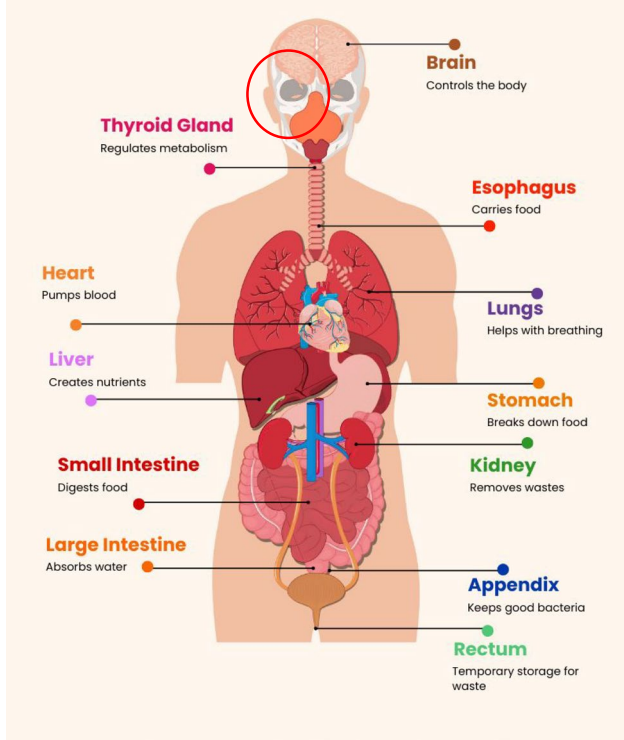


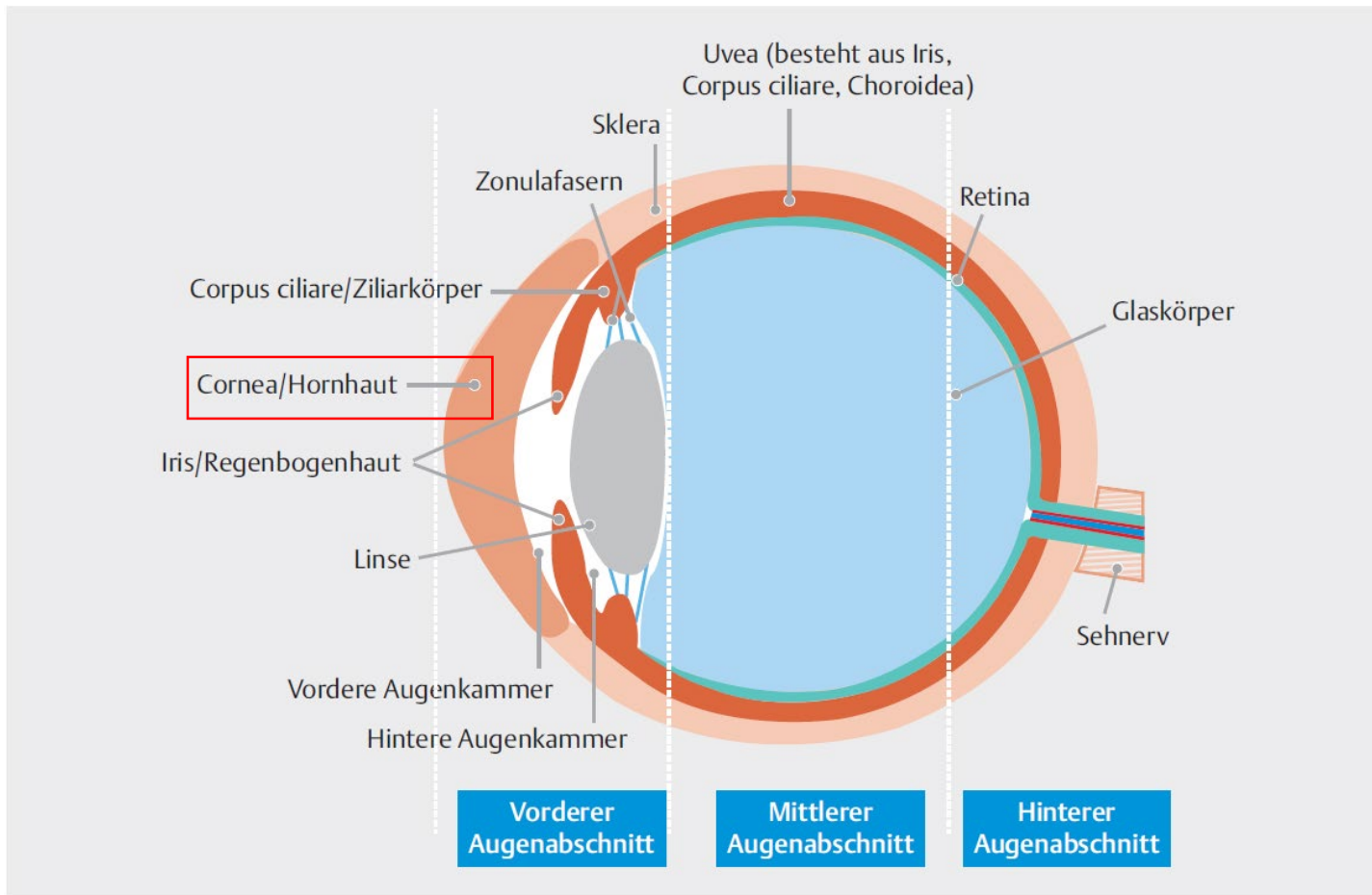
Ulcus corneae – Differentialdiagnosen, PUK

