Corneal Dystrophies

?

?

What are the four categories of corneal dystrophies?

?

?

Corneal Dystrophies

Epithelial and Subepithelial Dystrophies

Epithelial-Stromal *TGFBI* Dystrophies

What are the four categories of corneal dystrophies?

Stromal Dystrophies

Endothelial Dystrophies

Corneal Dystrophies

Epithelial and Subepithelial Dystrophies

Epithelial-Stromal *TGFBI* Dystrophies

1) ?
2) ?
3) ?
4) ?
5) ?
6) ?

What are the six epithelial-stromal TGFBI corneal dystrophies?

Stromal Dystrophies

Endothelial Dystrophies

Corneal Dystrophies

Epithelial and Subepithelial Dystrophies

Epithelial-Stromal *TGFBI* Dystrophies

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What are the six epithelial-stromal TGFBI corneal dystrophies?

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What are the six non-TGFBI stromal dystrophies?

Stromal Dystrophies

1) ***?***
2) ***?***
3) ***?***
4) ***?***
5) ***?***
6) ***?***

Endothelial Dystrophies

Corneal Dystrophies

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What are the six non-TGFBI stromal dystrophies?

Stromal Dystrophies

1) Macular corneal dystrophy
2) Schnyder corneal dystrophy
3) Congenital stromal corneal dystrophy
4) Fleck corneal dystrophy
5) Posterior amorphous corneal dystrophy
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Which stromal dystrophies does the BCSC Cornea *book consider the 'classic 3'?*

Stromal Dystrophies

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What is the well-known mnemonic regarding the classic 3?

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What is the well-known mnemonic regarding the classic 3?

Marilyn Monroe Always Gets Her Man in LA County

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Marilyn Monroe Always Gets Her Man in LA County

What does the mnemonic help us to remember?

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What does the mnemonic help us to remember?
The **name**, **abnormal material**, and **stain** for each of the classic 3

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Marilyn Monroe Always Gets Her Man in LA County

What does the mnemonic help us

and **stain** for each of the classic 3

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Endothelial Dystrophies

Use the mnemonic to identify the names/materials/stains:

Marilyn
Monroe
Always
(Start here, and we'll work our way down the list)
Gets
Her
Man
in
L
A
County

What is
regardi

Marilyn Monroe Always Gets Her Man in LA County

What does the mnemonic help us to remember?

The **name**, **abnormal material**, and **stain** for each of the classic 3

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Endothelial Dystrophies

Use the mnemonic to identify the names/materials/stains:

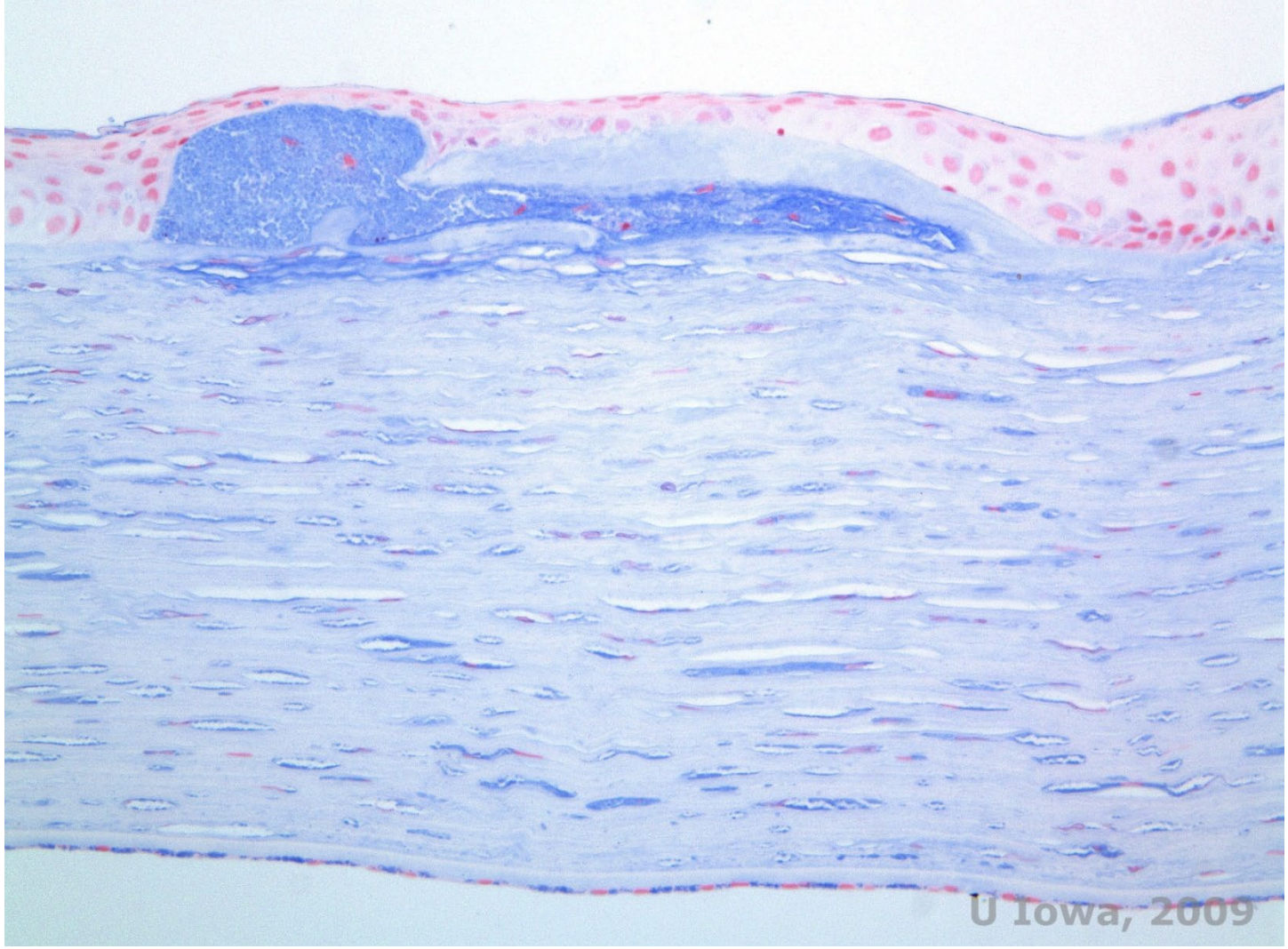
Marilyn	macular dystrophy
Monroe	mucopolysaccharide
Always	Alcian blue
Gets	
Her	
Man	
in	
L	
A	
County	

What is regardi

Marilyn Monroe Always Gets Her Man in LA County

What does the mnemonic help us to remember?

The **name**, **abnormal material**, and **stain** for each of the classic 3



Macular corneal dystrophy: Mucopolysaccharide: Alcian blue

Corneal Dystrophies

Epithelial and Subepithelial Dystrophies

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Endothelial Dystrophies

Use the mnemonic to identify the names/materials/stains:

Marilyn	macular dystrophy
Monroe	mucopolysaccharide
Always	Alcian blue
Gets	granular dystrophy
Her	hyaline
Man	Masson trichrome
in	
L	
A	
County	

