



PRE CONGRESSO

Corso teorico – pratico di semeiotica strumentale

Venerdì 2 Ottobre

Torre Melissa (Kr)

**Anatomia del segmento anteriore
con SD – OCT
e
miscellanea di patologie**

Dr. Alain SERRU - Nuoro

Caratteristiche generali

- Dominio delle frequenze (Fourier domain)
- Risoluzione assiale 5 μm
- Risoluzione laterale 20 μm
- Acquisizione a pseudo colori e ricostruzione 3D
- Analisi strato per strato (analisi 3D) su 3 piani
- Retinografo non midriatico a colori per il reperi della scansione analizzata
- Fotografia del segmento anteriore e ricostruzione 3D del segmento anteriore
- Analisi dello spessore e dei volumi delle fibre nervose.

Caratteristiche generali

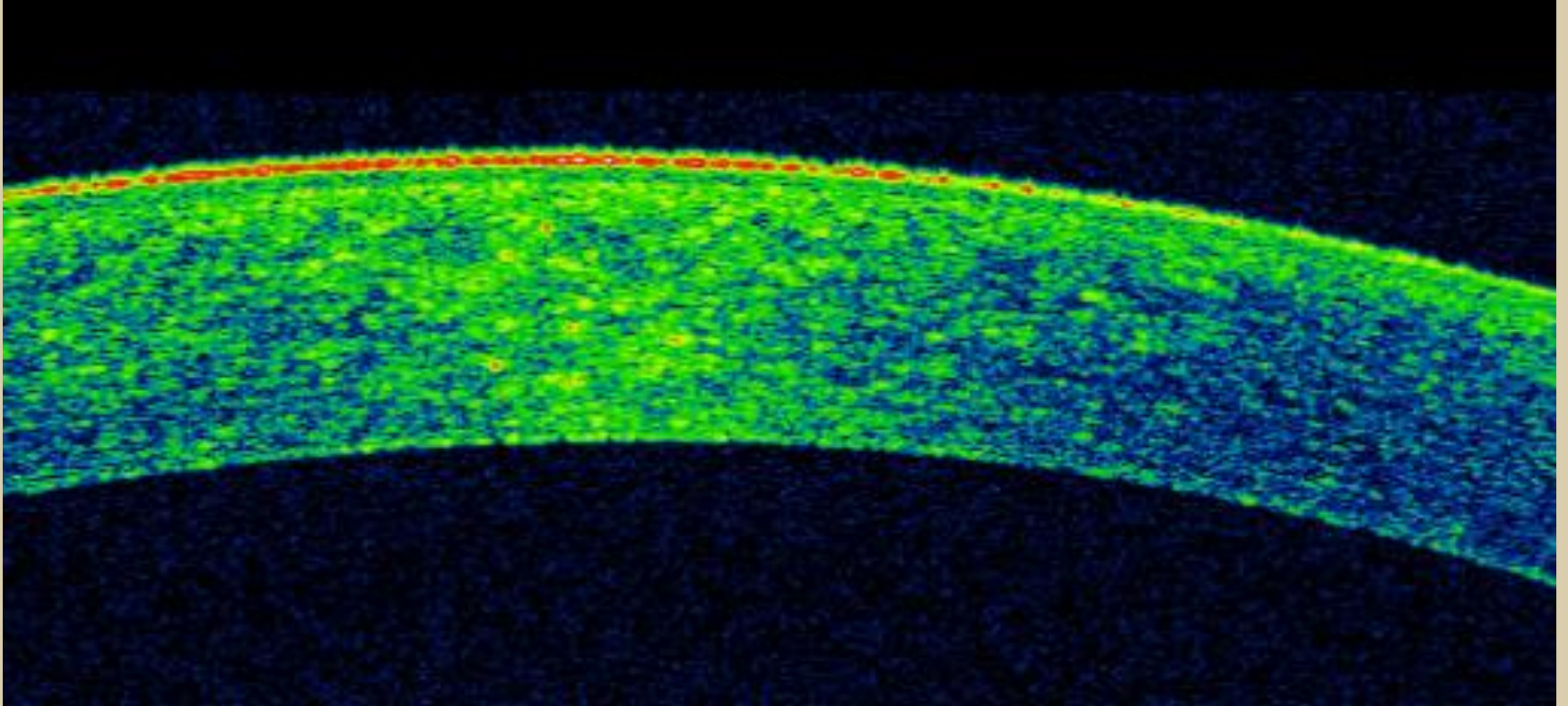
- Angolo di osservazione 45°
- Profondità di scansione 2,3 mm
- Allineamento automatico del segnale OCT
- Selezione acquisizione vitreo/coroide/segm. Ant.
- Segmento anteriore: Cornea, Cristallino
- Overlap: più scansioni lineari, sovrapposizione e media
- Ricostruzione retiniche e segmento anteriore del segnale OCT (3D)
- Sfogliare il volume 3D per assi cartesiani (cropping) e per strati (peeling)
- ...e forse (in futuro) en face

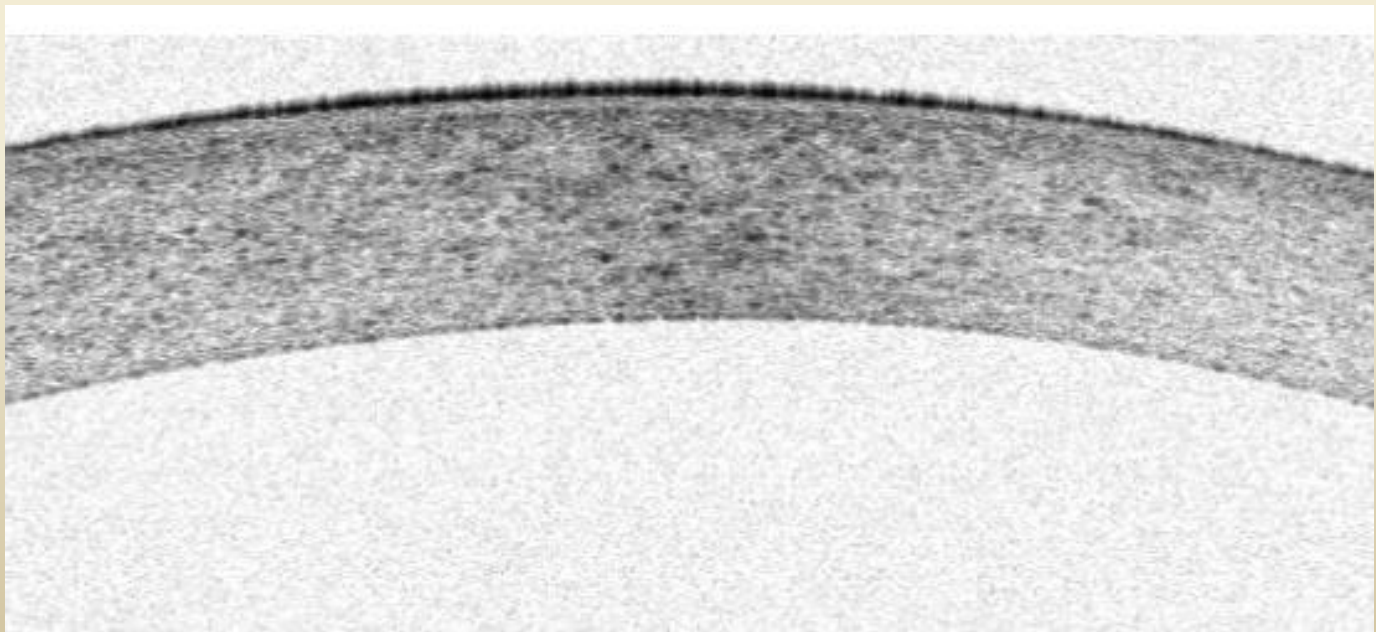
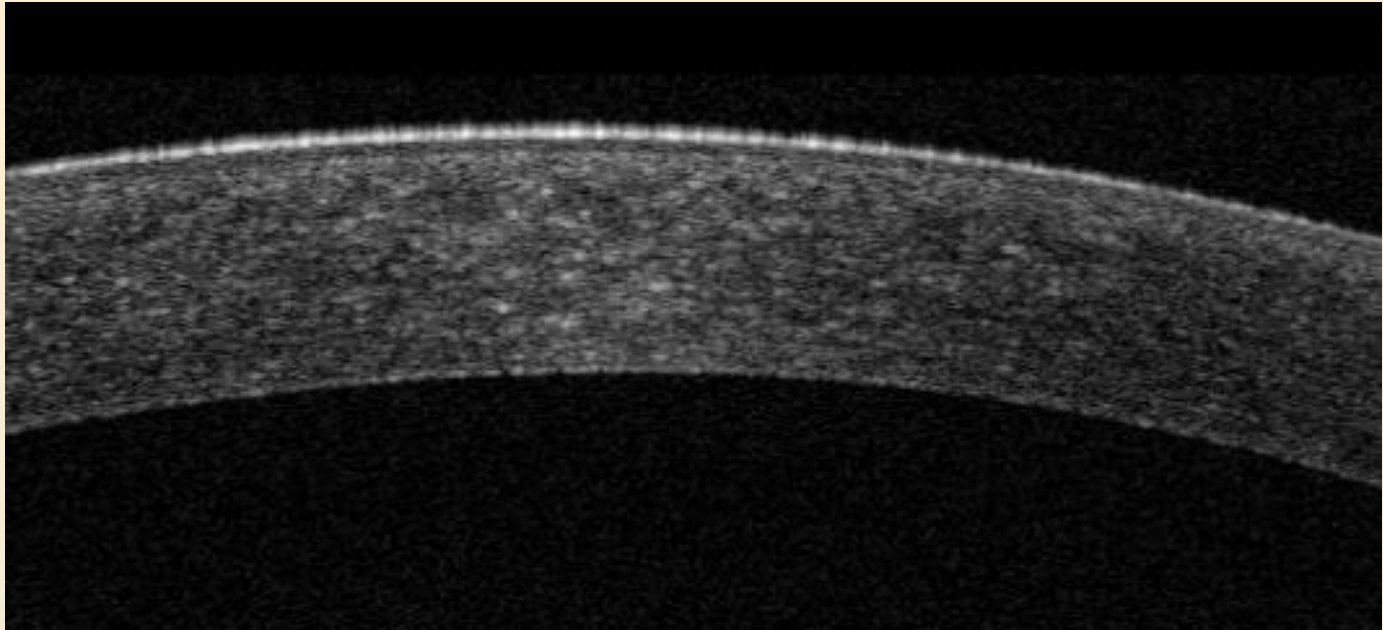
Tipo di acquisizione

- Lineare
- 3D
- Circolare
 - Falsi colori
 - Scala di grigi

Sfondo nero
Sfondo bianco

Escludiamo

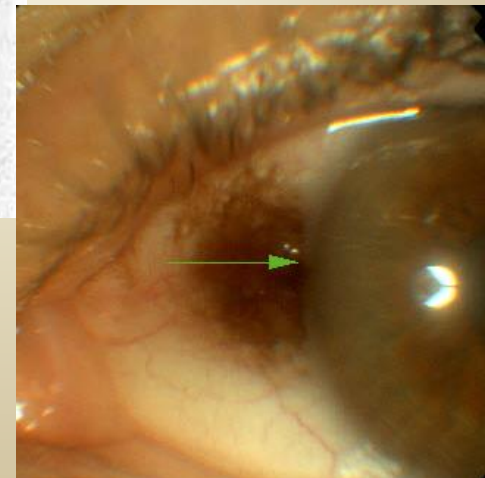
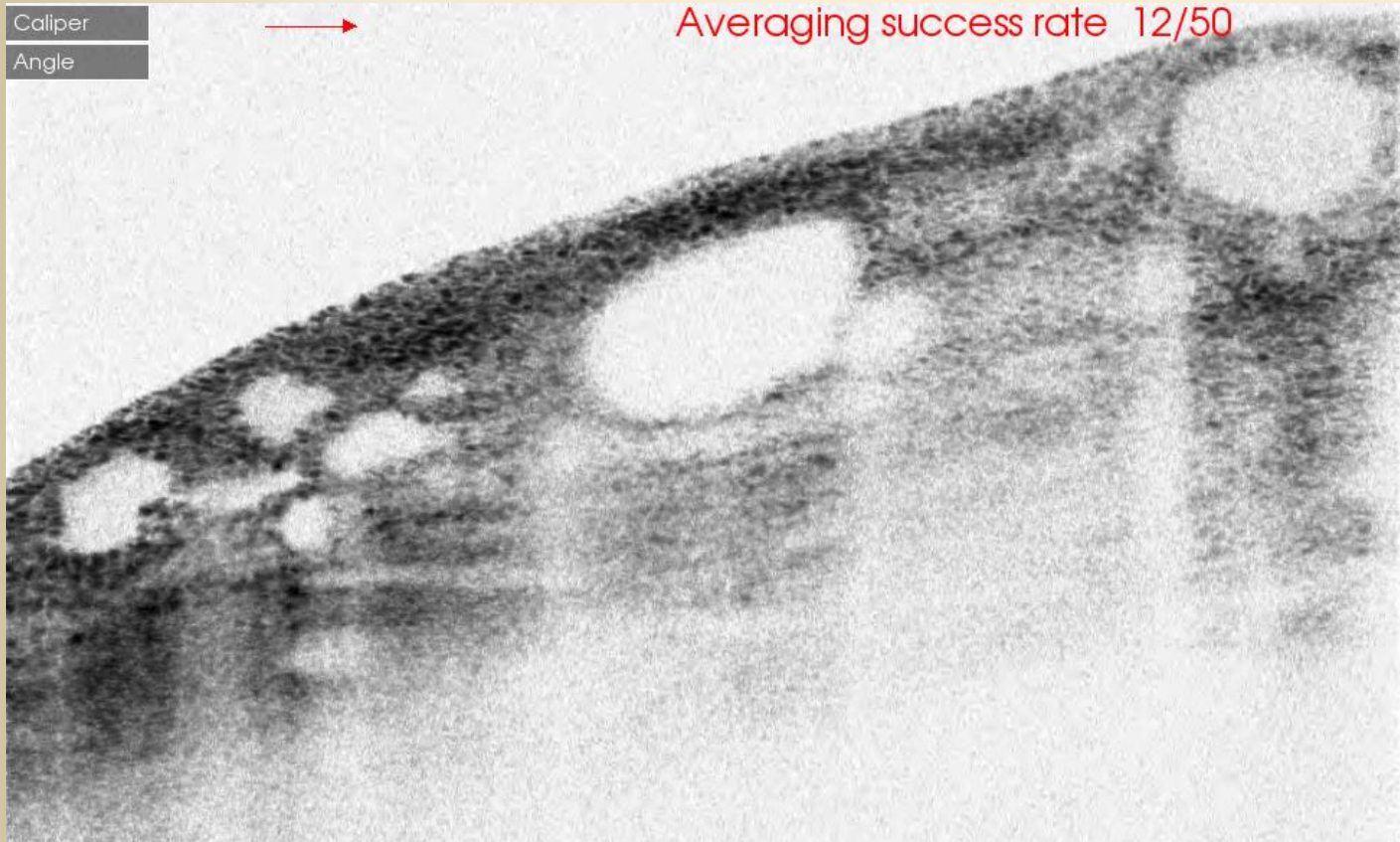




Lineare

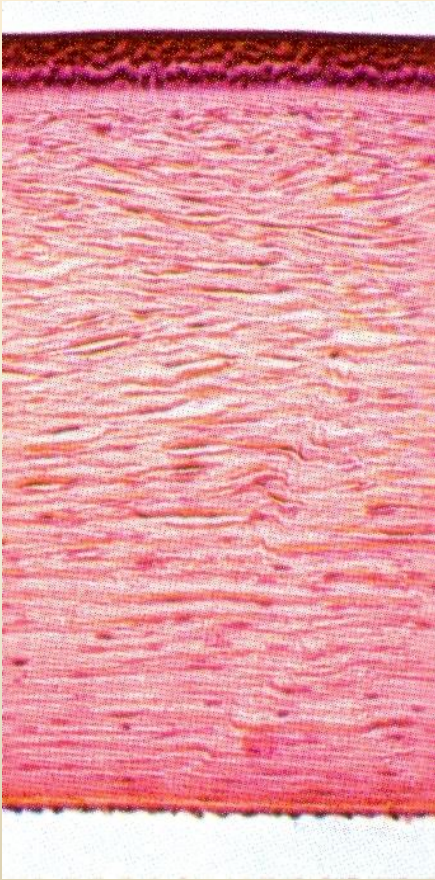
- **Semplice** (3 o 6 mm)
- **Overlap** (da 0 fino a 50 scansioni)
- **Orientata su 360°** (orizzontale, verticale e angoli intermedi)
- **Multiple su 360°** (in contemporanea)
- **Raster** (con linee a varie distanze)
- **Eseguire misurazioni**

3 mm è straordinaria!



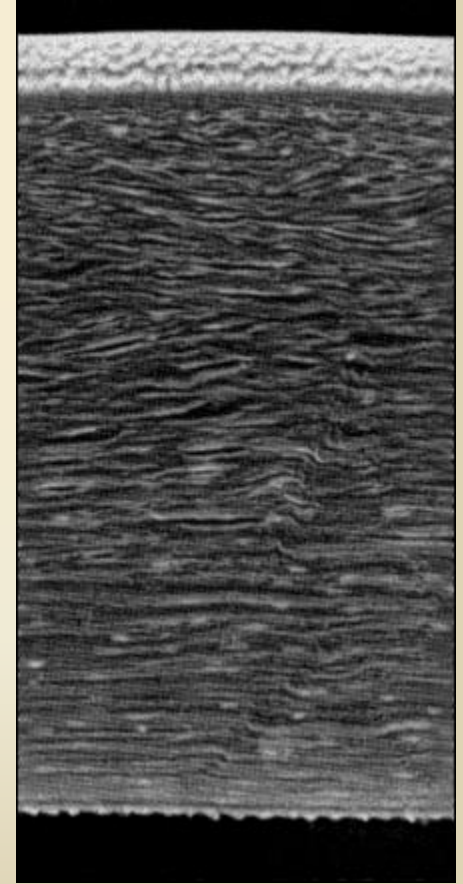
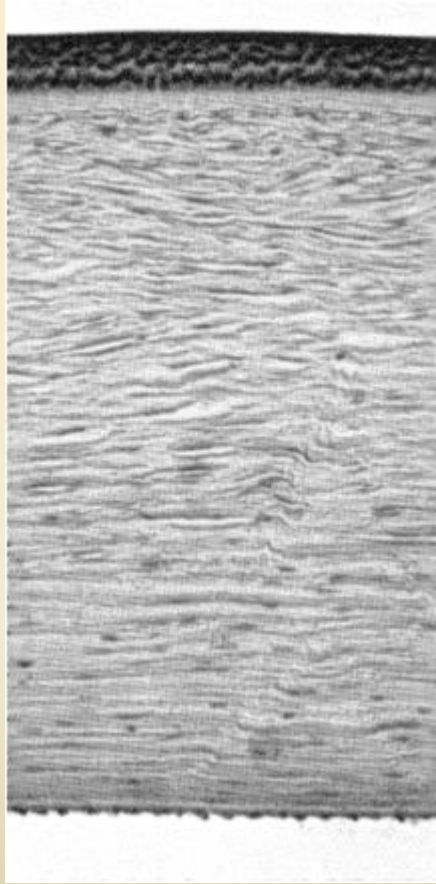
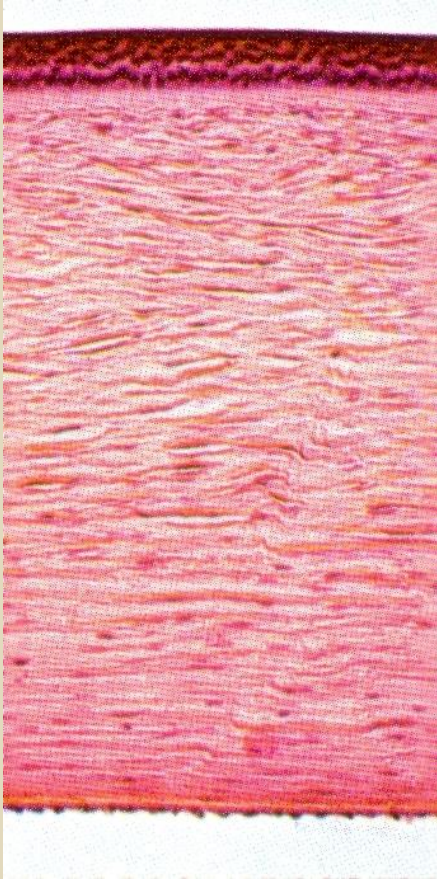
CORNEA

Istologia della cornea

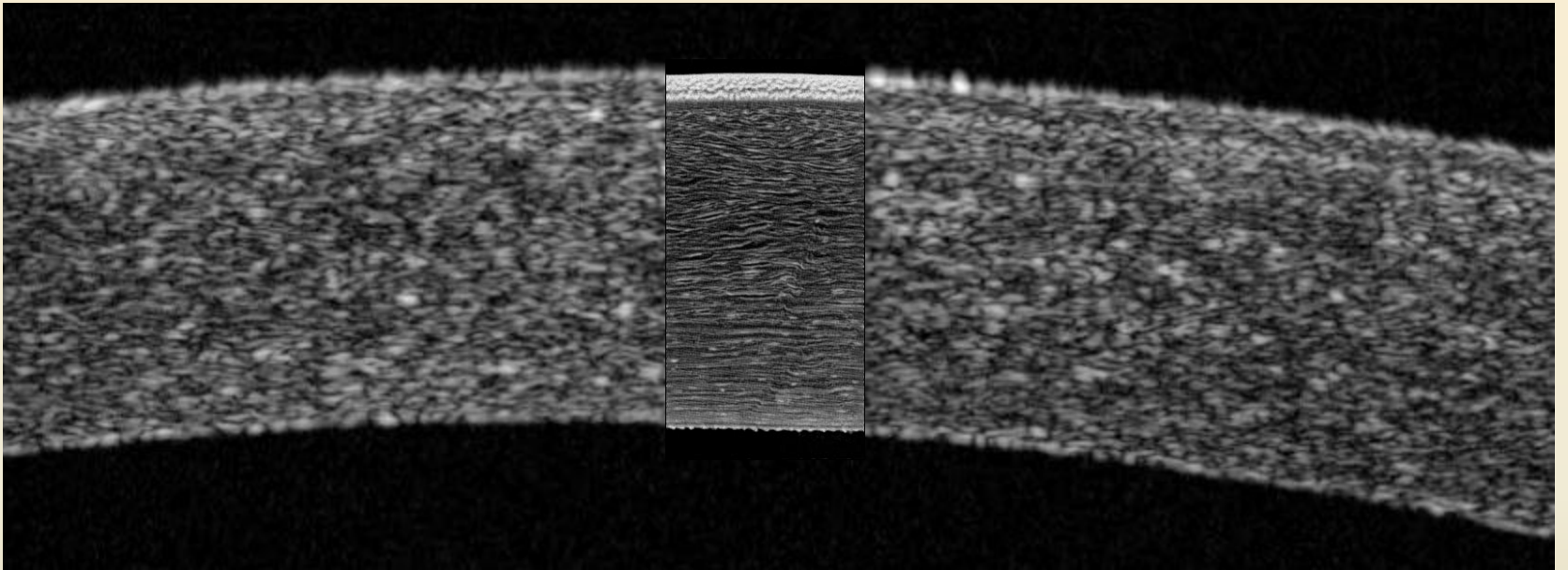


- **Film lacrimale:** 7 a 9 μ
- **Epitelio:** 50 μ
- **Bowman:** 8 a 14 μ
- **Stroma:** 486 μ
- **Descemet:** 5 a 10 μ
- **Endotelio:** 20 μ

