

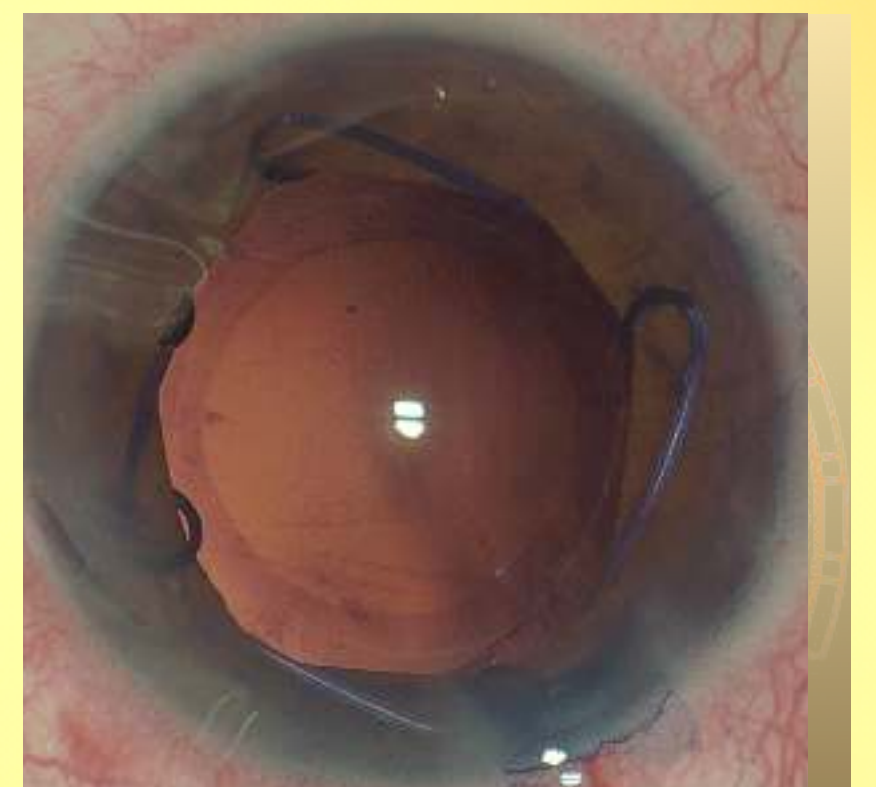
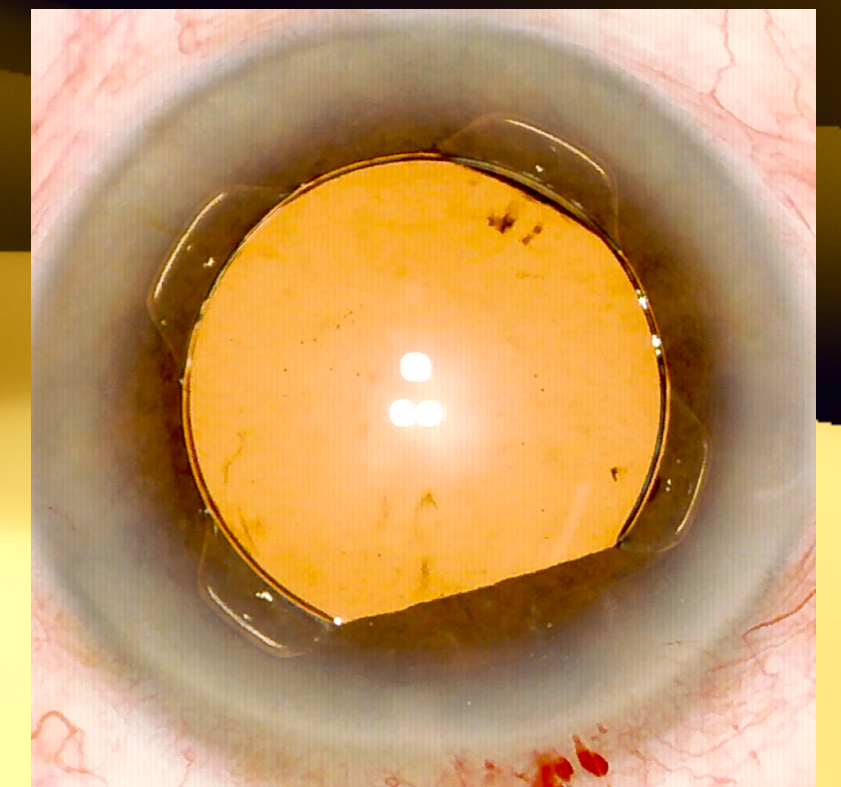
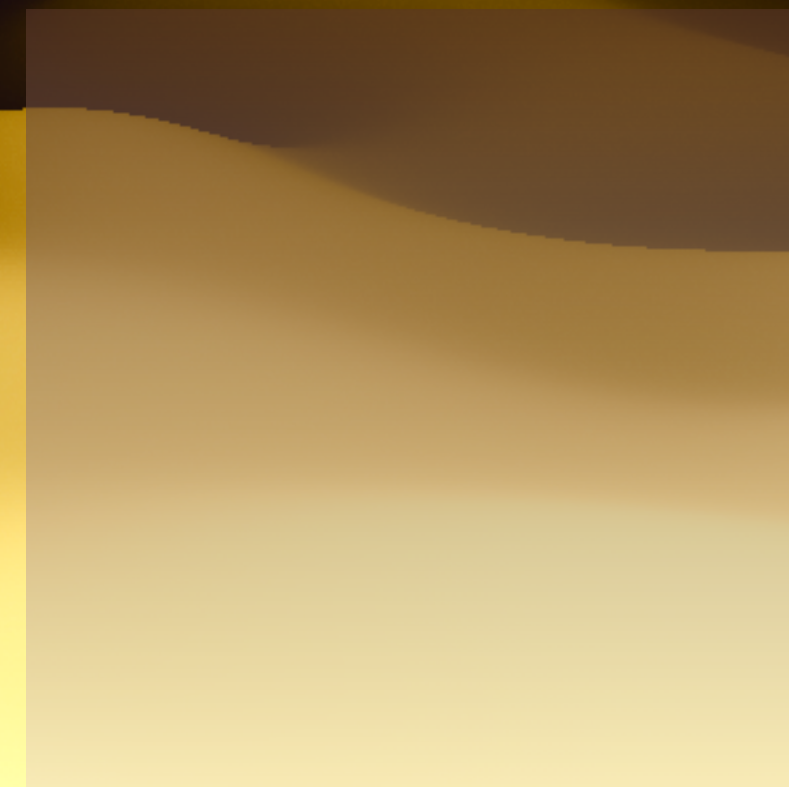
