My experience with IPCL and IPCL in extreme situations …

- Dr Kamal B Kapur
- **Co-Founder Medical Director**

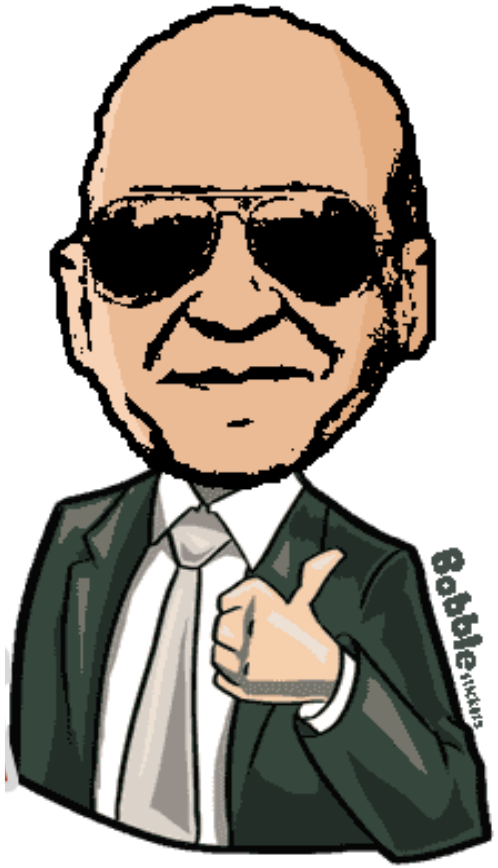
SHARP SIGHT
GROUP OF EYE HOSPITALS

NABH

ISO 9001:2015

Financial Relationships Disclosure

Dr Kamal B. Kapur



No financial disclosures

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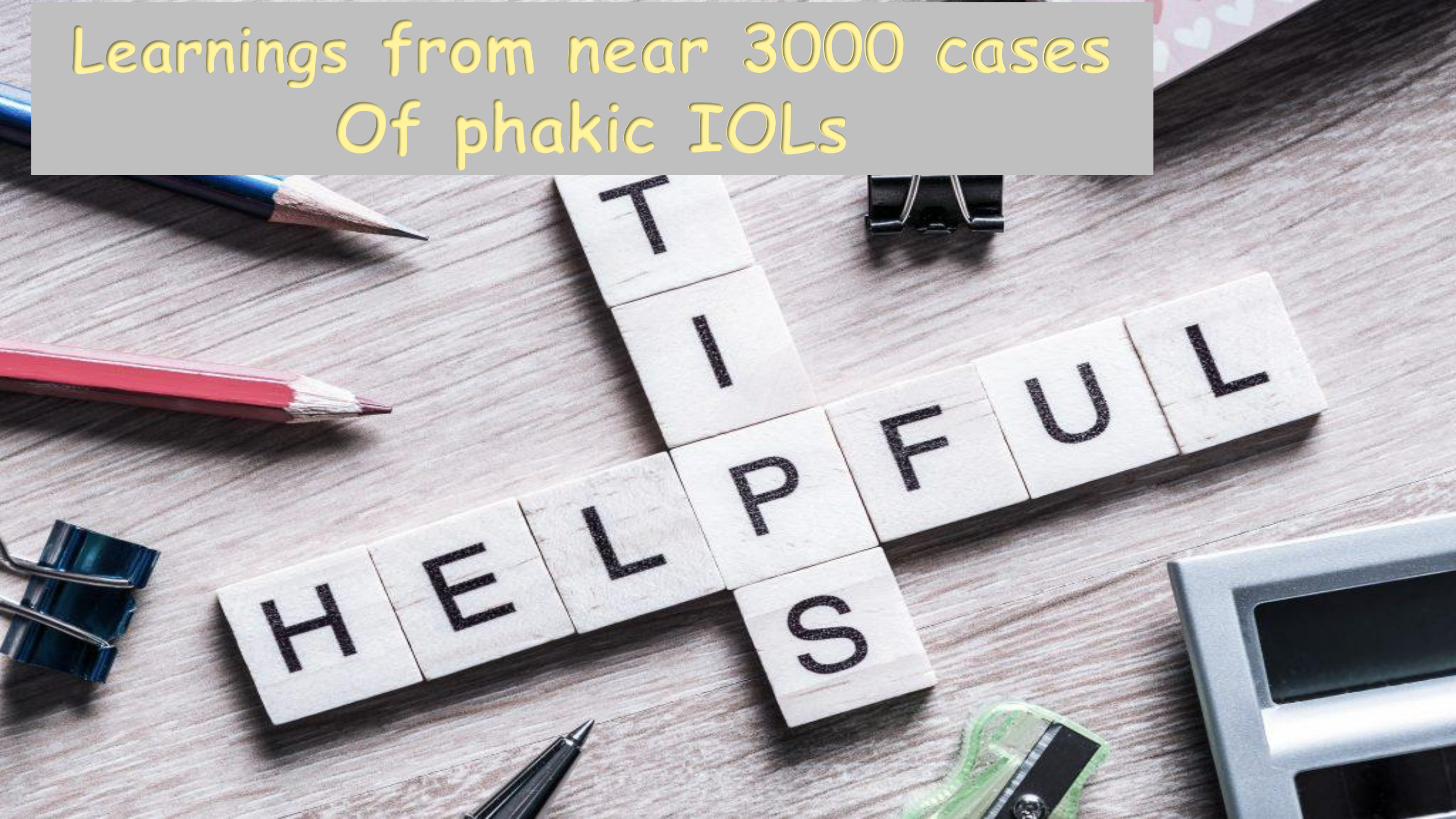
Learnings from near 3000 cases Of phakic IOLs



