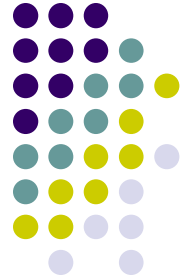


Q

Surfer's Eye (*Surfer's Eye?*)



How a pinguecula presents...

*Appearance:*

*Location:*

*Laterality:*



# Q/A

## Surfer's Eye (*Surfer's Eye?*)

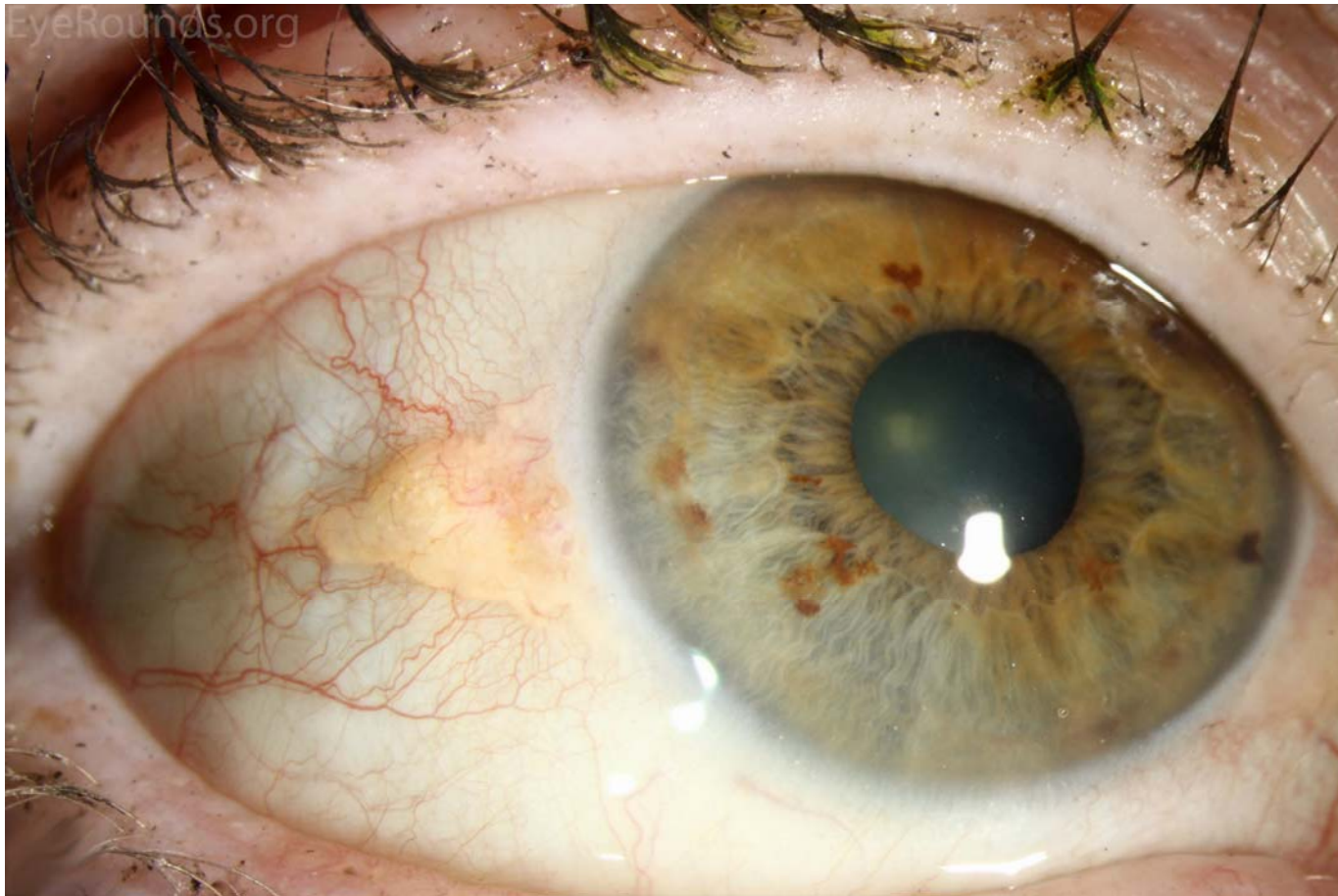
How a pinguecula presents...

*Appearance:* **Yellow-white mass**

*Location:*

*Laterality:*

## Surfer's Eye (*Surfer's Eye?*)



Pinguecula





# Q/A

## Surfer's Eye (*Surfer's Eye?*)

How a pinguecula presents...

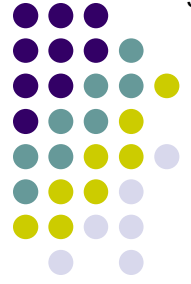
*Appearance:* Yellow-white mass

*Location:*

*Laterality:*

# Q/A

Surfer's Eye (*Surfer's Eye?*)

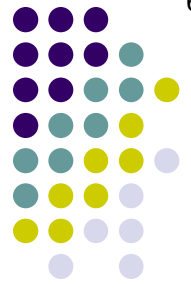


## How a pinguecula presents...

*Appearance:* Yellow-white mass

*Location:* IPFZ conj near the limbus

*Laterality:* (IPFZ = interpalpebral fissure zone)



Q

Surfer's Eye (*Surfer's Eye?*)

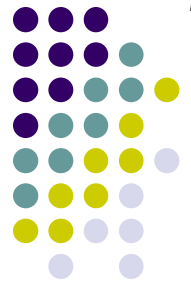
How a pinguecula presents...

*Appearance:* Yellow-white mass

***Location:* IPFZ conj near the limbus**

*Laterality:*

*Do pinguecula occur nasally, or temporally?*



# Q/A

## Surfer's Eye (*Surfer's Eye?*)

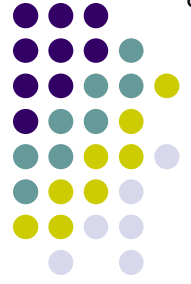
How a pinguecula presents...

*Appearance:* Yellow-white mass

***Location:* IPFZ conj near the limbus**

*Laterality:*

*Do pinguecula occur nasally, or temporally?  
Both, but they are more likely to be located*



# A

## Surfer's Eye (*Surfer's Eye?*)

How a pinguecula presents...

*Appearance:* Yellow-white mass

***Location:* IPFZ conj near the limbus**

*Laterality:*

*Do pinguecula occur nasally, or temporally?  
Both, but they are more likely to be located nasally*



Q

Surfer's Eye (*Surfer's Eye?*)

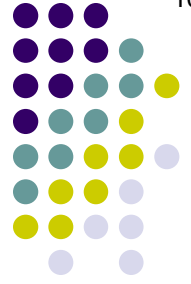


How a pinguecula presents...

*Appearance:* Yellow-white mass

*Location:* IPFZ conj near the limbus

*Laterality:*



# A

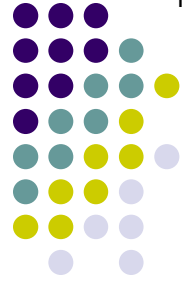
## Surfer's Eye (*Surfer's Eye?*)

How a pinguecula presents...

*Appearance:* Yellow-white mass

*Location:* IPFZ conj near the limbus

*Laterality:* Bilateral



Q

Surfer's Eye (*Surfer's Eye?*)

How a pinguecula presents...

