ADC related ocular adverse events: correct managements

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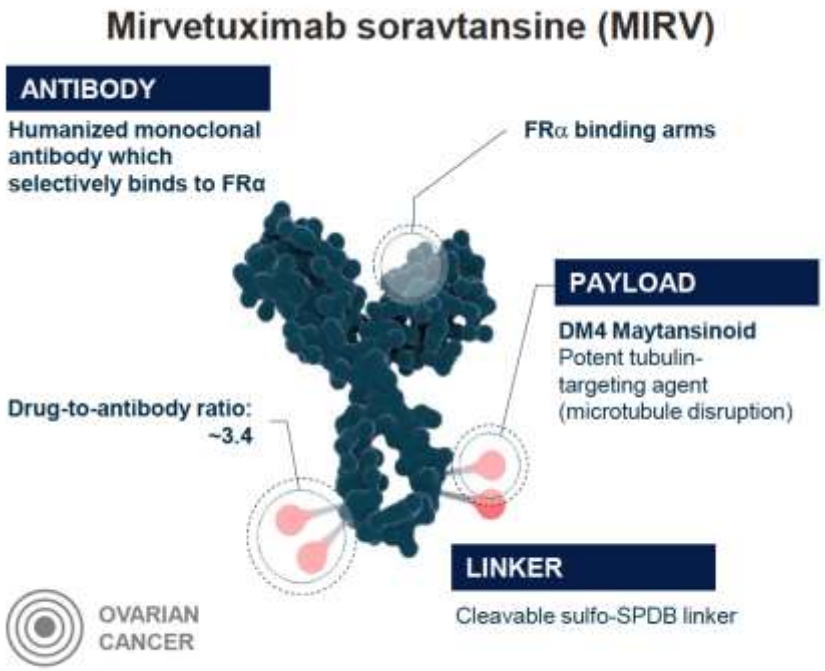
IT-ELAH-250079

Disclosure Statement

The presenter has no financial or professional conflicts of interest to disclose.

Introduction



Mirvetuximab is an antibody-drug conjugate (ADC) comprising:

-FRα-binding antibody

-Cleavable linker

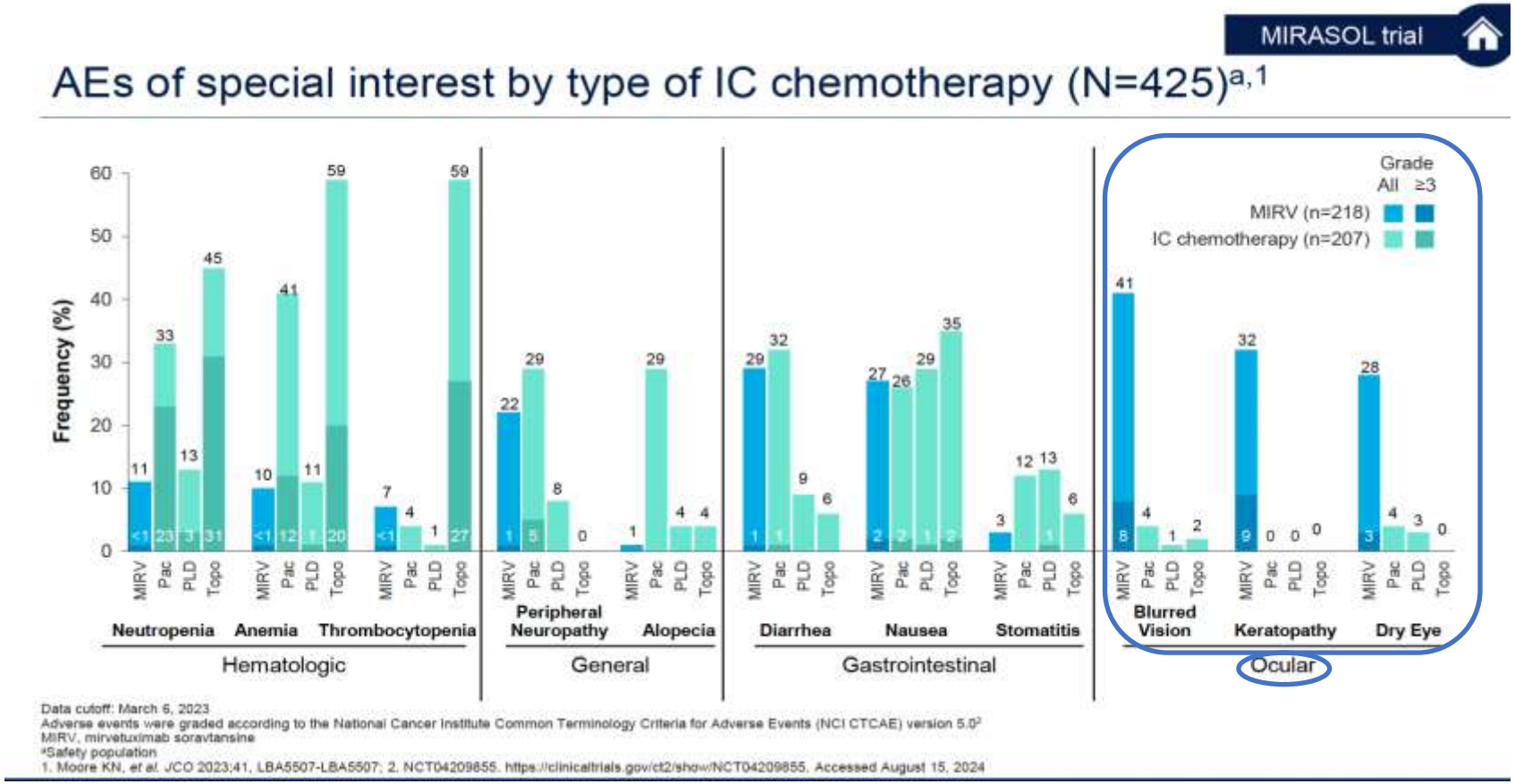
-Maytansinoid DM4 payload

Target: FRα-positive, platinum-resistant epithelial ovarian, fallopian tube, or primary peritoneal cancer who have received 1 to 3 prior systemic treatment regimens

ADC, antibody–drug conjugate; FDA, Food and Drug Administration; FRα, folate receptor alpha; MIRV, mirvetuximab soravtansine; PROC, platinum-resistant ovarian cancer; OS, overall survival; US, United States.

1. Moore KN, et al. Cancer 2017;123(16):3080-3087; 2. Ab O, et al. Mol Cancer Ther 2015;14(7):1605-1613; 3. Kalli KR, et al. Gynecol Oncol 2008;108(3):619–626;
4. Moore KN, et al. European Society for Medical Oncology (ESMO) Annual Meeting 2019; Presentation 992O; 5. Matulonis UA, et al. J Clin Oncol 2023:41(13):2436-2445

Safety outcomes: Mirasol trial



Ocular AEs are significantly more frequent in patient treated with Mirvetuximab compared to those treated with IC chemotherapy.

Integrated data

AE, adverse event; MIRV, mirvetuximab soravtansine
1. Moore KN, et al. N Eng J Med 2023;389:2162-2174, incl. supplementary appendix. Figure adapted from Moore KN, et al[1]

Summary: ocular adverse events

Pooled safety data from 464 patients across 3 clinical trials

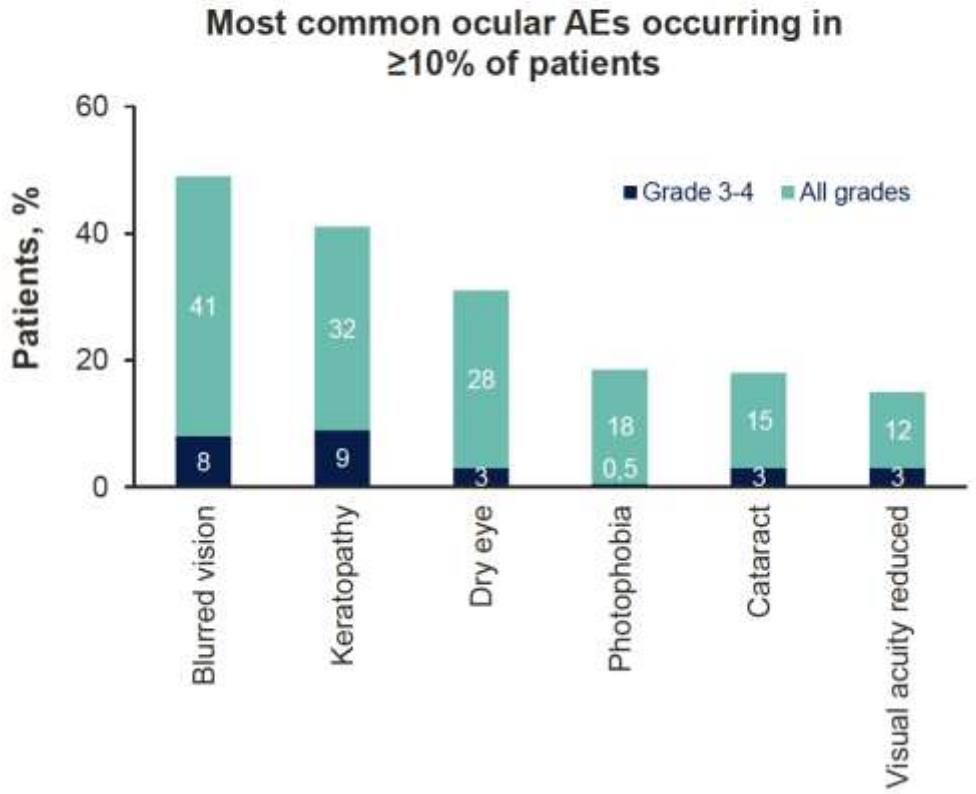
Integrated Safety Analysis

Ocular events with MIRV are mostly:

-low grade
-predictable
-managed by proactive supportive care
-resolvable

Safety outcomes: Mirasol trial

Ocular adverse events in patients receiving MIRV



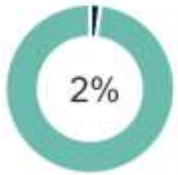
Any ocular AE

Ocular AEs occurred in 56% of patients (122/218)

Low grade or no ocular AEs

The majority of patients did not have a grade ≥3 ocular AE (188/218)