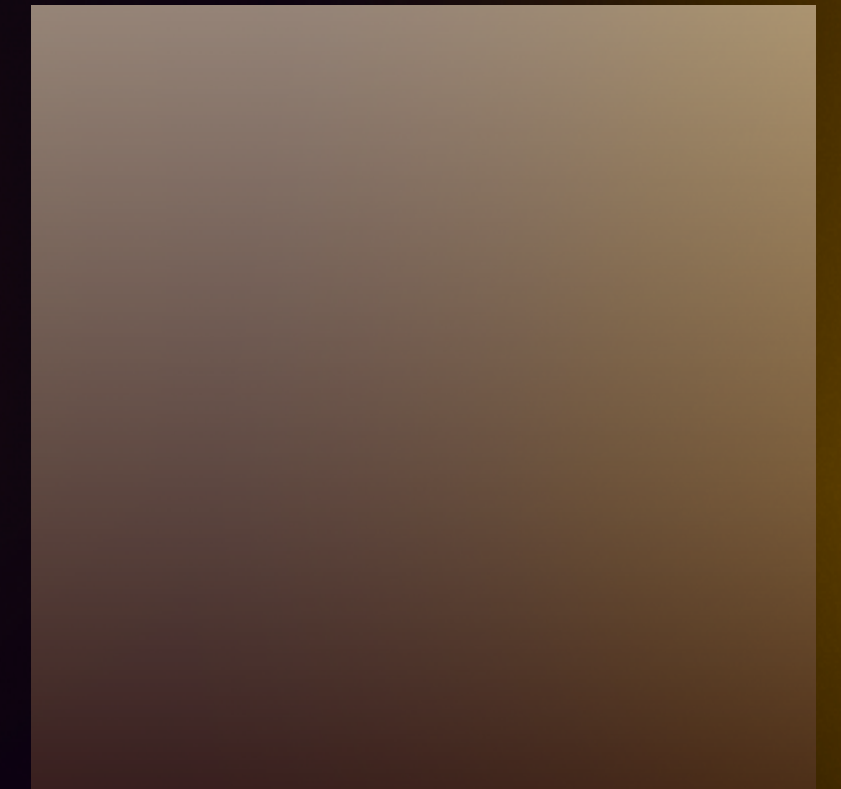
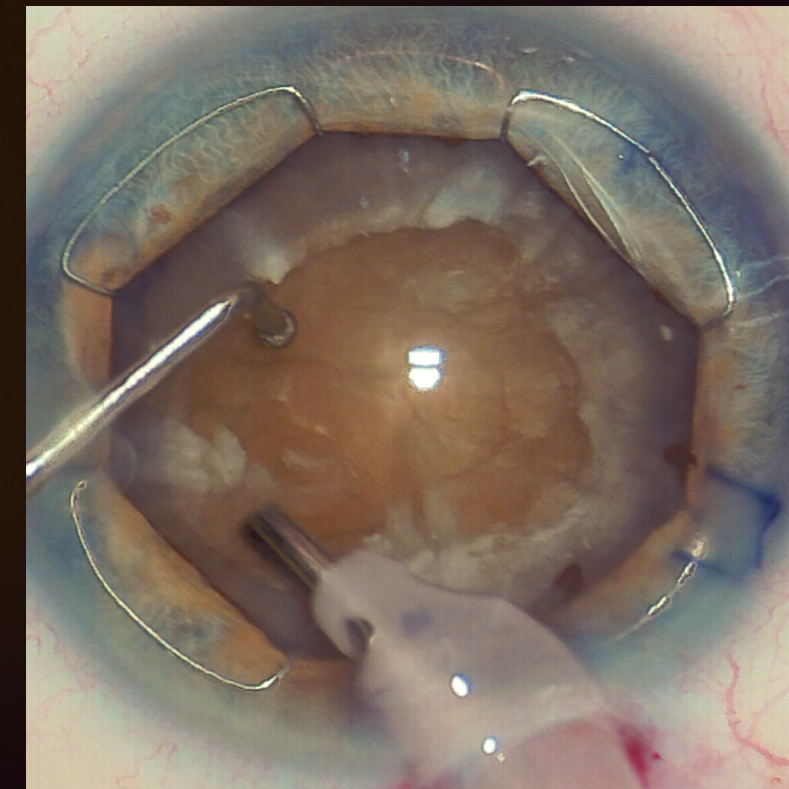
18th International Conference of the
Research Institute of Ophthalmology

