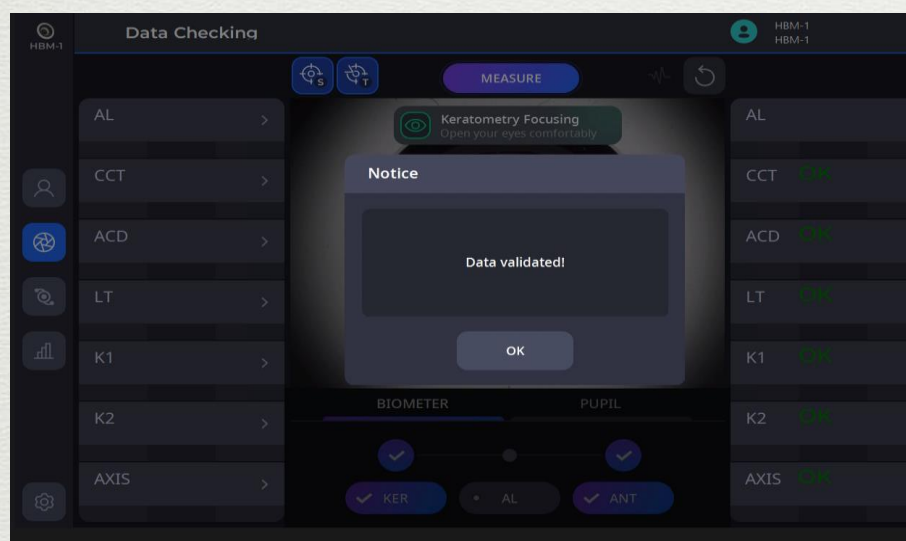
- Axial Length(AL) x6
- Anterior Chamber Depth(ACD)
- Central Corneal Thickness(CCT)
- Lens Thickness(LT)
- Zernike Coefficients
- Pupilometry
- White to white
- x1



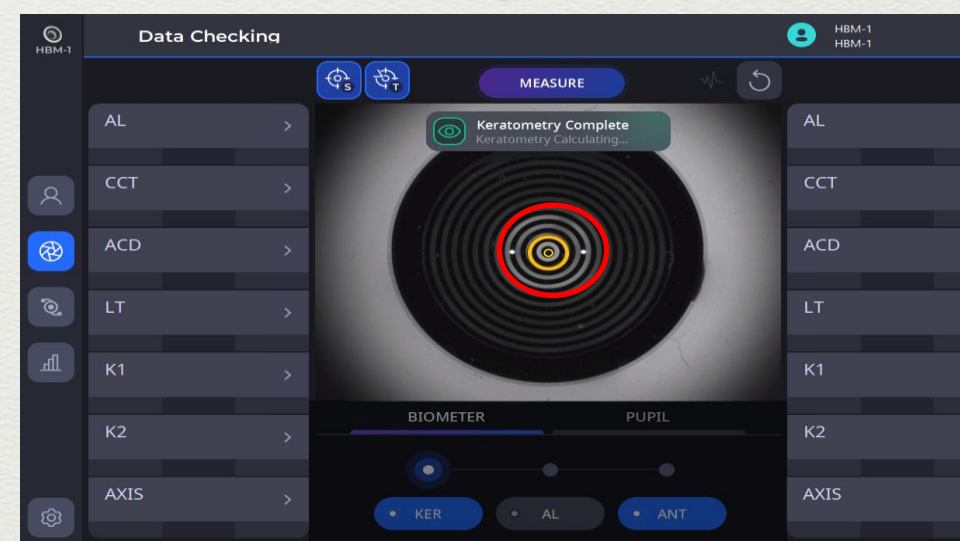
Check calibration status **regularly**



Place a model eye on the chinrest



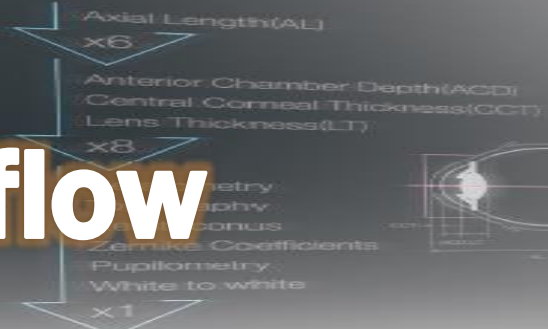
Check the message "Data validated"



Set up the focus like the picture



# Workflow



# Operation

## Patient Info

New Patient

Patient ID: 00032  
 First Name: Sook  
 Last Name: Choi

Birth: 1984-09-23  
 Gender: Female  
 Physician: 1

Cancel OK

|       |                      |      |            |            |
|-------|----------------------|------|------------|------------|
| 00005 | Patient_Keratoconus2 | Male | 1983-08-17 | 2023-08-17 |
| 00004 | Patient_Keratoconus1 | Male | 1983-08-17 | 2023-08-17 |

## Measurement

MEASURE

OD Phakic OS Phakic

AL 24.56 mm  
 CCT 0.487 mm  
 ACD 3.11 mm  
 LT 3.89 mm  
 K1 8.76 mm  
 K2 8.66 mm  
 AXIS 24°

Keratometry Focusing  
 Open your eyes comfortably

BIOMETER PUPIL

MEASURE KER AL ANT

## Result

RESULT

OD Phakic OS Phakic

SUM

KER

ZER

AL

ACD

ANT

LT

PUP

WTW

CONT.FIT

AXIS

OD: AL 24.26, CCT 0.547, ACD 3.11, LT 3.61, K1 8.15, K2 7.94, AXIS 177°

OS: AL 24.37, CCT 0.538, ACD 3.13, LT 3.64, K1 8.18, K2 7.99, AXIS 6°

## Report Preview

Report Preview showing data for Patient 2, including OD and OS measurements, keratometry, and topography maps.

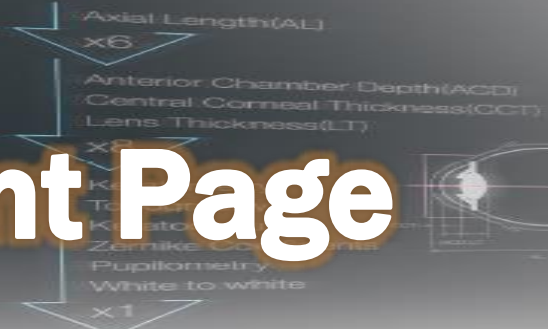
## Workflow

1. Easy & fast workflow
2. Auto tracking & shoot
3. Separate measurement



# Patient Page

Operation



HBM-1
PATIENT LIST

Searching
Today List
New
Delete
Transfer (HIIS-1)

🔍
📅
👤+
🗑️
🔼
☰

|                                  | ID    | Name             | Gender | Age        | Update     |  |
|----------------------------------|-------|------------------|--------|------------|------------|--|
| <input checked="" type="radio"/> | 00014 | 김재민              | Male   | 1983-10-13 | 2023-10-13 |  |
| <input type="radio"/>            | 00013 | 임인호              | Male   | 1983-10-13 | 2023-10-13 |  |
| <input type="radio"/>            | 00012 | 김정환              | Male   | 1983-10-13 | 2023-10-13 |  |
| <input type="radio"/>            | 00011 | 이화준              | Male   | 1983-10-13 | 2023-10-13 |  |
| <input type="radio"/>            | 00010 | 송인석              | Male   | 1983-10-13 | 2023-10-13 |  |
| <input type="radio"/>            | 00032 | Sook Choi        | Female | 1984-09-23 | 2023-10-13 |  |
| <input type="radio"/>            | 00002 | Patient_2        | Male   | 1983-08-17 | 2023-10-12 |  |
| <input type="radio"/>            | 00001 | Patient_1_myopia | Male   | 2006-08-17 | 2023-10-05 |  |
| <input type="radio"/>            | 00007 | Patient DCM_IOL  | Male   | 1983-08-17 | 2023-09-26 |  |

👤

Current Selection

🔒

Disabled

⚙️

User Option

🔌

Power Off



# New Patient

Operation

## New Patient

Patient ID

00032

First Name

Sook

Last Name

Choi

Birth YYYY-MM-DD

1984-09-23

Gender

Female

Physician

1

Each Physician can have its own lens & formulas

Cancel

OK

|                       |       |                      |      |            |            |
|-----------------------|-------|----------------------|------|------------|------------|
| <input type="radio"/> | 00005 | Patient_Keratoconus2 | Male | 1983-08-17 | 2023-08-17 |
| <input type="radio"/> | 00004 | Patient_Keratoconus1 | Male | 1983-08-17 | 2023-08-17 |



# Patient Detail Page

Operation



**HBM-1** **PATIENT LIST**

← Patient ID 00011 Gender Male Physician  
Name 이화준 Age 1983-10-13

MYOPIA

Start Myopia management

Delete Patient

| DATE / TIME   | AL    | CCT   | ACD  | LT   | K1   | K2   | Axis | Lens   |
|---------------|-------|-------|------|------|------|------|------|--------|
| OD 2023-10-13 | 24.82 | 0.594 | 3.10 | 4.76 | 7.99 | 7.64 | 179  | Phakic |
| OS 14:48:05   | 24.18 | 0.594 | 3.06 | 4.75 | 7.88 | 7.60 | 0    | Phakic |

Press this button to start a measurement



# Measurement Page

Operation



MEASURE

OD Phakic

MEASURE

OS Phakic

LENS

- Phakic
- Aphakic
- Pseudophakic (Unknown)
- Pseudophakic (Silicone)
- Pseudophakic (PMMA)
- Pseudophakic (Acrylate)
- Pseudophakic (Memory)
- Myopia

Spherical

START

Keratometry Focusing  
Open your eyes comfortably

Select a crystal lens type

Phakic - Include crystalline lens  
Aphakic - Exclude crystalline lens  
Pseudophakic - IOL surgical eye

Axial Length  
(The method of calculating Axial Length depends on the type of lens)  
Phakic : + 0.0mm  
Aphakic : + 0.20mm  
Pseudophakic : + 0.11 ~ 0.12mm

Input the Diopter (Option)

START

KER AL ANT



# Measurement

Operation



Right

Auto Shoot

Left

MEASURE

Auto Tracking

Keratometry Focusing  
Open your eyes comfortably

Live Signal

Clear Retry

Message window

Move HBM body to the center roughly

Selectable

BIOMETER PUPIL

KER AL ANT

Each mode can be on or off

OD Phakic

OS Phakic

AL mm STD

CCT mm STD

ACD mm STD

LT mm STD

K1 mm

K2 mm

AXIS °

AXIS Cyl

HBM-1

Sook Choi



# Measurement

# Operation



**HBM-1 MEASURE** kevin 00008

OD Phakic OS Phakic

**MEASURE**

**AL 24.96 mm** 0.039 STD  
24.96

**CCT 0.495 mm** 0.020 STD  
0.487

**ACD 3.58 mm** 0.020 STD  
3.58

**LT 3.73 mm** 0.010 STD  
3.74

**K2 44.71 D**

**AXIS 126 °**  
Cyl = -0.51D

**AL 24.83 mm** 0.014 STD  
24.83

**CCT 0.482 mm** 0.020 STD  
0.482

**ACD 3.60 mm** 0.020 STD  
3.60

**LT 3.73 mm** 0.020 STD  
3.73

**K1 44.14 D**

**K2 45.65 D**

**AXIS 173 °**  
Cyl = -1.51D

**Keratomy Focusing**  
Open your eyes comfortably

Green : Data is passed

Orange : Data is suspicious

Red : Data is failed

BIOMETER PUPIL

If 'Auto Try' is on, process 3 times until data is satisfied

✓ KER ✓ AL ✓ ANT

Go to result page



# Measurement(Bad Case Ker Tear 1)

Operation



HBM-1

RESULT



Cristea Elena  
F2-00002

2023-11-27  
18:27:01

OD OS

SUM

KER

ZER

AL

ANT

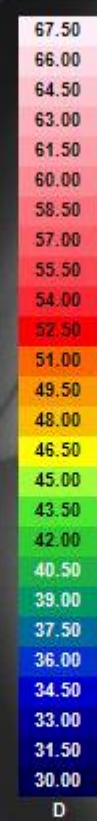
PUPIL

WTW

CONT.FIT

MAP

PROFILE



SimK

K1(Rf)

44.34D(7.61mm) @81°

K2(Rs)

45.75D(7.38mm) @171°

CYL

-1.41D

K Max(R Min)

45.87D(7.36mm) @3°

K Avg

45.04D(7.49mm)

Ecc(8mm)

e

0.61

EYE

MAP

RING

Axial

SCALE



# Measurement(Bad Case Ker Tear 2)

Operation



HBM-1

RESULT



Muresan Ana  
F2-00007

2023-12-04  
17:30:49

OD

OS

MAP

PROFILE

SUM

KER

ZER

AL

ANT

PUPIL

WTW

CONT.FIT

SimK

K1(Rf)

45.52D(7.41mm) @23°

K2(Rs)

46.81D(7.21mm) @113°

CYL

-1.29D

K Max(R Min)

48.65D(6.94mm) @84°

K Avg

46.16D(7.31mm)

Ecc(8mm)

e

0.30

EYE

MAP

RING

Axial

SCALE





# Measurement(Bad Case Ker Tear 3)

Operation



HBM-1

RESULT



Petrican Aurica  
F2-00012

2023-12-06  
17:31:28

OD

OS

MAP

PROFILE

SimK

SUM

KER

ZER

AL

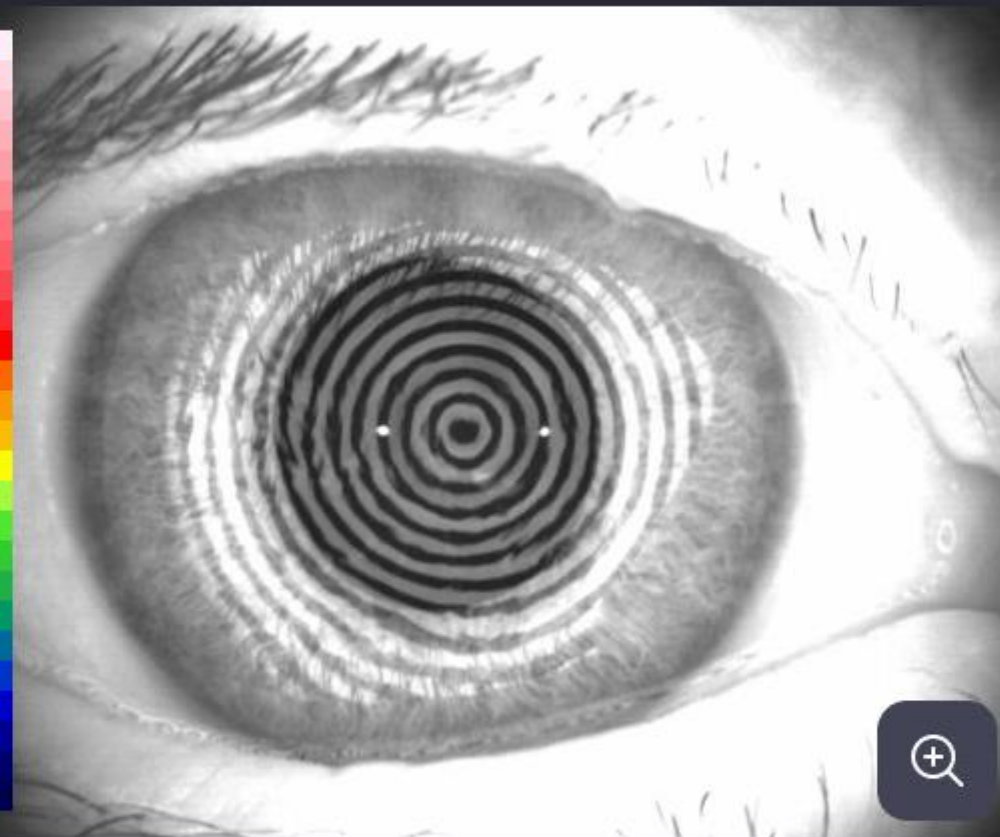
ANT

PUPIL

WTW

CONT.FIT

67.50  
66.00  
64.50  
63.00  
61.50  
60.00  
58.50  
57.00  
55.50  
54.00  
52.50  
51.00  
49.50  
48.00  
46.50  
45.00  
43.50  
42.00  
40.50  
39.00  
37.50  
36.00  
34.50  
33.00  
31.50  
30.00



K1(Rf)

43.82D(7.70mm) @91°

K2(Rs)

44.98D(7.50mm) @1°

CYL

-1.16D

K Max(R Min)

46.27D(7.29mm) @176°

K Avg

44.39D(7.60mm)

Ecc(8mm)

e

-0.58

EYE

MAP

RING

Axial

SCALE



# Measurement(Bad Case Ker Eyebrow)

Operation



**HBM-1** **RESULT** Ye J 40178 2023-02-28 15:49:24

OD **OS** MAP PROFILE

SUM **KER** ZER AL ANT PUPIL

54.00  
53.00  
52.00  
51.00  
50.00  
49.00  
48.00  
47.00  
46.00  
45.00  
44.00  
43.00  
42.00  
41.00  
40.00  
39.00  
38.00  
37.00  
36.00  
35.00  
34.00  
33.00  
32.00  
31.00

SimK

K1(Rf) 41.95D(8.04mm) @2°

K2(Rs) 43.44D(7.77mm) @92°

CYL -1.49D

K Max(R Min) 44.66D(7.56mm) @93°

K Avg 42.68D(7.91mm)

Ecc(8mm) -0.90

**SETUP**

System Auto Tracking **On** Off Auto Retry

Patient Auto Shoot **On** Off

Auto Shoot Detail KER **AL** ANT

**Measure**

**! We recommend manual Ker measurement by operator !**



# Result : Summary

Operation



HBM-1
RESULT

kevin  
00008

2024-04-12  
13:59:18

|          | OD                                | OS                                |
|----------|-----------------------------------|-----------------------------------|
| AL (mm)  | 24.97<br><small>0.036 STD</small> | 24.82<br><small>0.032 STD</small> |
| CCT (mm) | 0.492<br><small>0.010 STD</small> | 0.455<br><small>0.010 STD</small> |
| ACD (mm) | 3.59                              | 3.63                              |
| LT (mm)  | 3.70<br><small>0.050 STD</small>  | 3.75<br><small>0.020 STD</small>  |
| K1       | 44.27                             |                                   |
| WTW      |                                   |                                   |
| AXIS     | 142                               |                                   |

**Warning Mark (!)**

AL Warning - Data was obtained by DCM Mode

ACD Warning - Patient Lens is Aphakic / PseudoPhakic

LT Warning - Patient Lens is Aphakic / PseudoPhakic



# Result : Keratometry

Operation

- Axial Length(AL) x6
- Anterior Chamber Depth(ACD)
- Central Corneal Thickness(CCT)
- Lens Thickness(LT)
- x8
- Ke...
- Top...
- Ke...
- Zernike Coefficients
- Pupilometry
- White to white
- x1



**RESULT** 2024-02-14 15:45:21 00032

OD OS

SUM

**KER**

ZER

AL

ANT

PUPIL

WTW

CONT.FIT

MAP PROFILE

Zoom Image

Eye Image ON/OFF

Map Image ON/OFF

EYE MAP RING

Placido Ring Segmentation ON/OFF

SCALE

Axial Tangential, Elevation, Refractive

Select Color palette Select Overlay

SimK Meridian Keratoconus

K1(Rf) 38.82D(8.69mm) @6°

K2(Rs) 39.45D(8.55mm) @96°

CYL -0.63D

K Max(R Min) 39.28D(8.59mm) @127°

K Avg 39.13D(8.62mm)

-0.94



# Result : Topography Zoom Image

appendix

Display Type

Full Image

Full Image

4 Images

Comparison

Map Type

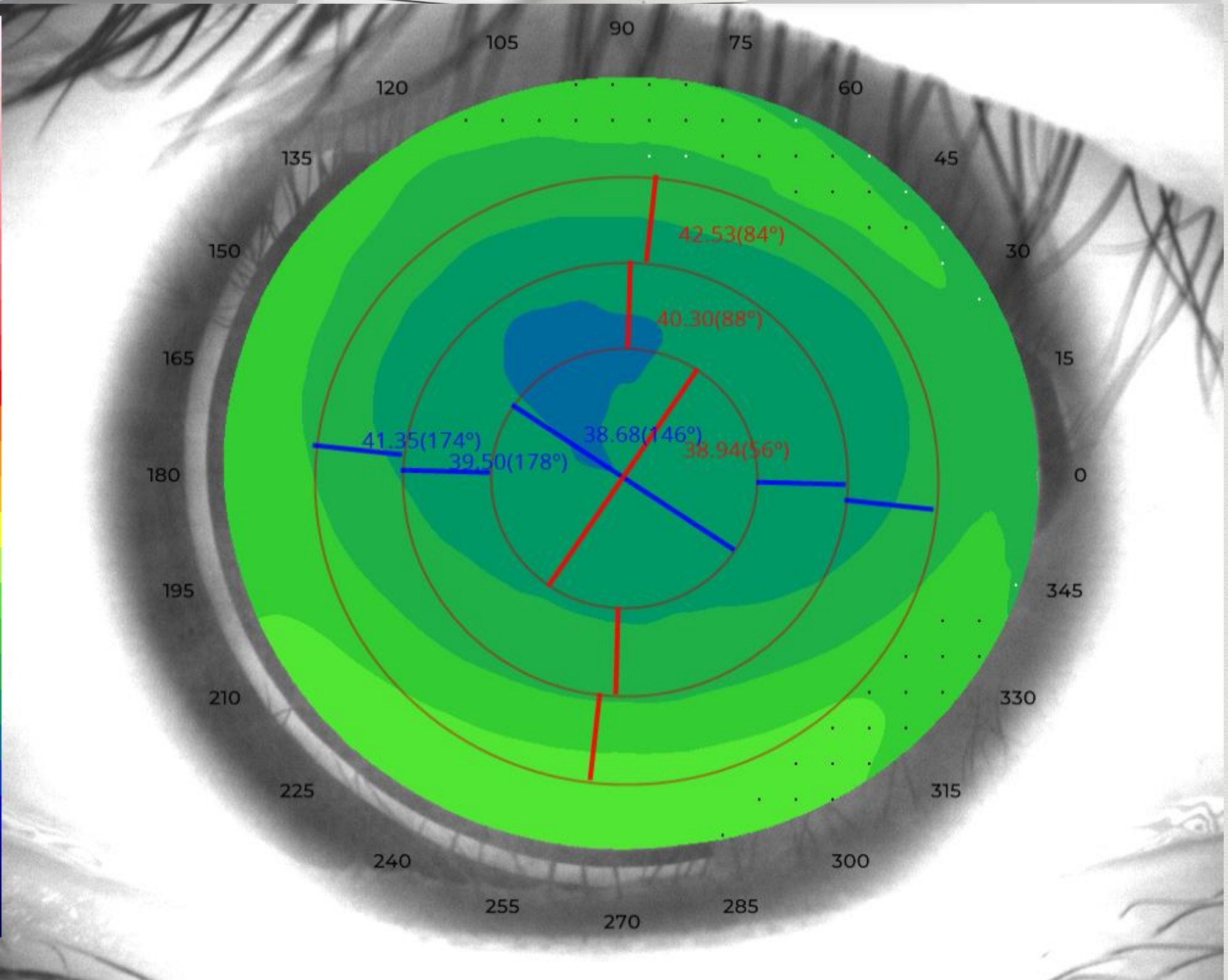
Axial

Scale

Ker Data

|          |          |
|----------|----------|
| Rf       | 8.69mm   |
| K1       | 38.82D   |
| Axis(K1) | 63°      |
| Rs       | 8.64mm   |
| K2       | 39.07D   |
| Axis(K2) | 153°     |
| Cyl      | -0.25D   |
| R Min    | 8.62mm   |
| K Max    | 39.17D   |
| R Avg    | 8.67mm   |
| K Avg    | 38.94D   |
| Ecc(8mm) | -0.90(e) |

|       |
|-------|
| 67.50 |
| 66.00 |
| 64.50 |
| 63.00 |
| 61.50 |
| 60.00 |
| 58.50 |
| 57.00 |
| 55.50 |
| 54.00 |
| 52.50 |
| 51.00 |
| 49.50 |
| 48.00 |
| 46.50 |
| 45.00 |
| 43.50 |
| 42.00 |
| 40.50 |
| 39.00 |
| 37.50 |
| 36.00 |
| 34.50 |
| 33.00 |
| 31.50 |
| 30.00 |
| D     |