Tongzhou Li, Augenklinik USZ

HUMAN ANATOMY

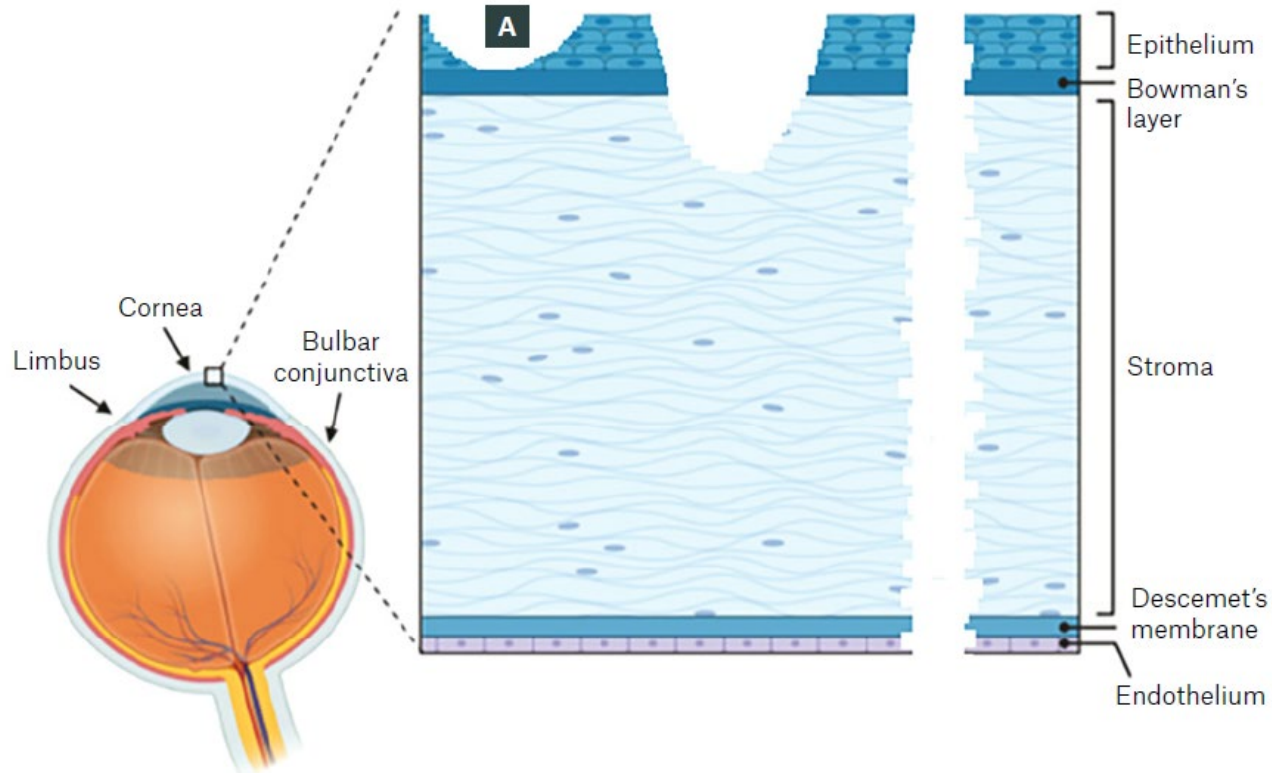


<https://www.template.net/editable/121446/human-anatomy-chart>
BBC Four - The Sky at Night, Hubble: The Five Greatest Images of the Cosmos, Your images: Hubble Deep Field - Hubble Deep Field by Tim Jones



https://www.researchgate.net/publication/353230533_Rheumatische_Erkrankungen_mit_Manifestation_am_Auge

Cornea



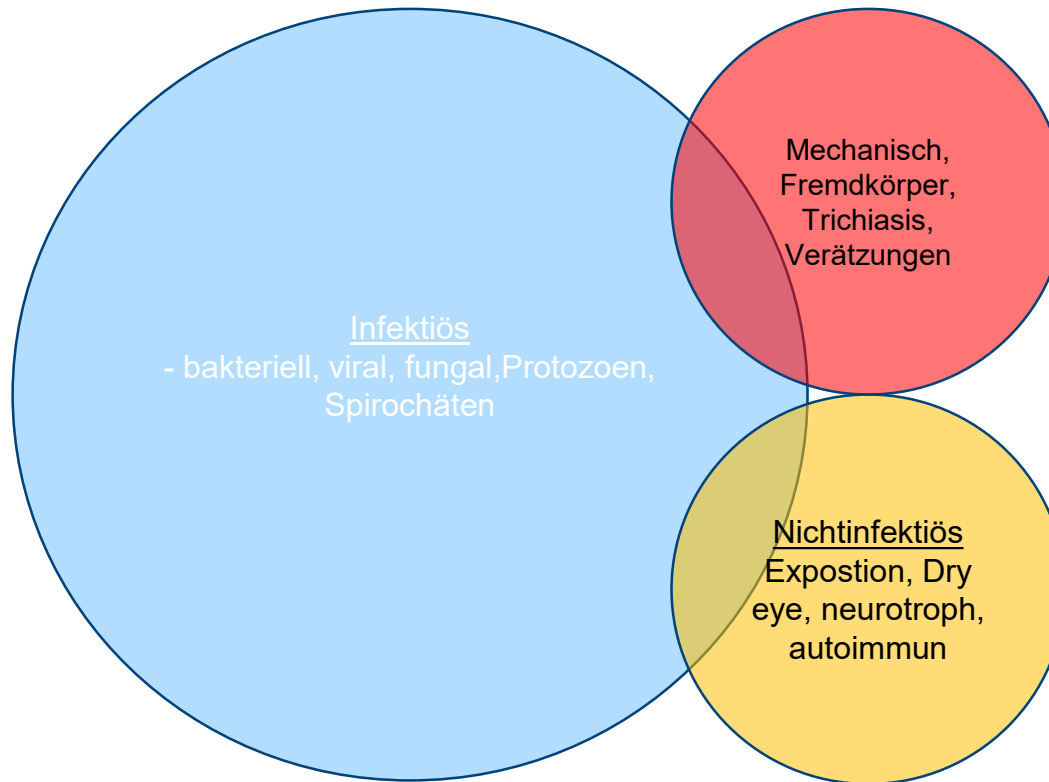
Erosio corneae:

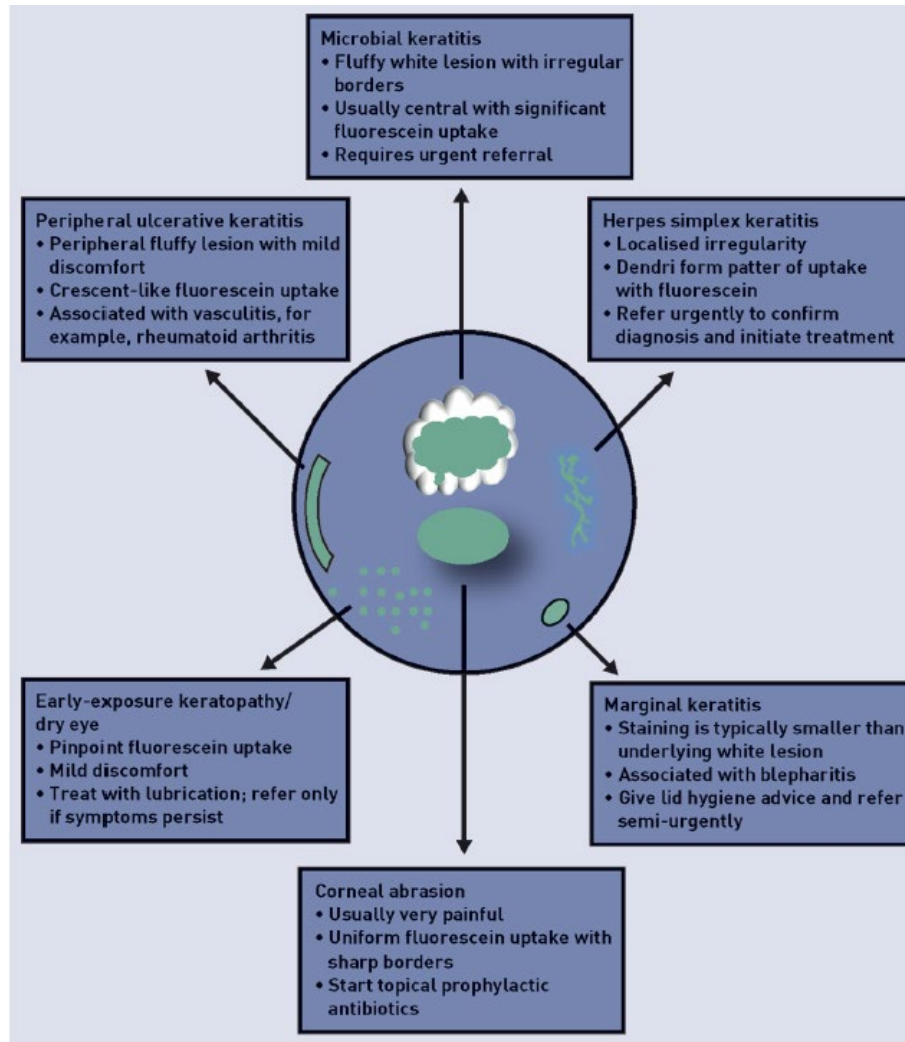
- Epithel

Ulcus corneae:

- Epithel
- Bowman Membran
- Stroma

Ulcus corneae



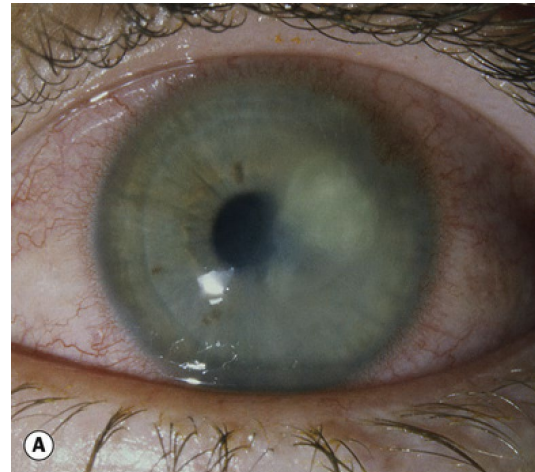
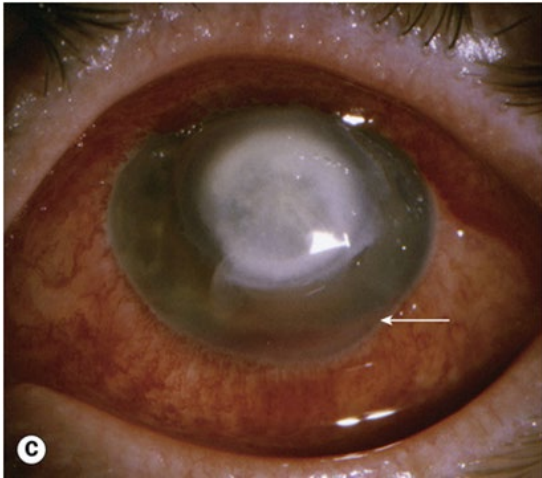


Arbabi EM, Kelly RJ, Carrim ZI. Corneal ulcers in general practice. Br J Gen Pract. 2018;68(666):49-50. doi:10.3399/bjgp17X694385

Bakterielle Keratitis

- Risikofaktoren: Kontaktlinsen, schlechte Hygiene, vorangehendes Trauma oder Disruption der epithelialen Barriere anderer Ursache
- Erreger:
 - Staphylococcus aureus
 - Pseudomonas aeruginosa (häufigster Erreger bei kontaktlinsen-assoziiertes Keratitis)
 - Streptococcus pneumoniae
 - E. coli
 - Klebsiellen
 - N. gonorrhoe

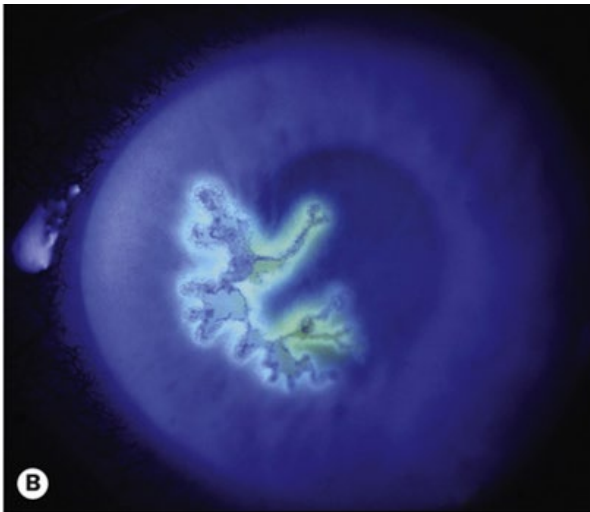
Bakterielle Keratitis



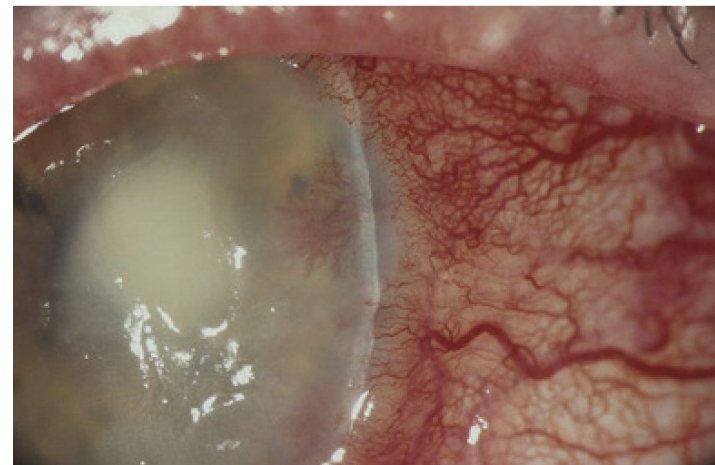
Salmon, John. Kanski's Clinical Ophthalmology E-Book. Available from: Elsevier eBooks+, (9th Edition). Elsevier - OHCE, 2019.

Herpes simplex Keratitis

- HSV1 (selten 2)
- Häufige Ursache einer Keratitis in den entwickelten Welt



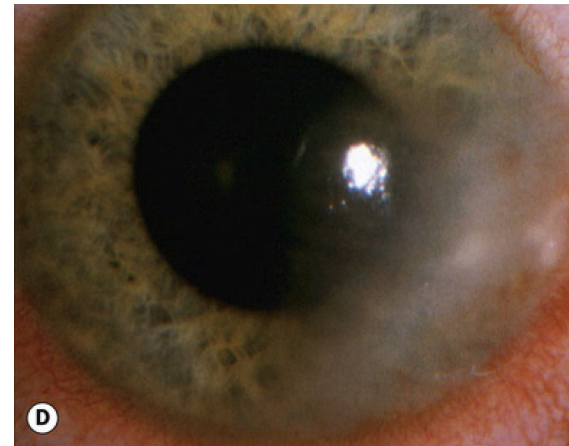
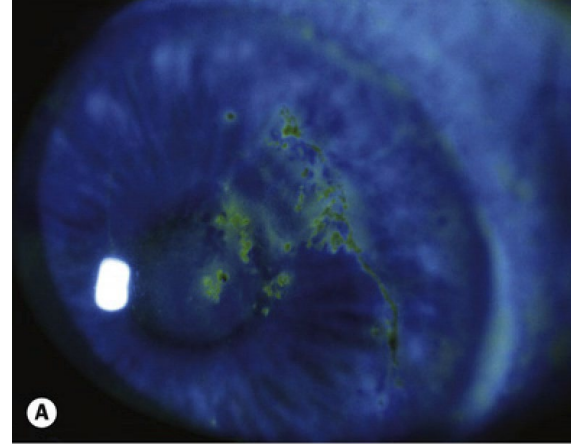
Epitheliale Keratitis, Dendritische Läsion