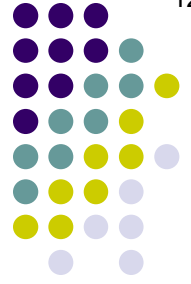
*Appearance:* Yellow-white mass

*Location:* IPFZ conj near the limbus

*Laterality:* Bilateral

Pinguecula risk factors:

- 
- 
-



# A

## Surfer's Eye (*Surfer's Eye?*)

How a pinguecula presents...

*Appearance:* Yellow-white mass

*Location:* IPFZ conj near the limbus

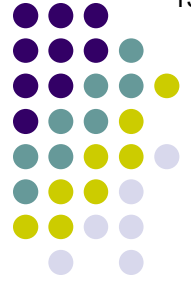
*Laterality:* Bilateral

Pinguecula risk factors:

--Age

--UV exposure

--Dust/wind damage



# Q

## Surfer's Eye (*Surfer's Eye?*)

How a pinguecula presents...

*Appearance:* Yellow-white mass

*Location:* IPFZ conj near the limbus

*Laterality:* Bilateral

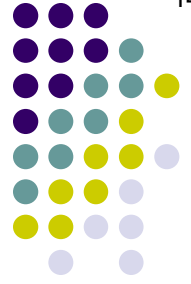
Pinguecula risk factors:

**--Age**

*What age is a risk factor—being young, or being old?*

--UV exposure

--Dust/wind damage



# A

## Surfer's Eye (*Surfer's Eye?*)

How a pinguecula presents...

*Appearance:* Yellow-white mass

*Location:* IPFZ conj near the limbus

*Laterality:* Bilateral

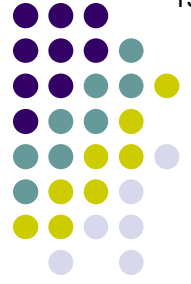
Pinguecula risk factors:

--**Age**

*What age is a risk factor—being young, or being old?*  
Older age

--UV exposure

--Dust/wind damage



# Q

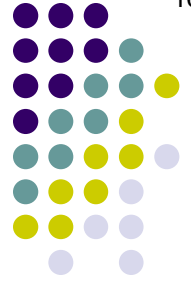
## Surfer's Eye (*Surfer's Eye?*)

How a **pinguecula** presents...

*In two words, what is the histology of a pinguecula?*

Pinguecula risk factors.

- Age
- UV exposure
- Dust/wind damage



# Q/A

## Surfer's Eye (*Surfer's Eye?*)

How a **pinguecula** presents...

*In two words, what is the histology of a pinguecula?*

It is an

two words

(also known as

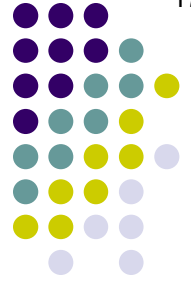
slightly diff 1<sup>st</sup> word, same 2<sup>nd</sup> word

)

Pinguecula risk factors.

- Age
- UV exposure
- Dust/wind damage





# A

## Surfer's Eye (*Surfer's Eye?*)

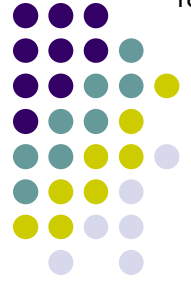
How a **pinguecula** presents...

*In two words, what is the histology of a pinguecula?*

It is an *elastoid degeneration* (also known as *elastotic degeneration*)

Pinguecula risk factors.

- Age
- UV exposure
- Dust/wind damage



# Q

## Surfer's Eye (*Surfer's Eye?*)

How a **pinguecula** presents...

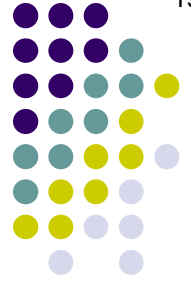
*In two words, what is the histology of a pinguecula?*

It is an *elastoid degeneration* (also known as *elastotic degeneration*)

*Why 'elastoid/elastotic' degeneration?*

Pinguecula risk factors.

- Age
- UV exposure
- Dust/wind damage



# Q/A

## Surfer's Eye (*Surfer's Eye?*)

How a **pinguecula** presents...

*In two words, what is the histology of a pinguecula?*

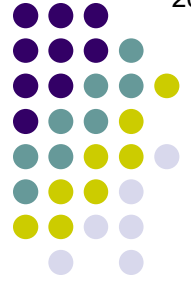
It is an *elastoid degeneration* (also known as *elastotic degeneration*)

*Why 'elastoid/elastotic' degeneration?*

The collagen fibers in pinguecula stain with one word, just like true elastic tissue. However, the fibers are insensitive to the enzyme similar word. Thus the fibers are not truly elastic tissue—hence the terms *elastoid/elastotic*.

Pinguecula risk factors:

- Age
- UV exposure
- Dust/wind damage



# A

## Surfer's Eye (*Surfer's Eye?*)

How a **pinguecula** presents...

*In two words, what is the histology of a pinguecula?*

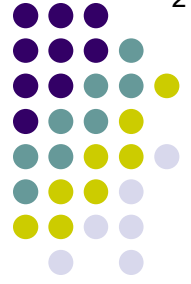
It is an *elastoid degeneration* (also known as *elastotic degeneration*)

*Why 'elastoid/elastotic' degeneration?*

The collagen fibers in pinguecula stain with *elastin*, just like true elastic tissue. However, the fibers are insensitive to the enzyme *elastase*. Thus the fibers are not truly elastic tissue—hence the terms *elastoid/elastotic*.

Pinguecula risk factors:

- Age
- UV exposure
- Dust/wind damage



Q

## Surfer's Eye (*Surfer's Eye?*)

How a pterygium presents...

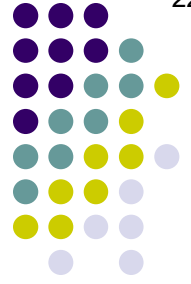
*Appearance:*

*Location:*

*Laterality:*

# Q/A

Surfer's Eye (*Surfer's Eye?*)