RIO 2026

Master Class on Pupil Expanders



NETO **ROSATELLI**





I have no financial disclosures
related to the devices shown in
this presentation



• PUPIL EXPANDERS

Small Pupil: significant hazard!

- Promote ease
- Increase safety
- Improve surgical control



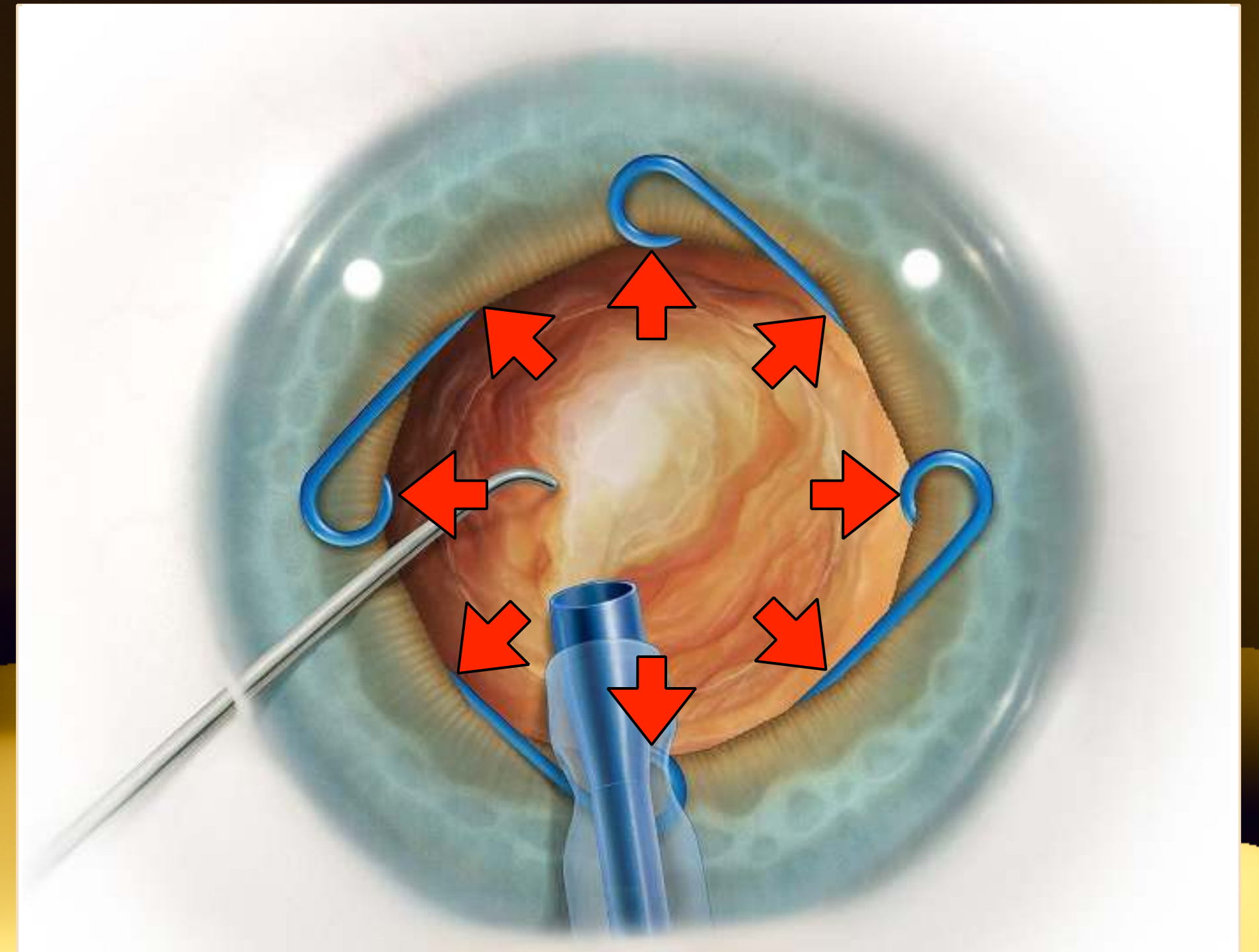
Malyugin Ring



MST

Malyugin Ring

- Square shape with 4 scroll flanges
- Models:
 - Classic 6.25 mm (5.0 polipropilene)
 - Classic 7.0 mm (5.0 polipropilene)
 - “2.0” 6.25 mm (6.0 polipropilene)
- Octagonal opening
- Injector





Malyugin Ring





03:59:23

Malyugin Ring

What I like

- Ease of use
- Fast insertion and retrieval

What I don't like

- Iris pinching and chafing
- Price (US \$125 - EU €180)

