



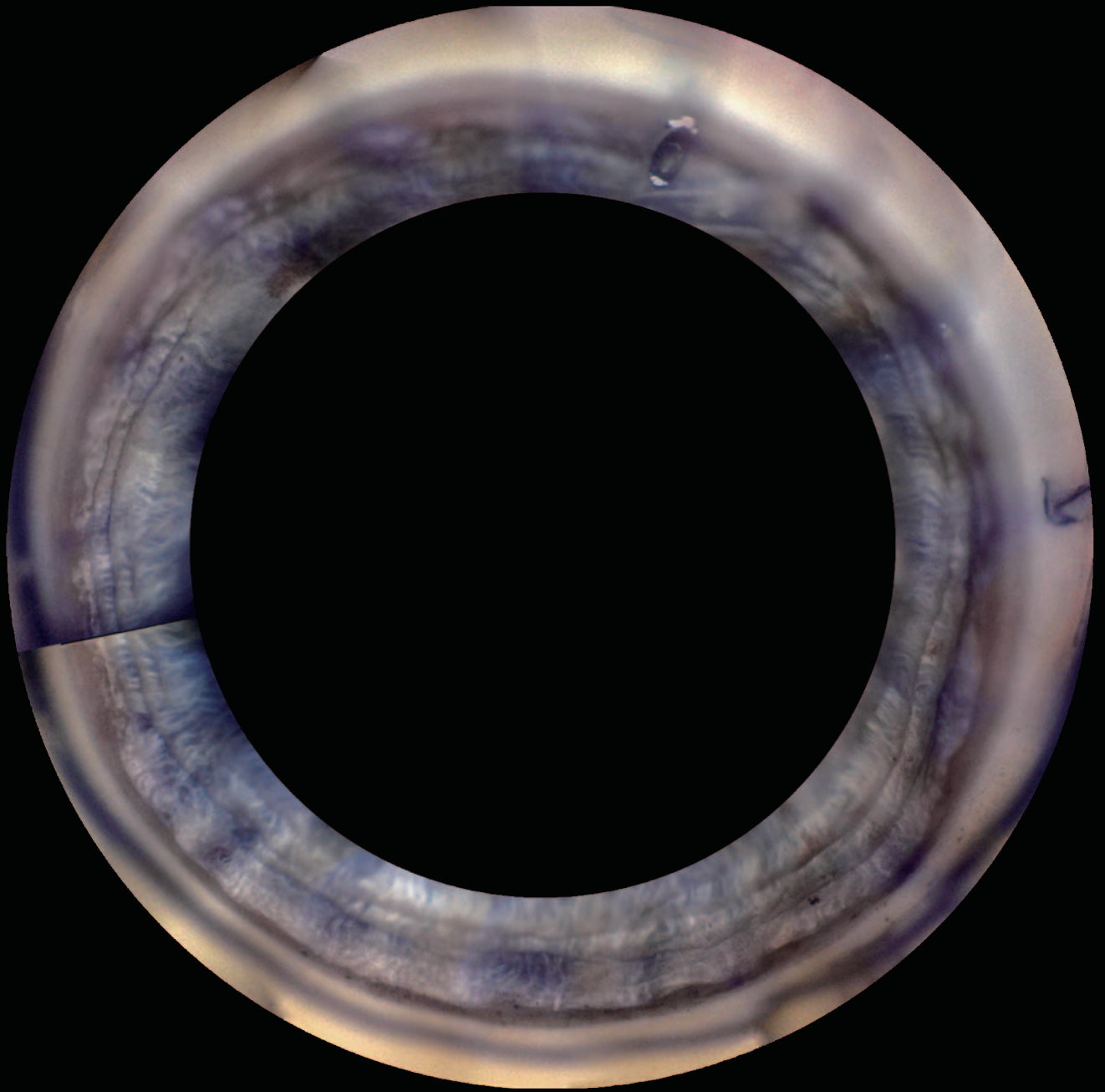
# Clinical Cases with Automated Gonioscopy

## GS-1 Gonioscope

Prof. Carlo E. Traverso, MD

Assist. Prof. Luis Abegão Pinto, MD, PhD

Assoc. Prof. Vikas Chopra, MD



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# Contributing professionals

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## Prof. Carlo E. Traverso, MD