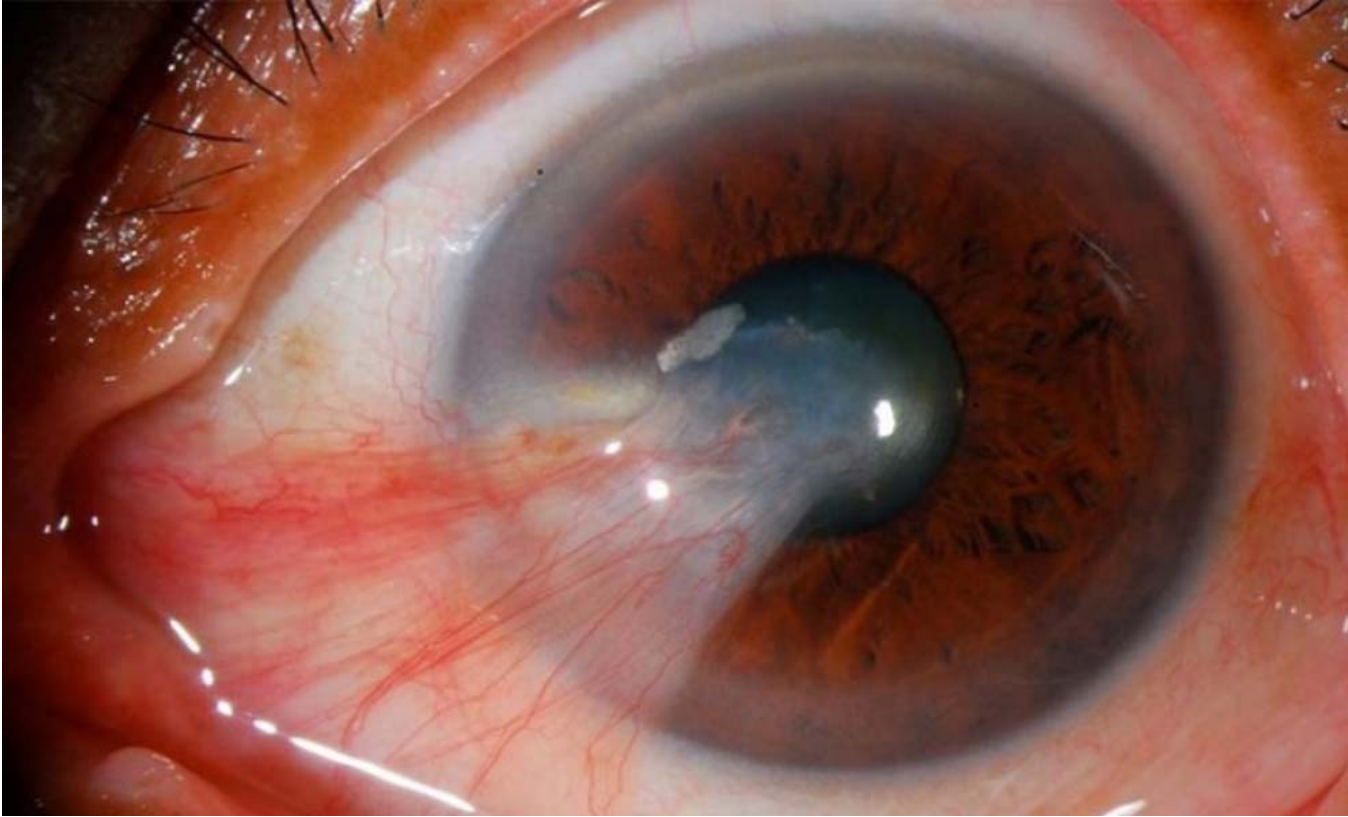
How a pterygium presents...

*Appearance:* Wing-shaped growth

*Location:*

*Laterality:*

## Surfer's Eye (*Surfer's Eye?*)



Pterygium



# Q/A

Surfer's Eye (*Surfer's Eye?*)



How a pterygium presents...

*Appearance:* Wing-shaped growth

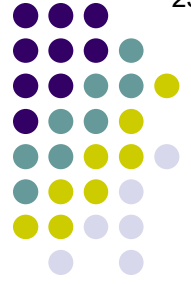
*Location:*

*Laterality:*



# Q/A

## Surfer's Eye (*Surfer's Eye?*)

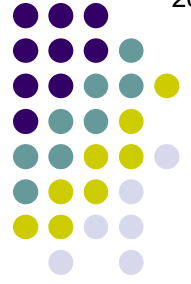


How a pterygium presents...

*Appearance:* Wing-shaped growth

*Location:* IPFZ cornea near the limbus

*Laterality:*



# A

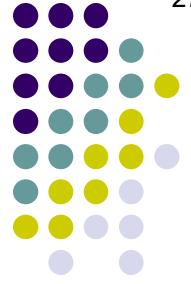
## Surfer's Eye (*Surfer's Eye?*)

How a pterygium presents...

*Appearance:* Wing-shaped growth

*Location:* IPFZ cornea near the limbus

*Laterality:* Bilateral



# Q

## Surfer's Eye (*Surfer's Eye?*)

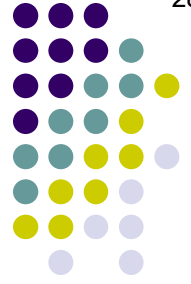
How a pterygium presents...

*Appearance:* Wing-shaped growth

*Location:* IPFZ cornea near the limbus

*Laterality:* Bilateral

*What is the histology of pterygia?*



# A

## Surfer's Eye (*Surfer's Eye?*)

How a pterygium presents...

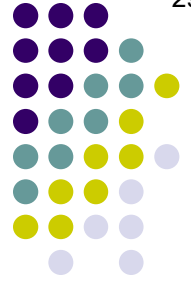
*Appearance:* Wing-shaped growth

*Location:* IPFZ cornea near the limbus

*Laterality:* Bilateral

*What is the histology of pterygia?*

The same as that of pingecula—elastoid/elastotic degeneration



# Q

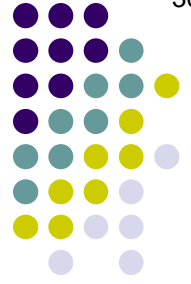
## Surfer's Eye (*Surfer's Eye?*)

How a pterygium presents...

*Appearance:* Wing-shaped growth

***Location:* IPFZ cornea near the limbus**

*Which side of the cornea—nasal, or temporal?*



# A

## Surfer's Eye (*Surfer's Eye?*)

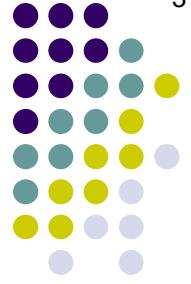
How a pterygium presents...

*Appearance:* Wing-shaped growth

***Location:* IPFZ cornea near the limbus**

*Which side of the cornea—nasal, or temporal?*

Nasal is much more likely



# Q

## Surfer's Eye (*Surfer's Eye?*)

How a pterygium presents...

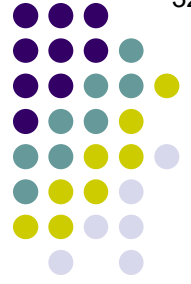
*Appearance:* Wing-shaped growth

***Location:* IPFZ cornea near the limbus**

*Which side of the cornea—nasal, or temporal?*

Nasal is much more likely

*Why are pterygia more likely to be located nasally?*



# A

## Surfer's Eye (*Surfer's Eye?*)

How a pterygium presents...

*Appearance:* Wing-shaped growth

***Location:* IPFZ cornea near the limbus**

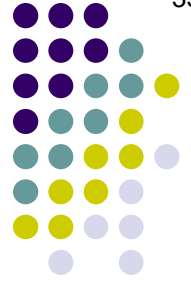
*Which side of the cornea—nasal, or temporal?*

Nasal is much more likely

*Why are pterygia more likely to be located nasally?*

It's not known for certain, but the theory goes that, when light strikes the eye obliquely from the temporal side, the cornea focuses those rays on the nasal limbal conj. Because similarly-angled rays from the nasal side are blocked by the nose, the temporal limbal conj is spared this effect.





# Q

## Surfer's Eye (*Surfer's Eye?*)

How a pterygium presents...

*Appearance:* Wing-shaped growth

*Location:* IPFZ cornea near the limbus

*Laterality:* Bilateral

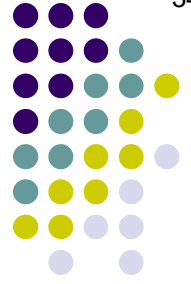
Pterygium risk factors:

--

--

--

--



# A

## Surfer's Eye (*Surfer's Eye?*)

How a pterygium presents...

*Appearance:* Wing-shaped growth

*Location:* IPFZ cornea near the limbus

*Laterality:* Bilateral

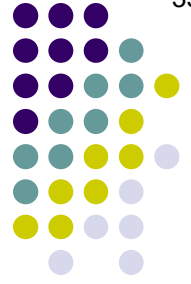
Pterygium risk factors:

--Age

--UV exposure

--Geographic location

--Gender



# Q

## Surfer's Eye (*Surfer's Eye?*)

How a pterygium presents...

