

# MYAH

Optical Biometry + Corneal Topography

Build, Manage and Grow  
Your Myopia & Dry Eye Practice



LEARN MORE at  
[topconmyah.com](http://topconmyah.com)

 **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



Comprehensive suite of dry eye assessment tools



Patient-friendly with rapid capture



Compact, space-saving, easy to operate



Exclusive axial length reference databases



Myopia and dry eye questionnaires

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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.

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

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

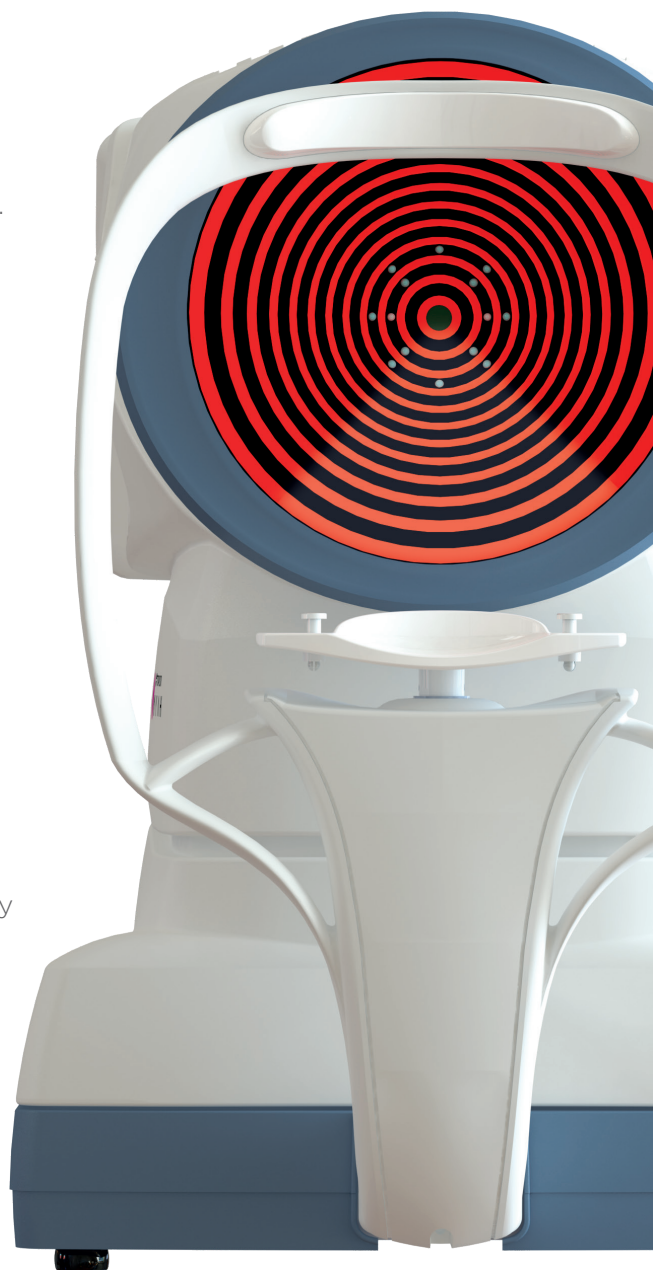
### **MANAGE: MONITOR AND COMPARE**

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.