Ophthalmology Dept, San Martino Hospital, Genova, Italy  
Professor of Ophthalmology  
Chairman of Clinica Oculistica University of Genova  
Ospedale Policlinico San Martino  
AAO Achievement Award, FARVO  
President, EU EYE  
Chairman, EGS Foundation Board  
Medical director, FBOMJ Eye Bank of Genova  
Executive Committee Member, Istituto David Chiossone Genova

## Assist. Prof. Luis Abegão Pinto, MD, PhD



Ophthalmology Dept, Hospital Santa Maria, Lisbon, Portugal  
Prof. Luís Abegão Pinto is the Head of the Glaucoma Clinic of the Department of Ophthalmology of Portugal's largest Hospital (Hospital Santa Maria) and serves as Assistant Professor of Ophthalmology at the Faculty of Medicine of Lisbon University, Portugal. He has authored or co-authored 50 indexed, peer-reviewed papers in Glaucoma. He is actively engaged in a number of scientific ophthalmological societies, including the European Glaucoma Society (EGS) and European Vision and Eye Research (EVER).

## Assoc. Prof. Vikas Chopra, MD

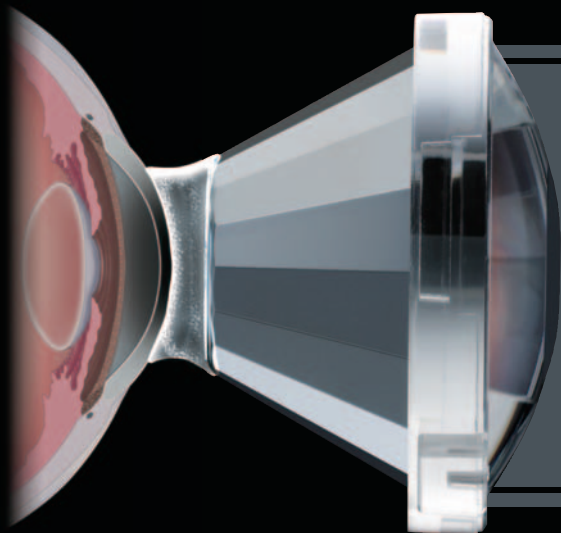


Associate Professor, Ophthalmology  
David Geffen School of Medicine at UCLA  
Steward and Hildegard Warren Endowed Chair  
Doheny Eye Institute  
Principal Investigator, Doheny Image Reading Center  
Medical Director, UCLA Doheny Eye Centers - Pasadena

60+ Peer-reviewed publications  
AAO Achievement Award  
Active Member: AAO, AGS, ABO

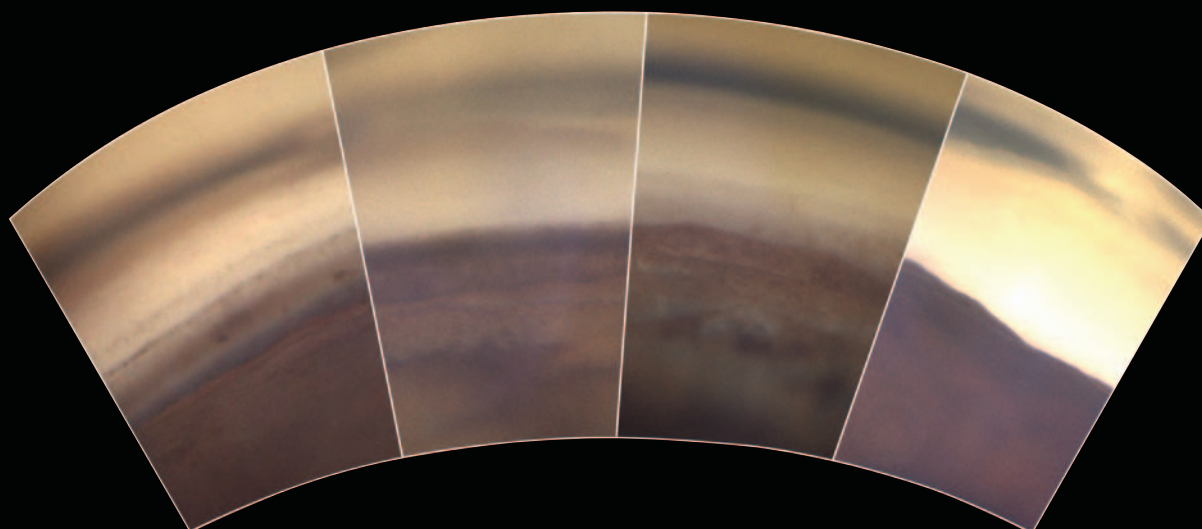
# Introduction

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The Gonioscope was developed to capture the entire 360 degrees of the angle using a unique 16 surface multi-mirrored prism lens. By optimizing the multimirror prism lens, a white LED is projected into the angle, simulating indirect static gonioscopy. Captured images can be stitched together to provide a view of the entire angle to support angle assessment and clinical findings.

