

kontaktlinsenstudio
studio bärtschi

Corneal Ectasia

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Financial Disclosure

- Clinical Investigator :
 - Abbott
 - Bausch&Lomb
 - Ciba Vision
 - Cooper
 - Falco Kontaktlinsen
 - Johnson&Johnson
- Payed Consultant:
 - Falco Kontaktlinsen Switzerland
 - Johnson&Johnson

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Corneal Ectasia

Incidence Ranking

1. Refractive Surgery 0.66%

Pallikaris et al Cataract Refract Surg 2001; 27:1796–1802

2. Keratoconus 0.0005% - 0.0025%

Jiménez et al. Contact Lens & Anterior Eye 2010; 33 :157–166

Keratoconus in LASIK Candidates: 3-6%!!

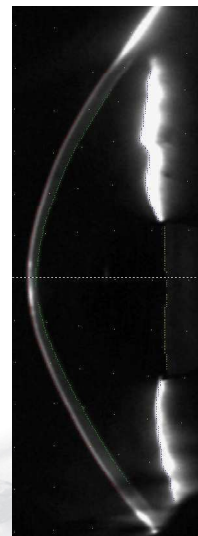
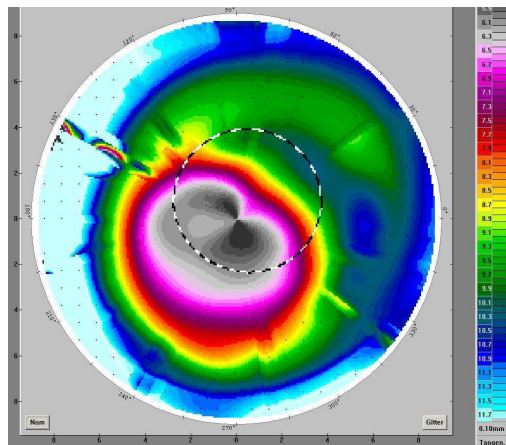
David Varssano et al. Cornea 2004;23:602–607

3. Pellucid Marginal Degeneration (PMD) is very rare (no exact data available)
4. Keratoglobus extremely rare (no data available)

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Ectasia Topography

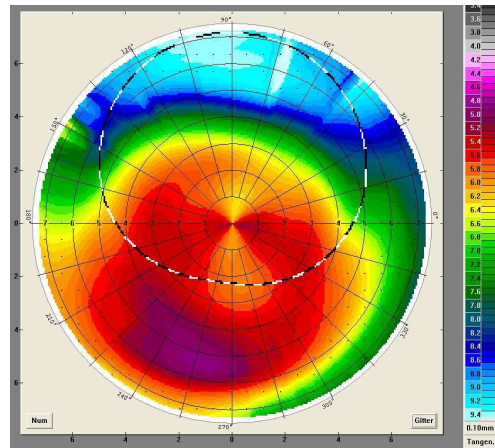
- Keratoconus



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Ectasia Topography

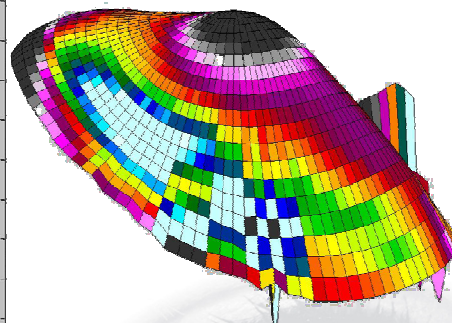
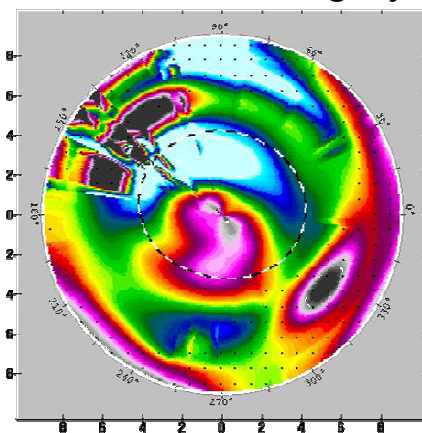
- PMD