# Result : Topography 4Maps

appendix



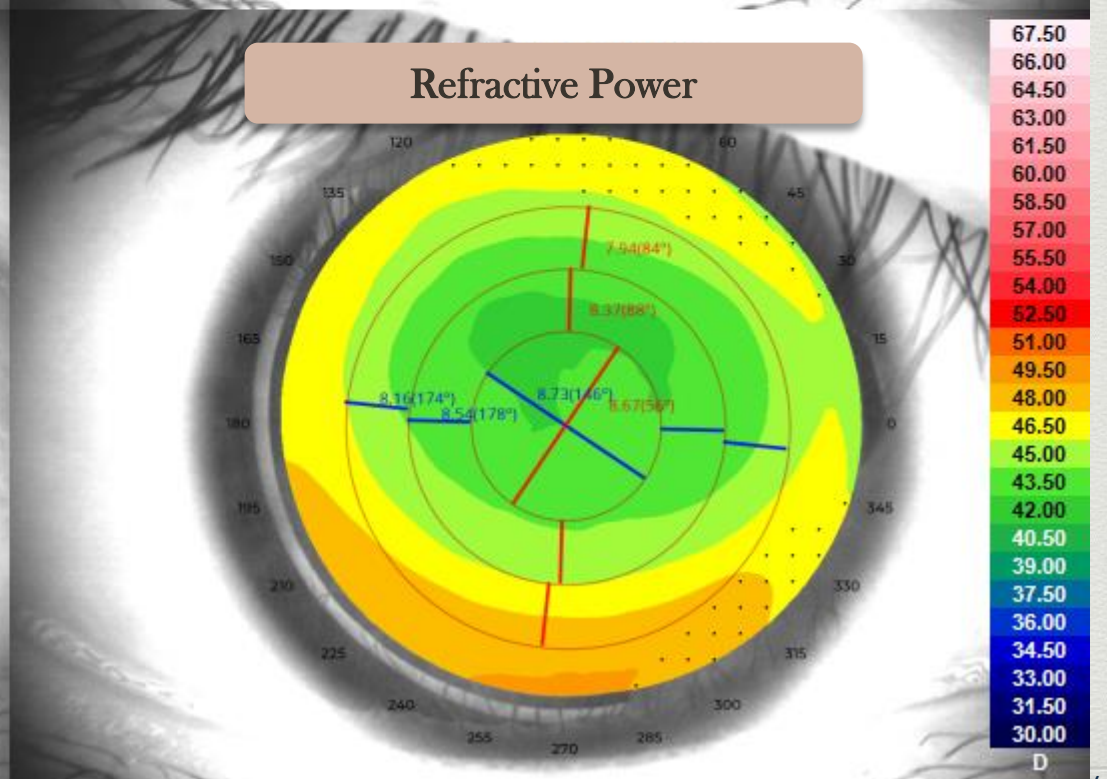
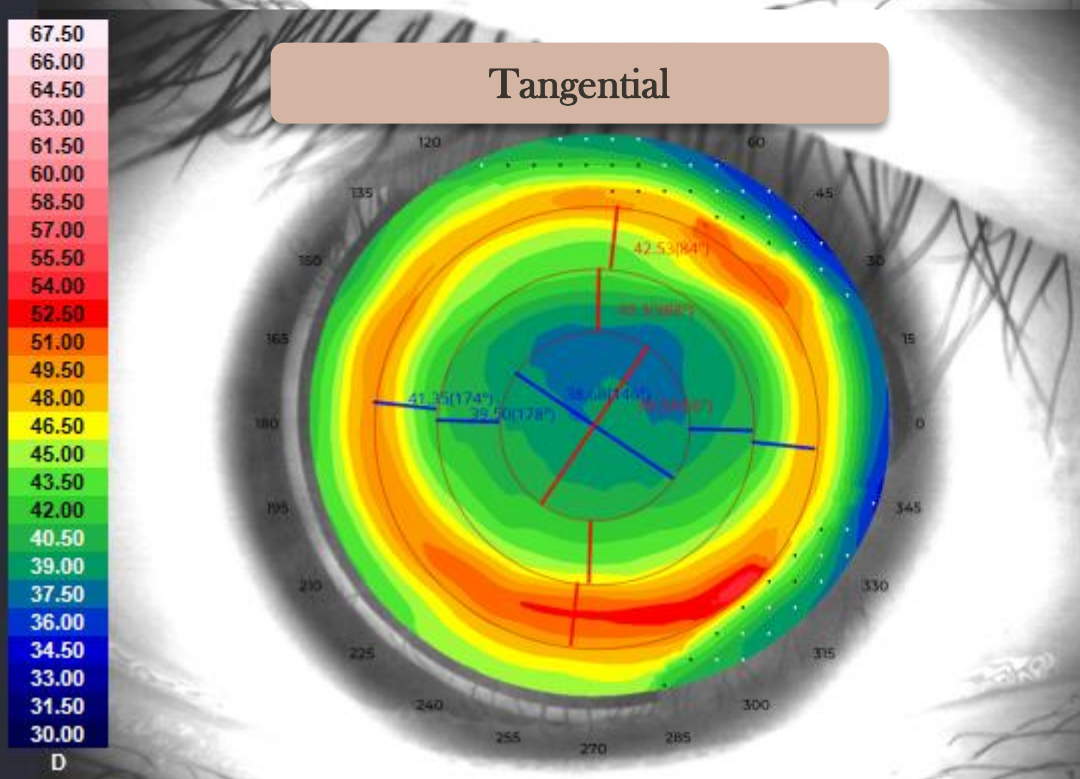
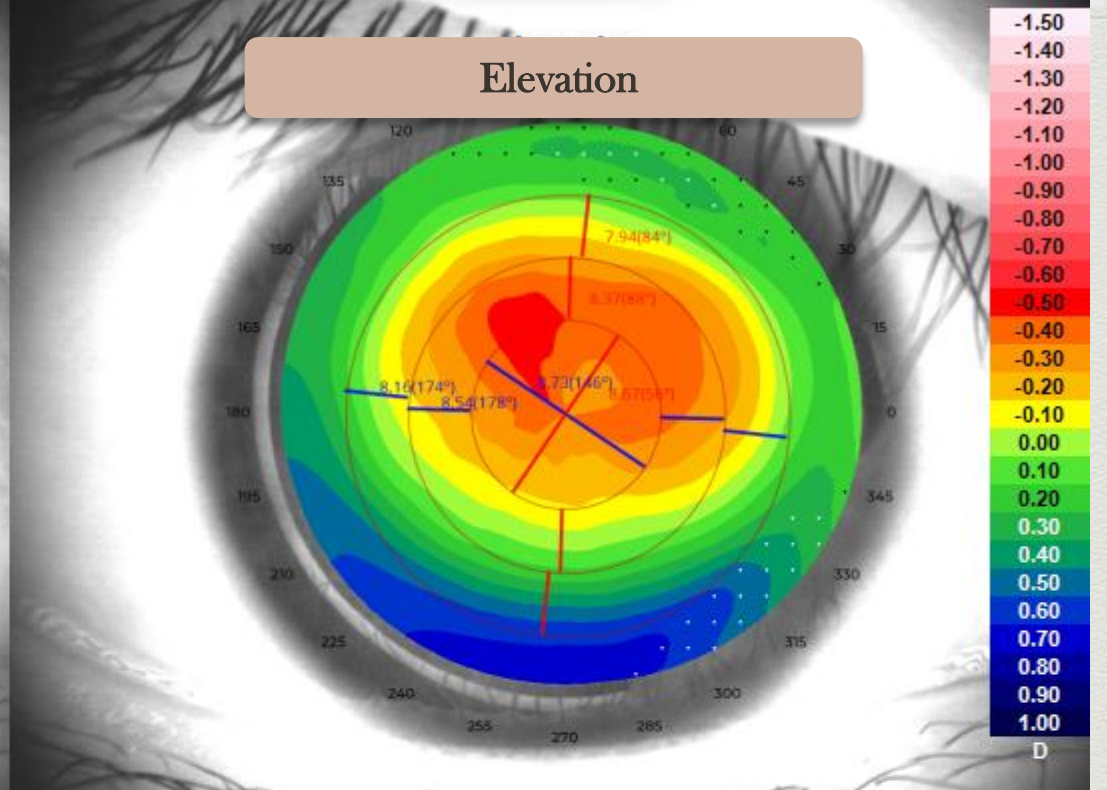
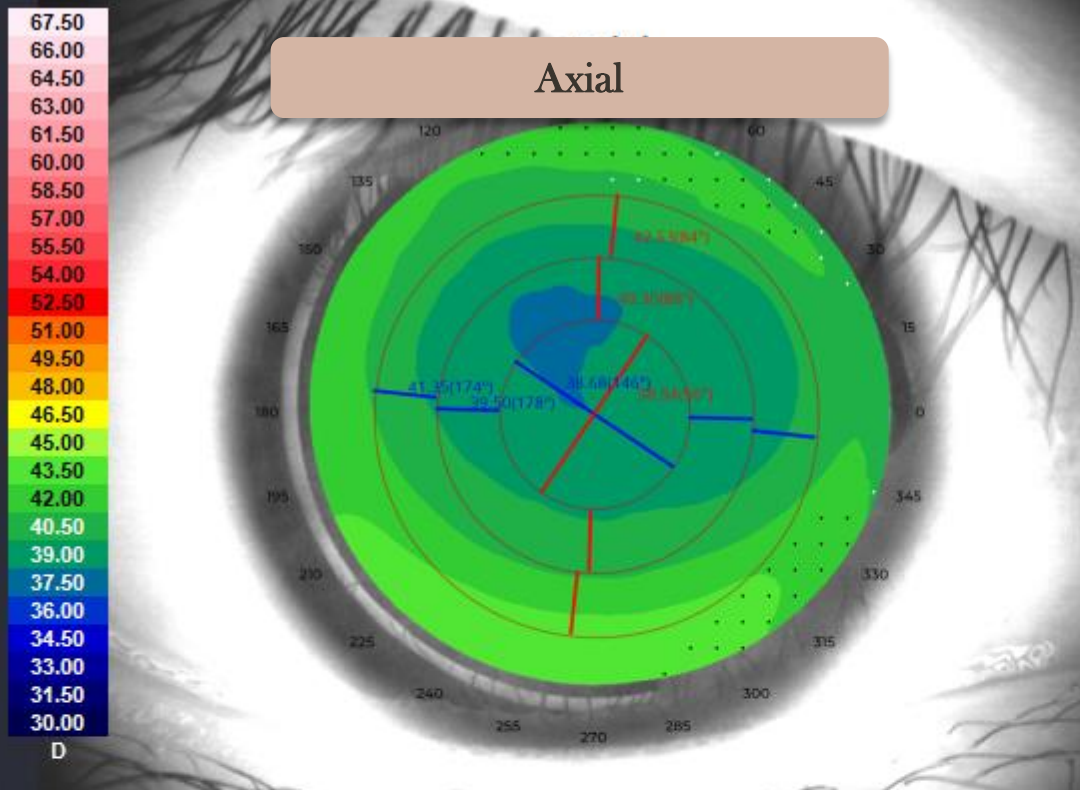
Display Type

4 Images

Scale

Ker Data

|          |          |
|----------|----------|
| Rf       | 8.69mm   |
| K1       | 38.82D   |
| Axis(K1) | 63°      |
| Rs       | 8.64mm   |
| K2       | 39.07D   |
| Axis(K2) | 153°     |
| Cyl      | -0.25D   |
| R Min    | 8.62mm   |
| K Max    | 39.17D   |
| R Avg    | 8.67mm   |
| K Avg    | 38.94D   |
| Ecc(8mm) | -0.90(e) |

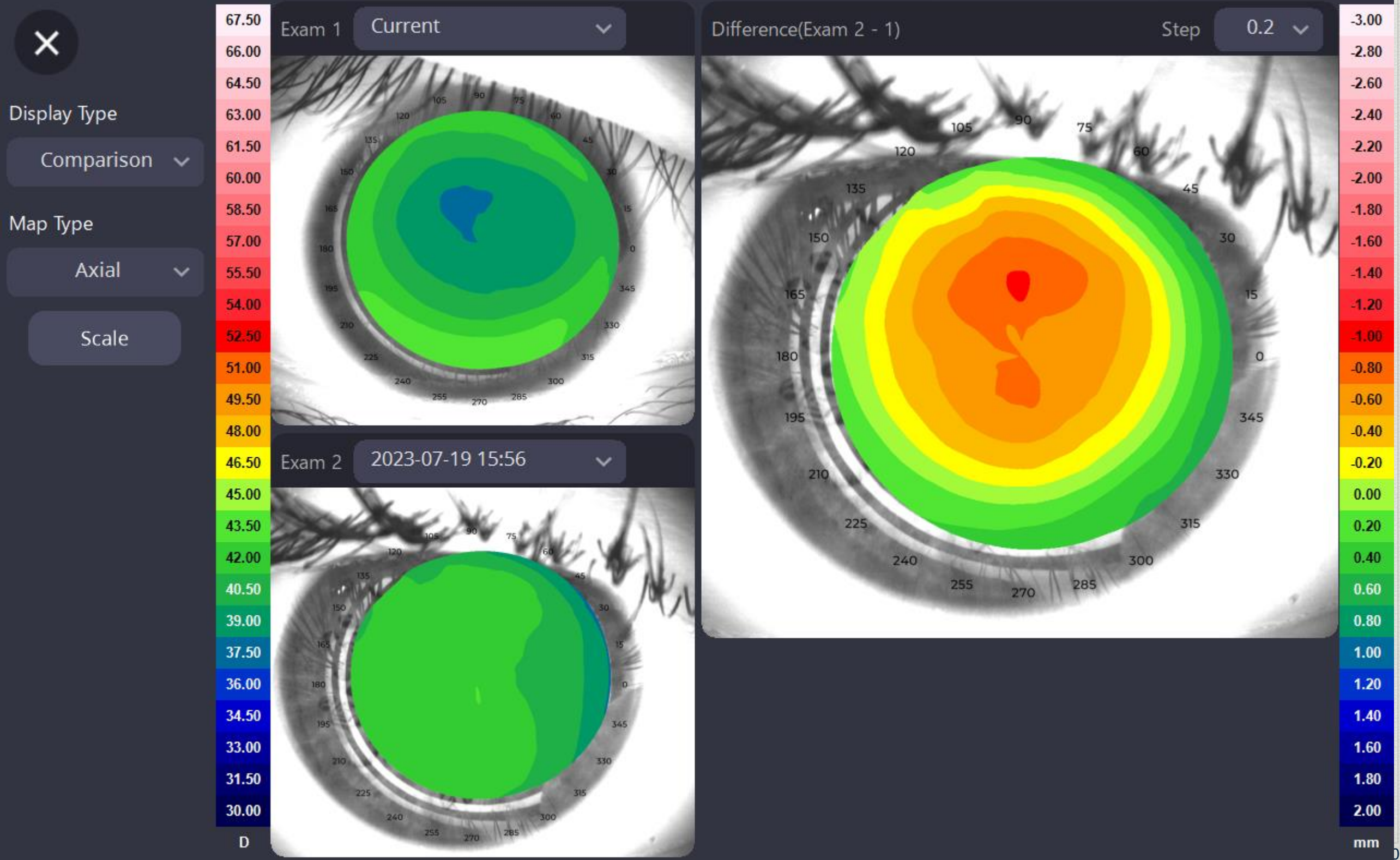




# Result : Topography Comparison

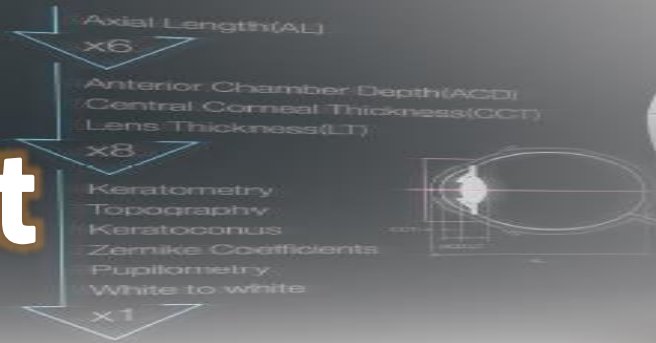
appendix

- ↑ Axial Length(AL) x6
- Anterior Chamber Depth(ACD)
- Central Corneal Thickness(CCT)
- Lens Thickness(LT)
- x8
- ↓ Keratometry
- Topography
- Keratometry
- Zernike Coefficients
- Pupillometry
- White to white
- x1





# Result



# Operation

**HBM-1** **RESULT** 00032 2024-02-14 15:45:21

**SimK**

K1(Rf) 38.82D(8.69mm) @6°

K2(Rs) 39.45D(8.55mm) @96°

CYL -0.63D

K Max(R Min) 39.28D(8.59mm) @127°

K Avg 39.13D(8.62mm)

Ecc(8mm) e -0.94

**Meridian**

2mm Zone

K1 8.78mm @ 12°  
K2 8.60mm @ 102°  
AVG 8.69mm  
Cyl -0.82D ax 12°

4mm Zone

K1 8.63mm @ 4°  
K2 8.50 @ 94°  
AVG 8.57mm  
Cyl -0.58D ax 4°

6mm Zone

K1 8.38mm @ 178°  
K2 8.13mm @ 88°  
AVG 8.26mm  
Cyl -1.25D ax 178°

2mm / 4mm / 6mm  
3mm / 5mm / 7mm  
Diopter / Millimeter  
Changeable

**Keratoconus**

KPI (Keratoconus Prediction Index) 0.30

SAI (Surface Asymmetry Index) 1.06

DSI (Differential Sector Index) 3.47

CSI (Central/Surrounding Index) 3.47

IAI (Irregular Astigmatism Index) 1.14

0.23

If the KPI is over 0.23,  
It suspicious Keratoconus

Central steepening Keratoconus  
Keratoconus Suspicious  
Non-Keratoconus



# Result

- Axial Length(AL) x6
- Anterior Chamber Depth(ACD)
- Central Corneal Thickness(CCT)
- Lens Thickness(LT) x8
- Keratometry
- Topography
- Keratoconus
- Zernike Coefficients
- Pupilometry
- White to white



Operation

HBM-1

RESULT



Keratoconus Sample  
00004

2023-04-27  
12:08:18

OD

OS

SUM

KER

ZER

AL

ANT

PUPIL

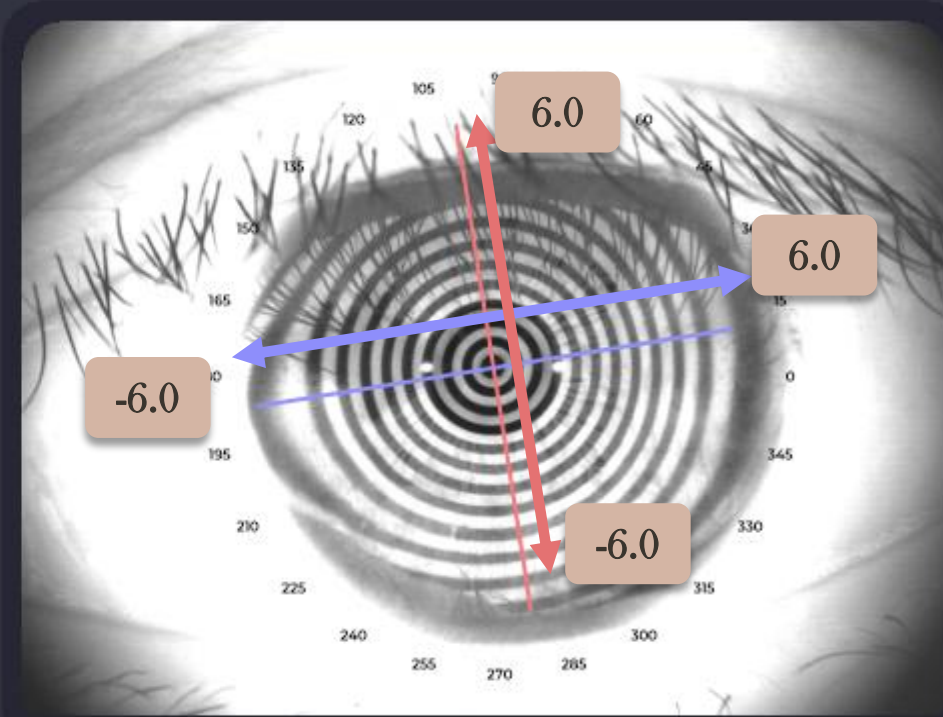
WTW

CONT.FIT

MAP

PROFILE

Data Profiler



Steepest Meridian

Change Steep Axis



99



Flattest Meridian

Change Flat Axis

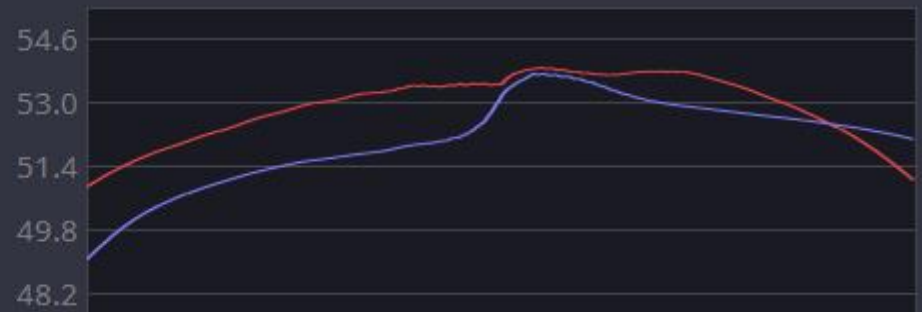


9



K-Value (Diopter)

Value



279°/189°

99°/9°

Differential





# Result: Zernike



Operation

HBM-1

RESULT



Test3 Test3  
F1-00028

2023-12-05  
11:13:02

OD OS

SUM

KER

ZER

AL

ANT

PUPIL

WTW

CONT.FIT

MAP

PSF

Low Order Aberrations

High Order Aberrations

Expansion Coefficients

7.0mm



RMS = 0.37  $\mu\text{m}$

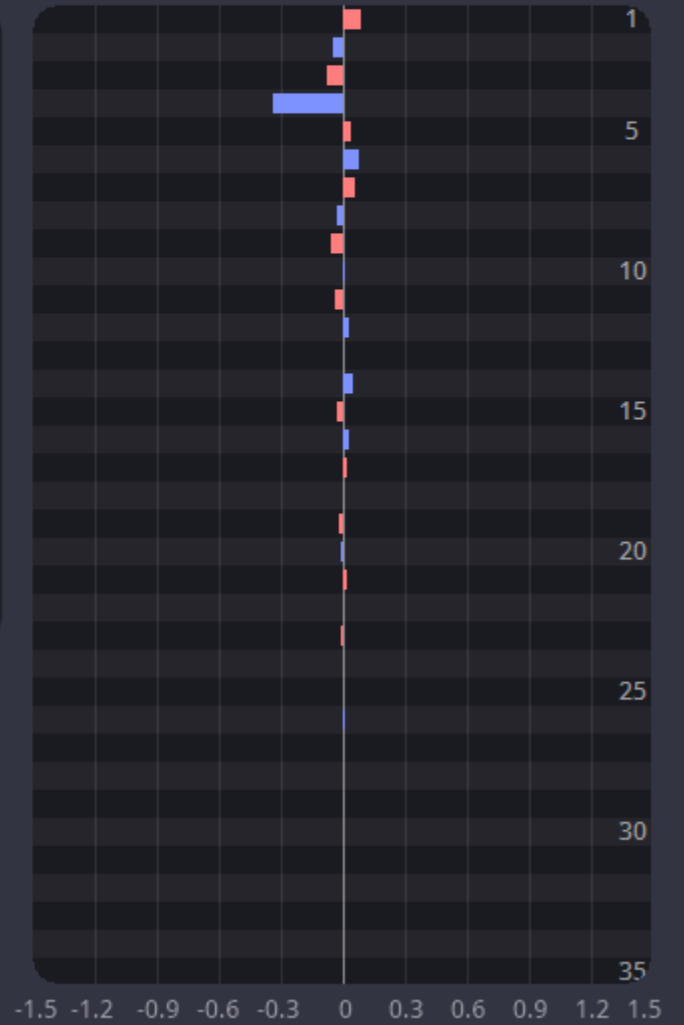
7.0mm



RMS = 0.16  $\mu\text{m}$

Related with SPH, CYL

- Irregular astigmatism
- Corneal imbalance
- Size of pupil





# Result: Zernike



Operation

**HBM-1** **RESULT** **Keratoconus Sample 00004** 2023-04-27 12:08:18

OD **OS**

SUM

KER

**ZER**

AL

ANT

PUPIL

WTW

CONT.FIT

MAP **PSF**

Point Spread Function

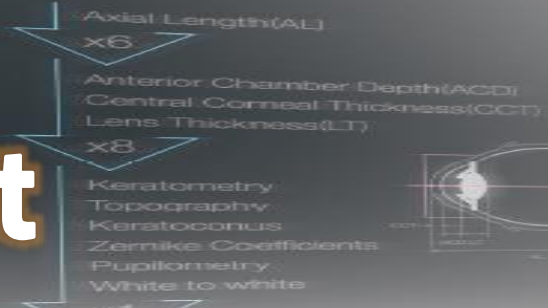
Object

Retina

The main display area shows three visualizations: 'Point Spread Function' (a starburst pattern), 'Object' (a large white 'E' on a black background), and 'Retina' (a blurred white 'E' on a black background). Below the 'Object' and 'Retina' visualizations are four smaller icons: a blue 'E', a grid, a starburst, and a grid of small 'E's.



