There are four corneal iron lines. Name them.

1) ?
2) ?
3) ?
4) ?
There are four corneal iron lines. Name them.

1) Stocker line

2) Fleischer line (ring)

3) Ferry line

4) Hudson-Stähli line
There are four corneal iron lines. Name them. With what condition are they associated?

1) Stocker line is associated with...
   - ?

2) Fleischer line (ring)

3) Ferry line

4) Hudson-Stähli line
There are four corneal iron lines. Name them. With what condition are they associated?

1) Stocker line is associated with...
   - Pterygium

2) Fleischer line (ring)

3) Ferry line

4) Hudson-Stähli line
There are four corneal iron lines. Name them. With what condition are they associated?

1) Stocker line is associated with...

Pterygium

In one word, what sort of condition is pterygium?

A degeneration

In one word, what sort of degeneration is it?

A fibrovascular degeneration

In one word, what sort of fibrovascular degeneration is it?

A elastoid (or elastoic) fibrovascular degeneration
There are four corneal iron lines. Name them. With what condition are they associated?

1) Stocker line is associated with...

- Pterygium

In one word, what sort of condition is pterygium?
A degeneration
There are four corneal iron lines. Name them. With what condition are they associated?

1) Stocker line is associated with...

- **Pterygium**

In one word, what sort of condition is pterygium?
A degeneration

In one word, what sort of degeneration is it?
A degeneration
There are four corneal iron lines. Name them. With what condition are they associated?

1) Stocker line is associated with...
   - Pterygium

In one word, what sort of condition is pterygium?
A degeneration

In one word, what sort of degeneration is it?
A fibrovascular degeneration
There are four corneal iron lines. Name them. With what condition are they associated?

1) Stocker line is associated with...

- **Pterygium**

   *In one word, what sort of condition is pterygium?*
   A degeneration

   *In one word, what sort of degeneration is it?*
   A fibrovascular degeneration

   *In one word, what sort of fibrovascular degeneration is it?*
   An elastoid (or elastoic) fibrovascular degeneration
There are four corneal iron lines. Name them. With what condition are they associated?

1) Stocker line is associated with...

- **Pterygium**

In one word, what sort of condition is pterygium?
A degeneration

In one word, what sort of degeneration is it?
A fibrovascular degeneration

In one word, what sort of fibrovascular degeneration is it?
An elastoid (or elastoic) fibrovascular degeneration
There are four corneal iron lines. Name them. With what condition are they associated?

1) Stocker line is associated with...

- **Pterygium**

In one word, what sort of condition is pterygium?
A degeneration

In one word, what sort of degeneration is it?
A fibrovascular degeneration

In one word, what sort of fibrovascular degeneration is it?
An **elastoid (or elastoic)** fibrovascular degeneration

What does it mean to say a degeneration is ‘elastoid/elastotic’?
There are four corneal iron lines. Name them. With what condition are they associated?

1) Stocker line is associated with...

- Pterygium

In one word, what sort of condition is pterygium?
A degeneration

In one word, what sort of degeneration is it?
A fibrovascular degeneration

In one word, what sort of fibrovascular degeneration is it?
An elastoid (or elastoic) fibrovascular degeneration

What does it mean to say a degeneration is ‘elastoid/elastotic’?
The collagen fibers in pterygia 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.
There are four corneal iron lines. Name them. With what condition are they associated?

1) Stocker line is associated with...

- **Pterygium**

*In one word, what sort of condition is pterygium?*
A degeneration

*In one word, what sort of degeneration is it?*
A fibrovascular degeneration

*In one word, what sort of fibrovascular degeneration is it?*
An *elastoid (or elastoic)* fibrovascular degeneration

What does it mean to say a degeneration is ‘elastoid/elastotic’?
The collagen fibers in pterygia 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.*
There are four corneal iron lines. Name them.

With what condition are they associated?

1) Stocker line is associated with Pterygium.

2) Fleischer line (ring).

3) Ferry line

4) Hudson-Stähli line
There are four corneal iron lines. Name them. With what condition are they associated?

1) Stocker line is associated with **Pterygium**
2) Fleischer line (ring)
3) Ferry line
4) Hudson-Stähli line

What are the four main risk factors for pterygia?

--Age
--UV exposure
--Geographic location
--Gender
There are four corneal iron lines. Name them. With what condition are they associated?