*Appearance:* Wing-shaped growth

*Location:* IPFZ cornea near the limbus

*Laterality:* Bilateral

### Pterygium risk factors:

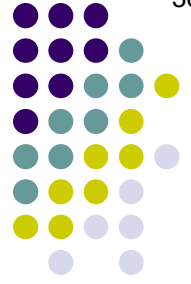
**--Age**

*What age is a risk factor—being young, or being old?*

--UV exposure

--Geographic location

--Gender



# Q/A

## Surfer's Eye (*Surfer's Eye?*)

How a pterygium presents...

*Appearance:* Wing-shaped growth

*Location:* IPFZ cornea near the limbus

*Laterality:* Bilateral

## Pterygium risk factors:

### --Age

*What age is a risk factor—being young, or being old?*  
Young (adult, in the # - # year range)

--UV exposure

--Geographic location

--Gender



# A

## Surfer's Eye (*Surfer's Eye?*)

How a pterygium presents...

*Appearance:* Wing-shaped growth

*Location:* IPFZ cornea near the limbus

*Laterality:* Bilateral

## Pterygium risk factors:

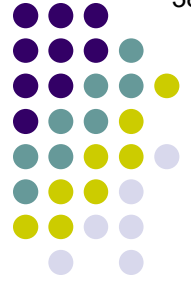
### --Age

*What age is a risk factor—being young, or being old?  
Young (adult, in the 20-30 year range)*

--UV exposure

--Geographic location

--Gender



# Q

## Surfer's Eye (*Surfer's Eye?*)

How a pterygium presents...

*Appearance:* Wing-shaped growth

*Location:* IPFZ cornea near the limbus

*Laterality:* Bilateral

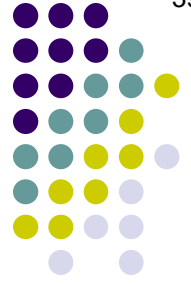
**Pterygium risk factors:**

--Age

--UV exposure

--**Geographic location**

*What is the general rule regarding geographic location and pterygium risk?*



# Q/A

## Surfer's Eye (*Surfer's Eye?*)

How a pterygium presents...

*Appearance:* Wing-shaped growth

*Location:* IPFZ cornea near the limbus

*Laterality:* Bilateral

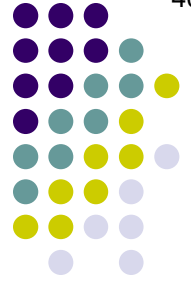
**Pterygium risk factors:**

--Age

--UV exposure

**--Geographic location**

*What is the general rule regarding geographic location and pterygium risk?  
The closer one lives to the one word, the greater the risk*



# A

## Surfer's Eye (*Surfer's Eye?*)

How a pterygium presents...

*Appearance:* Wing-shaped growth

*Location:* IPFZ cornea near the limbus

*Laterality:* Bilateral

**Pterygium risk factors:**

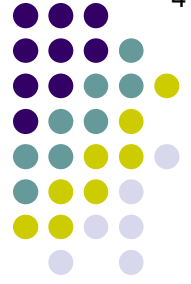
--Age

--UV exposure

--**Geographic location**

*What is the general rule regarding geographic location and pterygium risk?  
The closer one lives to the equator, the greater the risk*





# Q

## Surfer's Eye (*Surfer's Eye?*)

How a pterygium presents...

*Appearance:* Wing-shaped growth

*Location:* IPFZ cornea near the limbus

*Laterality:* Bilateral

### Pterygium risk factors:

--Age

--UV exposure

--Geographic location

--**Gender**

*Which gender is at greater risk?*



# A

## Surfer's Eye (*Surfer's Eye?*)

How a pterygium presents...

*Appearance:* Wing-shaped growth

*Location:* IPFZ cornea near the limbus

*Laterality:* Bilateral

## Pterygium risk factors:

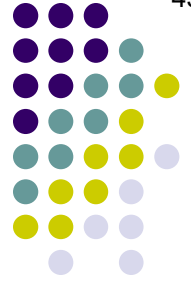
--Age

--UV exposure

--Geographic location

--**Gender**

*Which gender is at greater risk?*  
Male



# Q

## Surfer's Eye (*Surfer's Eye?*)

How a pterygium presents...

*Appearance:* Wing-shaped growth

*Location:* IPFZ cornea near the limbus

*Laterality:* Bilateral

Pterygium risk factors:

--Age

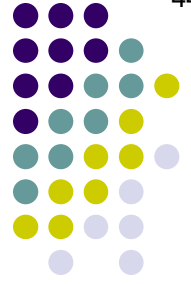
--UV exposure

--Geographic location

--Gender

--*Dust/wind damage?*

*How about dust and wind exposure--  
are they risk factors for pterygia the  
way they are for pingueculas?*



# A

## Surfer's Eye (*Surfer's Eye?*)

How a pterygium presents...

*Appearance:* Wing-shaped growth

*Location:* IPFZ cornea near the limbus

*Laterality:* Bilateral

Pterygium risk factors:

--Age

--UV exposure

--Geographic location

--Gender

--*Dust/wind damage?*

*How about dust and wind exposure--  
are they risk factors for pterygia the  
way they are for pingueculas?*

Per the BCSC Cornea book, they  
"may also be factors"



## Surfer's Eye (*Surfer's Eye?*)

How a **pinguecula** presents...

*Appearance:* Yellow-white mass

*Location:* IPFZ conj near the limbus

*Laterality:* Bilateral

**Pinguecula** risk factors:

--Age (older)

--UV exposure

--Dust/wind damage

Histology (both): Elastoid/elastotic degeneration

How a **pterygium** presents...

*Appearance:* Wing-shaped growth

*Location:* IPFZ cornea near the limbus

*Laterality:* Bilateral

**Pterygium** risk factors:

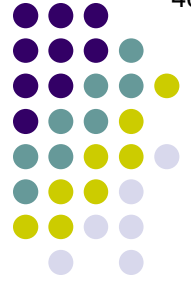
--Age (younger)

--UV exposure

--Geographic location (equatorial)

--Gender (male)

*Review slide—no questions*



# Q

## Surfer's Eye (*Surfer's Eye?*)

Indications for pterygium excision:

--

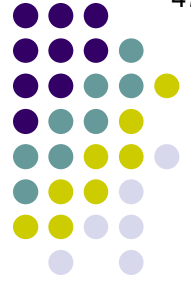
--

--

--

--

--

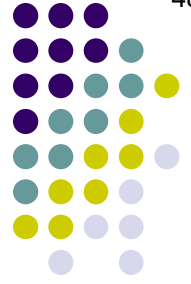


# A

## Surfer's Eye (*Surfer's Eye?*)

### Indications for pterygium excision:

- Documented rapid growth
- Irritation refractory to MTMT (*MTMT = maximally tolerated medical treatment*)
- Dellen formation
- Unacceptable cosmesis
- Encroachment upon the visual axis
- Visually significant



# Q

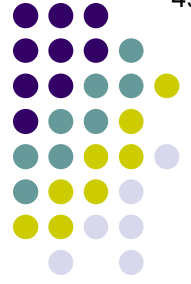
## Surfer's Eye (*Surfer's Eye?*)

