

# MYAH

Optical Biometry + Corneal Topography

Build, Manage and Grow  
Your Myopia & Dry Eye Practice



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**TOPCON** Healthcare

# Myopia greatly impacts the quality of life and personal development of children<sup>1</sup>.

It has never been a better time to join the battle against the global myopia epidemic. MYAH is the perfect instrument for eyecare professionals interested in building, managing and growing a myopia service.

## Overview of MYAH



Corneal Topography including keratoconus screening and pupillometry



Axial length measurement using optical low coherence Interferometry



Progression reports for analysing treatment efficacy



Myopia and dry eye questionnaires



Comprehensive suite of dry eye assessment tools



Patient-friendly with rapid capture



Compact, space-saving, easy to operate



Exclusive axial length reference databases

Did you know that 50% of the world's population<sup>2</sup> may be myopic by 2050?

**European regions are not an exception.**

Region	2000	2010	2020	2030	2040	2050
Central Europe	20.5%	27.1%	34.6%	41.8%	48.9%	54.1%
Eastern Europe	18.0%	25.0%	32.2%	38.9%	45.9%	50.4%
Western Europe	21.9%	28.5%	36.7%	44.5%	51.0%	56.2%
Global	22.9%	28.3%	33.9%	39.9%	45.2%	49.8%

Building a myopia management practice requires you to educate your patients and their families about the implications of myopia progression, to manage the condition and to grow your service offering.

### **BUILD YOUR MYOPIA MANAGEMENT SERVICE**

MYAH establishes the initial baseline to monitor risk, allowing you to start the conversation early with parents.

### **MANAGE: MONITOR AND COMPARE**

MYAH provides essential information to monitor eye elongation and compare axial length measurements with built-in growth curves.

### **GROW YOUR MYOPIA MANAGEMENT SERVICE**

Offering axial length screening tests may complement your refraction tests.

MYAH offers all the technologies required to support myopia management: optical biometry, corneal topography and pupillometry — it is a one-time investment. In addition, MYAH is an all-in-one device that offers an evolving platform which provides the tools to add or grow a dry-eye management service.



# Introducing MYAH's growth curves.

MYAH allows you to monitor the progression of myopia and compare measurements with the growth curves for axial length.

The majority of myopic eyes become myopic principally because of excessive axial elongation<sup>3</sup>. By using the extensive axial length dataset collected by Erasmus University (Rotterdam, NL)<sup>4</sup>, or the dataset on Chinese children (Shanghai)<sup>5,6</sup>, now incorporated into MYAH, you can monitor axial length and then compare the patient's data with normative growth curves. You will thus be able to better understand a child's risk of myopia in adulthood.

## You can now enhance your myopia management service with MYAH's growth curves.

Home

Measurements

Lenses

RX/AL Trends

COMP

GC

RX/AL

RX

AL

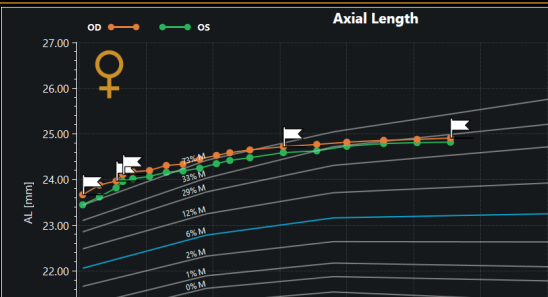
A.P.P.

DATA

OD (ID: 3263825) Doe Jane

21/02/2004

AXIAL LENGTH



Parents/guardians tend to be familiar with growth charts in relation to their child's height and weight as a baby, making it easier to communicate with the parents of myopic children. This is particularly important for children with pre- and low myopia, where the urgency of intervention is difficult to appreciate based on refractive error alone.

Patient

Doe Jane

Patient ID

3263825

Gender

F

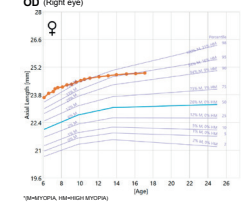
Date of Birth

21-02-2004

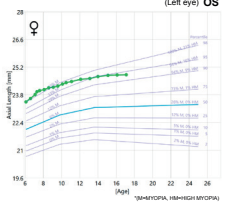
Exam Date

07-03-2021 09:00:00

OD (Right eye)



(Left eye) OS



OD (Right eye)

Exam Date (dd/mm/yyyy)	AL [mm]	SE [D]	Intervention / Note
07/03/2021	24.91 (+0.03)	-3.00 (-0.13)	Streaking?
14/03/2020	24.88 (+0.02)	-2.88 (-0.13)	
19/03/2019	24.86 (+0.04)	-2.75 (-0.13)	
04/03/2018	24.82 (+0.05)	-2.62 (-0.12)	
12/03/2017	24.77 (+0.05)	-2.50 (-0.12)	
10/03/2016	24.72 (+0.07)	-2.38 (0.00)	Switched to Mlight lenses - patient preference