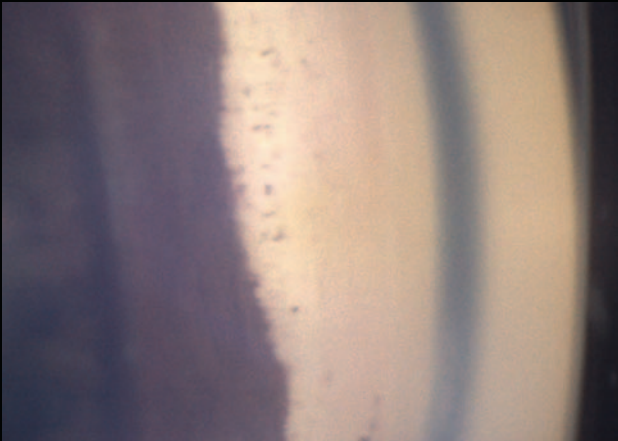
Width of the angle



Open ← → Closed

# Clinical evaluation

## Synechia<sup>\*1</sup>



Comment

Closed angle  
Trabecular meshwork is  
not visible.

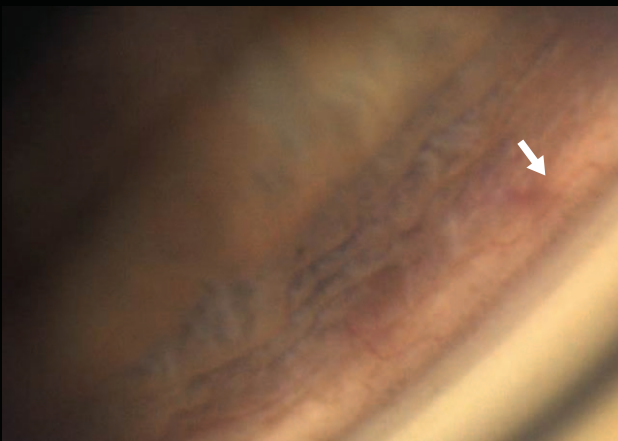
## Iris processes<sup>\*2</sup>



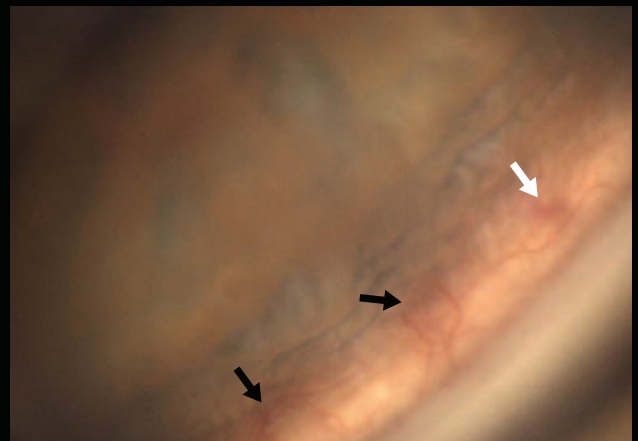
Comment

This is different from synechiae.