# Result



Operation

HBM-1 RESULT 송인석 00010 2023-10-13 14:46:27

OD OS

SUM

KER

ZER

AL

ANT

PUP

WTW

CONT.FIT

DCM

Dense Cataract Mode  
Analyze data with DCM algorithm

| No. | AL    |          |
|-----|-------|----------|
| 1   | 26.89 | included |
| 2   | 26.89 |          |
| 3   | 26.83 |          |
| 4   | 26.93 | excluded |
| 5   | 26.80 |          |
| 6   | 26.89 |          |
| AVG |       | 26.90    |

Axial Length 26.87 mm  
0.022 STD

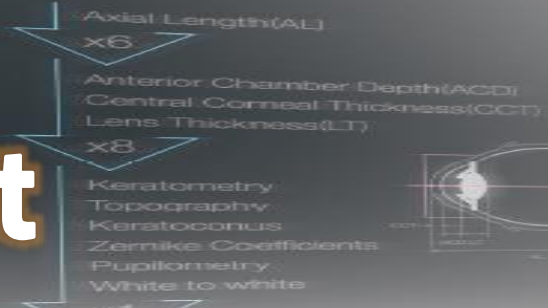
#1 #2 #3  
#4 #5 #6

Measured twice

No of Exam



# Result



# Operation

HBM-1
**RESULT**

송인석  
00010
 2023-10-13  
14:46:27

**OD** OS

SUM

KER

SETUP

- System
- Patient
- Measure
- Connectivity
- Report
- IOL
- Information

Language: English

Device Name: \_\_\_\_\_

Sleep Time:  Off  5 Min

Touch Keyboard:  On  Off

Login Page:  On  Off

Save Mode:  Light  Raw

DCM

| No. | AL    |
|-----|-------|
| 1   | 26.89 |
| 2   | 26.89 |
| 3   | 26.83 |
| 4   | 26.93 |
| 5   | 26.80 |
| 6   | 26.89 |
| 7   | 26.90 |

26.87 mm  
0.022 STD

#1 #2 #3  
#4 #5 #6

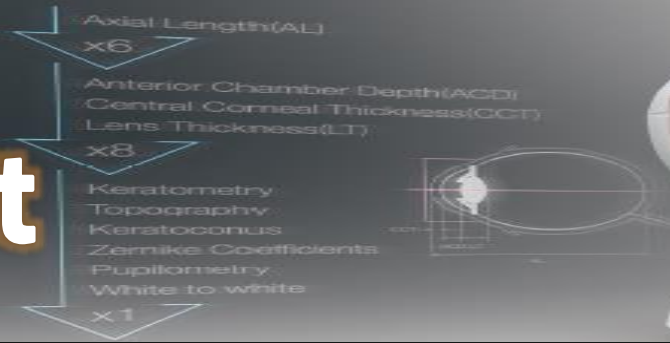
Dense Cataract Mode  
Analyze data with DCM algorithm

**Caution !**  
If Setup - Save Mode : Light Mode  
DCM mode not working  
(Light Mode : Don't Save Raw data)

**Caution !**  
Severe cataract may not come out on DCM Mode, which requires the use of A-Scan Ultrasonic Probe



# Result



Operation

HBM-1

RESULT



00032

2024-02-14  
15:45:21

OD

OS

SUM

KER

ZER

AL

ANT

PUPIL

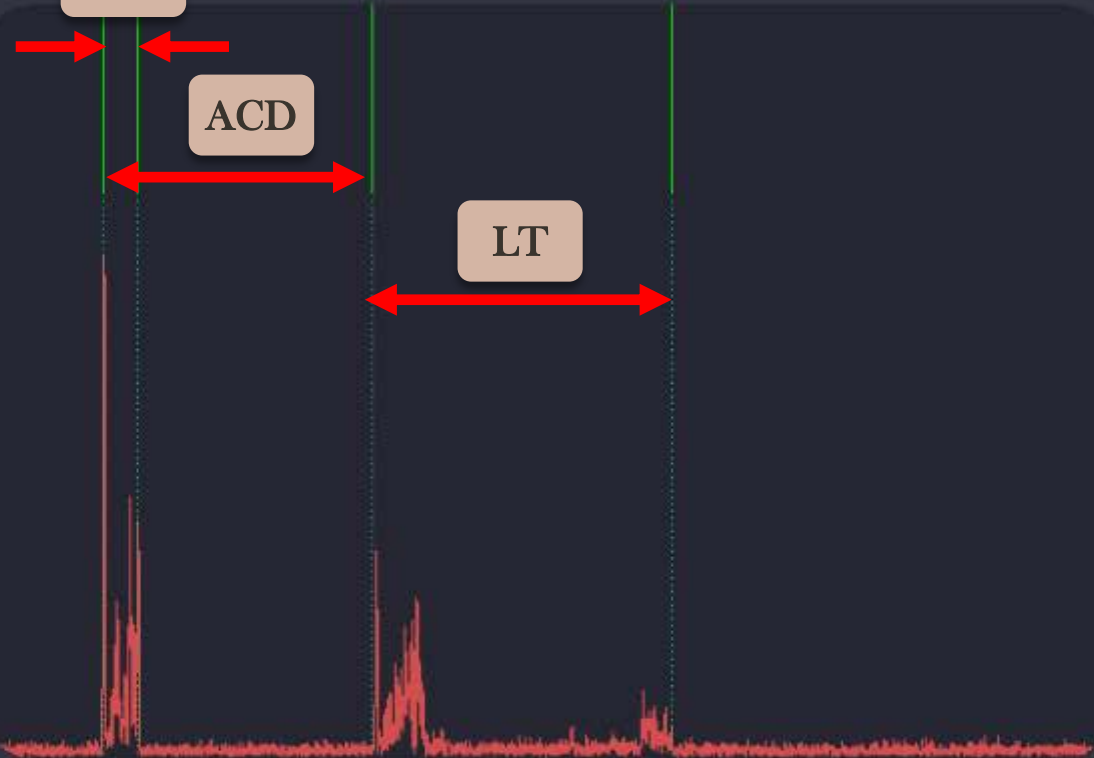
WTW

CONT.FIT

CCT

ACD

LT



Total AVG

CCT 0.450 mm  
0.010 STD

ACD 3.48 mm  
0.020 STD

LT 3.65 mm  
0.030 STD

| No. | CCT   | ACD  | LT   |
|-----|-------|------|------|
| 1   | 0.459 | 3.47 | 3.66 |
| 2   | 0.461 | 3.47 | 3.65 |
| 3   | 0.440 | 3.45 | 3.68 |
| 4   | 0.459 | 3.45 | 3.59 |
| 5   | 0.448 | 3.46 | 3.64 |
| 6   | 0.454 | 3.47 | 3.62 |
| 7   | 0.429 | 3.44 | 3.68 |
| 8   | 0.458 | 3.50 | 3.68 |

AVG 0.451 3.47 3.65

#1

#2

#3

#4

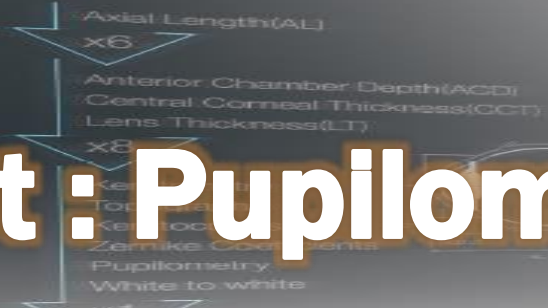
#5

#6



# Result : Pupilometry

Operation



**HBM-1**      **RESULT**      Sook Choi 00032      2023-10-13 08:28:51

**OD**   **OS**      **PUPIL**   **GRAPH**      **VALUES**

**SUM**   **KER**   **ZER**   **AL**   **ANT**   **PUP**   **WTW**   **CONT.FIT**

**Dynamic**

Dynamic : Photopic + Mesopic  
Photopic : Daylight  
Mesopic : Dark night

64/106      No / Total Frame

| Average Diameter |         |
|------------------|---------|
| Min Values       | 2.17mm  |
| Max Values       | 5.13mm  |
| Average          | 4.08mm  |
| Std              | 0.789mm |

| Diameter |        |
|----------|--------|
| Diameter | 4.53mm |

| Pupil Center Diff |         |
|-------------------|---------|
| X                 | -0.01mm |
| Y                 | -0.01mm |

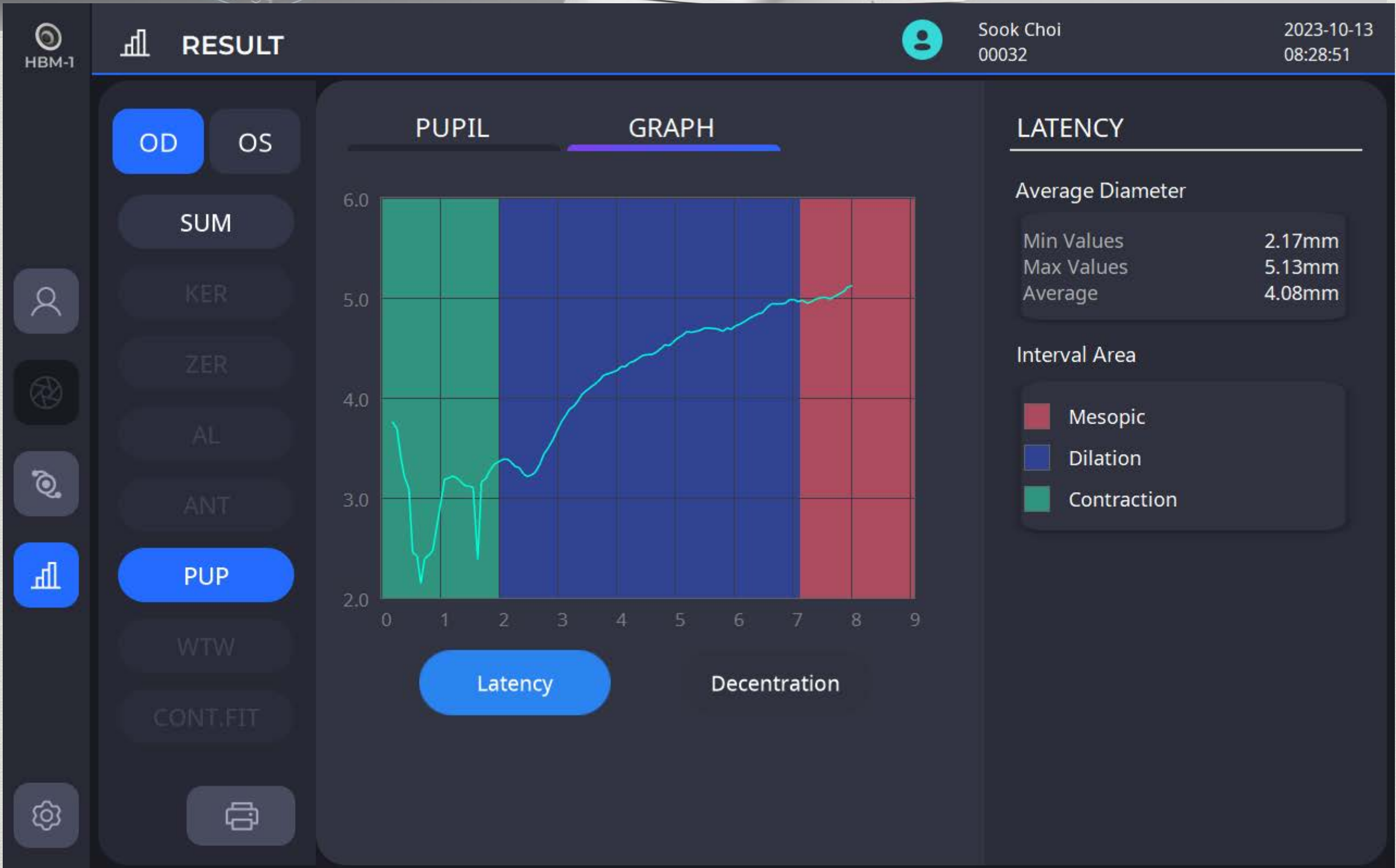
| Time |      |
|------|------|
| Time | 4.90 |

**R.Center**   **Pupil**   **Grid**   **Rulers**



# Result : Pupilometry

Operation





# Result : Pupilometry

Operation

**RESULT**

OD OS

SUM

KER

ZER

AL

ANT

**PUP**

WTW

CONT.FIT

HBM-1

Sook Choi  
00032

2023-10-13  
08:28:51

**PUPIL GRAPH**

Average Diameter

|            |        |
|------------|--------|
| Min Values | 2.17mm |
| Max Values | 5.13mm |
| Average    | 4.08mm |

Average Pupil Decentration

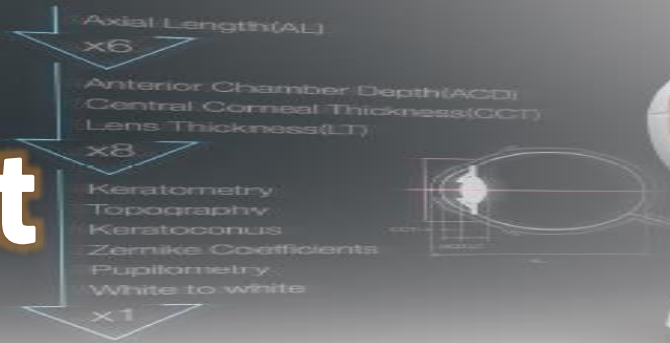
|         |         |
|---------|---------|
| X       | -0.24mm |
| Y       | -0.17mm |
| Std Dev | 0.12mm  |

Latency

**Decentration**



# Result



Operation

HBM-1

RESULT



Keratoconus Sample  
00004

2023-04-27  
12:08:18

OD

OS

Editable

EDIT

VALUES

Diameter

10.69mm

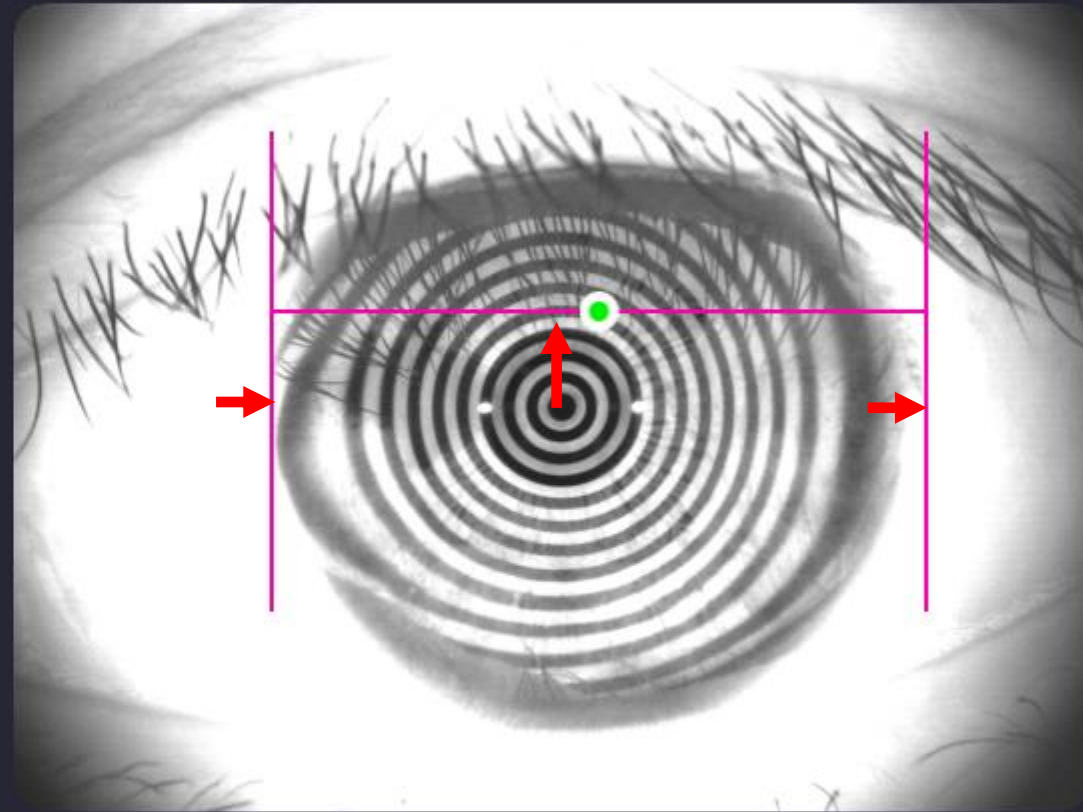
Decentration

X

0.61mm

Y

-1.52mm



SUM

KER

ZER

AL

ANT

PUPIL

WTW

CONT.FIT

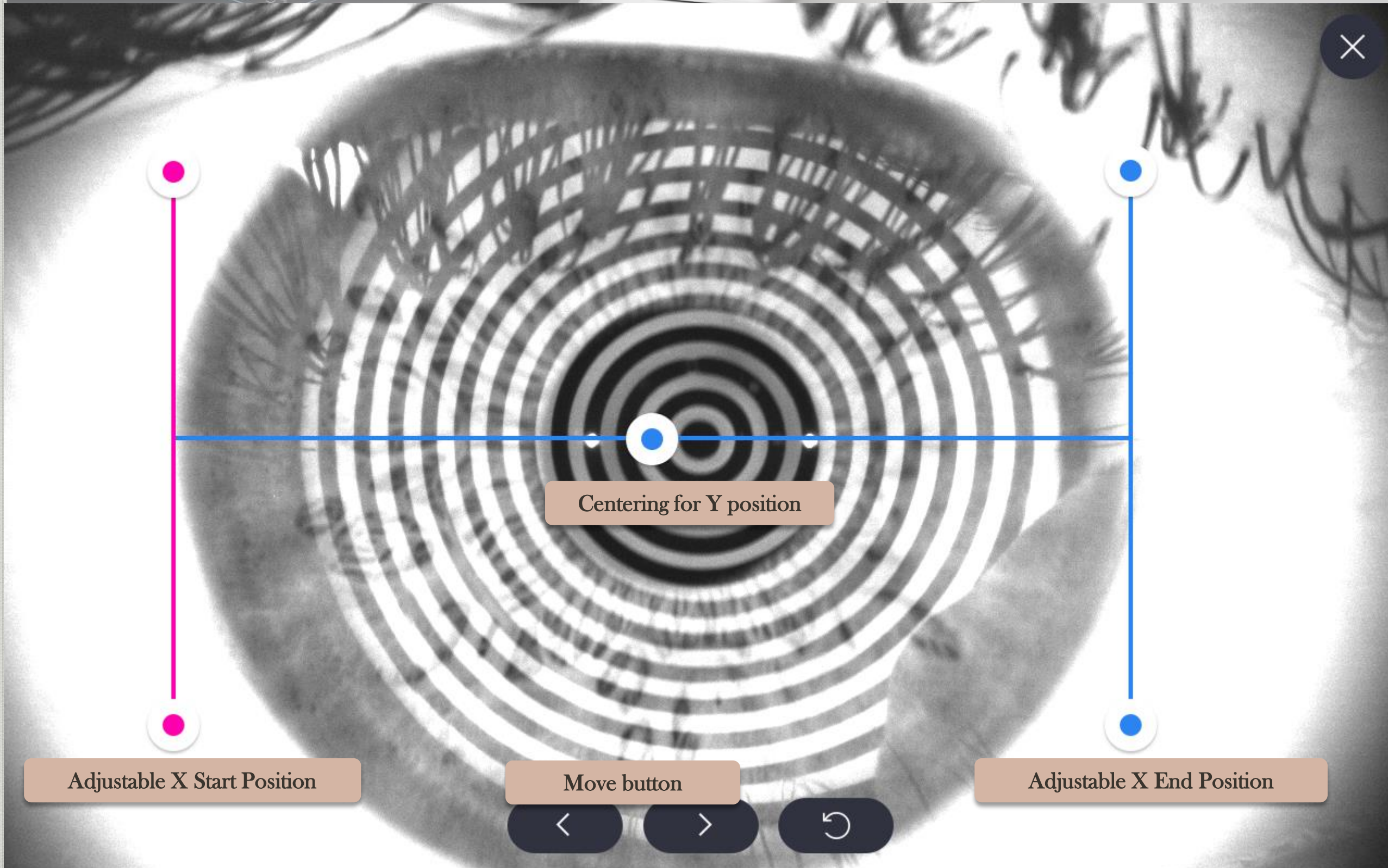




# Result: WhitetoWhite

Operation

- Axial Length(AL)
- x6
- Anterior Chamber Depth(ACD)
- Central Corneal Thickness(CCT)
- Lens Thickness(LT)
- ...
- Zernike Oculaberrations
- Pupillometry
- White to white



Centering for Y position

Adjustable X Start Position

Move button

Adjustable X End Position



# Result: Contact Lens Fitting

Operation



**HBM-1** **RESULT** Myopia Management Sample 00001 2024-02-01 20:47:34

**OD** **OS**

**SUM** **KER** **ZER** **AL** **ANT** **PUPIL** **WTW** **CONT.FIT**

**Simulation** **Gallery**

0 75 125 175 225 275 325 375 425 525 575 625 675 725 775 825 875 925 975 1000

**Axial / Tangential Map ON/OFF** **Lens Fitting Map ON**

**Axial** **Map**

**Steep Axis Clearance** **Flat Axis Clearance**

— Steep — Flat

**Manufacturer** Please Select

**Lens** Please Select **Set Parameter**

**Keratometry**

|     |             |
|-----|-------------|
| K1  | 42.48 @ 5°  |
| K2  | 43.15 @ 95° |
| Cyl | -0.67 ax 5° |

**r0** 7.85  
**Diameter** 10.00  
**dr0** 0.00  
**Ecc** 0.30  
**r1** 9.35  
**Width** 1.00  
**dr1** 0.00  
**Ecc** 0.00

**Lens Info**

**SAVE**

**Patient SimK**



# Result: Contact Lens Fitting

Operation



HBM-1

## Lens Parameters

Patient 2

2023-07-19

8:12

### Base Curve

Curvature Radius(r0)

- 7.99 +

Diameter(mm)

- 10 +

Curvature Diff(dr0)

- 0 +

Eccentricity

- 0.3 +

Set a base curve

### Peripheral Curve 1

Curvature Radius(r1)

- 9.49 +

Width(mm)

- 1 +

Curvature Diff(dr1)

- 0 +

Eccentricity

- 0 +

Set the first peripheral

### Peripheral Curve 2

Curvature Radius(r2)

- 0 +

Width(mm)

- 0 +

Curvature Diff(dr2)

- 0 +

Eccentricity

- 0 +

Set the second peripheral

### Peripheral Curve 3

Curvature Radius(r3)

- 0 +

Set Parameter

- 0 +

Curvature Diff(dr3)

- 0 +

Eccentricity

- 0 +

Set the third peripheral

Set a proper base and first curve

1

Default

Cancel

2  
Apply



# Result: Contact Lens Fitting

Operation

**HBM-1** **RESULT** Patient\_2 2023-07-19  
00002 15:18:12

**Simulation** Gallery

0  
75  
125  
175  
225  
275  
325  
375  
425  
525  
575  
625  
675  
725  
775  
825  
875  
925  
975  
1000

Simulated with a selected lens

Manufacturer: JenaLens

Lens: Asph

- ABOGDT 7°
- ABOGVTP 7°
- ABOGTpri 7°
- Asph 8.05**
- Asph-Kera 9.80
- AsphPri 0.00
- Asph VTP 2.00
- Jeclips 0.40
- Jecl. RT/BT 0.00
- Jecl. VT 0.60

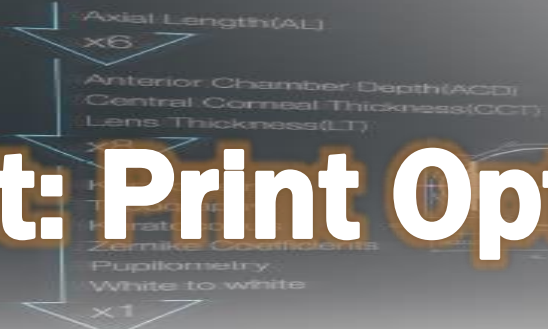
Axial **Map**

CONT.FIT



# Result: Print Option

Operation



**RESULT**

OD OS

SUM

KER

ZER

AL

ANT

PUPIL

WTW

CONT.FIT



**Transfer Data**

Choose Where To Send Your Data.