What is regardi

Marilyn Monroe Always Gets Her Man in LA County

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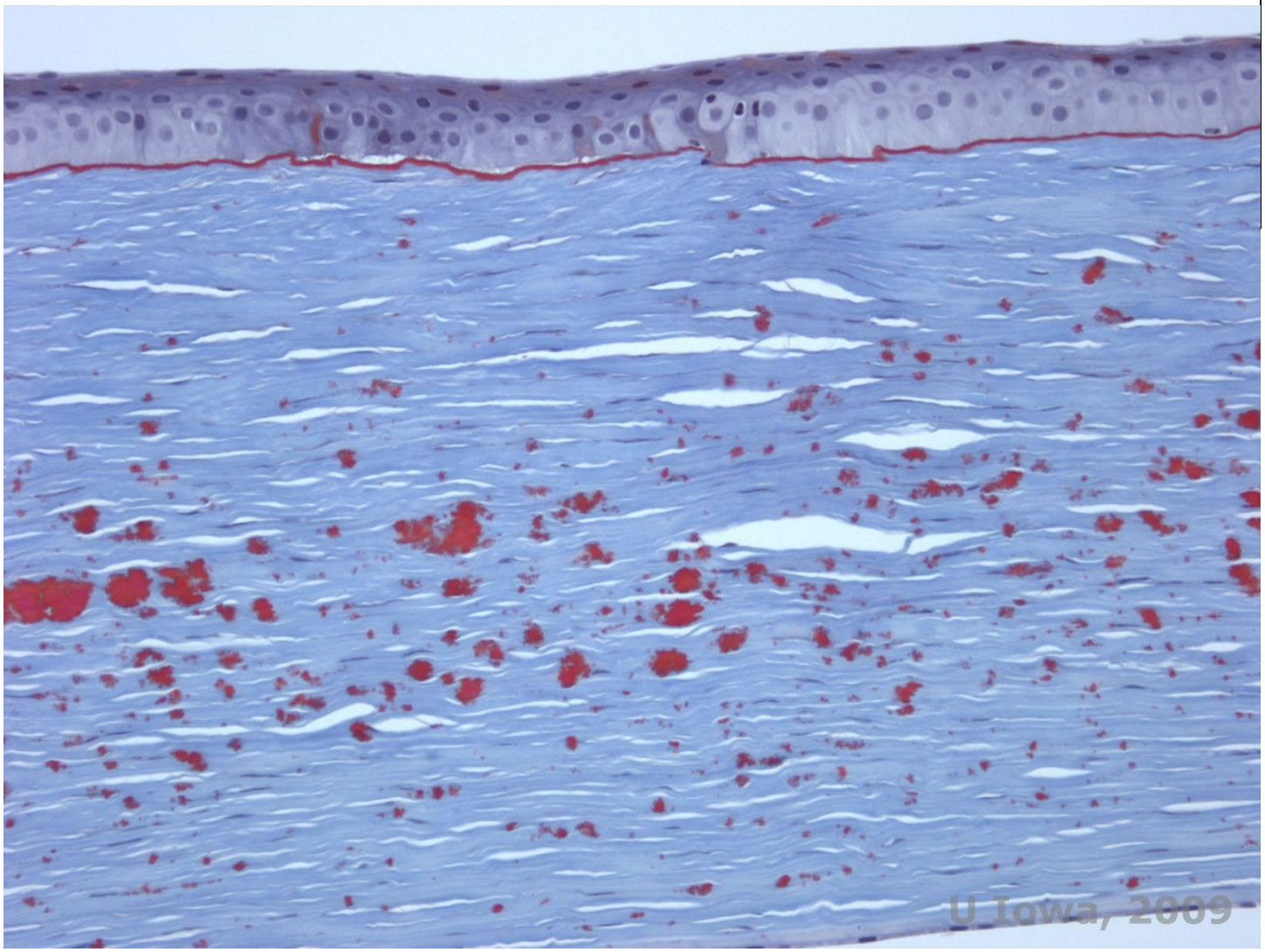
The **name**, **abnormal material**, and **stain** for each of the classic 3



Granular corneal dystrophy: Hyaline: Masson trichrome

Corneal Dystrophies

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in	
L	
A	
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L	lattice dystrophy
A	amyloid
County	Congo Red