### Indications for pterygium excision:

- Documented rapid growth
- Irritation refractory to MTMT
- Dellen formation**

*What is a dellen?*





# A

## Surfer's Eye (*Surfer's Eye?*)

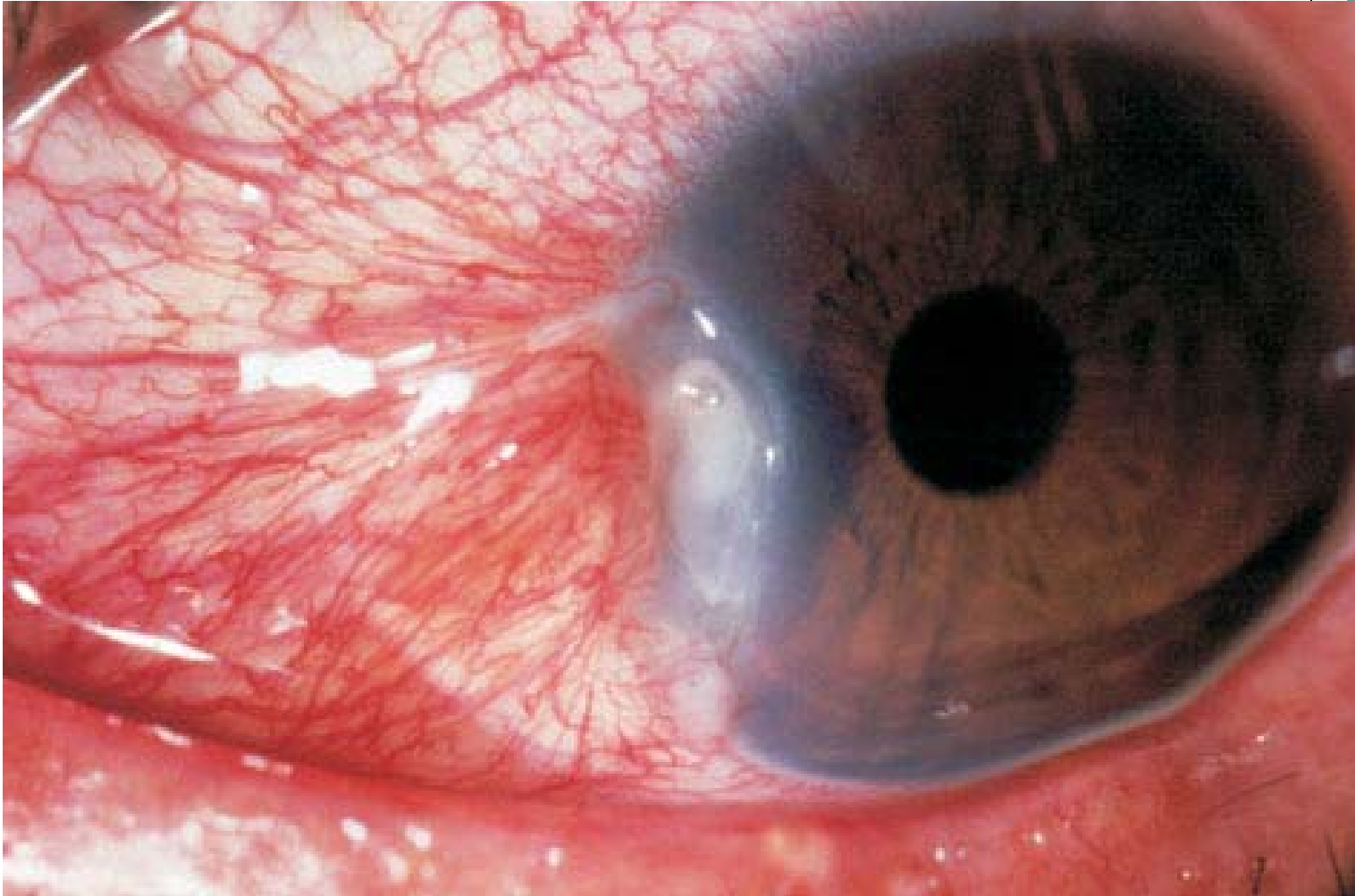
### Indications for pterygium excision:

- Documented rapid growth
- Irritation refractory to MTMT
- Dellen formation**

*What is a dellen?*

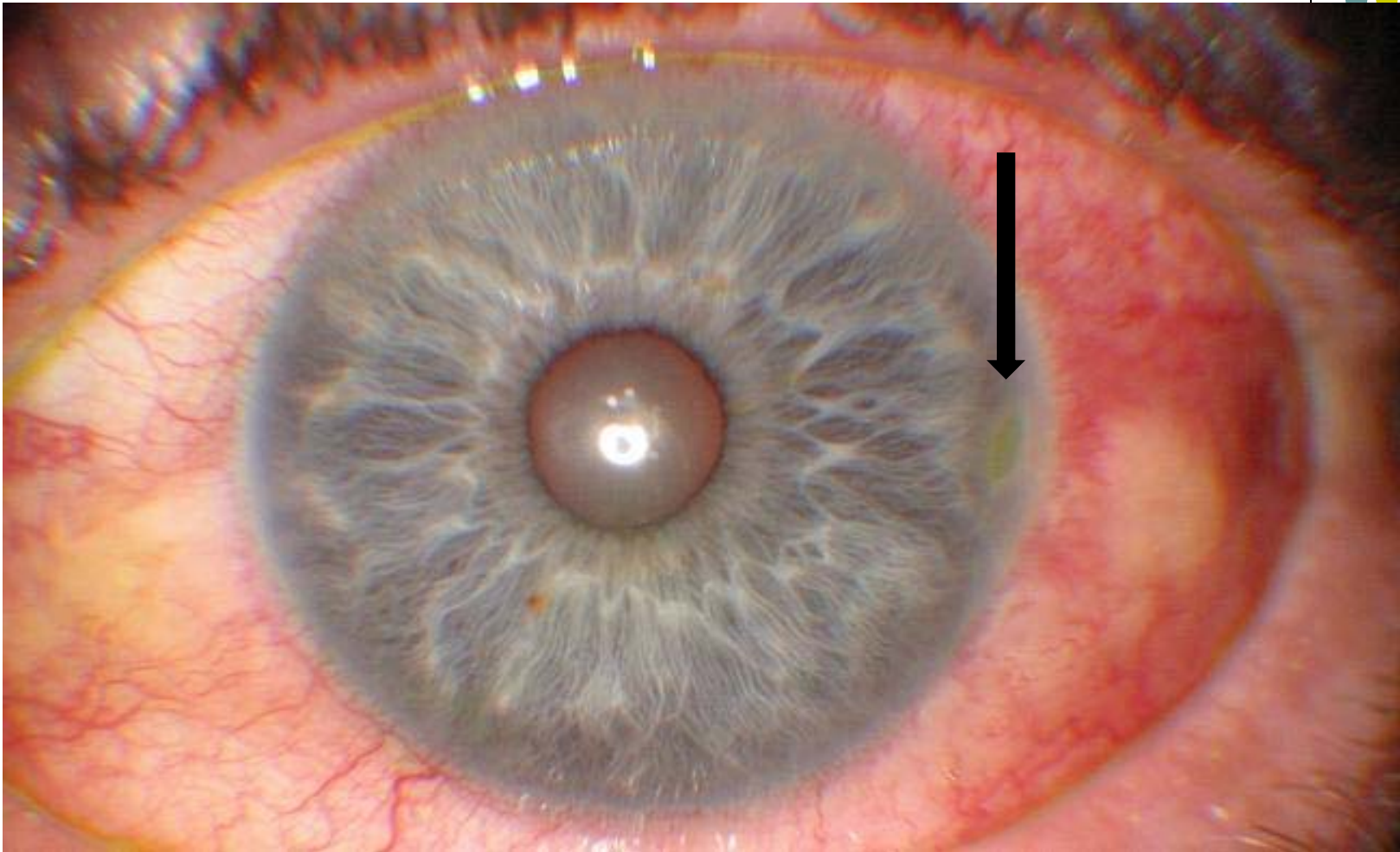
A small focal depression in the corneal surface that develops when an elevated lesion near the limbus (eg, a pterygium) prevents the eyelid from touching that area during blinking, thereby disrupting the normal corneal wetting process at that site