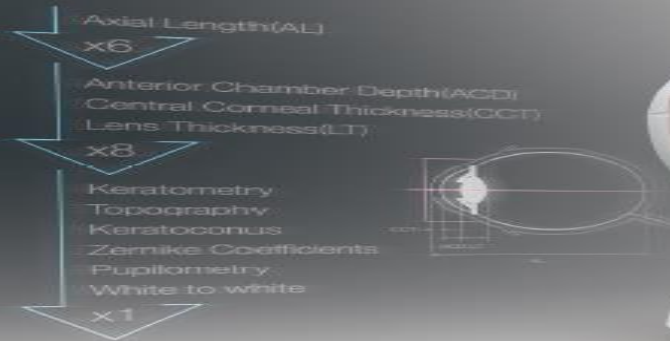
|            | HIIS-1      | Dicom      | Print                                      |
|------------|-------------|------------|--|
|            | Send HIIS-1 | Send DICOM | Send Printer                               |
| Biometry   | OFF         | OFF        | OD/OS/OU/OFF                               |
| Topography | OFF         | OFF        | OD/OS/OU/OFF                               |
| Topo Map   | Select      | Select     | Axial / Tangential / Ref Power / Elevation |
| IOL        | OU          | OU         | OD/OS/OU/OFF                               |
| IOL List   | IOL C.      | Post R     | Toric                                      |
|            |             |            | OFF  |
|            |             |            | Barrett Tab                                |

Cancel OK

024-02-01 10:47:34



# IOL



## IOL Calculation

HBM-1

### IOL CALCULATION

Myopia Management Sample 00001
2024-02-13 10:05:57

OD

OS

IOL Calculation

Post Refractive

Toric

Barrett

Reset

Select OD / OS

General IOL

Post Surgery

Toric IOL

Select Surgeon

0

AMO

AMO

Tecnis 1 ZCB00

Tecnis 1 ZCB00

Tecnis 1 ZCB00

SRK2

SRK2

SRK2

SRK2

Warning (!)  
Measurement - Manual  
AL - DCM  
ACD,LT - Aphakic /  
Pseudophakic

(Optional) Include  
Barrett Universal II  
Barrett Universal II Toric  
Barrett True K  
Barrett True K Toric  
Barrett Rx  
(License Only)

|       | A = 119.600 |        | A = 119.600 |        | A = 119.600 |        | A = 119.600 |        |
|-------|-------------|--------|-------------|--------|-------------|--------|-------------|--------|
|       | 19.28       | 19.28  | 19.28       | 19.28  | 19.28       | 19.28  | 19.28       |        |
|       | IOL(D)      | REF(D) | IOL(D)      | REF(D) | IOL(D)      | REF(D) | IOL(D)      | REF(D) |
| 18.50 | 0.63        | 0.63   | 18.50       | 0.63   | 18.50       | 0.63   | 18.50       | 0.63   |
| 19.00 | 0.23        | 0.23   | 19.00       | 0.23   | 19.00       | 0.23   | 19.00       | 0.23   |
| 19.50 | -0.17       | -0.17  | 19.50       | -0.17  | 19.50       | -0.17  | 19.50       | -0.17  |
| 20.00 | -0.57       | -0.57  | 20.00       | -0.57  | 20.00       | -0.57  | 20.00       | -0.57  |
| 20.50 | -0.97       | -0.97  | 20.50       | -0.97  | 20.50       | -0.97  | 20.50       | -0.97  |

Edit Measurement

Print



# IOL : IOL Measurement Data Edit

IOL Calculation

HBM-1 IOL CALCULATION Patient\_2 2023-07-19  
00002 15:18:12

OD OS IOL Calculation Post Refractive Toric

### Measurement Data Edit

Status: Measured **Measured Manual**

| Biometry |       |    | Keratometry |       |    |    |      |    |       |        |
|----------|-------|----|-------------|-------|----|----|------|----|-------|--------|
| AL       | 24.26 | mm | CCT         | 0.547 | mm | K1 | 8.15 | mm | Index | 1.3375 |
| ACD      | 3.11  | mm | WTW         | 12.28 | mm | K2 | 7.94 | mm | Unit  | mm     |
| LT       | 3.61  | mm |             |       |    |    |      |    |       |        |

All data is editable in 'Manual' status

Reset Cancel OK

|       |       |       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|-------|-------|
| 20.50 | 0.34  | 21.00 | 0.33  | 20.50 | 0.43  | 20.00 | 0.51  |
| 21.00 | 0.00  | 21.50 | -0.02 | 21.00 | 0.09  | 20.50 | 0.16  |
| 21.50 | -0.34 | 22.00 | -0.37 | 21.50 | -0.24 | 21.00 | -0.20 |
| 22.00 | -0.69 | 22.50 | -0.72 | 22.00 | -0.58 | 21.50 | -0.57 |

# IOL : General IOL

## IOL Calculation

HBM-1
IOL CALCULATION
Myopia Management Sample 00001
2024-02-13 10:05:57

OD OS
IOL Calculation Post Refractive Toric Barrett
Reset

Surgeon: 2 Target: -1.0 Input target diopter after surgery

Manufacturer: AMO Lens Model: Tecnis 1 ZCB00

Formula: SRK2 Selected Lens lens constants / Ideal IOL Diopter

| Formula              | LF    | VF    | pACD  | VF    | A     | VF    | IOL(D) | REF(D) | IOL(D) | REF(D) |
|----------------------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|
| Holladay             | 21.00 | -0.96 | 21.00 | -0.97 | 21.00 | -0.94 | 19.50  | -1.05  |        |        |
| Barrett Universal II | 21.50 | -1.32 | 21.50 | -1.35 | 21.50 | -1.30 | 20.00  | -1.45  |        |        |
|                      | 22.00 | -1.69 | 22.00 | -1.73 | 22.00 | -1.66 | 20.50  | -1.85  |        |        |

20.00 -0.24 18.50 -0.25 The closest IOL diopter to the input target



# IOL : IOL Post Ref

## IOL Calculation



HBM-1
IOL CALCULATION
Myopia Management Sample 00001
2024-02-13 10:05:57

OD
OS
IOL Calculation
Post Refractive
Toric
Barrett
Next Page
Reset

Measurement (!)

|      |       |
|------|-------|
| AL   | 25.91 |
| CCT  | 0.447 |
| ACD  | 3.54  |
| LT   | 3.70  |
| K1   | 38.73 |
| K2   | 39.16 |
| Cyl  | -0.44 |
| Axis | 170   |
| WTW  | 11.83 |

Surgeon LT

Select Surgeon 3.68

---

Keratorefractive Surgery Information

Correction Type Myopic Type PRK

Formulas Available

Camellin Calossi

Shammas No History

Select formulas to be used

Unknown  
RK  
PRK  
LASIK  
LASEK

SIRC 0

SIRC (Surgically Induced Refractive Change)  
"Rx Change"  
Example :  
Before refractive surgery : SPH -4D CYL -2 ax 180 -> Preop SEQ = -5D  
After refractive surgery : SPH -0D CYL -1 ax 180 -> Postop SEQ = -0.5D  
SIRC = (-5D) - (-0.5D) = -4.5D

# IOL : IOL Post Ref

## IOL Calculation



HBM-1
**IOL CALCULATION**
Myopia Management Sample 00001
2024-02-13 10:05:57

OD
OS

IOL Calculation
Post Refractive
Toric
Barrett

Reset

**Measurement** (i)

AL 25.91

CCT 0.447

ACD 3.54

LT 3.70

K1 38.73

K2 39.16

Cyl -0.44

Axis 170

WTW 11.83

| Surgeon          | Target       |  |        |                    |                  |
|------------------|--------------|--|--------|--------------------|------------------|
| 2                | -1.0         | Input target diopter after surgery               |        |                    |                  |
| AMO              | Manufacturer | AMO  |        | AMO                | AMO              |
| ReZoom NXG1      | Lens Model   | n 911A   |        | 808C               | 808C             |
| Camellin-Calossi |              | Camellin-Calossi                                 |        | Shammas No Hist... | Camellin-Calossi |
|                  | Formula      | Selected Lens lens constants / Ideal IOL Diopter |        |                    |                  |
| A = 118.400      | 22.51        | A = 118.300                                      | 22.39  | A = 118.000        | 22.10            |
|                  |              |  |        |                    |                  |
| IOL(D)           | REF(D)       | IOL(D)   | REF(D) | IOL(D)             | REF(D)           |
| 21.50            | -0.28        | 21.50  | -0.37  | 21.00              | -0.13            |
| 22.00            | -0.64        | 22.00  | -0.72  | 22.00              | -0.26            |
| 22.50            | -0.99        | 22.50  | -1.08  | 22.00              | -0.92            |
| 23.00            | -1.34        | 23.00  | -1.43  | 22.50              | -1.32            |
| 23.50            | -1.70        | 23.50  | -1.79  | 23.00              | -1.73            |

The closest IOL diopter to input target



# Result: IOL Toric

## IOL Calculation



HBM-1
**IOL CALCULATION**
Myopia Management Sample  
00001
2024-02-13  
10:05:57

OD

OS

IOL Calculation

Post Refractive

Toric

Barrett

>
↶

|         |        |     |    |  |  |
|---------|--------|-----|----|--|--|
| Surgeon | Target | SIA | IL |  |  |
| 1       | -1     | 1   | 35 |  |  |

|                        |                     |                     |                     |  |  |
|------------------------|---------------------|---------------------|---------------------|--|--|
| HumanOptics            | HumanOptics         | HumanOptics         | HumanOptics         |  |  |
| TORICA -aAY Stan...    | TORICA -aAY Stan... | TORICA -aAY Stan... | TORICA -aAY Stan... |  |  |
| Barrett Univ. II Toric | SRK/T               | SRK/T               | SRK/T               |  |  |

|                        | IOL(D)            | REF(D) | IOL(D)            | REF(D) | IOL(D)            | REF(D) |
|------------------------|-------------------|--------|-------------------|--------|-------------------|--------|
| SRK/T                  | A = 118.700 20.04 |        | A = 118.700 20.04 |        | A = 118.700 20.04 |        |
| HofferQ                |                   |        |                   |        |                   |        |
| Haigis                 |                   |        |                   |        |                   |        |
| Holladay               |                   |        |                   |        |                   |        |
| Barrett Univ. II Toric | -0.22             | -0.22  | 19.00             | -0.22  | 19.00             | -0.22  |
|                        | 20.00             | -0.48  | 19.50             | -0.59  | 19.50             | -0.59  |
|                        | 20.50             | -0.86  | 20.00             | -0.97  | 20.00             | -0.97  |
|                        | 21.00             | -1.24  | 20.50             | -1.35  | 20.50             | -1.35  |
|                        | 21.50             | -1.63  | 21.00             | -1.73  | 21.00             | -1.73  |

Select a lens

Manufacturer

Lens model

Formula

Licensed only

Selected Lens lens constants / Ideal IOL Diopter

# Result: IOL Toric ( Select Target REF)

IOL Calculation



HBM-1
**IOL CALCULATION**
Myopia Management Sample  
00001
2024-02-13  
10:05:57

OD
OS

IOL Calculation
Post Refractive
Toric
Barrett

Surgeon

1

HumanOptics

TORICA -aAY Stan...

Barrett Univ. II Toric

SRK/T

HofferQ

Haigis

Holladay

Barrett Univ. II Toric

20.00 -0.48

20.50 -0.86

21.00 -1.24

21.50 -1.63

Target

-1

TORICA -aAY Stan...

SRK/T

A = 118.700    20.04

IOL(D)    REF(D)

19.00    -0.22

19.50    -0.59

20.00    -0.97

20.50    -1.35

21.00    -1.73

SIA

1

TORICA -aAY Stan...

SRK/T

A = 118.700    20.04

IOL(D)    REF(D)

19.00    -0.22

19.50    -0.59

20.00    -0.97

20.50    -1.35

21.00    -1.73

IL

35

TORICA -aAY Stan...

SRK/T

A = 118.700    20.04

IOL(D)    REF(D)

19.00    -0.22

19.50    -0.59

20.00    -0.97

20.50    -1.35

21.00    -1.73

Select a lens

✎
🖨

When selected IOL REF diopter , next button is available

Input target diopter after surgery

Input SIA (Surgically induced astigmatism)

Input IL (Incision on axis)

A = 118.700    20.04    A = 118.700    20.04    A = 118.700    20.04

| IOL(D) | REF(D) | IOL(D) | REF(D) | IOL(D) | REF(D) |
|--------|--------|--------|--------|--------|--------|
| 19.00  | -0.22  | 19.00  | -0.22  | 19.00  | -0.22  |
| 19.50  | -0.59  | 19.50  | -0.59  | 19.50  | -0.59  |
| 20.00  | -0.97  | 20.00  | -0.97  | 20.00  | -0.97  |
| 20.50  | -1.35  | 20.50  | -1.35  | 20.50  | -1.35  |
| 21.00  | -1.73  | 21.00  | -1.73  | 21.00  | -1.73  |



# Result: IOL Toric ( Select Target CYL)

IOL Calculation



**HBM-1 IOL CALCULATION** Myopia Management Sample 00001 2024-02-13 10:05:57

**OD OS** IOL Calculation Post Refractive **Toric** Barrett

Formula: Barrett Univ. II Toric Target: -1 SIA: 1 IL: 35

Previous Page (Set REF Power) Reset

Ideal Cylindrical Power

IOL Ideal Toricity 1.16

**Measurement**

|      |       |
|------|-------|
| AL   | 25.91 |
| CCT  | 0.447 |
| ACD  | 3.54  |
| LT   | 3.70  |
| K1   | 38.73 |
| K2   | 39.16 |
| Cyl  | -0.44 |
| Axis | 170   |
| WTW  | 11.83 |

**Toric Lense Information**

Lens Axis

**Available Toric Lenses**

| Lens                      | Res Astigm                                     |
|---------------------------|--|
| n.a.                      | n.a.   |
| Non Toric                 | The closest IOL toricity to the ideal toricity |
| <b>TORICA -aA Special</b> | <b>-0.14D @ 33°</b>                            |
| TORICA -aA Special        | -0.22D @ 123°                                  |
| TORICA -aA Special        | -0.59D @ 123°                                  |

Select a lens

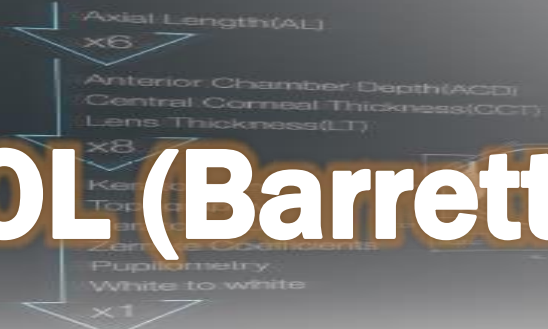
**Model:** TORICA -aA Special

| Spherical Equivalent Power (D) | Cylindrical Power (D)   |
|--------------------------------|-------------------------|
| 20.50 Selected REF power       | 1.00 Selected CYL Power |

| Spherical Power (D)      | Axis Of Placement (°) | Expected Refraction |
|--------------------------|-----------------------|---------------------|
| 20.00 Selected CYL Power | 123 Lens Axis         | -0.79D -0.14D @ 33° |

Expected result

# IOL: IOL (Barrett)



## IOL Calculation

HBM-1
**IOL CALCULATION**
Myopia Management Sample 00001
2024-02-13 10:05:57

OD
OS

**Measurement** (!)

AL 25.91

CCT 0.447

ACD 3.54

LT 3.70

K1 38.73

K2 39.16

Cyl -0.44

Axis 170

WTW 11.83

Surgeon 2 ▼ Barrett Formulas

Target 1

AMO ▼

Tecnis 1 ZCB00 ▼

AMO ▼

Tecnis 1 ZCB00 ▼

AMO ▼

Tecnis 1 ZCB00 ▼

| LF = 2.041 |        | LF = 2.041 |        | LF = 2.041 |        |
|------------|--------|------------|--------|------------|--------|
| IOL(D)     | REF(D) | IOL(D)     | REF(D) | IOL(D)     | REF(D) |
| 17.50      | 1.64   | 17.50      | 1.64   | 17.50      | 1.64   |
| 18.00      | 1.30   | 18.00      | 1.30   | 18.00      | 1.30   |
| 18.50      | 0.95   | 18.50      | 0.95   | 18.50      | 0.95   |
| 19.00      | 0.60   | 19.00      | 0.60   | 19.00      | 0.60   |
| 19.50      | 0.25   | 19.50      | 0.25   | 19.50      | 0.25   |

Universal II ▲

Universal II

Universal II Toric

True K

True K Toric

RX

**Formula**

Universal II - General IOL

Universal II Toric - Toric IOL

True K - Post Ref IOL

True K - Post Ref Toric IOL

Rx - Exchange IOL / Piggyback IOL

17.50 1.64

18.00 1.30

18.50 0.95

19.00 0.60

19.50 0.25

👤  
📷  
👁️  
📊  
⚙️

✎
🖨



# IOL: IOL (Barrett True K / True K Toric)

IOL Calculation

**HBM-1** IOL CALCULATION Myopia Management Sample 00001 2024-02-13 10:05:57

OD OS IOL Calculation Post Refractive Toric Barrett

Surgeon 2 Barrett Formulas True K

Target -1 Input target diopter after surgery History Myopic Lasik Myopic Lasik Hyperopic Lasik Radial Keratotomy Keratoconus Post Surgery history

Pre-Lasik Ref -5.0 Post-Lasik Ref -1.0 TRUE K : 38.5 / Corr. -3.73 D

AMO AMO CeeOn 911A Tecnis 1 ZCB00

LF = 1.726 TK LF = 1.880 21.60 LF = 2.041 TK LF = 2.200 22.15 LF = 2.041 TK LF = 2.200 22.15

| IOL(D) | REF(D) | IOL(D) | REF(D) | IOL(D) | REF(D) | IOL(D) | REF(D) |
|--------|--------|--------|--------|--------|--------|--------|--------|
| 21.00  | -0.55  | 21.50  | -0.52  | 22.00  | -0.89  | 22.50  | -1.26  |
| 21.50  | -0.93  | 22.00  | -0.89  | 22.50  | -1.26  | 23.00  | -1.64  |
| 22.00  | -1.31  | 22.50  | -1.26  | 23.00  | -1.64  | 23.00  | -1.64  |
| 22.50  | -1.69  | 23.00  | -1.64  | 23.00  | -1.64  | 23.00  | -1.64  |

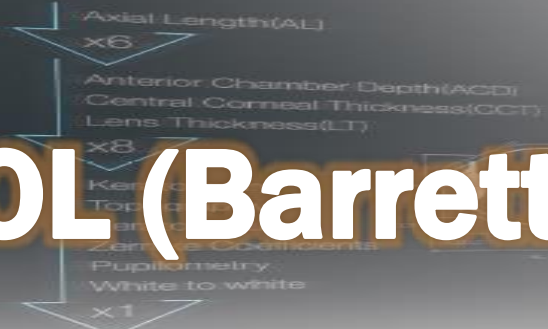
Measurement (!)

- AL 25.91
- CCT 0.447
- ACD 3.54
- LT 3.70
- K1 38.73
- K2 39.16
- Cyl -0.44
- Axis 170
- WTW 11.83

Input Pre Surgery / Post Surgery Ref diopter when nohistory ref diopter  
 If input is 'Blank', Correction diopter is calculated by measurement data  
 TRUE K - Be used in formula  
 It changed depending on the surgery type

# IOL: IOL (Barrett True K / True K Toric)

IOL Calculation



HBM-1
**IOL CALCULATION**
Myopia Management Sample  
00001
2024-02-13  
10:05:57

OD

OS

IOL Calculation

Post Refractive

Toric

Barrett

>

↶

Surgeon 2

Target -1

Barrett Formulas True K

History Myopic Lasik

Pre-Lasik Ref -5.0

Post-Lasik Ref -1.0

TRUE K : 38.5 / Corr. -3.73 D

AMO

CeeOn 911A

AMO

Tecnis 1 ZCB00

AMO

Tecnis 1 ZCB00

AMO

Tecnis 1 ZCB00

| LF = 1.726 | TK LF = 1.880 | 21.60 | LF = 2.041 | TK LF = 2.200 | 22.15 | LF = 2.041 | TK LF = 2.200 | 22.15 | LF = 2.041 | TK LF = 2.200 | 22.15 |
|------------|---------------|-------|------------|---------------|-------|------------|---------------|-------|------------|---------------|-------|
| IOL(D)     | REF(D)        |       | IOL(D)     | REF(D)        |       | IOL(D)     | REF(D)        |       | IOL(D)     | REF(D)        |       |
| 20.50      | -0.18         |       | 21.00      | -0.16         |       | 21.00      | -0.16         |       | 21.00      | -0.16         |       |
| 21.00      | -0.55         |       | 21.50      | -0.52         |       | 21.50      | -0.52         |       | 21.50      | -0.52         |       |
| 21.50      | -0.93         |       | 22.00      | -0.89         |       | 22.00      | -0.89         |       | 22.00      | -0.89         |       |
| 22.00      | -1.31         |       | 22.50      | -1.26         |       | 22.50      | -1.26         |       | 22.50      | -1.26         |       |
| 22.50      | -1.69         |       | 23.00      | -1.64         |       | 23.00      | -1.64         |       | 23.00      | -1.64         |       |

Input target diopter after surgery

- Myopic Lasik
- Myopic Lasik
- Hyperopic Lasik
- Radial Keratotomy
- Keratoconus

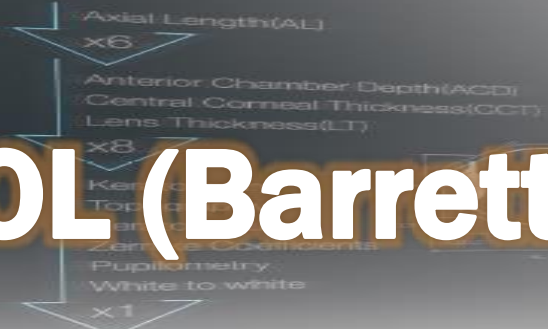
Selected Lens constants / Ideal IOL Diopter

The closest IOL diopter to the input target



# IOL: IOL (Barrett True K / True K Toric)

IOL Calculation



HBM-1
**IOL CALCULATION**
Myopia Management Sample  
00001
2024-02-13  
10:05:57

OD

OS

IOL Calculation

Post Refractive

Toric

Barrett

>

↶

Surgeon 2 Barrett Formulas True K Toric

Target -1 SIA 1 IL 45 History Myopic Lasik

TRUE K : 38.31 / Corr. -5.28 D

ARTIS T PL E TORICA -aA Special TORICA -aA Special TORICA -aA Special

|                             |        |                             |        |                             |        |                             |        |
|-----------------------------|--------|-----------------------------|--------|-----------------------------|--------|-----------------------------|--------|
| LF = 2.270<br>TK LF = 2.540 | 22.97  | LF = 1.726<br>TK LF = 2.000 | 21.99  | LF = 1.726<br>TK LF = 2.000 | 21.99  | LF = 1.726<br>TK LF = 2.000 | 21.99  |
| IOL(D)                      | REF(D) | IOL(D)                      | REF(D) | IOL(D)                      | REF(D) | IOL(D)                      | REF(D) |
| 22.00                       | -0.30  | 21.00                       | -0.27  | 21.00                       | -0.27  | 21.00                       | -0.27  |
| 22.50                       | -0.66  | 21.50                       | -0.64  | 22.00                       | -1.01  | 22.00                       | -1.01  |
| 23.00                       | -1.02  | 22.00                       | -1.01  | 22.00                       | -1.01  | 22.00                       | -1.01  |
| 23.50                       | -1.39  | 22.50                       | -1.39  | 22.50                       | -1.39  | 22.50                       | -1.39  |
| 24.00                       | -1.76  | 23.00                       | -1.77  | 23.00                       | -1.77  | 23.00                       | -1.77  |

Measurement

AL 25.91

CCT 0.447

ACD 3.54

LT 3.70

K1 38.73

K2 39.16

Cyl -0.44

Axis 170

WTW 11.83

Input target diopter after surgery

Input SIA (Surgically induced astigmatism)

Input IL (Incision on axis)

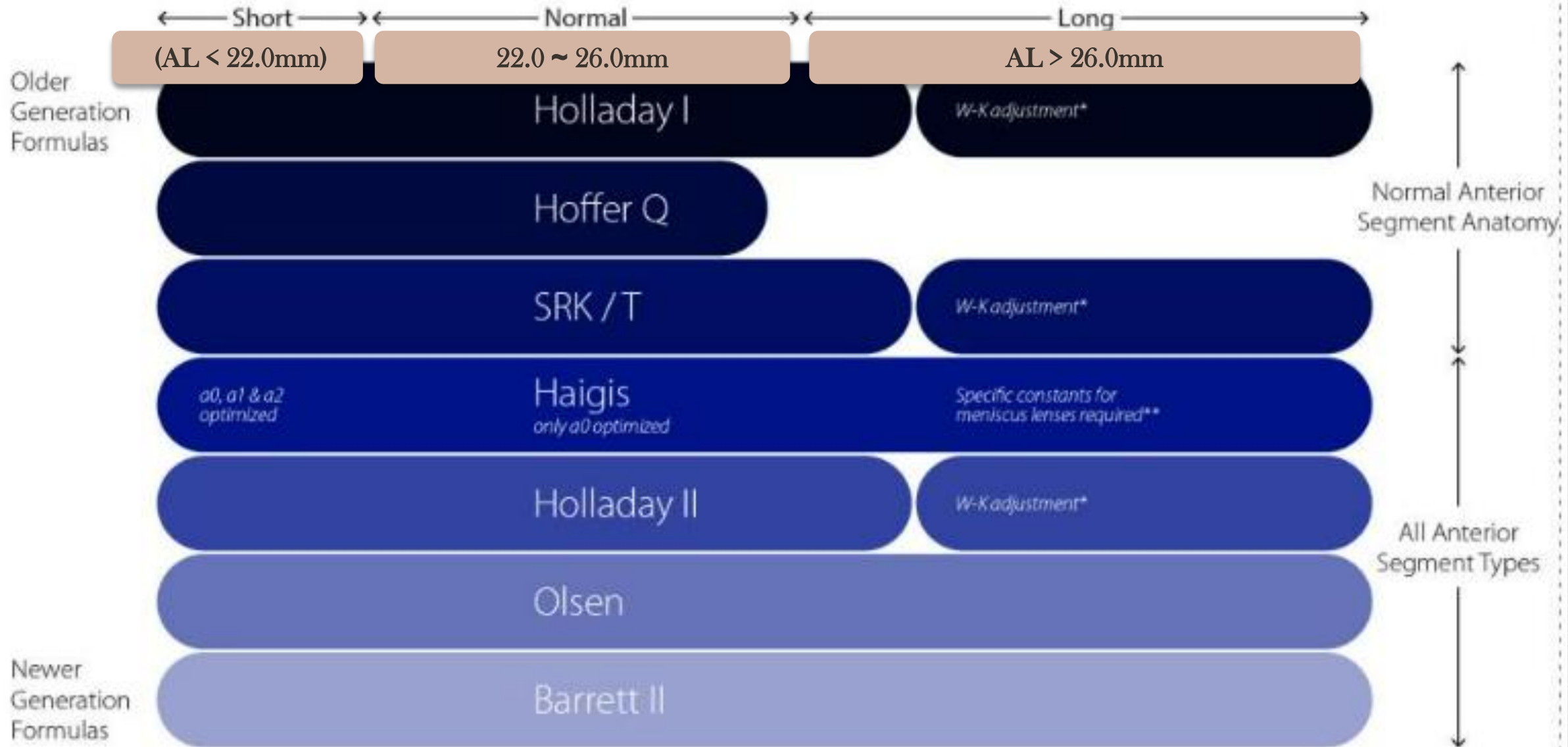
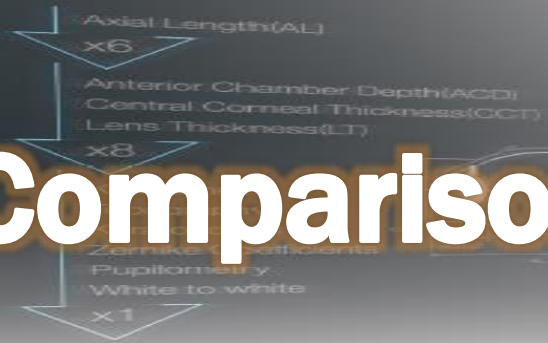
Selected Lens lens constants / Ideal IOL Diopter

The closest IOL diopter of the input target

When selected IOL REF diopter, next button is available

# IOL : Comparison IOL Formula

IOL Calculation



\* Wang, L., Shirayama, M., Ma, X.J., Kohnen, T., Koch, D.D. Optimizing intraocular lens power calculations in eyes with axial lengths above 25.0 mm. *J Cataract Refract Surg.* 2011;37:2018-2027.  
 Abulafia, A., Barrett, G.D., Rotenberg, M., Kleinmann, G., Levy, A., Reitblat, O., Koch, D.D., Wang, L., Assia, E.I. Intraocular lens power calculation for eyes with an axial length greater than 26.0 mm: Comparison of formulas and methods. *J Cataract Refract Surg.* 2015;41:548-556.