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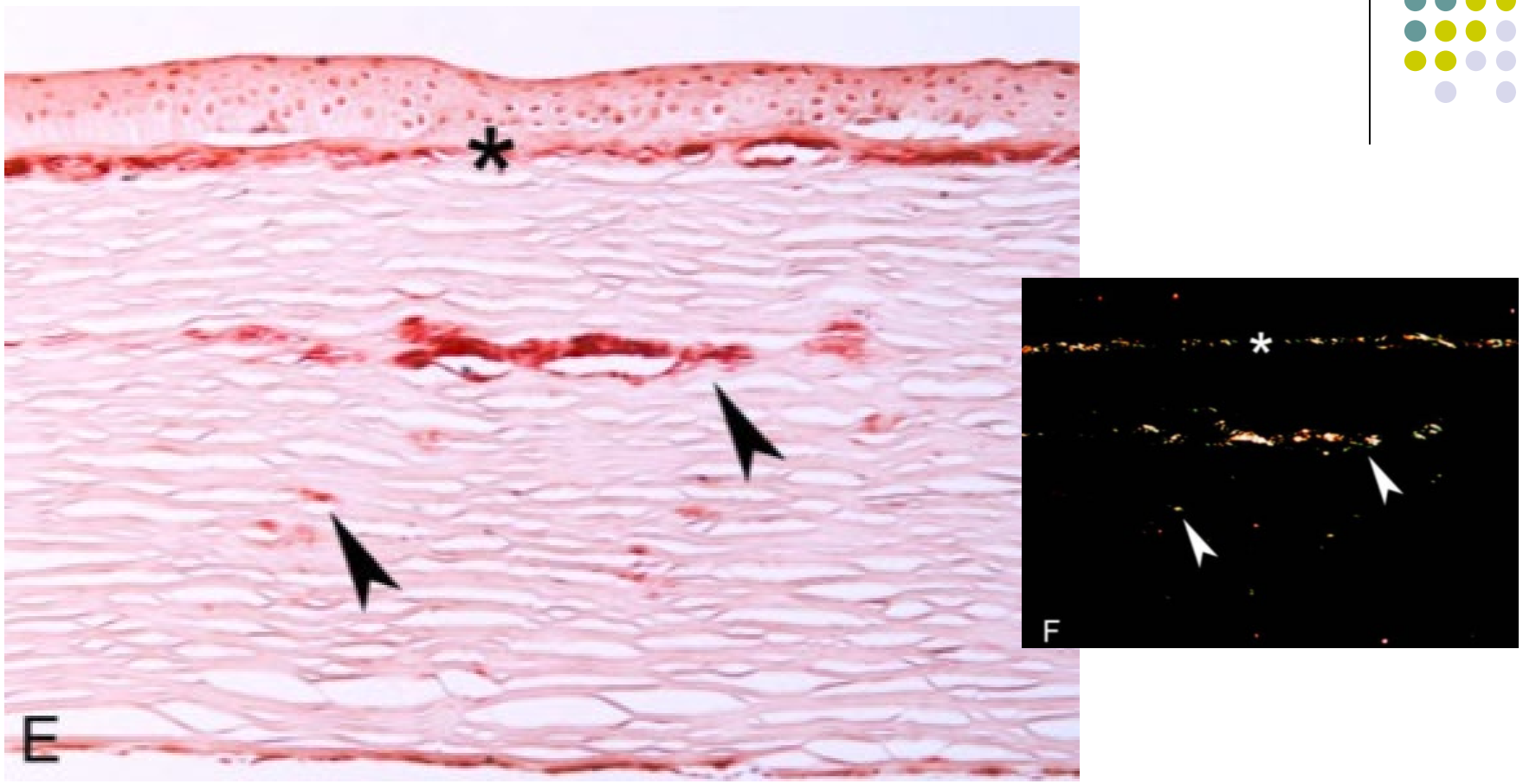

Lattice corneal dystrophy, type 1 (classic lattice) E. Congo red. F, This same section viewed with polarized light

Corneal Dystrophies

Epithelial and Subepithelial Dystrophies

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Marilyn Monroe Always Gets Her Man in LA County

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and **stain** for each of the classic 3

Foreshadowing alert—we will see shortly there's a drawback to overreliance on this mnemonic!

The time has come to address the drawback

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Marilyn Monroe Always Gets Her Man in LA County

What does the mnemonic help us

Foreshadowing alert—we will see shortly there's a drawback to overreliance on this mnemonic!

and **stain** for each of the classic 3

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Corneal Dystrophies

Epithelial and Subepithelial Dystrophies

The problem is readily apparent—*the macular dystrophy portion of the mnemonic only works if the abnormal material is called 'mucopolysaccharide.'*

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Endothelial Dystrophies

The time has come to address the drawback

Corneal Dystrophies

Epithelial and Subepithelial Dystrophies

The problem is readily apparent—*the macular dystrophy portion of the mnemonic only works if the abnormal material is called 'mucopolysaccharide.'* So you'll have to either modify the mnemonic to include GAGs (tweet your mods to me @EyeDentistAAO), or (gasp!) actually learn this factoid.

