*Interstitial keratitis* is an inflammatory condition of the corneal stroma in the absence of primary involvement of either the corneal or endothelial layer.
Interstitial keratitis is an inflammatory condition of the corneal stroma in the absence of primary involvement of either the corneal epithelium or endothelium.
**Interstitial keratitis** is an inflammatory condition of the corneal stroma in the absence of primary involvement of either the corneal epithelium or endothelium.

What does it mean to say the corneal stroma is inflamed?

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**Interstitial keratitis** is **an inflammatory condition of the corneal stroma** in the absence of primary involvement of either the corneal epithelium or endothelium.
*Interstitial keratitis* is an inflammatory condition of the corneal stroma in the absence of primary involvement of either the corneal epithelium or endothelium.

*What does it mean to say the corneal stroma is inflamed?*
It means inflammatory cells are present in the interlamellar stroma.
**Interstitial keratitis** is an **inflammatory condition of the corneal stroma** in the absence of primary involvement of either the corneal epithelium or endothelium.

*What does it mean to say the corneal stroma is inflamed?*
It means inflammatory cells are present in the interlamellar stroma.

*So, there’s pus in the stroma?*
Interstitial keratitis is an inflammatory condition of the corneal stroma in the absence of primary involvement of either the corneal epithelium or endothelium.

What does it mean to say the corneal stroma is inflamed? It means inflammatory cells are present in the interlamellar stroma.

So, there’s pus in the stroma? No—IK is a nonsuppurative condition.
Interstitial keratitis is an inflammatory condition of the corneal stroma in the absence of primary involvement of either the corneal epithelium or endothelium.

Be sure to take note of this! This is why stromal inflammation resulting from, say, a corneal ulcer eating its way into stroma would not be classified as IK.
**Interstitial keratitis** is an inflammatory condition of the corneal stroma in the absence of primary involvement of either the corneal epithelium or endothelium.

**What are the typical symptoms of IK?**

Tearing and photophobia

**What are the typical signs of IK, ie, what does it look like at the slit lamp?**

Early IK is characterized by perilimbal injection, inflammation of the peripheral stroma, and possibly keratic precipitates. As the disease progresses, deep stromal vessels appear and make their way toward the central cornea.
**Interstitial keratitis** is an inflammatory condition of the corneal stroma in the absence of primary involvement of either the corneal epithelium or endothelium.

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Early IK is characterized by perilimbal injection, inflammation of the peripheral stroma, and possibly keratic precipitates. As the disease progresses, deep stromal vessels appear and make their way toward the central cornea.

With respect to IK, to what does the term salmon patch refer?
Interstitial keratitis is an inflammatory condition of the corneal stroma in the absence of primary involvement of either the corneal epithelium or endothelium.

What are the typical symptoms of IK?
Tearing and photophobia

What are the typical signs of IK, ie, what does it look like at the slit lamp?
Early IK is characterized by perilimbal injection, inflammation of the peripheral stroma, and possibly keratic precipitates. As the disease progresses, **deep stromal vessels appear and make their way toward the central cornea.**

With respect to IK, to what does the term **salmon patch** refer?
If the stromal vascularization is particularly dense and the blood flow is exuberant, the resulting color of the cornea has been likened to that of salmon flesh.
Salmon patch in IK
Interstitial keratitis is an inflammatory condition of the corneal stroma in the absence of primary involvement of either the corneal epithelium or endothelium.

IK represents a Type hypersensitivity reaction to antigens within the two words.
**Interstitial keratitis** is an inflammatory condition of the corneal stroma in the absence of primary involvement of either the corneal epithelium or endothelium.

IK represents a Type IV hypersensitivity reaction to antigens within the corneal stroma.
Interstitial keratitis is an inflammatory condition of the corneal stroma in the absence of primary involvement of either the corneal epithelium or endothelium. IK represents a Type IV hypersensitivity reaction to antigens within the corneal stroma.

Speaking of hypersensitivity reactions…
Speaking of hypersensitivity reactions…

How many types of ocular-surface hypersensitivity reactions are there?
Speaking of hypersensitivity reactions…

How many types of ocular-surface hypersensitivity reactions are there?
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<tr>
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<th>Type IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type I reactions involve… [One word that captures the nature of this rxn]</td>
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Speaking of hypersensitivity reactions…
How many types of ocular-surface hypersensitivity reactions are there?
Anaphylaxis

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Speaking of hypersensitivity reactions…
How many types of ocular-surface hypersensitivity reactions are there?
Anaphylaxis

**Type I**

**Type II**

**Type III**

**Type IV**

**Type I reactions involve**... *Anaphylaxis*

**Type II reactions involve**... [Two words capturing this rxn]

**Type III reactions involve**...

**Type IV reactions involve**...
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*Type I reactions involve...* Anaphylaxis  
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**Type I reactions involve...** Anaphylaxis  
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‘Cell-mediated reaction’…Which sort of immune cell is doing the mediating?
Type I reactions involve Anaphylaxis
Type II reactions involve Cytotoxic antibodies
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‘Cell-mediated reaction’…Which sort of immune cell is doing the mediating? T-helper cells
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‘Cell-mediated reaction’…Which sort of immune cell is doing the mediating?
T-helper cells