Stromale nekrotisierende Keratitis

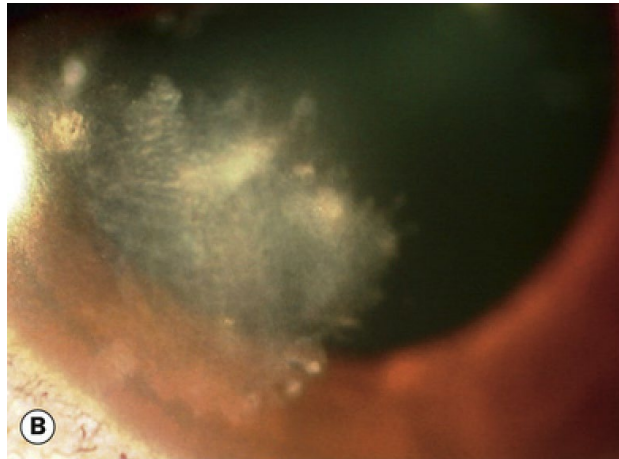
Herpes Zoster Keratitis

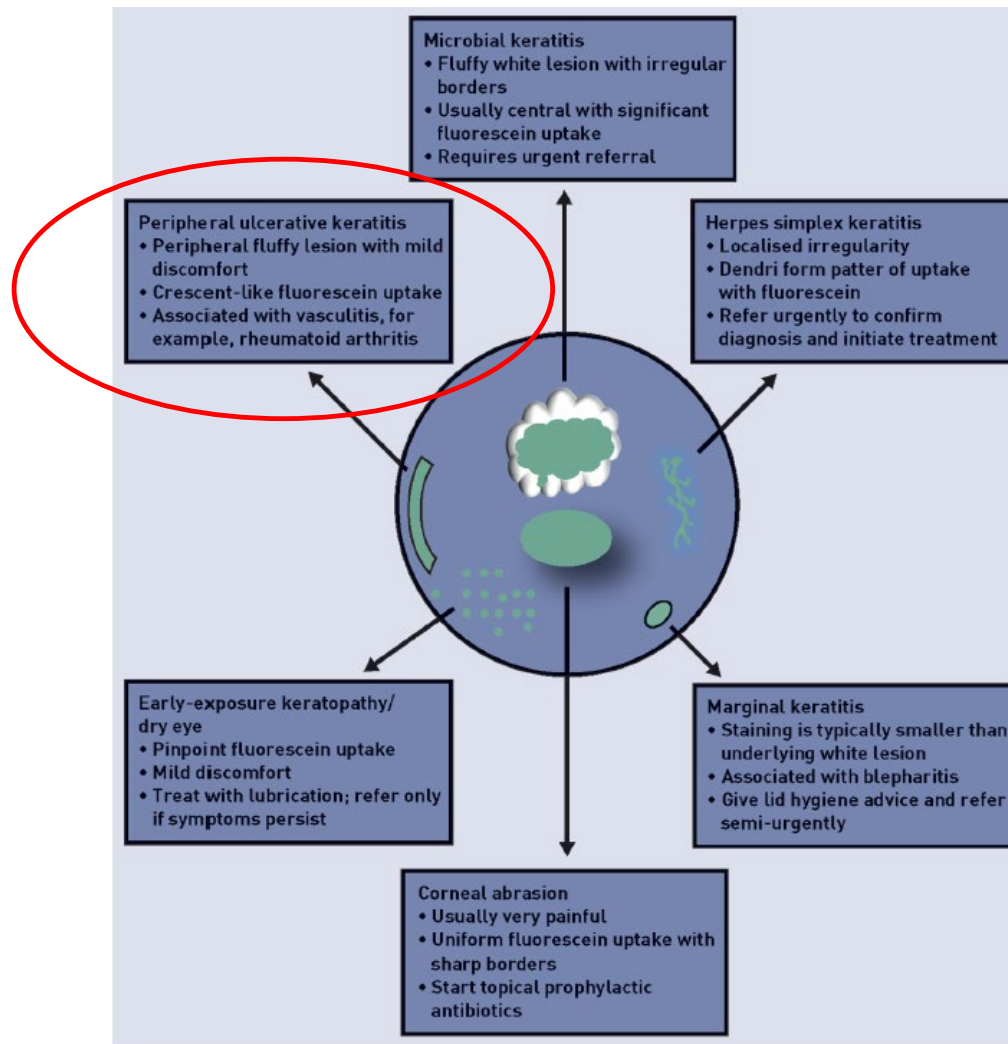
- Varicella-zoster Virus (VZV)



Fungale Keratitis

- Selten
- Meist in tropischen Regionen
- Risikofaktoren: Kontaktlinsen, Gebrauch von topischen Steroiden, Immunsuppression





Periphere ulzerative Keratitis (PUK)

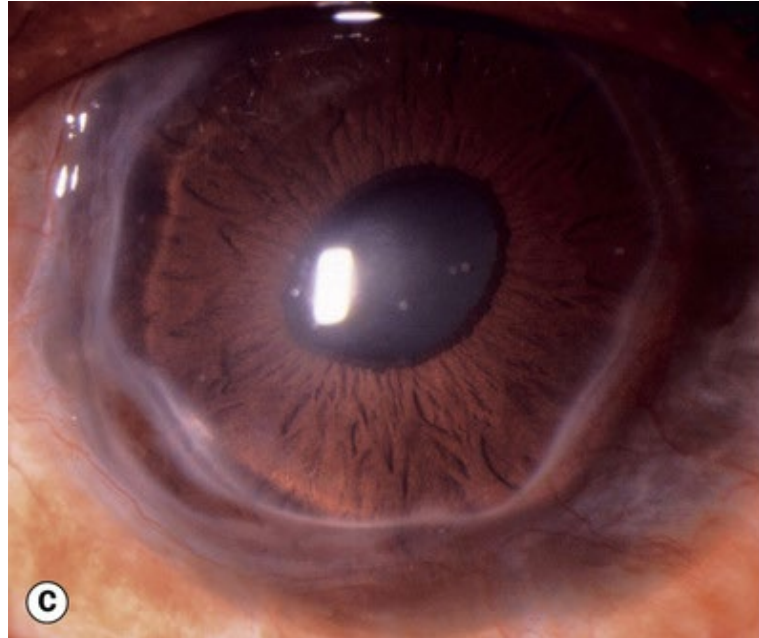
- Schwere, destruktive Inflammation der peripheren Cornea
- Sichel-/halbmondförmige Ulzeration mit stromaler Ausdünnung, +/- Infiltration
- Episkleritis, Skleritis (auch nekrotisierend), Uveitis möglich
- Unilateral oder bilateral