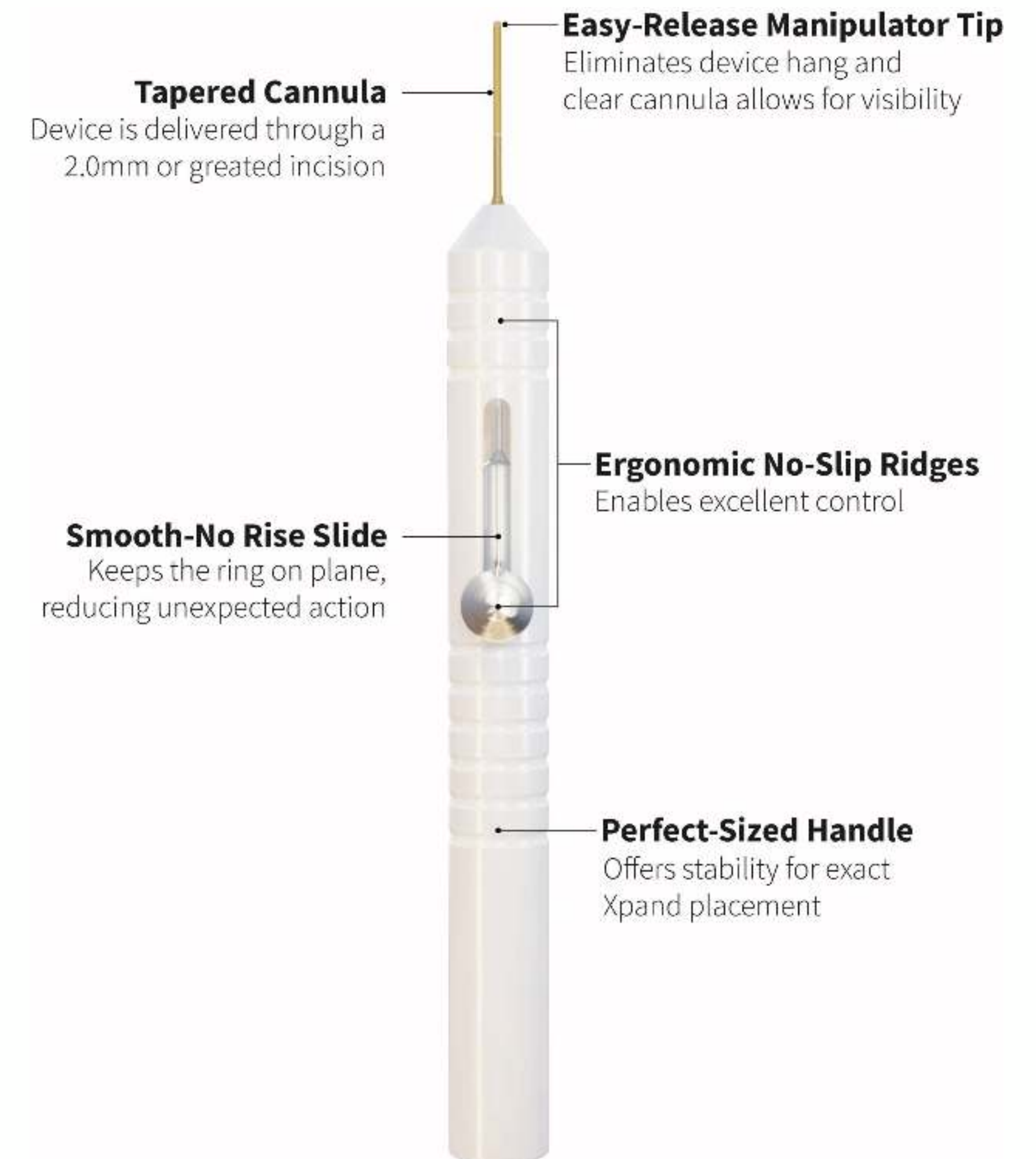


Xpand NT X2



Diamatrix Xpand NT X2

- Material: nitinol
 - Metal alloy of nickel and titanium
 - Shape memory and superelasticity
- Octogonal 7.0 mm dilation
- Injector
- Fits through a 2.0 mm incision