## Neo-vessels<sup>\*2</sup>



March 2018



August 2018

Comment

White arrows : same vessel in both pictures

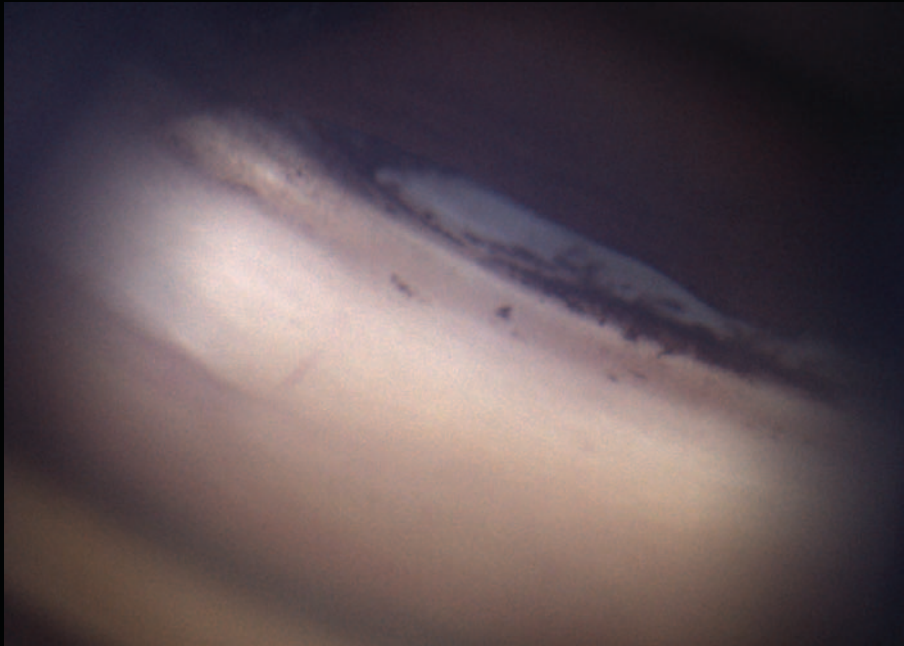
Black arrows : increased neovascularization, indicating progressive disease

<sup>\*1</sup> Images courtesy of Prof. C. E. TRAVERSO, MD, Clinica Oculistica, Di.N.O.G.M.I., University of Genova - Ospedale Policlinico S. Martino, Italy

<sup>\*2</sup> Images courtesy of Assist. Prof. Luis Abegão Pinto, MD, PhD, University of Lisbon, Portugal



## Angular recession<sup>\*1</sup>



Comment

Cyclodialysis + Iridodialysis with sclera visible through cleft

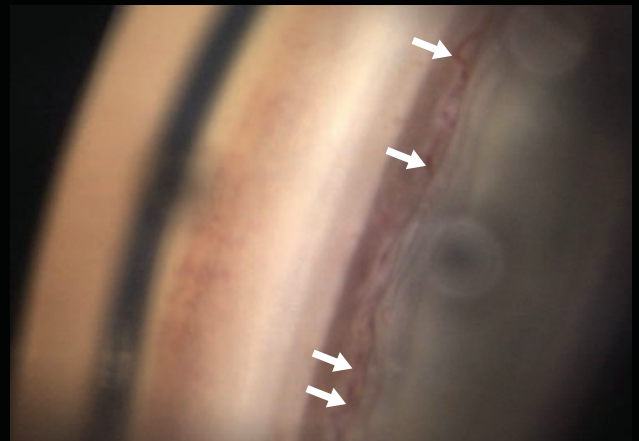
## Angle closure<sup>\*2</sup>



Comment

Minor gap between the full length synechia

## Sea-serpent<sup>\*2</sup>



Comment

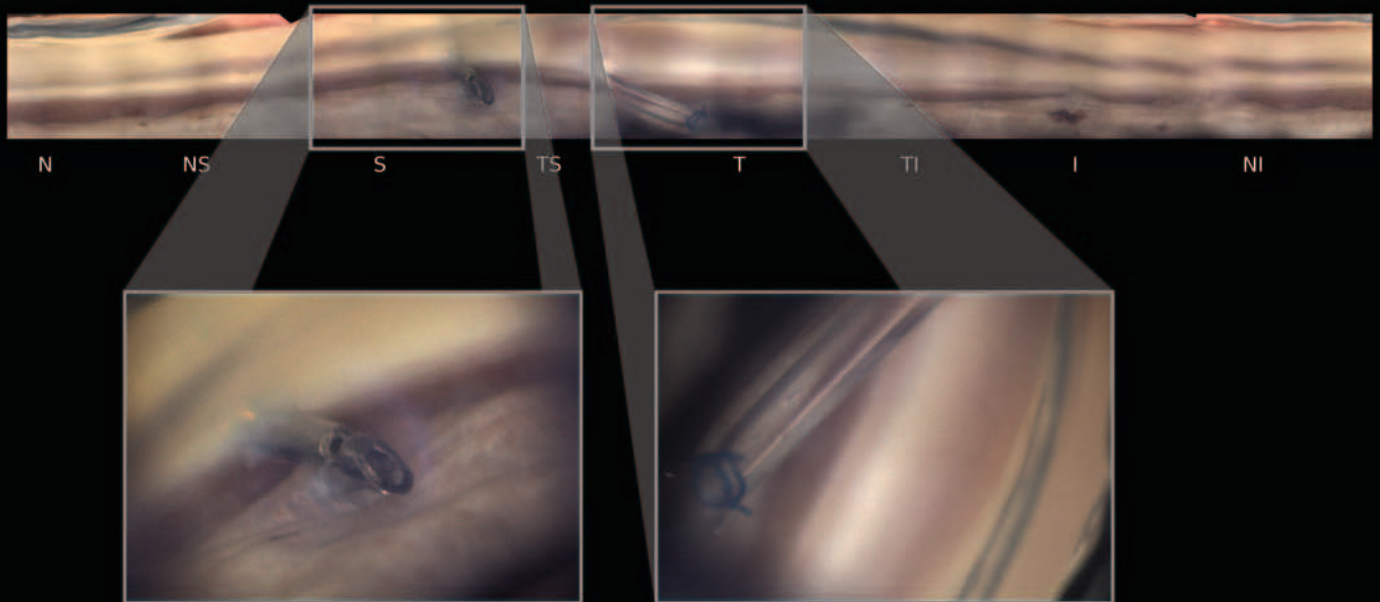
A physiological vessel circling the iris, not to be confused with neovascularization