VARIOUS OPTIONS IN PHAKIC LENSES
OUR LARGE EXPERIENCE IS WITH EYEPCL AND ICL

Our main Experience

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Visian ICL

STAAR
SURGICAL

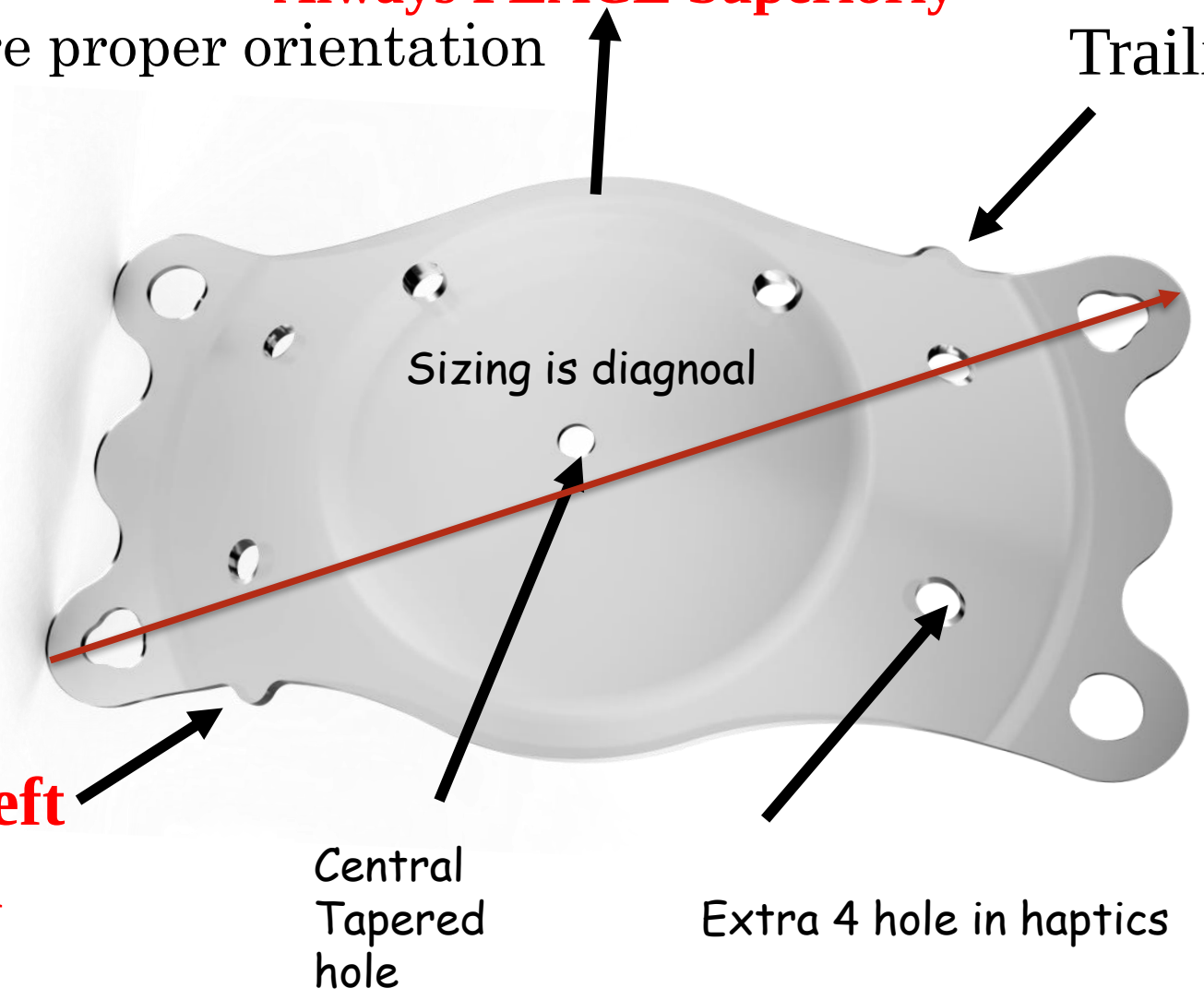
ICL
IMPLANTABLE
PHAKIC Contact Lens

CARE GROUP

Leading holes for orientation
Haptic pads
Holes in optic haptic vault
Holes in the optic-superior/centraflow

IPCL IMPLANT ALWAYS HORIZONTAL
V2 WITHOUT TAPERED CENTRAL HOLE

- TO ensure proper orientation



Contraindications for Phakic IOLs

- Myopia other than axial myopia (sclerotic cataract)
- Corneal dystrophy/ Endothelial cell count <2000cells/cu mm
- Anterior chamber depth less than 2.8 mm
- History of uveitis,even if healed
- High Lens rise more than 600 microns
- Presence of anterior/posterior synechiae
- Glaucoma
- Angle pathology / Iris cyst,
- Evidence of nuclear sclerosis or developing cataract
- Personal or family history of retinal detachment
- Diabetes mellitus long standing

ICL vs IPCL power range

Power available

ICL	IPCL
Myopic ICL (ICM):	Myopic IPCL:
• Sphere: -0.5 to -18.0 D	• Sphere: -0.5 to -30.0 D
Hyperopic ICL (ICH):	Hyperopic IPCL:
• Sphere: +1.0 to +10.0 D	• Sphere: +1.0 to +15.0 D
Toric ICL (TICM):	Toric IPCL:
• Sphere: -0.5 to -18.0 D	• Sphere: -0.5 to -30.0 D
• Cylinder: +1.0 to +6.0 D	• Cylinder: +1.0 to +8.0 D

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Size available

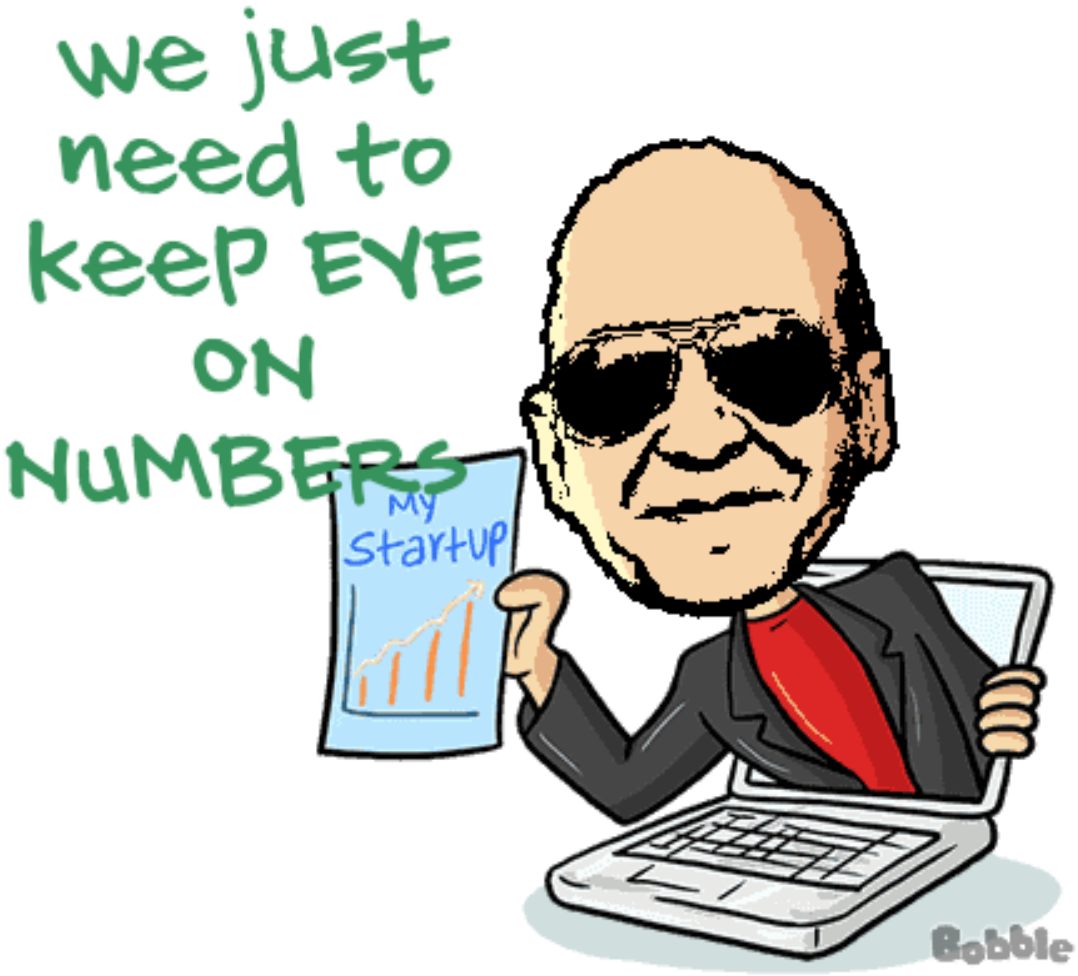
ICL

Model No	Overall Diameter (mm)
ICM121V4	12.10 mm
ICM126V4	12.60 mm
ICM132V4	13.20 mm
ICM137V4	13.70 mm