13:39



Diamatrix XpandNT Iris Speculum

Flow

0

cc/min

30

30

Vac Limit

0

mmHg

80

80

Dynamic Rise

0

Tors Amp

0

%

0

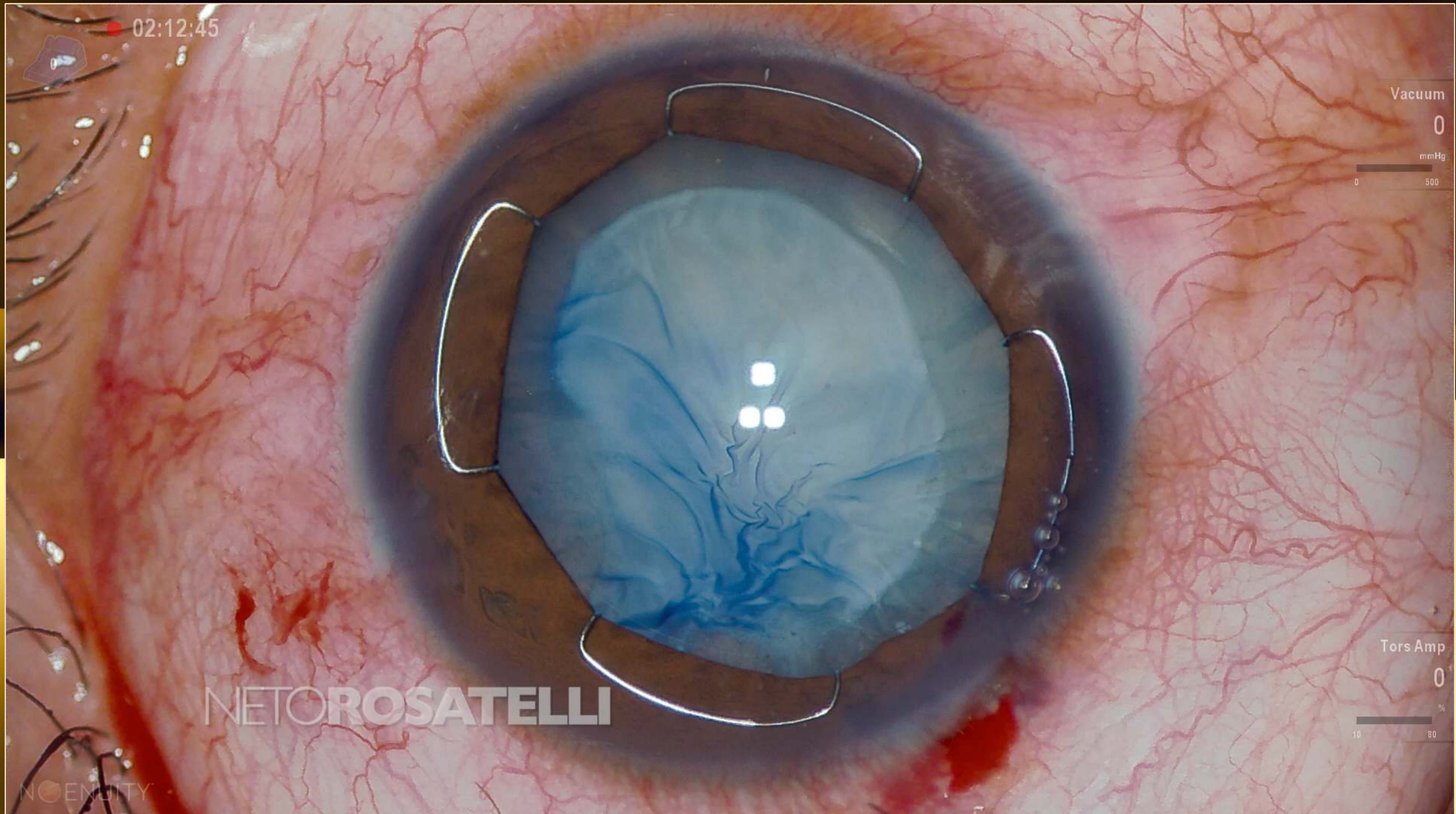
85

NETOROSATELLI

NO ENQUIRY



R10 2026





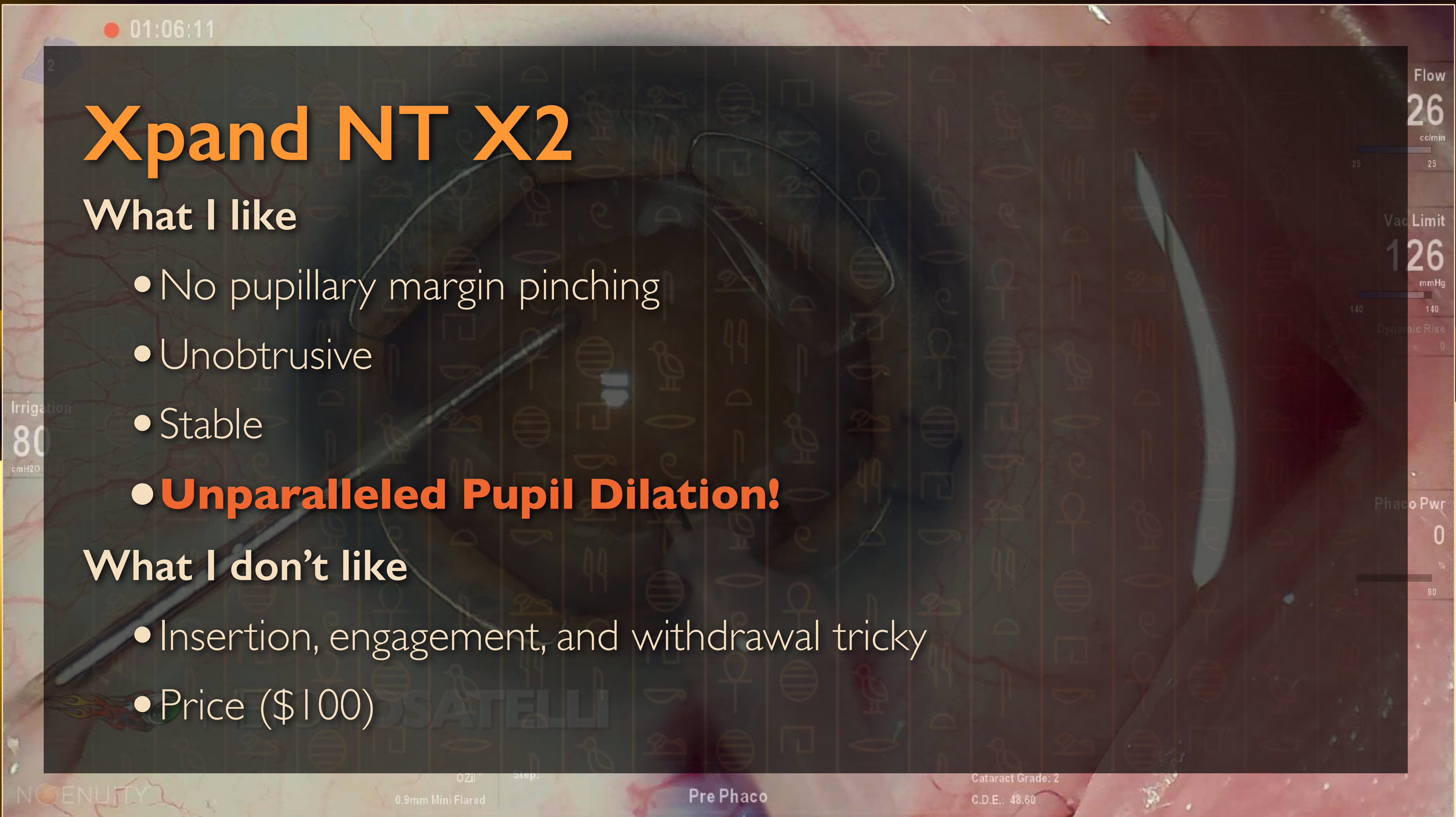
Xpand NT X2

What I like

- No pupillary margin pinching
- Unobtrusive
- Stable
- **Unparalleled Pupil Dilation!**

What I don't like

- Insertion, engagement, and withdrawal tricky
- Price (\$100)