(Left eye) OS


Exam Date (dd/mm/yyyy)	AL [mm]	SE [D]	Intervention / Note
07/03/2021	24.82 (+0.01)	-2.82 (-0.25)	Streaking?
14/03/2020	24.81 (+0.02)	-2.90 (-0.25)	
19/03/2019	24.79 (+0.06)	-2.28 (-0.25)	
04/03/2018	24.73 (+0.10)	-2.00 (+0.12)	
12/03/2017	24.63 (+0.06)	-2.12 (-0.24)	
10/03/2016	24.59 (+0.11)	-1.88 (-0.13)	Switched to Mlight lenses - patient preference

(This table only shows the last 6 exams)

(1) AL = Axial Length, is the length of the eye

(2) SE = Spherical Equivalent, is the refractive error of the measured eye

Notes:



Hi Jane,

It was nice to see you again!

Look at the orange and green lines to see how your eyes are growing. Continue wearing your Ortho-K lenses every night as prescribed.

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iMAP Pro - E V1.0.13 SN: 030222093800(136200027) 2023-07-18 08:47:09

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07-11-2023 16:08

## New! Questionnaires on myopia & dry eye

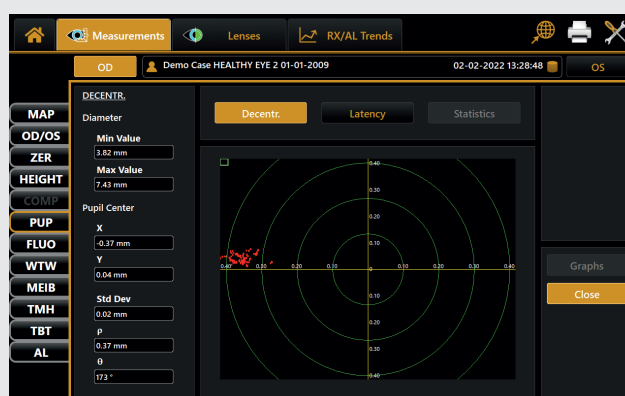
Discover the latest additions to MYAH's services: a new myopia questionnaire along with two comprehensive dry eye questionnaires: OSDI and DEQ-5. These insightful questionnaires help systematically track data over time and are seamlessly integrated into our enhanced reports.



## Additional Features.

### Dynamic Pupillometry

Provides clear information on the reaction time and size of the pupil, which may be useful to monitor low dose atropine compliance or to titrate the dose of atropine. The user can examine pupil centration and diameter over a range of light levels, which is useful for Ortho-K and multifocal lens fittings, and is also informative for pre- and post-refractive surgery.

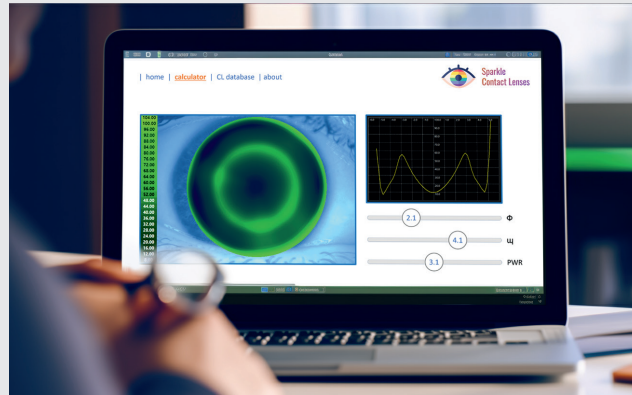




### Contact Lens Fitting

MYAH provides support for contact lens fitting, reducing the number of lenses that need to be trialed on the eye:

- Includes a database of conventional RGP and Ortho-K lenses.
- Export topography data to 3<sup>rd</sup> party calculators.
- Fluorescein simulation with ability to save and review data.



### Dry Eye Assessment Tools

These tools offer non-invasive tear break-up time (NIBUT), Meibomian gland imaging with the area of loss analysis, tear meniscus height analysis, blink analysis, real fluorescein imaging and video acquisition. You can play a video of the topographic maps and also the Zernike maps and see them change during the break up of the tear film. Review results, print and export reports on network or USB.



### Corneal Topography

MYAH offers another range of tools to analyse the anterior cornea, including topographic maps, 3D maps, comparison maps, height maps, Zernike analysis and keratoconus screening.



### Corneal Aberration Summary

The Zernike expansion coefficient is used to determine which component(s) dominate the aberration structure of the cornea and to what degree.

The anterior corneal Zernike summary consists of 36 polynomials up to the 7<sup>th</sup> order and provides a clear view of the optical irregularities that can impact the quality of vision.