IPCL

Model No	Overall Diameter (mm)
EPCL11	11.00 mm
EPCL112	11.25 mm
EPCL115	11.50 mm
EPCL117	11.75 mm
EPCL12	12.00 mm
EPCL122	12.25 mm
EPCL125	12.50 mm
EPCL127	12.75 mm
EPCL13	13.00 mm
EPCL132	13.25 mm
EPCL135	13.50 mm
EPCL137	13.75 mm
EPCL14	14.00 mm

Broad statistical analysis



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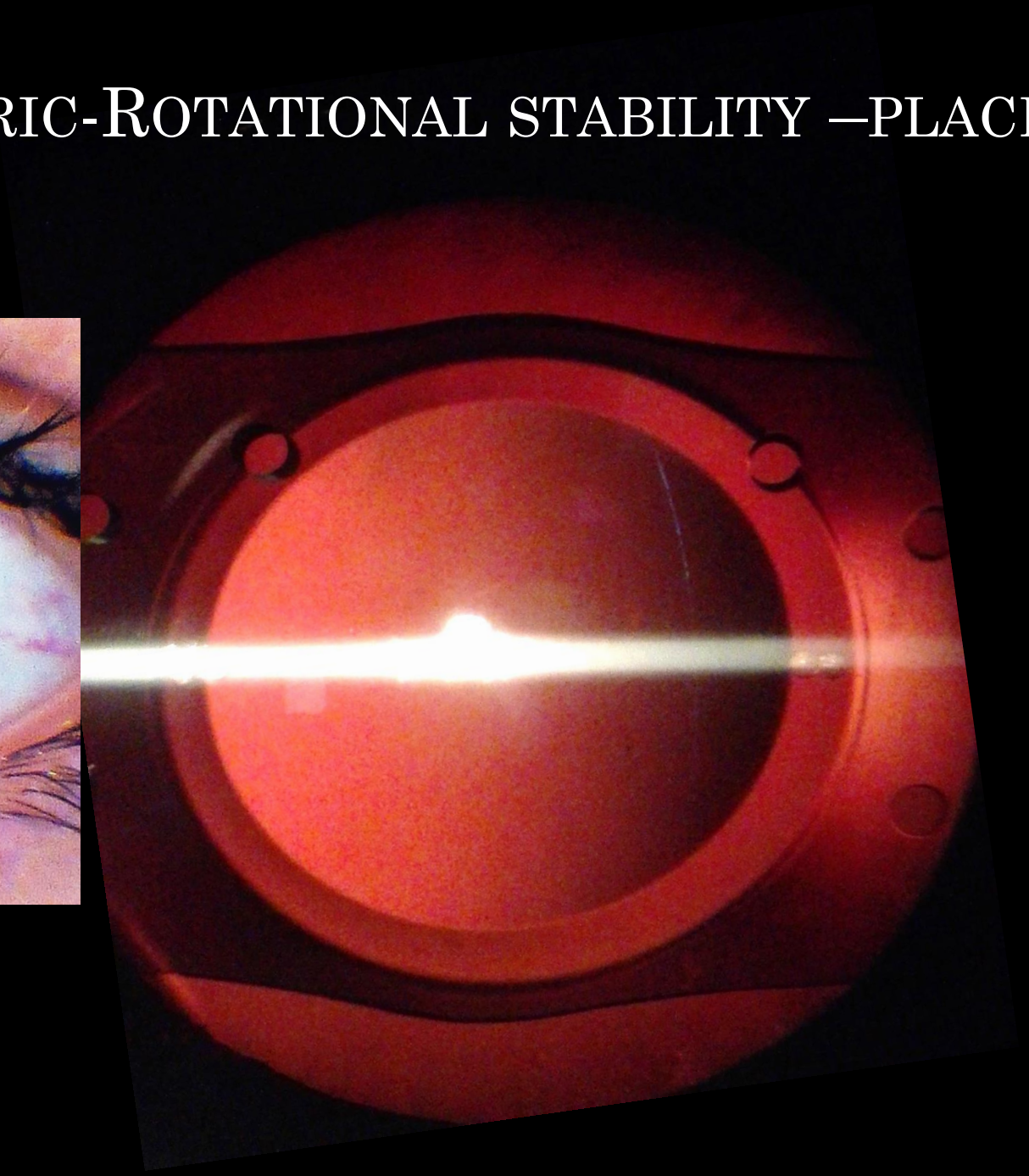
General about IPCL

- 11.5 mm to 14.00 mm size in steps of 0.25 mm (IPCL)
- Optic size can be Personalized used upto 4.5 mm to 8.5 mm

- +8 to -34 available in increments of 0.5mm (IPCL)
- Cylindrical power available upto 11 diopters

- TORIC IPCL NEEDS NO ROTATION - Smart TORIC LENS

Smart toric-Rotational stability –place it at 0-180



OUR EXPERIENCE WITH IPCL SINCE 2013 =3045 CASES

- 1193 cases (V1) of IPCL done
- 1852 cases of (V2) done till now **3045 cases till now**
- Follow up period near over 8 years
- 17 cases of secondary Piggy back for Post pseudophakik residual error
- 8 case of Presbyopic (4 secondary Piggyback & 4 Primary presbyopia)
- Model v1 done with yag laser PI (V1) done at least 7 days prior
- Power corrected from +6 diopters to -34 diopters

ISSUES WE OFTEN CONFRONTED IN PRACTICE

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- High refractive errors up to -34/2 cyl (one had delayed RD)
- High to moderate refractive errors with 11 d cyl High astigmatism (corneal Scar)
- Accuracy of smart TORIC IPCL is good
- Variable large pupil sizes (especially high myopes) upto 7.80 mm IPCL size 8.5 mm
- Exceptional large corneal sizes – Watch for post Dilatation size (if small)
- Astigmatism high (if more than 2 diopters (smart toric),also measure Vertical
- Presbyopia correction near add +1 - +3.5 WITH REFRACTIVE ERRORS AND ASTIGMATISM- presbyopic ipcl
- SECONDARY PIGGY BACK PROCEDURE- both for correction of residual refraction (post IOL) and presbyopia correction primary or secondary along with astigmatism and refractive errors
- Presbyopic IPCL in piggy back works well
- Damage or mark on lens (back up IPCL)
- PHAKIK IOL (IPCL) ADDRESSES ALL ABOVE

Some interesting case examples

Wearing -27/-4 d cyl - Now spectacle free

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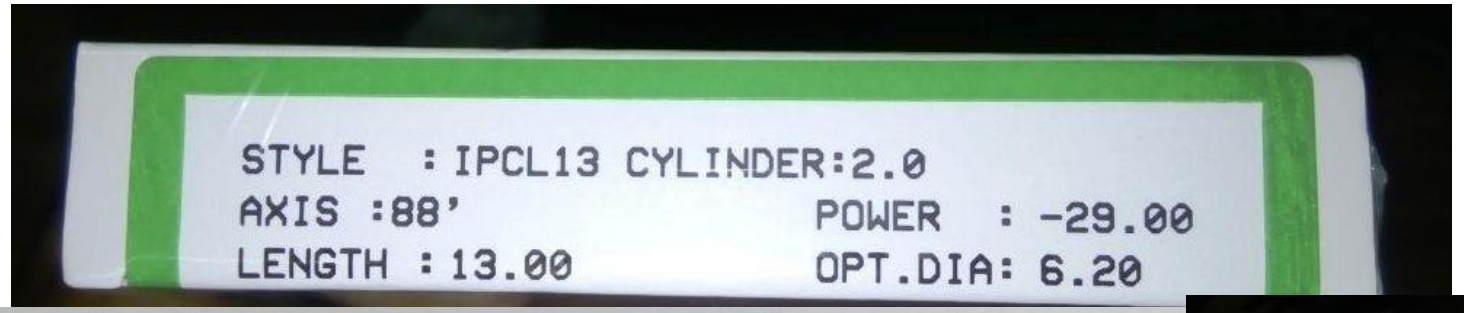