1) Stocker line
2) Fleischer line (ring)
3) Ferry line
4) Hudson-Stähli line

What are the four main risk factors for pterygia?
- Age
- UV exposure
- Geographic location
- Gender

What age group is at risk?
- Young adults, 20-30 years old
There are four corneal iron lines. Name them. With what condition are they associated?

1) Stocker line
2) Fleischer line (ring)
3) Ferry line
4) Hudson-Stähli line
There are four corneal iron lines. Name them. With what condition are they associated?

1) Stocker line
2) Fleischer line (ring)
3) Ferry line
4) Hudson-Stähli line

What are the four main risk factors for pterygia?
- Age
- UV exposure
- Geographic location
- Gender

What does this imply about vocation as a risk factor?

Q
There are four corneal iron lines. Name them. With what condition are they associated?

1) Stocker line
2) Fleischer line (ring)
3) Ferry line
4) Hudson-Stähli line

What are the four main risk factors for pterygia?

- Age
- UV exposure
- Geographic location
- Gender

What does this imply about vocation as a risk factor?

It implies (correctly) that individuals who work outdoors are at greater risk.
There are four corneal iron lines. Name them. With what condition are they associated?

1) Stocker line
2) Fleischer line
3) Ferry line
4) Hudson-Stähli line

What are the four main risk factors for pterygia?
- Age
- UV exposure
- Geographic location

What is the rule-of-thumb regarding geographic location and pterygium risk?

The closer one lives to the equator, the greater the risk.
There are four corneal iron lines. Name them. With what condition are they associated?

1) Stocker line
   - Stocker line
   - Stoker line
   - Stocker's line
   - Stoker's line

2) Fleischer line
   - Pterygium
   - Pterygium
   - Pterygium

3) Ferry line
   - Ferry line
   - Ferry's line
   - Ferry's line

4) Hudson-Stähli line
   - Hudson-Stähli line
   - Hudson-Stähli's line
   - Hudson-Stähli's line

What are the four main risk factors for pterygia?

- Age
- UV exposure
- Geographic location
- Gender

What is the rule-of-thumb regarding geographic location and pterygium risk?
The closer one lives to the equator, the greater the risk is associated with pterygium.
There are four corneal iron lines. Name them. With what condition are they associated?

1) Stocker line
2) Fleischer line
3) Ferry line
4) Hudson-Stähli line

What are the four main risk factors for pterygia?

- Age
- UV exposure
- Geographic location
- Gender

What is the rule-of-thumb regarding geographic location and pterygium risk?

The closer one lives to the equator, the greater the risk.
There are four corneal iron lines. Name them. With what condition are they associated?

1) Stocker line
2) Fleischer line (ring)
3) Ferry line
4) Hudson-Stähli line

What are the four main risk factors for pterygia?
-- Age
-- UV exposure
-- Geographic location
-- Gender

Which gender is at greater risk?

Male
There are four corneal iron lines. Name them. With what condition are they associated?

1) Stocker line
2) Fleischer line (ring)
3) Ferry line
4) Hudson-Stähli line

What are the four main risk factors for pterygia?
- Age
- UV exposure
- Geographic location
- Gender

Which gender is at greater risk?
- Male
There are four corneal iron lines. Name them. With what condition are they associated?

1) **Stocker line** is associated with...
   - Pterygium

With respect to its associated pterygium, where is the Stocker line found?

4) Hudson-Stähli line
There are four corneal iron lines. Name them. With what condition are they associated?

1) **Stocker line** is associated with...
   - Pterygium

*With respect to its associated pterygium, where is the Stocker line found?*  
Just anterior to the leading edge of the pterygium

4) Hudson-Stähli line
There are four corneal iron lines. Name them. With what condition are they associated?

1) **Stocker line** is associated with...
   - Pterygium

   *With respect to its associated pterygium, where is the Stocker line found? Just anterior to the leading edge of the pterygium*

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

4) Hudson-Stähli line
There are four corneal iron lines. Name them. With what condition are they associated?

1) **Stocker line** is associated with...
   - Pterygium

   *With respect to its associated pterygium, where is the Stocker line found?* Just anterior to the leading edge of the 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.

4) Hudson-Stähli line
There are four corneal iron lines. Name them. With what condition are they associated?

1) Stocker line
   - Pterygium

2) Fleischer line (ring) is associated with...
   - ?