Discontinuations

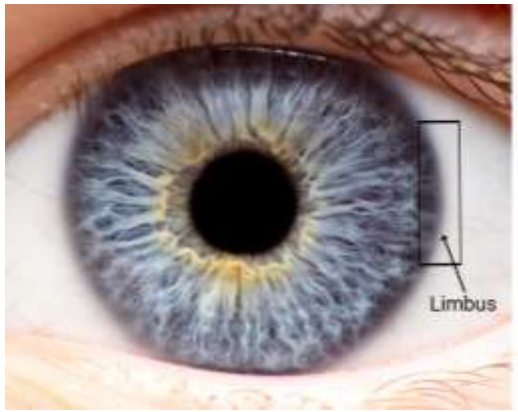


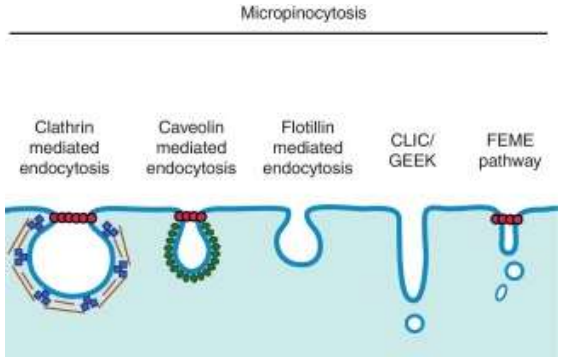
Ocular AEs led to MIRV discontinuation in 2% of patients (4/218)

AE, adverse event; MIRV, mirvetuximab soravtansine

1. Moore KN, et al. N Eng J Med 2023;389:2162-2174, incl. supplementary appendix. Figure adapted from Moore KN, et al[1]

Proposed MOA for ocular events associated with MIRV



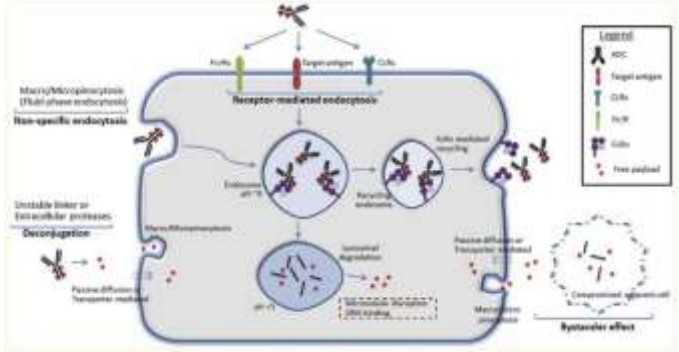


- **Off target effect of MIRV's DM4 payload molecule → antimitotic effects** on dividing cells → corneal epithelial microcysts

(Consistent with this, same ocular AEs also with another ADC using DM4 (tusamitamab ravtansine)

- Circulating MIRV molecules may reach epithelium **via the vascularized limbal region or via the tear film** (thus punctal plug is not reccomended in these patients)→ interference with transient amplifyng corneal cells

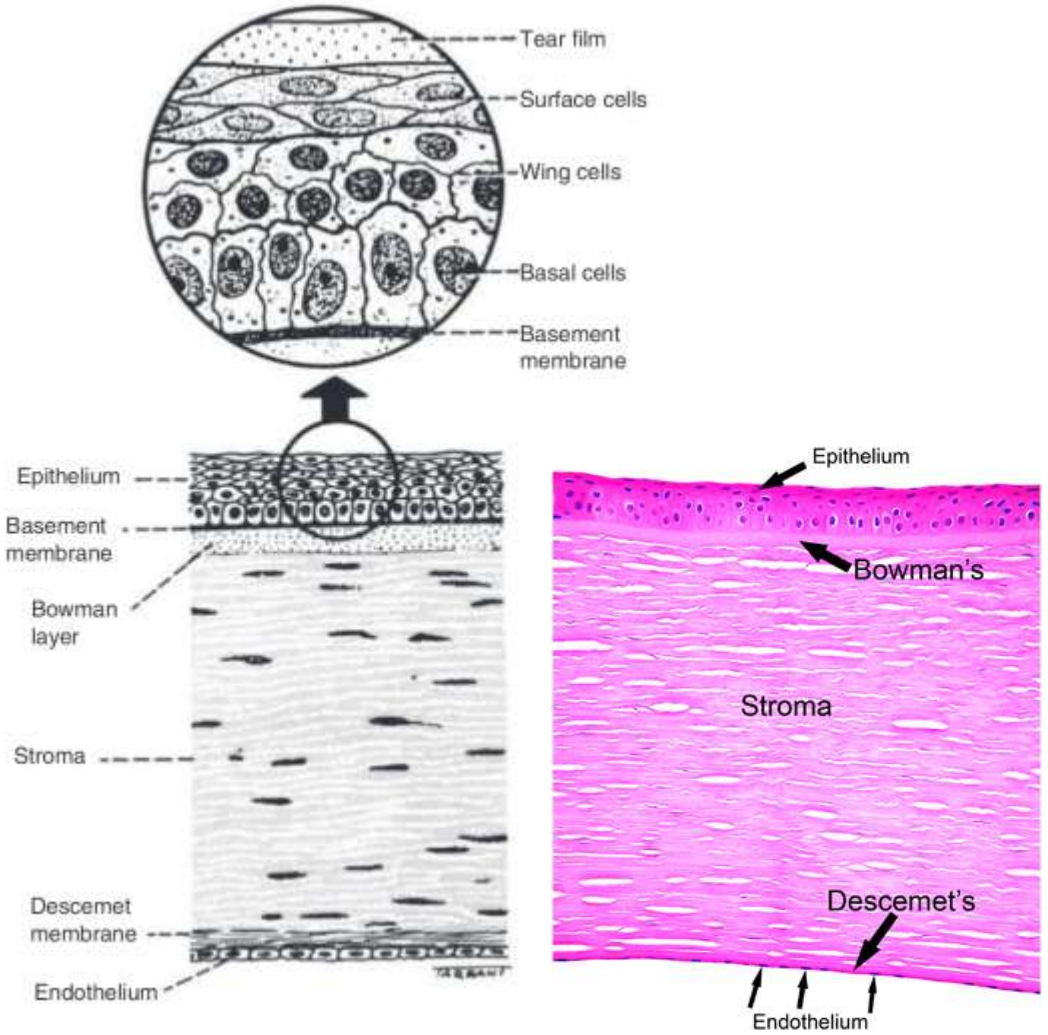
- Non–specific and non-receptor-mediated process → **micropinocytosis**



Lindgren ES, Yan R, Cil O, et al. Incidence and Mitigation of Corneal Pseudomicrocysts Induced by Antibody-Drug Conjugates (ADCs). *Curr Ophthalmol Rep*. 2024;12(2):13-22

AE, adverse event; FRα, folate receptor alpha; MIRV, mirvetuximab soravtansine; MOA, mechanism of action
1. Hendershot A, et al. Gynecol Oncol Rep 2023;47:101155; 2. Ruan Y, et al. Cells 2021; Sep; 10(9): 2302; 3. Mannis, MJ and Holland, EJ. Cornea Elsevir 2021
2. Figure adapted from Mannis, MJ and Holland, EJ[3]

Corneal Anatomy



The cornea is a multilayered structure

1. Epithelium (50 µm thick) → 5-6 layers of non-keratinized stratified squamous epithelium, further subdivided into:

-2-3 layers of superficial cells (tight junction)
-2-3 layers of wing cells, interdigitated, polygonal
-monolayer of columnar basal cells which divide to replace continuous desquamation

2. Bowman's layer (10 µm thick) → acellular layer of collagen fibres; it does not regenerate after injury ; it heals with cellular scar tissue

3. Stroma: the major non-aqueous constituents of the stroma are collagen fibrils and proteoglycans. The collagen fibrils are made of a mixture of type I and type V collagens.

4. Descemet's membrane (2-4 µm thick, it increases throughout life until 12 µm) → barrier to penetration of cells but not water or small molecules

5. Endothelium → single layer of polygonal (mainly hexagonal) cells arranged in a mosaic. Cell density decreases with age.

Kanski's Clinical Ophthalmology, A systematic approach, John F. Salmon MD, 10° ed.

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Corneal epithelium

It covers the front of the cornea and acts as a barrier to protect the cornea, resisting the free flow of fluids from the tears, and prevents bacteria from entering the epithelium and corneal stroma

- It is about 70 microns thick
- consists of several layers of cells:

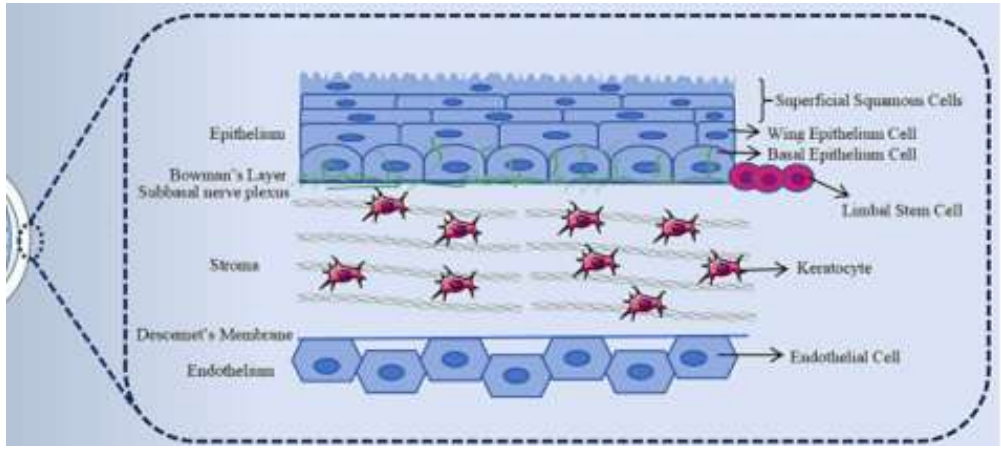
squamous cells ➡ *three or four layers with flattened nuclei*

wing cells ➡ *two or three layers of polyhedral cells*

basal cells ➡ *deepest layer attached by hemidesmosomes to an underlying basement membrane*

Elucidating the mechanism of corneal epithelial cell repair: unraveling the impact of growth factors