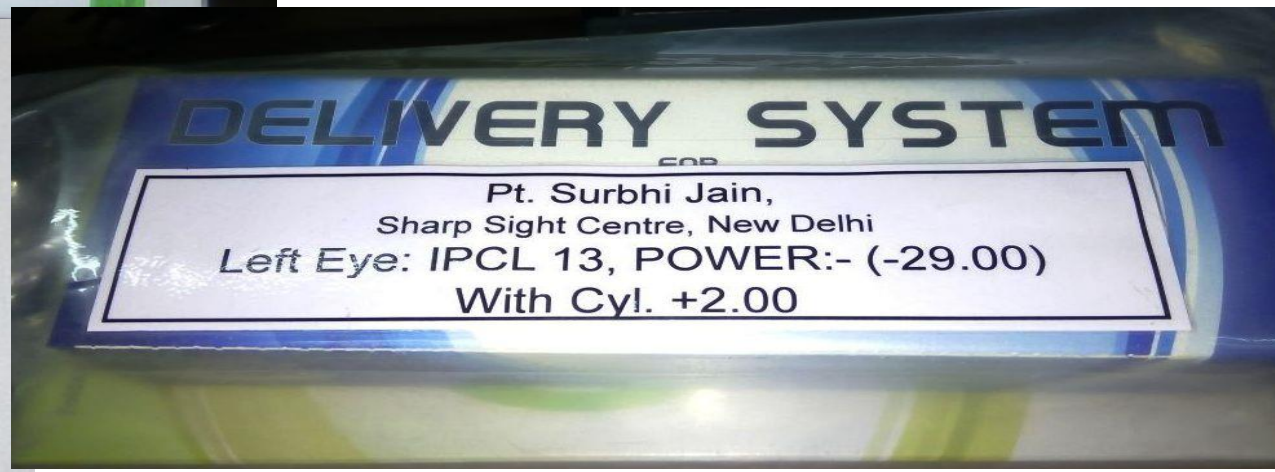

EXTREME POWERS AVAILABLE

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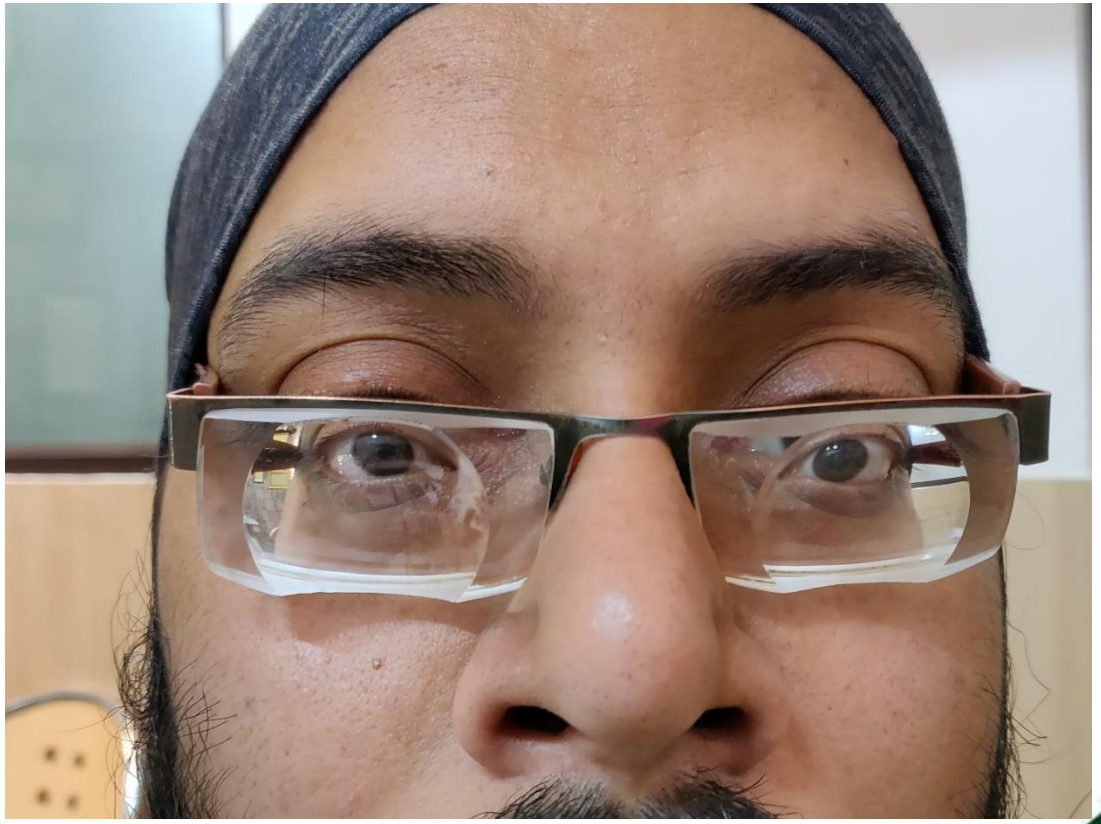
-34 DIOPTERS /2.5 D CYL



A few interesting situations

In extreme situations.

Tricks of sizing ICL

ICL available sizes

10.7 to 11.1 = 12.1 ICL
11.2 to 11.6 = 12.6
11.7 to 12.3 = 13.2
>12.3 = 13.7

EyePCL available sizes

10.40 - 10.64 = 11.75
10.65 - 10.94 = 12.00
10.95 - 11.22 = 12.25
11.23 - 11.35 = 12.50
11.36 - 11.64 = 12.75
11.65 - 11.93 = 13.00
11.94 - 12.22 = 13.25
12.23 - 12.51 = 13.50
12.52 - 12.80 = 13.75
>12.80 - 13.0 = 14.00

WTW of patient **ICL size**

- 11.70 mm → 13.2 mm ICL (1.5 mm larger)
- 12.30 mm→ 13.2 mm ICL (0.9 mm larger)

Which one will have the higher vault?

So the bad combination is shallow AC (<3.0mm) and…

Courtesy – Dr Himanshu Matalia

Playing with the sizes to our advantage

Especially **Toric IPCL**

- **WTW of patient** **EyePCL size**
  - 11.65 mm → 13.0 mm IPCL (1.35 mm larger)
  - 11.93 mm → 13.0 mm IPCL (1.07 mm larger)

- Which one will have the lower vault?
- More chances of rotation, hence select one size higher

- So for 11.93 mm instead of 13.0 mm (1.07 mm larger) take 13.25 mm (1.32 mm larger)!

- When diameter of IPCL is increased the vault increases by 40% e.g. if diameter is increased by 0.25 mm, the vault will be increased by 100 microns.