# Topcon MYAH

The all-in-one instrument features tools that monitor eye elongation, assess dry eye and assist with contact lens fittings.



## MYAH makes your practice dynamic and smart.

This versatile instrument, with its intuitive and user-friendly interface, integrates easily into your workflow and offers different options for exporting the results.

### 4 EASY STEPS



Select patient\*\* and acquisition mode.



Align patient and adjust automated chinrest.



Follow alignment guides to focus and trigger to start.



Review results and print/export reports to network or USB.

\*\* Create new patient, select existing patient or select patient from DICOM (search/worklist).

MYAH SPECIFICATION

FEATURE	SPECIFICATION
Keratoscopic cone	24 rings equally distributed on a 43 D sphere
Analyzed points	Over 100,000
Measured points	6,144
Corneal coverage	Up to 9.8 mm on a sphere of radius 8.00 mm (42.2 D with n=1.3375)
Axial Biometry	Low-coherence interferometry on optical fiber (SLED @ 820 nm)
Capture system	Guided-focus
Database	Internal
Pupillometry	Dynamic, Photopic, Mesopic, Scotopic
Fluorescein	Image, Video
Reports	Keratometry, comparison map, contact lens, height map, Zernike analysis, pupillometry, Meibomian glands, tear film break-up time, tear meniscus height, Rx/AL trend analysis, fluorescein, parental, dry eye summary & dry eye follow-up report
Working environment	10 °C – 40 °C, Relative humidity 8 – 75% (no condensing), Atmospheric pressure 800 – 1060 hPa
Power supply	AC 100 – 240 V 50/60 Hz
Power consumption	100 VA
Dimensions	320 mm (W) x 490 mm (H) x 470 mm (L), 18 Kg
Printing options	USB printer, Network printer, PDF on network shared folder, PDF on USB PDF or Image on network folder or on USB
Operating System	Windows 10 64-bit
Monitor	LCD 10.1 inch capacitive touch screen
RAM	At least 4 GB
Hard Disk	500 GB
External connections	LAN integrated, 2x USB

INFORMATION ON MEASUREMENTS

MEASUREMENT	MEASURING RANGE	DISPLAY RESOLUTION	IN VIVO REPEATABILITY
Keratometry	Radius of curvature	5.00 – 12.00 mm	±0.02 mm
	Curve Radius in Diopter (D) (n=1,3375)	28.00 – 67.50 D	±0.12 D
Axial Length	15.00 – 36.00 mm	0.01 mm	±0.027 mm
Pupil dimension	0.50 – 10.00 mm	0.01 mm	N/A
Limbus (White-To-White)	8.00 – 14.00 mm	0.01 mm	±0.05 mm
IBI Index (Interblink Interval)	0.2 – 20.0 s	0.1 s	N/A
Non-invasive Break-Up Time (TBT)	0.5 – 30.0 s	0.1 s	N/A
Meibomian Glands area of loss	0 – 100%	1%	N/A
Tear Meniscus Height	0.10 – 1.00 mm	0.01 mm	N/A

Not all products, services or offers are approved or offered in every market, and products vary from one country to another. Contact your local distributor for country-specific information.

1. Report of the Joint World Health Organization-Brien Holden Vision Institute. Global Scientific Meeting on Myopia. The Impact of myopia and high myopia. University of New South Wales, Sydney, Australia. 16-18 March 2015.

2. Holden, BA, Fricke, TR, Wilson, DA et al. Global prevalence of myopia and high myopia and temporal trends from 2000 through 2050. Ophthalmology. 2016; 123:1036–42. Available from: doi: 10.1016/j.ophtha.2016.01.006

3. Gifford KL, Richdale K, Kang P, Aller TA, Lam CS, Liu YM, Michaud L, Mulder J, Orr JB, Rose KA, Saunders KJ, Seidel D, Tideman JW, Sankaridurg P. IMI - Clinical Management Guidelines Report. Invest Ophthalmol Vis Sci. 2019 Feb 28;60(3):M184-M203.

4. Coordinates incorporated in this Myopia device are the most recent available data and originate from the Myopia Research Group of Erasmus MC, Rotterdam

5. Courtesy of Prof. Xu Xun, MD

6. He X, Sankaridurg P, Naduvilath T, Wang J, Xiong S, Weng R, Du L, Chen J, Zou H, Xu X. Normative data and percentile curves for axial length and axial length/corneal curvature in Chinese children and adolescents aged 4-18 years. Br J Ophthalmol. 2023 Feb;107(2):167-175

**IMPORTANT** Subject to change in design and/or specifications without advanced notice. In order to obtain the best results with this instrument, please be sure to review all user instructions prior to operation. Medical device MDR Class IIa. Manufacturer: VISIA imaging S.r.l.

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