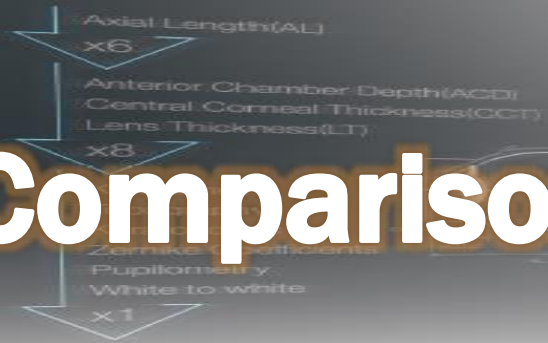
\* Scientifically the W-K adjustment is controversial since it depends on the IOL design whether the adjustment is required or not.

\*\* Care has to be taken in eyes with very long AL. Special constants are needed for IOLs that change from symmetrical to asymmetrical geometry at certain power thresholds. This can lead to significant principal plane shifts and as a result to different ELP positions.



# IOL : Comparison IOL Formula

IOL Calculation



| Formula                            | ME±SD (D)    | Mean AE | Median AE | Eyes within ±0.50 D prediction error (%) |
|------------------------------------|--------------|---------|-----------|--|
| <b>Short axial length (n=89)</b>   |              |         |           |  |
| Haigis                             | -0.080±0.428 | 0.344   | 0.280     | 75.3                                     |
| Holladay 1                         | -0.097±0.421 | 0.334   | 0.295     | 77.5                                     |
| SRK/T                              | -0.028±0.446 | 0.352   | 0.320     | 71.9                                     |
| Barrett universal II               | 0.215±0.439  | 0.398   | 0.340     | 66.3                                     |
| <b>Medium axial length (n=432)</b> |              |         |           |  |
| Haigis                             | -0.126±0.439 | 0.360   | 0.285     | 73.6                                     |
| Holladay 1                         | 0.005±0.416  | 0.326   | 0.270     | 78.9                                     |
| SRK/T                              | 0.057±0.446  | 0.350   | 0.280     | 75.7                                     |
| Barrett universal II               | 0.184±0.392  | 0.337   | 0.278     | 76.6                                     |
| <b>Long axial length (n=69)</b>    |              |         |           |  |
| Haigis                             | -0.093±0.458 | 0.365   | 0.340     | 68.1                                     |
| Holladay 1                         | 0.306±0.521  | 0.500   | 0.410     | 56.5                                     |
| SRK/T                              | 0.064±0.464  | 0.386   | 0.350     | 69.6                                     |
| Barrett universal II               | 0.079±0.406  | 0.327   | 0.300     | 78.3                                     |
| <b>Low power (n=84)</b>            |              |         |           |  |
| Haigis                             | -0.020±0.394 | 0.318   | 0.288     | 77.4                                     |
| Holladay 1                         | 0.259±0.511  | 0.454   | 0.370     | 63.1                                     |
| SRK/T                              | 0.055±0.490  | 0.400   | 0.358     | 67.9                                     |
| Barrett universal II               | 0.126±0.372  | 0.308   | 0.280     | 78.6                                     |
| <b>Medium power (n=436)</b>        |              |         |           |  |
| Haigis                             | -0.133±0.478 | 0.362   | 0.283     | 73.6                                     |
| Holladay 1                         | -0.013±0.412 | 0.323   | 0.270     | 78.9                                     |
| SRK/T                              | 0.025±0.437  | 0.342   | 0.280     | 76.6                                     |
| Barrett universal II               | 0.164±0.391  | 0.332   | 0.278     | 77.3                                     |
| <b>High power (n=70)</b>           |              |         |           |  |
| Haigis                             | -0.123±0.486 | 0.388   | 0.298     | 65.7                                     |
| Holladay 1                         | -0.021±0.462 | 0.371   | 0.310     | 74.3                                     |
| SRK/T                              | 0.157±0.457  | 0.378   | 0.340     | 68.6                                     |
| Barrett universal II               | 0.310±0.475  | 0.471   | 0.418     | 58.6                                     |

Holladay is suitable for Short AL

Barrett U II is suitable for Long AL

Barrett U II is suitable for Low IOL Power

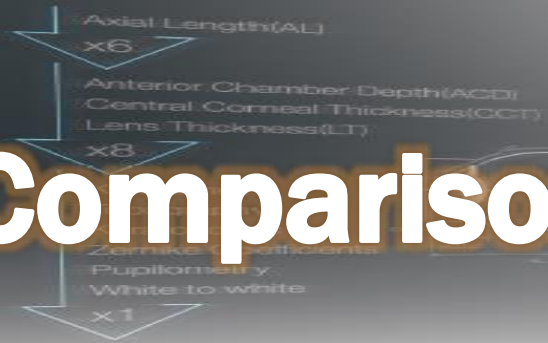
Holladay is suitable for High IOL Power

ME, mean prediction error; SD, standard deviation of mean prediction error; AE, absolute prediction error; D, diopter



# IOL : Comparison IOL Formula

IOL Calculation



| 60 Eyes:     | True K TK | True K | Haigis L | Haigis TK | Shammas |
|--------------|-----------|--------|----------|-----------|---------|
| Mean Error   | -0.04     | -0.17  | -0.45    | -0.12     | -0.36   |
| STDev        | 0.51      | 0.57   | 0.65     | 0.67      | 0.62    |
| MAE          | 0.41      | 0.47   | 0.67     | 0.56      | 0.59    |
| Med AE       | 0.34      | 0.37   | 0.61     | 0.50      | 0.57    |
| </= % 0.5 D  | 70.0%     | 63.3%  | 31.7%    | 50.0%     | 46.7%   |
| </= % 0.75 D | 86.7%     | 85.0%  | 60.0%    | 71.7%     | 66.7%   |
| </= % 1.00 D | 96.7%     | 88.3%  | 83.3%    | 80.0%     | 86.7%   |

Table 5. Percentage of eyes within  $\pm 0.50$  D and  $\pm 1.00$  D from the target refraction in Groups A and B.

| Formula/Method    | Percentage          |                     |                  |                     |
|-------------------|---------------------|---------------------|------------------|---------------------|
|                   | Group A (n = 58)    |                     | Group B (n = 30) |                     |
|                   | Within $\pm 0.50$ D | Within $\pm 1.00$ D | Within 0.50 D    | Within $\pm 1.00$ D |
| Adjusted Atlas    | 60.3                | 87.9                | —                | —                   |
| Masket            | 60.3                | 84.5                | —                | —                   |
| Modified Masket   | 53.4                | 86.2                | —                | —                   |
| Wang/Koch/Maloney | 43.1                | 81.0                | —                | —                   |
| Shammas           | 55.2                | 82.8                | 50.0             | 80.0                |
| Haigis-L          | 48.3                | 81.0                | 46.7             | 76.7                |
| True-K            | 67.2                | 94.8                | 63.3             | 80.0                |
| Average           | 58.6                | 91.4                | 46.7             | 83.3                |

Group A -  
Pre/Post REF Data exist  
Group B -  
No history Pre/Post REF Data



# Field Test : Israel



Field test

## 1) Measured Data

| Name | Side | HBM-1 |     |       |       |       |       | Lenstar-900 |     |      |      |       |       |
|------|------|-------|-----|-------|-------|-------|-------|-------------|-----|------|------|-------|-------|
|      |      | AL    | CCT | ACD   | LT    | K1    | K2    | AL          | CCT | ACD  | LT   | K1    | K2    |
| A**  | R    | 22.36 | 563 | 2.729 | 4.08  | 46.07 | 46.83 | 22.35       | 550 | 3.22 | 4.04 | 45.81 | 46.57 |
|      | L    | 22.32 | 538 | 2.766 | 4.06  | 45.97 | 46.37 | 22.25       | 551 | 3.25 | 4.02 | 45.79 | 46.27 |
| R**  | R    | 23.36 | 518 | 3.12  | 4.26  | 45.15 | 46    | 23.35       | 527 | 3.55 | 4.23 | 44.93 | 45.75 |
|      | L    | 23.32 | 553 | 3.148 | 4.245 | 45.14 | 45.76 | 23.39       | 533 | 3.57 | 4.25 | 45.33 | 45.87 |
| P**  | R    | 22.37 | 557 | 3.5   | 3.63  | 45.86 | 46.9  | 22.36       | 548 | 3.96 | 3.63 | 45.82 | 47.16 |
|      | L    | 22.4  | 561 | 3.56  | 3.58  | 46.11 | 47.24 | 22.35       | 549 | 4    | 3.64 | 45.97 | 47.38 |
| Y**  | R    | 22.57 | 527 | 3.21  | 3.83  | 44.62 | 45.86 | 22.53       | 527 | 3.64 | 3.83 | 44.86 | 45.81 |
|      | L    | 22.81 | 523 | 3.27  | 3.83  | 44.82 | 45.75 | 22.71       | 526 | 3.68 | 3.82 | 44.84 | 45.67 |
| S**  | R    | 22.16 | 506 | 2.93  | 3.73  | 45.19 | 46.86 | 22.2        | 511 | 3.32 | 3.81 | 45.06 | 46.72 |
|      | L    | 22.09 | 526 | 2.97  | 3.82  | 44.62 | 47    | 21.96       | 511 | 3.36 | 3.82 | 45.06 | 47.69 |
| G**  | R    | 24.31 | 546 | 2.85  | 4.28  | 45.44 | 45.58 | 24.39       | 529 | 3.28 | 4.34 | 45.04 | 45.45 |
|      | L    | 24.08 | 545 | 4.2   | 0.89  | 44.52 | 46.44 | 24.16       | 535 | 4.65 | 0.83 | 45.14 | 45.74 |

## 2) Lens prescription

| HBM         |             |             | Holladay | Hoffer Q | Barrett | Lenstar-900 |             |             |
|-------------|-------------|-------------|----------|----------|---------|-------------|-------------|-------------|
| 22.0(-0.19) | 22.0(-0.24) | 22.0(-0.32) | 0        | 0        | 0       | 22.0(-0.25) | 22.0(-0.3)  | 22.0(-0.41) |
| 21.5(-0.17) | 21.5(-0.25) | 21.5(-0.3)  | -0.5     | 0        | 0       | 22.0(-0.37) | 21.5(-0.1)  | 21.5(-0.18) |
| 22.5(-0.08) | 22.5(-0.08) | 23.0(-0.16) | -0.5     | -0.5     | 0       | 23.0(-0.39) | 23.0(-0.39) | 23.0(-0.16) |
| 22.0(-0.36) | 22.0(-0.4)  | 22.0(-0.09) | 0        | 0        | -0.5    | 22.0(-0.1)  | 22.0(-0.13) | 22.5(-0.22) |
| 23.5(-0.38) | 23.5(-0.36) | 23.0(-0.25) | 0        | 0        | 0       | 23.5(-0.35) | 23.5(-0.33) | 23.0(-0.27) |
| 24.0(-0.36) | 24.0(-0.32) | 23.5(-0.14) | 0.5      | 0.5      | 0       | 23.5(-0.12) | 23.5(-0.08) | 23.5(-0.36) |
| 16.5(-0.25) | 16.0(-0.24) | 16.5(-0.27) | 0        | 0        | 0       | 16.5(-0.18) | 16.0(-0.16) | 16.5(-0.23) |
| 17.0(-0.14) | 17.0(-0.39) | 17.0(-0.26) | 0        | 0.5      | ---     | 17(-0.21)   | 16.5(-0.17) | ??          |



# Field Test : India



Field test

Comparison Of Biometry Measures Between HBM-1 And Lenstar-900

| Parameter          | HBM-1 Mean SD | Lenstar Mean SD | Diff  | 95% LoA          |
|--------------------|---------------|-----------------|-------|------------------|
| Axial Length       | 24.04±1.40    | 24.07±1.39      | -0.03 | `-0.08 to + 0.22 |
| CCT                | 537.88±29.97  | 533.85±29.34    | 4.02  | `-18.4 to +9.46  |
| ACD                | 3.32±0.45     | 3.44±0.55       | -0.12 | `-0.38 to + 0.64 |
| LT                 | 4.32±0.45     | 4.13±0.47       | 0.18  | `-0.83 to + 0.47 |
| Flat Meridian(K1)  | 43.47±2.53    | 43.16±2.39      | 0.3   | `-1.57 to + 0.95 |
| Steep Meridian(K2) | 44.28±2.59    | 44.21±2.65      | 0.06  | `-0.95 to + 0.82 |
| White to White     | 11.87±0.45    | 11.78±0.60      | 0.09  | `-1.04 to + 0.87 |



# Field Test : Romania

Field test

| Comparison Of Biometry Measures Between HBM-1 And PentaCam-AXL |               |                  |      |                  |
|--|---------------|------------------|------|------------------|
| Parameter  | HBM-1 Mean SD | PentaCam Mean SD | Diff | 95% LoA          |
| Axial Length   | 23.56±0.85    | 23.52±0.88       | 0.04 | `-0.04 to + 0.13 |
| CCT  | 533±43.95     | 532±33.67        | 1.5  | `-18.4 to +9.46  |
| ACD  | 3.25±0.23     | 3.14±0.24        | 0.11 | `-0.06 to + 0.15 |
| Flat Meridian(K1)  | 43.93±1.27    | 43.58±1.21       | 0.35 | `-0.12 to + 0.80 |
| Steep Meridian(K2)   | 44.69±1.53    | 44.19±1.41       | 0.5  | `-0.24 to + 1.23 |



# Field Test : Romania

Field test

| Comparison Of Biometry Measures Between HBM-1 And Optopol biometer |               |                 |       |                  |
|--|---------------|-----------------|-------|------------------|
| Parameter  | HBM-1 Mean SD | Optopol Mean SD | Diff  | 95% LoA          |
| Axial Length   | 23.56±0.85    | 23.52±0.88      | 0.04  | `-0.08 to + 0.16 |
| CCT  | 533±43.95     | 548±35.67       | 14.6  | `-42.7 to +14.3  |
| ACD  | 3.25±0.23     | 3.16±0.24       | 0.09  | `-0.02 to + 0.16 |
| LT   | 4.56±0.34     | 4.62±0.36       | -0.06 | `-0.18 to + 0.07 |



# Myopia management

Myopia



HBM-1

## MYOPIA MANAGEMENT

Myopia Management 00001

OD OS

Atropine 0.01% Ortho-K 1.5Diopter

Atropine 0.02% Atropine 0.02% + Ortho-...

Atropine 0.02% + Otrho-...

AL Axial Length Graph

SPH SPH Graph

KER Keratometry Graph

ORTHO-K Ortho-K Comparison Topography

OD / OS Comparison OD / OS Information

DATA Edit / Add / Delete Data



AsianMale



# Myopia management

Myopia



HBM-1
MYOPIA MANAGEMENT
Myopia Management 00001

OD OS

AL

SPH

KER

ORTHO-K

Axial Length(mm)

DATA

Add Comment

Atropine 0.01%

Atropine 0.02%

Atropine 0.02% + Otrho-...

Ortho-K 1.5Diopter

Atropine 0.02% + Ortho-...

Atropine 0.02% + Otrho-...

Show Comment List

Moving one Year ago

| Years (Y) | Axial Length (mm) |
|-----------|-------------------|
| 4.0       | 21.00             |
| 5.0       | 21.20             |
| 6.0       | 21.70             |
| 7.0       | 22.20             |
| 8.0       | 22.70             |
| 9.0       | 22.50             |
| 10.0      | 22.80             |
| 11.0      | 23.00             |
| 12.0      | 23.00             |
| 13.0      | 23.30             |
| 14.0      | 24.20             |
| 15.0      | 27.30             |

Zoom

Graph Setting

AsianMale
Axial Length Trend by Race
Trend ON / OFF



# Myopia management

Myopia



**MYOPIA MANAGEMENT** Myopia Management 00001

OD OS

AL

SPH

KER

ORTHO-K

OD / OS

DATA

Start. D 20100930 End. D 20120731

Start Date(YYYYMMDD) End Date(YYYYMMDD)

Comment Atropine 0.01%

Input Comment

Delete current comment

DELETE

SAVE

Save current comment

| Age  | Axial Length (mm) |
|------|-------------------|
| 4.0  | 21.00             |
| 5.0  | 21.20             |
| 6.0  | 21.70             |
| 7.0  | 22.20             |
| 8.0  | 22.70             |
| 9.0  | 22.50             |
| 10.0 | 22.80             |
| 11.0 | 23.00             |
| 12.0 | 23.00             |
| 13.0 | 23.30             |
| 14.0 | 24.20             |
| 16.0 | 27.30             |

AsianMale

# Myopia management

Myopia



**MYOPIA MANAGEMENT** Myopia Management 00001

**Graph Scale**

Start Year > 2.0 End Year

Start Year 4 End Year 16

Show Value **ON** OFF

Value overlay ON/OFF

Cancel OK

The difference between the start year and the end year must set at least 2.0

Showing Myopia Trend Percentile

Myopia 95%  
Myopia 90%  
Myopia 75%  
Myopia 50%  
Myopia 25%  
Myopia 10%  
Myopia 5%  
Myopia 3%

OD / O

DATA

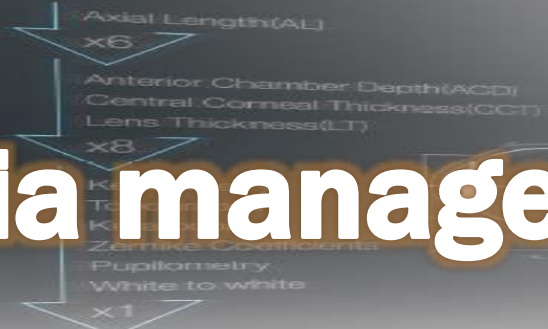
AsianFemale

| Year | Myopia Trend Percentile |
|------|-------------------------|
| 4.0  | 21.00                   |
| 5.0  | 21.20                   |
| 6.0  | 21.70                   |
| 7.0  | 22.20                   |
| 8.0  | 22.70                   |
| 9.0  | 22.50                   |
| 10.0 | 22.80                   |
| 11.0 | 23.00                   |
| 12.0 | 23.00                   |
| 13.0 | 23.30                   |
| 14.0 | 24.20                   |
| 15.0 | 27.30                   |



# Myopia management

Myopia



HBM-1
MYOPIA MANAGEMENT
Myopia Management 90001

2024-02-13 10:05

Before Topography wearing Ortho-k Treatment

2024-02-01 20:47

After Topography wearing Ortho-k Treatment

DIFF. MAP

3mm Zone

K-AVG 8.70mm  
Cyl -0.26 @ 146

5mm Zone

K-AVG 8.46mm  
Cyl -0.80 @ 178

7mm Zone

K-AVG 8.05mm  
Cyl -1.18 @ 174

Map Scale

ISO **ISO / American / Basic**

Interval **interval value on map**

0.1 **0.2**

Map Type

**Axial** Tangential

3mm Zone

K-AVG 7.87mm  
Cyl -0.51 @ 11

5mm Zone

K-AVG 7.90mm  
Cyl -0.64 @ 9

7mm Zone

K-AVG 8.08mm  
Cyl -0.68 @ 14

OD OS

AL

SPH

KER

**ORTHO-K**

OD / OS

DATA

3 / 5 / 7, 2 / 4 / 6 meridian changeable

# Myopia management

Myopia



HBM-1

## MYOPIA MANAGEMENT

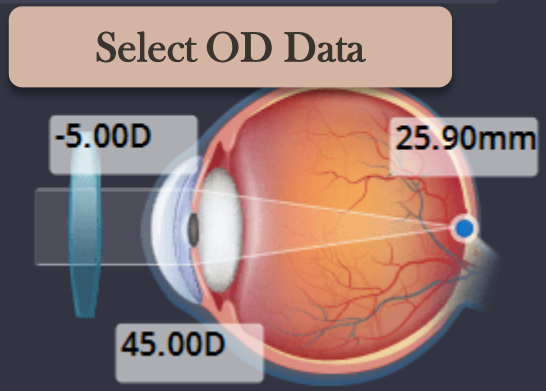
Myopia Management S  
00001

- OD
- OS
- AL
- SPH
- KER
- ORTHO-K
- OD / OS
- DATA

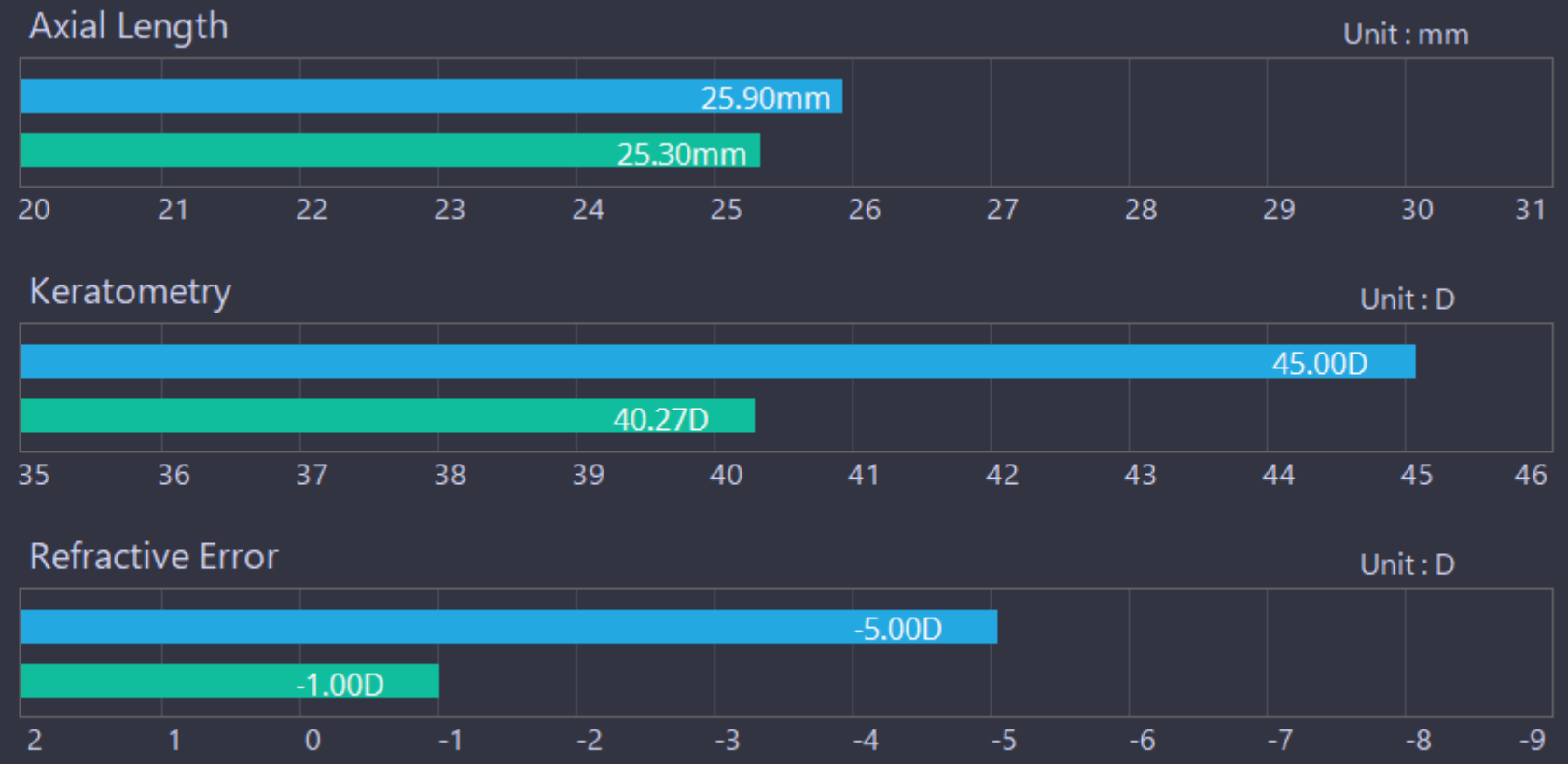
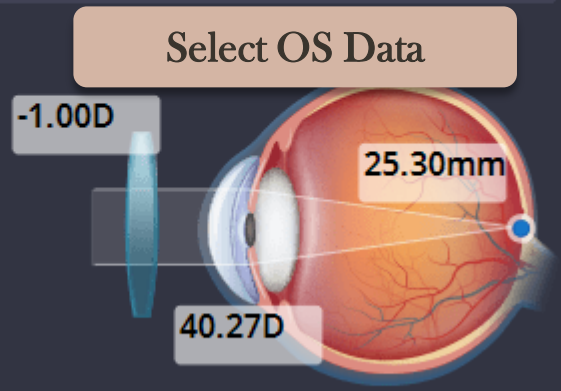
2023-09-19