10.40 - 10.64 = 11.75
10.65 - 10.94 = 12.00
10.95 - 11.22 = 12.25
11.23 - 11.35 = 12.50
11.36 - 11.64 = 12.75
11.65 - 11.93 = 13.00
11.94 - 12.22 = 13.25
12.23 - 12.51 = 13.50
12.52 - 12.80 = 13.75
>12.80 - 13.0 = 14.00

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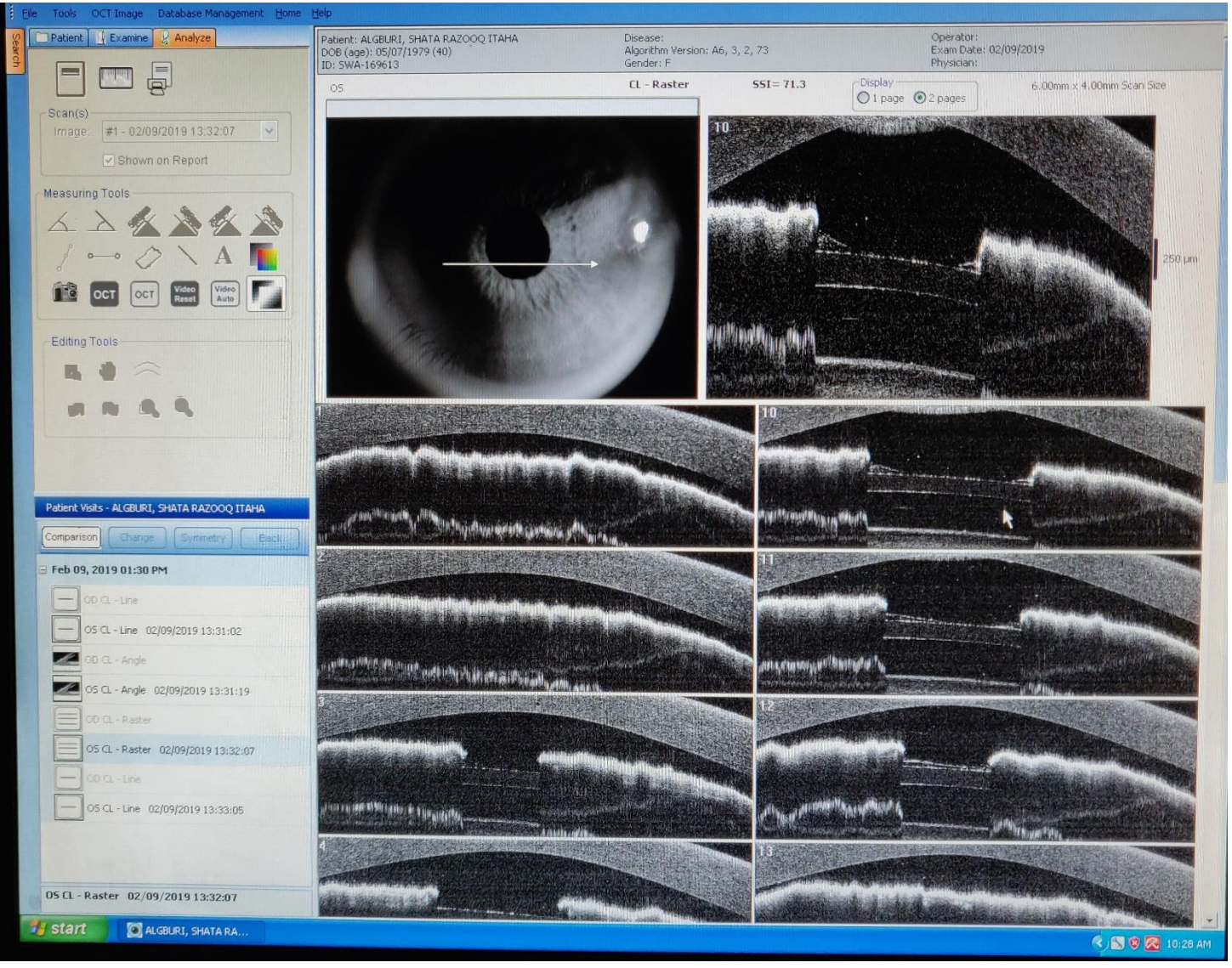
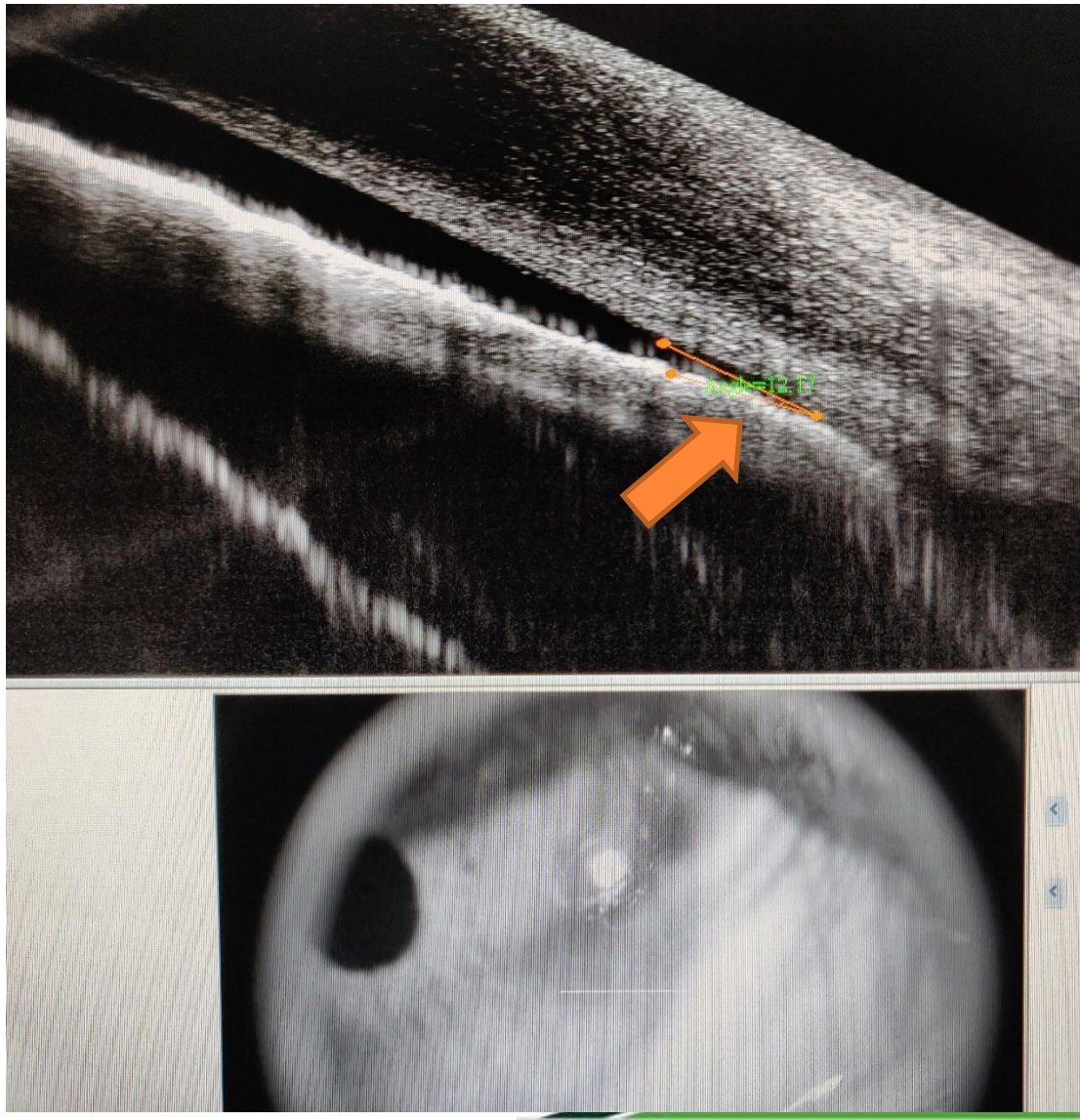
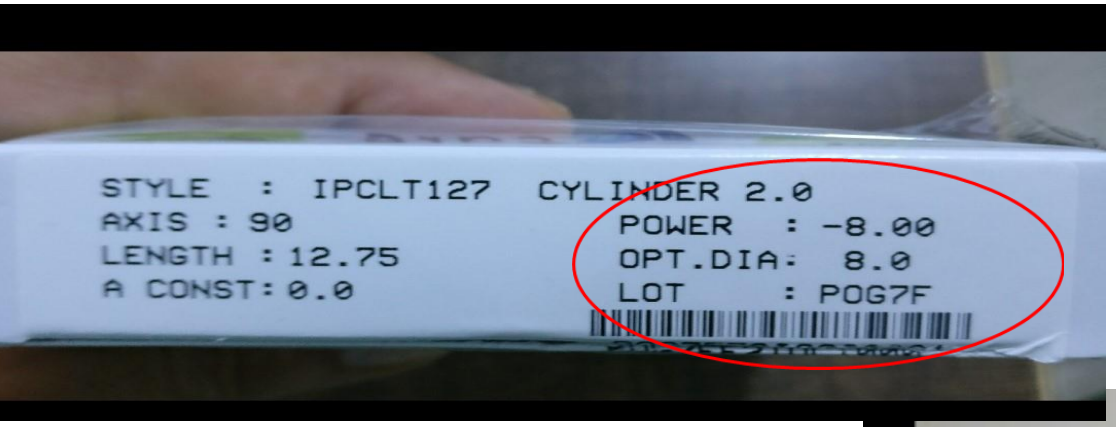
KERATOCONUS TORIC IPCL -NEAR TOTAL ANGLE CLOSED