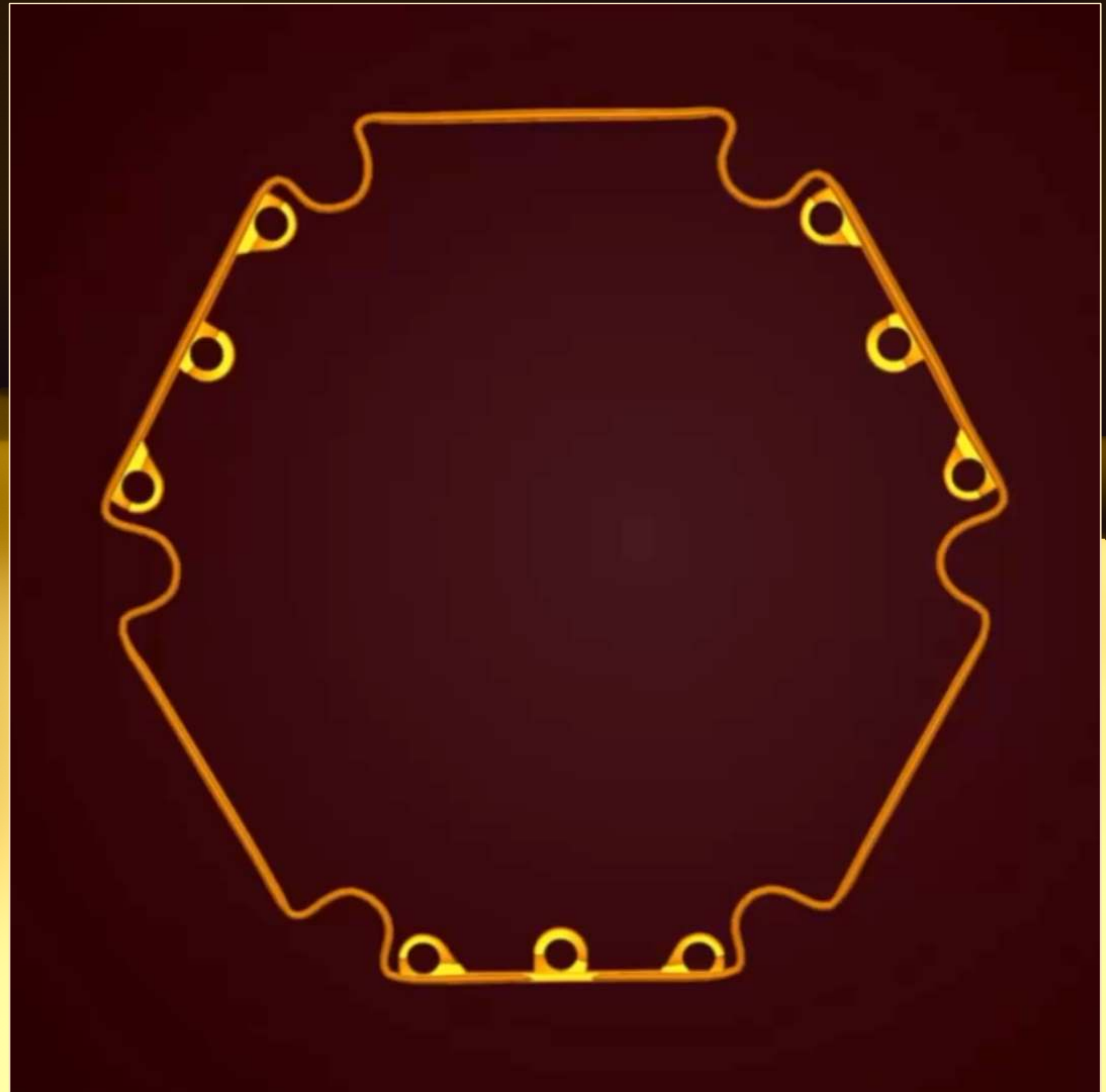
B-HEX



MedInvent Devices

B-Hex

- Nylon
- Hexagonal shape
- Uniplanar, 0.07 mm
- Six iris fixation points
- Exposure: 5.0-5.5 mm
- No injector





03:05:58

B-Hex

Flow

0

cc/min

20 20

Vac Limit

0

mmHg

80 80

Phaco Pwr

0

%

0 70

NO ENUITY



RIO 2026



● 49:45

B-Hex

What I like

- Absolutely unobtrusive
- Excellent for shallow anterior chambers!
- Price (₹2,000-3,000 \$23-33)