3) Ferry line

4) Hudson-Stähli line
● There are four corneal iron lines. Name them. *With what condition are they associated?*

1) Stocker line  
   ● Pterygium  
2) Fleischer line (ring) is associated with...  
   ● Keratoconus  
3) Ferry line  
4) Hudson-Stähli line
In one word, what sort of condition is keratoconus (KCN)?

- Ectasia
- Noninflammatory

What does corneal topography reveal about the typical course in KCN?

- The central and/or paracentral cornea thins progressively, producing a cone-like bulge. Extreme irregular astigmatism eventually results.

During what period of life does the condition tend to progress most rapidly?

- Adolescence
There are four corneal iron lines. Name them.

1) Stocker line

2) Fleischer line (ring)

3) Ferry line

4) Hudson-Stähli line

With what condition are they associated?

1) Stocker line — Pterygium

2) Fleischer line (ring) — Keratoconus

3) Ferry line

4) Hudson-Stähli line

In one word, what sort of condition is keratoconus (KCN)?

An ectasia

The condition is... Noninflammatory

What does corneal topography reveal about the typical disease course in KCN?
The central and/or paracentral cornea thins progressively, producing a cone-like bulge. Extreme irregular astigmatism eventually results.

During what period of life does the disease tend to progress most rapidly?
Adolescence...
There are four corneal iron lines. Name them.

1) Stocker line
   - Pterygium

2) Fleischer line (ring)
   - Keratoconus

3) Ferry line

4) Hudson-Stähli line

In one word, what sort of condition is keratoconus (KCN)?
An **ectasia**

It is inflammatory, or noninflammatory?

The condition is **noninflammatory**.

What does corneal topography reveal about the typical disease course in KCN?
The central and/or paracentral cornea thins progressively, producing a cone-like bulge. Extreme irregular astigmatism eventually results.

During what period of life does the disease tend to progress most rapidly?
Adolescence
There are four corneal iron lines. Name them.

1) Stocker line
2) Fleischer line (ring)
3) Ferry line
4) Hudson-Stähli line

With what condition are they associated?

1) Stocker line
   - Pterygium
2) Fleischer line (ring)
   - Keratoconus
3) Ferry line
4) Hudson-Stähli line

In one word, what sort of condition is keratoconus (KCN)?
An **ectasia**

It is inflammatory, or noninflammatory?
Noninflammatory

What does corneal topography reveal about the typical dz course in KCN?
The central and/or paracentral cornea thins progressively, producing a cone-like bulge. Extreme irregular astigmatism eventually results.

During what period of life does the dz tend to progress most rapidly?
Adolescence
In one word, what sort of condition is keratoconus (KCN)?

An **ectasia**

*It is inflammatory, or noninflamatory?*

Noninflammatory

*What does corneal topography reveal about the typical dz course in KCN?*

The central and/or paracentral cornea thins progressively, producing a cone-like bulge. Extreme irregular astigmatism eventually results.

*During what period of life does the dz tend to progress most rapidly?*

Adolescence
In one word, what sort of condition is keratoconus (KCN)?
An **ectasia**

*It is inflammatory, or noninflammatory?*
Noninflammatory

What does corneal topography reveal about the typical dz course in KCN?
The central and/or paracentral cornea thins progressively, producing a cone-like bulge. Extreme irregular astigmatism eventually results.

1) Stocker line
2) Fleischer line (ring) **is associated with**...
   - **Keratoconus**
3) Ferry line
4) Hudson-Stähli line
There are four corneal iron lines. Name them.

1) Stocker line
2) Fleischer line (ring)
3) Ferry line
4) Hudson-Stähli line

With what condition are they associated?

1) Stocker line
   - Pterygium
2) Fleischer line (ring)
   - Keratoconus
3) Ferry line
4) Hudson-Stähli line

In one word, what sort of condition is keratoconus (KCN)?

An **ectasia**

It is inflammatory, or noninflammatory?

Noninflammatory

What does corneal topography reveal about the typical dz course in KCN?

The central and/or paracentral cornea thins progressively, producing a cone-like bulge. Extreme irregular astigmatism eventually results.

During what period of life does the dz tend to progress most rapidly?

Adolescence
Corneal Iron Lines

In one word, what sort of condition is keratoconus (KCN)?
An **ectasia**

*It is inflammatory, or noninflammatory?*
Noninflammatory

What does corneal topography reveal about the typical dz course in KCN?
The central and/or paracentral cornea thins progressively, producing a cone-like bulge. Extreme irregular astigmatism eventually results.

