How a pinguecula presents...

**Appearance:**

**Location:**

**Laterality:**
How a pinguecula presents...

**Appearance:** Yellow-white mass

**Location:**

**Laterality:**
Surfer’s Eye (Surfer’s Eye?)

Pinguecula
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)
How a pinguecula presents...

**Appearance:** Yellow-white mass

**Location:** IPFZ conj near the limbus

**Laterality:**

*Do pinguecula occur nasally, or temporally?*
Surfer’s Eye (Surfer’s Eye?)

How a pinguecula presents...

Appearance: Yellow-white mass

Location: IPFZ conj near the limbus

Laterality: Both, but they are more likely to be located nasally.
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*
How a pinguecula presents...

*Appearance*: Yellow-white mass

*Location*: IPFZ conj near the limbus

*Laterality*: 

**Surfer’s Eye (Surfer’s Eye?)**
How a pinguecula presents...

**Appearance:** Yellow-white mass

**Location:** IPFZ conj near the limbus

**Laterality:** Bilateral

**Surfer’s Eye (Surfer’s Eye?)**
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:

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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
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
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
How a pinguecula presents...

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

Pinguecula risk factors:

-- Age
-- UV exposure
-- Dust/wind damage
How a pinguecula presents...

In two words, what is the histology of a pinguecula?
It is an elastoid degeneration (also known as elastotic degeneration).

Surfer’s Eye (Surfer’s Eye?)

Pinguecula risk factors:
--Age
--UV exposure
--Dust/wind damage
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
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
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
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
How a pterygium presents…

**Appearance:**

**Location:**

**Laterality:**
Surfer’s Eye (Surfer’s Eye?)

How a pterygium presents...

Appearance: Wing-shaped growth

Location:

Laterality:
Surfer’s Eye

Pterygium
Q/A

Surfer’s Eye (Surfer’s Eye?)

How a pterygium presents...

Appearance: Wing-shaped growth

Location:

Laterality:
Surfer’s Eye (Surfer’s Eye?)

How a pterygium presents…

*Appearance*: Wing-shaped growth

*Location*: IPFZ cornea near the limbus

*Laterality*: 
Surfer’s Eye (Surfer’s Eye?)

How a pterygium presents…

*Appearance*: Wing-shaped growth
*Location*: IPFZ cornea near the limbus
*Laterality*: Bilateral
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?
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 pinguecula—elastoid/elastotic degeneration
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?*
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
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?
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.
How a pterygium presents...

Appearance: Wing-shaped growth
Location: IPFZ cornea near the limbus
Laterality: Bilateral

Pterygium risk factors:

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How a pterygium presents...

Appearance: Wing-shaped growth
Location: IPFZ cornea near the limbus
Laterality: Bilateral

Ptterygium risk factors:

--Age
--UV exposure
--Geographic location
--Gender
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
How a pinguecula presents...

Appearance: Yellow-white mass
Location: IPFZ conj near the limbus
Laterality: Bilateral

Pterygium risk factors:

--Age

--UV exposure

--Geographic location

--Gender

Q/A

Surfer’s Eye (Surfer’s Eye?)

What age is a risk factor—being young, or being old?
Young (adult, in the # # year range)
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
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?
How a pterygium presents…

*Appearance*: Wing-shaped growth

*Location*: IPFZ cornea near the limbus

*Laterality*: Bilateral

**Pterygium risk factors:**

--Age

--UV exposure

--**Geographic location**

**Q/A**

Surfer’s Eye *(Surfer’s Eye?)*

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

The closer one lives to the ______, the greater the risk
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
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?*
How a pterygium presents...

*Appearance*: Wing-shaped growth
*Location*: IPFZ cornea near the limbus
*Laterality*: Bilateral

Ptterygium risk factors:

--Age
--UV exposure
--Geographic location

--**Gender**  
Which gender is at greater risk?  
Male
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?

**Surfer’s Eye (Surfer’s Eye?)**

How about dust and wind exposure—are they risk factors for pterygia the way they are for pingueculas?
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
Indications for pterygium excision:

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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 cosmescis
--Encroachment upon the visual axis
--Visually significant
Indications for pterygium excision:

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

What is a dellen?

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.
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
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?*
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 (e.g., 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.
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?
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
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?
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/A

Indications for pterygium excision:

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

Surfer’s Eye (Surfer’s Eye?)

In the present context, what is a Stocker line?

An iron line on the cornea that forms near the head of a pterygium.
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
Indications for pterygium excision:
--Documented rapid growth
--Irritation refractory to MTMT
--Dellen formation
--Unacceptable cosmescis
--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?
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.
Signs worrisome for malignancy:

- Atypical
- Atypical
- Atypical
- Atypical

Surfer’s Eye (Surfer’s Eye?)
Signs worrisome for malignancy:

--Atypical *pigmentation*
--Atypical *elevation*
--Atypical *vascularization*
Signs worrisome for malignancy:

- Atypical pigmentation
- Atypical elevation
- Atypical vascularization

Wait--pterygia have malignant potential?

Something on the squamous-cell continuum (i.e., carcinoma-in-situ; frank SSC)
Signs worrisome for malignancy:

- Atypical pigmentation
- Atypical elevation
- Atypical vascularization

Wait--pterygia have malignant potential?
Not per se, but they can harbor a foci of malignancy. Or, a malignant lesion might mimic a pterygium.
Signs worrisome for malignancy:
- Atypical pigmentation

**Surfer’s Eye (Surfer’s Eye?)**

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?
Signs worrisome for malignancy:
- Atypical pigmentation
- Atypical elevation
- Atypical vascularization

Wait--pterigia 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