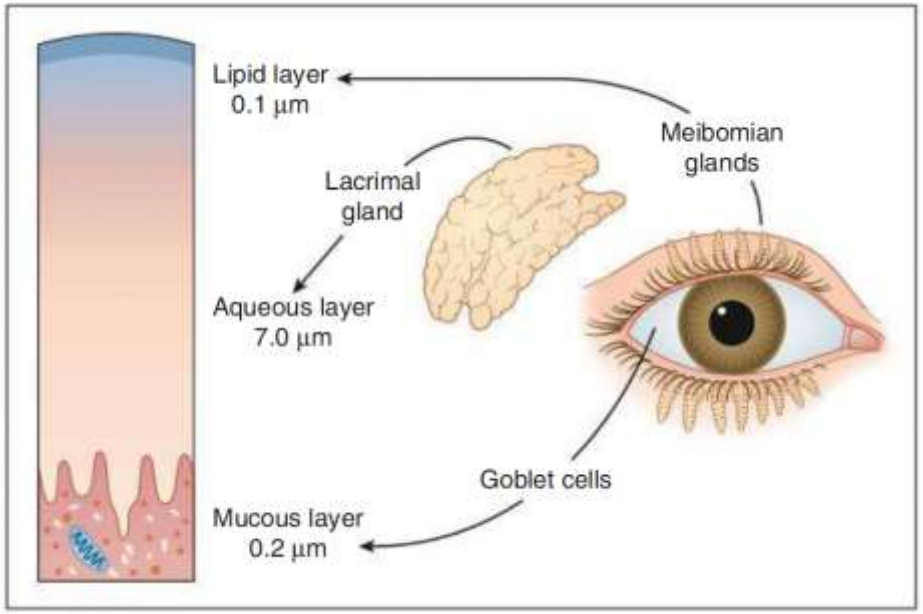
Jinjin Gong[1,2], Gang Ding[2], Zhongkai Hao[1,2], Yuchun Li[1], Aijun Deng[1]* and Chenming Zhang[1,2]*



Frontiers in Medicine
TYPE Review
PUBLISHED 04 April 2024
DOI 10.3389/fmed.2024.1384500

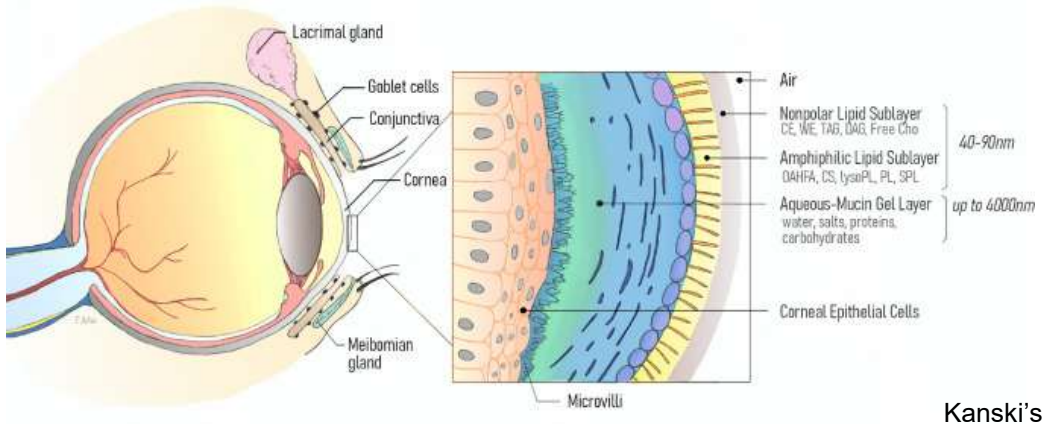
Eghrari AO, Riazuddin SA, Gottsch JD. Overview of the Cornea: Structure, Function, and Development. Prog Mol Biol Transl Sci. 2015;134:7–23. doi: 10.1016/bs.pmbts.2015.04.001

Lacrimal tear film



The tear film has three layers:

- Lipid layer (outermost) → reduces evaporation
- Aqueous layer → contains water, proteins, nutrients
- Mucous layer (innermost) → helps spread tears evenly and bind to the ocular surface



<u>Tear film functions:</u>

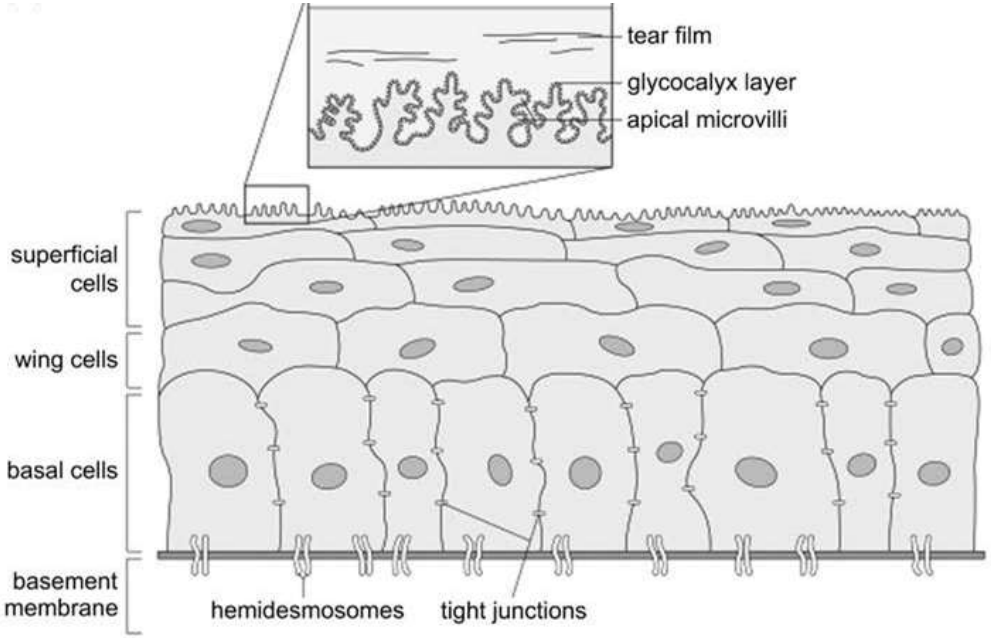
1. Optical Function
2. Lubrication
3. Protection /Antimicrobial Defense
4. Nutritional Support
5. Wound Healing and Homeostasis
6. Waste Removal
7. Barrier Function

Kanski's Clinical Ophthalmology, A systematic approach, John F. Salmon MD, 10° ed.

Pagina 10

Cameron JD. Corneal reaction to injury. In: Krachmer JH, Mannis MJ, Holland EJ, eds, Cornea, 2nd ed. Philadelphia, PA, Elsevier Mosby, 2005; 115–133

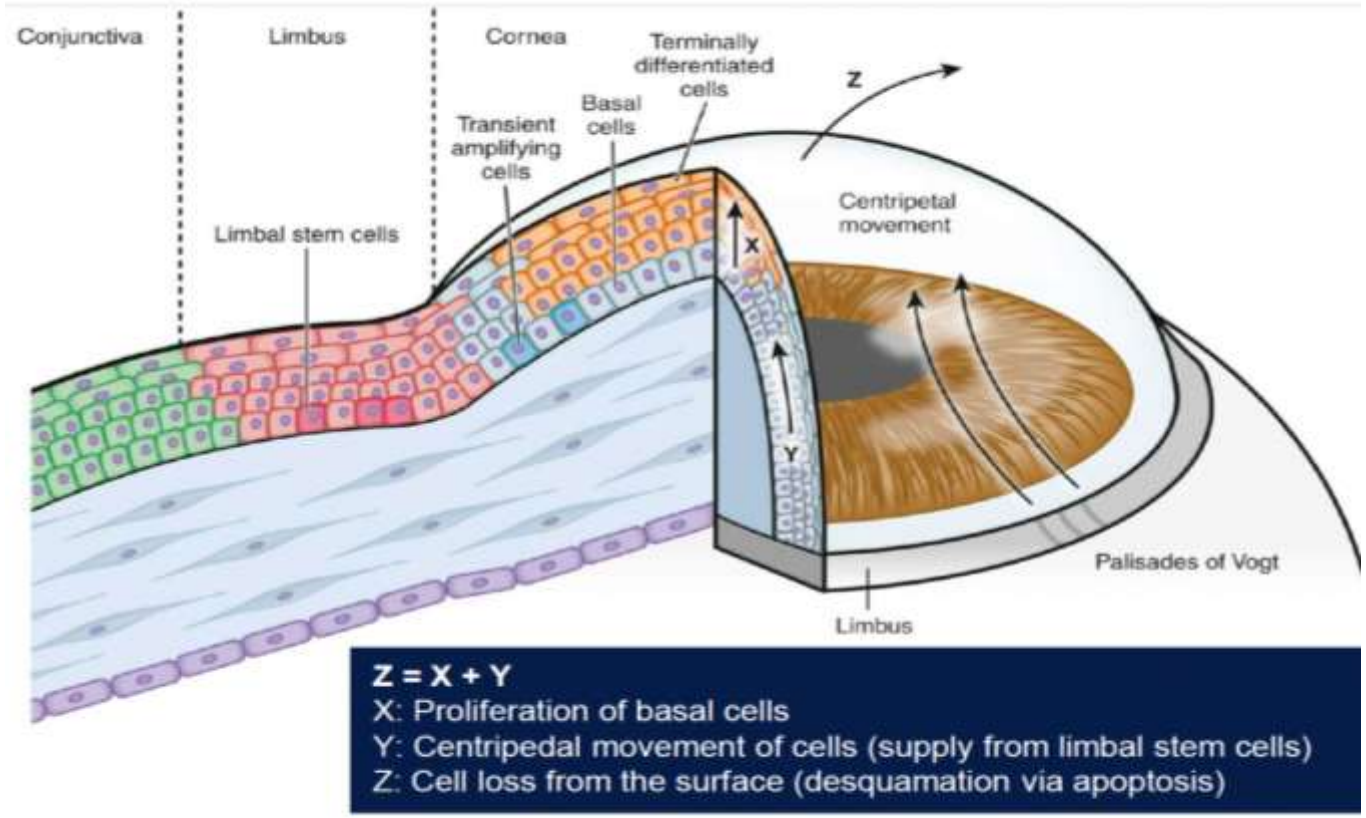
The corneal epithelium and overlying tear film have a symbiotic relationship both anatomically and physiologically.



The tear film is the primary protector of the corneal surface from microbial invasion, as well as from chemical, toxic, and foreign-body damage. The tear film also supplies immunological and growth factors that are critical for epithelial health, proliferation, and repair.

Corneal epithelial turnover

Regeneration of the human corneal epithelium is regulated by the stem cell reservoir of the limbus. The life cycle is approximately 10-14 days.



Stem cells proliferate asymmetrically into

stem cell → *daughter stem cell*

→ *transient amplifying cell* →

It divides and moves centripetally toward the center of the cornea to become basal corneal epithelial cells.