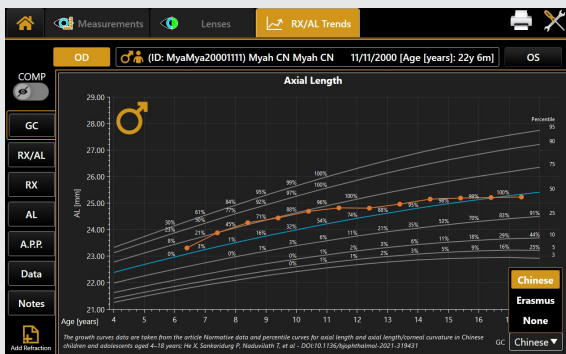


# Introducing MYAH's Asian Growth Curves

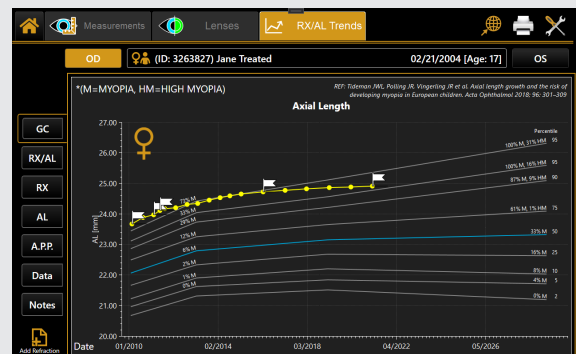
MYAH allows you to monitor the progression of myopia and compare measurements with the growth curves for axial length.

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.



Asian's Growth Curves



Erasmus's Growth Curves

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.

Exam Date (mm/yyyy)	AL [mm]	SE [D]	Intervention / Note
04/06/2021	24.91 (+0.03)	-3.00 (-1.13)	Sticking?
03/07/2021	24.61 (+0.03)	-3.00 (-1.13)	Sticking?
03/14/2020	24.68 (+0.02)	-2.88 (-1.13)	
03/19/2019	24.86 (+0.04)	-3.75 (-1.19)	
03/04/2018	24.87 (+0.05)	-3.65 (-1.13)	
03/19/2017	24.77 (+0.06)	-3.50 (-1.15)	

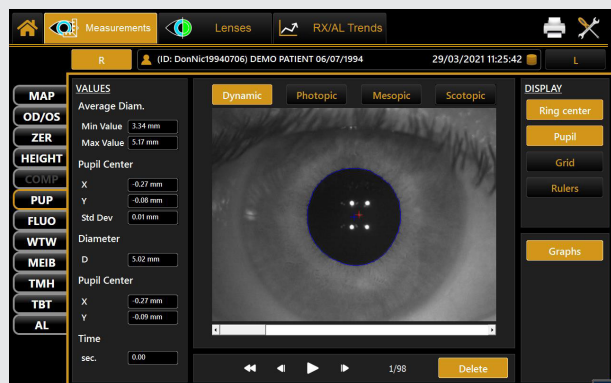
Notes:

Hi Jane, It was so nice to see you again! Look at the orange and green lines to see how your eyes are growing. Continue wearing your special contact lenses every day as prescribed.

# Comprehensive Suite of Analysis

## Dynamic Pupillometry

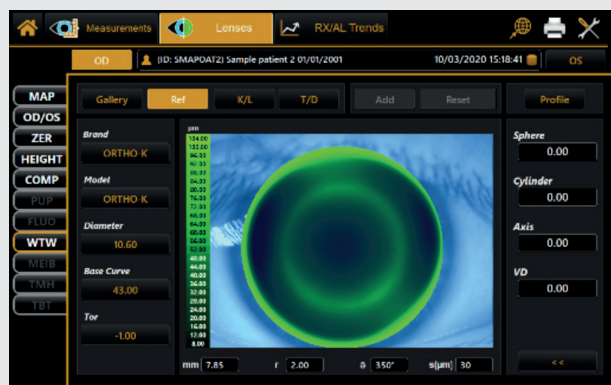
Provides clear information on the reaction time and size of the pupil, which may be useful to monitor low dose atropine compliance or to titrate the dose of atropine. The user can examine pupil centration and diameter over a range of light levels, which is useful for Ortho-K and multifocal lens fittings,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



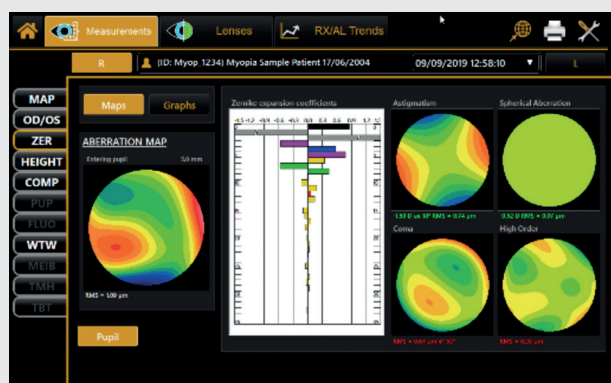
## Corneal Topography

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.