---

**The Answer**

1) Stocker line
   - Pterygium
2) Fleischer line (ring)
   - Keratoconus
3) Ferry line
4) Hudson-Stähli line

During what period of life does the dz tend to progress most rapidly?
Adolescence
There are four corneal iron lines. Name them.

1) Stocker line
2) Fleischer line (ring)
3) Ferry line
4) Hudson-Stähli line

With what condition are they associated?

1) Stocker line
   - Pterygium
2) Fleischer line (ring)
   - Keratoconus
3) Ferry line
4) Hudson-Stähli line

In one word, what sort of condition is keratoconus (KCN)?

An **ectasia**

It is inflammatory, or noninflammatory?

Noninflammatory

What does corneal topography reveal about the typical disease course in KCN?

The central and/or paracentral cornea thins progressively, producing a cone-like bulge. Extreme irregular astigmatism eventually results.

During what period of life does the disease tend to progress most rapidly?

Adolescence

With respect to the cone, where is the Fleischer line located?

Inferior to its base

The Fleischer line can be difficult to spot. What simple slit-lamp adjustment can help reveal it?

Switching to the cobalt-blue light is associated with...
There are four corneal iron lines. Name them.

1) Stocker line
2) Fleischer line (ring)
3) Ferry line
4) Hudson-Stähli line

With what condition are they associated?

1) Keratoconus
2) Keratoconus

In one word, what sort of condition is keratoconus (KCN)?
An ectasia

It is inflammatory, or noninflammatory?
Noninflammatory

What does corneal topography reveal about the typical dz course in KCN?
The central and/or paracentral cornea thins progressively, producing a cone-like bulge. Extreme irregular astigmatism eventually results.

During what period of life does the dz tend to progress most rapidly?
Adolescence

With respect to the cone, where is the Fleischer line located?
Inferior to its base

2) **Fleischer line** (ring) is associated with...

- Keratoconus

3) Ferry line

4) Hudson-Stähli line

The corneal iron lines are:

- Stocker line
- Fleischer line (ring)
- Ferry line
- Hudson-Stähli line
In one word, what sort of condition is keratoconus (KCN)?
An **ectasia**

*It is inflammatory, or noninflammatory?*
Noninflammatory

**Q**

The central and/or paracentral cornea thins progressively, producing a cone-like bulge. Extreme irregular astigmatism eventually results.

**Q**

During what period of life does the dz tend to progress most rapidly?
Adolescence

**Q**

With respect to the cone, where is the Fleischer line located?
Inferior to its base

*The Fleischer line can be difficult to spot. What simple slit-lamp adjustment can help reveal it?*

Switching to the **cobalt-blue light** is associated with...

2) **Fleischer line (ring)** is associated with...
   - **Keratoconus**

3) Ferry line

4) Hudson-Stähli line
There are four corneal iron lines. Name them:

1) **Stocker line**
2) **Fleischer line (ring)**
3) **Ferry line**
4) **Hudson-Stähli line**

With what condition are they associated?

1) **Stocker line** is associated with [PTERYGium](#).
2) **Fleischer line (ring)** is associated with [KERATOCONUS](#).
3) **Ferry line**
4) **Hudson-Stähli line**

A corneal iron line is [FLEISCHER line](#).

A corneal iron line is [FLEISCHER line (ring)](#).

A corneal iron line is [FLEISCHER line](#).

A corneal iron line is [FLEISCHER line (ring)](#).

A corneal iron line is [FLEISCHER line](#).
There are four corneal iron lines. Name them. With what condition are they associated?

1) Stocker line
   ● Pterygium

2) Fleischer line (ring)
   ● Keratoconus

3) Ferry line is associated with...
   ● ?

4) Hudson-Stähli line
There are four corneal iron lines. Name them. With what condition are they associated?

1) Stocker line
   - Pterygium

2) Fleischer line (ring)
   - Keratoconus

3) Ferry line is associated with...
   - Filtering bleb

4) Hudson-Stähli line
There are four corneal iron lines. Name them. With what condition are they associated?

1) Stocker line
   - Pterygium
2) Fleischer line (ring)
   - Keratoconus
3) Ferry line is associated with...
   - Filtering bleb
4) Hudson-Stähli line

With respect to the bleb, where is the Ferry line located?
● There are four corneal iron lines. Name them. 
   With what condition are they associated?