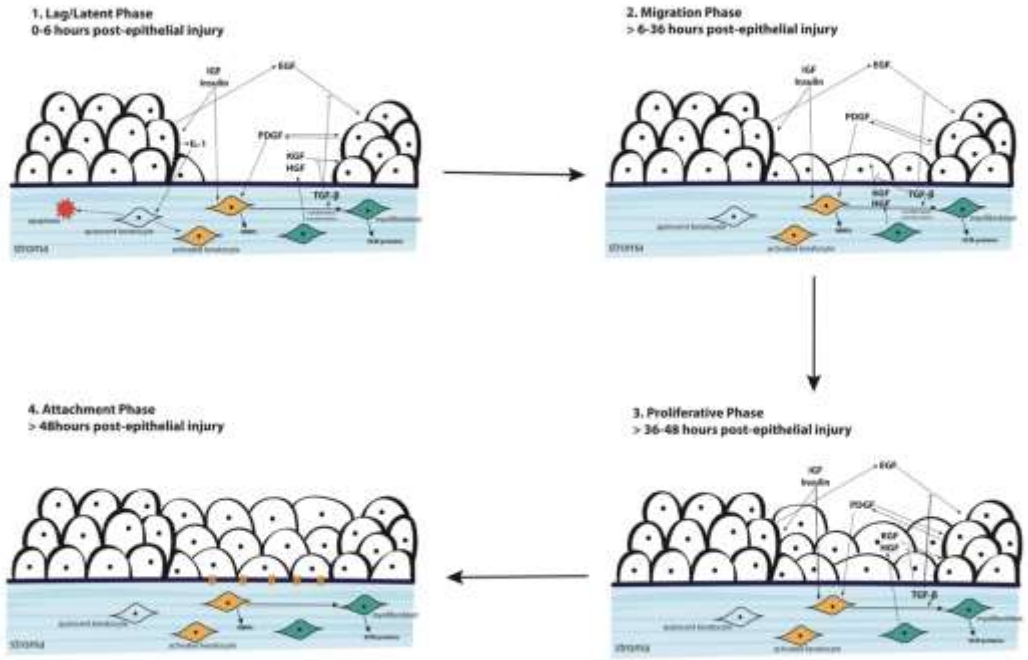
The newly generated basal cells proliferate symmetrically and then differentiate consecutively into wing cells and superficial cells

Superficial cells are eventually destined to desquamation

Cornea, Fundamentals, diagnosis and management, Mark J. Mannis, Edward J. Holland, 5° ed.

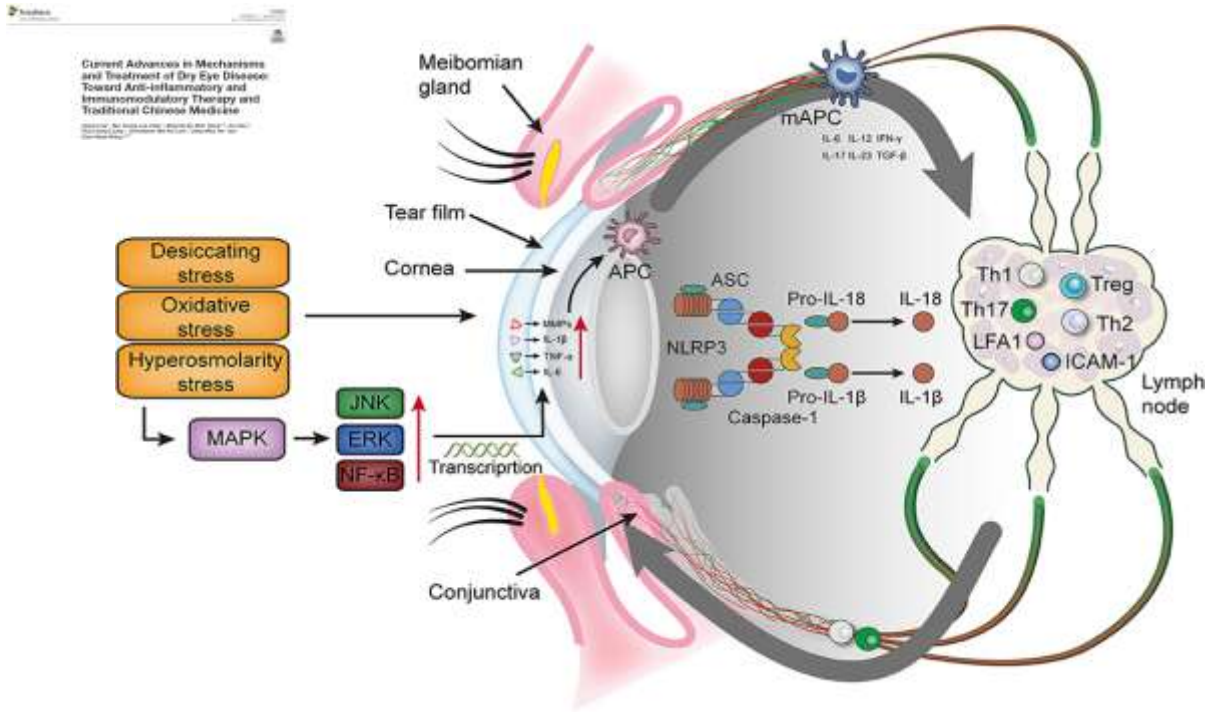
Corneal epithelial wound healing,

1. Inflammatory cytokines, as tumor necrosis factor alpha (TNF-α) and interleukin-1 (IL-1),
2. Keratocytes respond to IL-1 and produce growth actors,,
3. migration and proliferation of epithelial cells.
4. Insulin-like growth factors (IGFs) and transforming growth factor beta (TGF-β) regulate differentiation and growth of stromal keratocytes and epithelial cells.
5. Nerve growth factor (NGF) plays a vital role in trophic support, corneal sensation, and maintaining the tear film



Vaidyanathan U, Hopping GC, Liu HY, Somani AN, Ronquillo YC, Hoopes PC, Moshirfar M. Persistent Corneal Epithelial Defects: A Review Article. Med Hypothesis Discov Innov Ophthalmol. 2019 Fall;8(3):163-176. PMID: 31598519; PMCID: PMC6778469.

DRY EYE IS A MULTIFACTORIAL DISEASE OF THE OCULAR SURFACE



Loss of Homeostasis of The Tear Film

- tear film instability and hyperosmolarity,
- ocular surface inflammation and damage,
- neurosensory abnormalities play etiological roles.

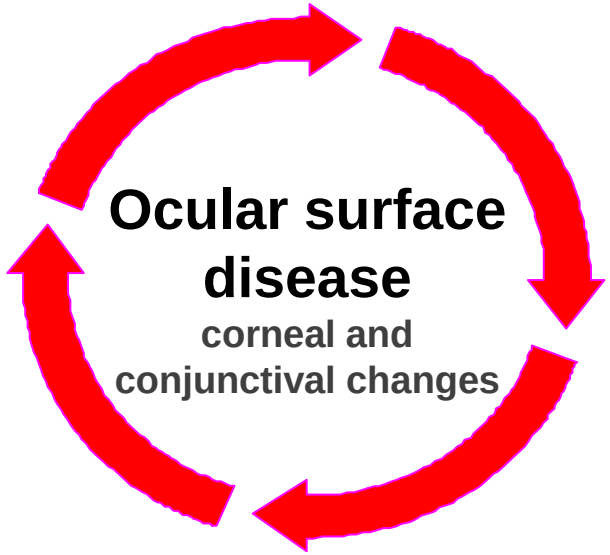
IMPARED ANATOMICAL RELATIONSHIP BETWEEN TEAR FILM AND CORNEAL EPITHELIUM

Tear Gland Inflammation and Dysfunction

Neurogenic inflammation; T-cell activation;
Cytokine secretion into tears

Sensitive nerve impairment

Decreased tear secretion
Decreased blinking
Decreased epithelial mitosis



Abnormal Tear Film

changes in concentration of growth factors and cytokines; collagenases

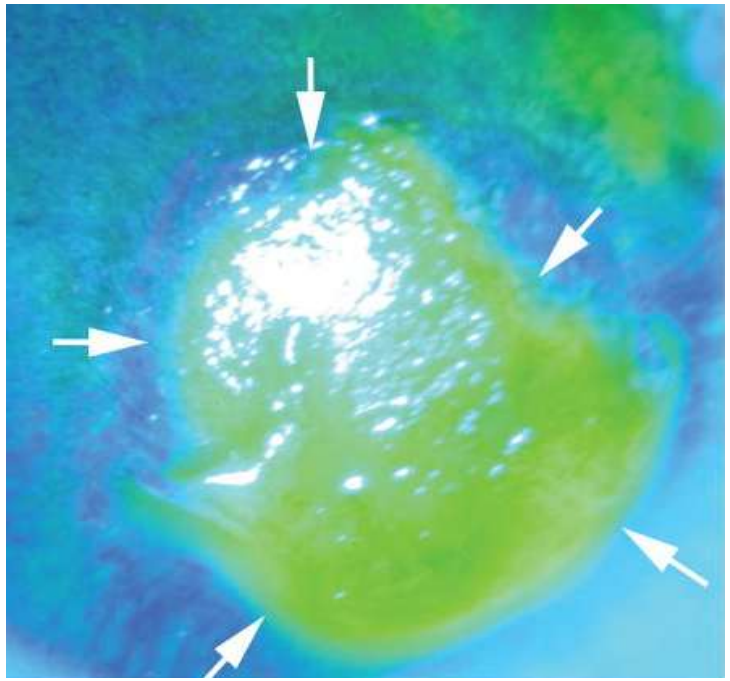
Ocular Surface Inflammation

T-cell activation; cytokine production; reduced corneal sensitivity
Decreased sensory input to gland; destabilized tear film

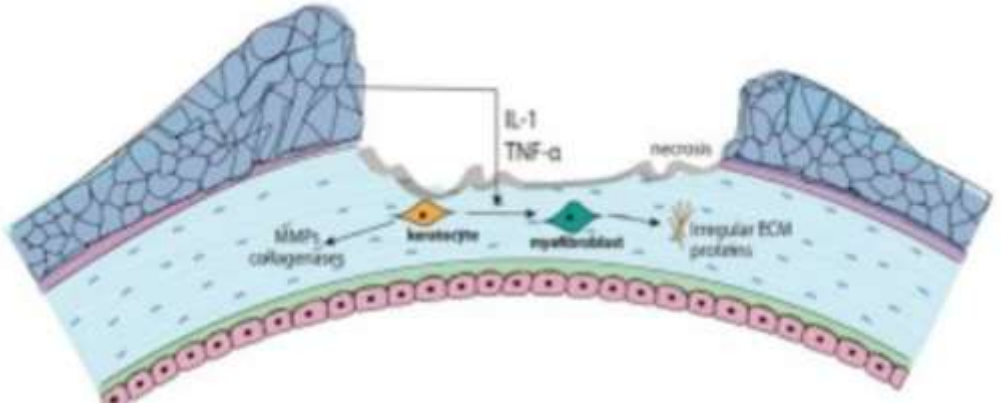
Persistent epithelial defect (PED) is defined as full-thickness loss of epithelial cells that do not show healing for more than 2 weeks despite conventional treatment.

