


## Lens Options for Patients with Varying Degrees of Posterior Capsule Tear



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## Financial Disclosures

- Alcon Laboratories
- Johnson & Johnson Surgical Vision
- Longbridge Medical
- Oculus USA



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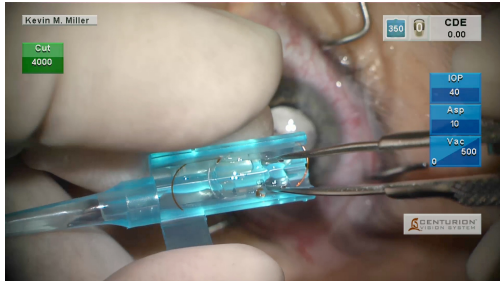
## Overview of this Presentation

- Preoperative considerations
- Intraoperative considerations
- Lens implantation in the ciliary sulcus
- The Ideal lens for the sulcus space
- Lenses not to implant in this space
- Special considerations

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## This was My Favorite Sulcus Lens




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## Preoperative Considerations

- Order a lens for the capsular bag
- Have a backup sulcus lens available
  - This lens may be the same model as the primary (in-the-bag) lens
    - The power should generally be reduced by 0.5 D
  - Often it will be a different IOL

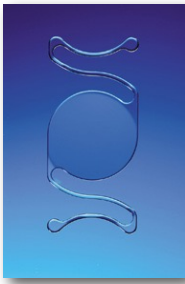


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## Preoperative Considerations

- Have a series of backup anterior chamber lenses available.
  - The power has to be calculated specifically for the anterior chamber using an appropriate A constant or surgeon factor.
  - Initial haptic size is horizontal corneal white to white plus 1 mm.



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### Intraoperative Considerations

- If a capsule tears, you need to limit its extension and determine its size.
- If a capsule tear is small and central, try to turn it into a posterior capsulorrhexis to make it more stable.
  - Consider in-the-bag lens implantation.
  - Sulcus implantation is a reasonable alternative, with or without optic capture.
- If a tear is larger but does not extend anteriorly to involve the capsulorrhexis, remove the capsule remnants behind the pupil with a vitrector.
  - Implant a lens in the sulcus.

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### Intraoperative Considerations


- If the tear is extensive and extends anteriorly to involve the capsulorrhexis, but the zonules are strong for 360°, remove the capsule remnants behind the pupil.
  - Implant a sulcus-based IOL with its haptics 90 degrees away from the capsulorrhexis tear.
- If the tear is extensive and there is capsular instability because of zonular laxity or dehiscence
  - Implant an anterior chamber lens.
  - Suture fixate a posterior chamber lens to the sclera or iris.
    - Do not do this under topical anesthesia.

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### Important Point

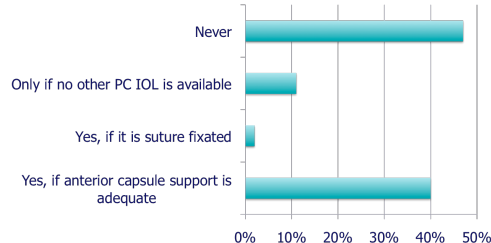
Most eyes with posterior capsule tears can be managed by sulcus-based posterior chamber lens implantation.



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### Can a single-piece acrylic IOL be placed in the ciliary sulcus?



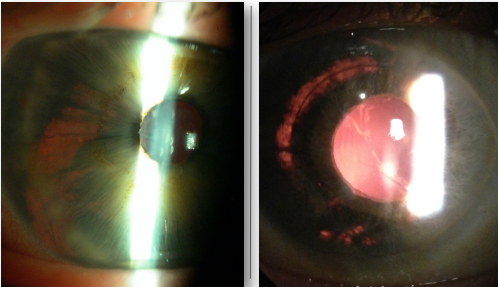
Response	Percentage
Never	~48%
Only if no other PC IOL is available	~12%
Yes, if it is suture fixated	~2%
Yes, if anterior capsule support is adequate	~38%

Question posed at the 2008 AAO Cataract Spotlight Symposium

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### Sulcus Implanted Single Piece Acrylic IOLs



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SPECIAL REPORT

### Complications of sulcus placement of single-piece acrylic intraocular lenses

#### Recommendations for backup IOL implantation following posterior capsule rupture

David F. Chang, MD, Samuel Masket, MD, Kevin M. Miller, MD, Rosa Braga-Mele, MD, Brian C. Little, MD, Nick Mamalis, MD, Thomas A. Oetting, MD, Mark Packer, MD, for the ASCRS Cataract Clinical Committee

**PURPOSE:** To describe complications arising from sulcus placement of single-piece acrylic (SPA) intraocular lenses (IOLs), evaluate IOL options for eyes that lack adequate capsule support, and examine the appropriateness of various IOL designs for sulcus placement.