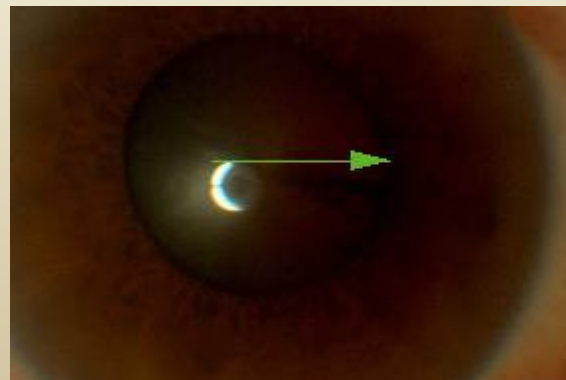
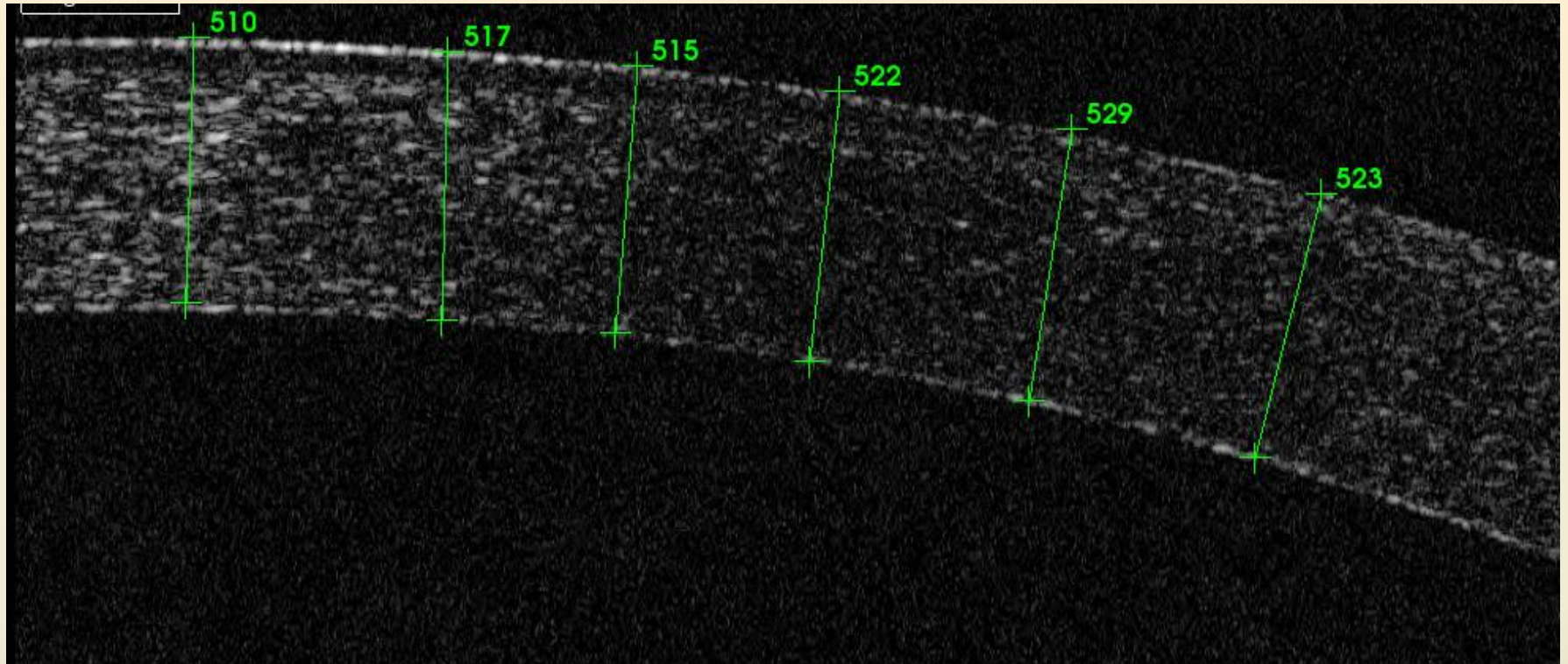
Proviamo a:



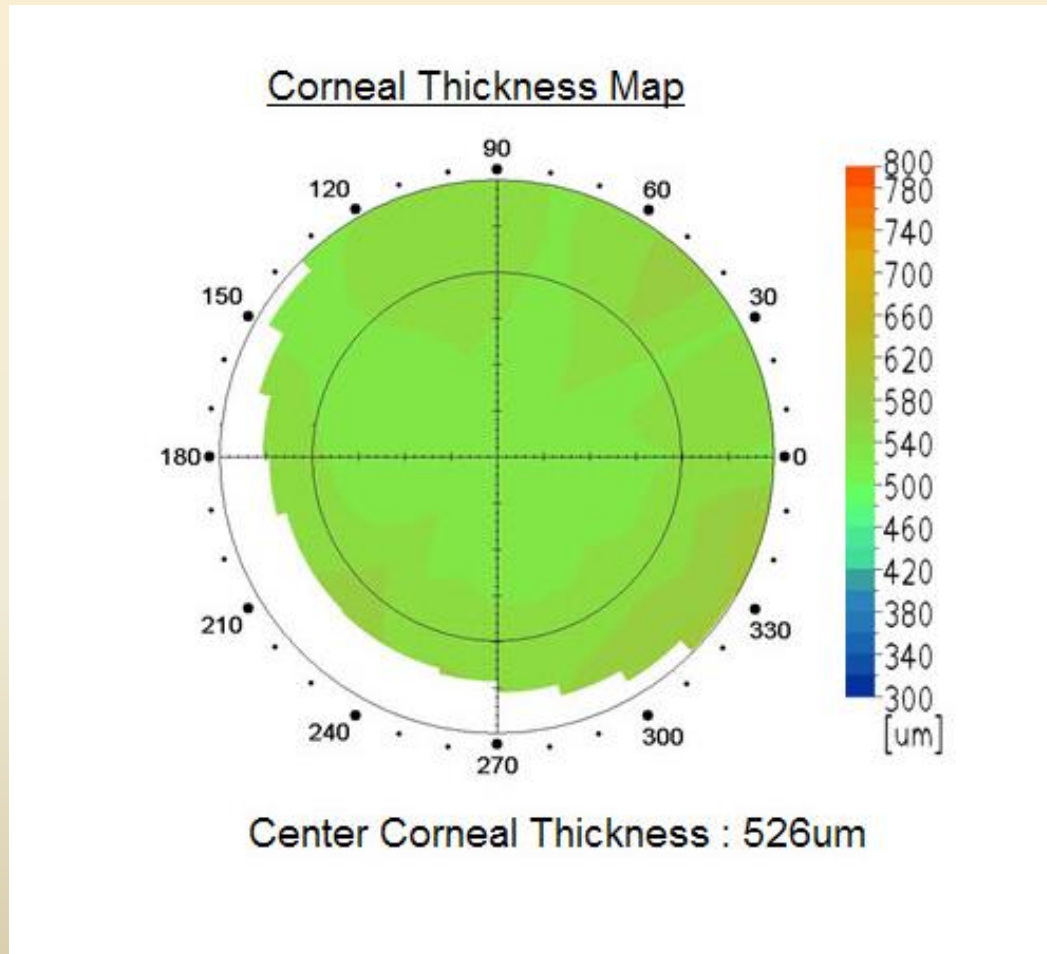
Analogie istologico - OCT



Misurazioni manuali

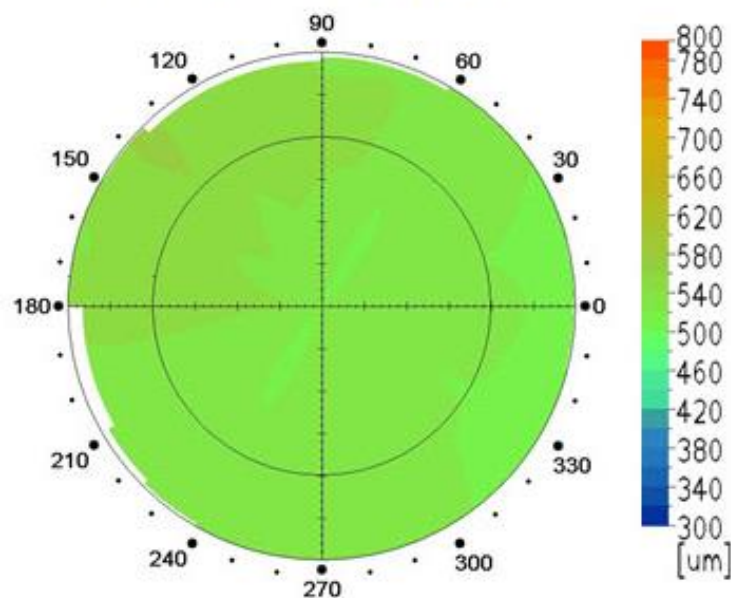


Misurazioni automatiche



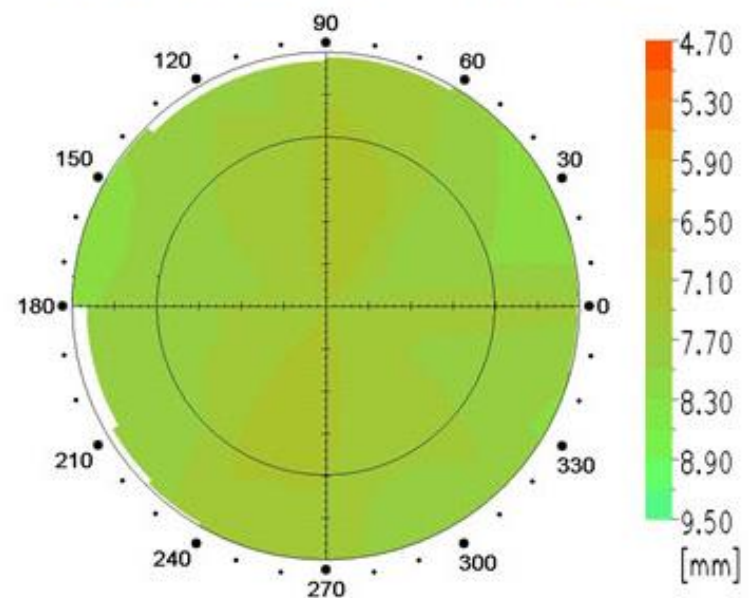
Mappa pachimetrica e Cheratometrica

Corneal Thickness Map



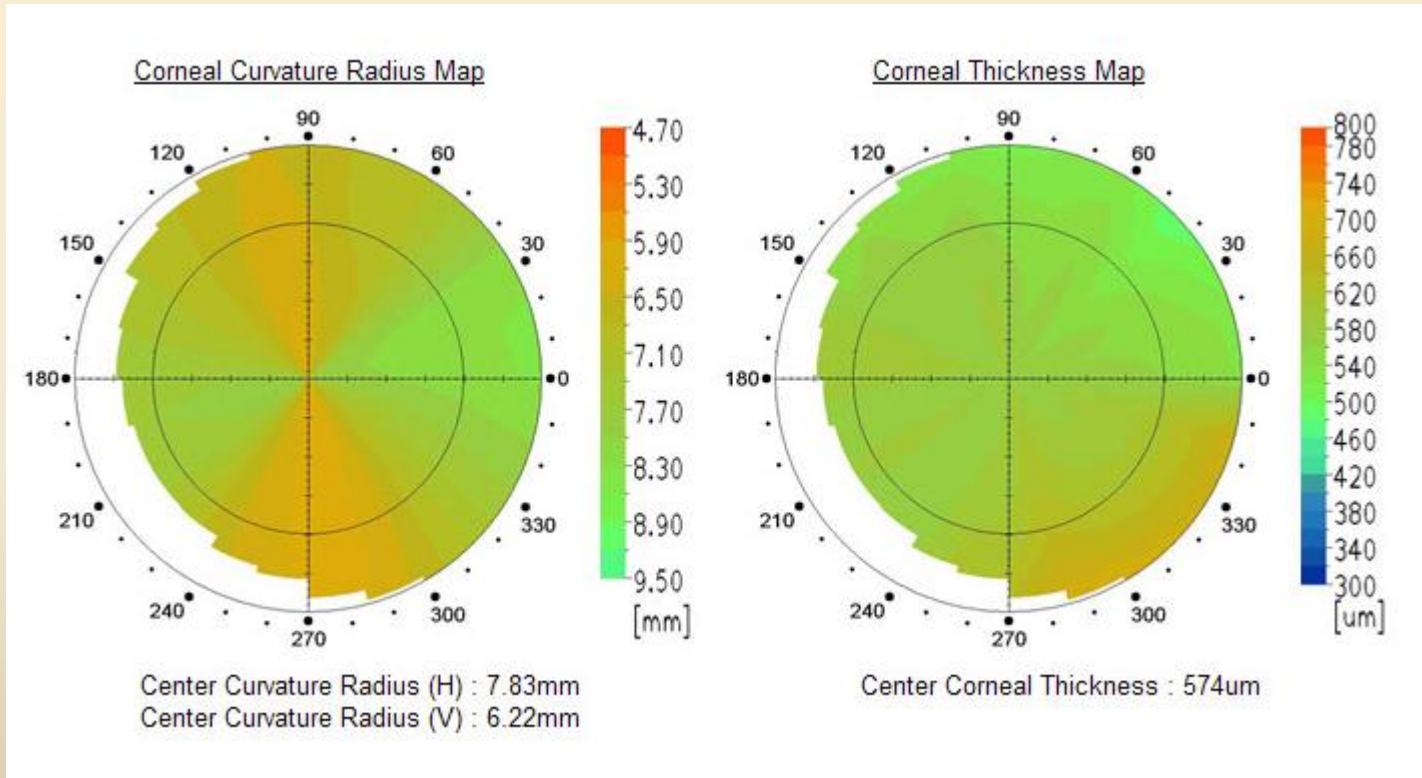
Center Corneal Thickness : 526um

Corneal Curvature Radius Map

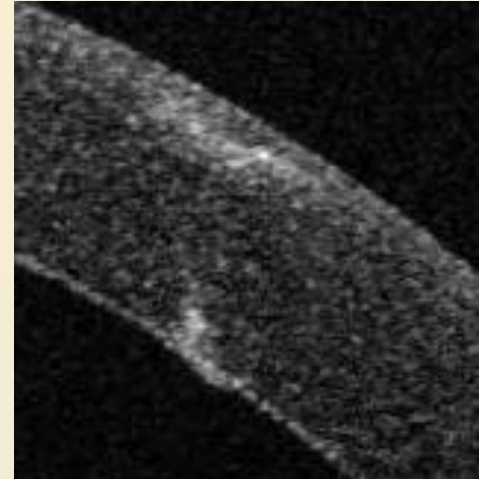
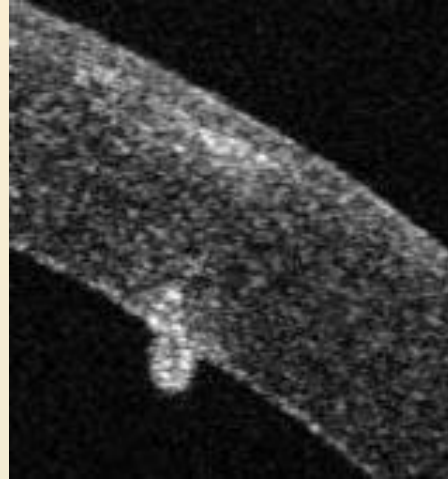
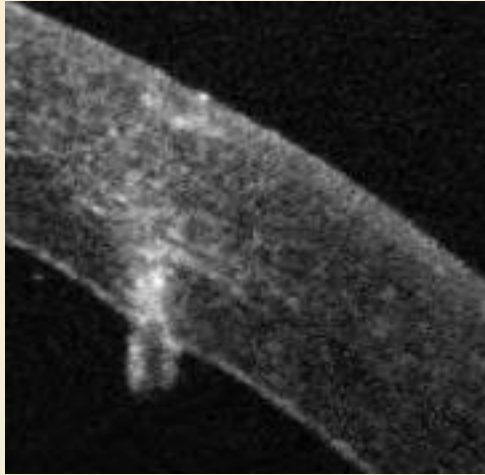


Center Curvature Radius (H) : 7.61mm
Center Curvature Radius (V) : 7.28mm

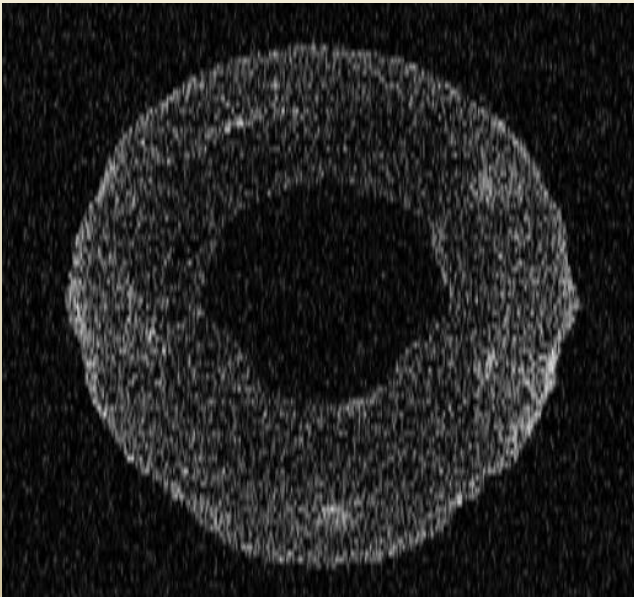
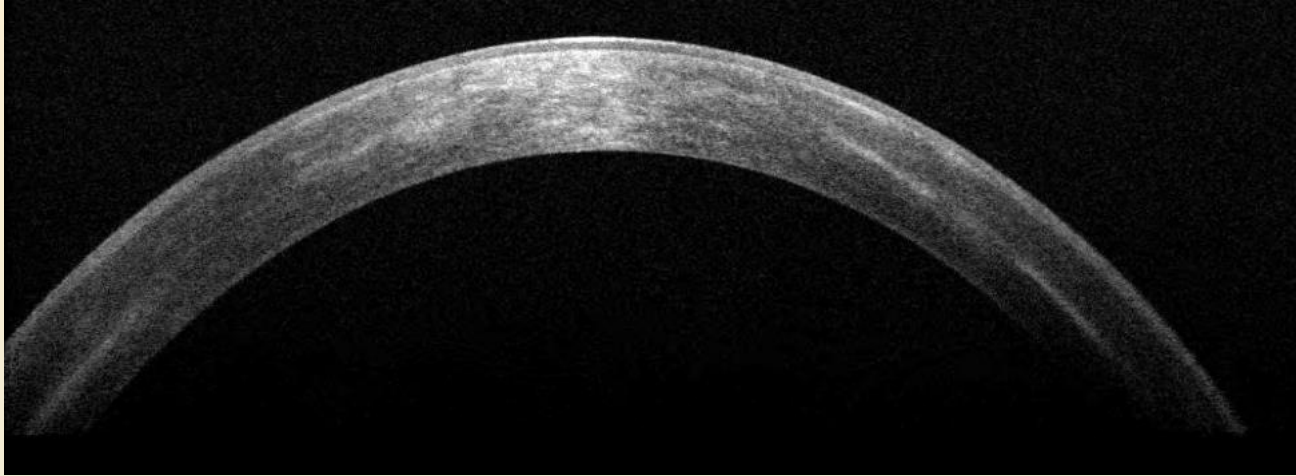
Astigmatismo elevato dopo cheratoplastica



Spina di cardo corneale

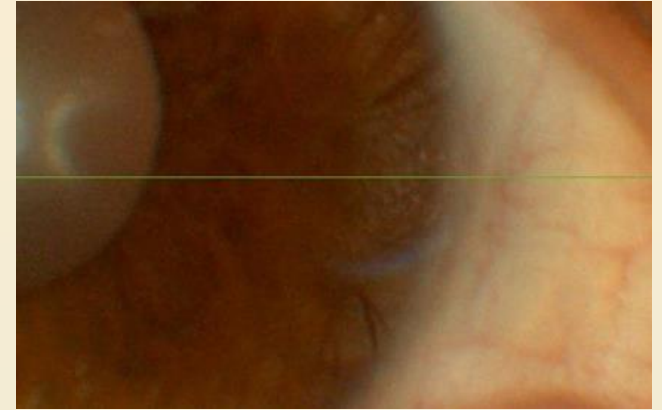
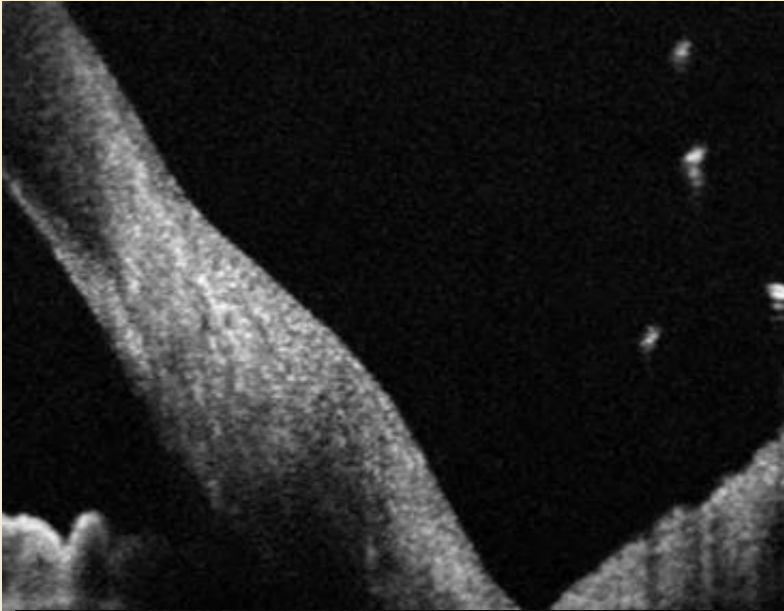


Cheratite da *Acanthamoeba*

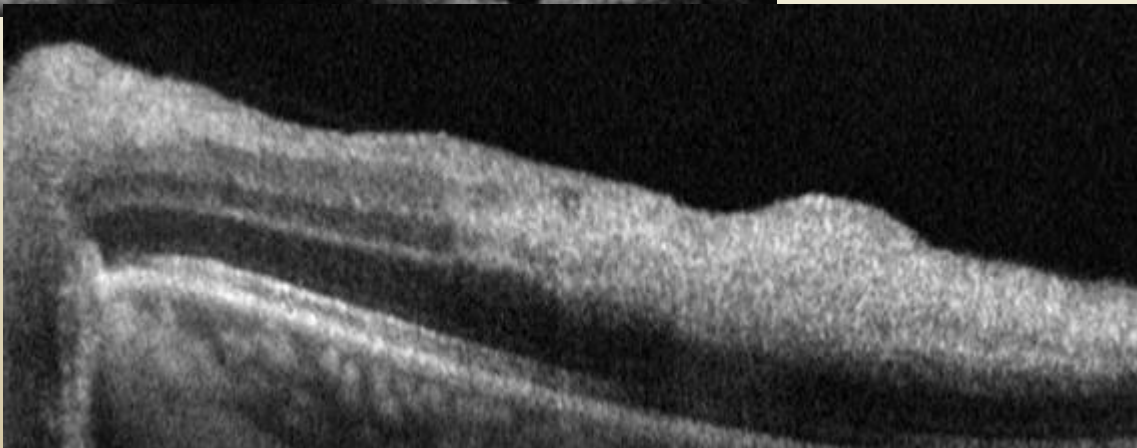


Infiltrati perineuronali

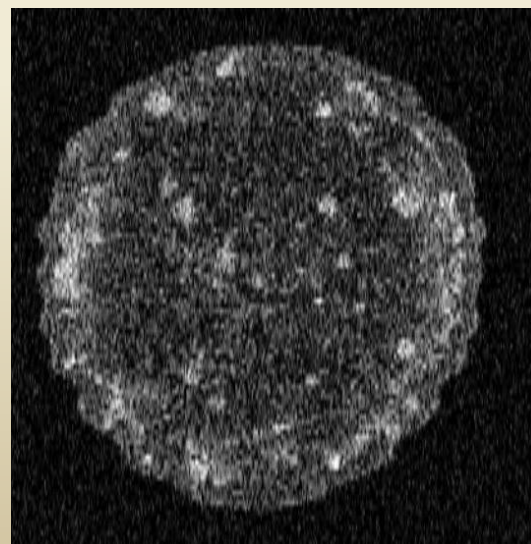
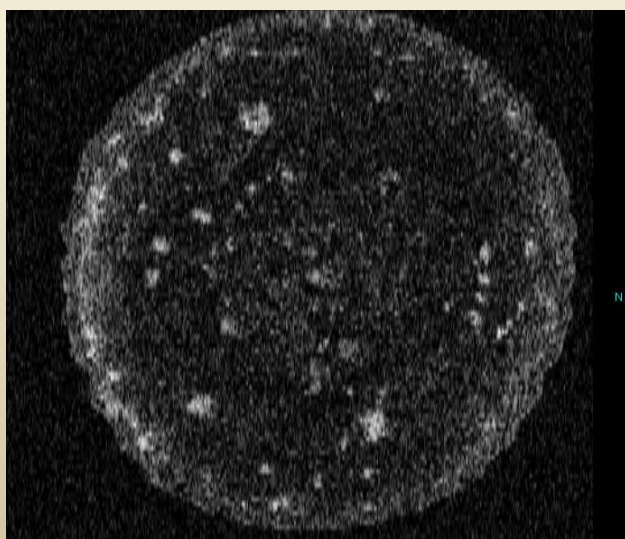
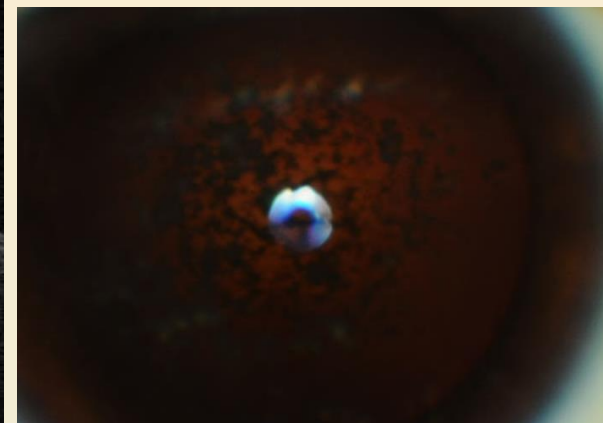
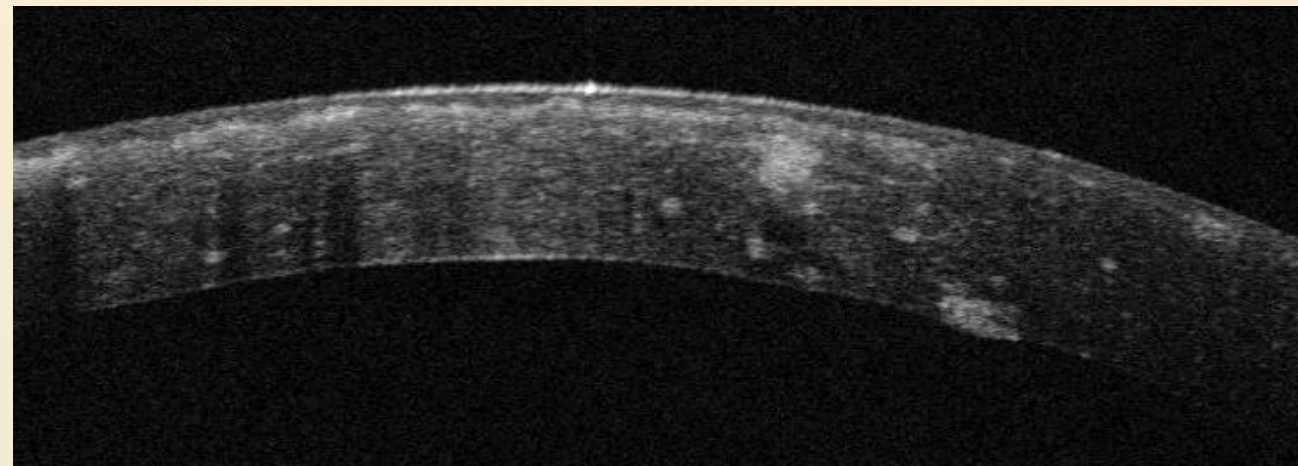
Sindrome di Fabry (depositi di glicosfingolipidi)