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Endothelial Dystrophies

Big 3 stromal dystrophies:
Fill in the table

Common?		
Most ?		
?		
? *Least*		

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Endothelial Dystrophies

Big 3 stromal dystrophies:
Fill in the table

Common?	Recur in PK	
Most **Lattice**	*Earliest* **?**	
Granular	**?**	
Macular *Least*	**?** *Latest*	

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Endothelial Dystrophies

Big 3 stromal dystrophies:
Fill in the table

Common?	Recur in PK	
Most **Lattice**	*Earliest* **Lattice**	
Granular	**Granular**	
Macular *Least*	**Macular** *Latest*	

Corneal Dystrophies

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3) Congenital stromal corneal dystrophy
4) Fleck corneal dystrophy
5) Posterior amorphous corneal dystrophy
6) Pre-Descemet corneal dystrophy

Endothelial Dystrophies

Big 3 stromal dystrophies:
Fill in the table

Common?	Recur in PK	Age of Onset
Most **Lattice**	*Earliest* **Lattice**	*Youngest* ***?***
Granular	**Granular**	***?***
Macular *Least*	**Macular** *Latest*	***?*** *Oldest*

Corneal Dystrophies

Epithelial and Subepithelial Dystrophies

Epithelial-Stromal *TGFBI* Dystrophies

1) Reis-Bücklers corneal dystrophy
2) Thiel-Behnke corneal dystrophy
3) **Lattice, type 1**
4) Lattice, variant types (III, IIIA, I/IIIA, IV)
5) **Granular type 1**
6) Granular type 2

Stromal Dystrophies

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Endothelial Dystrophies

Same order as other two, just shifted down by one

Note: Same order

Big 3 stromal dystrophies: Fill in the table

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Stromal Dystrophies

1) **Macular corneal dystrophy**
2) Schnyder corneal dystrophy

Give 6 reasons that macular is the 'black sheep' of the big 3 stromal dystrophies:

1)
2)
3)
4)
5)
6)

En

Corneal Dystrophies

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1) It is AR (others are AD)
2) It is limbus-to-limbus (others are clear peripherally)
3) The cornea is hazy between lesions (others have clear spaces between lesions)
4) It's gene locus is not *TGFBI* (others are)
5) The cornea tends to thin in macular (others do not)
6) It involves the deep stroma, and even the endothelium (others are anterior)

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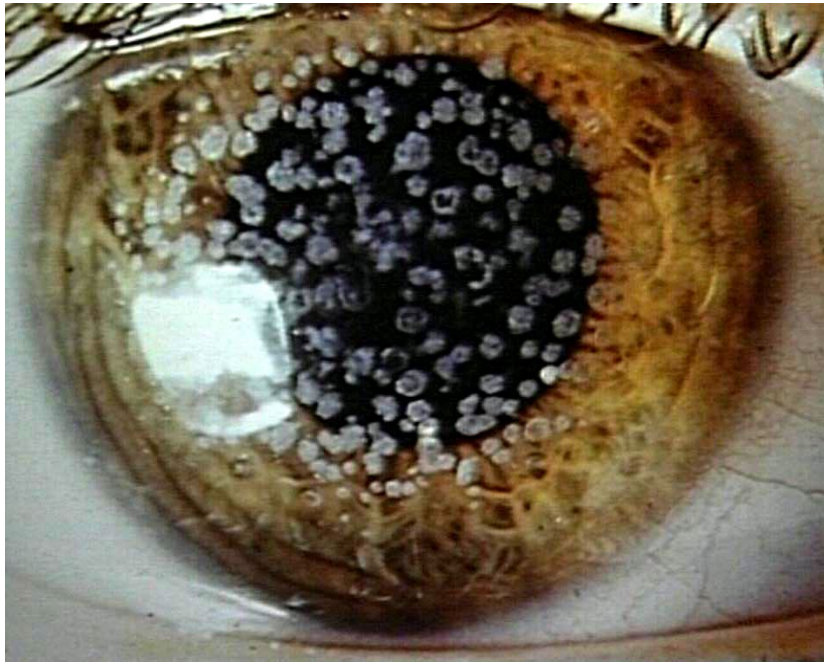
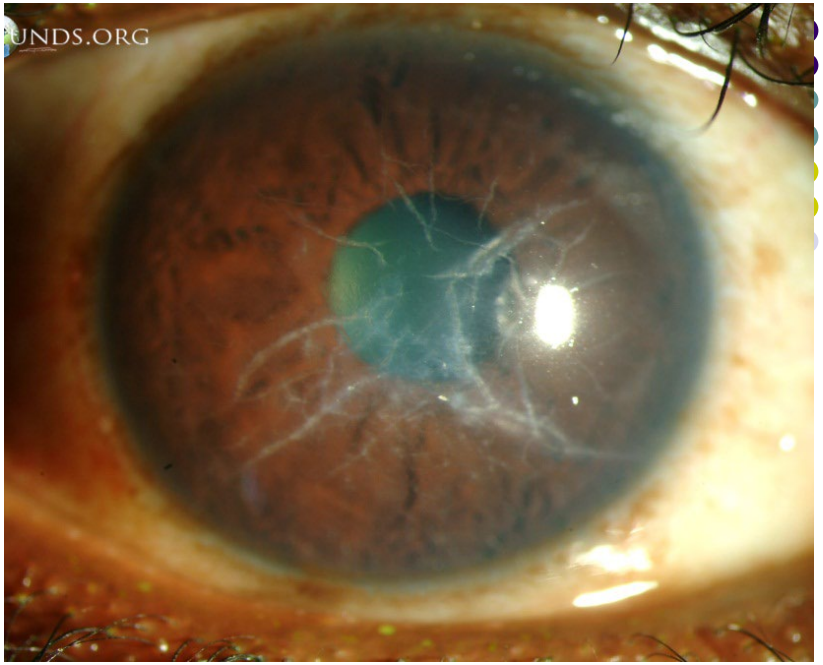
En