## Surfer's Eye (*Surfer's Eye?*)



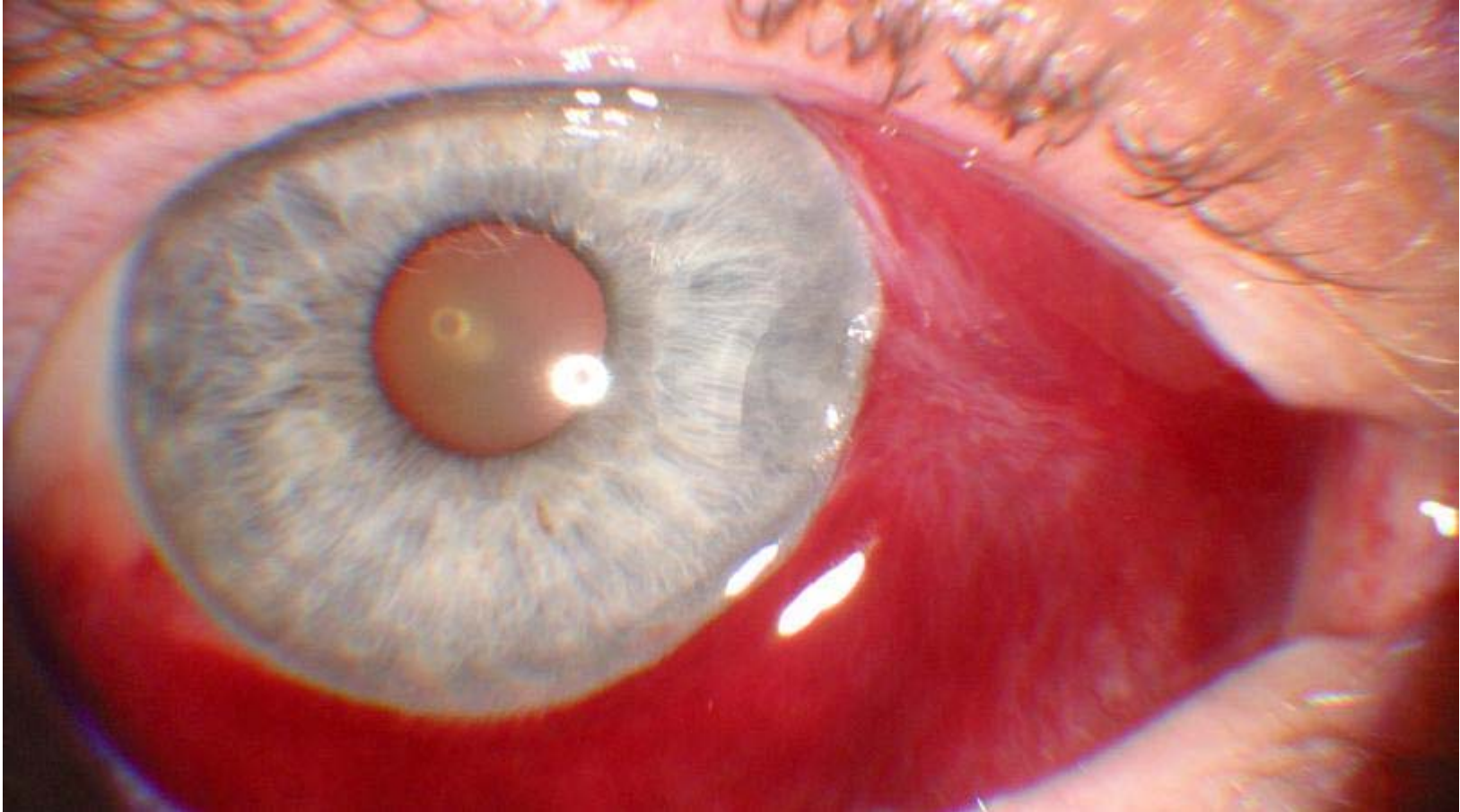
Dellen secondary to a pterygium

## Surfer's Eye (*Surfer's Eye?*)

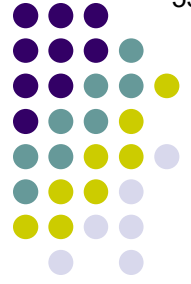


Dellen secondary to a episcleritis nodule

## Surfer's Eye (*Surfer's Eye?*)



Dellen secondary to a bloody chemosis



# Q

## Surfer's Eye (*Surfer's Eye?*)

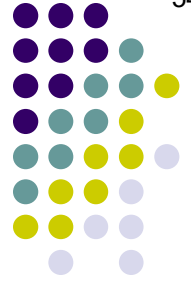
### Indications for pterygium excision:

- Documented rapid growth
- Irritation refractory to MTMT
- Dellen formation**

*What is a dellen?*

A small focal depression in the corneal surface that develops when an elevated lesion near the limbus (eg, a pterygium) prevents the eyelid from touching that area during blinking, thereby disrupting the normal corneal wetting process at that site

*In addition to removing the elevated lesion, how are dellen managed?*



# A

## Surfer's Eye (*Surfer's Eye?*)

### Indications for pterygium excision:

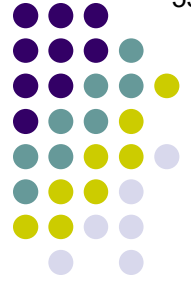
- Documented rapid growth
- Irritation refractory to MTMT
- Dellen formation**

*What is a dellen?*

A small focal depression in the corneal surface that develops when an elevated lesion near the limbus (eg, a pterygium) prevents the eyelid from touching that area during blinking, thereby disrupting the normal corneal wetting process at that site

*In addition to removing the elevated lesion, how are dellen managed?*

With copious preservative-free artificial tears. Pressure patching may be needed as well.



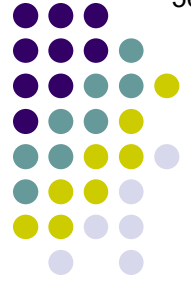
# Q

## Surfer's Eye (*Surfer's Eye?*)

Indications for pterygium excision:

- Documented rapid growth
- Irritation refractory to MTMT
- Dellen formation
- Unacceptable cosmesis
- Encroachment upon the visual axis
- Visually significant**

*How might a pterygium be visually significant?*



# A

## Surfer's Eye (*Surfer's Eye?*)

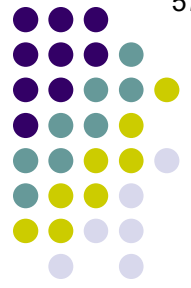
Indications for pterygium excision:

- Documented rapid growth
- Irritation refractory to MTMT
- Dellen formation
- Unacceptable cosmesis
- Encroachment upon the visual axis
- Visually significant**

