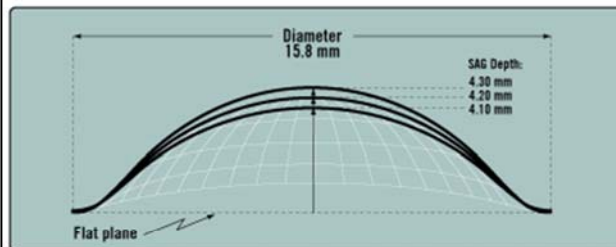


Fitting Mini-scleral Gas Permeable Contact Lenses on Irregular Corneas

Fitting Mini-scleral Gas Permeable Contact Lenses on Irregular Corneas

Stephen P Byrnes, OD, FAAO
Private Practice – Londonderry, NH
Academic Consultant - B&L / The Boston Group

Understanding sagittal height / sagittal depth



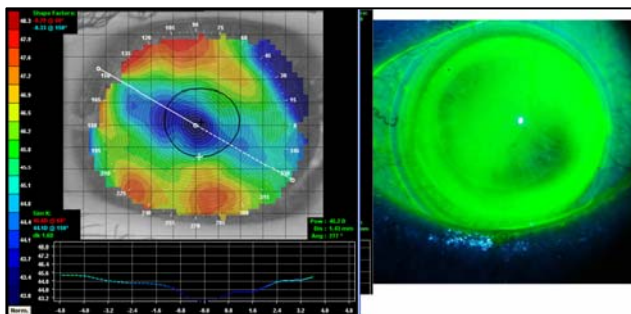
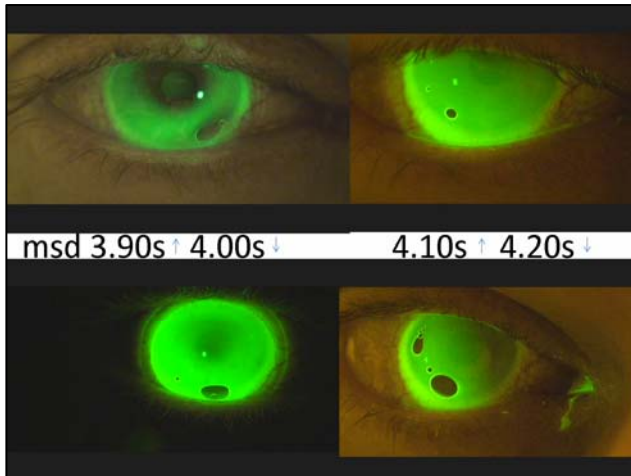
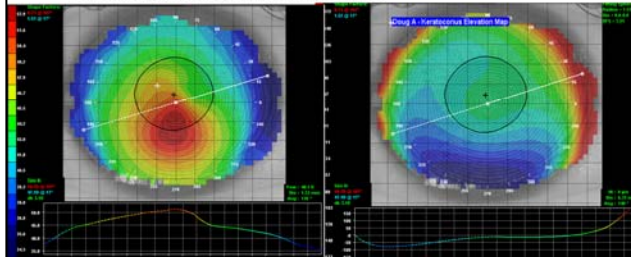
Sagittal depth value of the mini-scleral contact lens is adjusted to vault the highest point on the cornea



Fitting Mini-scleral Gas Permeable Contact Lenses on Irregular Corneas

Topography – which map is more useful?