2023-08-08

OD



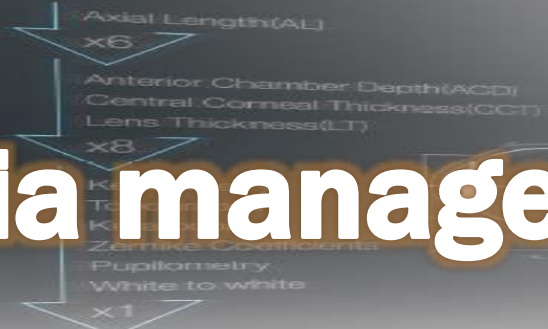
OS





# Myopia management

Myopia



HBM-1
MYOPIA MANAGEMENT
Myopia Management S 00001

OD

OS

Raw Data

AL

SPH

KER

ORTHO-K

OD / OS

DATA

Add

Delete

Add Data

Delete Data

|   | DATE           | RX SE(D) | AL (mm) | ACD (mm) | LT (mm) | KER (D) |
|---|----------------|----------|---------|----------|---------|---------|
| ✓ | 19 - 09 - 2023 | -5.00    | 25.90   | 3.47     | 4.00    | 45.00   |
| ✓ | 19 - 09 - 2023 |          | 26.45   | 3.74     | 3.82    | 42.80   |
| ✓ | 08 - 08 - 2023 | -4.75    | 27.50   | 3.00     | 3.00    | 45.00   |
| ✓ | 08 - 08 - 2022 | -4.75    | 27.30   | 3.00     | 3.00    | 44.00   |
| ✓ | 08 - 08 - 2021 | -4.50    |         |          |         |         |
| ✓ | 08 - 08 - 2020 | -3.50    | 24.20   | 3.00     | 3.00    | 38.00   |
| ✓ | 08 - 08 - 2019 | -1.75    | 23.30   | 3.00     | 3.00    | 38.00   |

Settings

Print

←

1 / 3

→

# Myopia management

Myopia

**Edit Exam**

**Date**

YY 2024 MM 02 DD 13

**SPH**

OD  OS  Load Setting

**Biometry**

AL 26.50 ACD  LT

KER

Cancel OK

Must be Input

Load Sph Data from Huvitz RK

Port Setting to connect Huvitz RK

At least one data must be input



# Myopia management

Myopia

Setup

REF

KER

AUTO START

**COMMUNICATION**

PRINT

DISPLAY

PATIENT NUMBER

ETC

I BPS(COM1) Setting BPS (9600 / 57600 / 115200)

|      |       |        |
|------|-------|--------|
| 9600 | 57600 | 115200 |
|------|-------|--------|

I RS232(COM1) Choose anything except 'OFF'

|     |    |    |     |
|-----|----|----|-----|
| Off | V1 | V2 | Ext |
|-----|----|----|-----|

I MODE(COM1)

|      |       |        |
|------|-------|--------|
| Mate | Nidek | Topcon |
|------|-------|--------|

I HLM PRINT

|     |    |
|-----|----|
| Off | On |
|-----|----|

< 1 2 >

Set a Huvitz RK

HuvitzRK Connect Setting

Port

COM5

Bps

115200

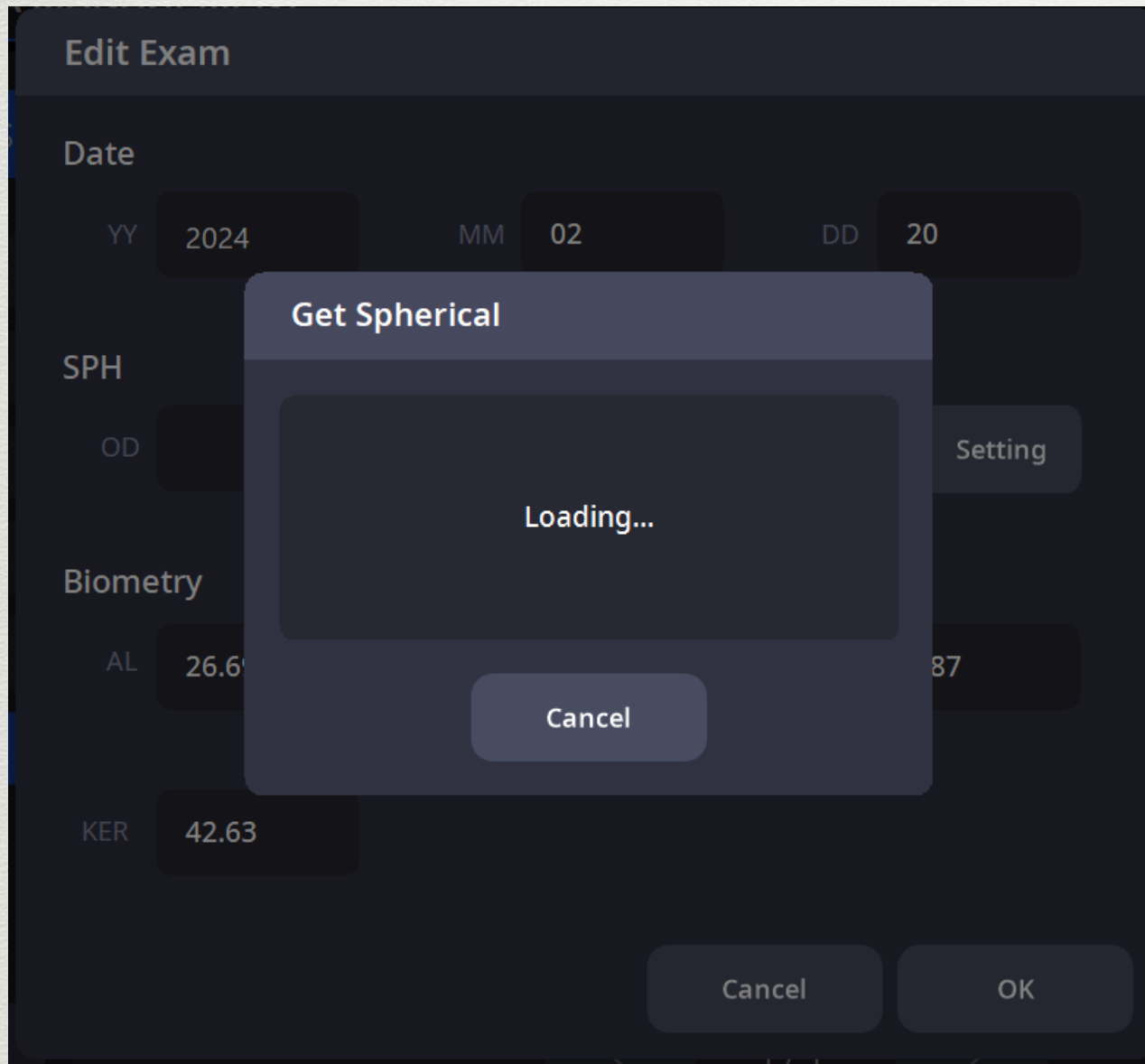
Cancel OK

Set a HBM-1

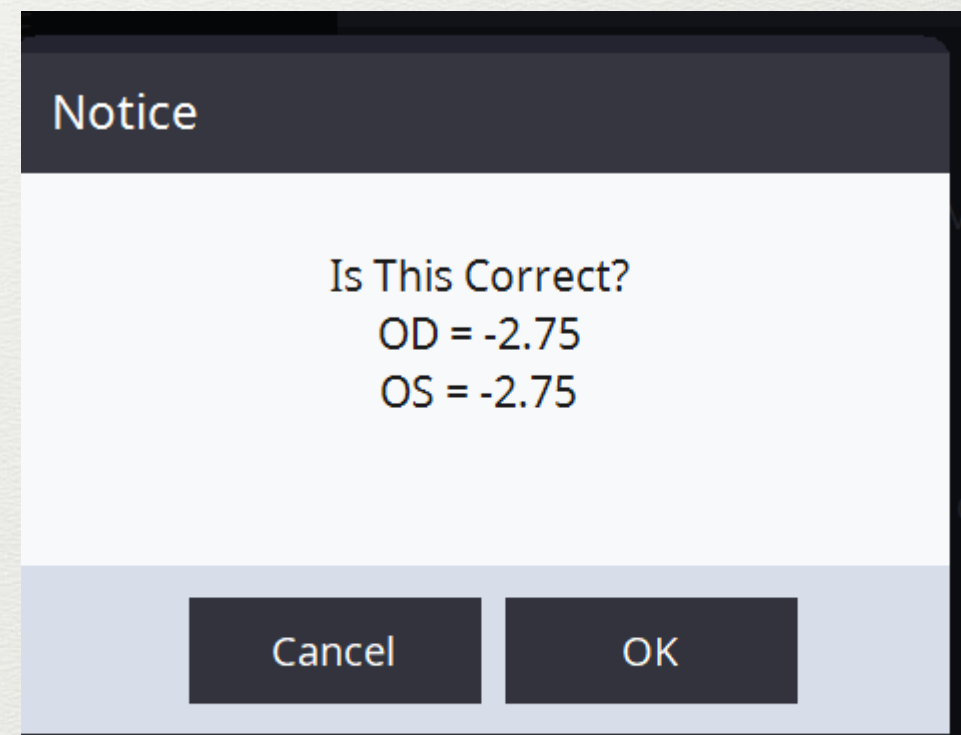


# Myopia management

Myopia



Press Load

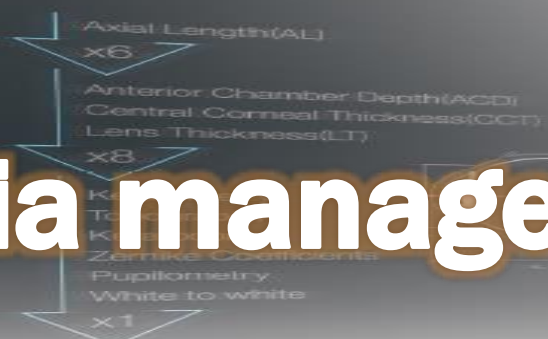


HRK Press Transfer  
And SPH Data Received



# Myopia management

Myopia



MYOPIA Management 00001

Print AL / KER / REF Graph

Graph:  AL  KER  REF

Graph Option: Start Year 2.0 ~ End Year 18.0 Myopia Trend: Asian Male

Editable Start year / end year

OrthoK:  ON  OFF

Select AL Trend (OFF / ON)

Before: 2024-02-13 10:05 After: 2024-02-01 20:47

Select Before Topo / After Topo

Compare:  ON  OFF

Before: 2023-09-19 After: 2023-08-08

Select OD / OS Data

Cancel OK

| LT (mm) | KER (D) |
|---------|---------|
| 4.00    | 45.00   |
| 3.82    | 42.80   |
| 3.00    | 45.00   |
| 3.00    | 44.00   |
| 3.00    | 38.00   |



# Myopia management

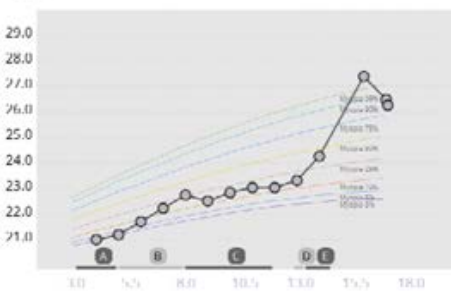
Myopia



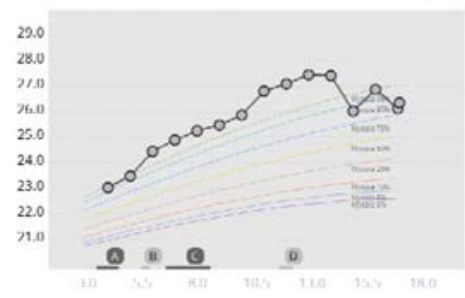
**Huvitz** Name: Patient\_1\_myopia ID: 00001 Gender: Male Exam Date: 08-08-2023  
 Date of Birth: 2006-07-31 Physician: Exam Time: Operator:

## MYOPIA MANAGEMENT REPORT (AXIAL LENGTH)

OD



OS



- Myopia Treatment**
- A Atropine 0.01%
  - B Atropine 0.02%
  - C Atropine 0.02% + Ortho-K 2.0D
  - D Ortho-K 1.5Diopter
  - E Atropine 0.02% + Ortho-K toric
  - F

- Myopia Treatment**
- A Atropine 0.01%
  - B Atropine 0.015%
  - C Atropine 0.02% + Ortho-K 1D
  - D Lasik Surgery
  - E
  - F

| Date       | AL(mm)           | SE(D)            | KER(D)           |
|------------|------------------|------------------|------------------|
| 19-09-2023 | 25.90<br>(-0.50) | -5.00<br>(0.25)  | 45.00<br>(+4.25) |
| 08-08-2023 | 26.40<br>(-0.90) | -4.75<br>(0.00)  | 40.75<br>(-3.25) |
| 08-08-2022 | 27.30<br>(+3.10) | -4.75<br>(1.25)  | 44.00<br>(+6.00) |
| 08-08-2020 | 24.20<br>(+0.90) | 3.50<br>(-1.75)  | 38.00<br>(0.00)  |
| 08-08-2019 | 23.30<br>(+0.30) | -1.75<br>(0.25)  | 38.00<br>(+2.50) |
| 08-08-2018 | 23.00<br>(0.00)  | -1.50<br>(-0.25) | 38.80<br>(-0.50) |

| Date       | AL(mm)           | SE(D)            | KER(D)           |
|------------|------------------|------------------|------------------|
| 08-08-2023 | 25.30<br>(-1.48) | -4.75<br>(2.00)  | 40.27<br>(2.87)  |
| 08-08-2022 | 26.78<br>(+0.82) | 2.75<br>(-1.08)  | 43.14<br>(+1.16) |
| 08-08-2021 | 25.96<br>(-1.35) | -1.67<br>(+1.33) | 41.98<br>(+0.53) |
| 08-08-2020 | 27.31<br>(-0.04) | 3.00<br>(-0.80)  | 41.45<br>(-1.28) |
| 08-08-2019 | 27.35<br>(+0.35) | -2.20<br>(0.95)  | 42.73<br>(+3.93) |
| 08-08-2018 | 27.00<br>(+0.30) | 1.25<br>(+0.25)  | 38.84<br>(-3.84) |

Data Graph + Trend

Comment

6 recent data

Comments | Signature | Device / SW info.



# User Setting



User Setup

## SETUP

System

Language

English

Patient

Device Name

Reset

Measure

Sleep Time

Off

5 Min

10 Min

30 Min

Connectivity

Touch Keyboard

On

Off

Report

Login Page

On

Off

IOL

Save Mode

Light

Raw

Information

Contact Lens

Import

Export

Dicom

Light - Total 1 Measure -> 20MB  
But, Not supported DCM  
( But it can be done before saving)

Raw - Total 1 Measure -> 60MB

Default



1 / 1



Cancel

OK

# User Setting (Import Contact Lens)

User Setup

HBM\_ContactLensFitting\_Database.csv - Excel

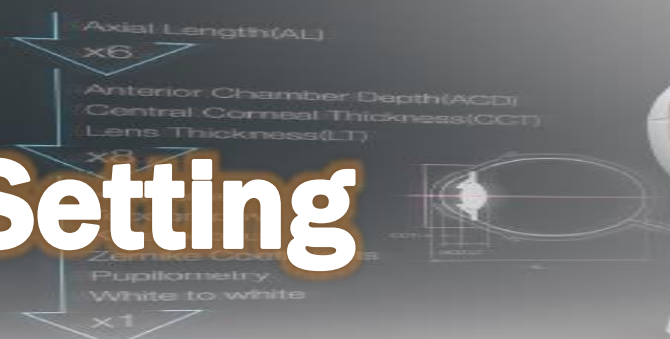
데이터가 손실될 수 있음 이 통합 문서를 심표로 구분된 형식(.csv)으로 저장하면 일부 기능이 손실될 수 있습니다. 기능을 유지하려면 Excel 파일 형식으로 저장하세요. 다시 표시 안 함 다른 이름으로 저장...

|    | A            | B             | C      | D       | E             | F        | G            | H            | I            | J            | K            | L            | M            | N            |
|----|--------------|---------------|--------|---------|---------------|----------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| 1  | Manufacturer | Model         | Type   | Base_r0 | Base_Diameter | Base_Ecc | Periphery_r1 | Periphery_b1 | Periphery_r2 | Periphery_b2 | Periphery_r3 | Periphery_b3 | Periphery_r4 | Periphery_b4 |
| 2  | Appenz.      | EX AS         | Normal | 8.45    | 9.8           | 0.6      | 11.95        | 0.4          | 0            | 0            | 0            | 0            | 0            | 0            |
| 3  | Appenz.      | EX MK         | Normal | 8.45    | 9.8           | 0.6      | 8.93         | 0.96         | 11.95        | 0.4          | 0            | 0            | 0            | 0            |
| 4  | Falco        | FAE           | Normal | 8.45    | 10            | 0.6      | 12.05        | 0.5          | 0            | 0            | 0            | 0            | 0            | 0            |
| 5  | Falco        | FAS           | Normal | 8.45    | 10            | 0.6      | 12.05        | 0.5          | 0            | 0            | 0            | 0            | 0            | 0            |
| 6  | Galifa       | ModulaA       | Normal | 8.45    | 9.8           | 0.6      | 11.25        | 0.4          | 10.7         | 0            | 0            | 0            | 0            | 0            |
| 7  | Galifa       | ModulaM       | Normal | 8.45    | 9.8           | 0.6      | 9.29         | 0.57         | 11.25        | 0.5          | 0            | 0            | 0            | 0            |
| 8  | Hetych       | Aktiv Comf.   | Normal | 8.45    | 10            | 0.6      | 9.05         | 0.65         | 12           | 0.2          | 0            | 0            | 0            | 0            |
| 9  | Hetych       | Aktiv Top     | Normal | 8.45    | 10            | 0.6      | 12           | 0.4          | 12           | 0            | 0            | 0            | 0            | 0            |
| 10 | Hetych       | Bifo Aktiv    | Normal | 8.45    | 10            | 0.6      | 9.05         | 0.6          | 12           | 0.2          | 0            | 0            | 0            | 0            |
| 11 | JenaLens     | ABOGDT        | Normal | 8.5     | 9.8           | 0.45     | 12           | 0.4          | 12           | 0            | 0            | 0            | 0            | 0            |
| 12 | JenaLens     | ABOGVTP       | Normal | 8.5     | 9.8           | 0.45     | 12           | 0.4          | 12           | 0            | 0            | 0            | 0            | 0            |
| 13 | JenaLens     | ABOGTpri      | Normal | 8.5     | 9.8           | 0.45     | 12           | 0.4          | 12           | 0            | 0            | 0            | 0            | 0            |
| 14 | JenaLens     | Asph          | Normal | 8.45    | 9.8           | 0.6      | 12           | 0.4          | 12           | 0            | 0            | 0            | 0            | 0            |
| 15 | JenaLens     | Asph-Kera     | Normal | 8.25    | 9.8           | 0.9      | 12           | 0.4          | 12           | 0            | 0            | 0            | 0            | 0            |
| 16 | JenaLens     | AsphPri       | Normal | 8.45    | 9.8           | 0.6      | 12           | 0.4          | 12           | 0            | 0            | 0            | 0            | 0            |
| 17 | JenaLens     | Asph VTP      | Normal | 8.45    | 9.8           | 0.6      | 12           | 0.4          | 12           | 0            | 0            | 0            | 0            | 0            |
| 18 | JenaLens     | Jeclips       | Normal | 8.3     | 9.8           | 0.8      | 0            | 0            | 0            | 0            | 0            | 0            | 0            | 0            |
| 19 | JenaLens     | Jecl. RT/BT   | Normal | 8.3     | 9.8           | 0.8      | 0            | 0            | 0            | 0            | 0            | 0            | 0            | 0            |
| 20 | JenaLens     | Jecl. VT      | Normal | 8.3     | 9.8           | 0.8      | 0            | 0            | 0            | 0            | 0            | 0            | 0            | 0            |
| 21 | MPG&E        | compact AS    | Normal | 8.45    | 10            | 0.6      | 0            | 0            | 0            | 0            | 0            | 0            | 0            | 0            |
| 22 | MPG&E        | compact ASAB  | Normal | 8.45    | 10            | 0.6      | 0            | 0            | 0            | 0            | 0            | 0            | 0            | 0            |
| 23 | MPG&E        | compact ASVPT | Normal | 8.45    | 10            | 0.6      | 0            | 0            | 0            | 0            | 0            | 0            | 0            | 0            |
| 24 | MPG&E        | compact CX    | Normal | 8.5     | 9.8           | 0.45     | 0            | 0            | 0            | 0            | 0            | 0            | 0            | 0            |
| 25 | MPG&E        | compact CXVP  | Normal | 8.5     | 9.8           | 0.45     | 0            | 0            | 0            | 0            | 0            | 0            | 0            | 0            |
| 26 | MPG&E        | compact CXV   | Normal | 8.5     | 10            | 0.45     | 0            | 0            | 0            | 0            | 0            | 0            | 0            | 0            |
| 27 | MPG&E        | compact EZ    | Normal | 8.45    | 10            | 0.6      | 0            | 0            | 0            | 0            | 0            | 0            | 0            | 0            |
| 28 | MPG&E        | compact EZV   | Normal | 8.45    | 10            | 0.6      | 0            | 0            | 0            | 0            | 0            | 0            | 0            | 0            |
| 29 | MPG&E        | compact EZM   | Normal | 8.45    | 10            | 0.6      | 0            | 0            | 0            | 0            | 0            | 0            | 0            | 0            |
| 30 | MPG&E        | compact EZMVT | Normal | 8.45    | 10            | 0.6      | 0            | 0            | 0            | 0            | 0            | 0            | 0            | 0            |
| 31 | PRECI        | AZ            | Normal | 8.6     | 9.8           | 0.3      | 10           | 0.2          | 10           | 0.2          | 0            | 0            | 0            | 0            |
| 32 | PRECI        | AZTE          | Normal | 8.6     | 9.8           | 0.3      | 10           | 0.2          | 10           | 0.2          | 0            | 0            | 0            | 0            |
| 33 | PRECI        | BA7           | Normal | 8.6     | 9.8           | 0.3      | 10           | 0.2          | 10           | 0.2          | 0            | 0            | 0            | 0            |



# User Setting

## User Setup



### SETUP

System

Patient List Size

50

100

150

200

500

Patient

Today List

On

Off

Measure

PID Prefix

Reset

Connectivity

PID Postfix

Reset

Report

PID Number Length

5

6

7

8

IOL

Data Format

YMD

MDY

DMY

Information

Staff Management

Physicians

Set the name of a doctor which is used to define IOL setting



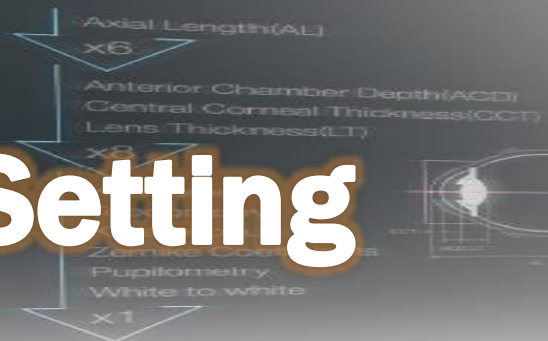
1 / 1



Cancel

OK

# User Setting



User Setup

## SETUP

System

Auto Tracking

On

Off

Auto Retry

On

Off

Patient

Auto Shoot

On

Off

Measure automatically until 3 times  
If data is not successful

Measure

Auto Shoot Detail

KER

AL

ANT

Connectivity

Live Signal

On

Off

Map Type

REF Power

Elevation

Report

Measurement Scale

Diopter

Millimeter

Axial

Tangential

IOL

Keratometry  
Display Area

2-4-6mm

3-5-7mm

Meridian Unit

Information

Cylinder Notation

Negative

Positive

Dicom

Default



1 / 3



Cancel

OK



# User Setting



User Setup

## SETUP

System

Asphericity

e

SF

p

Q

Patient

Measurement Mode

KER

AL

ANT

Types of Asphericity

Measure

Axial Length Offset

0

Axial Length Std

0.045

Connectivity

K1 Offset

0

Evaluation Red

2

AL settings

Report

K2 Offset

0

Evaluation Yellow

3

IOL

Evaluation Green

4

Information

Dicom

Default



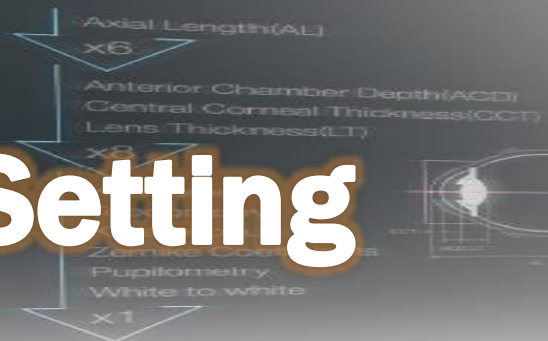
2 / 3



Cancel

OK

# User Setting



User Setup

## SETUP

System

CCT Offset

0

CCT Std

0.015

Patient

ACD Offset

0

ACD Std

0.05

Measure

LT Offset

0

LT Std

0.06

Connectivity

Evaluation Red

3

ANT settings

Report

Evaluation Yellow

4

IOL

Evaluation Green

5

Information

Dicom

Default



3 / 3



Cancel

OK



# User Setting

## User Setup



### SETUP

System

Auto Data Transfer

On

Off

Transfer data when saving

Patient

HIIS-1 Server IP

hocr.huvitz.com

Reset

Measure

HIIS-1 Server Port

8080

Reset

Connectivity

Report

IOL

Information



1 / 1



Cancel

OK

# User Setting



User Setup

## SETUP

System

Report Logo

C:\Users\Huvitz\Desktop\ta\pupil2.png

...