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Ectasia Topography

- Refractive Surgery



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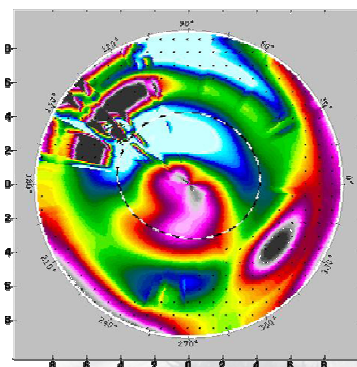
Fitting options and approach



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Central Ectasia

- RP, caucasian female , 41 y, post LASIK
- Ectasia limited only to the center part of the cornea, periphery appears almost regular
- Prevalence
 - early Keratoconus
 - post refractive surgery



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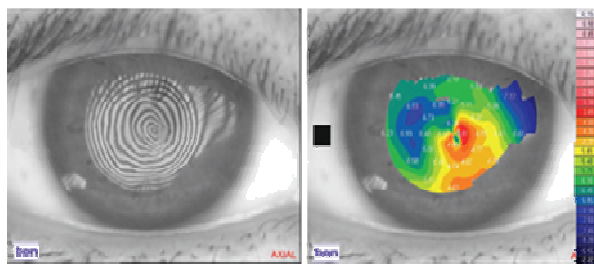
Specialty Soft

- Kerasoft®IC by Ultravision UK
 - High water content SiHy (DK 60) material (Definitive Contamac)
 - 3 month replacement schedule
 - High levels of comfort and long wearing times
 - Award winning wavefront optics and front surface toric

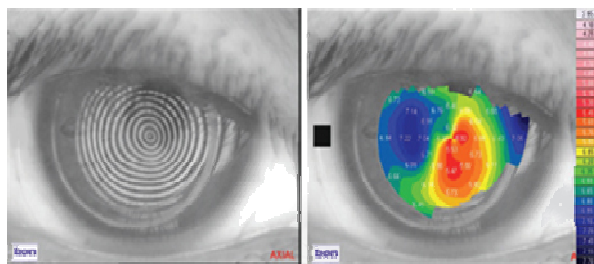
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Specialty Soft

No contact lens

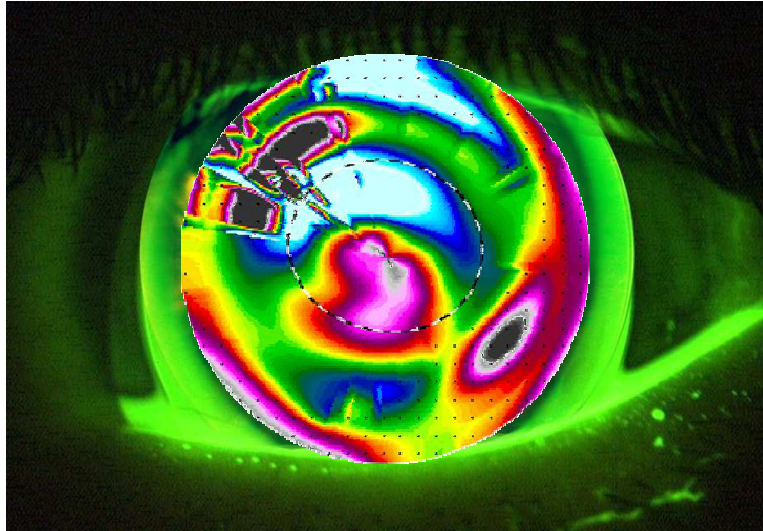


Kerasoft®IC



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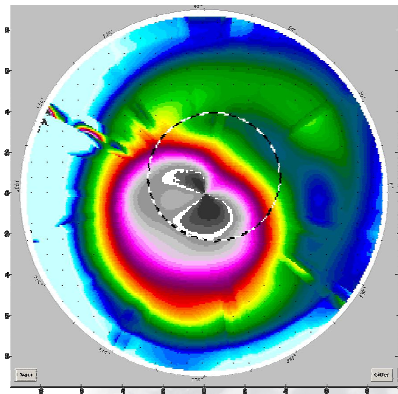
Classic GP Design