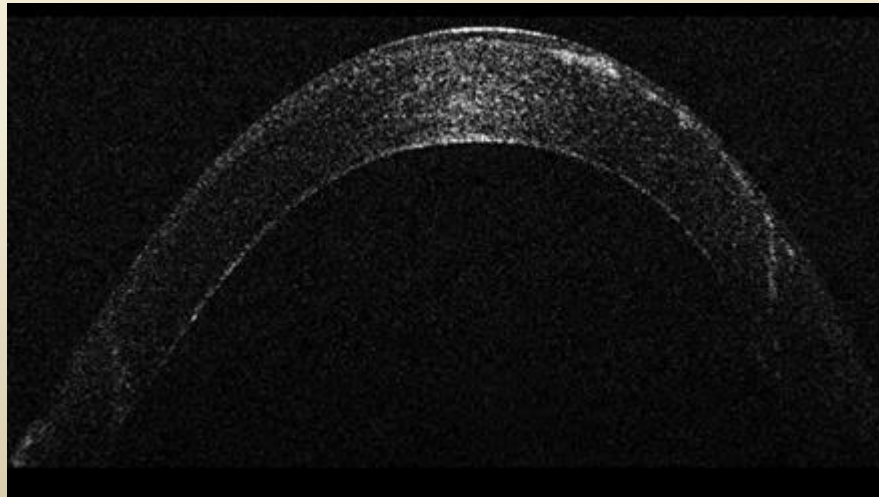
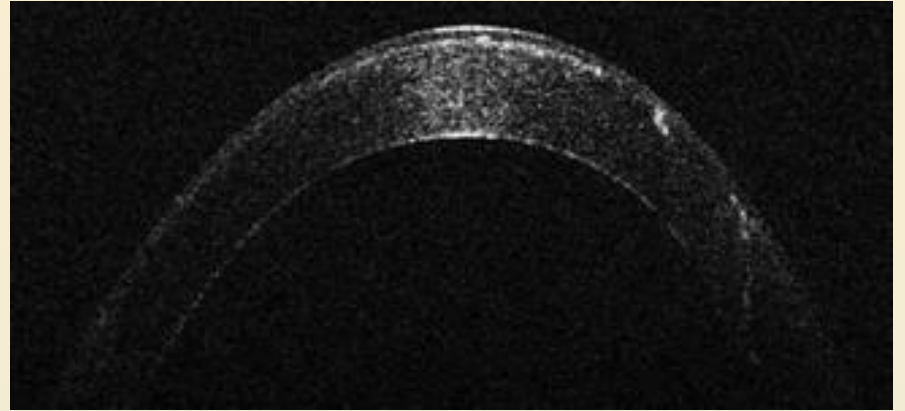
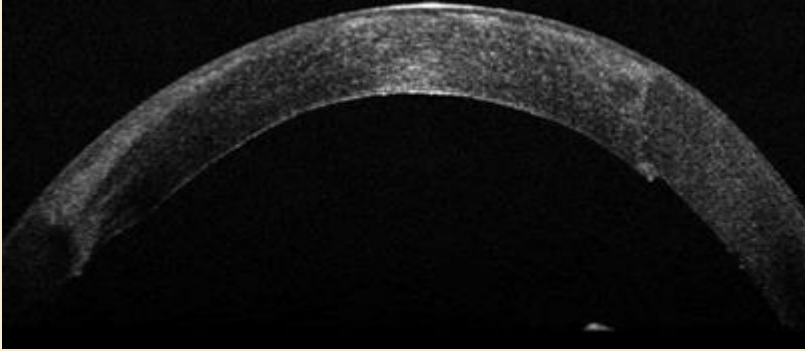
Cheratopatia verticillata



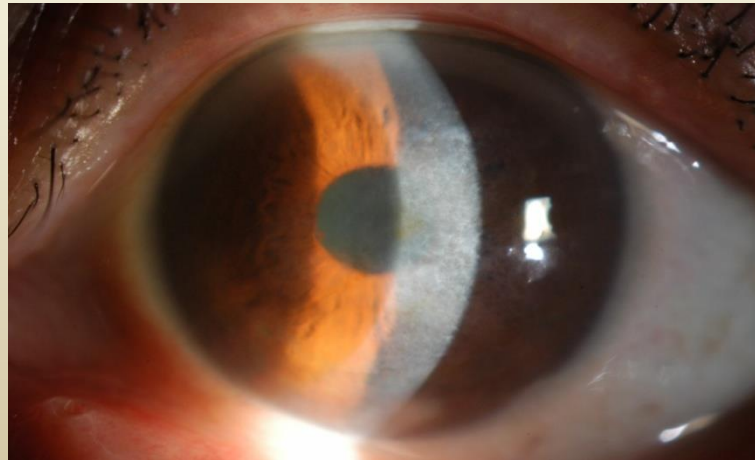
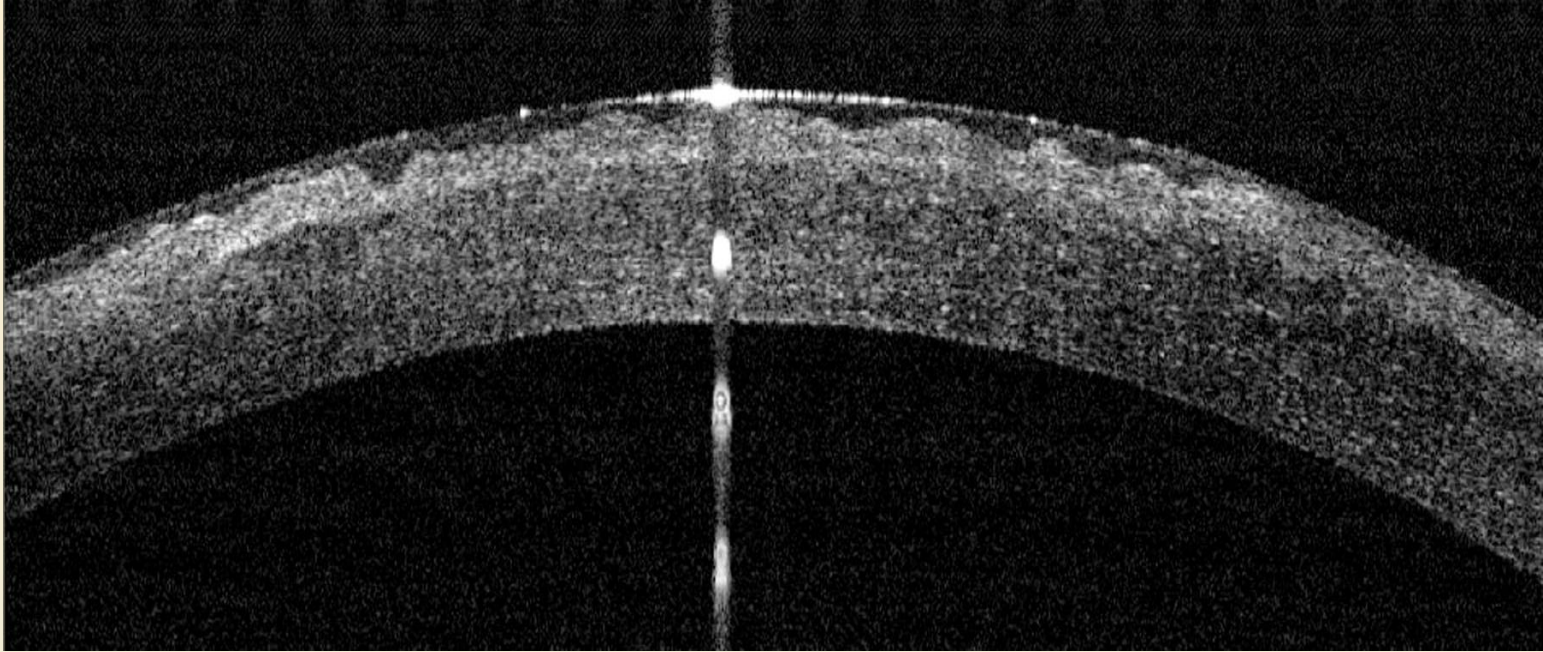
Groënow 2



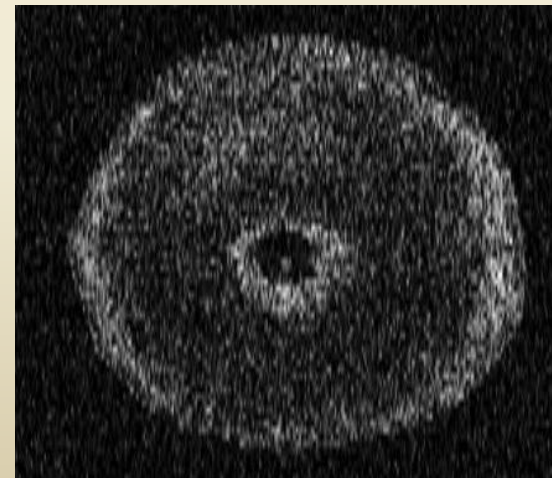
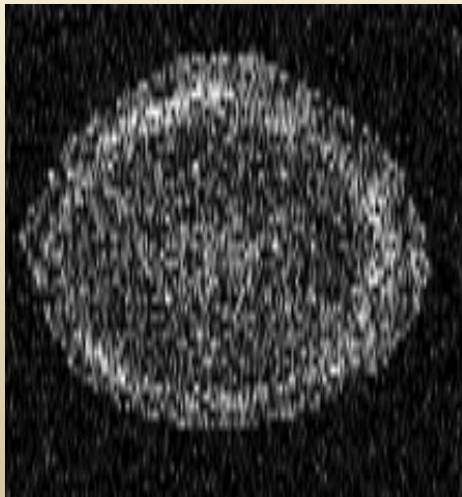
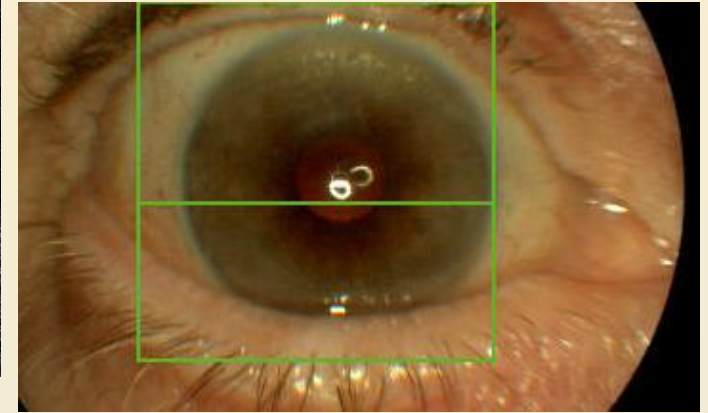
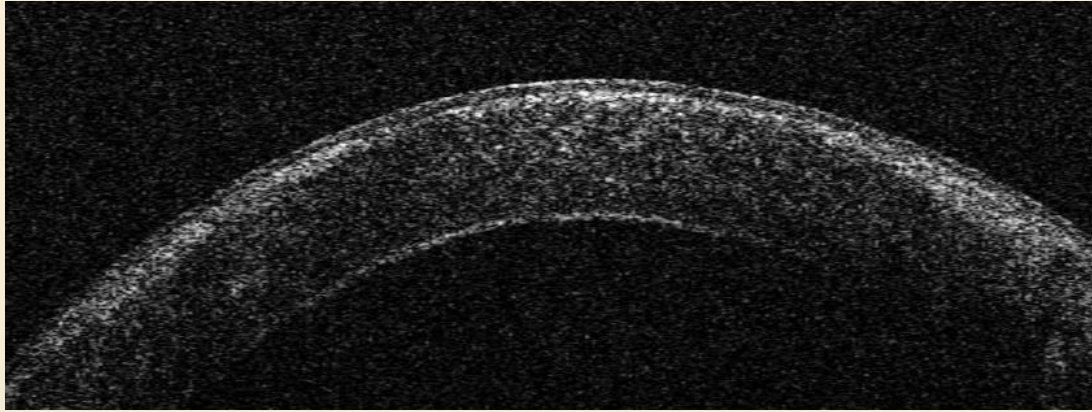
Groënow 2 su cheratoplastica



Reiss Bucklers



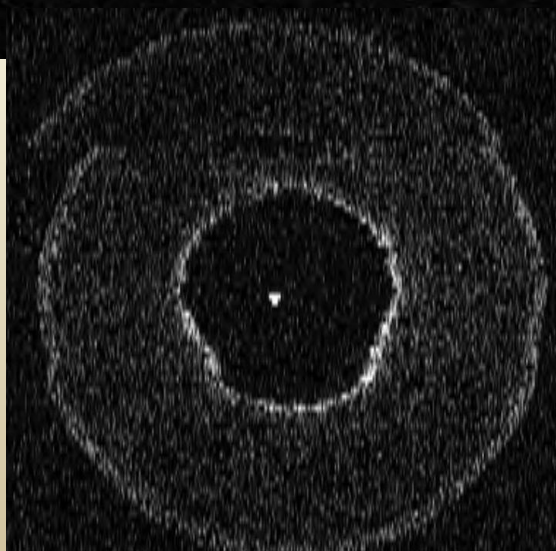
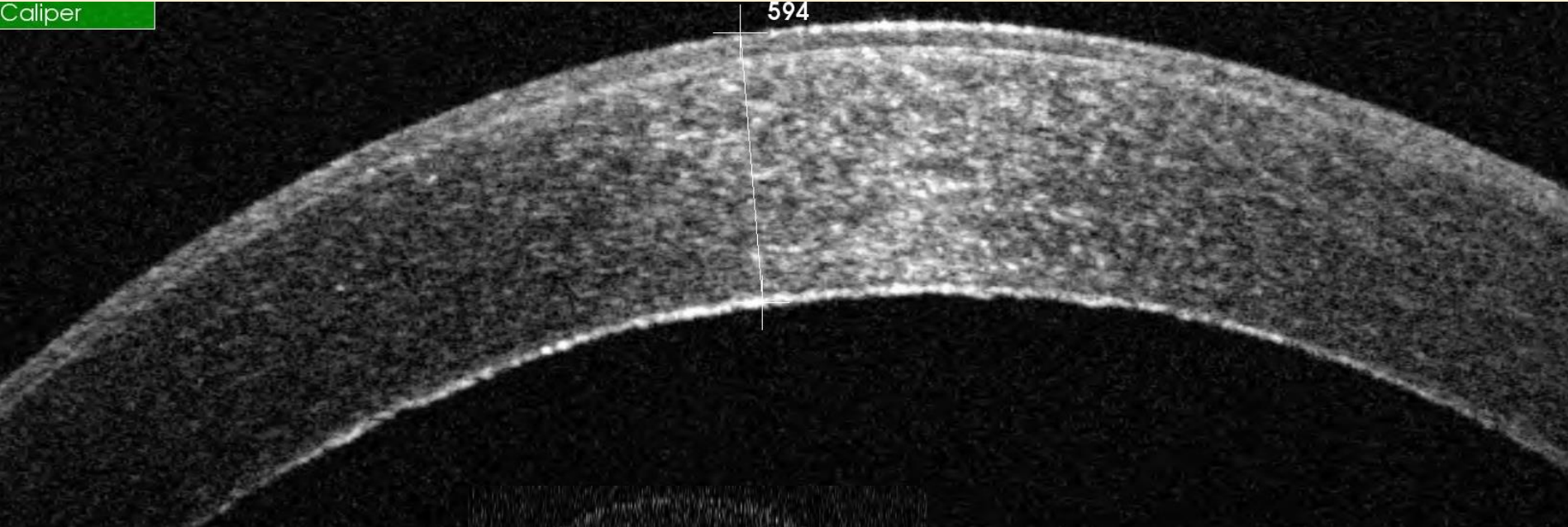
Reiss Bucklers su cheratoplastica



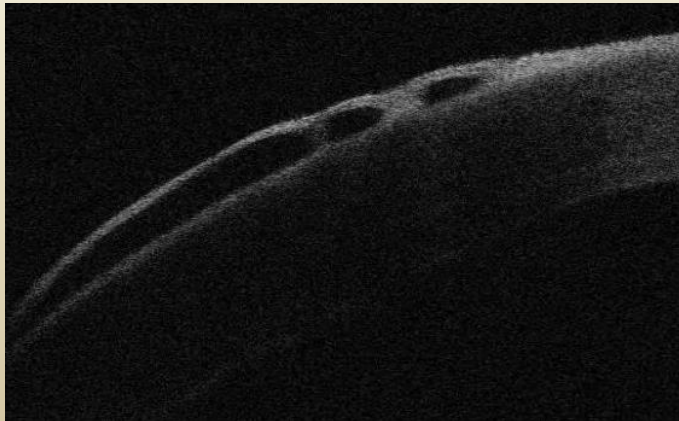
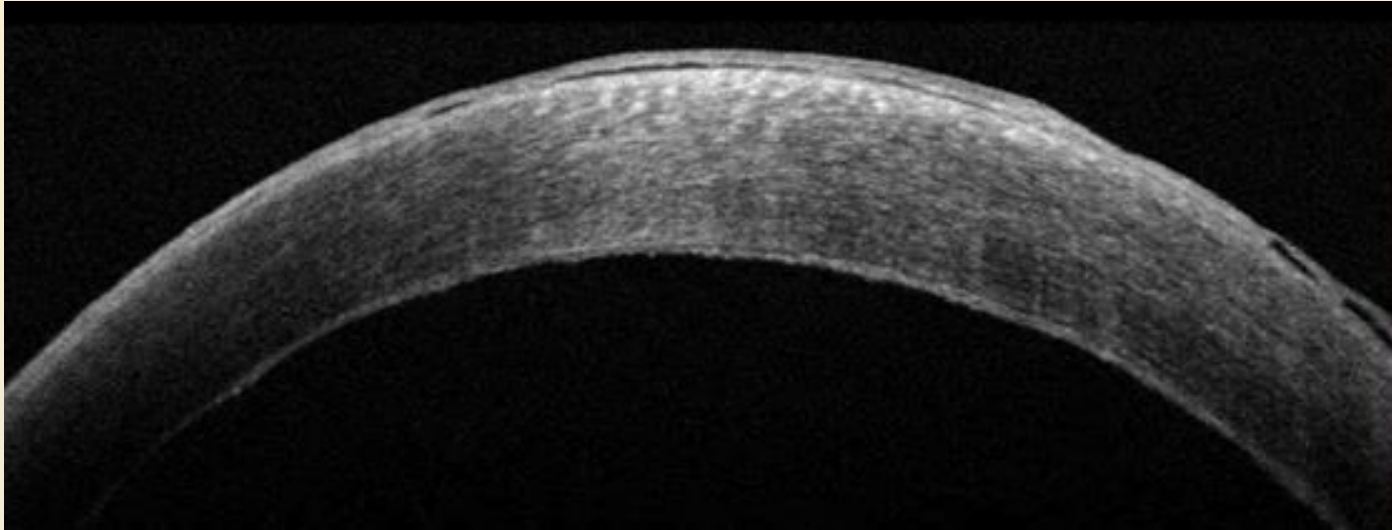
Degenerazione endoteliale di fuchs