Reset

Patient

Organization

Test

Reset

Measure

Auto Export

On

Off

Connectivity

Auto Export Folder

D:\HBM\_Export\_Report

...

Reset

Report

Export List

Biometry

Topography

IOL

IOL

Export TopoMap

Axial

Tangential

Elevation

Ref Power

Information



1 / 1



Cancel

OK



# User Setting



User Setup

## SETUP

System

Physician 1

IOL Lens Editor Open

IOL Default

Patient

Choose a physician from 1 .. 6

Open IOL Editor

Factory initialization

IOL Calculation

Measure

Target Refraction 0.00

Connectivity

Manufacturer AMO AMO AMO AMO

Report

Model Tecnis 1 ZCB... Tecnis 1 ZCB... Tecnis 1 ZCB... Tecnis 1 ZCB...

IOL

Formula SRK2 SRK2 SRK2 SRK2

Information

Dicom

Default



1 / 3

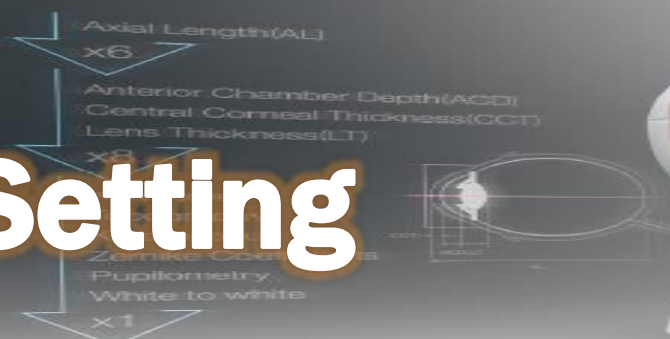


Cancel

OK

# User Setting

## User Setup



### SETUP

System

Physician

1

IOL Lens Editor

Open

Patient

Post Refractive IOL

Choose a physician  
from 1 .. 6

Open IOL Editor

Measure

Target Refraction

0.00

Connectivity

Manufacturer

AMO

AMO

AMO

AMO

Report

Model

Tecnis 1 ZCB...

Tecnis 1 ZCB...

Tecnis 1 ZCB...

Tecnis 1 ZCB...

IOL

Formula

Shammas N...

Shammas N...

Camellin-Cal...

Camellin-Cal...

Information



2 / 3



Cancel

OK



# User Setting

## User Setup

### SETUP

System

Physician

1

IOL Lens Editor

Open

Patient

Toric

Choose a physician  
from 1 .. 6

Open IOL Editor

Measure

Target Refraction

0.00

Connectivity

Manufacturer

HOYA

HOYA

HOYA

HOYA

Report

Model

iSert Toric 351

iSert Toric 351

iSert Toric 351

iSert Toric 351

IOL

Formula

Haigis

Barrett Univ...

Holladay

SRK/T

Information



3 / 3



Cancel

OK

# User Setting



## User Setup

### SETUP

System

S/W Version v1.1.0-Pre(2023\_02\_13\_1000)

Patient

Organization

Measure

~01-01-0001

Connectivity

License

Report

Serial Number 1BM00023E0006

IOL

Information

Storage D:\Measurement Data\

Dicom



Default



1 / 1



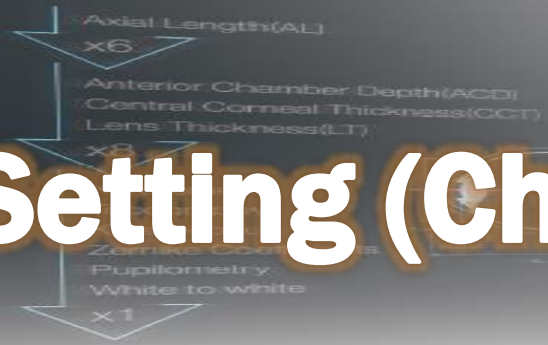
Cancel

OK



# User Setting (Change Directory)

User Setup



**Setting Directory**

D:\Measurement Data\ Factory initialization

Patient Data OK Init

IOL Lens Data OK Init

Contact Lens Data OK Init

Dir Close

Change Dir

| 이름             | 수정한 날짜              | 유형             | 크기    |
|----------------|---------------------|----------------|-------|
| 174            | 2024-02-19 오후 5:19  | 파일 폴더          |       |
| 175            | 2024-01-15 오전 11:48 | 파일 폴더          |       |
| 177            | 2024-01-31 오후 3:23  | 파일 폴더          |       |
| 179            | 2024-01-31 오후 3:23  | 파일 폴더          |       |
| ContactLens.db | 2024-02-16 오후 3:14  | Data Base File | 32KB  |
| HBM_DB2.db     | 2024-02-19 오후 1:16  | Data Base File | 134KB |
| iolc.db        | 2024-01-18 오후 4:30  | Data Base File | 71KB  |

**Caution !**  
When you change the path,  
database files must have in  
that path



# User Setting (Change Directory)

User Setup



Setting Directory

D:\Measurement Data\_\

|                   |       |      |
|-------------------|-------|------|
| Patient Data      | OK    | Init |
| IOL Lens Data     | Error | Init |
| Contact Lens Data | Error | Init |

Dir Close

If database file is damaged, click 'Init' button to initialize it. But this data will be in a factory initialization state

Setting Directory

D:\Measurement Data\_\

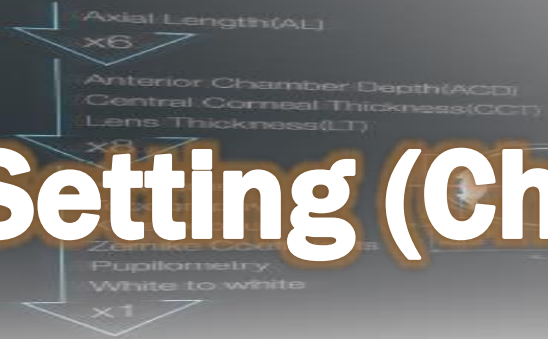
|                   |    |      |
|-------------------|----|------|
| Patient Data      | OK | Init |
| IOL Lens Data     | OK | Init |
| Contact Lens Data | OK | Init |

Dir Close



# User Setting (Change Directory)

User Setup



|   |                     |                |       |
|---|---------------------|----------------|-------|
| Backup_2024_01_10_07_03_11_HBM_DB2.db     | 2024-01-10 오후 2:42  | Data Base File | 134KB |
| Backup_2024_01_10_07_03_16_HBM_DB2.db     | 2024-01-10 오후 2:42  | Data Base File | 134KB |
| Backup_2024_01_10_07_12_46_HBM_DB2.db     | 2024-01-10 오후 2:42  | Data Base File | 134KB |
| Backup_2024_01_10_07_13_00_HBM_DB2.db     | 2024-01-10 오후 2:42  | Data Base File | 134KB |
| Backup_2024_01_10_07_13_33_HBM_DB2.db     | 2024-01-10 오후 2:42  | Data Base File | 134KB |
| Backup_2024_01_10_07_13_44_HBM_DB2.db     | 2024-01-10 오후 2:42  | Data Base File | 134KB |
| Backup_2024_01_10_07_17_22_HBM_DB2.db     | 2024-01-10 오후 2:42  | Data Base File | 134KB |
| Backup_2024_01_11_05_26_05_HBM_DB2.db     | 2024-01-10 오후 2:42  | Data Base File | 134KB |
| Backup_2024_01_10_15_18_ContactLens.db    | 2024-01-10 오후 3:18  | Data Base File | 0KB   |
| Backup_2024_01_10_15_18_iolc.db           | 2024-01-10 오후 3:18  | Data Base File | 0KB   |
| Backup_2024_01_11_02_54_41_HBM_DB2.db     | 2024-01-11 오전 11:36 | Data Base File | 129KB |
| Backup_2024_01_11_03_00_01_HBM_DB2.db     | 2024-01-11 오전 11:48 | Data Base File | 134KB |
| Backup_2024_01_11_04_35_05_HBM_DB2.db     | 2024-01-11 오전 11:48 | Data Base File | 134KB |
| Backup_2024_01_11_04_59_01_HBM_DB2.db     | 2024-01-11 오전 11:48 | Data Base File | 134KB |
| Backup_2024_01_11_05_01_10_HBM_DB2.db     | 2024-01-11 오전 11:48 | Data Base File | 134KB |
| Backup_2024_01_11_05_23_13_HBM_DB2.db     | 2024-01-11 오전 11:48 | Data Base File | 134KB |
| Backup_2024_01_11_05_28_17_HBM_DB2.db     | 2024-01-11 오전 11:48 | Data Base File | 134KB |
| Backup_2024_01_11_05_28_48_HBM_DB2.db     | 2024-01-11 오전 11:48 | Data Base File | 134KB |
| Backup_2024_01_11_05_29_41_HBM_DB2.db     | 2024-01-11 오전 11:48 | Data Base File | 134KB |
| Backup_2024_01_11_06_06_22_HBM_DB2.db     | 2024-01-11 오전 11:48 | Data Base File | 134KB |
| Backup_2024_01_11_06_06_53_HBM_DB2.db     | 2024-01-11 오전 11:48 | Data Base File | 134KB |
| Backup_2024_01_11_06_20_50_HBM_DB2.db     | 2024-01-11 오후 3:19  | Data Base File | 0KB   |
| Backup_2024_01_11_06_20_51_iolc.db        | 2024-01-11 오후 3:19  | Data Base File | 0KB   |
| Backup_2024_01_11_06_20_52_ContactLens.db | 2024-01-11 오후 3:19  | Data Base File | 0KB   |
| Backup_2024_01_11_06_25_45_iolc.db        | 2024-01-11 오후 3:25  | Data Base File | 0KB   |
| Backup_2024_02_19_08_37_04_iolc.db        | 2024-02-19 오후 5:37  | Data Base File | 0KB   |
| Backup_2024_02_19_08_37_05_ContactLens.db | 2024-02-19 오후 5:37  | Data Base File | 0KB   |

When user Pressed 'Init',  
database will be backup  
(C:\HBM-1\DatabaseBackup)



# User Setting (Data Backup)

User Setup

**Backup Database**

**Source Directory**  
D:¥Measurement Data¥  
Space Used : 1.75GB

**Destination Directory**  
C:¥HBMBACKUPTTEST¥

Total Size : 459.42GB Free Size : 215.78GB

0.0%

Start  
Cancel  
Close

Amount of data to be backup

Select Backup Directory

Selected Backup Directory

Selected Backup Directory Information

If Free Size smaller than Data size, Can't Backup

During the initialize patient database, you can cancel initialization



# User Setting (Data Backup)

User Setup

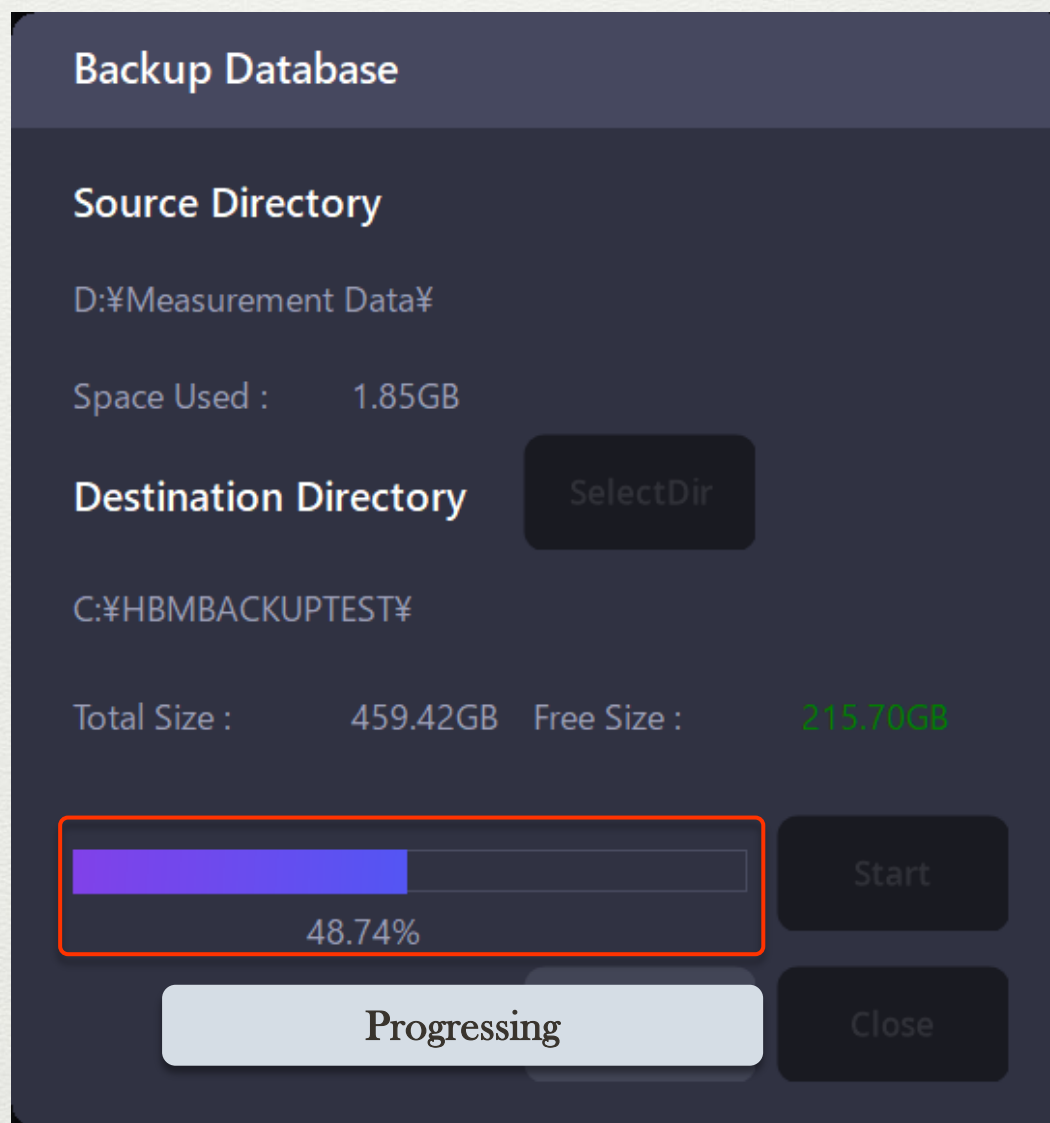
**Backup Database**

**Source Directory**  
D:¥Measurement Data¥  
Space Used : 1.85GB

**Destination Directory**   
C:¥HBMBACKUPTEST¥  
Total Size : 459.42GB Free Size : 215.70GB

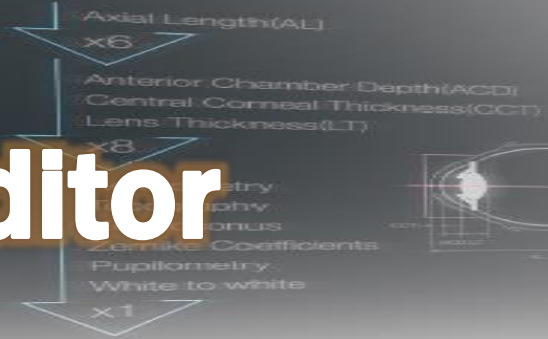
**Progressing**

48.74%





# IOL Editor



User Setup

[Download](#) [Print](#) [Subscribe](#) **652 selected lenses**

Constants to download:  
 Biometer: all  
 Ethnicity: all  
 Institution: all  
 Surgeon: all  
 File Version: 1.7  
 Manufacturer / ULIB  
 IOL Con

**Steinbeis Vision Research** **IOL Con**  
[Show All Lenses](#) [Search For Lenses](#) [Add Clinical Result](#) [Add Lens](#) [Log In](#)

| Intraocular Lens |           | Our Optimized Constants <sup>3</sup>                       |                     |                 |           |                     |          |                            |     |       |         |
|------------------|-----------|--|---------------------|-----------------|-----------|---------------------|----------|----------------------------|-----|-------|---------|
| Image            | Lens Name | Haigis (a <sub>0</sub> / a <sub>1</sub> / a <sub>2</sub> ) | Hoffer Q (pACD)     | Holladay 1 (SF) | SRK/T (A) | Castrop (C / H / R) |          |                            |     |       |         |
|                  | 1stQ      |  |                     |                 |           |                     |          |                            |     |       |         |
|                  | 611HPS    |  |                     |                 |           |                     |          |                            |     |       |         |
|                  | A4DW0K    |  |                     |                 |           |                     |          |                            |     |       |         |
|                  | A4EW0H    |  |                     |                 |           |                     |          |                            |     |       |         |
|                  | A4EW0M    |  |                     |                 |           |                     |          |                            |     |       |         |
|                  | A4FW00    |  |                     |                 |           |                     |          |                            |     |       |         |
|                  | A4HW0M    |  |                     |                 |           |                     |          |                            |     |       |         |
|                  | A4MW00    |  |                     |                 |           |                     |          |                            |     |       |         |
|                  | A4SW00    |  |                     |                 |           |                     |          |                            |     |       |         |
|                  | B1AB00    | 118.9  | 1.32<br>0.4<br>0.1  | 5.46            | 1.7       | 118.9               | 1.9<br>- | 0.8751<br>0.2659<br>0.1416 | 5.6 | 1.809 | 119.033 |
|                  | B1ABY0    | 118.9  | 1.32<br>0.4<br>0.1  | 5.46            | 1.7       | 118.9               | 1.9<br>- | 0.8751<br>0.2659<br>0.1416 | 5.6 | 1.809 | 119.033 |
|                  | B1ADY0    | 118.9  | 1.32<br>0.4<br>0.1  | 5.46            | 1.7       | 118.9               | 1.9<br>- | 0.8751<br>0.2659<br>0.1416 | 5.6 | 1.809 | 119.033 |
|                  | B1AP00    |  | 1.243<br>0.4<br>0.1 | 5.46            | 4.67      | 118.9               |          |                            |     |       |         |

[LPCM](#) [Help](#) [Contact](#) [Imprint](#) [Terms & Conditions](#) [Data Privacy Statement](#)

Manufacturer / ULIB -  
 Provide Constants Manufacturer  
 IOL Con -  
 Provide iolcon.org optimized constants



# IOL Editor

## User Setup

IOL Lens Edit

Keyboard

Select DB :

Spherical

History Log

| Manufacture | Model     | Manu (A) | SRK2 (A) | SRKT (A) | HofferQ (pA) | Holladay (SF) | Haigis (a0) | Haigis (a1) | Haigis (a2) | Barrett (LF) | Camellin Cal | Shammas (A) |
|-------------|-----------|----------|----------|----------|--------------|---------------|-------------|-------------|-------------|--------------|--------------|-------------|
| 1stQ        | Basis K   | 118.9    | 118.6    | 118.3    | 5.15         | 1.37          | 0.95        | 0.4         | 0.1         | 1.517        | 118.9        | 118.9       |
| 1stQ        | Basis Q   | 118      | 118.3    | 118.1    | 5.01         | 1.25          | 0.274       | 0.458       | 0.116       | 1.412        | 118          | 118         |
| 1stQ        | Basis Z   | 118      | 118.3    | 118.1    | 5.01         | 1.25          | -0.07       | 0.21        | 0.163       | 1.412        | 118          | 118         |
| 1stQ        | Basis Z h | 118      | 119.2    | 118.9    | 5.46         | 1.7           | 1.32        | 0.4         | 0.1         | 1.831        | 118          | 118         |
| AMO         | 808C      | 118      | 119.6    | 119.1    | 5.65         | 1.89          | 1.5         | 0.4         | 0.1         | 1.936        | 118          | 118         |
| AMO         | CeeOn 9   | 118.3    | 119.1    | 118.7    | 5.42         | 1.65          | 0.568       | 0.224       | 0.152       | 1.726        | 118.3        | 118.3       |
| AMO         | ClariFlex | 118      | 118.6    | 118.3    | 5.14         | 1.37          | 0.92        | 0.4         | 0.1         | 1.517        | 118          | 118         |
| AMO         | PS60 AN   | 116.7    | 118.9    | 118.7    | 5.46         | 1.65          | 1.15        | 0.4         | 0.1         | 1.726        | 116.7        | 116.7       |
| AMO         | ReZoom    | 118.4    | 118.5    | 118.3    | 5.2          | 1.4           | 0.92        | 0.4         | 0.1         | 1.517        | 118.4        | 118.4       |
| AMO         | SA40 Av   | 118      | 118.1    | 117.9    | 4.9          | 1.14          | 0.65        | 0.4         | 0.1         | 1.207        | 118          | 118         |

Add New Lens

Delete Lens

Import  
(XML)

Import  
Sph. DB  
(CSV)

Export  
Sph. DB  
(CSV)

Save

Close

# IOL Editor

## User Setup

**IOL Lens Edit**

**Import**

Reference Type : IOL Con

Constraint Type :  Norminal/ULIB  IOL Con Optimized

**Load Data** **Load USB**

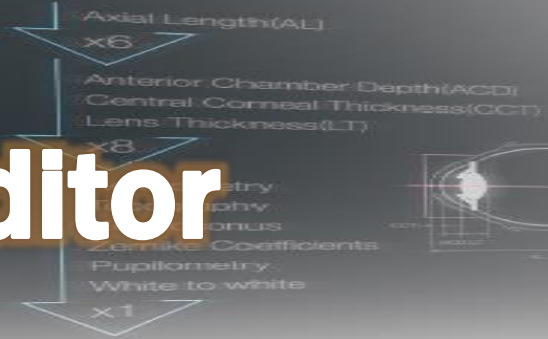
| <input type="checkbox"/> | Manufactur | Model | Manu (A) | SRK2 (A) | SRKT (A) | HofferQ (p) | Holladay (S) | Haigis (a0) | Haigis (a1) | Haigis (a2) | Barrett (LF) | Camellin C | Shammas ( |
|--------------------------|------------|-------|----------|----------|----------|-------------|--------------|-------------|-------------|-------------|--------------|------------|-----------|
|                          |            |       |          |          |          |             |              |             |             |             |              |            |           |