In what way are T-helper cells mediating the reaction?
**Type I reactions involve…** Anaphylaxis

**Type II reactions involve…** Cytotoxic antibodies

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**Type IV reactions involve…** Cell-mediated reactions

‘**Cell-mediated reaction**’…*Which sort of immune cell is doing the mediating?*

T-helper cells

*In what way are T-helper cells mediating the reaction?*

In Type IV reactions, T-helpers interact with antigens, thereby becoming activated. Once activated, the T-helpers release chemotactic factors that recruit and activate macrophages.
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That’s a convoluted process. How long does it take to become clinically apparent?
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24-72 hours, which is why this reaction is often referred to as delayed hypersensitivity.
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Note that if you remember Type IV as ‘delayed hypersensitivity’...
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the four forms can be remembered with the mnemonic ACID

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For more on hypersensitivity reactions of the ocular surface, see slide-set K21
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*Which one is described (by at least one BCSC book) as the “classic cause” of IK?*
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Which is the most common cause of IK?

HSV (interesting that the most common cause is not considered the ‘classic’ cause!)
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Let’s review Chlamydial dz. Chlamydia causes three conditions—what are they?

--?
--?
--?

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--C trachomatis
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--Lymphogranuloma venereum

--Cogan syndrome
--Measles virus

**C trachomatis**

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**Is trachoma a serious ocular condition?**

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**Is trachoma a serious ocular condition?**
Mos def—it is a blinding condition

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Is trachoma a serious ocular condition? Mos def—it is a blinding condition

Where does it rank in terms of infectious causes of blindness?

Mos def—it is a blinding condition

It is #1 cause worldwide
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Is adult inclusion conjunctivitis a serious ocular condition?

Nah—it is mild and transient

Does this bug have serious effects elsewhere?

Indeed it does—it is the cause of the classic chlamydial urethritis/cervicitis, ie, well-known STD manifestation...
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*Is adult inclusion conjunctivitis a serious ocular condition?*  
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How does a sexually-transmitted dz cause conjunctivitis?
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Is adult inclusion conjunctivitis a serious ocular condition? Nah—it is mild and transient

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How does a sexually-transmitted dz cause conjunctivitis?
Um, ask your parents

For completeness’s sake: The Cornea book lists sexually-transmitted causes of conjunctivitis.
The BCSC addresses **IK** four times in three volumes (twice in the *Cornea* book). The combined differential is listed below. It long. Let’s work through it...

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For completeness’ sake: The *Cornea* book lists **five** sexually-transmitted causes of conjunctivitis.

---

*We'll address what’s being asterisked* shortly

*Yes, asterisked is a word*
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For completeness’ sake: The Cornea book lists five sexually-transmitted causes of conjunctivitis. What are the other four? (Two are on the IK list.)

- Chlamydia
- ?
- ?
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- ?

*STD form
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--Chlamydia
--Neisseria gonorrhoeae
--Syphilis
--HSV
--HIV

*Must have a genital route of transmission.
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Now, the asterisk: The book lists a sixth cause—but acknowledges that it is vastly rarer than the others. Thus, it was left off the list here.

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Um, ask your parent!

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Surely lymphogranuloma venereum is an STD as well? I mean, it has venere- in its name.
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Surely lymphogranuloma venereum is an STD as well? I mean, it has venere- in its name. It is an STD too, but it’s not ‘the’ chlamydial STD.
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Surely lymphogranuloma venereum is an STD as well? I mean, it has venere- in its name. It is an STD too, but it’s not ‘the’ chlamydial STD (and it doesn’t cause conjunctivitis, if you were wondering why it wasn’t on the just-discussed list)
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Its **serotype**

Which chlamydia serotypes produce each condition?

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<table>
<thead>
<tr>
<th>Disease</th>
</tr>
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<tbody>
<tr>
<td>Syphilis</td>
</tr>
<tr>
<td>HSV</td>
</tr>
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<tr>
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</tr>
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Which chlamydia serotypes produce each condition?

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---

*C trachomatis*
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Got a mnemonic for remembering these serotypes?

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IK? IDK IK! OMG!
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Got a mnemonic for remembering these serotypes?
Try these:
- Trachoma is as simple as ABC

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-- Adult inclusion conjunctivitis is ‘the’ sexually-transmitted form of Chlamydia. Can you think of a sex-related word that starts with a D and ends with a K?

-- As for the ‘L’ serotypes causing lymphogranuloma, I assume you got that one.

IK? IDK IK! OMG!
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-- Trachoma is as simple as ABC
--Adult inclusion conjunctivitis is ‘the’ sexually-transmitted form of Chlamydia.