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Decentered Ectasia

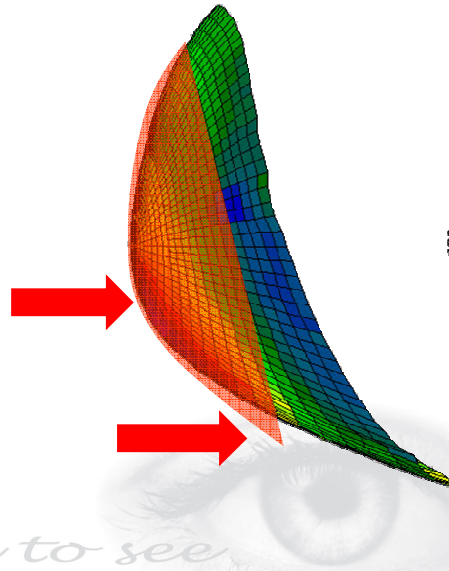
- SM, caucasian male, 38y, Keratoconus
- Ectasia displaced (mostly inferior), but periphery still possible to fit
- Prevalence
 - All stages of KC
 - mild or early PMD



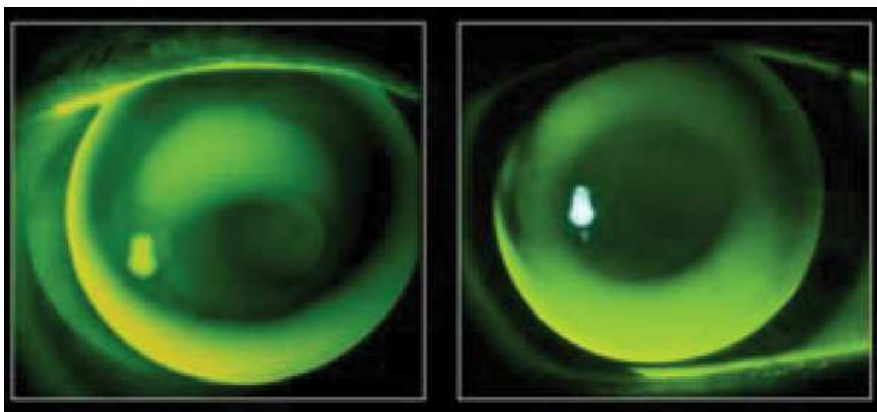
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Classic GP Design

- Rotation symmetric Design
- Pay attention to apex touch and the edge lift in 270°



Classic GP Design



courtesy of Pat Caroline

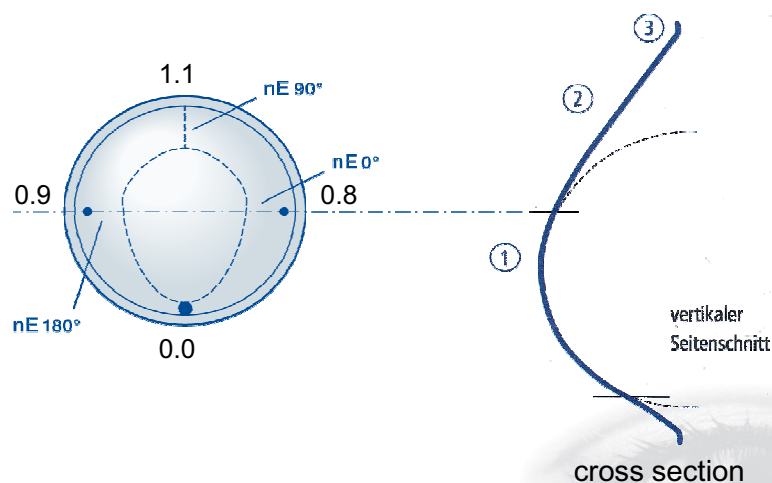
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Quadrant-specific Design

- The idea is to fit the lens in every quadrant as good as possible to the origin cornea curvature
 - Reducing pressure on the Apex of the Ectasia
 - Fitting the periphery is more important, than central K readings
 - The contact lens will click-in the peripheral cornea curvature