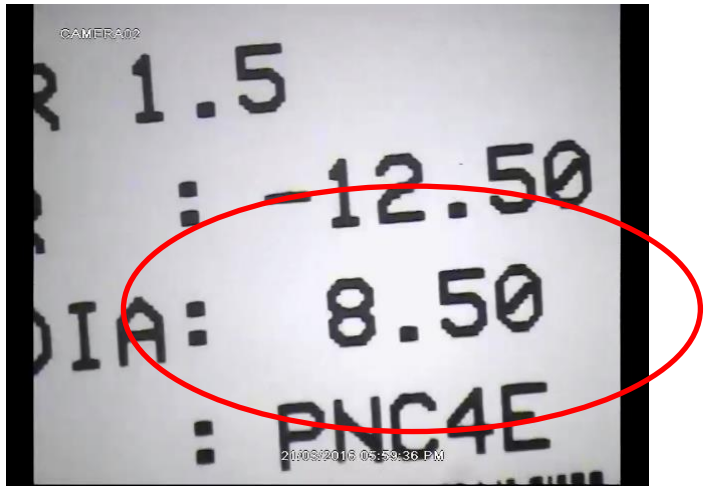




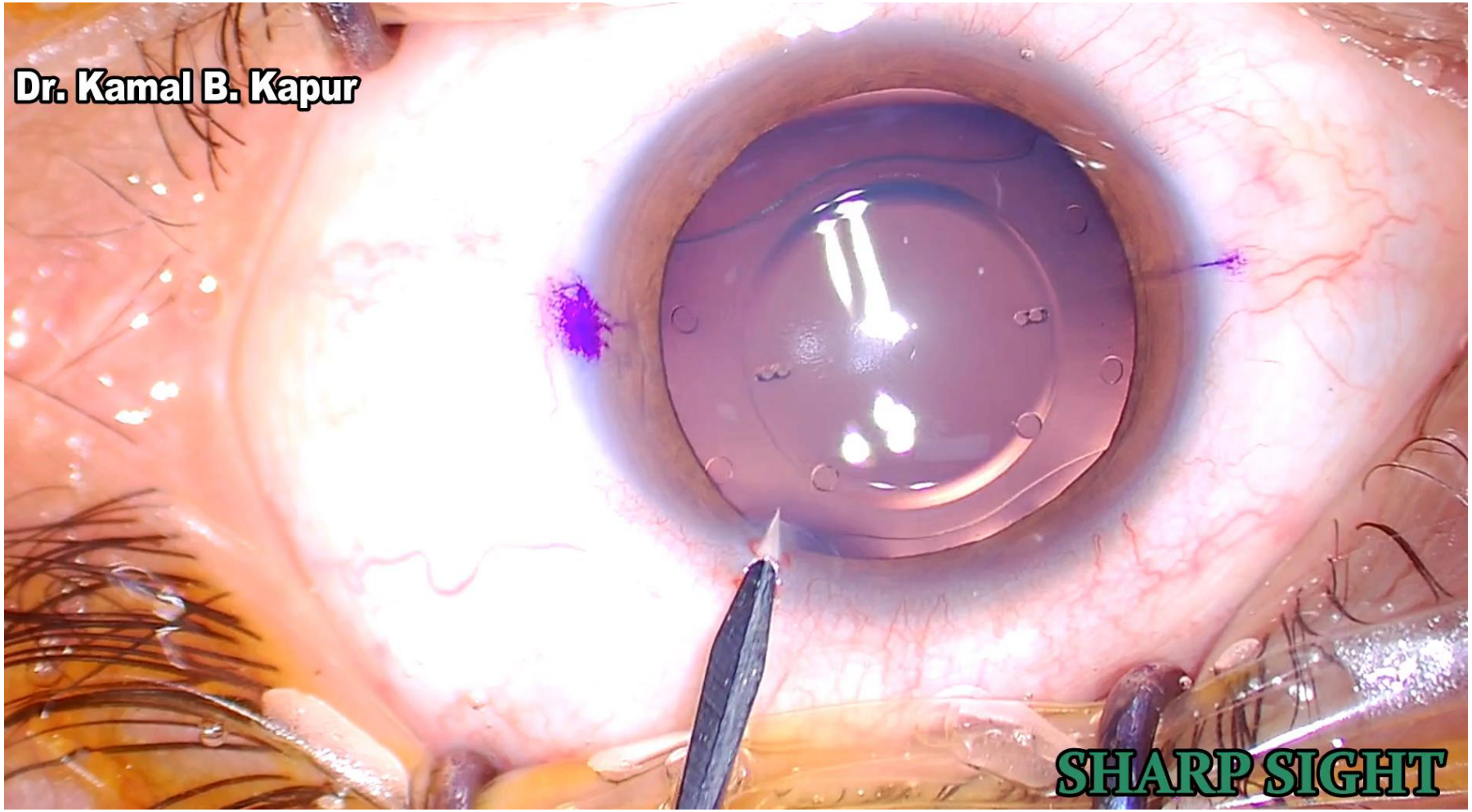
Optic diameter (upto 8.50 mm) measure scotopic pupil in patients