**Import** **Cancel**

Add New Lens Delete Lens (XML) Spn. DB (CSV) Spn. DB (CSV) Save Close



# IOL Editor



User Setup

## Import

Reference Type :

IOL Con

Constraint Type :

Norminal/ULIB

IOL Con Optimized

Load Data

Load USB

| <input type="checkbox"/> | Manufactu | Model  | Manu (A) | SRK2 (A) | SRKT (A) | HofferQ (p) | Holladay (s) | Haigis (a0) | Haigis (a1) | Haigis (a2) | Barrett (LF) | Camellin C | Shammas ( |
|--------------------------|-----------|--------|----------|----------|----------|-------------|--------------|-------------|-------------|-------------|--------------|------------|-----------|
| <input type="checkbox"/> | 1stQ      | 611HPS | 0        | 0        | 118.3    | 5.15        | 1.39         | 0.95        | 0.4         | 0.1         | 1.52         | 0          | 0         |
| <input type="checkbox"/> | 1stQ      | B1AB00 | 0        | 0        | 118.9    | 5.46        | 1.7          | 1.32        | 0.4         | 0.1         | 1.9          | 0          | 0         |
| <input type="checkbox"/> | 1stQ      | B1ABY0 | 0        | 0        | 118.9    | 5.46        | 1.7          | 1.32        | 0.4         | 0.1         | 1.9          | 0          | 0         |
| <input type="checkbox"/> | 1stQ      | B1ADYC | 0        | 0        | 118.9    | 5.46        | 1.7          | 1.32        | 0.4         | 0.1         | 1.9          | 0          | 0         |
| <input type="checkbox"/> | 1stQ      | B1AP00 | 0        | 0        | 118.9    | 5.46        | 1.67         | 1.243       | 0.4         | 0.1         | 0            | 0          | 0         |
| <input type="checkbox"/> | 1stQ      | B1ADY0 | 0        | 0        | 118.9    | 5.46        | 1.67         | 1.243       | 0.4         | 0.1         | 0            | 0          | 0         |

Import

Cancel

# IOL Editor

## User Setup

IOL Lens Edit

Keyboard

Select DB :

Spherical

History Log

| Manufacture | Model     | Manu (A) | SRK2 (A) | SRKT (A) | HofferQ (pA) | Holladay (SF) | Haigis (a0) | Haigis (a1) | Haigis (a2) | Barrett (LF) | Camellin Cal | Shammas (A) |
|-------------|-----------|----------|----------|----------|--------------|---------------|-------------|-------------|-------------|--------------|--------------|-------------|
| 1stQ        | Basis K   | 118.9    | 118.6    | 118.3    | 5.15         | 1.37          | 0.95        | 0.4         | 0.1         | 1.517        | 118.9        | 118.9       |
| 1stQ        | Basis Q   | 118      | 118.3    | 118.1    | 5.01         | 1.25          | 0.274       | 0.458       | 0.116       | 1.412        | 118          | 118         |
| 1stQ        | Basis Z   | 118      | 118.3    | 118.1    | 5.01         | 1.25          | -0.07       | 0.21        | 0.163       | 1.412        | 118          | 118         |
| 1stQ        | Basis Z h | 118      | 119.2    | 118.9    | 5.46         | 1.7           | 1.32        | 0.4         | 0.1         | 1.831        | 118          | 118         |
| AMO         | 808C      | 118      | 119.6    | 119.1    | 5.65         | 1.89          | 1.5         | 0.4         | 0.1         | 1.936        | 118          | 118         |
| AMO         | CeeOn 9   | 118.3    | 119.1    | 118.7    | 5.42         | 1.65          | 0.568       | 0.224       | 0.152       | 1.726        | 118.3        | 118.3       |
| AMO         | ClariFlex | 118      | 118.6    | 118.3    | 5.14         | 1.37          | 0.92        | 0.4         | 0.1         | 1.517        | 118          | 118         |
| AMO         | PS60 AN   | 116.7    | 118.9    | 118.7    | 5.46         | 1.65          | 1.15        | 0.4         | 0.1         | 1.726        | 116.7        | 116.7       |
| AMO         | ReZoom    | 118.4    | 118.5    | 118.3    | 5.2          | 1.4           | 0.92        | 0.4         | 0.1         | 1.517        | 118.4        | 118.4       |
| AMO         | SA40 Av   | 118      | 118.1    | 117.9    | 4.9          | 1.14          | 0.65        | 0.4         | 0.1         | 1.207        | 118          | 118         |

Add New Lens

Delete Lens

Import  
(XML)

Import  
Sph. DB  
(CSV)

Export  
Sph. DB  
(CSV)

Save

Close



# IOL Editor

IOL Lens Edit

Keyboard

Select DB :

Spherical

History Log

| Manufacture | Model     | Manu (A) | SRK2 (A) | SRKT (A) | HofferQ (pA) | Holladay (SF) | Haigis (a0) | Haigis (a1) | Haigis (a2) | Barrett (LF) | Camellin Cal | Shammas (A) |
|-------------|-----------|----------|----------|----------|--------------|---------------|-------------|-------------|-------------|--------------|--------------|-------------|
| 1stQ        | Basis K   | 118.9    | 118.6    | 118.3    | 5.15         | 1.37          | 0.95        | 0.4         | 0.1         | 1.517        | 118.9        | 118.9       |
| 1stQ        | Basis Q   | 118.9    | 118.6    | 118.3    | 5.15         | 1.37          | 0.95        | 0.4         | 0.1         | 1.517        | 118.9        | 118.9       |
| 1stQ        | Basis Z   | 118.9    | 118.6    | 118.3    | 5.15         | 1.37          | 0.95        | 0.4         | 0.1         | 1.517        | 118.9        | 118.9       |
| 1stQ        | Basis Z h | 118.9    | 118.6    | 118.3    | 5.15         | 1.37          | 0.95        | 0.4         | 0.1         | 1.517        | 118.9        | 118.9       |
| AMO         | 808C      | 118.9    | 118.6    | 118.3    | 5.15         | 1.37          | 0.95        | 0.4         | 0.1         | 1.517        | 118.9        | 118.9       |
| AMO         | CeeOn 9   | 118.9    | 118.6    | 118.3    | 5.15         | 1.37          | 0.95        | 0.4         | 0.1         | 1.517        | 118.9        | 118.9       |
| AMO         | ClariFlex | 118.9    | 118.6    | 118.3    | 5.15         | 1.37          | 0.95        | 0.4         | 0.1         | 1.517        | 118.9        | 118.9       |
| AMO         | PS60 AN   | 116.7    | 118.9    | 118.7    | 5.46         | 1.65          | 1.15        | 0.4         | 0.1         | 1.726        | 116.7        | 116.7       |
| AMO         | ReZoom    | 118.4    | 118.5    | 118.3    | 5.2          | 1.4           | 0.92        | 0.4         | 0.1         | 1.517        | 118.4        | 118.4       |
| AMO         | SA40 Av   | 118.9    | 118.6    | 118.3    | 5.15         | 1.37          | 0.95        | 0.4         | 0.1         | 1.517        | 118.9        | 118.9       |

Spherical DB Import (CSV)

Path : C:\Users\Huvitz\Desktop\IOL\_Sph\_20240226\_142132.csv

Open File

Data read successful.

Import

Apply

Cancel

Add New Lens

Delete Lens

Import  
(XML)

Import  
Sph. DB  
(CSV)

Export  
Sph. DB  
(CSV)

Save

Close

# IOL Editor

IOL Lens Edit

Keyboard

Select DB :

Spherical

History Log

| Manufacture | Model     | Manu (A) | SRK2 (A) | SRKT (A) | HofferQ (pA) | Holladay (SF) | Haigis (a0) | Haigis (a1) | Haigis (a2) | Barrett (LF) | Camellin Cal | Shammas (A) |
|-------------|-----------|----------|----------|----------|--------------|---------------|-------------|-------------|-------------|--------------|--------------|-------------|
| 1stQ        | Basis K   | 118.9    | 118.6    | 118.3    | 5.15         | 1.37          | 0.95        | 0.4         | 0.1         | 1.517        | 118.9        | 118.9       |
| 1stQ        | Basis Q   | 118      | 118.3    | 118.1    | 5.01         | 1.25          | 0.274       | 0.458       | 0.116       | 1.412        | 118          | 118         |
| 1stQ        | Basis Z   | 118      | 118.3    | 118.1    | 5.01         | 1.25          | -0.07       | 0.21        | 0.163       | 1.412        | 118          | 118         |
| 1stQ        | Basis Z h | 118      | 119.2    | 118.9    | 5.46         | 1.7           | 1.32        | 0.4         | 0.1         | 1.831        | 118          | 118         |
| AMO         | 808C      | 118      | 119.6    | 119.1    | 5.65         | 1.89          | 1.5         | 0.4         | 0.1         | 1.936        | 118          | 118         |
| AMO         | CeeOn 9   | 118.3    | 119.1    | 118.7    | 5.42         | 1.65          | 0.568       | 0.224       | 0.152       | 1.726        | 118.3        | 118.3       |
| AMO         | ClariFlex | 118      | 118.6    | 118.3    | 5.14         | 1.37          | 0.92        | 0.4         | 0.1         | 1.517        | 118          | 118         |
| AMO         | PS60 AN   | 116.7    | 118.9    | 118.7    | 5.46         | 1.65          | 1.15        | 0.4         | 0.1         | 1.726        | 116.7        | 116.7       |
| AMO         | ReZoom    | 118.4    | 118.5    | 118.3    | 5.2          | 1.4           | 0.92        | 0.4         | 0.1         | 1.517        | 118.4        | 118.4       |
| AMO         | SA40 Av   | 118      | 118.1    | 117.9    | 4.9          | 1.14          | 0.65        | 0.4         | 0.1         | 1.207        | 118          | 118         |

Add New Lens

Delete Lens

Import  
(XML)

Import  
Sph. DB  
(CSV)

Export  
Sph. DB  
(CSV)

Save

Close



# IOL Editor

IOL Lens Edit

Keyboard

Select DB :

Spherical

History Log

| Manufacture | Model     | Manu (A) | SRK2 (A) | SRKT (A) | HofferQ (pA) | Holladay (SF) | Haigis (a0) | Haigis (a1) | Haigis (a2) | Barrett (LF) | Camellin Cal | Shammas (A) |
|-------------|-----------|----------|----------|----------|--------------|---------------|-------------|-------------|-------------|--------------|--------------|-------------|
| 1stQ        | Basis K   | 118.9    | 118.6    | 118.3    | 5.15         | 1.37          | 0.95        | 0.4         | 0.1         | 1.517        | 118.9        | 118.9       |
| 1stQ        | Basis Q   | 118      | 118.2    | 118.1    | 5.01         | 1.25          | 0.974       | 0.459       | 0.116       | 1.412        | 118          | 118         |
| 1stQ        | Basis Z   | 118      |          |          |              |               |             |             |             |              | 118          | 118         |
| 1stQ        | Basis Z h | 118      |          |          |              |               |             |             |             |              | 118          | 118         |
| AMO         | 808C      | 118      |          |          |              |               |             |             |             |              | 118          | 118         |
| AMO         | CeeOn 9   | 118      |          |          |              |               |             |             |             |              | 118.3        | 118.3       |
| AMO         | ClariFlex | 118      | 118.6    | 118.3    | 5.14         | 1.37          | 0.92        | 0.4         | 0.1         | 1.517        | 118          | 118         |
| AMO         | PS60 AN   | 116.7    | 118.9    | 118.7    | 5.46         | 1.65          | 1.15        | 0.4         | 0.1         | 1.726        | 116.7        | 116.7       |
| AMO         | ReZoom    | 118.4    | 118.5    | 118.3    | 5.2          | 1.4           | 0.92        | 0.4         | 0.1         | 1.517        | 118.4        | 118.4       |
| AMO         | SA40 Av   | 118      | 118.1    | 117.9    | 4.9          | 1.14          | 0.65        | 0.4         | 0.1         | 1.207        | 118          | 118         |

Spherical DB Export (CSV)

Path : ./IOL\_Sph\_20240226\_142756.csv

Data export successful.

Open Folder

Export

Close

Add New Lens

Delete Lens

Import (XML)

Import Sph. DB (CSV)

Export Sph. DB (CSV)

Save

Close

# Exported CSV file

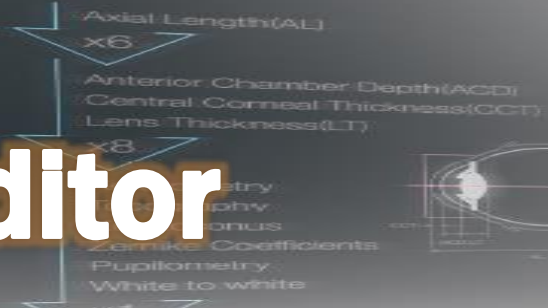
User Setup

IOL\_Sph\_20240405\_164802.csv - Microsoft Excel

| A1 | Manufacturer |             |        |         |         |           |           |           |           |           |            |           |           |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
|----|--------------|-------------|--------|---------|---------|-----------|-----------|-----------|-----------|-----------|------------|-----------|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
|    | A            | B           | C      | D       | E       | F         | G         | H         | I         | J         | K          | L         | M         | N | O | P | Q | R | S | T | U | V | W | X | Y | Z |  |
| 1  | Manufact     | Model       | Manu_A | SRKII_A | SRK_T_A | HofferQ_p | Holladay_ | Haigis_a0 | Haigis_a1 | Haigis_a2 | Barrett_LF | Camellin_ | Shammas_A |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| 2  | 1stQ         | Basis K     | 118.9  | 118.6   | 118.3   | 5.15      | 1.37      | 0.95      | 0.4       | 0.1       | 1.517      | 118.9     | 118.9     |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| 3  | 1stQ         | Basis Q     | 118    | 118.3   | 118.1   | 5.01      | 1.25      | 0.274     | 0.458     | 0.116     | 1.412      | 118       | 118       |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| 4  | 1stQ         | Basis Z     | 118    | 118.3   | 118.1   | 5.01      | 1.25      | -0.07     | 0.21      | 0.163     | 1.412      | 118       | 118       |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| 5  | 1stQ         | Basis Z hy  | 118    | 119.2   | 118.9   | 5.46      | 1.7       | 1.32      | 0.4       | 0.1       | 1.831      | 118       | 118       |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| 6  | AMO          | 808C        | 118    | 119.6   | 119.1   | 5.65      | 1.89      | 1.5       | 0.4       | 0.1       | 1.936      | 118       | 118       |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| 7  | AMO          | CeeOn 91    | 118.3  | 119.1   | 118.7   | 5.42      | 1.65      | 0.568     | 0.224     | 0.152     | 1.726      | 118.3     | 118.3     |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| 8  | AMO          | ClariFlex   | 118    | 118.6   | 118.3   | 5.14      | 1.37      | 0.92      | 0.4       | 0.1       | 1.517      | 118       | 118       |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| 9  | AMO          | PS60 ANB    | 116.7  | 118.9   | 118.7   | 5.46      | 1.65      | 1.15      | 0.4       | 0.1       | 1.726      | 116.7     | 116.7     |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| 10 | AMO          | ReZoom N    | 118.4  | 118.5   | 118.3   | 5.2       | 1.4       | 0.92      | 0.4       | 0.1       | 1.517      | 118.4     | 118.4     |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| 11 | AMO          | SA40 Arra   | 118    | 118.1   | 117.9   | 4.9       | 1.14      | 0.65      | 0.4       | 0.1       | 1.307      | 118       | 118       |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| 12 | AMO          | Sensar 1-p  | 118.4  | 119.3   | 119     | 5.57      | 1.79      | -1.004    | 0.182     | 0.232     | 1.87       | 118.4     | 118.4     |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| 13 | AMO          | Sensar AR   | 118.4  | 118.9   | 118.7   | 5.39      | 1.62      | 0.472     | 0.077     | 0.174     | 1.726      | 118.4     | 118.4     |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| 14 | AMO          | Sensar AR   | 118.4  | 118.8   | 118.7   | 5.41      | 1.63      | -2.42     | 0.157     | 0.288     | 1.726      | 118.4     | 118.4     |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| 15 | AMO          | SI30 NB     | 117.4  | 118.6   | 118.5   | 5.34      | 1.58      | 1.23      | 0.4       | 0.1       | 1.622      | 117.4     | 117.4     |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| 16 | AMO          | SI40 NB     | 118    | 118.6   | 118.4   | 5.19      | 1.42      | -0.199    | 0.276     | 0.169     | 1.569      | 118       | 118       |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| 17 | AMO          | SI55        | 118    | 119.1   | 118.7   | 5.28      | 1.56      | 1.1       | 0.4       | 0.1       | 1.726      | 118       | 118       |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| 18 | AMO          | Tecnis 1 Z  | 118.8  | 119.6   | 119.3   | 5.8       | 2.02      | -1.302    | 0.21      | 0.251     | 2.041      | 118.8     | 118.8     |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| 19 | AMO          | Tecnis Z9C  | 119    | 119.5   | 119.2   | 5.71      | 1.93      | -0.663    | 0.117     | 0.232     | 1.988      | 119       | 119       |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| 20 | AMO          | Tecnis Z9C  | 119    | 119.4   | 119.2   | 5.71      | 1.94      | 1.5       | 0.4       | 0.1       | 1.988      | 119       | 119       |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| 21 | AMO          | Tecnis Z9C  | 118.7  | 119     | 118.8   | 5.46      | 1.67      | -1.201    | 0.102     | 0.246     | 1.779      | 118.7     | 118.7     |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| 22 | AMO          | Tecnis ZA   | 119.1  | 119.4   | 119.1   | 5.61      | 1.84      | -1.298    | 0.233     | 0.24      | 1.936      | 119.1     | 119.1     |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| 23 | AMO          | Tecnis ZM   | 119    | 120.5   | 119.8   | 5.89      | 2.21      | 1.6       | 0.4       | 0.1       | 2.303      | 119       | 119       |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| 24 | AMO          | Tecnis ZM   | 119.1  | 120     | 119.5   | 5.8       | 2.06      | -1.75     | 0.242     | 0.266     | 2.146      | 119.1     | 119.1     |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| 25 | AMO          | Tecnis ZM   | 118.8  | 119.7   | 119.5   | 5.88      | 2.1       | 1.68      | 0.4       | 0.1       | 2.146      | 118.8     | 118.8     |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| 26 | AMO          | Tecnis ZM   | 118.8  | 119.7   | 119.7   | 6.14      | 2.35      | 1.93      | 0.4       | 0.1       | 2.25       | 118.8     | 118.8     |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| 27 | AMO          | Verisyse 5i | 116.8  | 116.8   | 116.9   | 4.34      | 0.54      | -0.25     | 0.4       | 0.1       | 0.784      | 116.8     | 116.8     |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| 28 | AMO          | ZFR00V Sy   | 119.3  | 0       | 119.211 | 5.629     | 1.882     | 1.456     | 0.4       | 0.1       | 0          | 0         | 0         |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| 29 | ARGONOF      | EUROMA      | 118    | 118.5   | 118.2   | 5.09      | 1.33      | 0.87      | 0.4       | 0.1       | 1.465      | 118       | 118       |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| 30 | ARGONOF      | TRICE       | 118    | 118.7   | 118.5   | 5.28      | 1.49      | 1.13      | 0.4       | 0.1       | 1.622      | 118       | 118       |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| 31 | AUROLAB      | FH5600AS    | 118    | 117.9   | 117.8   | 4.92      | 1.12      | 0.68      | 0.4       | 0.1       | 1.255      | 118       | 118       |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| 32 | Aaren        | Scientific  | 118.5  | 119.2   | 118.8   | 5.54      | 1.74      | 1.36      | 0.4       | 0.1       | 1.779      | 118.5     | 118.5     |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| 33 | Aaren        | Scientific  | 118.3  | 119.1   | 118.7   | 5.37      | 1.63      | 1.22      | 0.4       | 0.1       | 1.726      | 118.3     | 118.3     |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| 34 | Aaren        | Scientific  | 117.8  | 118.8   | 118.7   | 5.4       | 1.61      | 1.2       | 0.4       | 0.1       | 1.726      | 117.8     | 117.8     |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| 35 | Aaren        | Scientific  | 118.2  | 119.4   | 119.1   | 5.69      | 1.89      | 1.45      | 0.4       | 0.1       | 1.936      | 118.2     | 118.2     |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| 36 | Aaren        | Scientific  | 118.1  | 118.2   | 118     | 4.97      | 1.2       | 0.75      | 0.4       | 0.1       | 1.36       | 118.1     | 118.1     |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| 37 | Alcon        | AcrySof M   | 118.4  | 118.8   | 118.7   | 5.46      | 1.64      | 1.34      | 0.4       | 0.1       | 1.726      | 118.4     | 118.4     |   |   |   |   |   |   |   |   |   |   |   |   |   |  |



# IOL Editor



## IOL Lens Edit

Keyboard

Select DB :

Toric

History Log

### Manufacturer

- Alcon
- AMO**
- HOYA
- Oculentis
- HumanOptics

### Model

**Tecnis ZCTx**

### Lens Factor

- Manu A 118.800
- SRK/T A 119.300
- HofferQ pACD 5.800
- Holladay SF 2.020
- Haigis A0 -1.302
- Haigis A1 0.210
- Haigis A2 0.251
- Barrett LF 2.041

### Sphere Power Range

- Min 5
- Max 34
- Step 0.5

### Cylinder Power Range

| Lens          | Toricity |
|---------------|----------|
| Tecnis ZCT100 | 1        |
| Tecnis ZCT150 | 1.5      |
| Tecnis ZCT225 | 2.25     |
| Tecnis ZCT300 | 3        |
| Tecnis ZCT375 | 3.75     |

Add New Toric Lens

Edit Toric Lens

Delete Toric Lens

Close

# IOL Editor

## User Setup

### Edit Toric Lens

Keyboard

#### Manufacturer and Model

Manufacturer

Model/Series

Cylinder Range

Sphere Power Range

Min  Max  Step

#### SubModel List

| Lens | Toricity |
|------|----------|
|      |          |
|      |          |
|      |          |
|      |          |
|      |          |

Add

Delete

#### Lens Factor

Manu A

HofferQ PACD

Holladay SF

Haigis A0

Haigis A1

Haigis A2

Barrett LF

Save

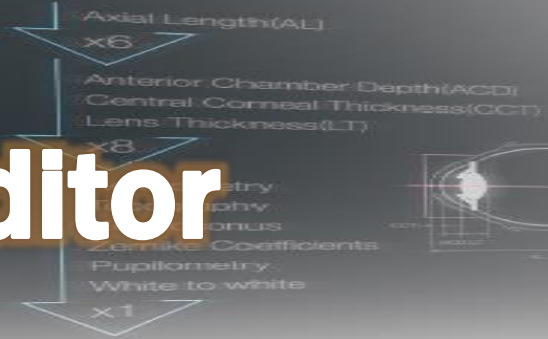
Cancel

Exist Submodel & UnConstant Toricity Step

Not exist Submodel & Constant Toricity step



# IOL Editor



## User Setup

**Edit Toric Lens** Keyboard

**Manufacturer and Model**

Manufacturer:

Model/Series:

Cylinder Range:

**Sphere Power Range**

Min:  Max:  Step:

**SubModel List**

| Lens               | Toricity |
|--------------------|----------|
| AlConSubmodelTest1 | 0.5      |
| AlConSubmodelTest2 | 1.5      |
| AlConSubmodelTest3 | 2.25     |
| AlConSubmodelTest4 | 3        |
| AlConSubmodelTest5 | 3.5      |

**Lens Factor**

Manu A:

SRK/T A:

HofferQ pACD:

Holladay SF:

Haigis A0:

Haigis A1:

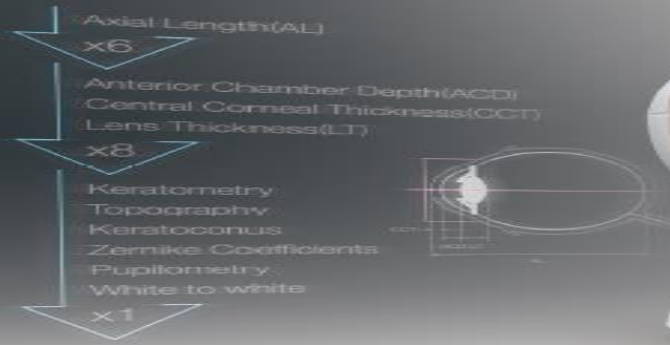
Haigis A2:

Barrett LF:





# Q&A



# Q & A