Clinical Science
Ocular Surface Deficits Contributing to Persistent Epithelial Defect After Penetrating Keratoplasty
Fu, Yao MD, PhD; Liu, Jingbo MD, PhD; Tseng, Scheffer C. G. MDJuly 2012 - Volume 31 - Issue 7, PhD

- chemical injury,
- microbial infection,
- neurotrophic keratitis,
- ***keratoconjunctivitis sicca,***
- Stevens–Johnson syndrome,
- ocular cicatricial pemphigoid



Wilson SE, Medeiros CS, Santhiago MR. Pathophysiology of Corneal Scarring in Persistent Epithelial Defects After PRK and Other Corneal Injuries. J Refract Surg. 2018;34(1):59–64. doi: 10.3928/1081597X-20171128-01



Basal epithelial cells produce and adhere to the basement membrane by hemidesmosomes and fibril connections.

Defective epithelial adhesion or a deficient basement membrane can cause an increased risk for persistent corneal epithelial defects

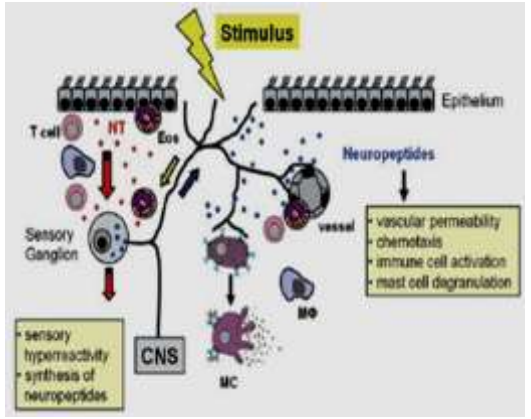
Overproduction of matrix metalloproteinases (MMPs)

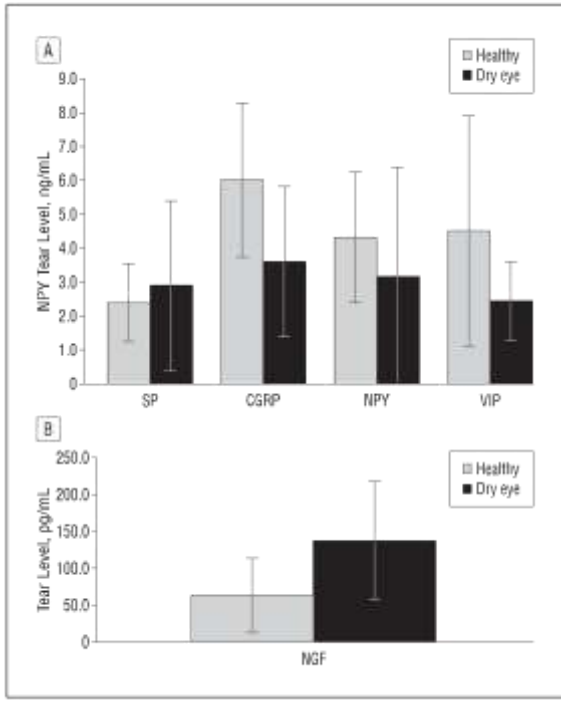
- Disrupt the basement membrane
- Destroy fibril connections between epithelium and basement membrane

Drug Toxicity

Topical anesthetics interfere with the migration of epithelial cells and hemidesmosome adhesion mechanisms

- Inflammation triggered by the release of neuromediators from terminal nerve endings
- These neuromediators act on T cell and mast cells and trigger the inflammatory cascade





Arch Ophthalmol Alterations of tear neuromediators in dry eye disease.
ALambiase, A Micera, M Sacchetti, M Cortes, F Mantelli, S Bonini 2011 Aug;129(8):981-6..

Table 2. Correlation of Neuropeptide Tear Levels With Clinical Variables

Characteristic	Spearman ρ Correlation				
	SP	CGRP	NPY	VIP	NGF
Conjunctival hyperemia	$P = .29$	$P = .07$	$P = .54$	$P = .90$	$P = .01$; $R = 0.489$
Schirmer test	$P = .97$	$P = .003$; $R = 0.574$	$P = .19$	$P = .61$	$P = .34$
BUT	$P = .45$	$P = .20$	$P = .006$; $R = -0.741$	$P = .73$	$P = .58$
Oxford score	$P = .87$	$P < .001$; $R = -0.629$	$P = .005$; $R = -0.526$	$P = .24$	$P = .006$; $R = 0.513$
Dry eye severity grade	$P = .59$	$P < .001$; $R = -0.674$	$P = .049$; $R = -0.515$	$P = .80$	$P = .009$; $R = 0.495$

Altered neuropeptide levels are found in tears of dry eye patients

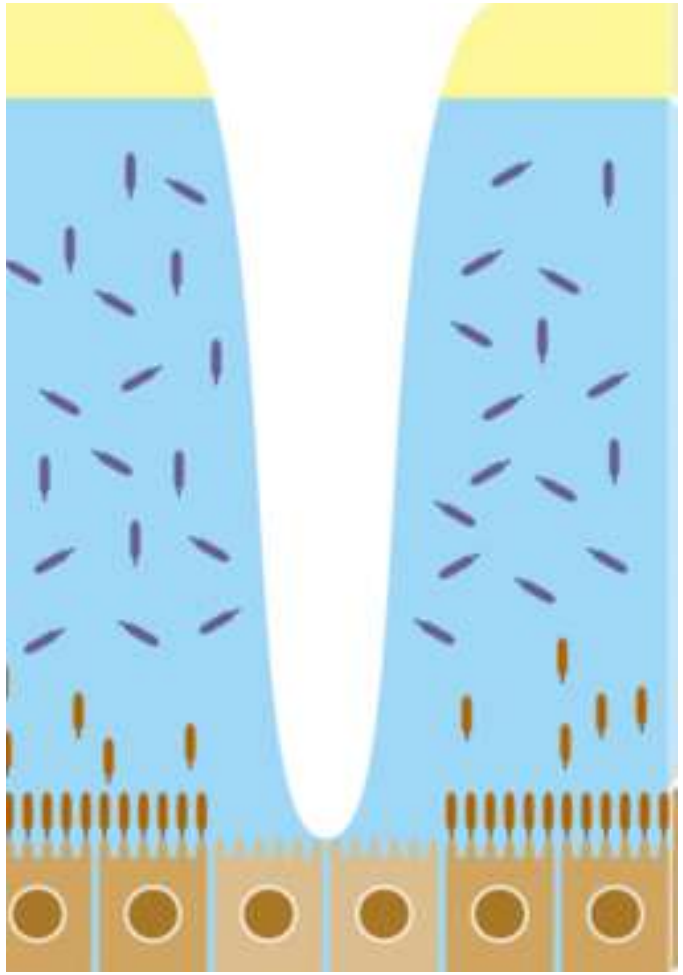
NGF tear levels are increased in early stages of disease but decrease thereafter (possible compensatory mechanism)

Tear-film-oriented diagnosis for dry eye

Norihiko Yokoi[1] · Georgi As Georgiev[2]

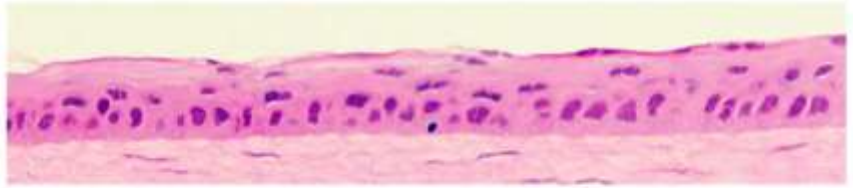
Received: 12 April 2018 / Accepted: 28 September 2018 / Published online: 19 February 2019

- Reduced quality of life
- Poor vision quality *(Koh IOVS 2008, Goto AJO 2002)*
- Contact lens intolerance (*Sindt CW Ocul Surf 2007*)
- ***Damage to the ocular surface***
- ***Increased risk of infection***
- ***Reduced capacity for repair***
- ***Risk factor for corneal surgery*** (refractive, transplants) *(Konomi K IOVS 2008, Levinson J Cataract Refract Surg 2008, Tuisku J Cataract Refract Surg 2007)*

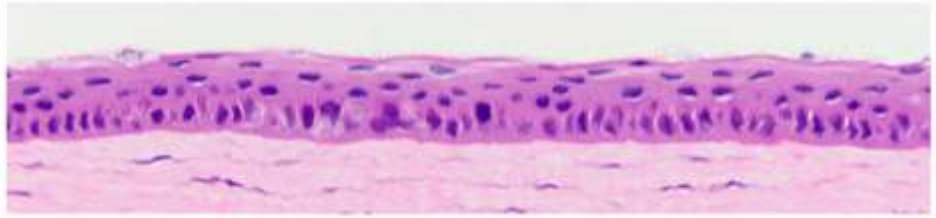


Non clinical study on rabbits

MIRV 12-mg/kg/dose: Left cornea (male Dutch-beltec rabbit)(near periphery; original magnification x40)



Control: Left cornea (male Dutch-belted rabbit) (near periphery; original magnification x40)



MIRV, mirvetuximab soravtansine
Matulonis UA, et al. Clin Cancer Res 2019;25(6):1727–1736
Images adapted from Matulonis UA, et al

Key observations with MIRV 12-mg/kg dose (n=10 eyes):

- Fewer and larger epithelial cells
- Basal epithelial layer appearing disorganized as gaps noted between visible nuclei
- Lesions found only at the periphery of the cornea

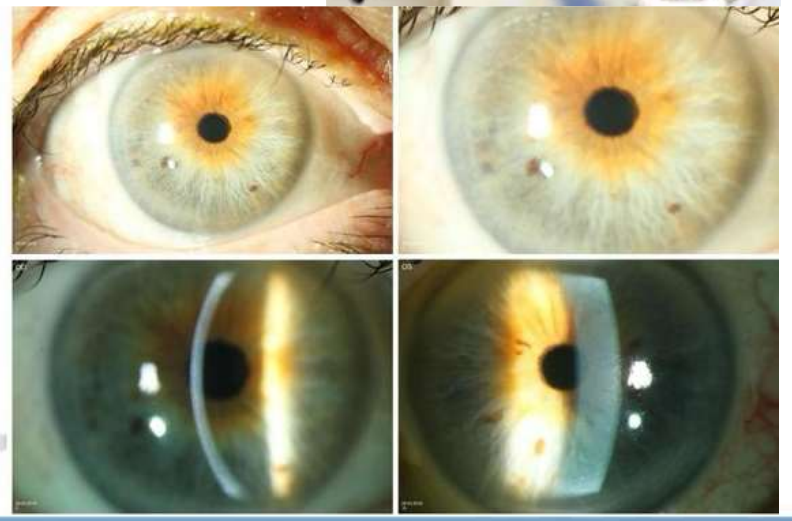
Canestraro, J., Hulterantz, M., Modi, S., Hamlin, P.A., Shoushtari, A.N., Konner, J.A., et al., 2022. Refractive shifts and changes in corneal curvature associated with antibody-drug conjugates. Cornea 41 (6), 792–801.