video

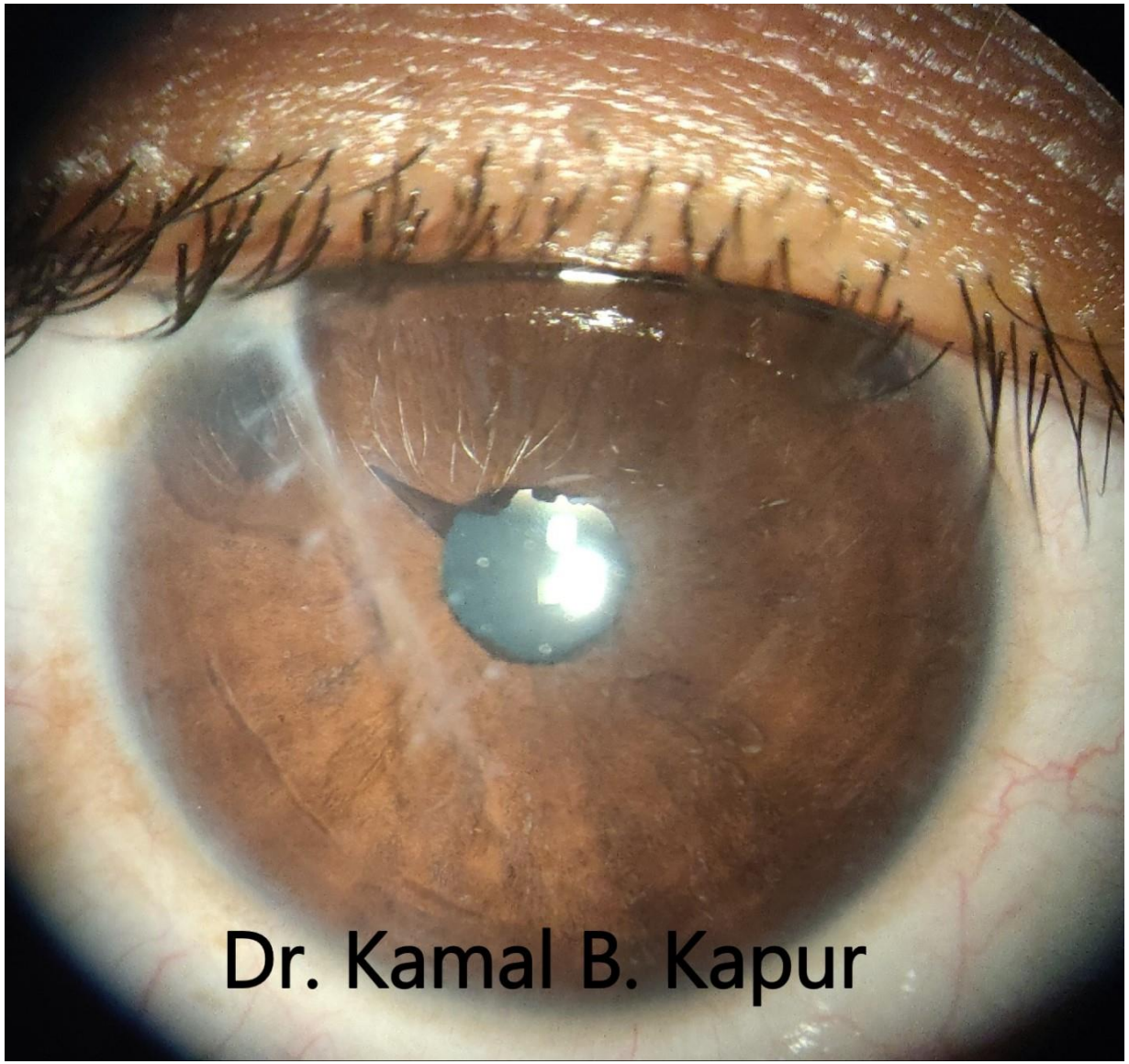


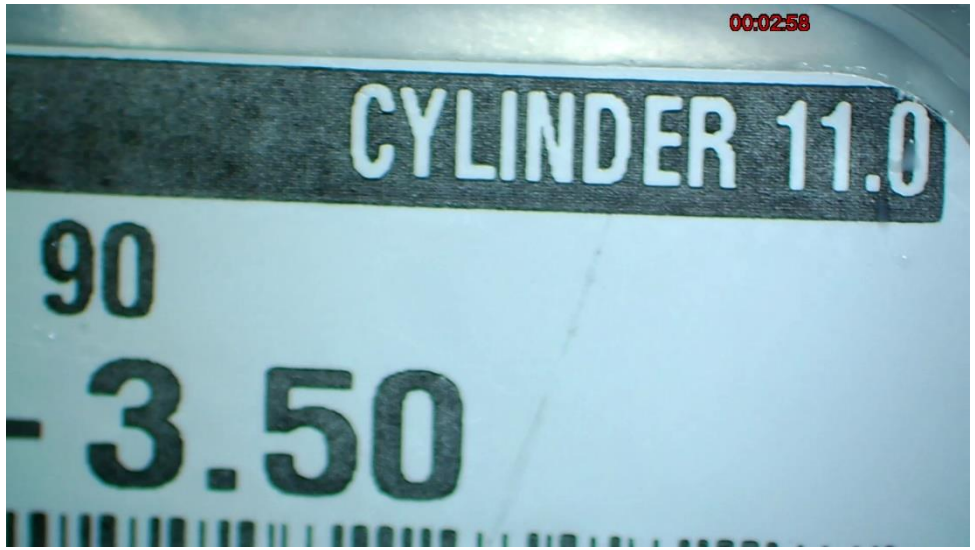
BAD MEASURE--- HIGH VAULT EXPLANT (HOOK TECHNIQUE)



PHAKIK IOL TO THE RESCUE IN PROBLEM SITUATIONS

Traumatic corneal perforation repaired -3.5 /11D Cyl astigmatism corrected with Phakic IOL





video

Traumatic corneal perforation repaired -3.5 /11D Cyl astigmatism corrected with Phakic IOL

Seconadry piggy back

implanted for residual -17 /-2.5 dsp in pseudophakos operated 18 years ago (traumatic cataract)

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4.5 mm small optic Customised Phakik IOL -13 mm diopters