Caliper

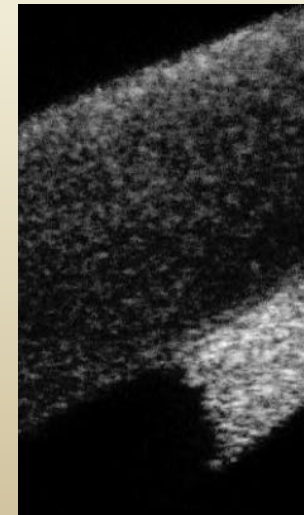
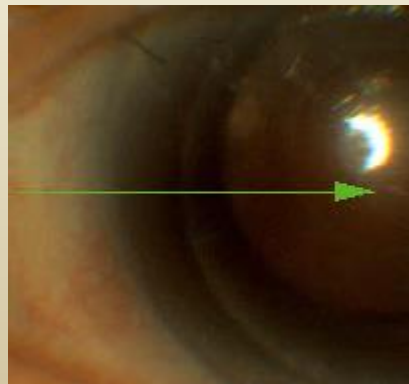
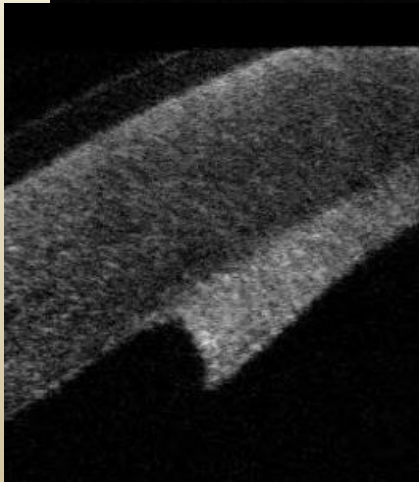
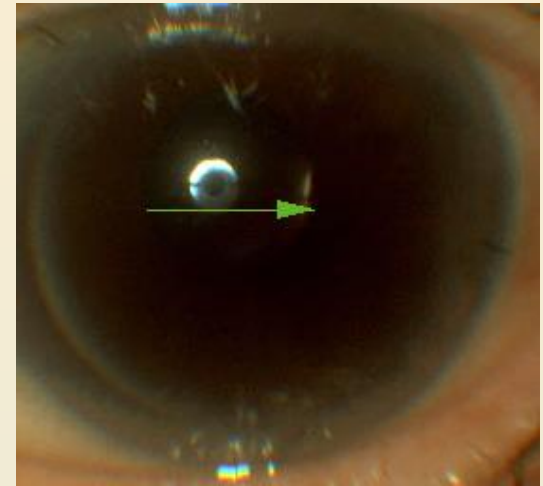
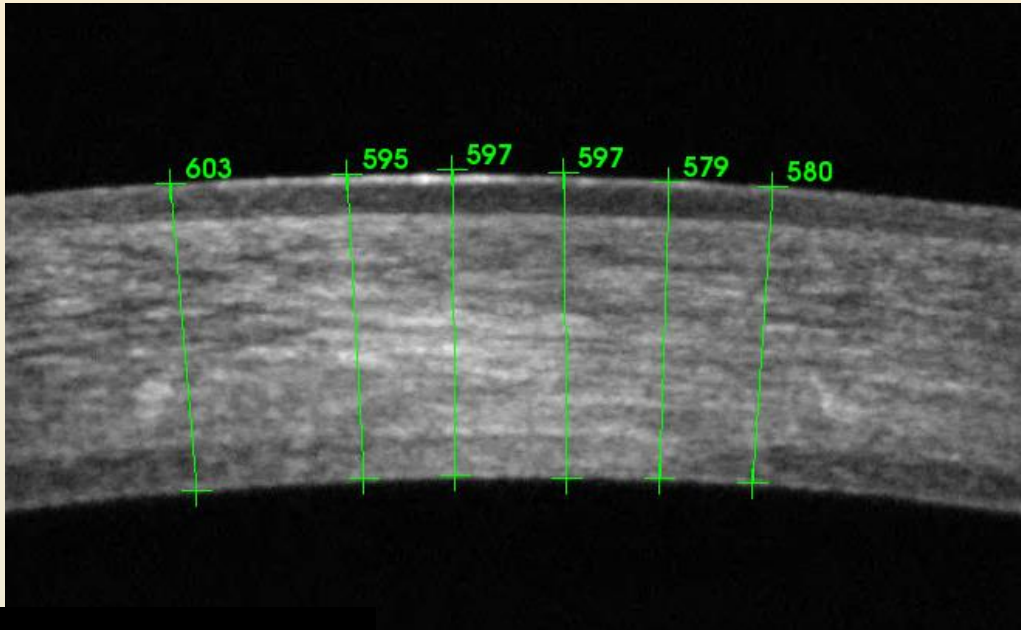
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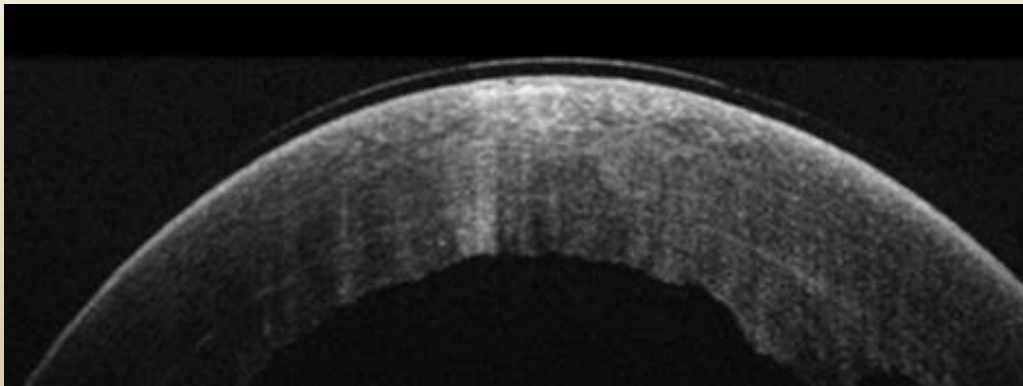
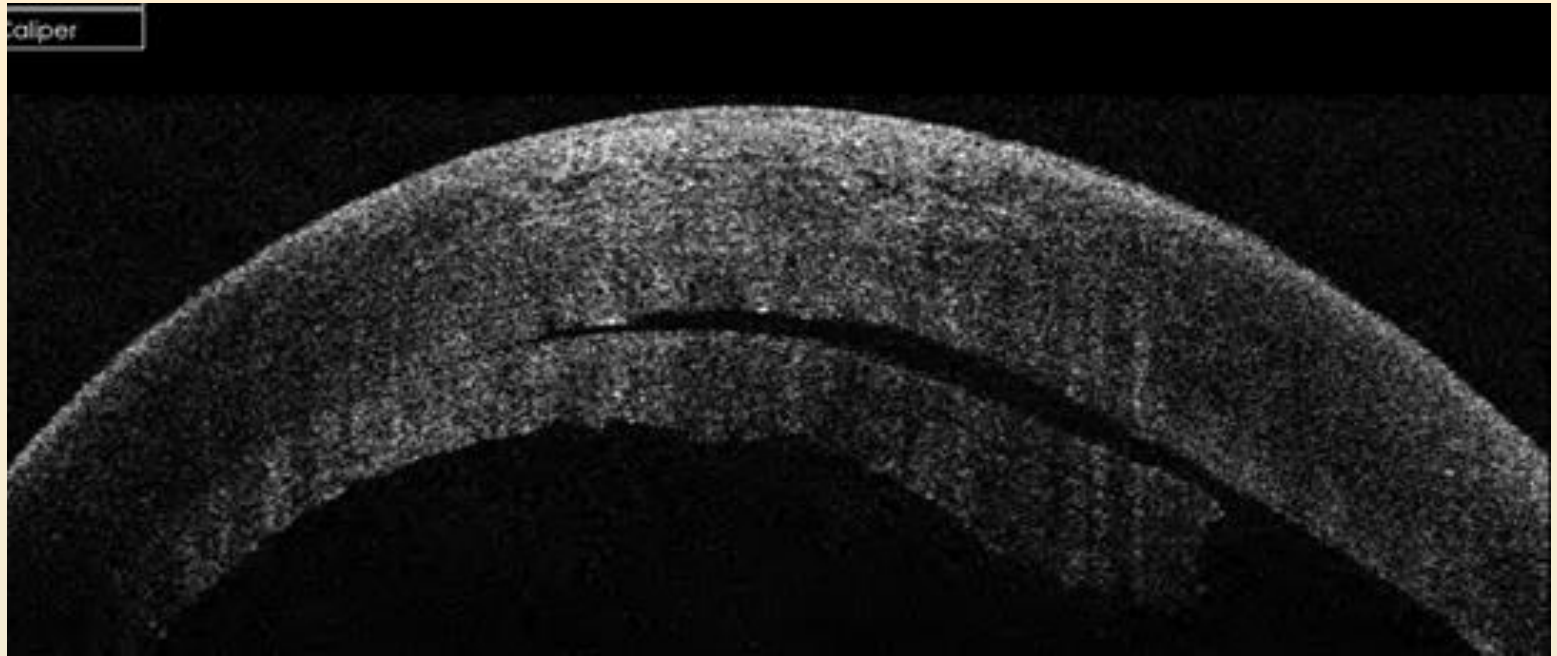
Scompenso corneale



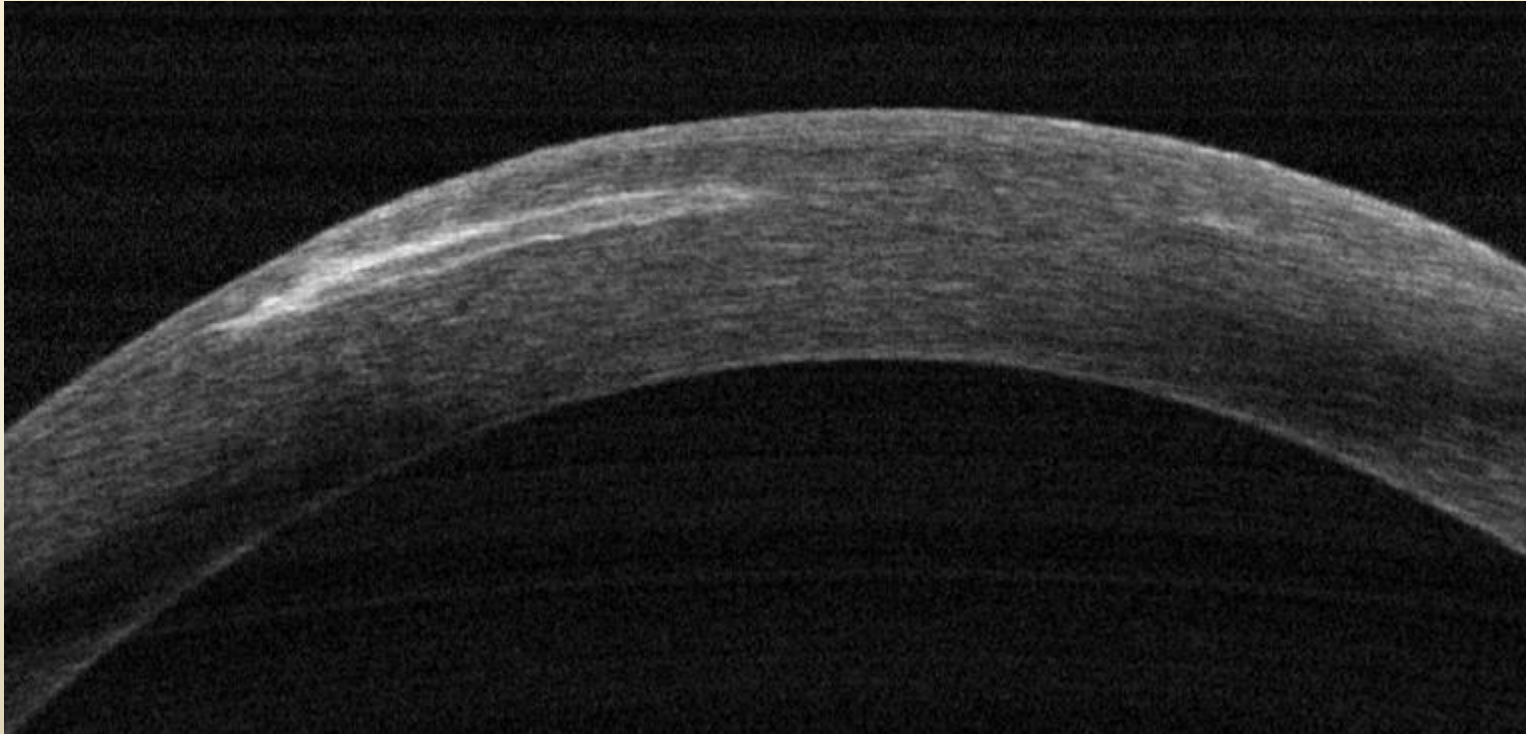
DSAEK



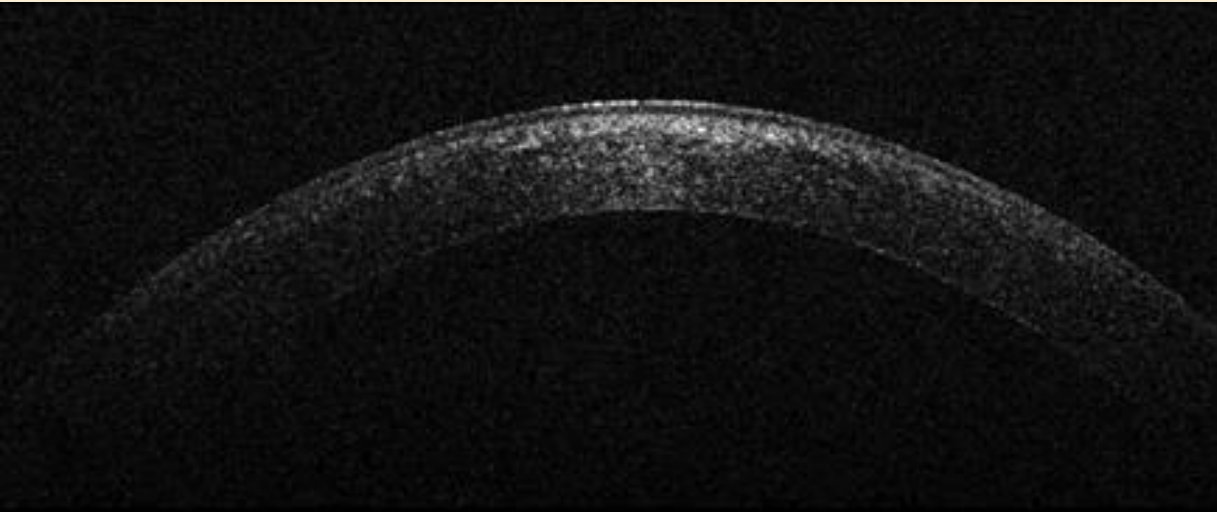
caliper



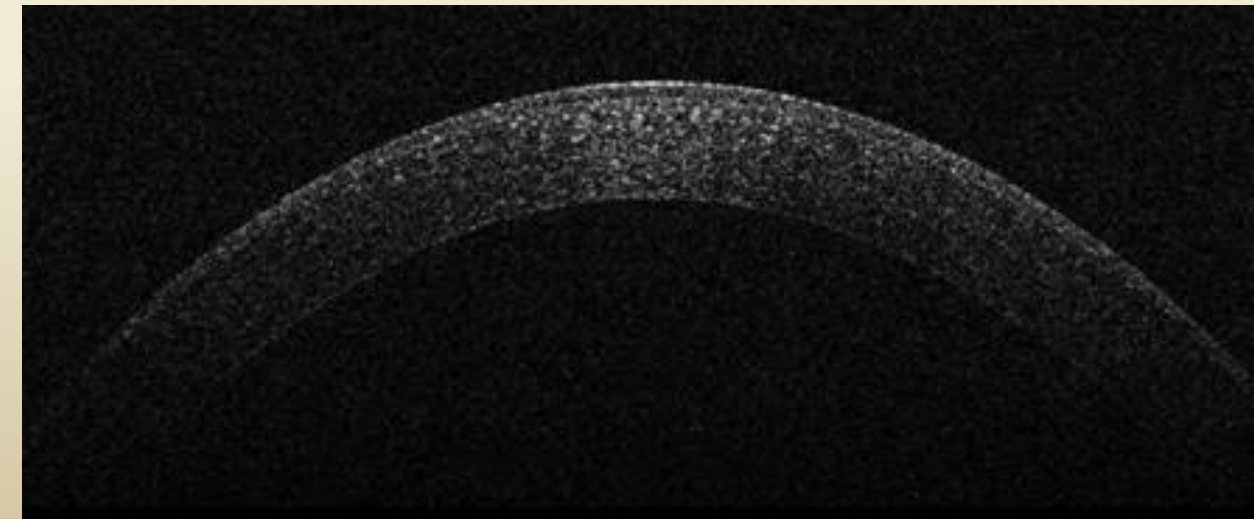
Invasione epiteliale su LASIK



Cross linking

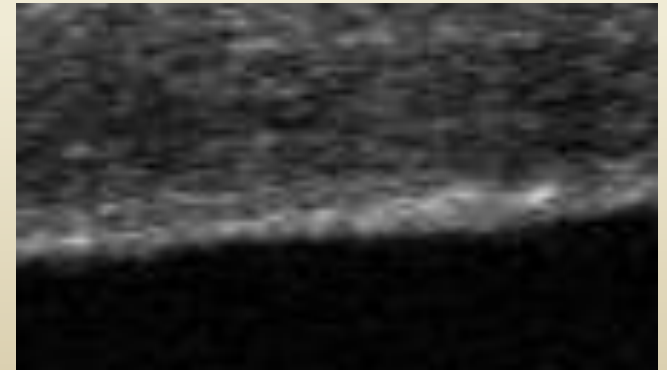
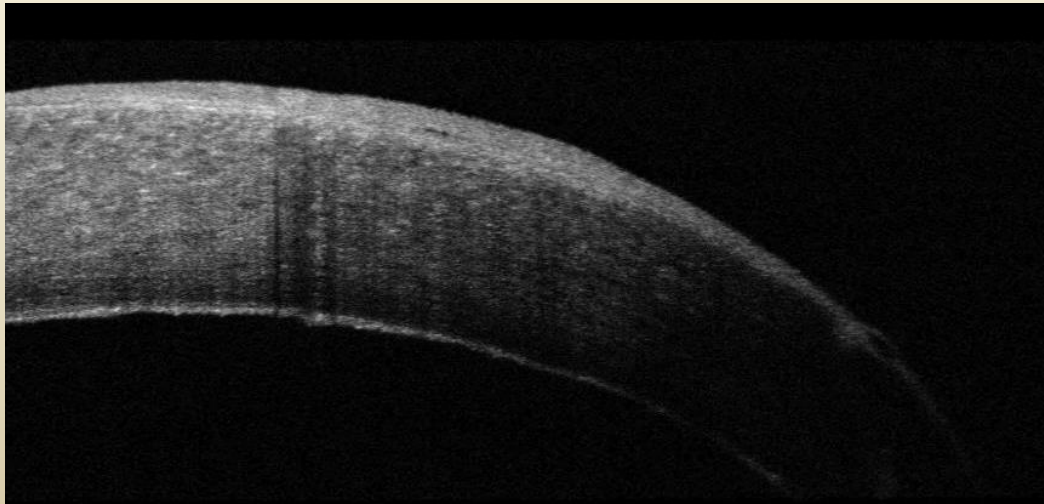
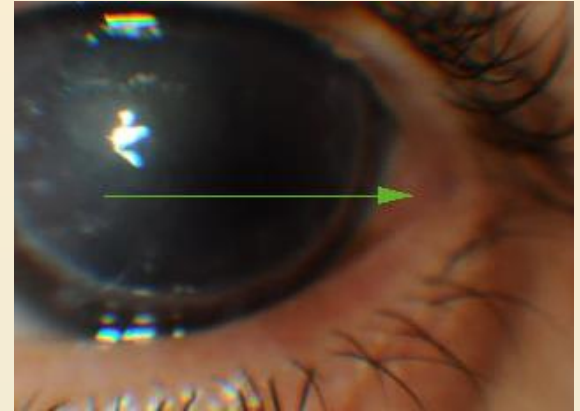
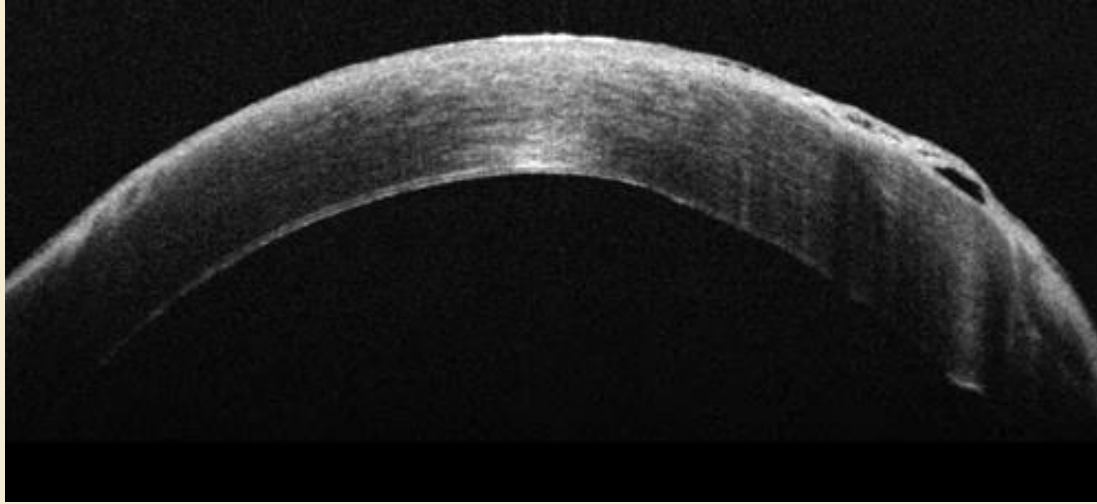


Con desepitelizzazione

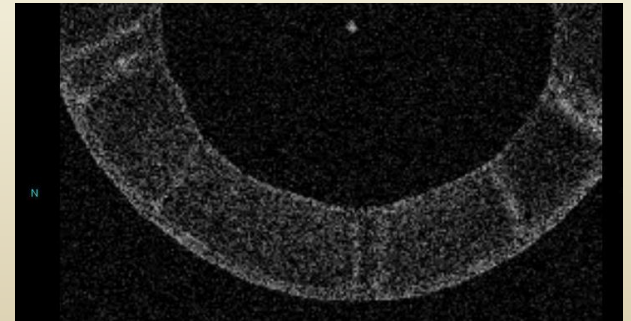
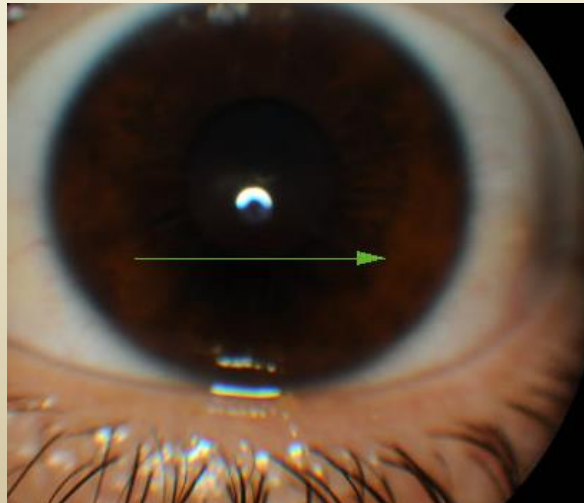
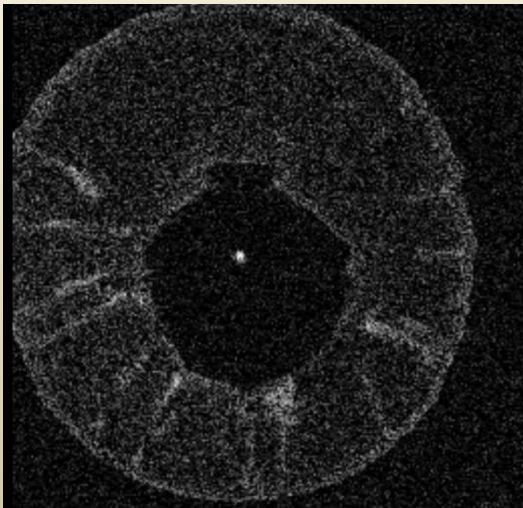
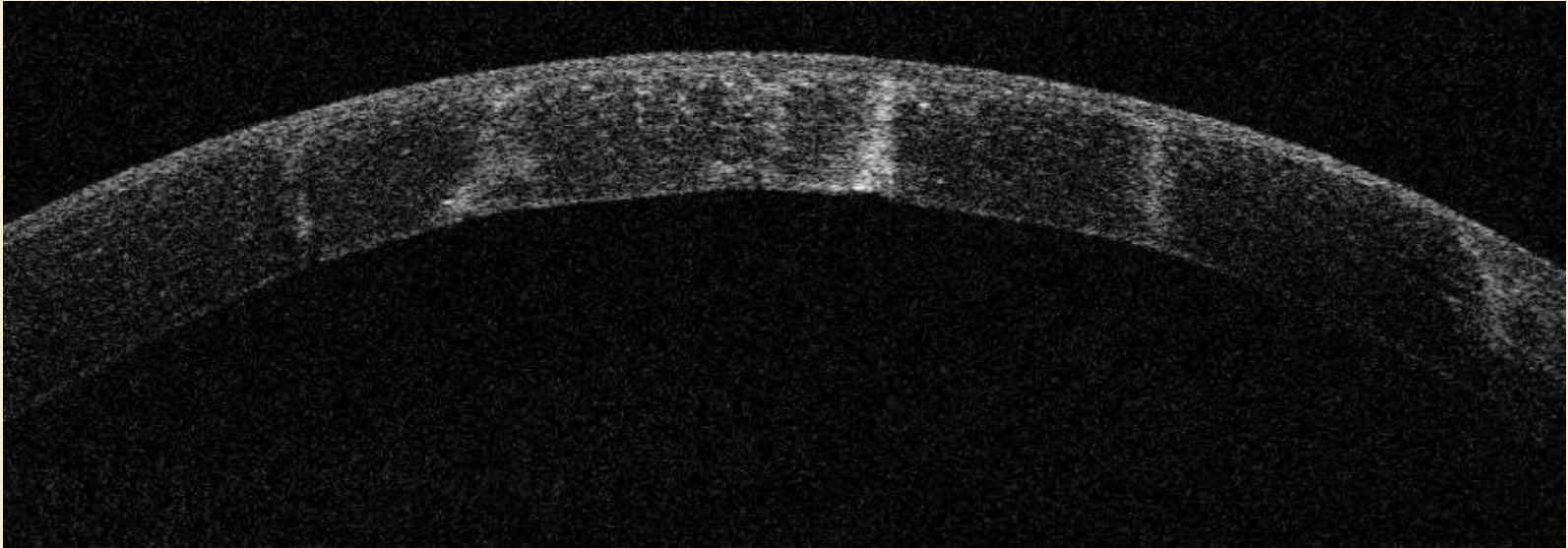