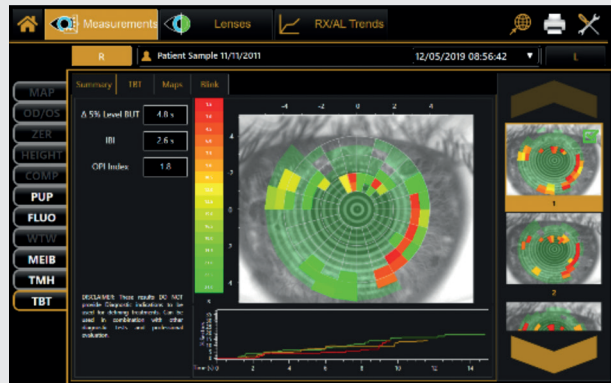
## Corneal Aberration Summary

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.

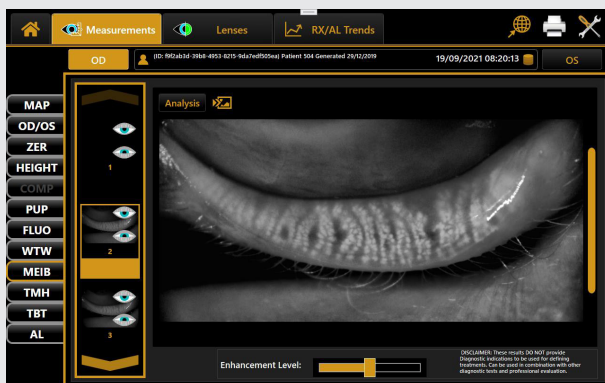


## Dry Eye Assessment Tools

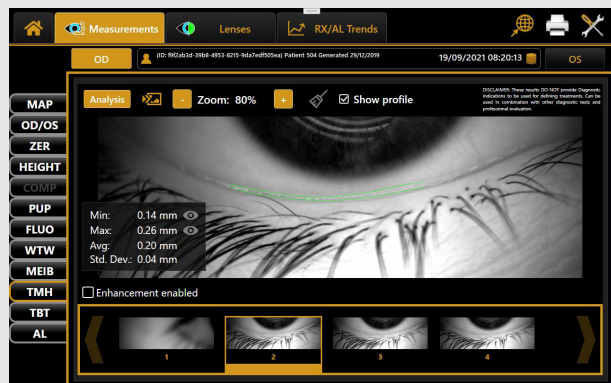
MYAH also offers a variety of features such as non-invasive tear breakup time (NIBUT), Meibomian gland imaging with the area of loss analysis, tear meniscus height analysis, blink analysis, real fluorescein imaging and its video acquisition. NIBUT function allows to capture and play the video of the time evolution of break up times. The sector is colored by time percentage. It enables to review results, to print and to export reports on network or USB.



NIBUT analysis



Meibomian Gland analysis



Tear Meniscus height analysis

## 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: DEQ-5 and OSDI. These insightful questionnaires help systematically track data over time and are seamlessly integrated into our enhanced reports.

### Myopia Questions

- Number of Myopic patients.
- Average hours per day spend on close work (reading, electronic devies, etc) - outside regular school work.
- Average hours per day spend outdoor - outside regular school work.