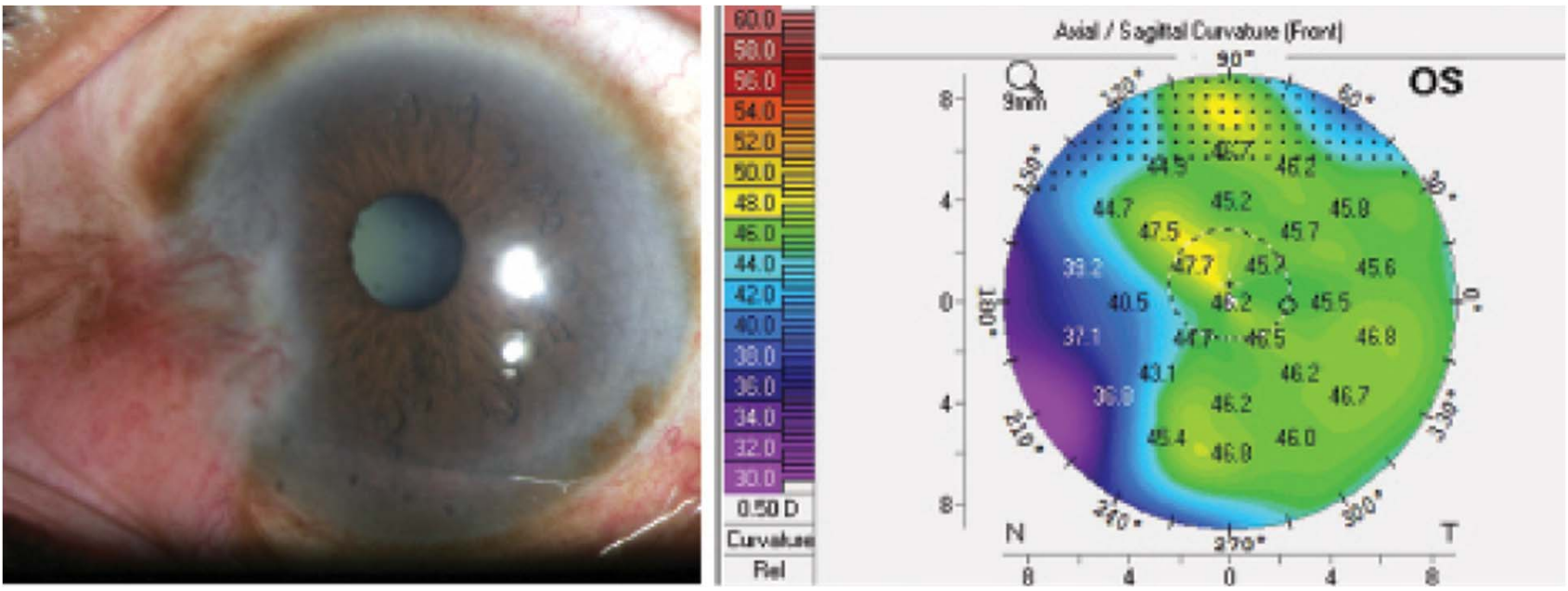
*How might a pterygium be visually significant?*

By inducing astigmatism, especially irregular astigmatism

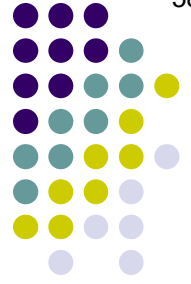




# Surfer's Eye (*Surfer's Eye?*)



Pterygium-induced astigmatism



# Q

## Surfer's Eye (*Surfer's Eye?*)

Indications for pterygium excision:

- Documented rapid growth
- Irritation refractory to MTMT
- Dellen formation
- Unacceptable cosmesis
- Encroachment upon the visual axis
- Visually significant

*In the present context, what is a Stocker line?*



# Q/A

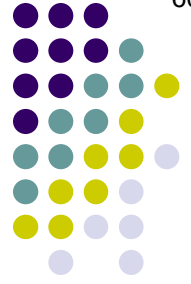
## Surfer's Eye (*Surfer's Eye?*)

Indications for pterygium excision:

- Documented rapid growth
- Irritation refractory to MTMT
- Dellen formation
- Unacceptable cosmesis
- Encroachment upon the visual axis
- Visually significant

*In the present context, what is a Stocker line?*

An  line on the cornea that forms near the head of a pterygium



# A

## Surfer's Eye (*Surfer's Eye?*)

Indications for pterygium excision:

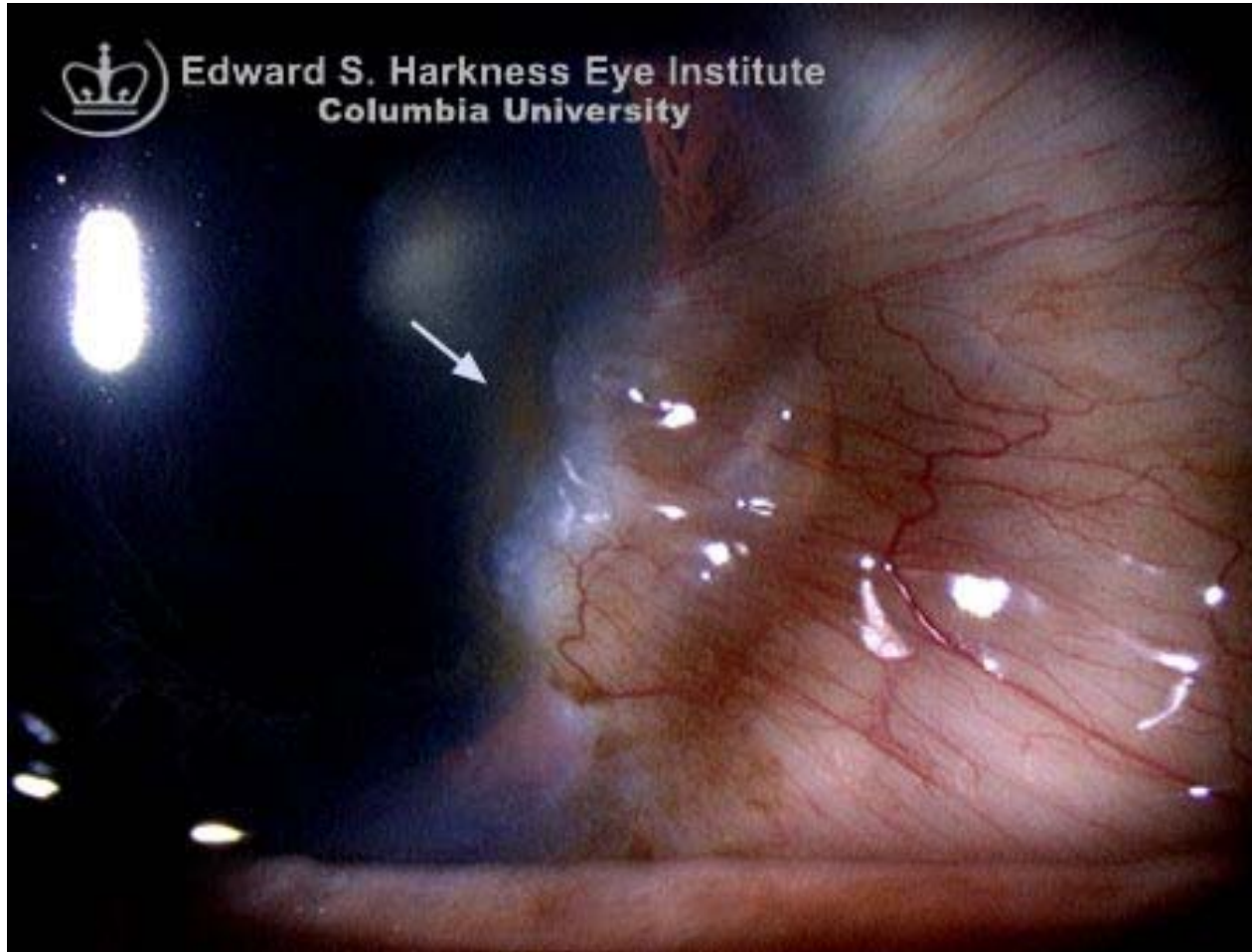
- Documented rapid growth
- Irritation refractory to MTMT
- Dellen formation
- Unacceptable cosmesis
- Encroachment upon the visual axis
- Visually significant