Senza

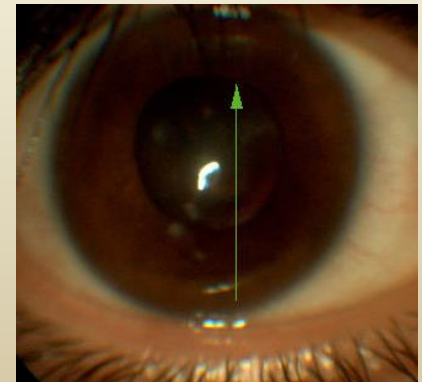
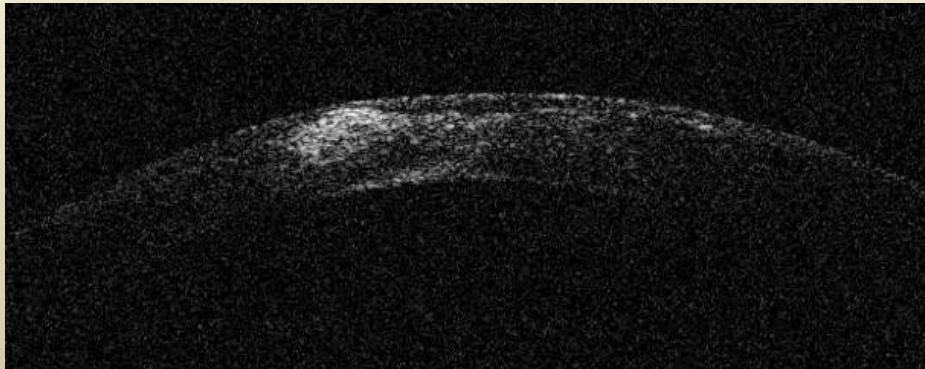
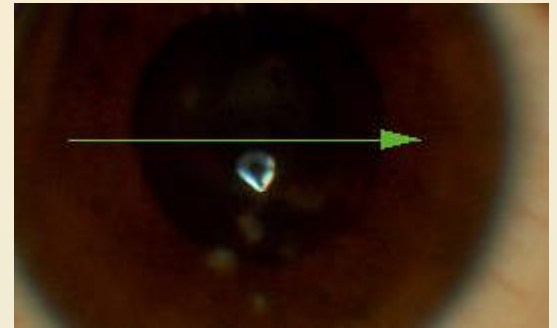
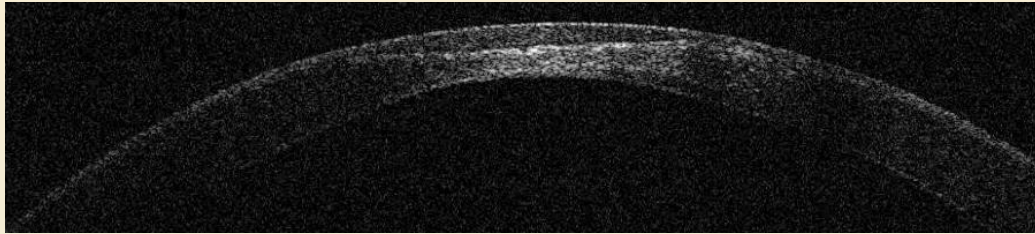
Rigetto endoteliale



Cheratotomy per cheratocono



Eccimeri su cheratocono

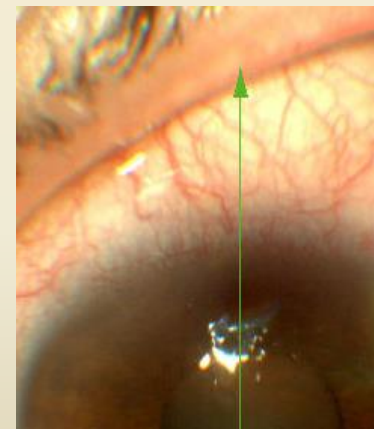
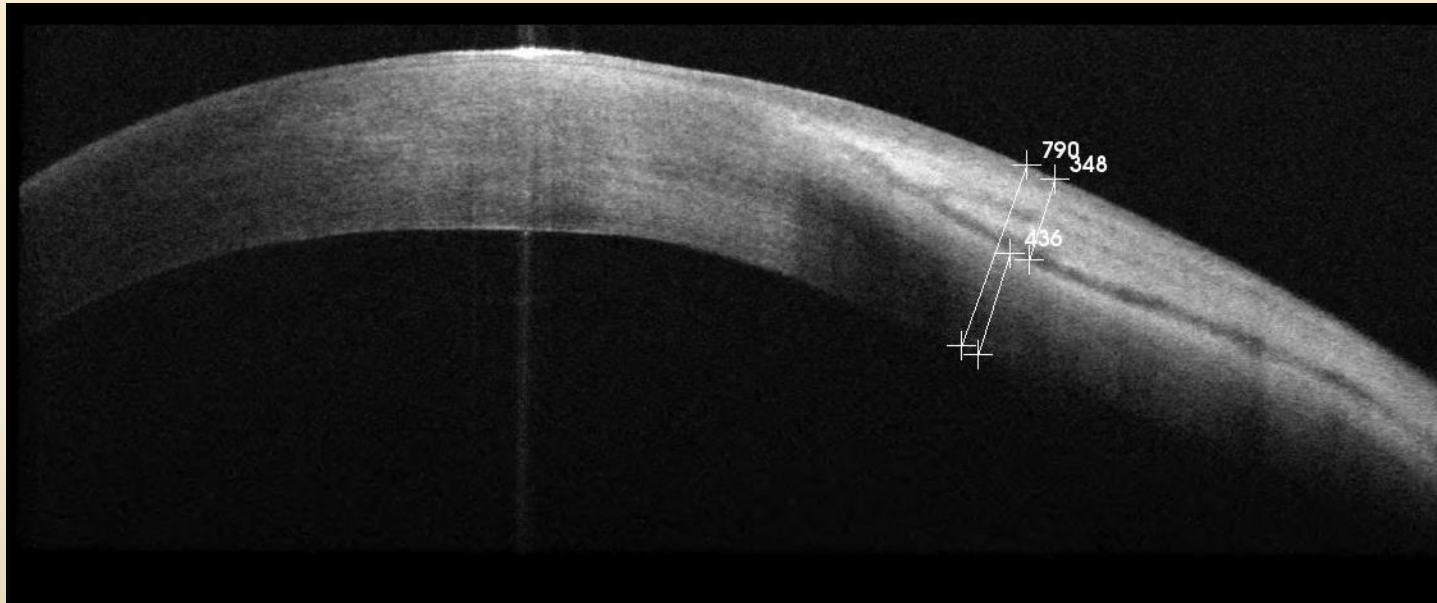


Descemetocoele

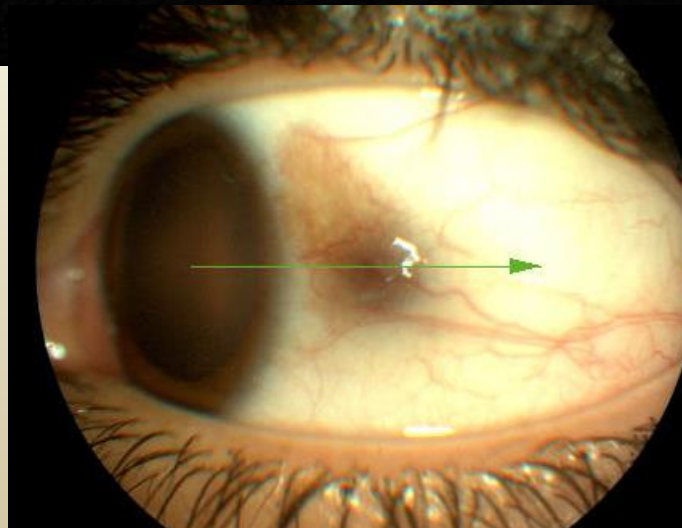
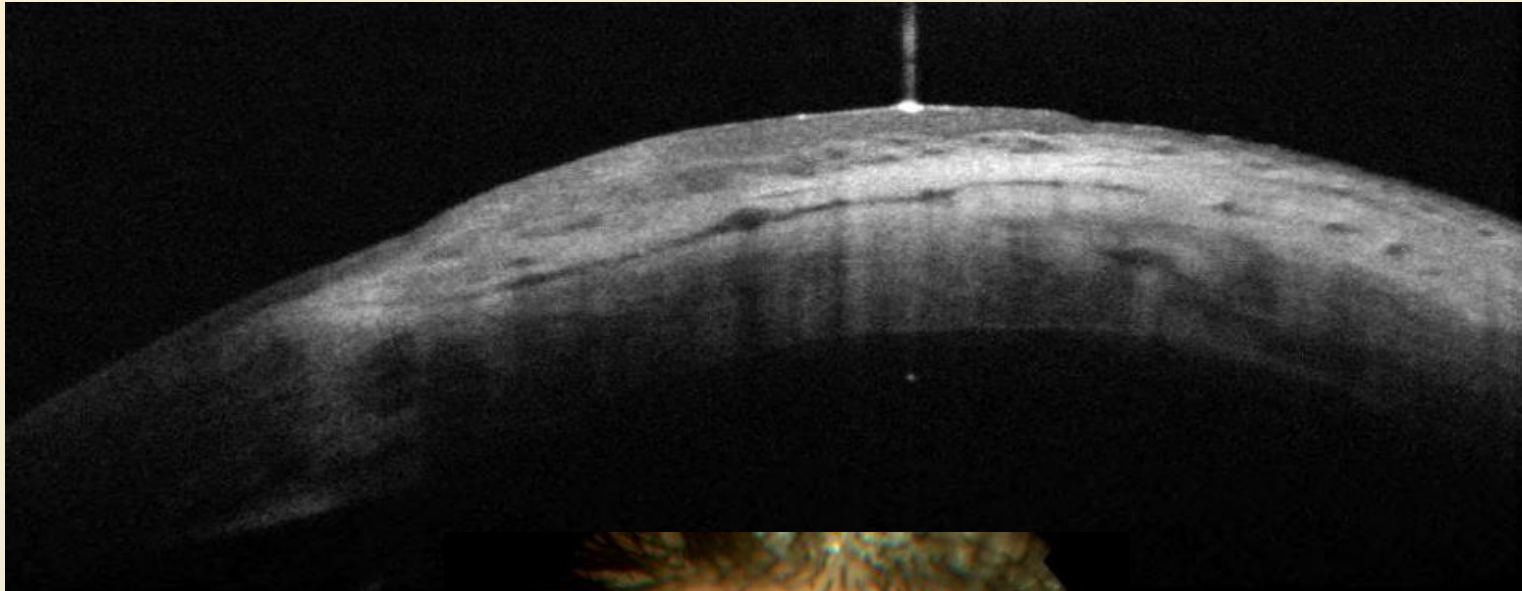


CONGIUNTIVA e SCLERA

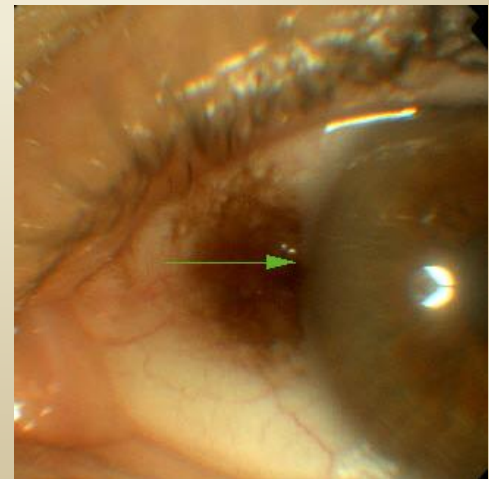
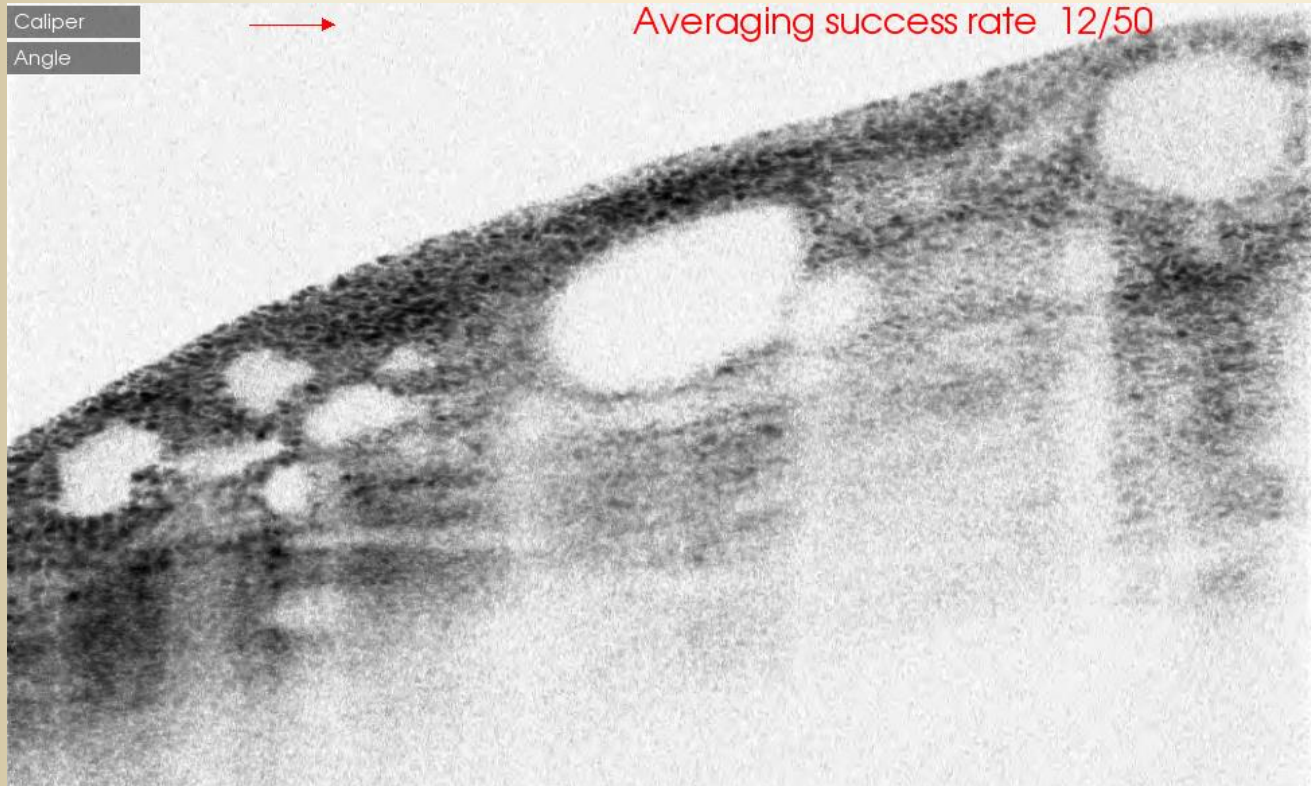
Congiuntiva e sclera



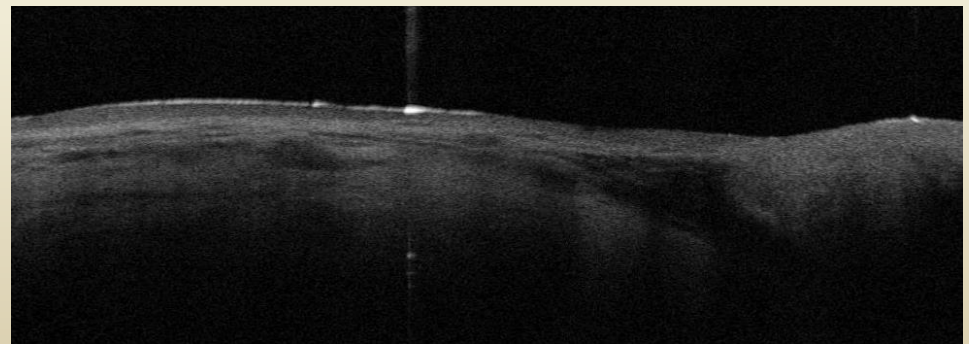
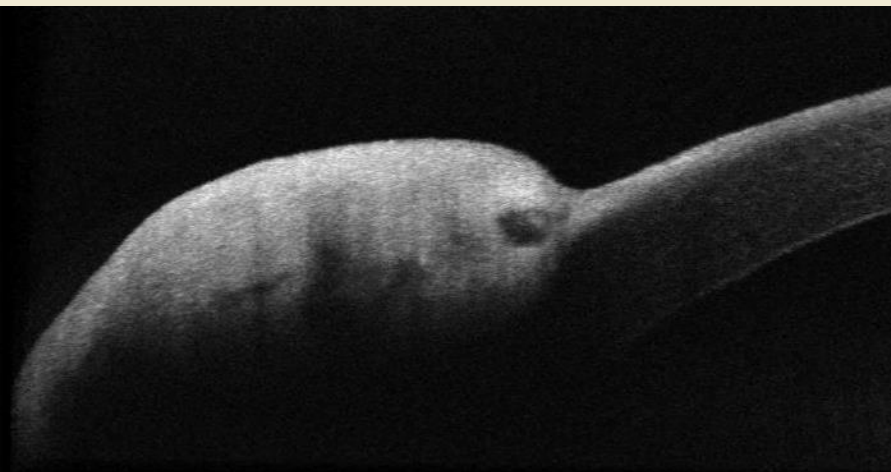
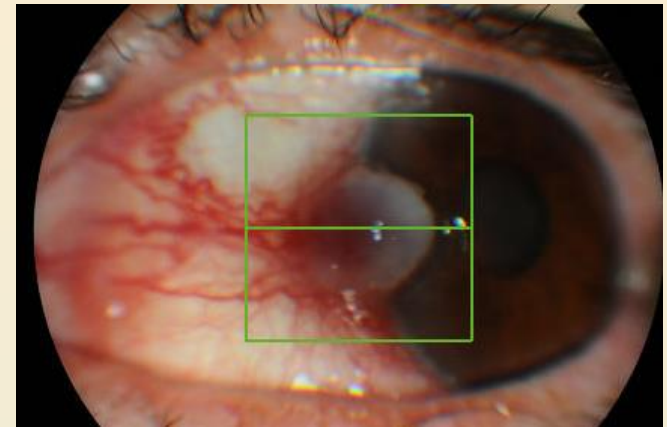
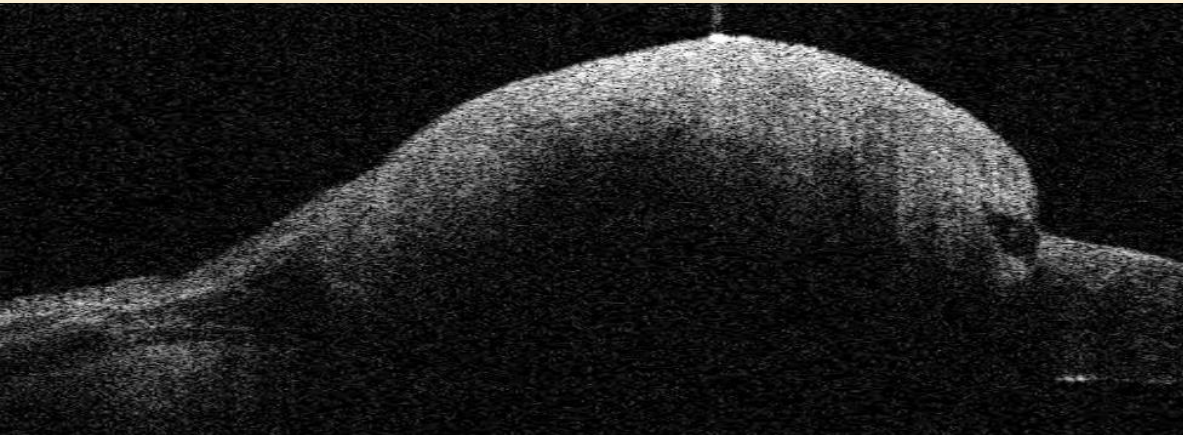
Nevo Congiuntivale



Nevo congiuntivale cistico

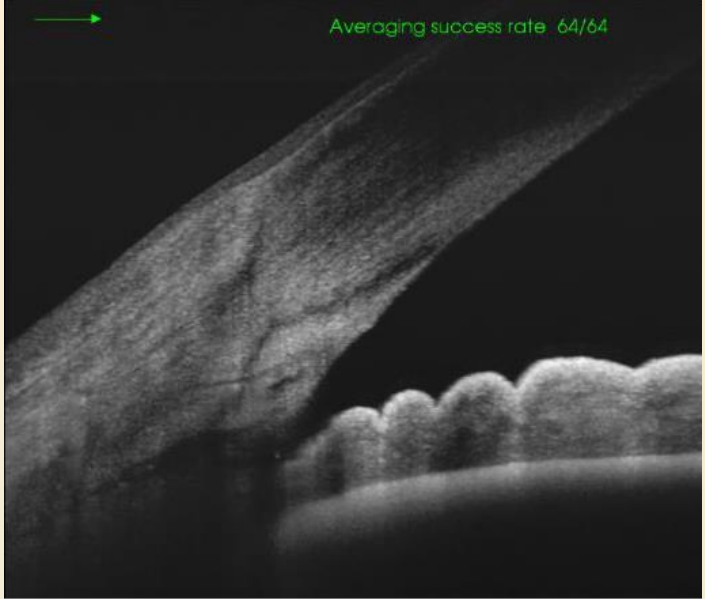
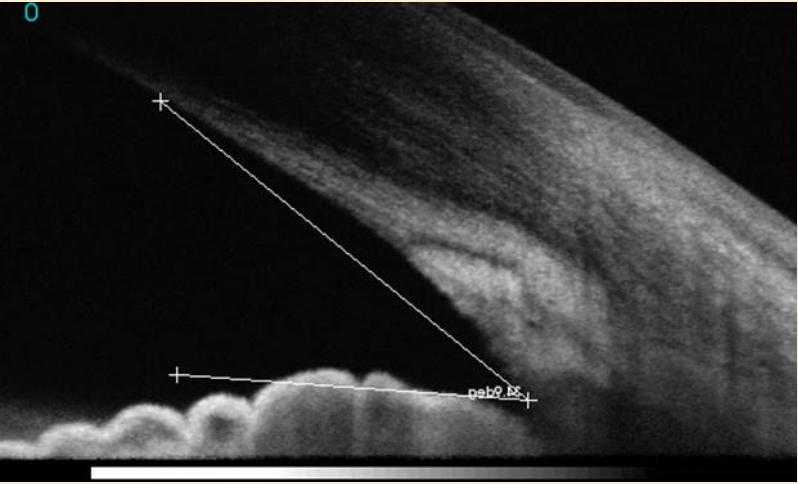