- The Axial Map and Tangential Map show changes in curvature of the corneal surface
- The Elevation Map shows the highest and lowest points on the cornea

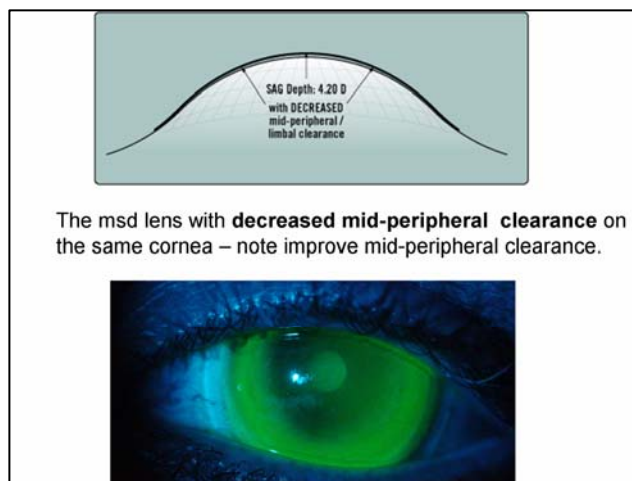
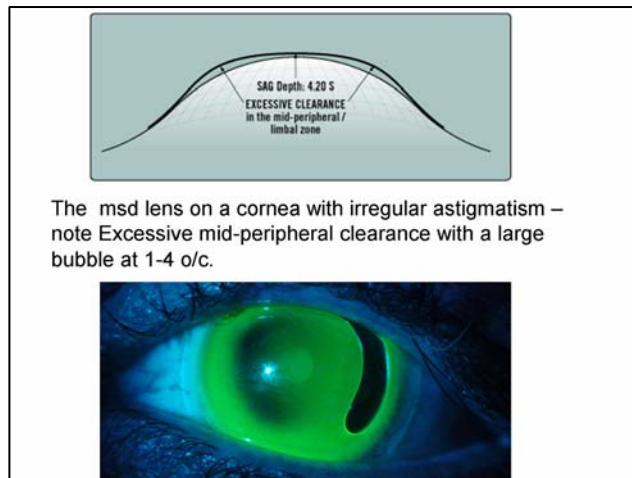
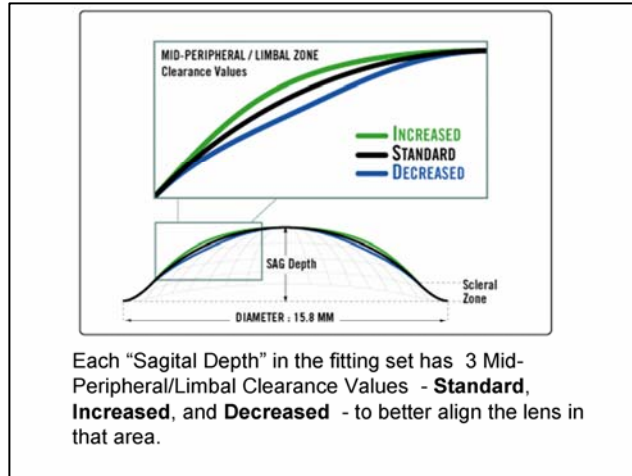


A non-fenestrated msd Mini-Scleral Lens fit on an eye s/p penetrating keratoplasty . Note minimal clearance over the corneal apex and clearance over the limbus. The lens is resting on the sclera/conjunctiva.

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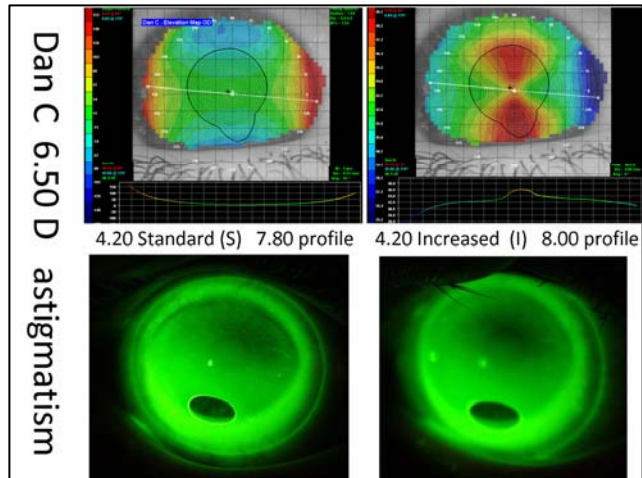
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Fitting Mini-scleral Gas Permeable Contact Lenses on Irregular Corneas