A different study:
Ophthalmic examination in MIRV-treated Rabbits

-slit lamp: punctate corneal epithelial deposits → MECs
-changes primarily at the basal epithelium in the perilimbal cornea
-changes are dose dependent → the higher the MIRV dosing the slowlier the resolution
-normal posterior segment

Ocular examination

- Symptoms assessment (QAs)
- BCVA
- Slit-lamp examination
- Tonometry
- Dry-eye assessment (BUT, Schirmer test)
- Topography and AS-tomography
- Posterior segment examination



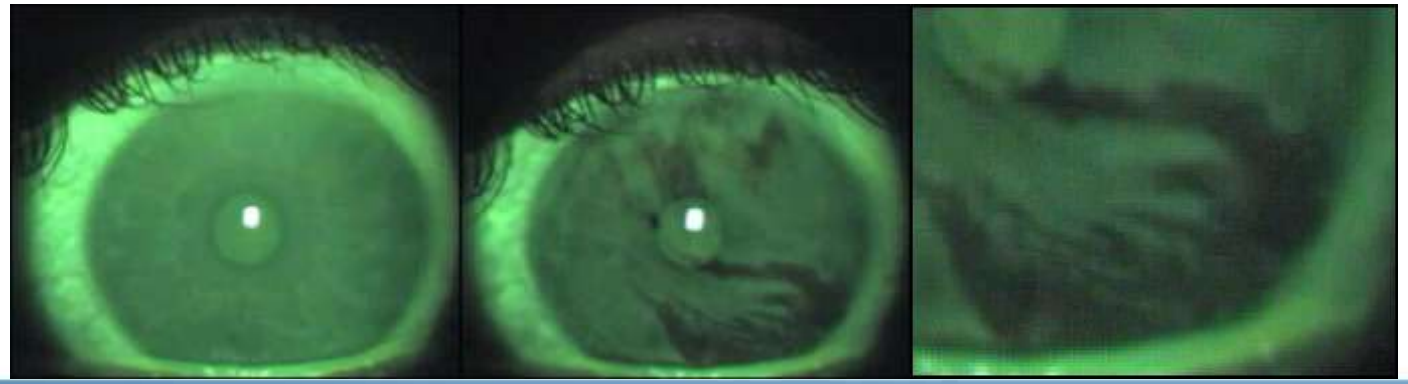
Tear Test

Schirmer Test
A measure of tear production

Without anesthesia
- Evaluate total tear production
- Uncomfortable

With anesthesia
- Evaluate basal tear function
- More Comfortable

Insert strip
- Wait 5 minutes (both tests)



Fluorescein tear break-up test (FTBUT)
Time that elapses from the last blink to the first appearance of a

dark spot in the fluorescein-stained film.

Break-up time of less than 10 seconds suggests an unstable tear film.

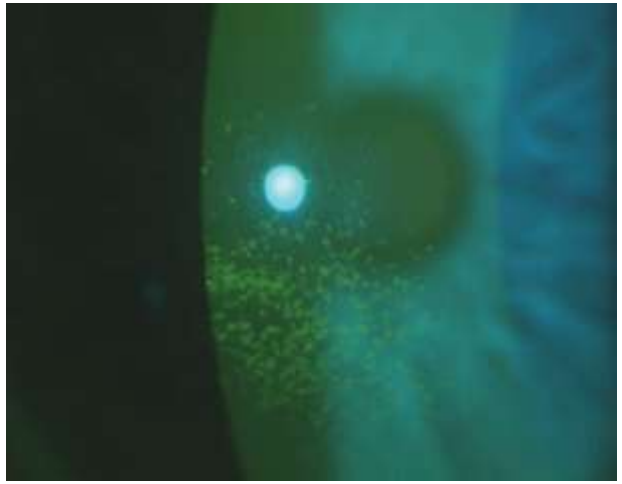
Ocular AEs - Description and grading

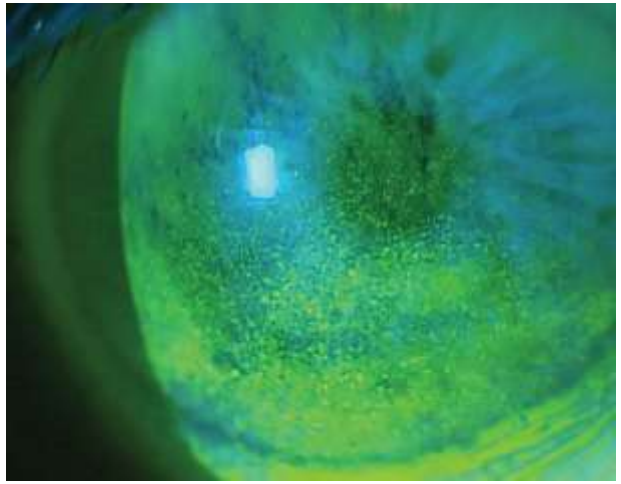
Ocular adverse events – description and grading[a]

CTCAE v.5 term	Grade 1	Grade 2	Grade 3	Grade 4
Blurred vision[b]	Intervention not indicated	Symptomatic; **moderate decrease in visual acuity**; limiting instrumental ADL	Symptomatic, with **marked decrease in visual acuity**; limiting self-care ADL	Best corrected visual acuity of **20/200 or worse** in the affected eye
Keratitis[c]	Asymptomatic; clinical or diagnostic observations only; intervention not indicated	Symptomatic; **moderate decrease in visual acuity**	Symptomatic, with **marked decrease in visual acuity**; corneal ulcer; limiting self-care ADL	Perforation; best corrected visual acuity of **20/200 or worse** in the affected eye
Dry eye[d]	Asymptomatic; clinical or diagnostic observations only; symptoms relieved by lubricants	Symptomatic; **moderate decrease in visual acuity**	Symptomatic, with **marked decrease in visual acuity**; limiting self-care ADL	–
Photophobia[e]	Symptomatic but not limiting ADL	Limiting instrumental ADL	Limiting self-care ADL	–

Moderate decrease in visual acuity
Best corrected visual acuity **20/40 and better** or **3 lines or less** of decreased vision from known baseline

Marked decrease in visual acuity
Best corrected visual acuity **worse than 20/40** or **more than 3 lines of decreased vision** from known baseline, up to 20/200

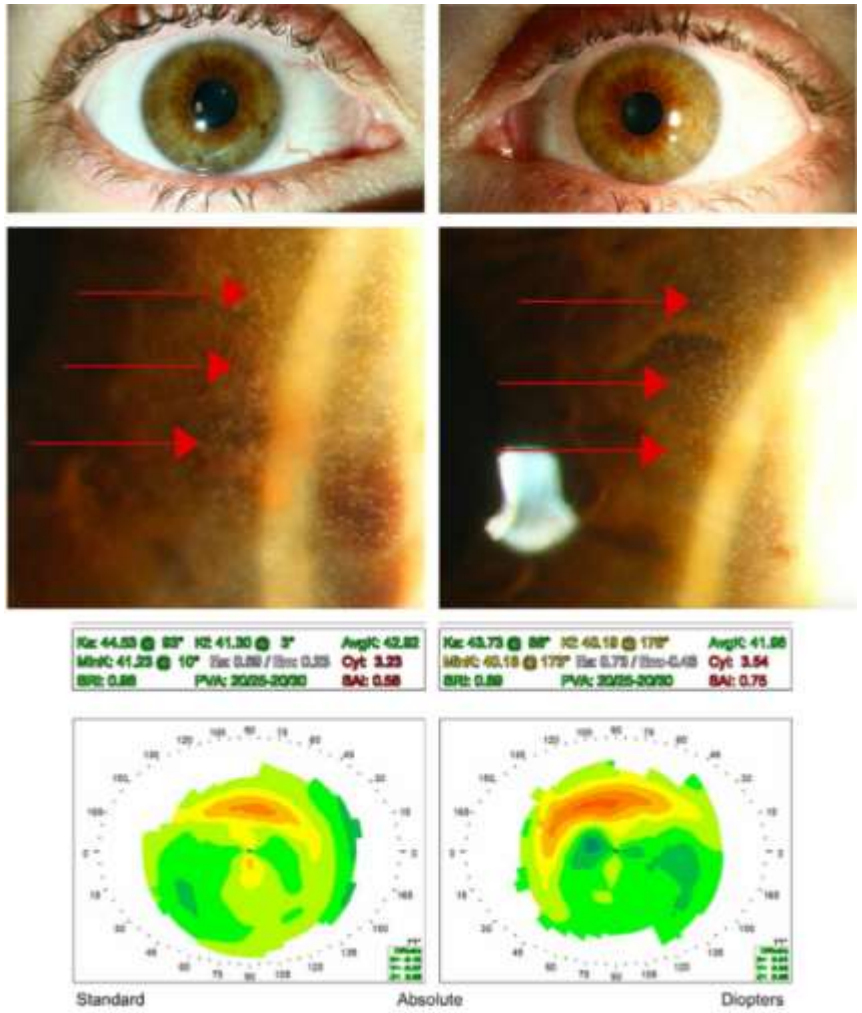




CTCAE has limitations for corneal findings
FDA revised guidance on corneal events grading:
Corneal AE grading scale is based on severity and descriptive findings

-NON CONFLUENT: keratitis/keratopathy considered grade 1 (multiple, distinct micro-punctate lesions, may be numerous or dense but have not coalesced)
-CONFLUENT: keratitis/keratopathy and cornea epithelial defect considered grade 2 (multiple macro-punctate lesions, that have coalesced or appear patchy)

CTCAE, Common Terminology Criteria for Adverse Events v 5.0; FDA, Food and Drug Administration; MIRV, mirvetuximab soravtansine; Keratitis (superficial keratitis, superficial punctate keratitis, epithelial erosion); Keratopathy (microcystic epithelial change, punctate epithelial keratopathy, subepithelial inclusion syst)
1. Karpecki PM et al. Shining the Slit Lamp on ADCs. REVIEW OF OPTOMETRY | MARCH 15, 2024



Incidence and Mitigation of Corneal Pseudomicrocysts Induced by Antibody–Drug Conjugates (ADCs)

Ethan S Lindgren [1], Rongshan Yan [1], Onur Cil [2], Alan S Verkman [3], Matilda F Chan [1,4], Gerami D Seitzman [1,4], Asim V Farooq [5], Laura A Huppert [6], Hope S Rugo [6], Paula R Pohlmann [7], Janice Lu [8], Laura J Esserman [6,9], Neel D Pasricha [1,4]

Current preventive therapies demonstrate limited efficacy at mitigating pseudomicrocysts and other ocular surface AEs.