Carcinoma della congiuntiva

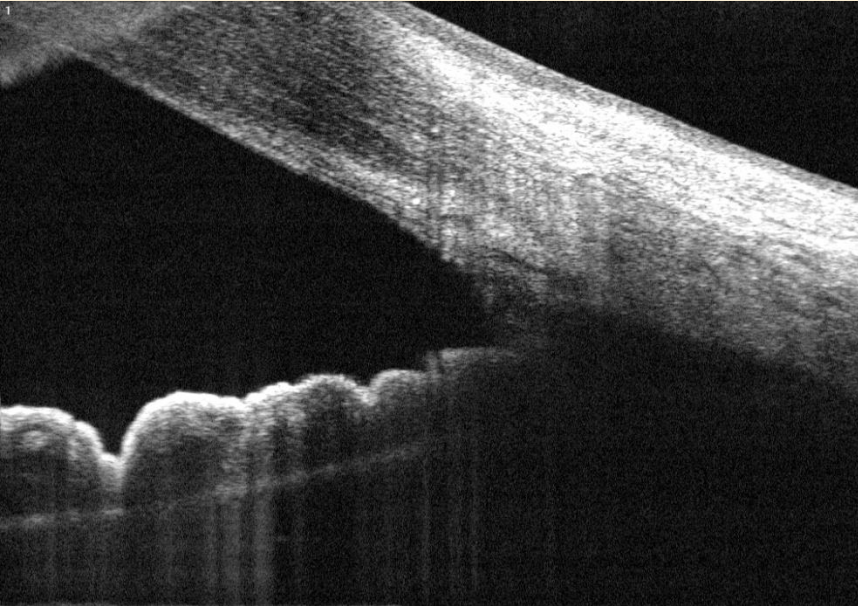


IRIDE e ANGOLO CAMERULARE

Analogie istologia - OCT



Stato dell'iride

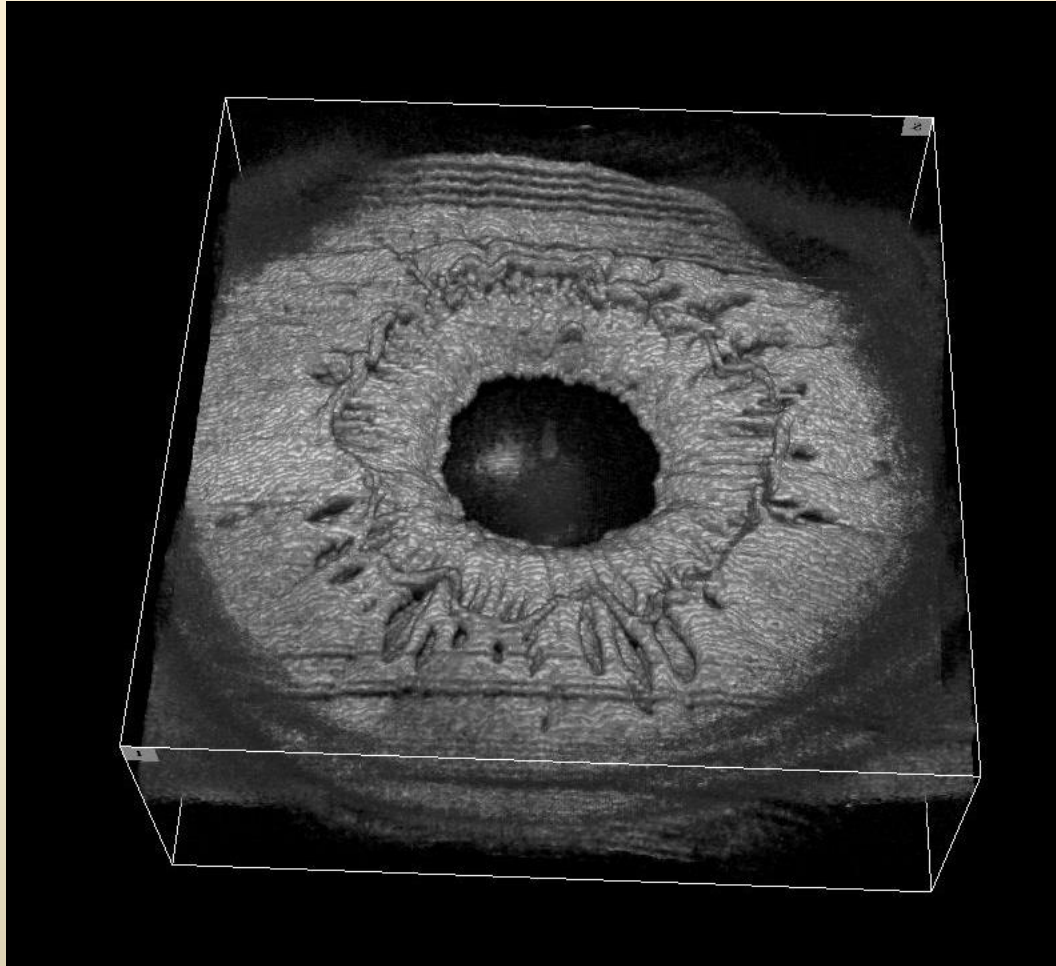


normale

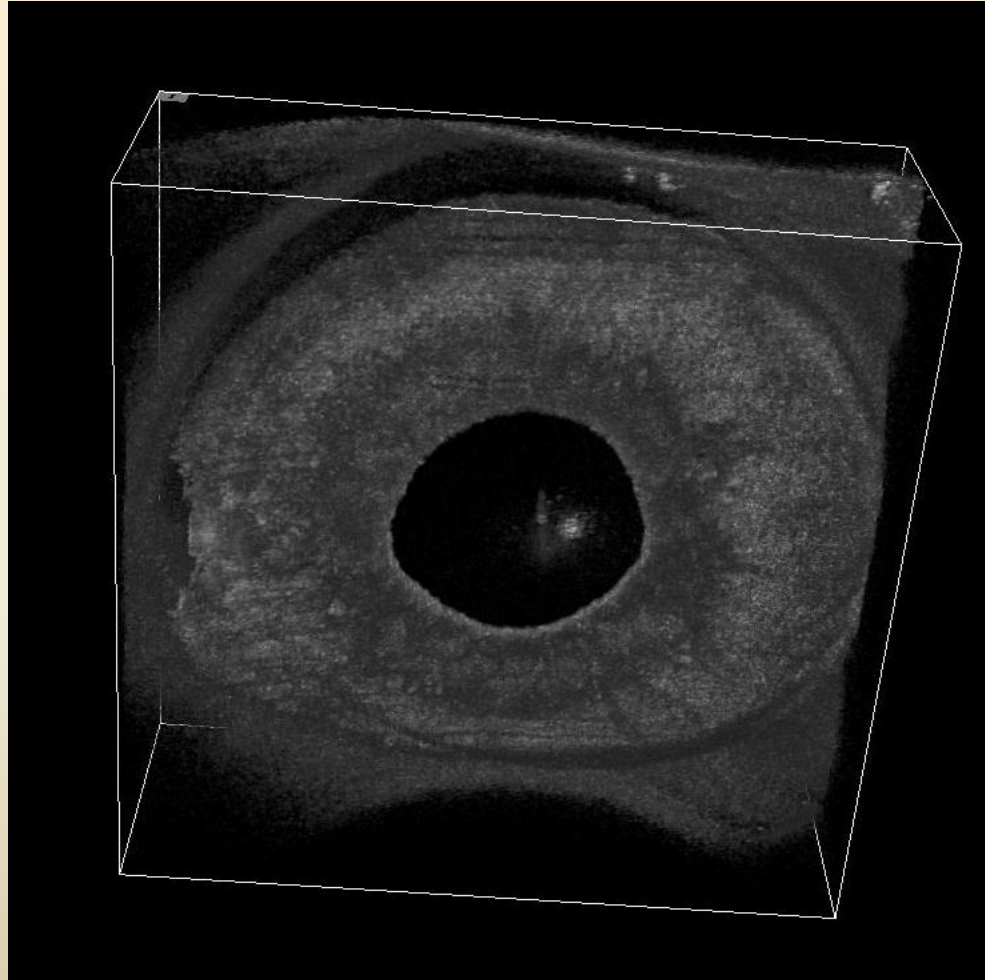
In midriasi



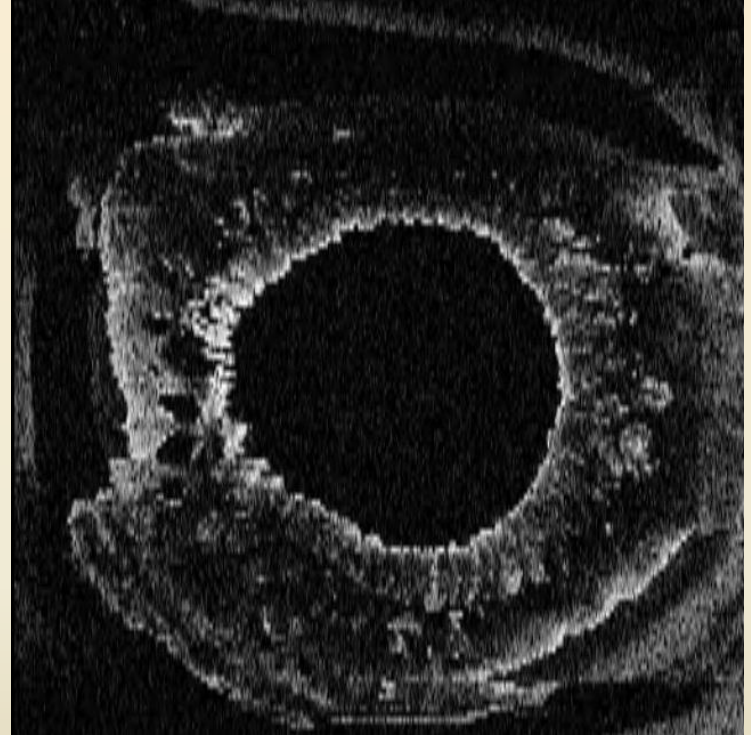
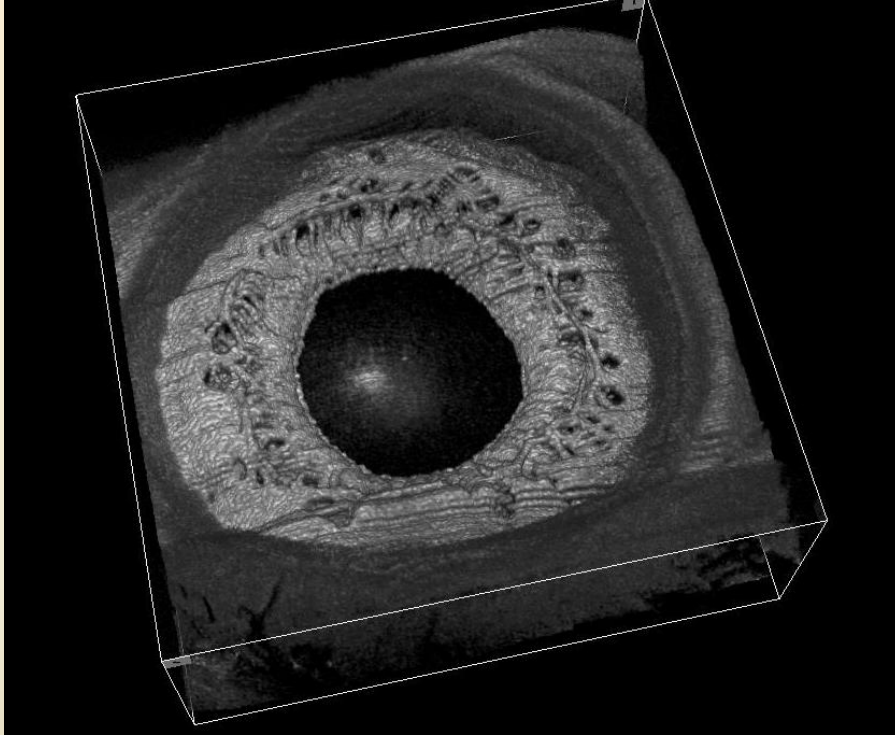
Iride 3D anteriore



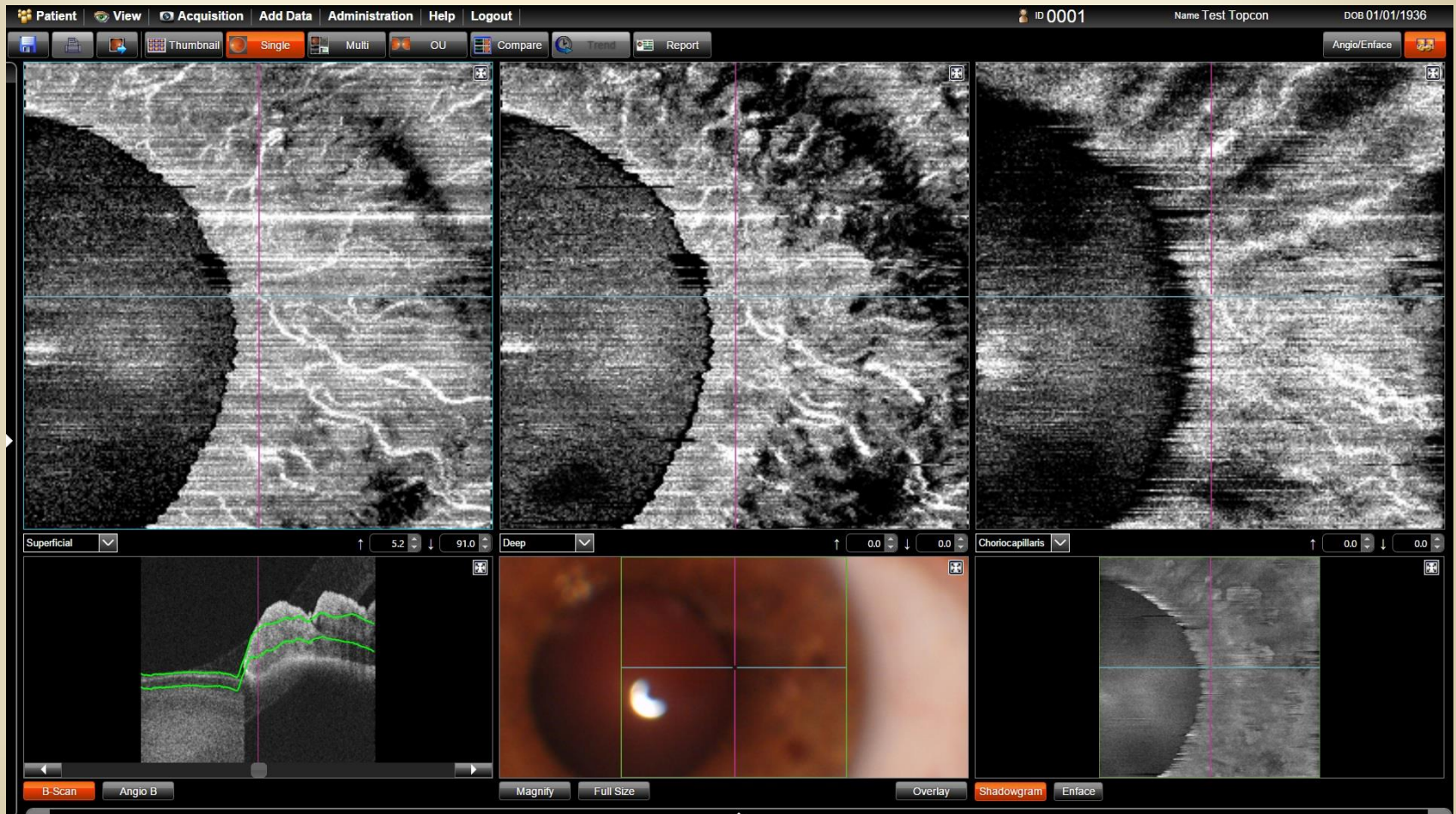
Posteriore



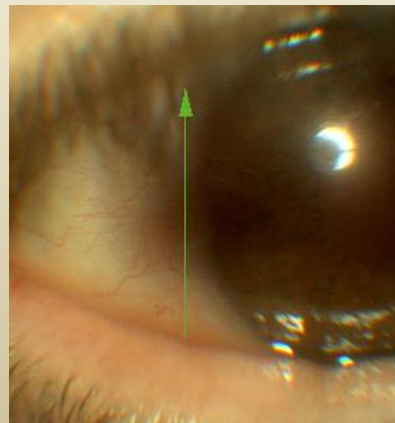
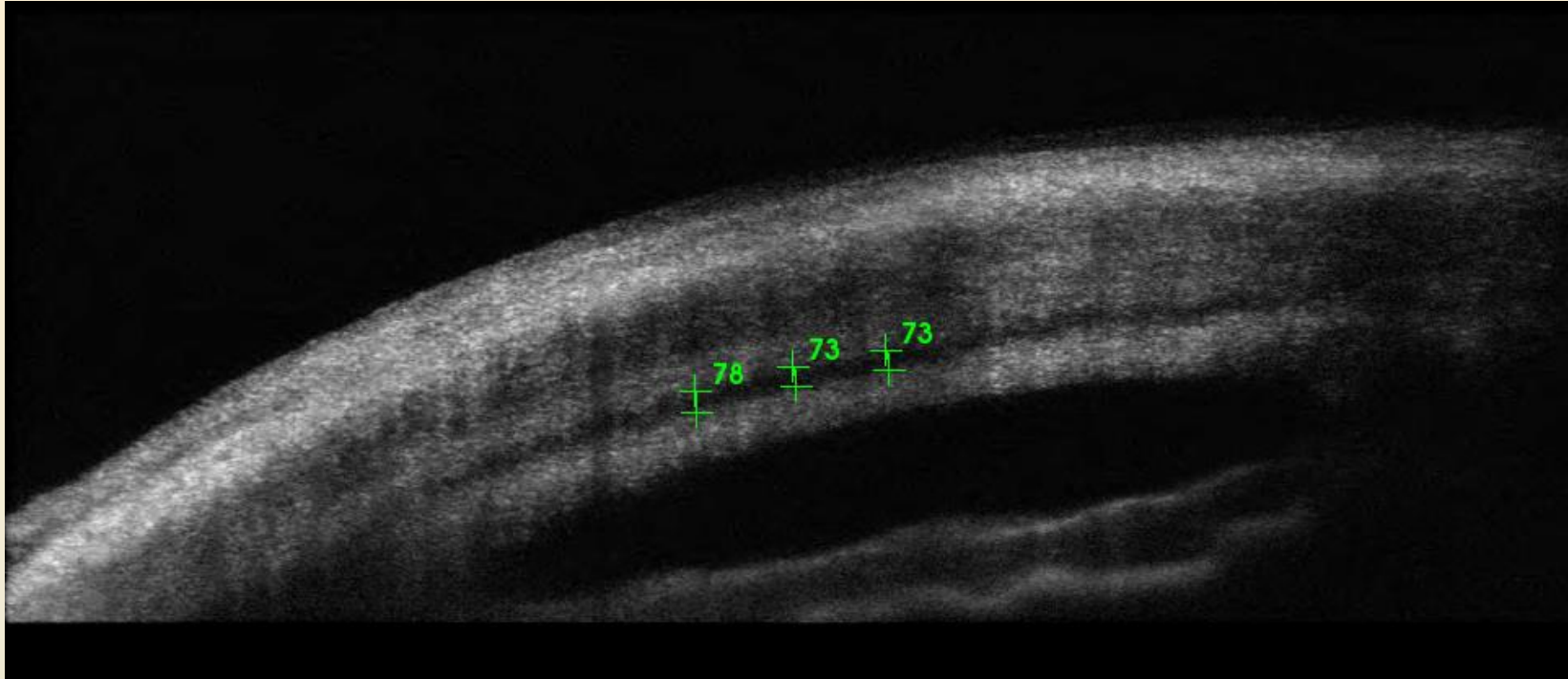
Iride 3D



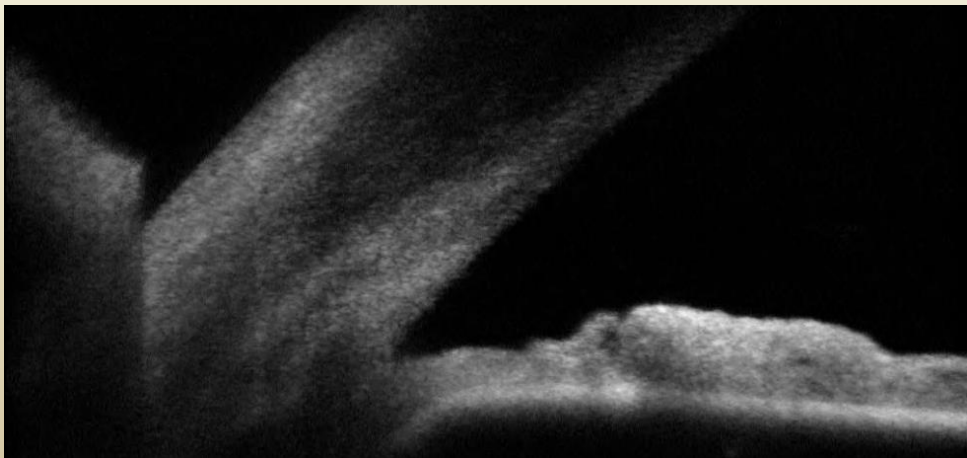
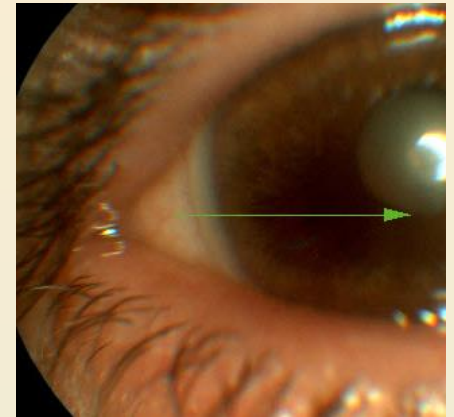
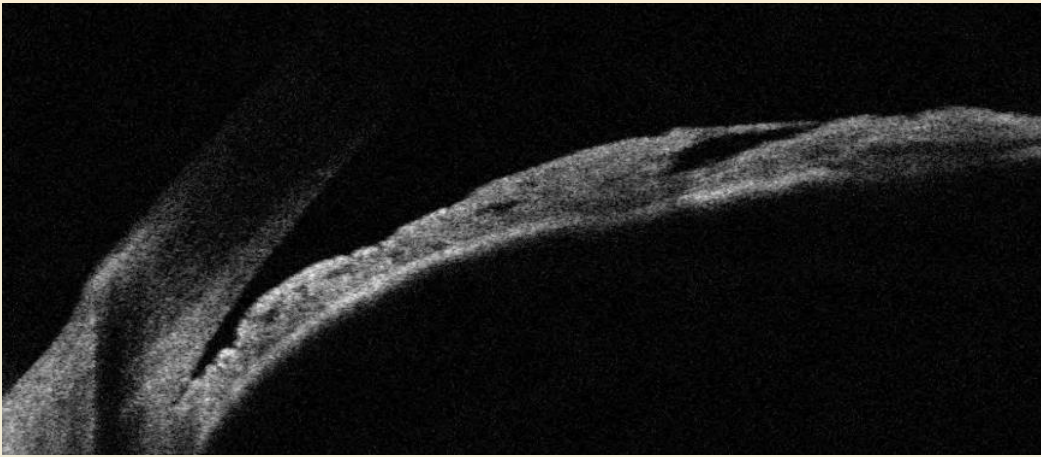
Angio OCT Iride



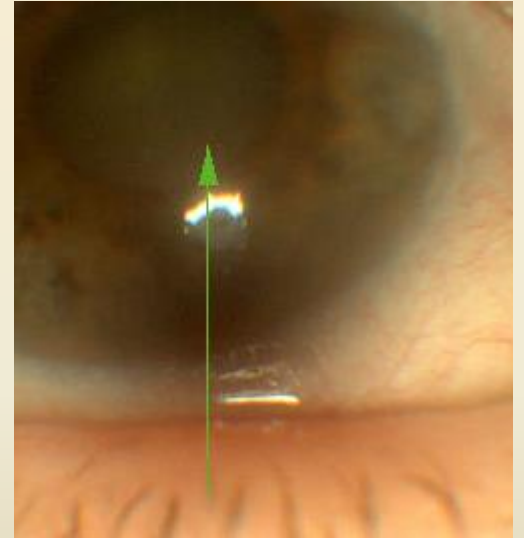
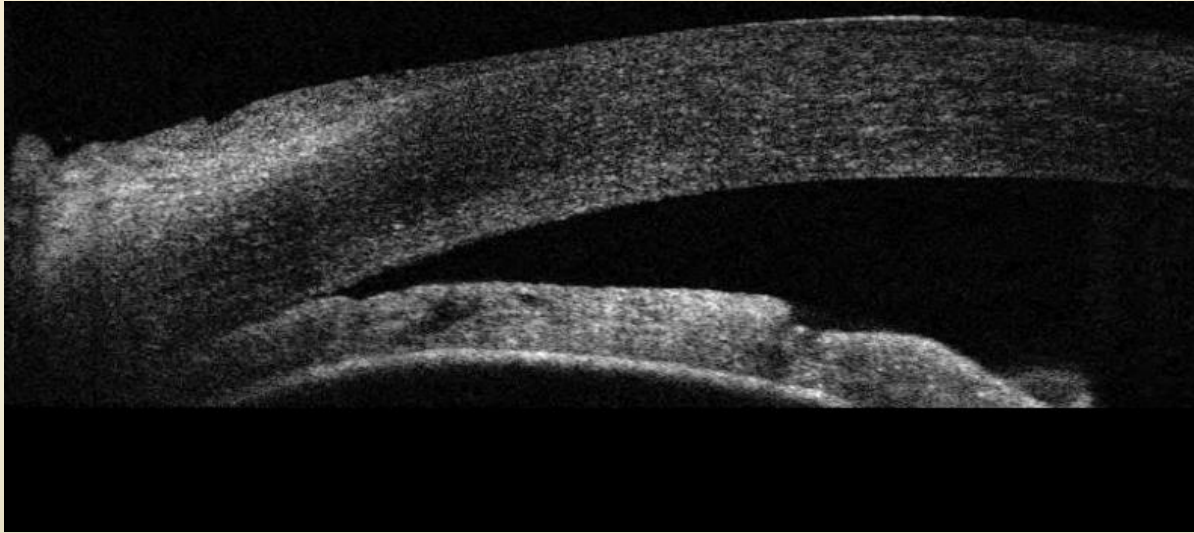
Canale di Schlemm