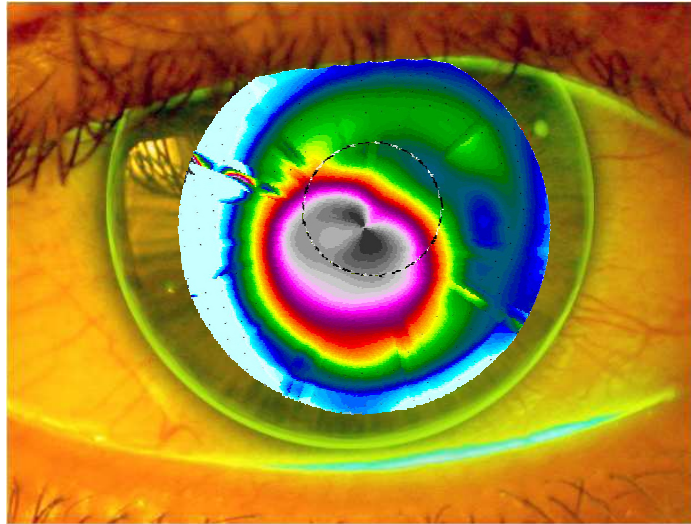
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Quadrant-specific Design



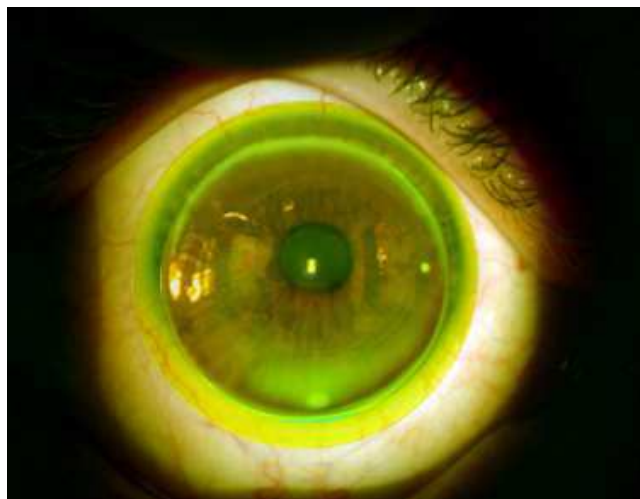
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Quadrant-specific Design



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Piggyback



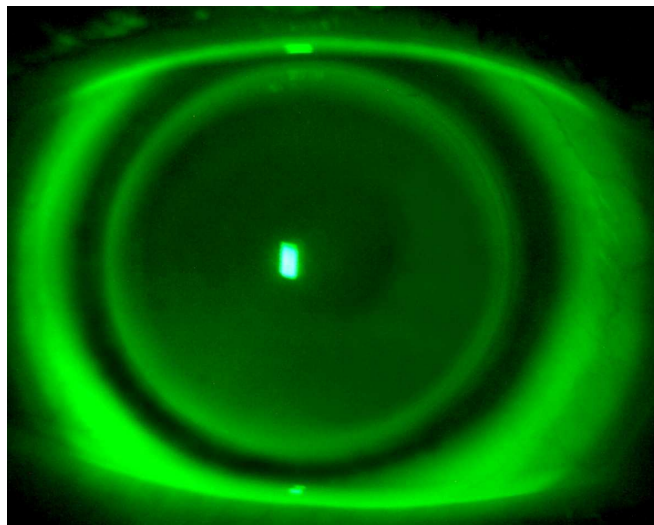
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Piggyback

- Piggyback is not transforming a bad GP fit into a good one!
- Usefull in cases with:
 - Massive 3+9 o'clock staining
 - Very sensitive Patient
 - Extreme exposition to dust
 - High DK Material for GP and Hydrogel

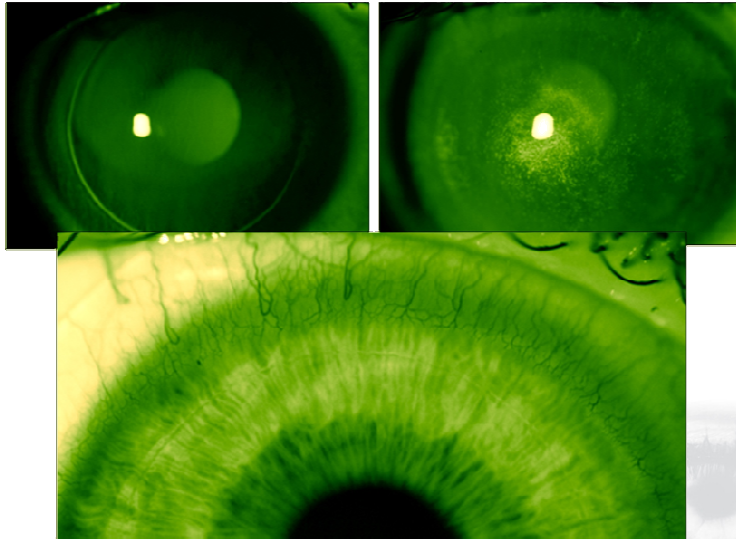
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Hybrid Synergeyes