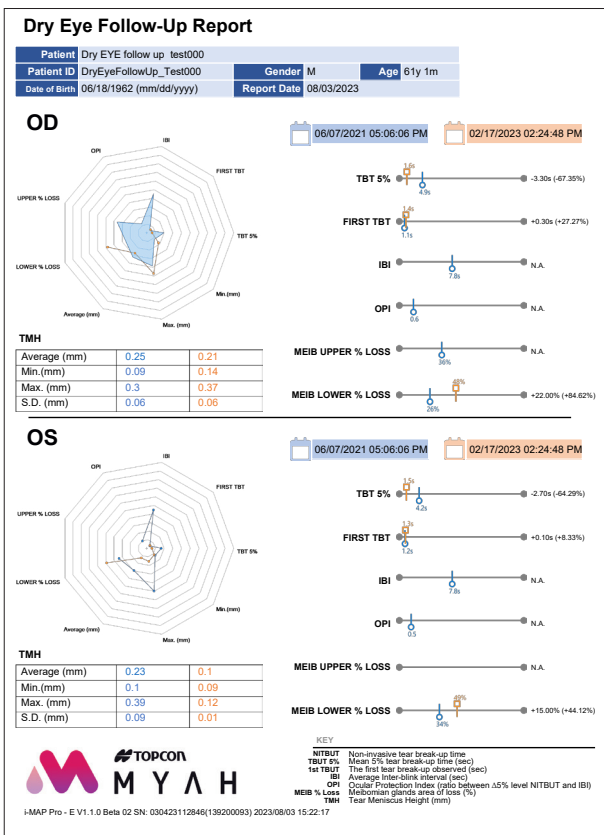
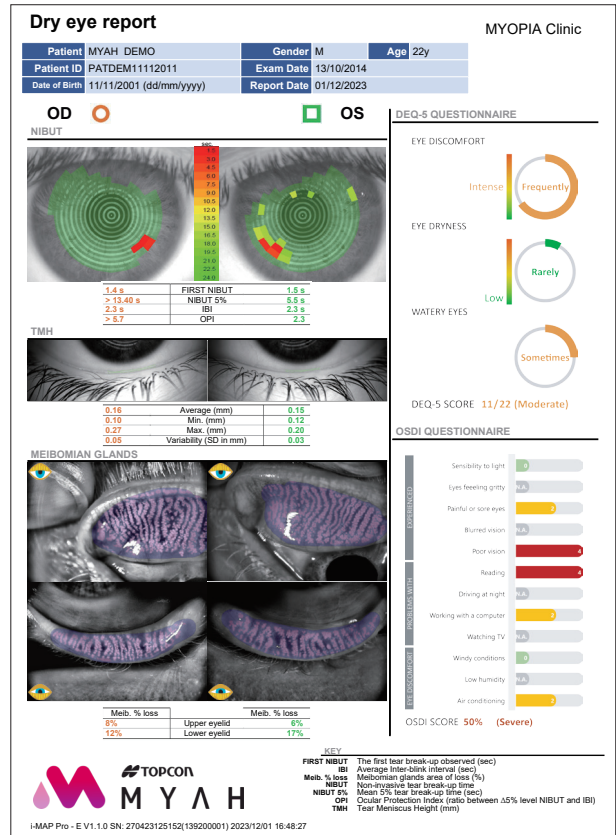
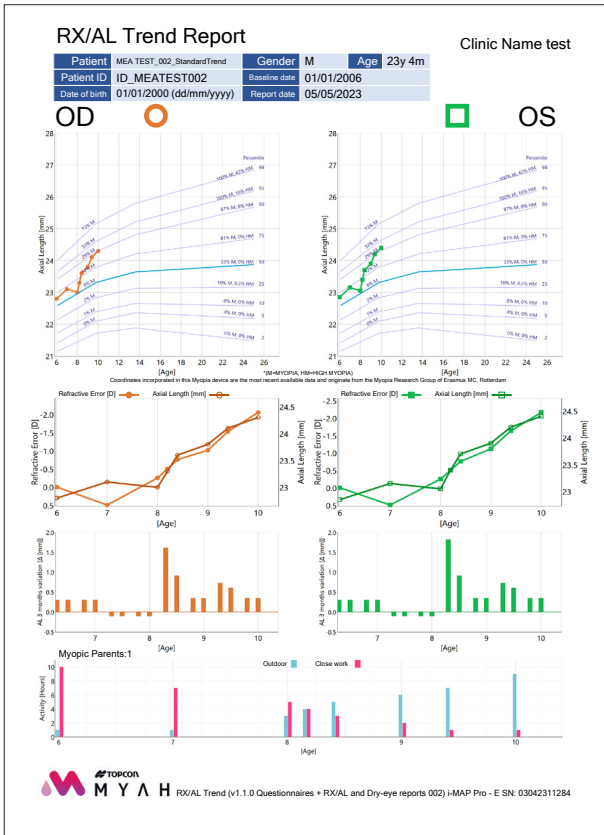
### DEQ-5 Questions