<sup>\*1</sup> Images courtesy of Vikas Chopra, MD, Doheny Eye Institute, UCLA, USA

<sup>\*2</sup> Images courtesy of Assist. Prof. Luis Abegão Pinto, MD, PhD, University of Lisbon, Portugal

# Surgical evaluation

## Drainage system implantation<sup>\*1</sup>



Comment

Linear stitching and individual images

## Trabeculectomy<sup>\*2</sup>



Comment

Black arrow: Scleral window  
White arrows: Iridectomy beneath the scleral hole

## Post-vitreous surgery<sup>\*2</sup>



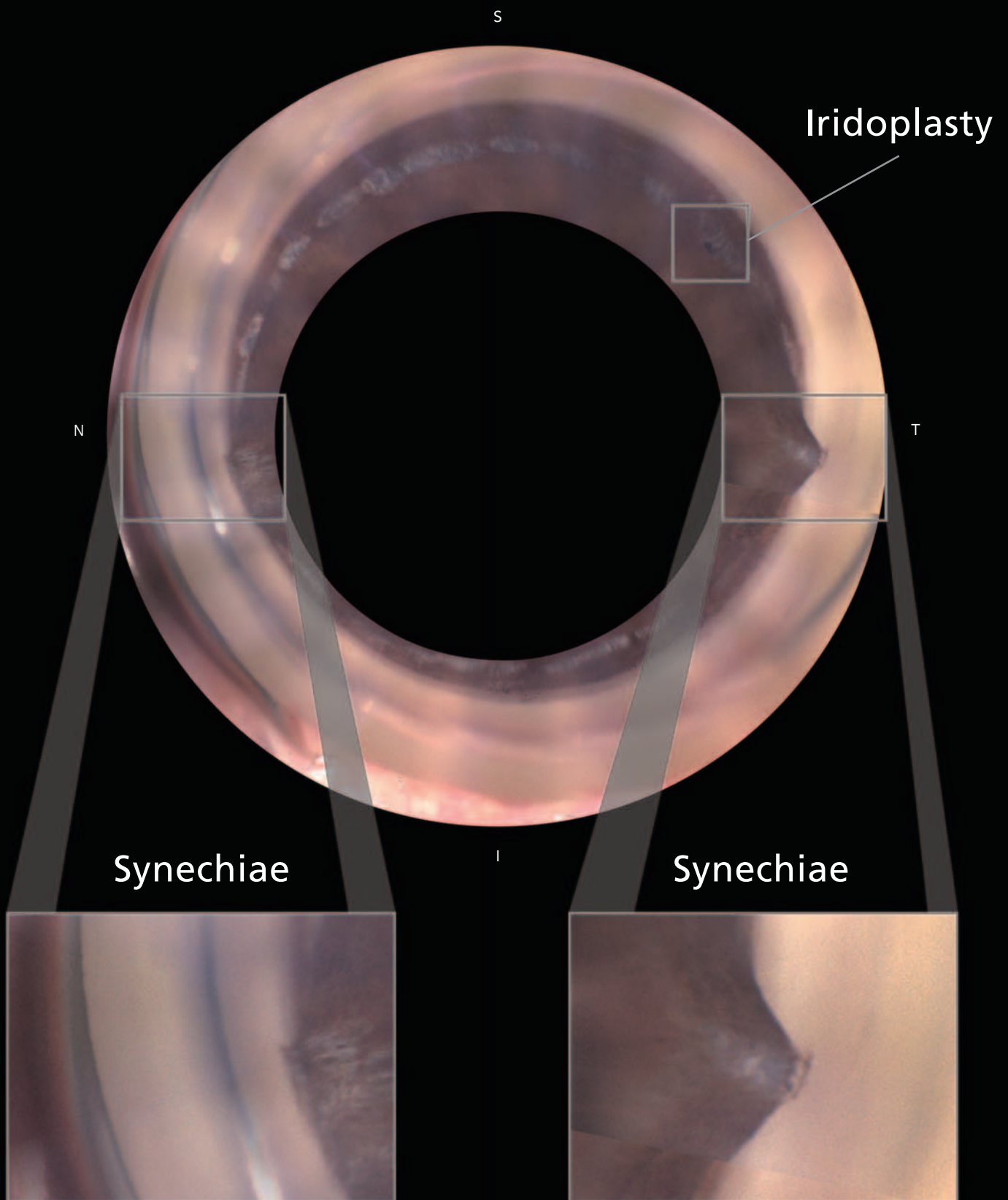
Comment

Silicone oil covering the entire superior angle

<sup>\*1</sup> Images courtesy of Prof. C. E. TRAVERSO, MD, Clinica Oculistica, Di.N.O.G.M.I., University of Genova - Ospedale Policlinico S. Martino, Italy

<sup>\*2</sup> Images courtesy of Assist. Prof. Luis Abegão Pinto, MD, PhD, University of Lisbon, Portugal