Points to ponder

- Mini-scleral lenses are designed to fit on the sclera – or more accurately on the bulbar conjunctiva.
 - The conjunctiva will compress and the net sagittal height will be greater – requiring a msd lens with greater sagittal depth.
 - Allow the initial trial lens to settle for 1 hour before accepting the fit
 - A lens that touches the cornea may disrupt the corneal epithelium

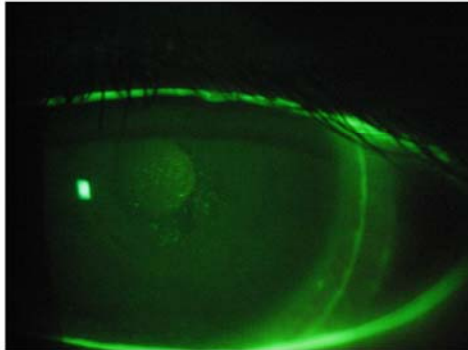
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Fitting Mini-scleral Gas Permeable Contact Lenses on Irregular Corneas



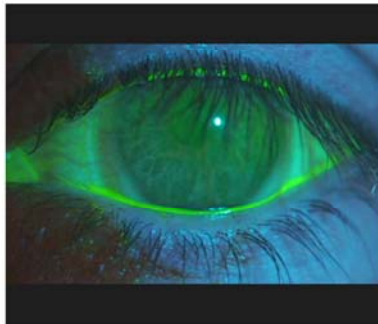
Compression ring and touch staining

Points to ponder

- Fenestration allows tear flow behind the lens but may allow in bubbles in some cases
- Mucin entrapment may also occur



Evaluating the fit at a progress check



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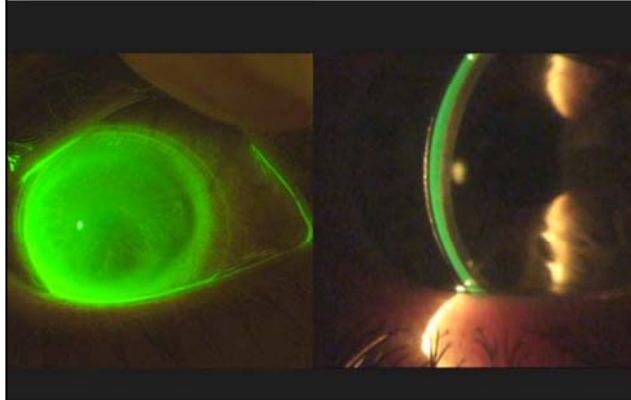
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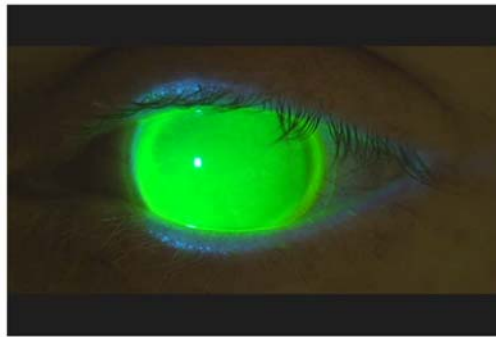


Fitting Mini-scleral Gas Permeable Contact Lenses on Irregular Corneas

The fluorescein / tear lens profile



Evaluate the “landing zone”



Move the bulbar conjunctiva – can the vessels move under the lens?

Value to the practice

- Advanced cones / pmd
- Piggy-back fits and failures
- Post surgical corneas
- Poor comfort with traditional corneal designs
- Neovascularization with hybrid lens designs
- Value to the patient
 - Better initial /long term comfort
 - Centered optics /consistent visual acuity
 - No foreign body complaints
 - Healthy cornea
 - Improved visual field vs. de-centered corneal lenses

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