- During a typical day in the past month, how often did your eyes feel discomfort?
- When your eyes felt discomfort, how intense was this feeling of discomfort at the end of the day, within two hours of going to bed?
- During a typical day in the past month, how often did your eyes feel dry?
- When your eyes felt dry, how intense was this feeling of dryness at the end of the day, within two hours of going to bed?
- During a typical day in the past month, how often did your eyes look or feel excessively watery?

### OSDI Questions

- Have you experienced any of the following during the last week:  
(Eyes that are sensitive to light?/Eyes that feel gritty?/Painful or sore eyes?/Blurred vision?/Poor vision?)
- Have problems with your eyes limited you in performing any of the following during the last week :  
(Reading?/Driving at night?/Working with a computer or bank machine(ATM)?/Watching TV?)
- Have your eyes felt uncomfortable in any of the following situations during the last week :  
(Windy conditions?/Places or areas with low humidity(very dry)?/Areas that are air conditions?)

# Comprehensive Reports with Questionnaires



## MYAH SPECIFICATION

FEATURE	SPECIFICATION
<b>Keratoscopic cone</b>	24 rings equally distributed on a 43 D sphere
<b>Analyzed points</b>	Over 10,000
<b>Measured points</b>	Over 6,000
<b>Corneal coverage</b>	Up to 9.8 mm on a sphere of radius 8.00 mm (42.2 D with n=1.3375)
<b>Axial Biometry</b>	Low-coherence interferometry on optical fiber (SLED @ 820 nm)
<b>Capture system</b>	Guided-focus
<b>Database</b>	Internal
<b>Pupillometry</b>	Dynamic, Photopic, Mesopic, Scotopic
<b>Fluorescein</b>	Image, Video
<b>Reports</b>	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
<b>Working environment</b>	10 °C – 40 °C, Relative humidity 8 – 75% (no condensing), Atmospheric pressure 800 – 1060 hPa
<b>Power supply</b>	AC 100 – 240 V 50/60 Hz
<b>Power consumption</b>	100 VA
<b>Dimensions</b>	320 mm (W) x 490 mm (H) x 470 mm (L), 18 Kg
<b>Printing options</b>	USB printer, Network printer, PDF on network shared folder, PDF on USB PDF or Image on network folder or on USB
<b>Operating System</b>	Windows embedded
<b>Monitor</b>	LCD 10.1 inch capacitive touch screen
<b>RAM</b>	At least 4 GB
<b>Hard Disk</b>	At least 500 GB
<b>External connections</b>	LAN integrated, 2x USB

## INFORMATION ON MEASUREMENTS

MEASUREMENT	MEASURING RANGE	DISPLAY RESOLUTION	IN VIVO REPEATABILITY
<b>Keratometry</b>	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
<b>Axial Length</b>	15.00 – 36.00 mm	0.01 mm	±0.027 mm
<b>Pupil dimension</b>	0.50 – 10.00 mm	0.01 mm	N/A
<b>Limbus (White-To-White)</b>	8.00 – 14.00 mm	0.01 mm	±0.05 mm
<b>IBI Index (Interblink Interval)</b>	0.2 – 20.0 s	0.1 s	N/A
<b>Non-invasive Break-Up Time (TBT)</b>	0.5 – 30.0 s	0.1 s	N/A
<b>Meibomian Glands area of loss</b>	0 – 100%	1%	N/A
<b>Tear Meniscus Height</b>	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.

- 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.
- 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: DOI: 10.1016/j.ophtha.2016.01.006
- (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.)
- Coordinates incorporated in this Myopia device are the most recent available data and originate from the Myopia Research Group of Erasmus MC, Rotterdam
- Courtesy of Prof. Xu Xun, MD
- 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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