# Surgical evaluation

## Phakic IOL implantation<sup>\*1</sup>

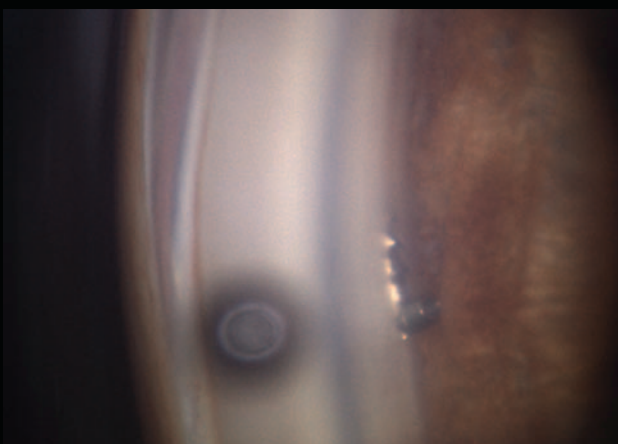


### Comment

White arrow: Haptic of phakic IOL

Black arrows: Epithelial ingrowth covering the angle

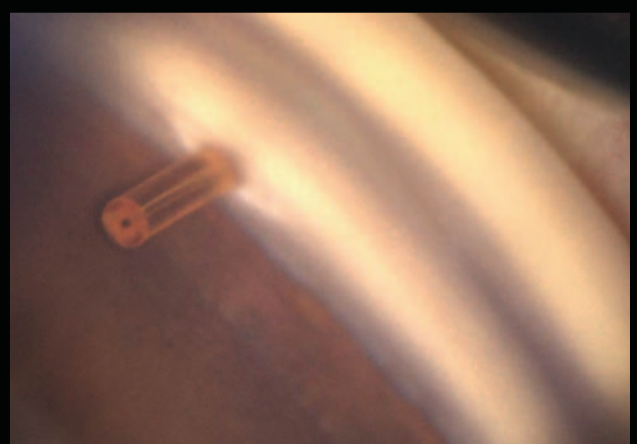
## MIGS device 1<sup>\*2</sup>



### Comment

Trabecular bypass microstent  
within Schlemm's canal

## MIGS device 2<sup>\*1</sup>



### Comment

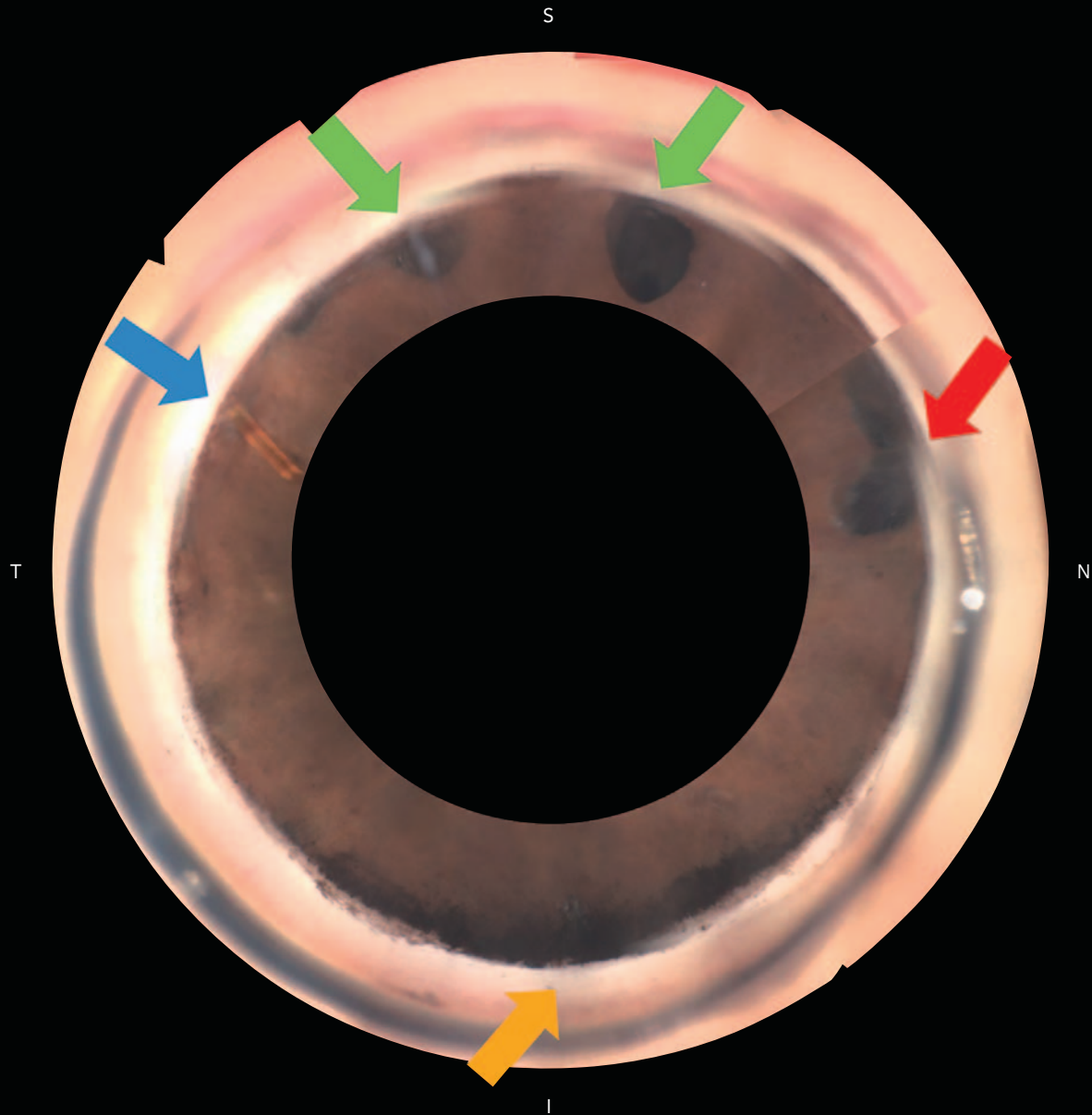
Focusing on the device

<sup>\*1</sup> Images courtesy of Assist. Prof. Luis Abegão Pinto, MD, PhD, University of Lisbon, Portugal

<sup>\*2</sup> Images courtesy of Vikas Chopra, MD, Doheny Eye Institute, UCLA, USA

# Clinical and surgical evaluation

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## Comment

Blue arrow: MIGS implant

Green arrows: Trabeculectomy ostium

Orange arrow: Pigment deposit inferiorly

Red arrow: Iris torn from the root

Brochure and listed features of the device are intended for non-US practitioners.



More clinical information available online

<https://www.nidek-intl.com/education/>