Supportive measures

Patients & caregivers

- Use recommended eye drops
  - Prophylactic use of preservative-free lubricating eye drops
  - Ophthalmic topical steroids if indicated after slit lamp examination (i.e. Grade ≥2 corneal adverse reactions)
- Practice good eye hygiene (eg, clean exterior eye area, use warm compresses)
- Use sunglasses during daylight
- Avoid contact lenses
- Report any new or worsening ocular symptoms during treatment and follow-up on ophthalmic exams

Patient/healthcare team collaboration

To maintain a generally low incidence of severe ocularAEs Patient shoud undergo an eye examination at baseline, at every other cycle for the first 8 cycles of treatment and as clinically indicated.

Know the risks for dry eye disease →
try to avoid extended screen use, certain medications, environmental factors

Figure adapted from Hendershot A, et al
BCVA, best corrected visual acuity; MIRV, mirvetuximab soravtansine; PI, prescribing information; ECP, eye care professional
Hendershot A, et al. Gynecol Oncol Rep 2023;47:101155

Care management plan

Eye drops	
Preservative-Free Eye Drops	Use of lubricating eye drops at least 4x daily during treatment
Steroid Eye Drops	**Steroid eye drops recommended only for corneal adverse reactions Grade ≥2 (keratopathy)** Initial prescription and renewals of any steroid eye drops should be made only after slit lamp examination if indicated due to corneal findings based on ophthalmologists' assessment[a]

Adapted from Compassionate Use Programme, Germany
AEs, adverse events; MIRV, mirvetuximab soravtansine
[a]For patients found to have signs of ≥Grade 2 corneal adverse reactions (confluent keratopathy or worse) on slit lamp examination, secondary prophylaxis with ophthalmic topical steroids is recommended for subsequent cycles of MIRV, unless the patient's ECP determines that the risks outweigh the benefits of such therapy

Notably, the currently enrolling phase 3 GLORIOSA trial that is evaluating mirvetuximab soravtansine with or without bevacizumab as maintenance therapy for platinum-sensitive ovarian cancer no longer requires patients to receive primary prophylaxis with steroid eye drops.[26] Dose reductions of mirvetuximab soravtansine in compiled analyses of the SORAYA and FORWARD I trials were similar to those of the phase 1 trial, which used lubricating eye drops alone.[14,15,23] This suggestion of minimal benefit with steroid eye drops, combined with the risk for cataracts and intraocular pressure, prompted this change in eyecare plan.[26]

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Eye Drop

It is difficult to prove that any ingredient in an ocular lubricant acts as an active agent

Although certain artificial tears have demonstrated more success than others in reducing symptoms or ocular surface dye staining, there have been no large scale, masked, comparative clinical trials to evaluate the wide variety of ocular lubricants.

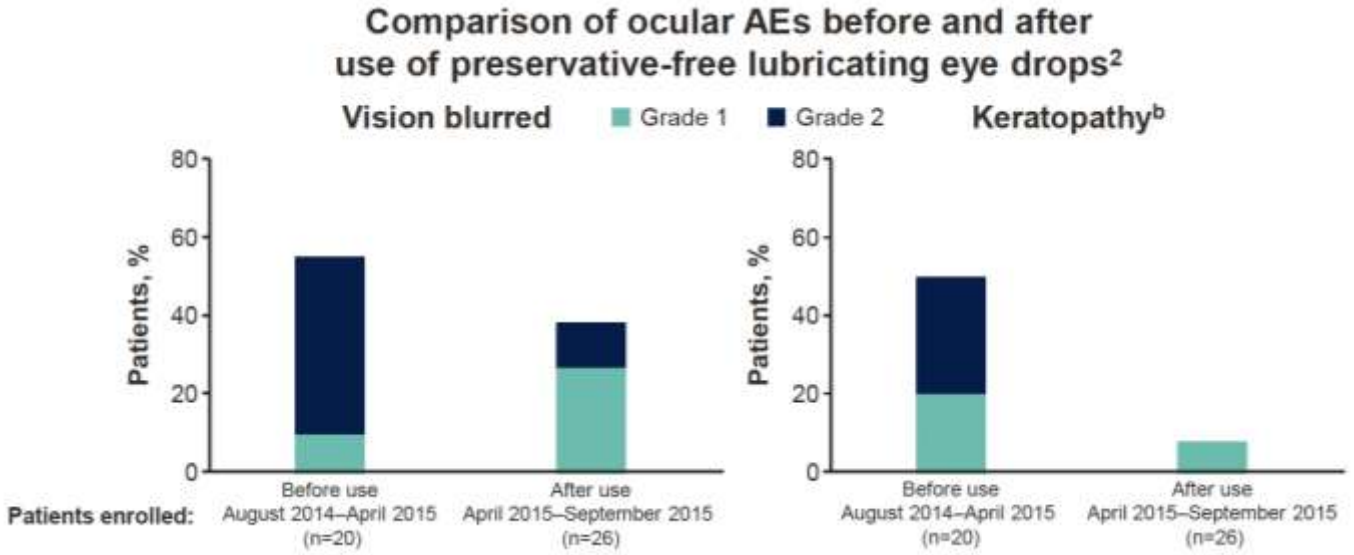
Best artificial tear:

- preservative-free,
- contain potassium, bicarbonate, and other electrolytes
- have a polymeric system to increase its retention time.
- a neutral to slightly alkaline pH
- osmolarities from about 181 to 354 mOsm/L
- Tear constituents

Impact of preventive measures

Based on phase 1 findings from Study 401, several mitigation strategies have been implemented with MIRV therapy to help reduce the incidence and severity of ocular AEs[1]

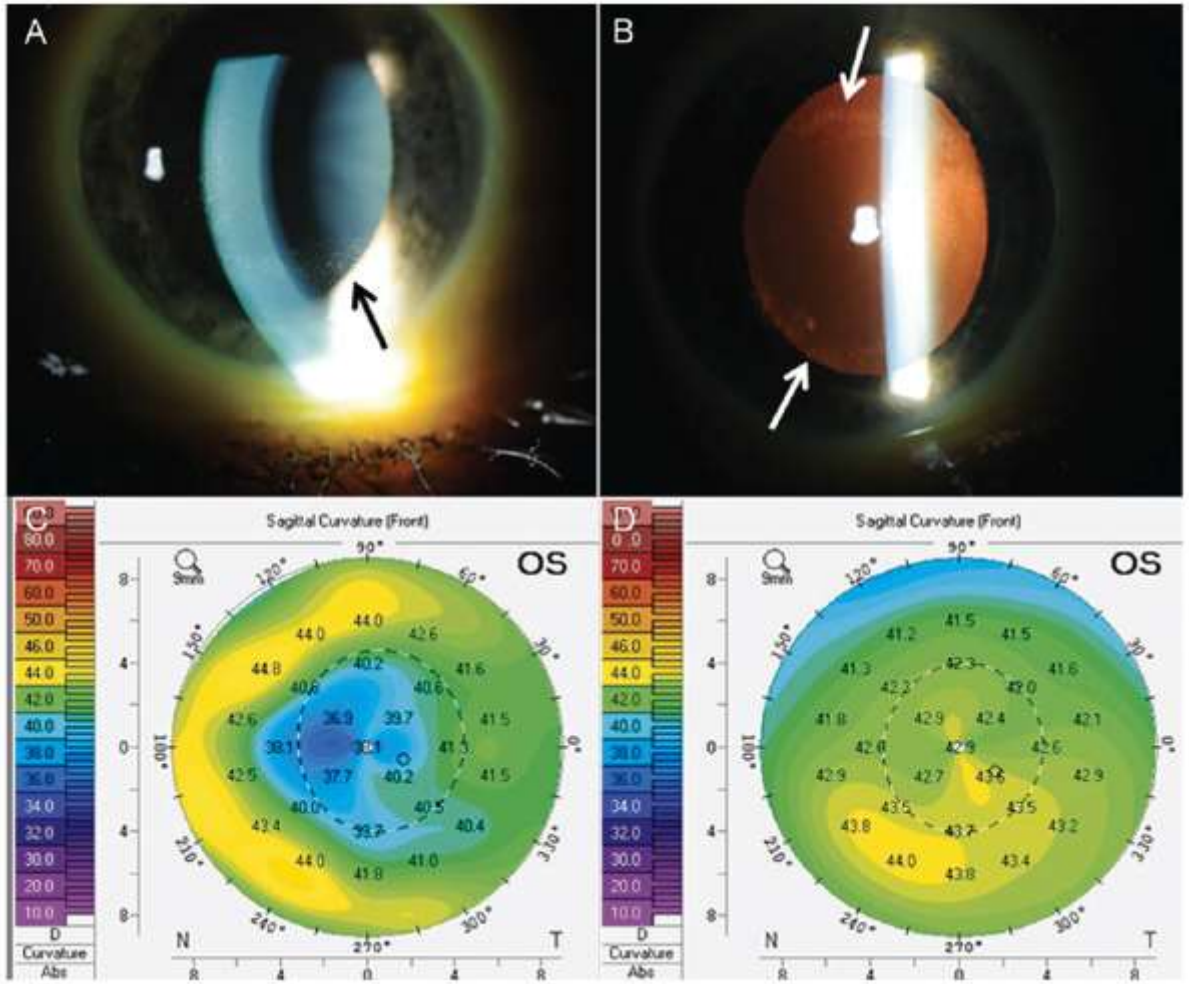
Figure adapted from Moore KN, et al. 2016[2]
AE, adverse event; MIRV, mirvetuximab soravtansine
[a]ClinicalTrials.gov identifier: NCT01609556; [b]Keratopathy included corneal cyst, corneal disorder, corneal deposits, corneal epithelial microcysts, keratitis, keratopathy, limbal stem cell deficiency, and punctate keratitis
1. Moore KN, et al. J Clin Oncol 2017;35(10):1112–1118; 2. Moore KN, et al. Presented at: 2016 American Society of Clinical Oncology Annual Meeting; June 3–7, 2016; Chicago, IL. Abstract 5567;
3. NCT01609556 study protocol. Accessed 16.07.2024 from https://clinicaltrials.gov/study/NCT01609556



The use of daily lubricating eye drops and additional ocular management procedures resulted in a subsequent decrease in both the incidence and gradeof ocular AEs with MIRV.

Clinical presentation: Case 1

5 weeks (cycle 2) after starting MIRV therapy in a 56-year-old patient



- On slit lamp: Microcyst-like epithelial changes (MECs) appear as fine punctate epithelial or subepithelial opacities
- On retroillumination: droplet-like appearance
- Often circumferential pattern in the mid-peripheral epithelium, with or without central involvement
- MECs in the mid-periphery has been associated with changes in corneal topography → hyperopic shift → blurred vision

Dry eye significantly affects the reliability of corneal curvature measurements, especially with optical reflection-based devices. Corneal topography and Pentacam are more sensitive to tear film abnormalities, while the IOL Master 700 and OPD-Scan III show more consistent results, making them preferable for clinical practice, such as clinical applications including refractive surgery planning, contact lens fitting, and preoperative cataract assessment.