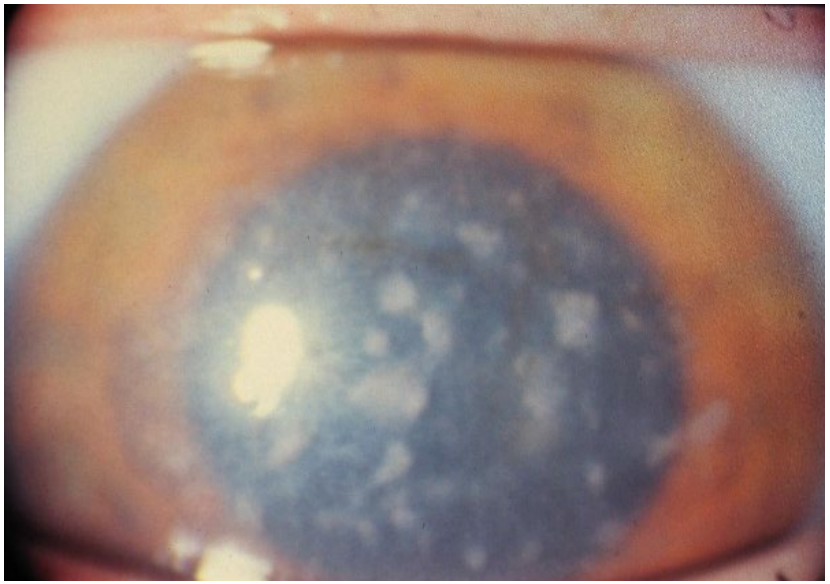
(See next slide)