SELTEN

- Inzidenz 3 Fälle auf 1'000'000 pro Jahr

Unspezifische Symptome

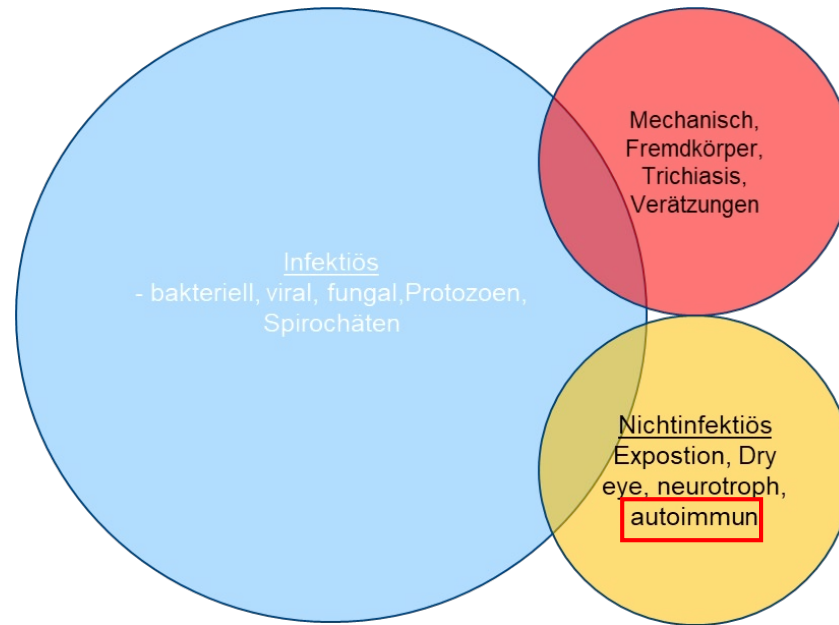
- mit/ohne Schmerzen
- okuläres Fremdkörpergefühl
- Rötung
- Epiphora
- Photophobie
- Sehstörung



Warum die periphere Cornea?

- Limbale Blut- und Lymphgefäße reichen ca. 0.5mm in die Cornea
- Makrophagen, Langerhans Zellen, Lymphozyten
- Höhere Konzentrationen von IgM und Komplementfaktoren (C1)
- Immunkomplexablagerungen

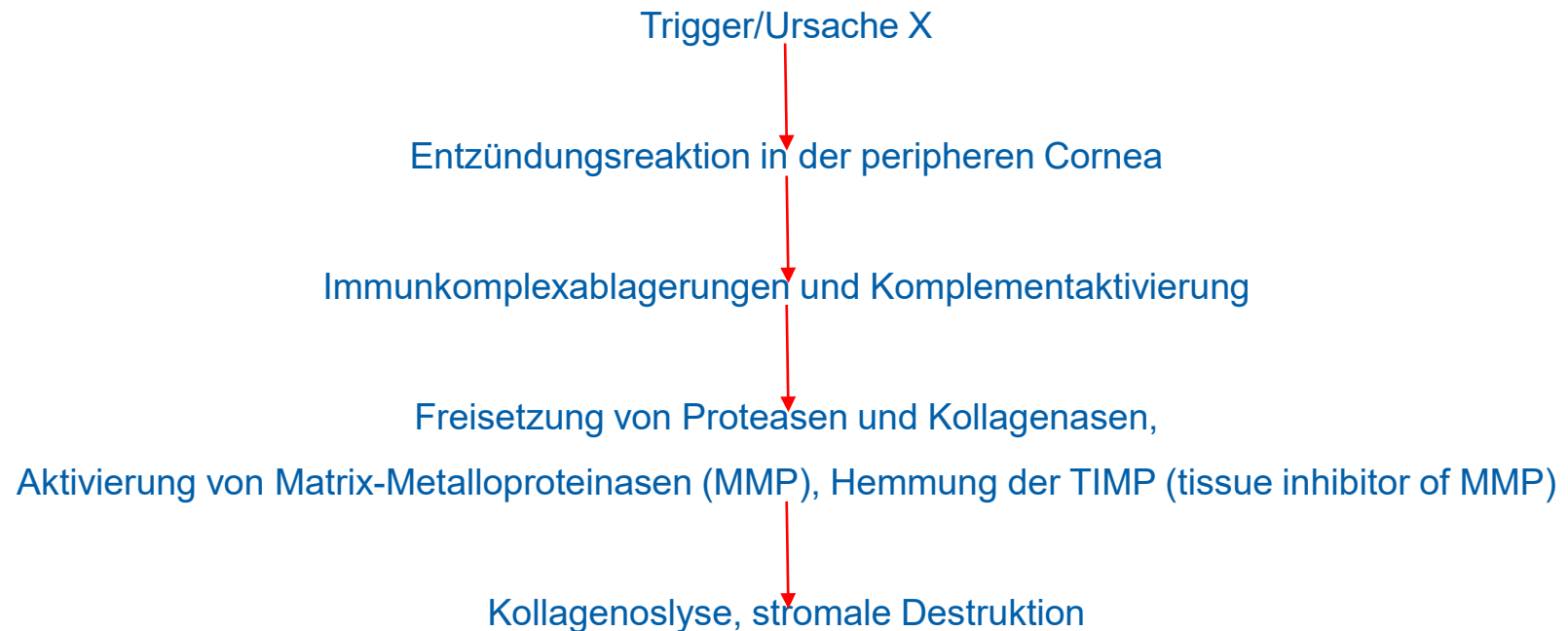
Warum ist die PUK besonders?