Kunkler AL, Binkley EM, Mantopoulos D, et al. Known and novel ocular toxicities of biologics, targeted agents, and traditional chemotherapeutics. *Graefes Arch Clin Exp Ophthalmol*. 2019;257(8):1771-1781. doi:10.1007/s00417-019-04337-8

Am J Ophthalmol. 2011 December ; 152(6): 900–909.e1. doi:10.1016/j.ajo.2011.08.023.

Tear Dysfunction and the Cornea: LXVII Edward Jackson Memorial Lecture

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Corneal epithelial disease resulting from tear dysfunction causes eye irritation and decreases visual function.

Vision starts at the Tear Layer

Vision starts at the Tear Layer The tear/corneal epithelial complex is the major light refracting surface of the eye, accounting for ***approximately 65% of the optical power of the eye.***

Approaches to treat Tear Dysfunction . O Related Corneal Disease

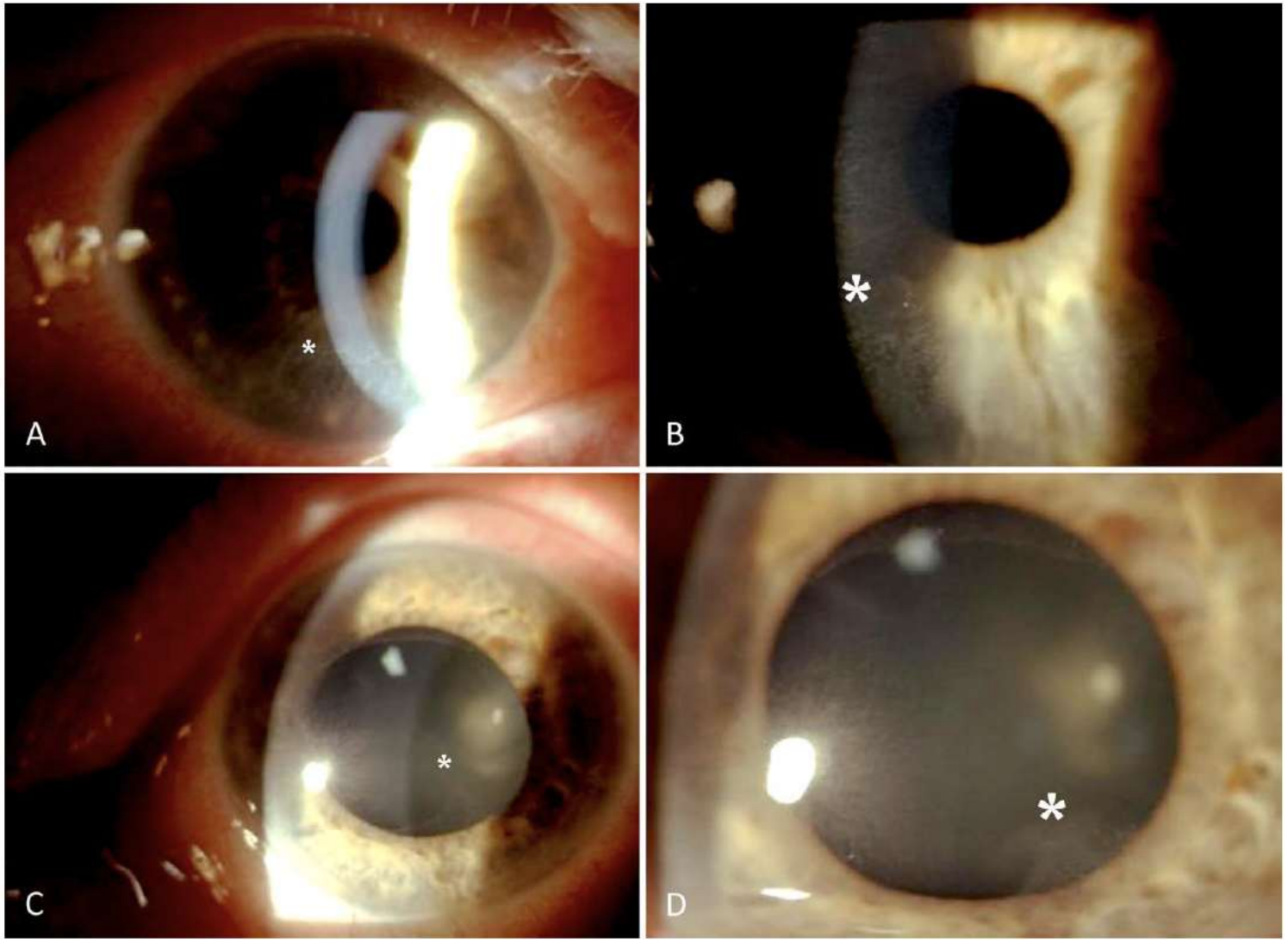
Increased knowledge regarding ***the cellular and molecular mechanisms of tear dysfunction mediated corneal epithelial disease has prompted use of therapies that target disease*** related factors and has generated buzz in the pharmaceutical industry about topical use of targeted immunomodulators

Clinical presentation: Case 2

Corbelli E, Miserocchi E, Marchese A, Giuffrè C, Berchicci L, Sacconi R, Bandello F, Modorati GM. Ocular Toxicity of Mirvetuximab. Cornea. 2019 Feb;38(2):229-232. doi: 10.1097/ICO.0000000000001805. PMID: 30379722.

Right eye

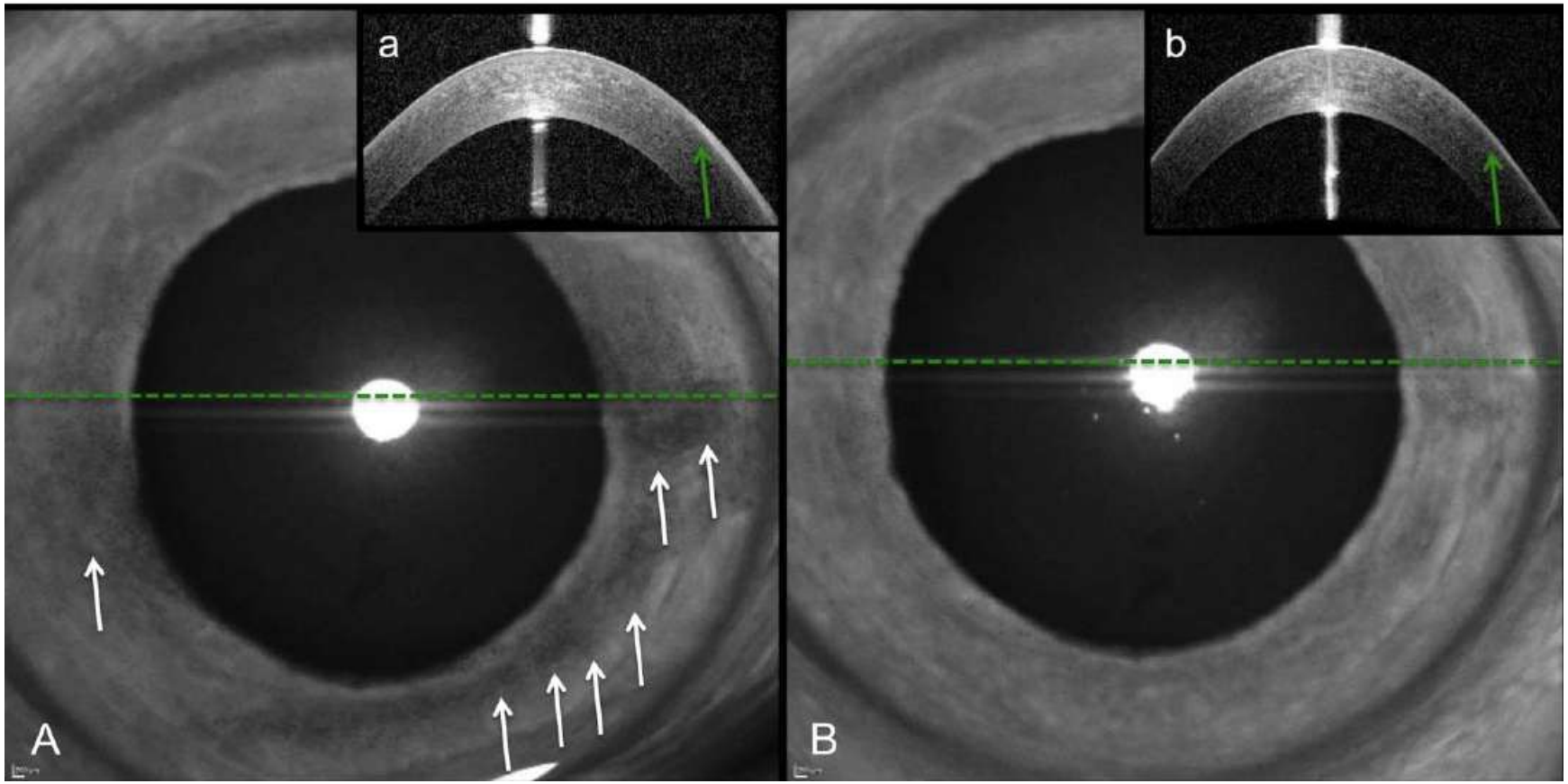
Left eye



- After Mirvetuximab initiation (4.1 +/- 1.7 days), patient complained of blurred vision, ocular pain, tearing, foreign body sensation, photophobia

-Tiny translucent dots (white asterisks) on corneal surface

Clinical presentation: Case 2



Multiple tiny black dots scattered throughout corneal periphery (white arrows)
They appear as a hyper-reflective thick line in the subepithelial space at optical coherence tomography.

Corbelli E, Miserocchi E, Marchese A, Giuffrè C, Berchicci L, Sacconi R, Bandello F, Modorati GM. Ocular Toxicity of Mirvetuximab. Cornea. 2019 Feb;38(2):229-232. doi: 10.1097/ICO.0000000000001805. PMID: 30379722.

Conclusions

MIRV is part of ADCs, an innovative class of drugs for cancer therapy that may improve life expectancy

Ocular events with MIRV are mostly low grade, predictable, managed by proactive supportive care, and resolvable

A supportive eye care management plan should include the use of eye drops, ophthalmic monitoring, and dose modifications by the oncologist, if needed.

Dose modification can maximise patients' ability to remain on treatment

Close collaboration between all care team members, including oncologists and eye care professionals, will help patients benefit from this novel anticancer agent

Grazie