**SETTING:** University and private anterior segment surgery practices.

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### AcrySof Package Insert

"...the clinical study of the AcrySof natural single-piece lens (referenced in tables 2 through 5) was conducted with the lens intended for implantation in the capsular bag only. There are no clinical data to demonstrate its safety and effectiveness for placement in the ciliary sulcus."



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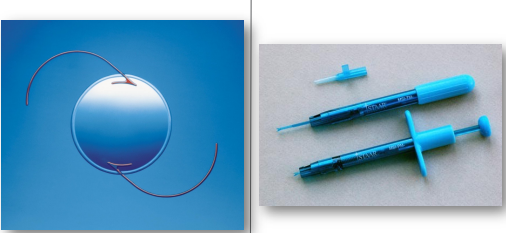
### What is the Ideal Lens for the Ciliary Sulcus?

- Optic
  - Large diameter
  - Round edge
  - Wide power range
- Haptics
  - Flexible, not stiff
  - Minimum 13 mm dimension (13.5 or 14 mm is better)
  - Slight posterior angulation

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### STAAR Surgical AQ2010V and MicroSTAAR Injector System (replaced by CQ2015A)




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### Lenses Not to Implant in the Ciliary Sulcus

- Lenses with
  - Small optics
  - Small haptics
  - Square edges
  - No posterior haptic angulation

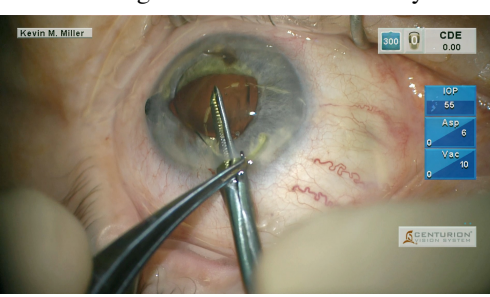
Never implant a single-piece acrylic or plate-haptic lens in the ciliary sulcus!



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### Lens Exchange and Anterior Vitrectomy



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300 0 CDE 6.00

IOP 66  
Asp 6  
Vac 10

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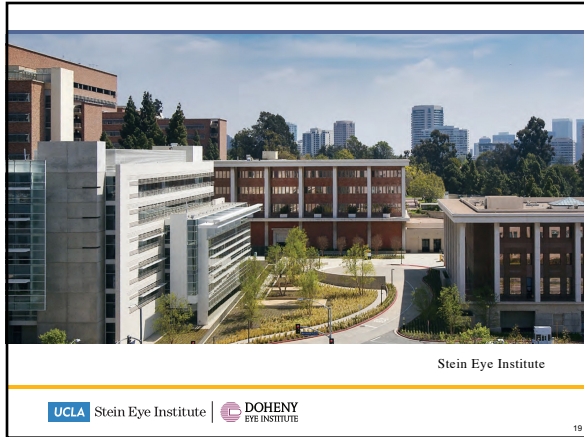
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### Special Considerations

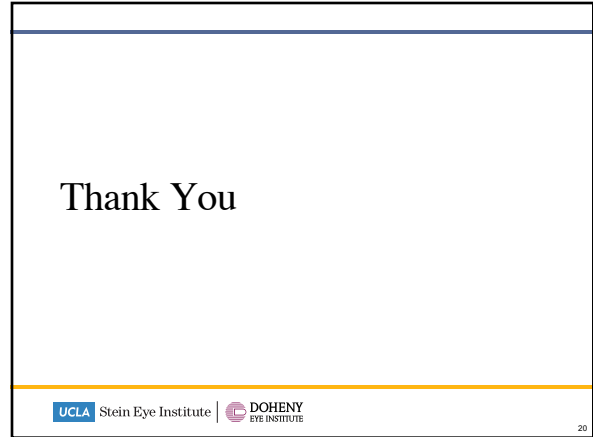
- Know your backup lenses well.
- Know how to insert them.
- Consider giving a patient IV or intravitreal corticosteroids as a prophylaxis against CME when you lose vitreous.

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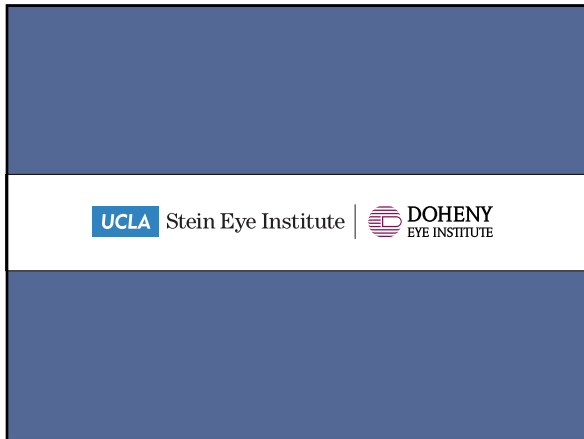
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