Granular



Lattice



Macular

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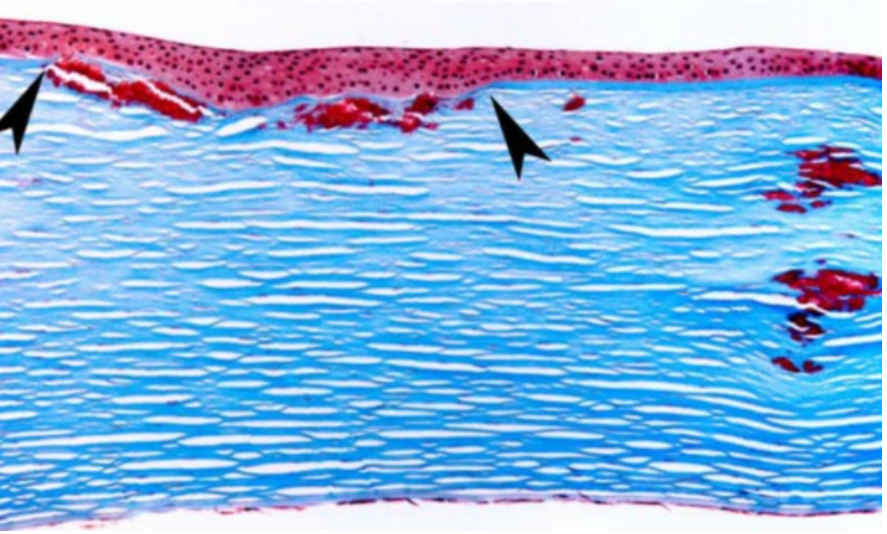
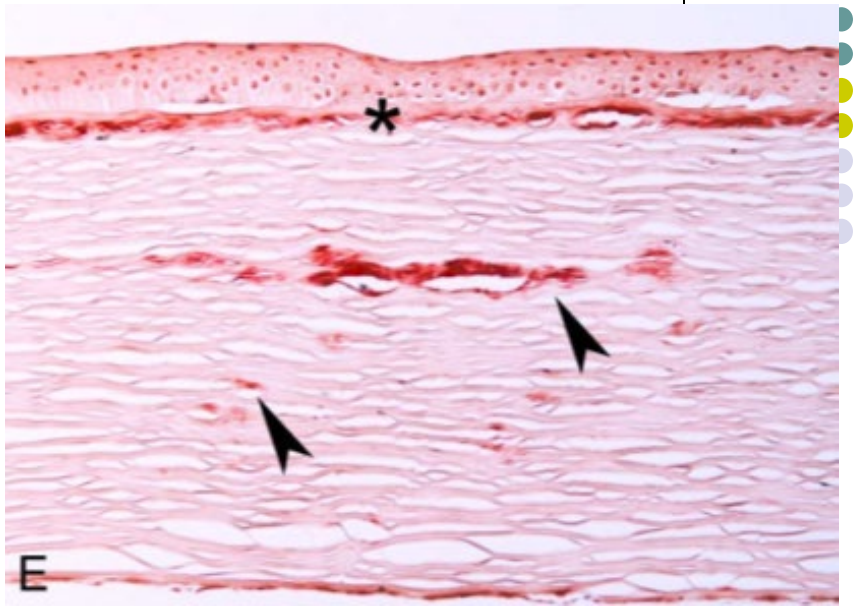
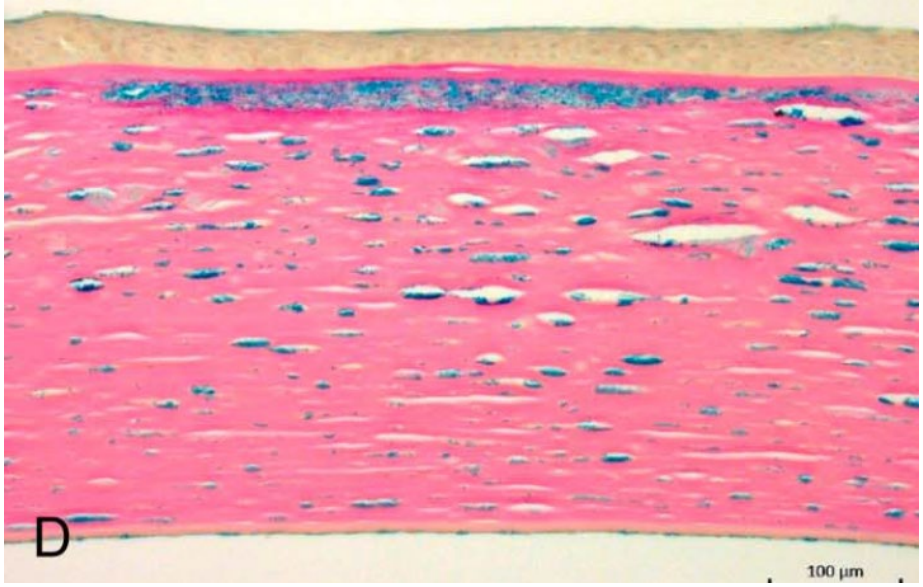
(ditto)



Granular



Lattice



Macular