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Problems in the Past



The Science of Duette™

- Flex₂O™ silicone hydrogel skirt (84 DK)
 - Low modulus: durable, resists protein deposits
 - HealthyEyes™ surface treatment increases wettability
- Proprietary MaxVu™ GP center (130 DK)
 - High modulus flexure resistant edge lift
 - Class II UV blocker
 - Low wetting angle keeps lens moist & comfortable

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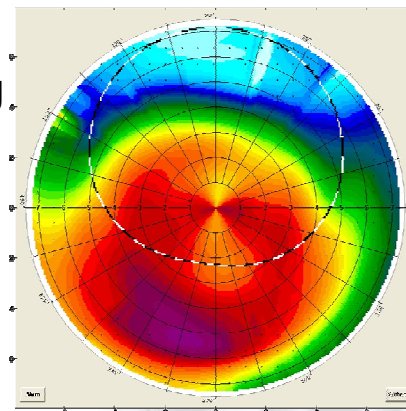
Breakthrough Lens Design

- RGP portion never touches cornea
 - Prolate asphericity coupled with reverse geometry of skirt will produce an ideal lens-to-cornea alignment when the selected base curve is ~1D steeper than flat K
 - Junction lift area corresponds to peripheral curve area of an RGP, with a slightly more modest lift
 - Approved **ONLY** for regular corneas

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Advanced Ectasia

- CM, caucasian male, 52y, PMD
- Ectasia extremely displaced, including the periphery
- Prevalence
 - Advanced stages Keratoconus
 - PMD



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Scleral Lenses

- Perfect centration
 - Vaulting entire Cornea and Limbus
 - The lens rests only at the Scleral Zone
- Simplified Fitting
 - Sclerals are fitted by Sagittal Depth rather than BC or K readings
- Outstanding Optic Results
 - Flatter BC and bigger Optical Zone Diameter

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Sclerals: Fitting Pearl

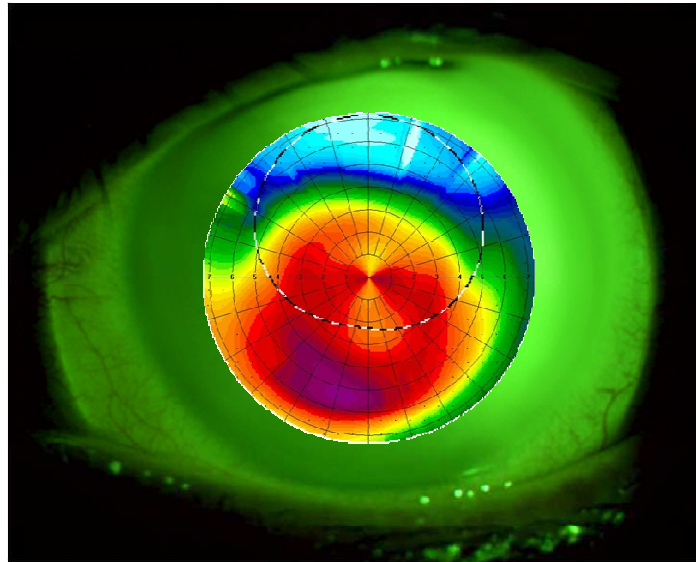
- Diameter (\emptyset_t)
 - maximal 17.00mm / Trials are 16.00mm
 - Till \emptyset 16.50 Sclera is more or less regular for fitting, if going bigger, the sclera shows different curves in each quadrant
- Limbal Region
 - Avoiding any Edema, by changing the Transition Zone between Optic - and Scleral Zone