1) Stocker line
   - Pterygium
2) Fleischer line (ring)
   - Keratoconus
3) **Ferry line** is associated with...
   - Filtering bleb
4) Hudson-Stähli line

*With respect to the bleb, where is the Ferry line located? Anterior to it*
There are four corneal iron lines. Name them. With what condition are they associated?

1) Stocker line
   ● Pterygium
2) Fleischer line (ring)
   ● Keratoconus
3) Ferry line
   ● Filtering bleb
4) Hudson-Stähli line is associated with...
   ● ?
There are four corneal iron lines. Name them. With what condition are they associated?

1) Stocker line
   - Pterygium
2) Fleischer line (ring)
   - Keratoconus
3) Ferry line
   - Filtering bleb
4) Hudson-Stähli line is associated with...
   - Normal and common finding in the elderly
There are four corneal iron lines. Name them. With what condition are they associated?

1) Stocker line
   - Pterygium
2) Fleischer line (ring)
   - Keratoconus
3) Ferry line
   - Filtering bleb
4) **Hudson-Stähli line** is associated with...
   - Normal and common finding in the elderly

*Where is the Hudson-Stähli line located?*
There are four corneal iron lines. Name them. **With what condition are they associated?**

1) Stocker line
   - Pterygium
2) Fleischer line (ring)
   - Keratoconus
3) Ferry line
   - Filtering bleb
4) **Hudson-Stähli line** is associated with...
   - Normal and common finding in the elderly

**Where is the Hudson-Stähli line located?**
At the junction of the lower- and middle-thirds of the cornea
Each of the following is the name of a corneal iron line. With what condition are they associated?

1) **Stocker line**
   - Pterygium

2) **Fleischer line (ring)**
   - Keratoconus

3) **Ferry line**
   - Filtering bleb

4) **Hudson-Stähli line**
   - Normal finding in the elderly

In which corneal layer are these lines located?

**The epithelium**
Each of the following is the name of a corneal iron line. With what condition are they associated?

1) Stocker line
   - Pterygium

2) Fleischer line (ring)
   - Keratoconus

3) Ferry line
   - Filtering bleb

4) Hudson-Stähli line
   - Normal finding in the elderly

In which corneal layer are these lines located?
- The epithelium

Corneal Iron Lines
Each of the following is the name of a corneal iron line. With what condition are they associated?

1) *Stocker line*
   - Pterygium

2) *Fleischer line (ring)*
   - Keratoconus

3) *Ferry line*
   - Filtering bleb

4) *Hudson-Stähli line*
   - Normal finding in the elderly

Which slit-lamp illumination settings render iron lines most readily visible?
Each of the following is the name of a corneal iron line. With what condition are they associated?

1) Stocker line
   - Pterygium

2) Fleischer line (ring)
   - Keratoconus

3) Ferry line
   - Filtering bleb

4) Hudson-Stähli line
   - Normal finding in the elderly

Which slit-lamp illumination settings render iron lines most readily visible?

Either cobalt blue or red-free two other words

Q/A
Corneal Iron Lines

Each of the following is the name of a corneal iron line. With what condition are they associated?

1) **Stocker line**
   - Pterygium

2) **Fleischer line (ring)**
   - Keratoconus

3) **Ferry line**
   - Filtering bleb

4) **Hudson-Stähli line**
   - Normal finding in the elderly

Which slit-lamp illumination settings render iron lines most readily visible?
- Either **cobalt blue** or **red-free**
Each of the following is the name of a corneal iron line. With what condition are they associated?

1) Stocker line
   - Pterygium
2) Fleischer line (ring)
   - Keratoconus
3) Ferry line
   - Filtering bleb
4) Hudson-Stähli line
   - Normal finding in the elderly

Does fluorescein dye improve iron-line visibility?
Corneal Iron Lines

- Each of the following is the name of a corneal iron line. With what condition are they associated?

1) Stocker line
   - Pterygium

2) Fleischer line (ring)
   - Keratoconus

3) Ferry line
   - Filtering bleb

4) Hudson-Stähli line
   - Normal finding in the elderly

Does fluorescein dye improve iron-line visibility? No--just the opposite. If you’re looking for an iron line, it’s best to look before instilling fluorescein.