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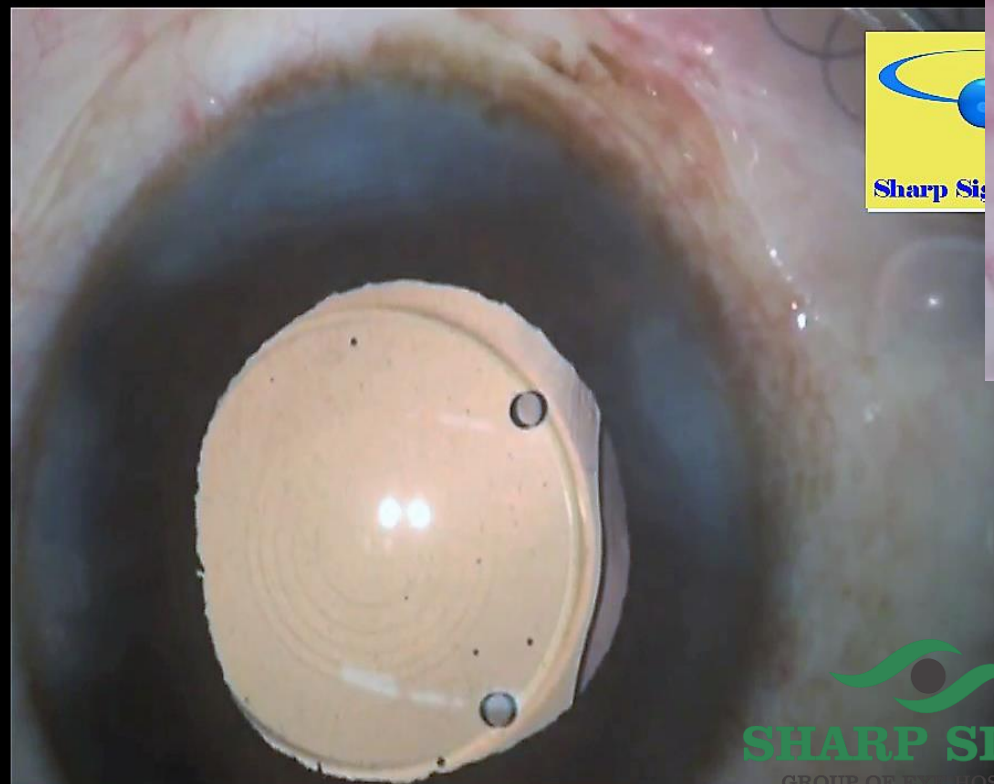
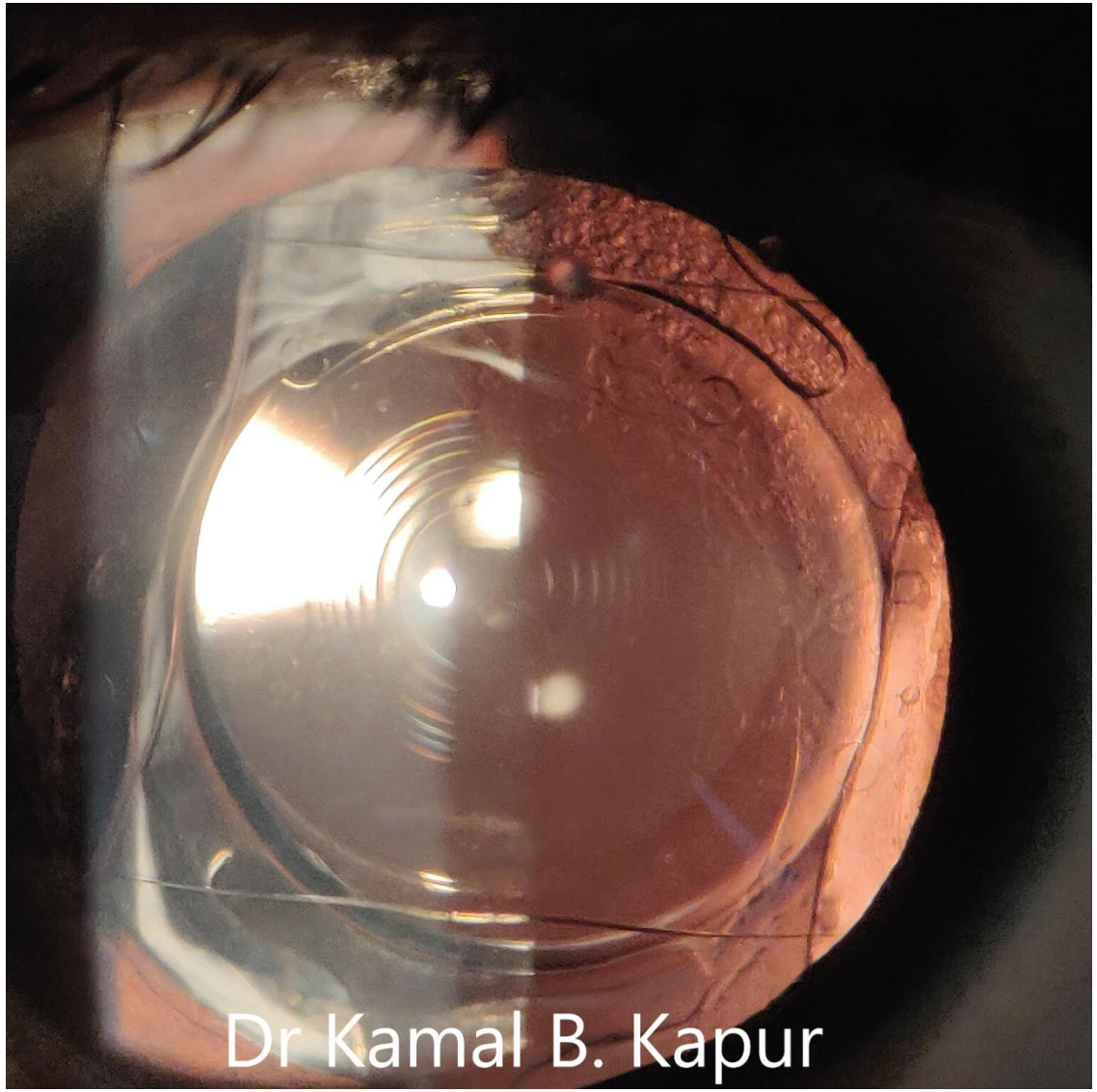
PRESBYOPIC PHAKIK IOL

Presbyopic IOL

PRESBY



Secondary Piggy back Presbyopic IOL



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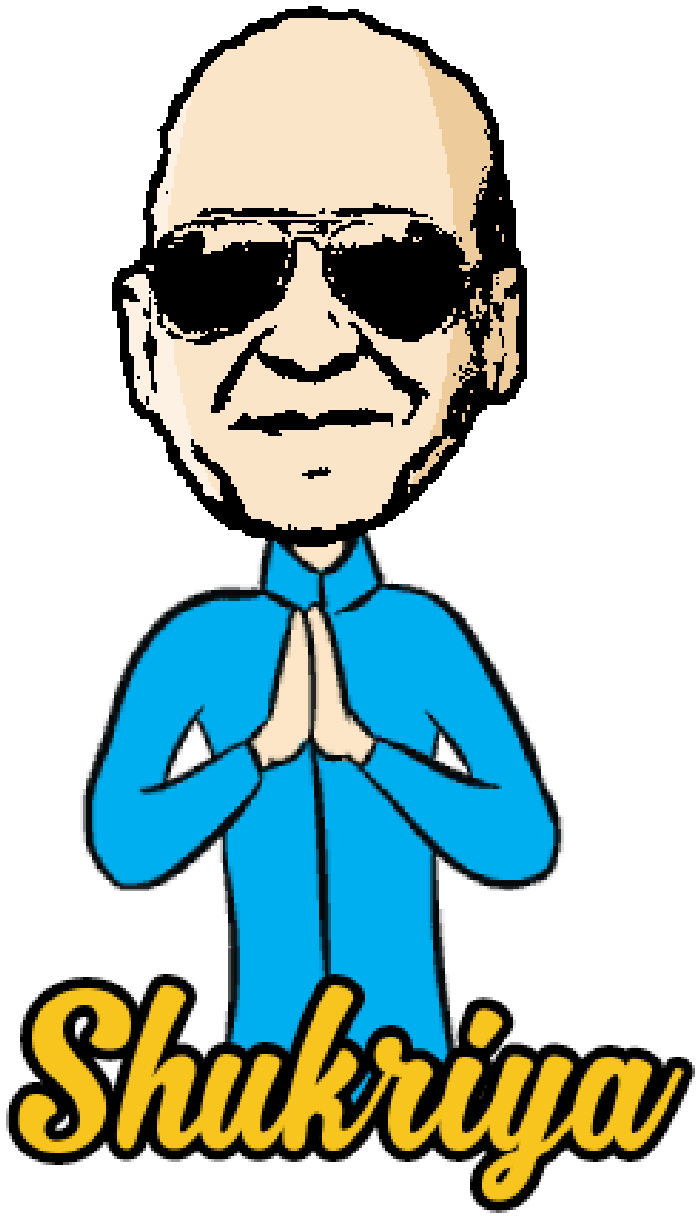

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