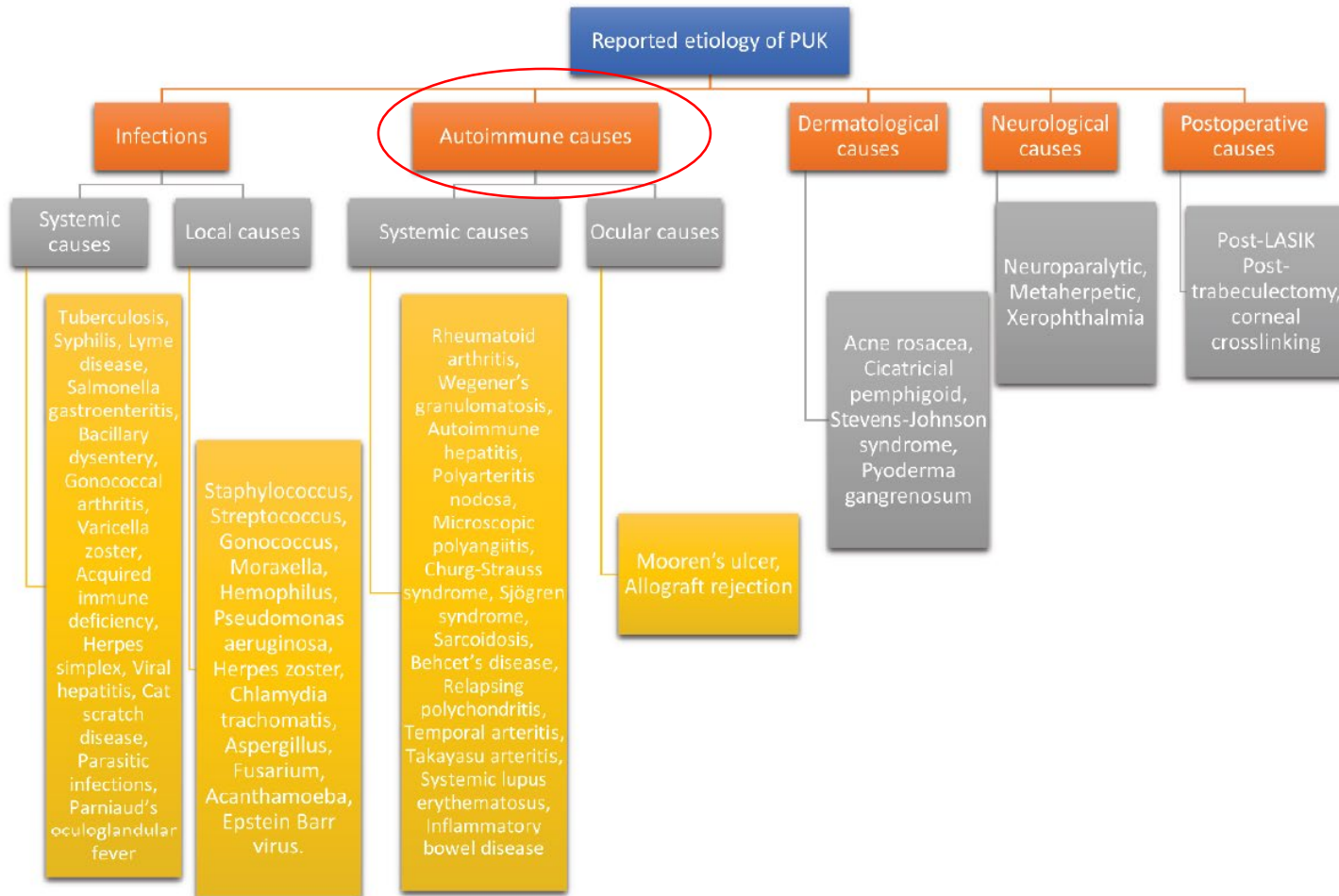


PUK kann mit einer zugrundeliegenden systemischen autoimmunen Erkrankung assoziiert sein

Pathogenese PUK

- die genauen pathophysiologischen Mechanismen sind noch unklar

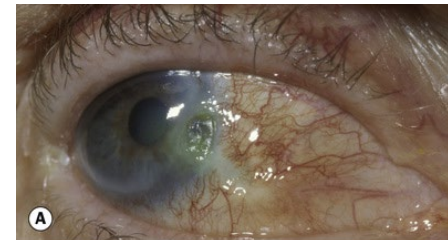
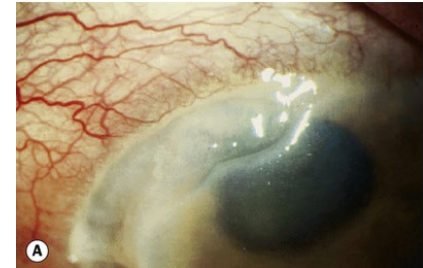
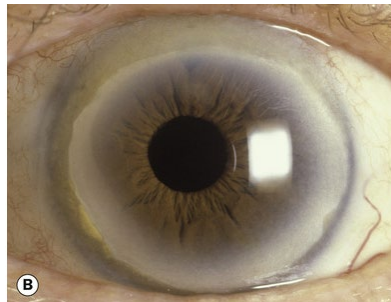
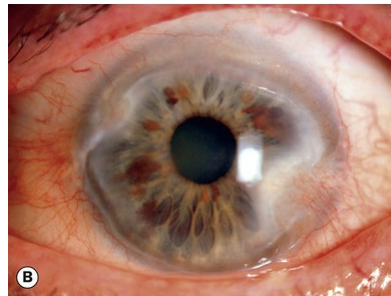
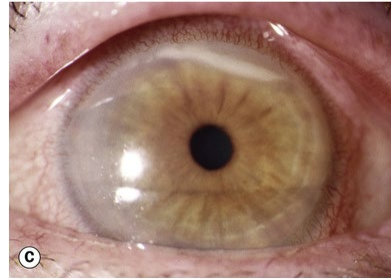




Hassanpour K, H ElSheikh R, Arabi A, R Frank C, M Elhusseiny A, K Eleiwa T, Arami S, R Djallian A, Kheirkhah A. Peripheral Ulcerative Keratitis: A Review. J Ophthalmic Vis Res. 2022 Apr 29;17(2):252-275. doi: 10.18502/jovr.v17i2.10797. PMID: 35765625; PMCID: PMC9185208.