What I don't like

- Relatively small dilation
- Engagement can be tricky





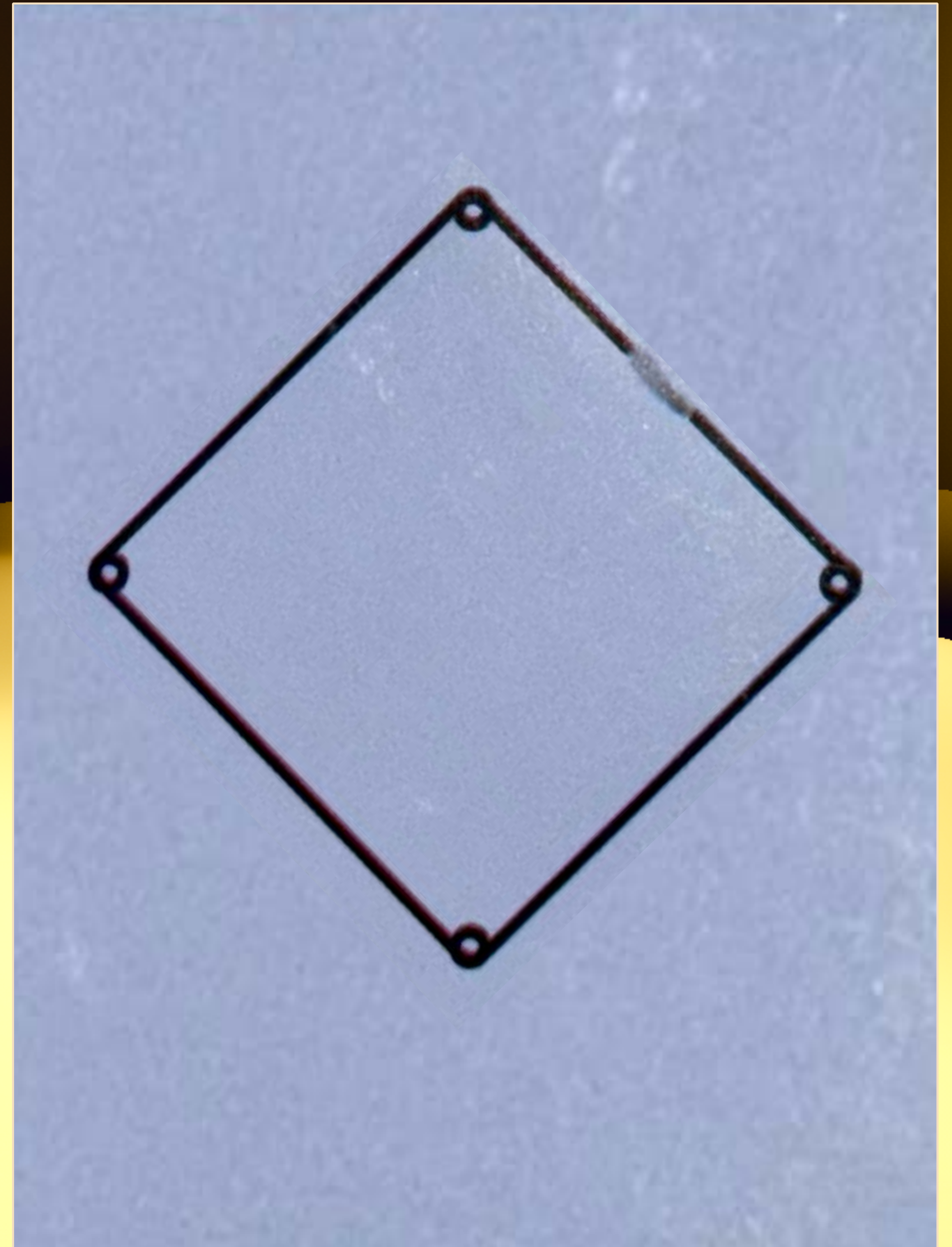
Gupta Ring Plus



Madhu Instruments

Gupta Ring Plus

- PMMA
- Square shape
- Four small scroll iris fixation points
- Injector
- Exposure: 5.5-6.0 mm



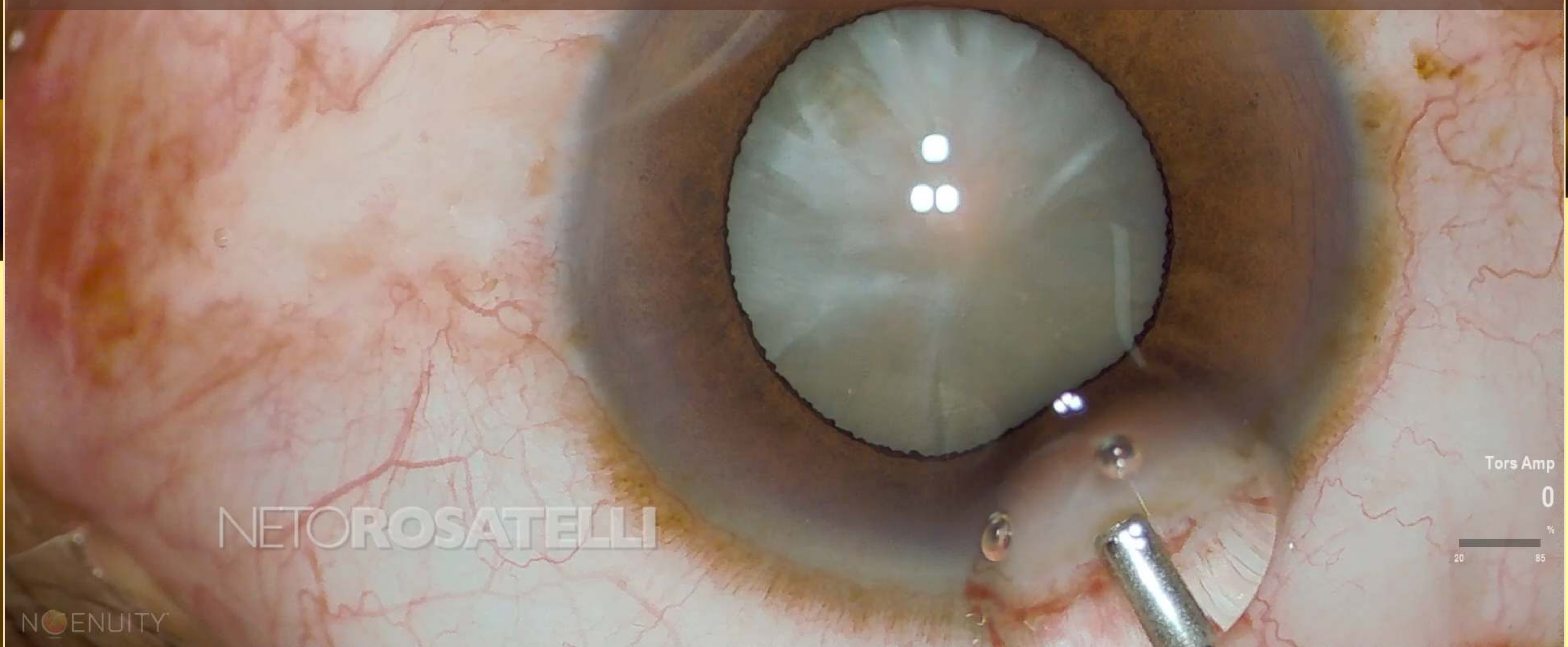


34:25



Gupta Ring Plus

Vacuum
0
mmHg
0 650



NETOROSATELLI

Tors Amp
0
%
20 85

NO ENUITY





01:22:49

Gupta Ring

What I like

- Ease of use
- Price (₹2,200 \$25)

What I don't like

- Small scrolls slip
- Iris pinching and chafing
- Limited square dilation





BVI I-Ring



BVI Medical I-Ring

- Silicone
- Round shape with 4 flanges
- 360° iris support
- Injector
- Exposure: round 5.5-6.0 mm





46:39



BVI I-Ring

Flow

0

cc/min

30 30

Vac Limit

0

mmHg

80 80

Dynamic Fil

Tors Amp

0

NETOROSATELLI

Brazil

NO ENEMY



RIO 2026



BVI I-Ring

What I like

- Ease of use
- Pupil margin protection by the flanges

What I don't like

- Relatively small dilation
- Thick and obtrusive
- Price (\$100)