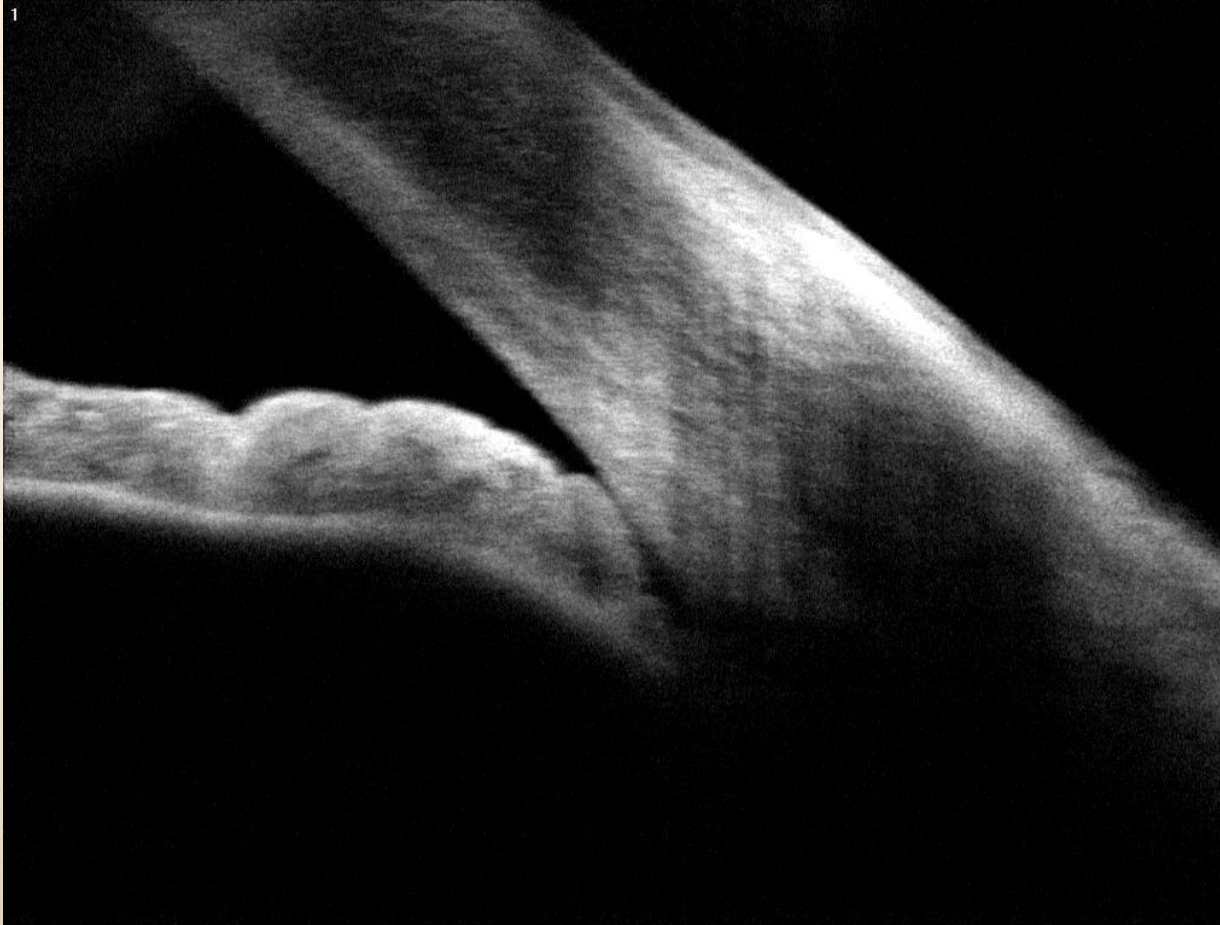
Angolo prima e dopo la cataratta



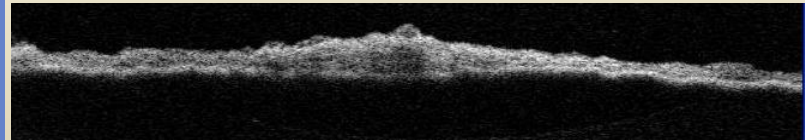
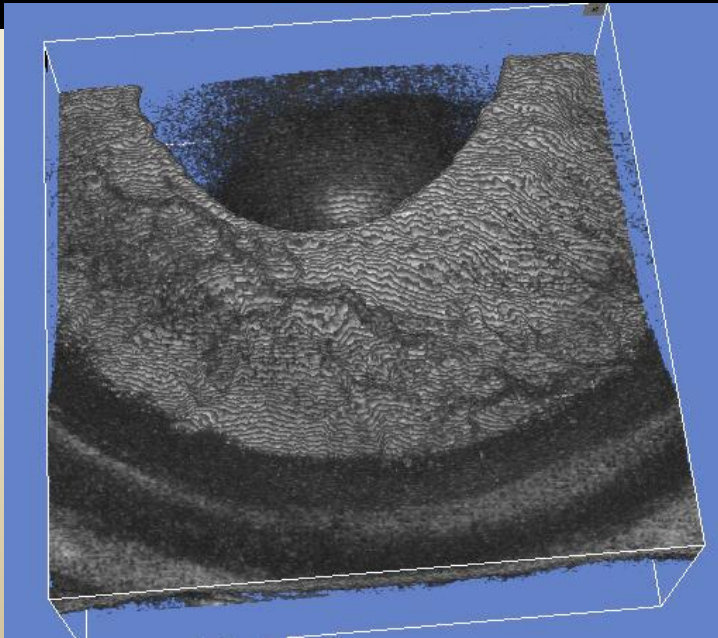
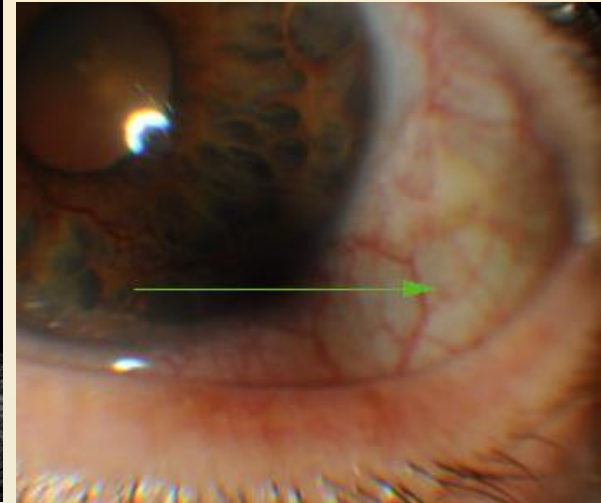
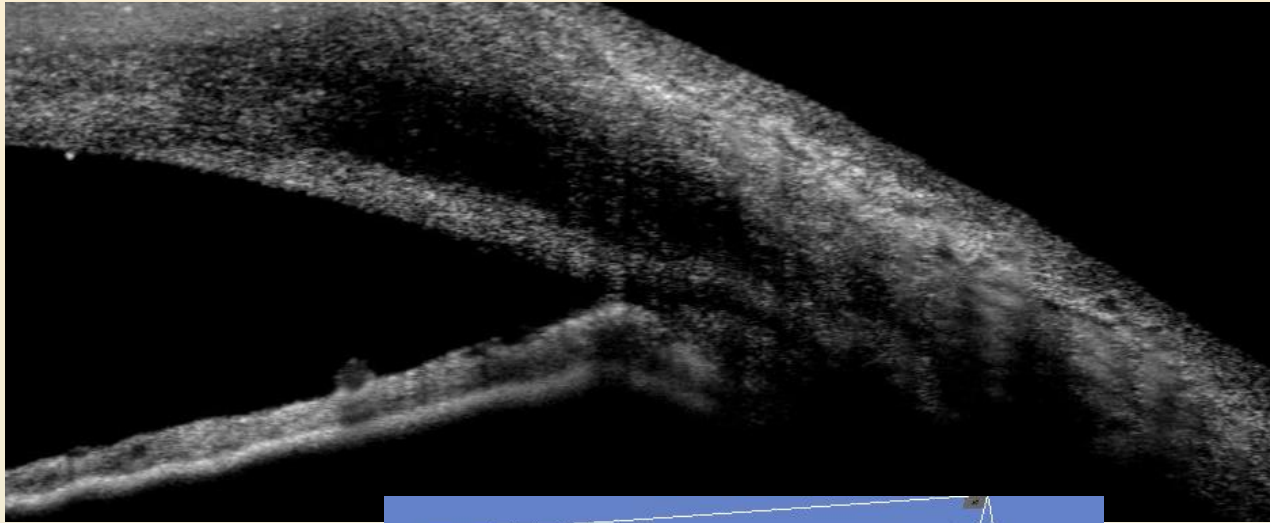
Glaucoma acuto



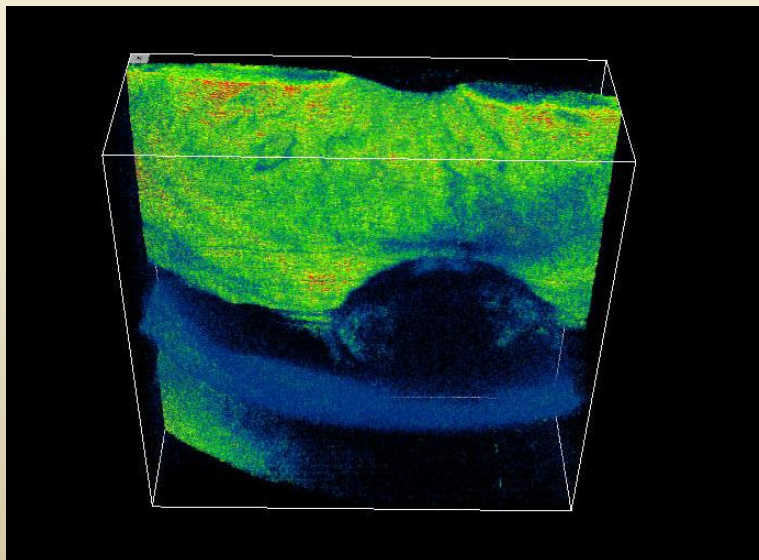
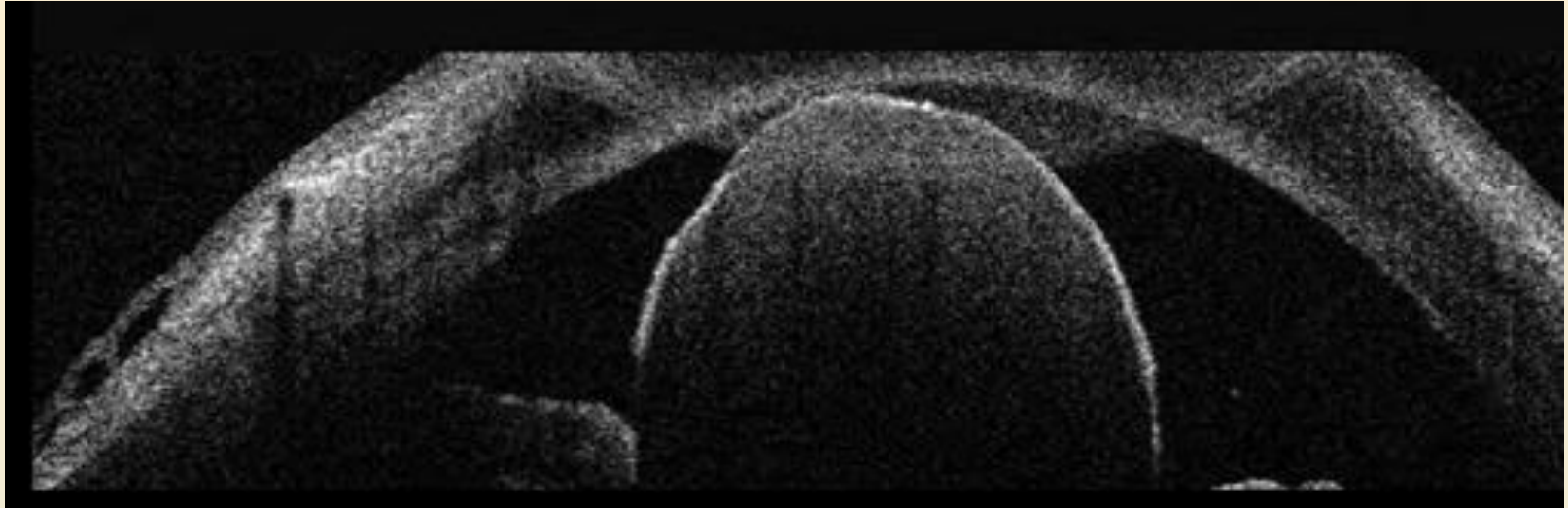
Iride a plateau



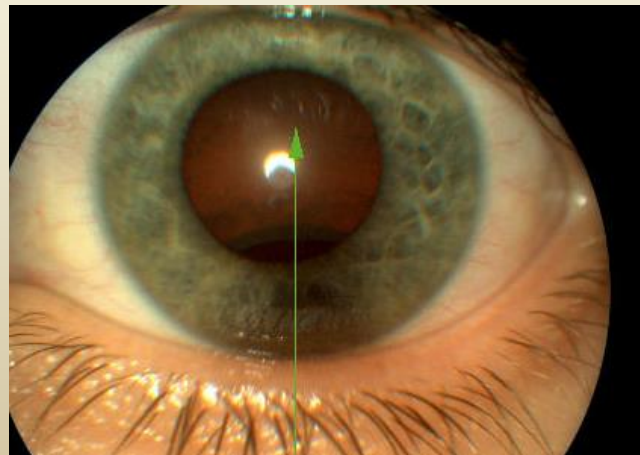
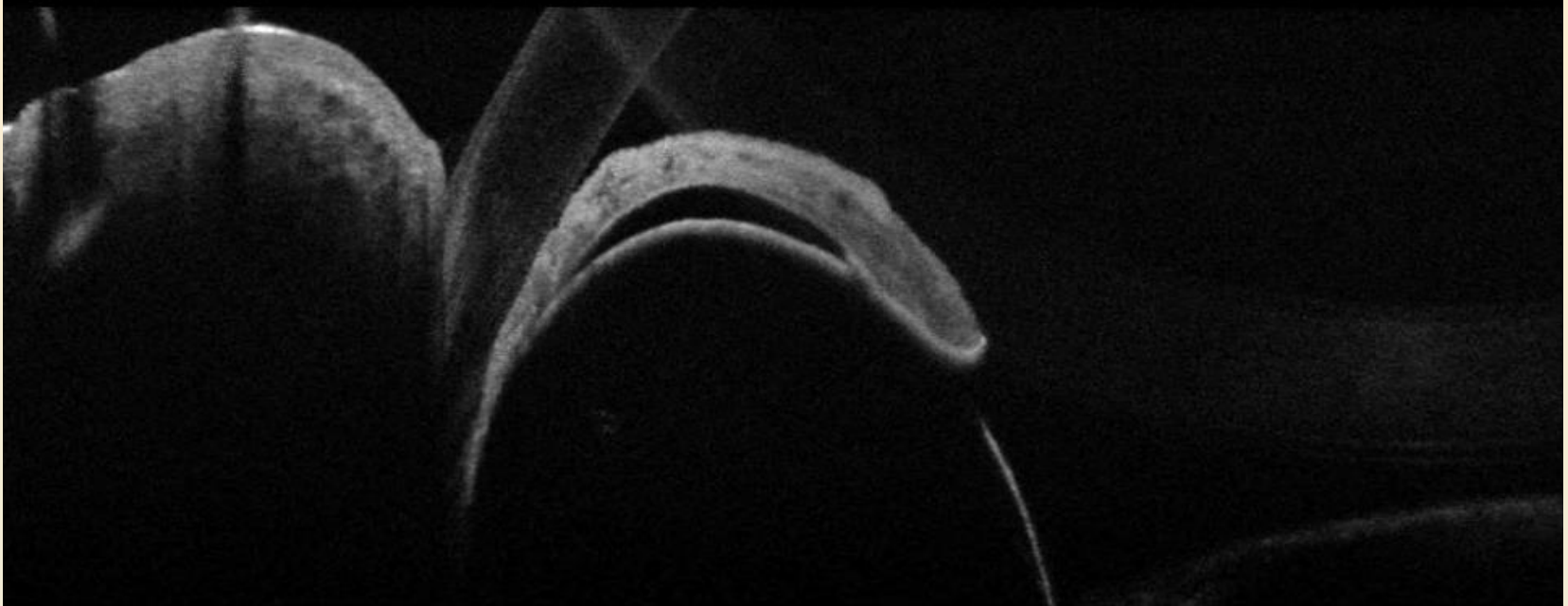
Glaucoma neovascolare



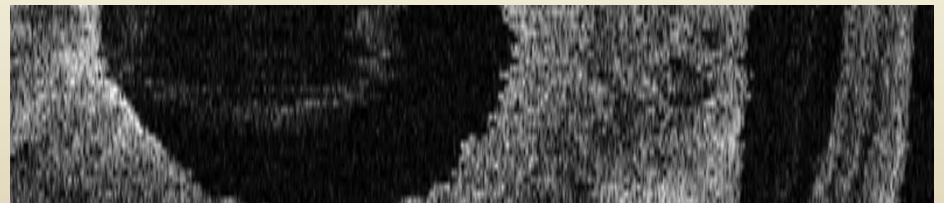
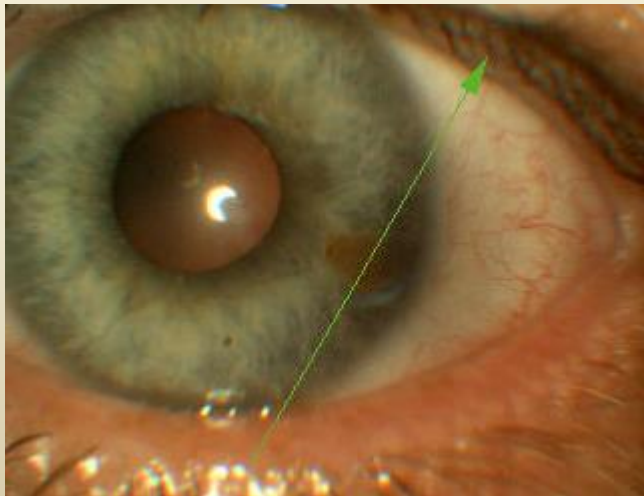
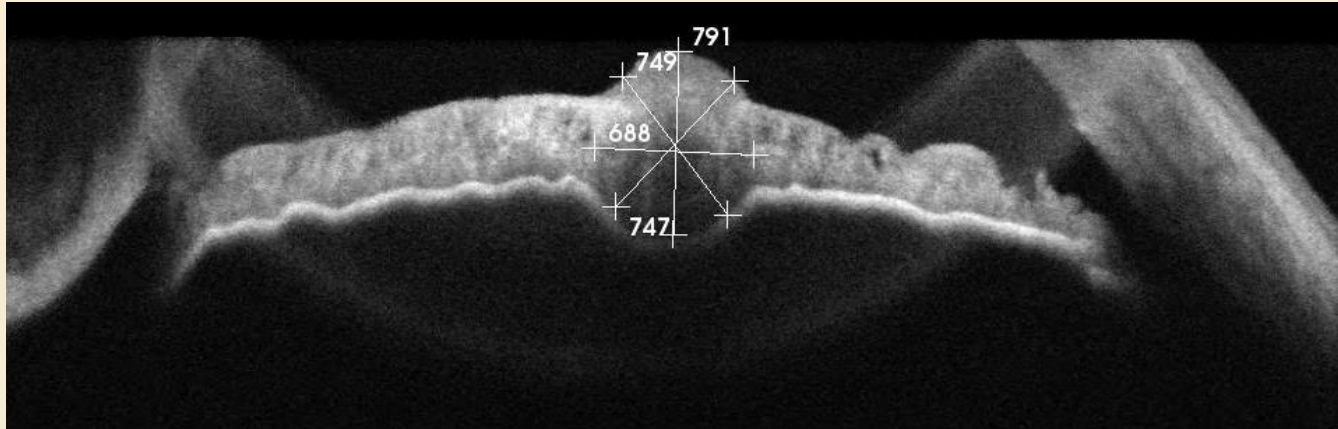
Cisti dell'iride anteriore



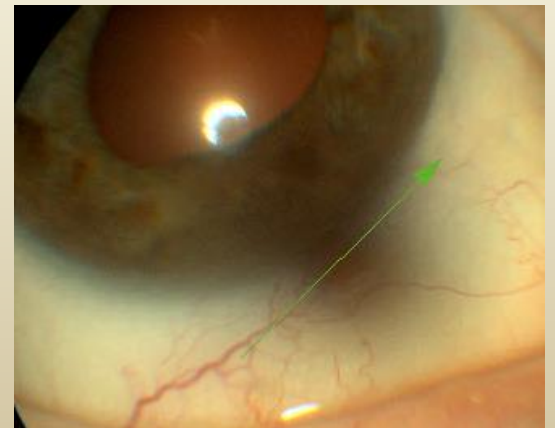
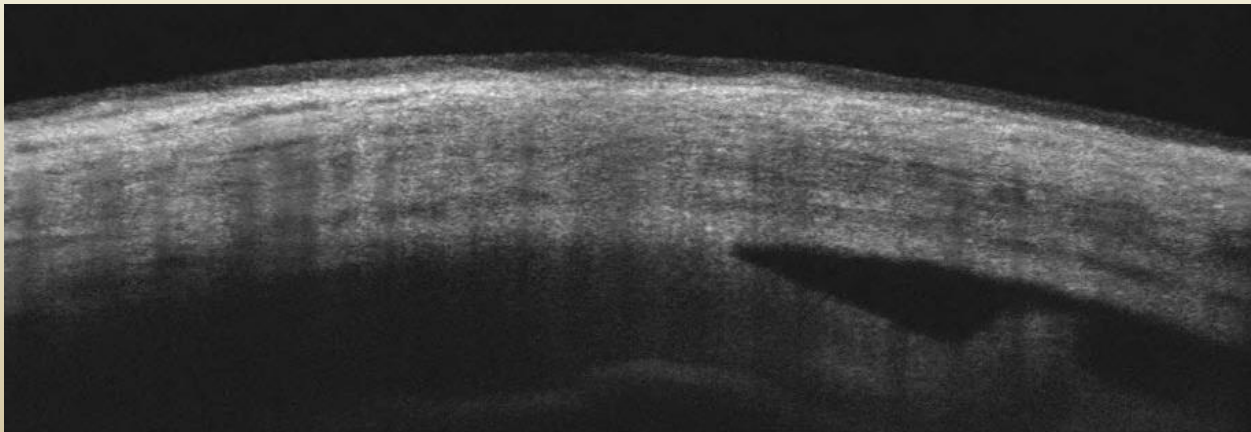
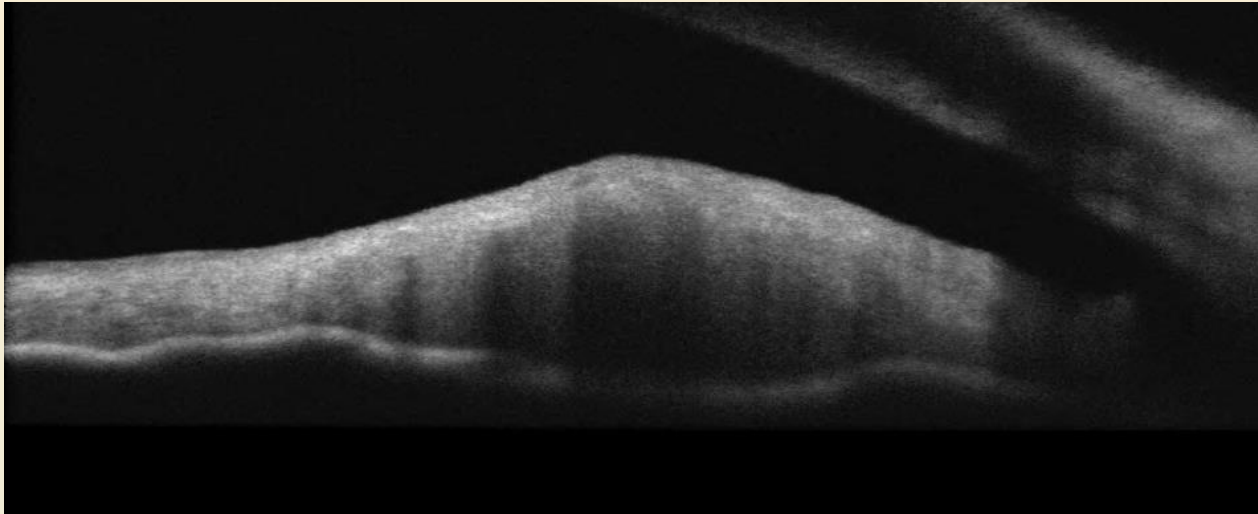
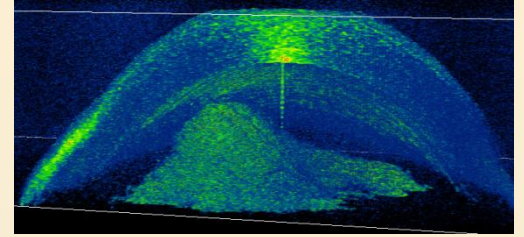
Cisti iridea posteriore