nicht-infektiöse

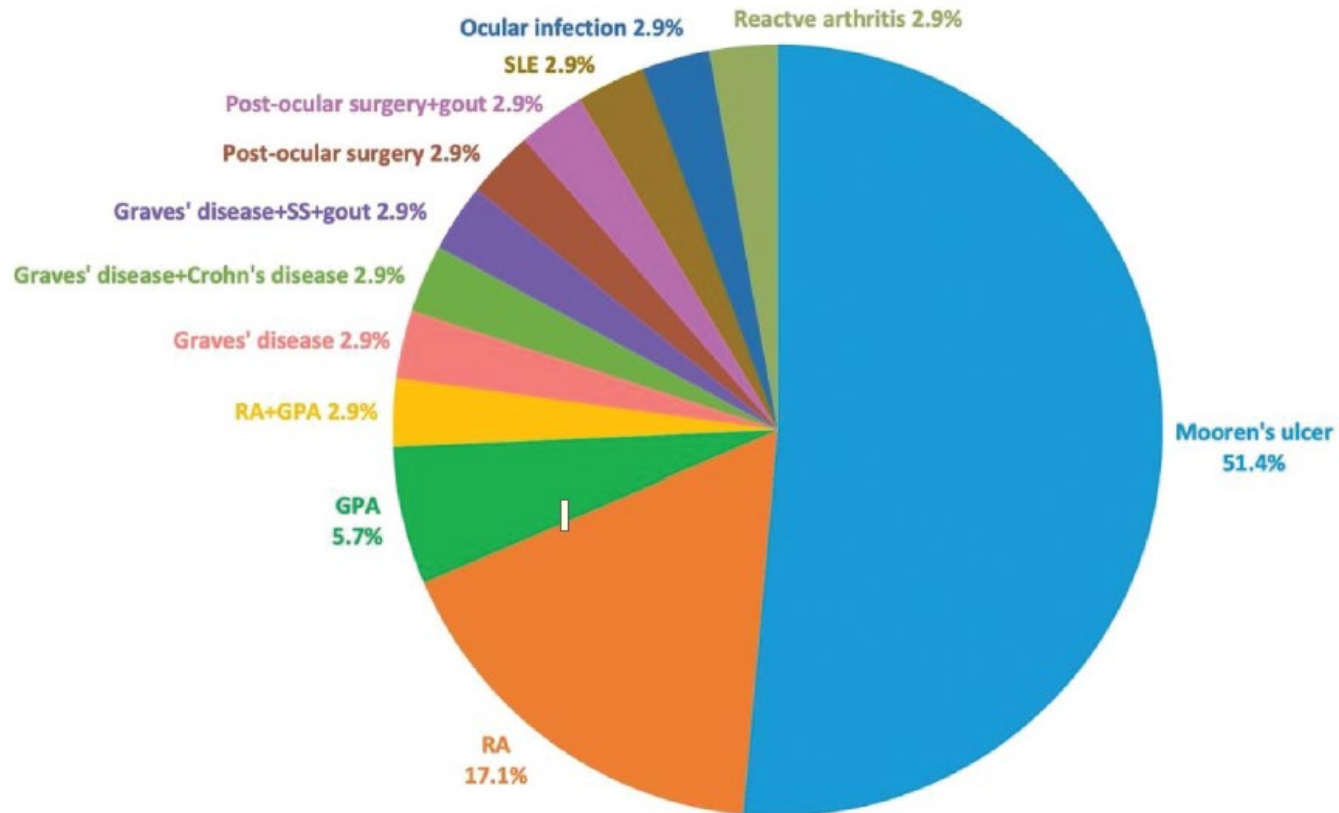
- Marginale Keratitis
- Mooren's ulcer (Ulkus Mooren)
- Terrien's marginale Degeneration
- Dellen
- Furrow'sche Degeneration



Systemische Erkrankungen bei PUK

- am häufigsten **Rheumatoide Arthritis** (34-42% bei Patienten mit PUK)
- SLE
- Sjögren-Syndrom
- Granulomatose mit Polyangiitis (GPA)
- Churg-Strauss Syndrom
- Mikroskopische Polyangiitis
-

- M. Behcet
- Sarkoidose
- Chronisch-entzündliche Darmerkrankungen

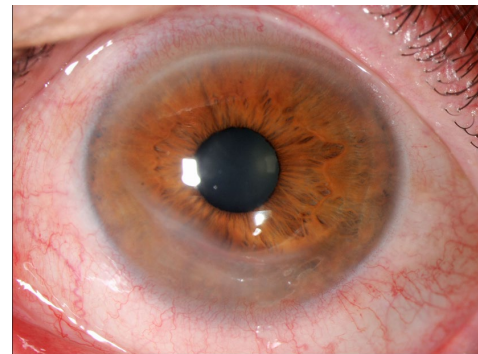
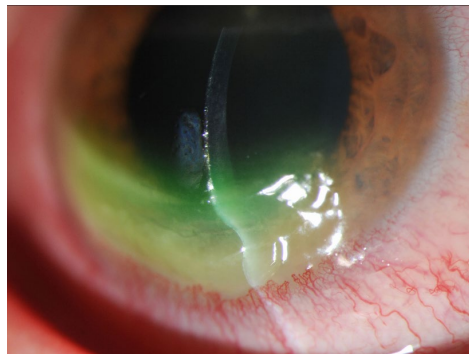
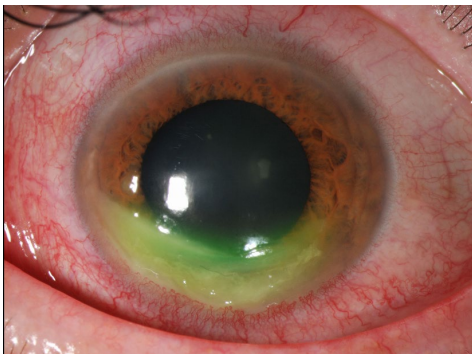


Chuephanich P, Kitsirilarp W, Keorochana N. Characteristics, Etiologies, and Outcomes of Peripheral Ulcerative Keratitis in a Tertiary Referral Hospital in Thailand: A 10-Year Study. *Ocul Immunol Inflamm.* 2023 Dec 22:1-8. doi: 10.1080/09273948.2023.2296069. Epub ahead of print. PMID: 38133946.

Fallbeispiel 1

54-jähriger Patient

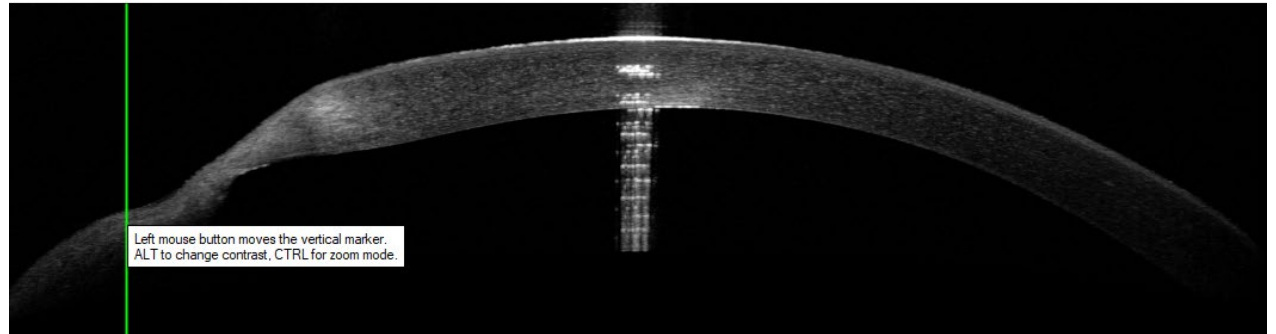
- Erstdiagnose einer seropositiven rheumatoiden Arthritis ca. 2006