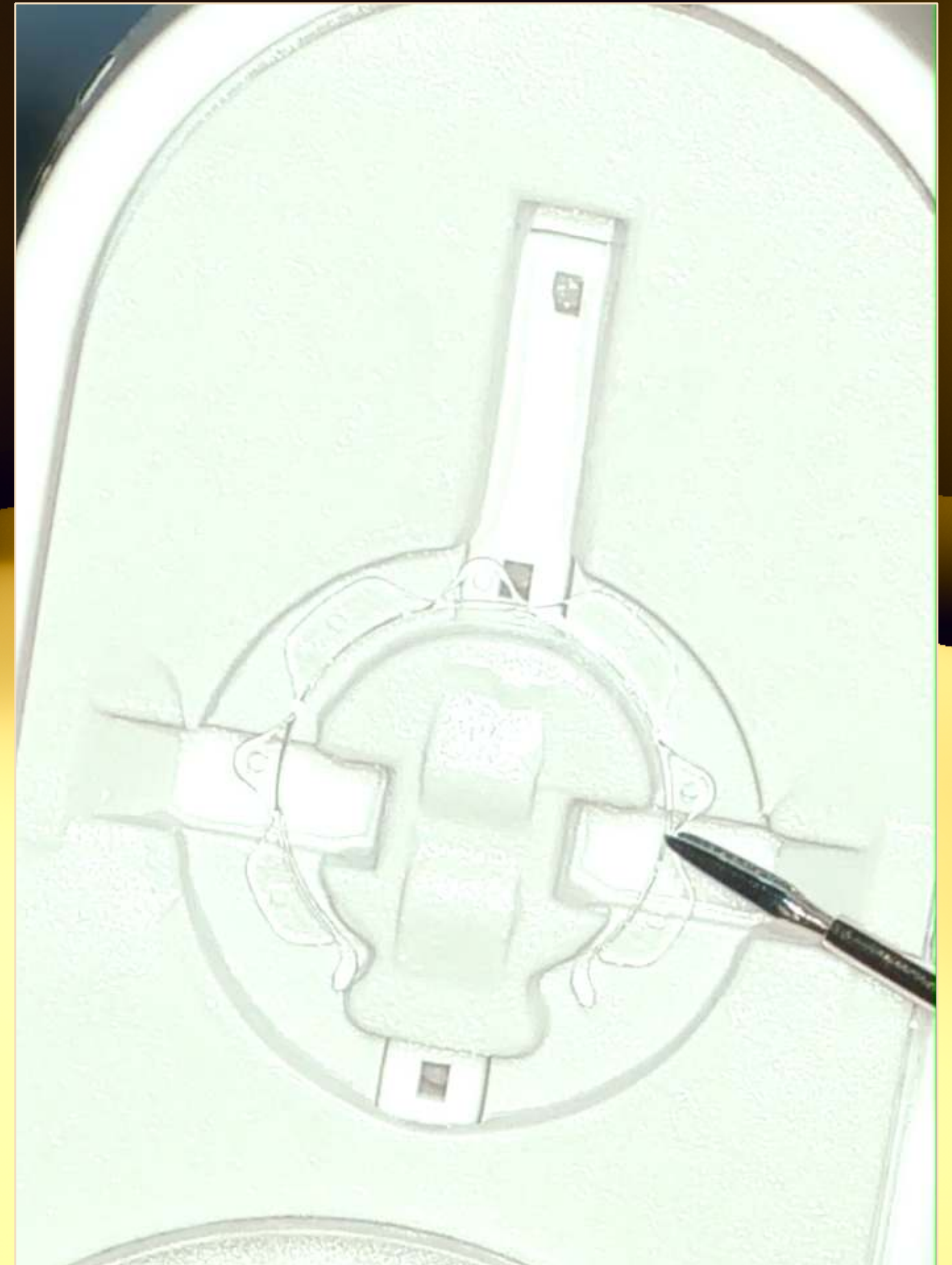


Canabrava Ring



AJL Ophthalmic **CANABRAVA** Ring

- PMMA
- Round shape 300° circular with 60° opening
- 300° iris support
- No injector
- Exposure: 6.3 mm





04:12:01

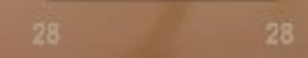


Canabrava Ring

Flow

0

cc/min



Vac Limit

0

mmHg



Dynamic Rise

0

Tors Amp

0

%



Pulse Rate

40

pps

Time On

80

%

NETOROSATELLI

NOENUITY





03:04:07

CANABRAVA Ring

What I like

- Beautiful!
- Circular opening
- Pupil margin protection by the flanges

What I don't like

- Somewhat laborious to engage
- The small "gap"
- Price (\$180)

Flow

0

cc/min

28

28

Vac Limit

0

mmHg

185

185

Dynamic Rise

0

Tors Amp

0

%

10

60

Pulse Rate

40

pps

Flow On

%



What About **Iris Hooks**?

- Very versatile and affordable
- Prime indications:
 - **Partial dilation** (localized problem)
 - **Extreme dilation** needed



Very Important!

- Rigid pupil vs elastic pupil
- Problems with stretching maneuvers and PEDs insertion



- PEDs are of **great help** for ease and safety in small pupil cases
- **Malyugin Ring**: best for overall cases
- **XpandNT**: very hard nucleus, anterior capsule fibrosis, I.F.I.S.
- **B-Hex**: excellent for delicate irises, shallow AC
- **Canabrava Ring**: most beautiful and satisfying to use!



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“THE CATARACT SURGERY CHANNEL”
<http://www.youtube.com/c/TheCataractSurgeryChannel>

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“NETO ROSATELLI”
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