Neoformazione iridea

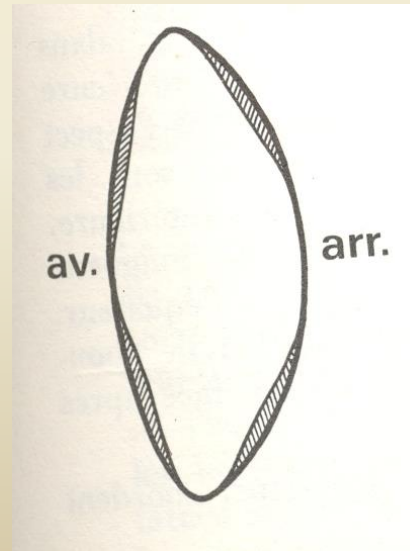
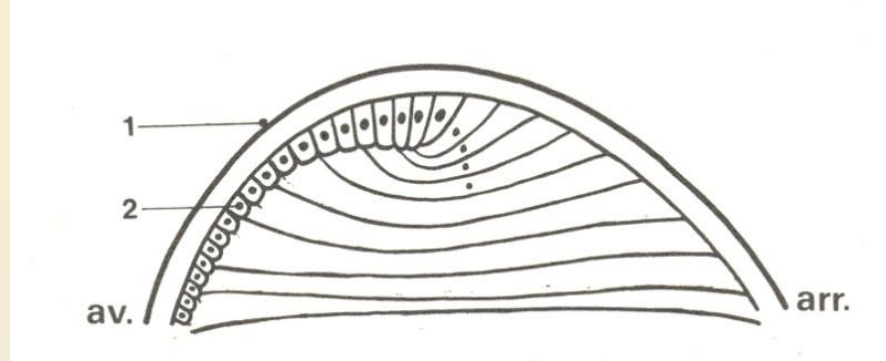


Melanoma



CRISTALLINO

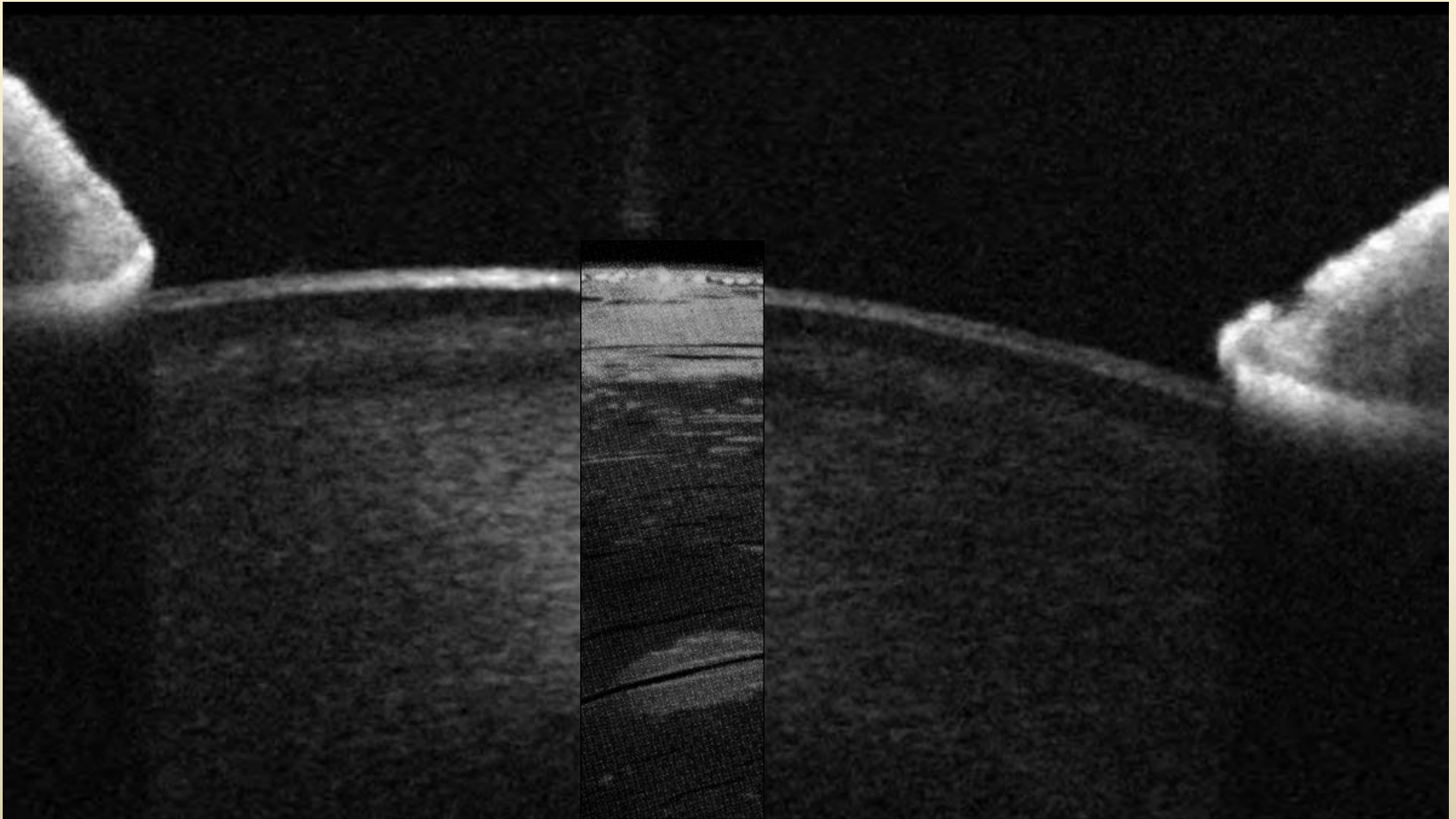
Istologia del cristallino



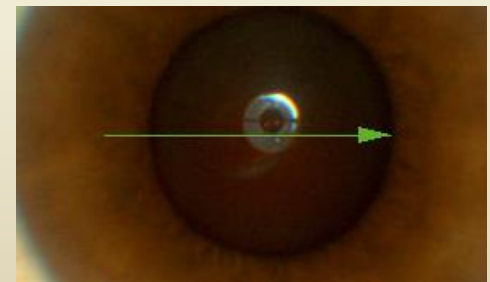
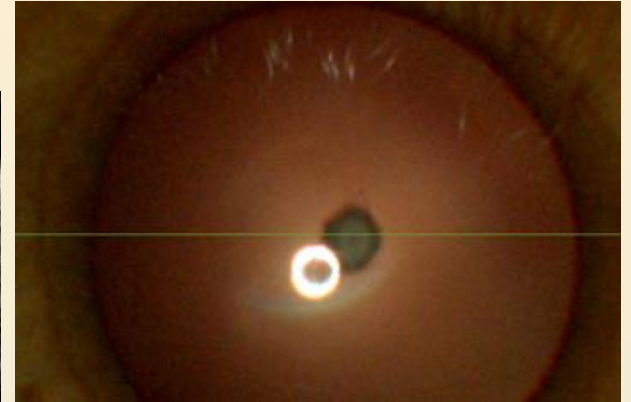
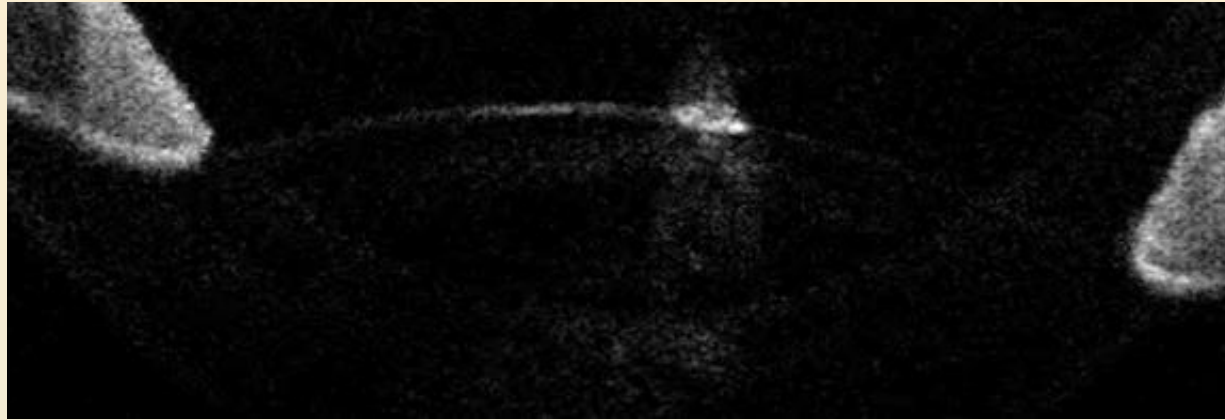
Facendo il precedente gioco



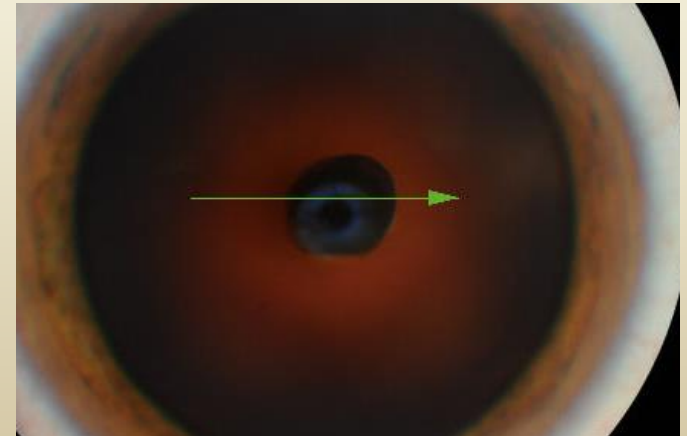
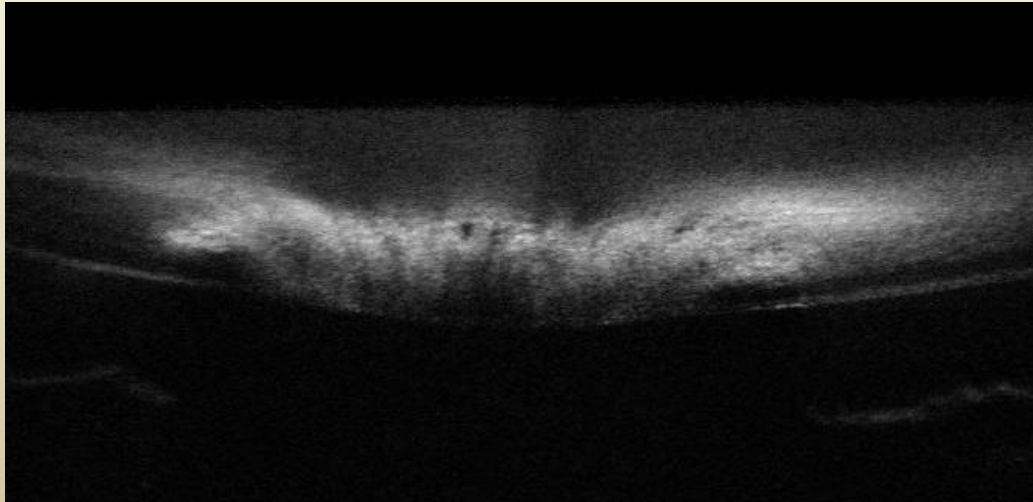
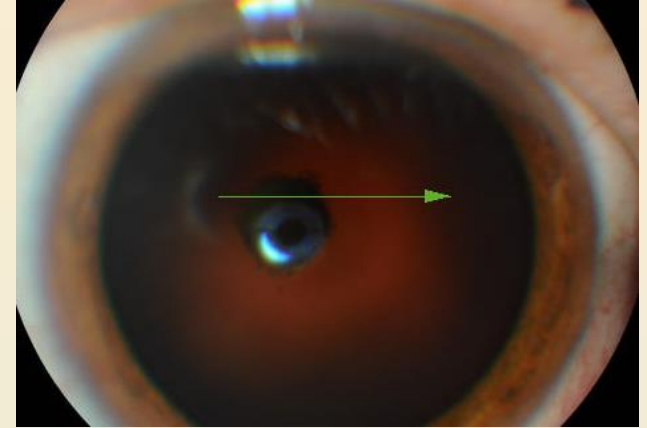
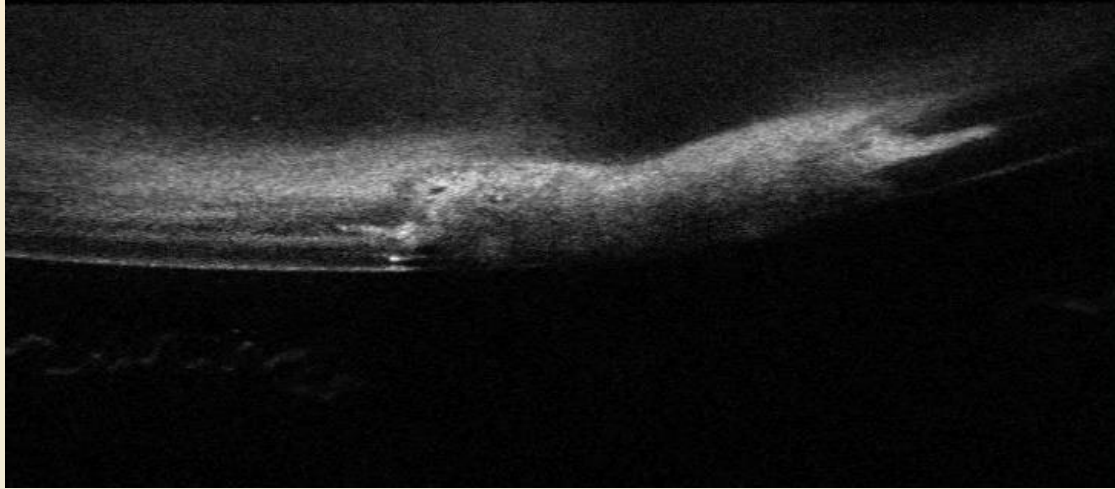
Analogie istologico - OCT



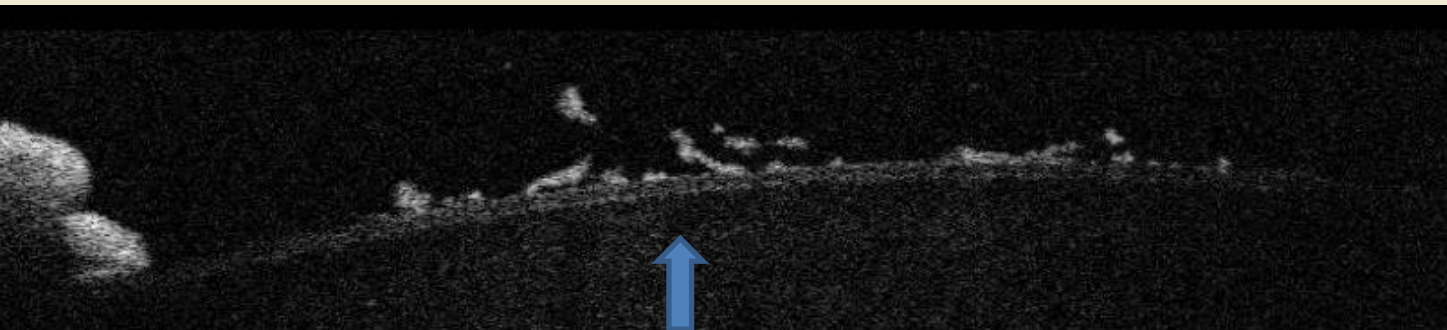
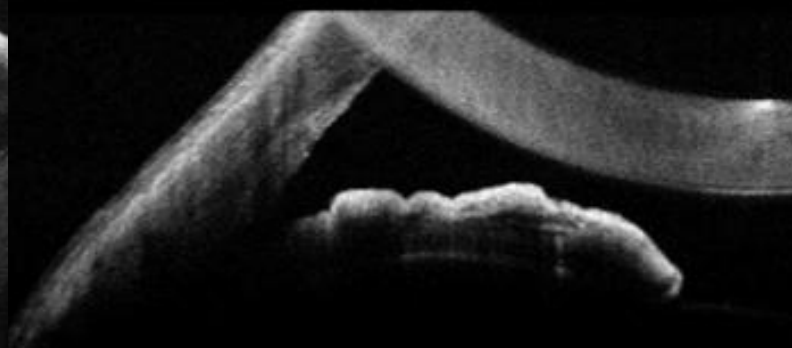
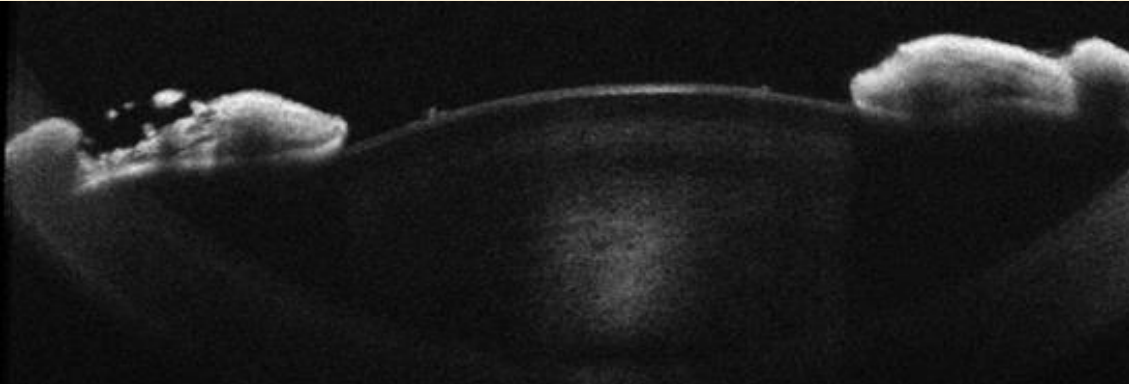
Cataratta polare anteriore



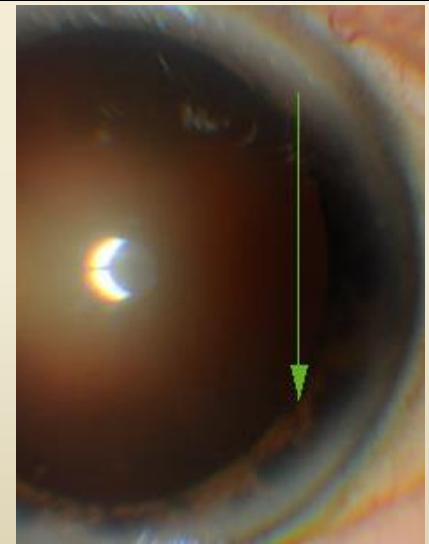
Cataratta polare posteriore



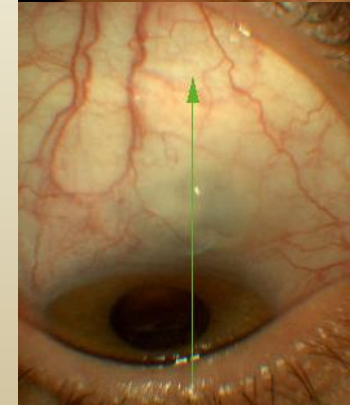
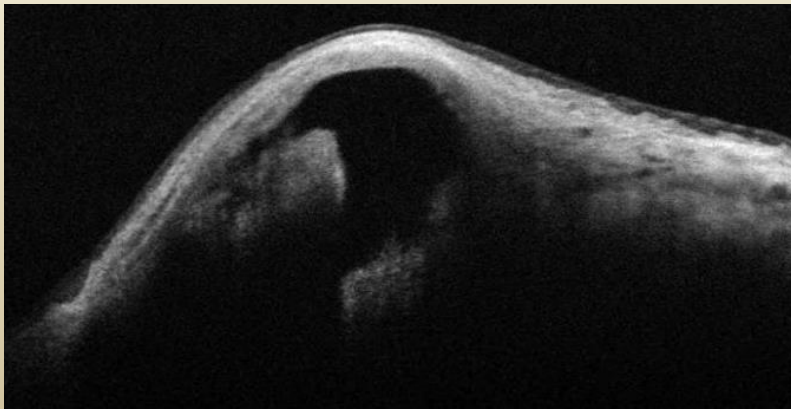
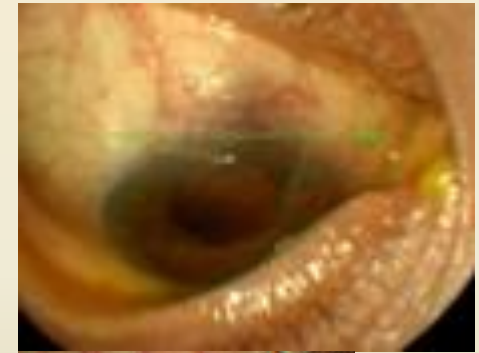
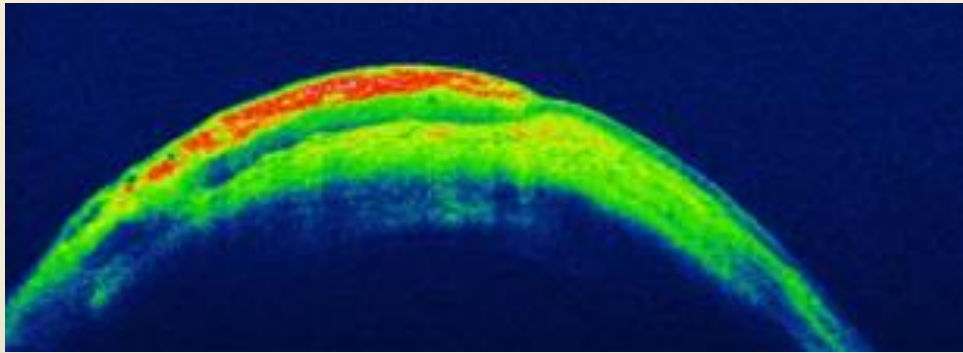
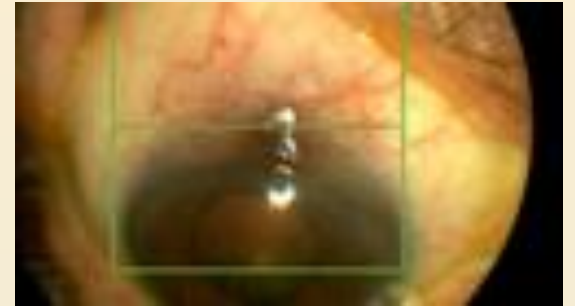
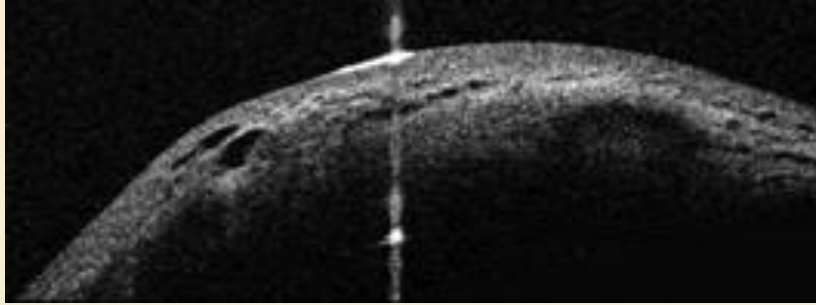
Pseudoesfoliatio



Strato amorfo di Bertelsen



Bozza filtrante



Conclusione

- **Segmento anteriore:** cornea, iride, angolo camerulare, canale di Schlemm cristallino, congiuntiva, ricostruzioni 3D topografia corneale, topografia pachimetrica.
- **Vitreo:** con ricostruzioni 3D
- **Retina:** Morfologia, en face, topografia retinica, microperimetria, angio OCT, Flussimetria
- **Nervo ottico:** Morfologia, fibre nervose, angio OCT, flussimetria
- **Coroide:** Angio OCT
- **Sclera**



Grazie per l'attenzione !