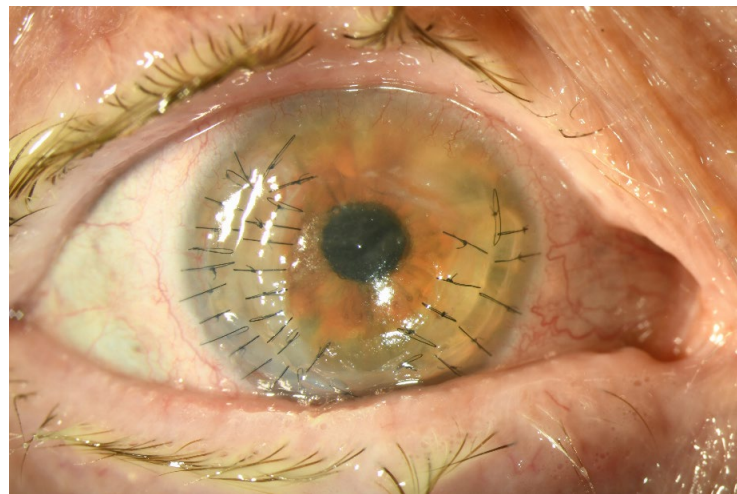
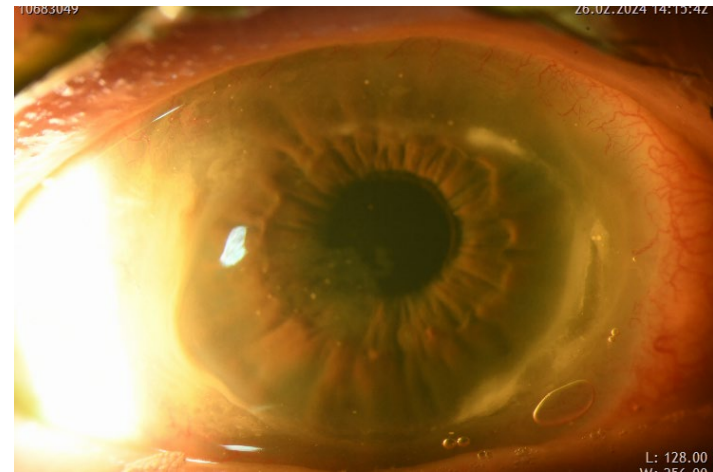
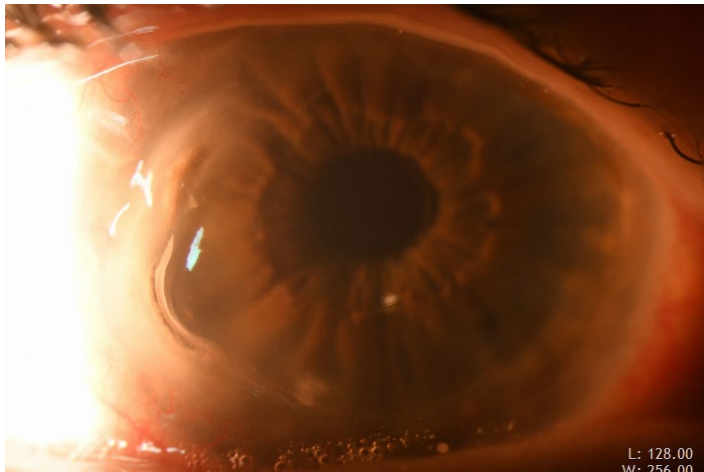
Fallbeispiel 2

81-jähriger Patientin

- Seropositive Polyarthrititis seit Jahren, ED unklar
- St.n. MTX, Humira, Kevzara



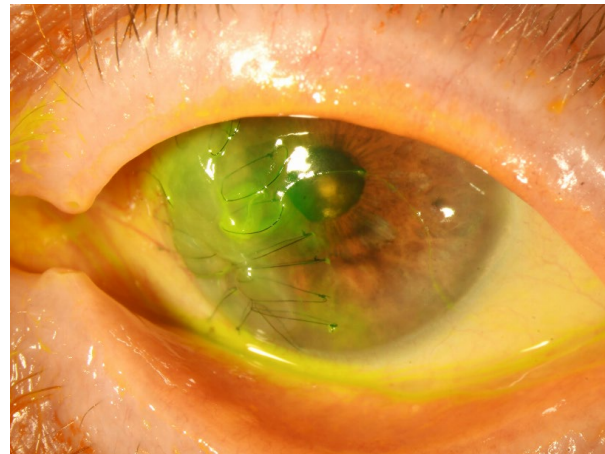
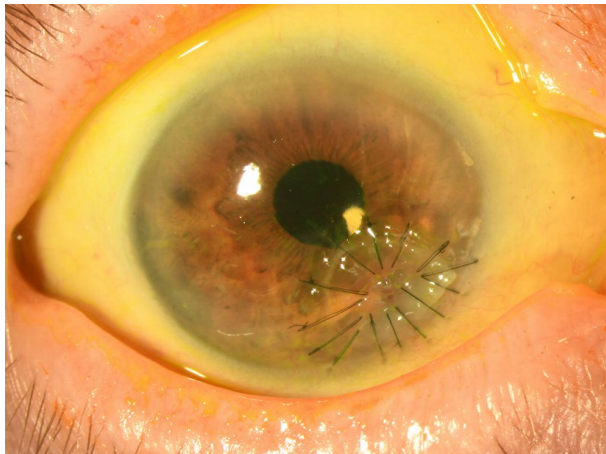
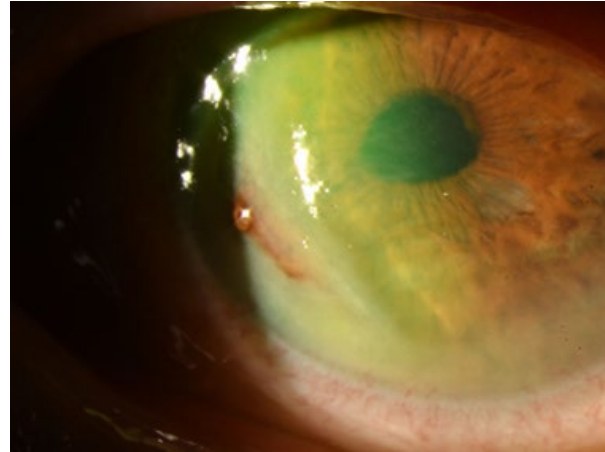
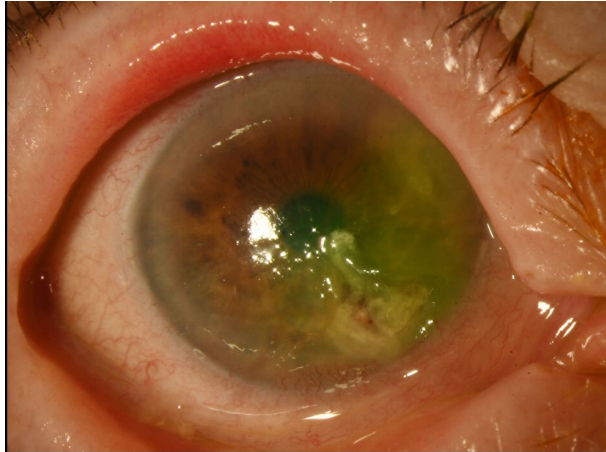
Fallbeispiel 2



Fallbeispiel 3

- 80-jährige Patientin
- Rheumatoide Arthritis DD Mischkollagenose, ED 1999
- Basistherapie mit MTX wurde 07/2020 scheinbar bei Niereninsuffizienz sistiert
- Perforiertes Hornhautulkus mit Iristamponade 11/2020

Fallbeispiel 3





Vielen Dank für Ihre
Aufmerksamkeit