*In the present context, what is a Stocker line?*

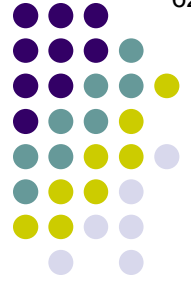
An iron line on the cornea that forms near the head of a pterygium



# Surfer's Eye (*Surfer's Eye?*)



Stocker line



# Q

## Surfer's Eye (*Surfer's Eye?*)

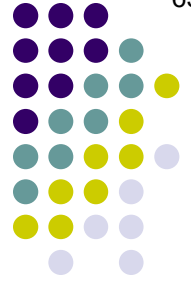
Indications for pterygium excision:

- Documented rapid growth
- Irritation refractory to MTMT
- Dellen formation
- Unacceptable cosmesis
- Encroachment upon the visual axis
- Visually significant

*In the present context, what is a Stocker line?*

An iron line on the cornea that forms near the head of a pterygium

*Is the presence of a Stocker line an indication for pterygium removal?*



# A

## Surfer's Eye (*Surfer's Eye?*)

Indications for pterygium excision:

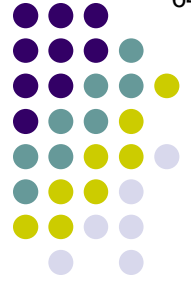
- Documented rapid **growth (not!)**
- Irritation refractory to MTMT
- Dellen formation
- Unacceptable cosmesis
- Encroachment upon the visual axis
- Visually significant

*In the present context, what is a Stocker line?*

An iron line on the cornea that forms near the head of a pterygium

*Is the presence of a Stocker line an indication for pterygium removal?*

No—just the opposite. A Stocker line forms when the pterygium is stable; i.e., it indicates a *lack* of growth.



# Q

## Surfer's Eye (*Surfer's Eye?*)

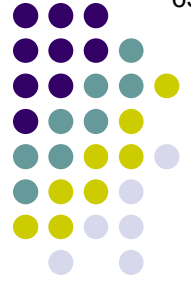
Signs worrisome for malignancy:

--Atypical

--Atypical

--Atypical



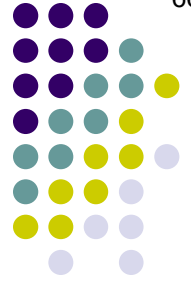


# A

## Surfer's Eye (*Surfer's Eye?*)

Signs worrisome for malignancy:

- Atypical *pigmentation*
- Atypical *elevation*
- Atypical *vascularization*



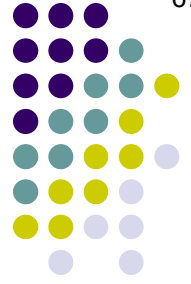
Q

Surfer's Eye (*Surfer's Eye?*)

Signs worrisome for **malignancy**:

Atypical pigmentation

*Wait--pterygia have malignant potential?*



# A

## Surfer's Eye (*Surfer's Eye?*)

Signs worrisome for **malignancy**:

Atypical pigmentation

*Wait--pterygia have malignant potential?*

Not per se, but they can harbor a foci of malignancy. Or, a malignant lesion might *mimic* a pterygium.



Q

## Surfer's Eye (*Surfer's Eye?*)

Signs worrisome for **malignancy**:

Atypical pigmentation

*Wait--pterygia have malignant potential?*

Not per se, but they can harbor a foci of malignancy. Or, a malignant lesion might *mimic* a pterygium.

*What type of malignancy is most likely to be associated with a pterygium?*



# A

## Surfer's Eye (*Surfer's Eye?*)

Signs worrisome for **malignancy**:

Atypical pigmentation

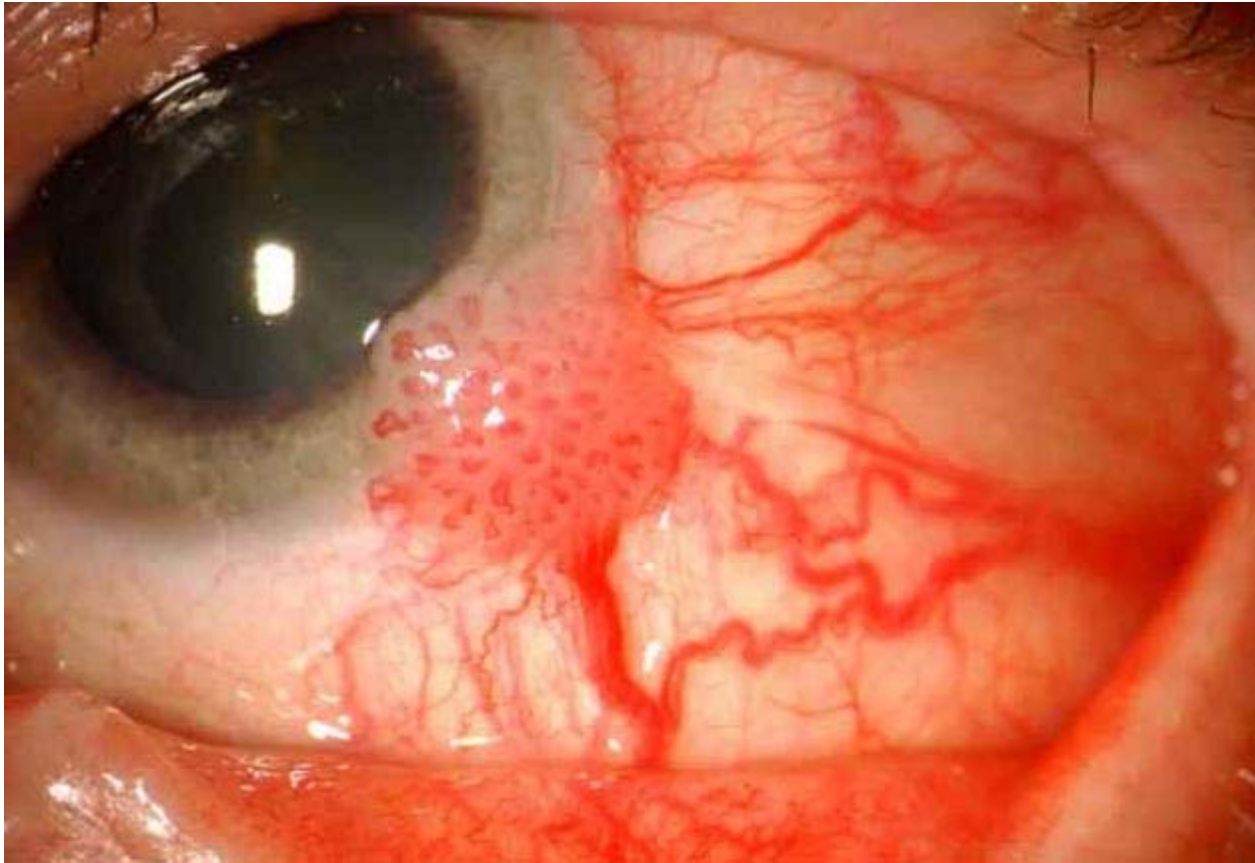
*Wait--pterygia have malignant potential?*

Not per se, but they can harbor a foci of malignancy. Or, a malignant lesion might *mimic* a pterygium.

*What type of malignancy is most likely to be associated with a pterygium?*

Something on the squamous-cell continuum (ie, carcinoma-in-situ; frank SSC)

## Surfer's Eye (*Surfer's Eye?*)



Conjunctival squamous-cell carcinoma