Study Pat Caroline, M.Sc. Kurs, Freiburg July 2010

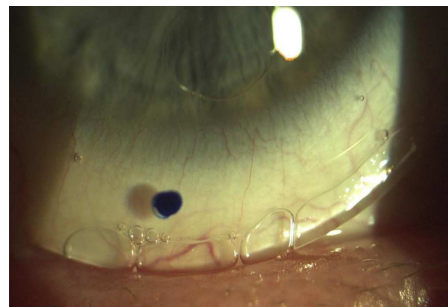
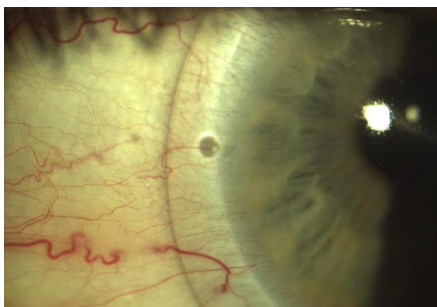
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Scleral Lenses (PMD)

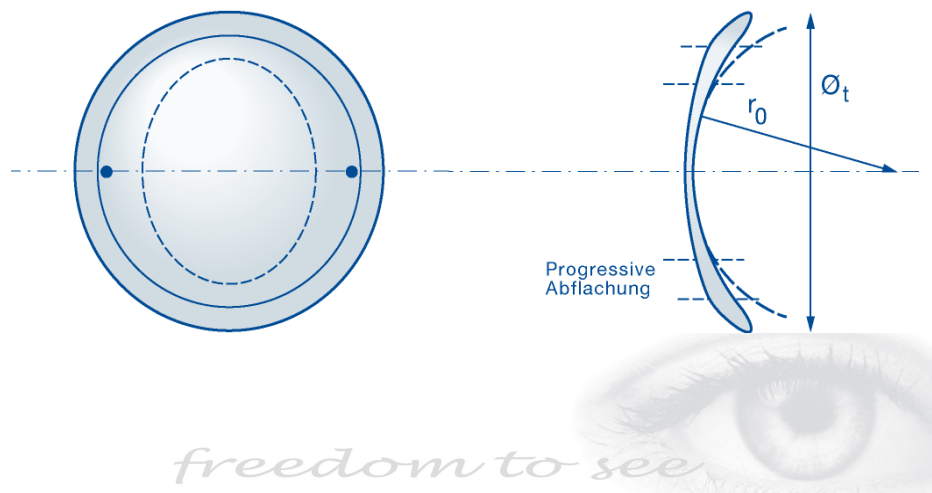


Case CM: Toric periphery

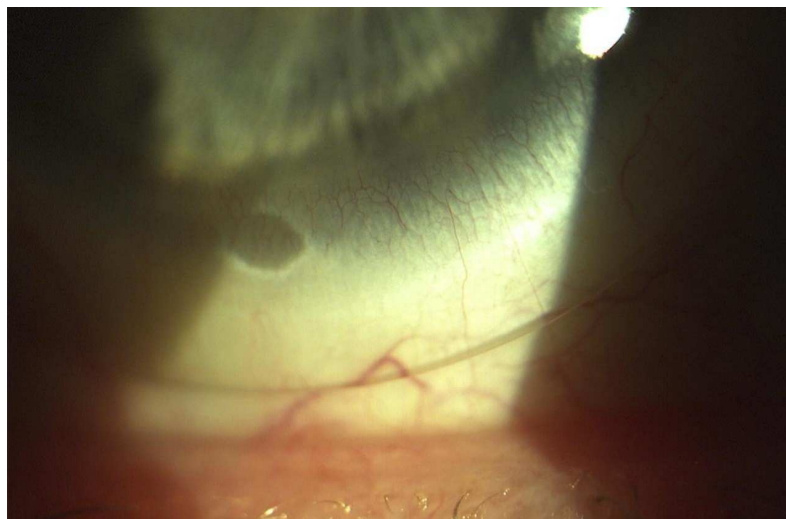


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Case CM: Toric periphery



Case CM: Toric periphery



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Download:

http://www.kontaktlinsenstudio.ch/medien/medien_Frameset.htm

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