Can you think of a sex-related word that starts with a D and ends with a K?

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The BCSC addresses C trachomatis four times in three volumes (twice in the Cornea book). The combined differential is listed below. It long. Let’s work through it...

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Let’s review Chlamydial dz. Chlamydia causes three conditions—what are they? What property of a Chlamydial bug determines which condition it will cause? Its serotype?

Which chlamydia serotypes produce each condition?

- Trachoma: Serotypes A, B, C
- Adult inclusion conjunctivitis: Serotypes D-K
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Got a mnemonic for remembering these serotypes? Try these:

- Trachoma is as simple as ABC
- Adult inclusion conjunctivitis is ‘the’ sexually-transmitted form of Chlamydia. Can you think of a sex-related word that starts with a D and ends with a K?

As for the ‘L’ serotypes causing Lymphogranuloma, I assume you got that one.

--Cogan syndrome
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Finally: Take note that it is the lymphogranuloma venereum serotypes which are associated with IK!
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--**HSV**

--Lyme

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--TB

--Leprosy/Hansen’s dz

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*Because HSV is the most common cause of IK…*

*(No question—proceed when ready)*
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Because HSV is the most common cause of IK… and syphilis is its ‘classic’ cause…

(No question—proceed when ready)
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Because HSV is the most common cause of IK… and syphilis is its ‘classic’ cause… it should come as no surprise that the BCSC addresses them in depth—and thus, so shall we.

(No question—proceed when ready)
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Because HSV is the most common cause of IK… and syphilis is its ‘classic’ cause… it should come as no surprise that the BCSC addresses them in depth—and thus, so shall we. Of the remaining causes of IK, only one is covered in detail by any BCSC volume—and thus by this slide-set. Which one?
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--Atopic keratitis (ie, AKC)
--Vernal keratitis (ie, VKC)

Because HSV is the most common cause of IK… and syphilis is its ‘classic’ cause… it should come as no surprise that the BCSC addresses them in depth—and thus, so shall we. Of the remaining causes of IK, only one is covered in detail by any BCSC volume—and thus by this slide-set. Which one?

Cogan syndrome
The BCSC addresses IK four times in three volumes (twice in the Cornea book). The combined differential is listed below. It long. Let’s work through it...

--- Syphilis
--- HSV
--- Lyme
--- EBV
--- VZV
--- TB
--- Leprosy/Hansen’s dz
--- Cogan syndrome
--- Measles virus
--- C trachomatis serotypes L1, L2, L3
--- Leishmania spp
--- Onchocerca volvulus
--- Acanthamoeba
--- Mumps
--- Sarcoid
--- Atopic keratitis (ie, AKC)
--- Vernal keratitis (ie, VKC)

Because HSV is the most common cause of IK… and syphilis is its ‘classic’ cause… it should come as no surprise that the BCSC addresses them in depth—and thus, so shall we. Of the remaining causes of IK, only one is covered in detail by any BCSC volume—and thus by this slide-set. Which one?

Cogan syndrome

Let’s start with luetic (ie, syphilitic) IK…
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease  T
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease **T**
- Symptoms include tearing and photophobia
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease  \textbf{T}
- Symptoms include tearing and photophobia  \textbf{T}
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease  \( \text{T} \)
- Symptoms include tearing and photophobia  \( \text{T} \)
- Usual age of presentation is late teens to early 20s
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease **T**
- Symptoms include tearing and photophobia **T**
- Usual age of presentation is late teens to early 20s **F**
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease  **T**
- Symptoms include tearing and photophobia  **T**
- Usual age of presentation is late teens to early 20s  **F**
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease \( \checkmark \)
- Symptoms include tearing and photophobia \( \checkmark \)
- Usual age of presentation is late teens to early 20s \( \times \)

**Rule of thumb regarding congenital syphilis manifestations and age:**

-- Manifestations presenting within the first two years of life are secondary to... (not shown)
-- Manifestations presenting later in life are secondary to... (not shown)
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease  **T**
- Symptoms include tearing and photophobia  **T**
- Usual age of presentation is late teens to early 20s  **F**

**Rule of thumb regarding congenital syphilis manifestations and age:**
--Manifestations presenting within the first two years of life are secondary to...active infection
--Manifestations presenting later in life are secondary to...an immune-mediated process
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease: **T**
- Symptoms include tearing and photophobia: **T**
- Usual age of presentation is nine years: **F**
- Treatment is topical steroids and cycloplegia: **F**
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease: **T**
- Symptoms include tearing and photophobia: **T**
- Usual age of presentation is late teens to early 20s: **F**
- Treatment is topical steroids and cycloplegia: **T**
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease  ✅
- Symptoms include tearing and photophobia  ✅
- Usual age of presentation is late teens to early 20s  ✗
- Treatment is topical steroids and cycloplegia  ✅
- Most patients have bilateral disease
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease  **T**
- Symptoms include tearing and photophobia  **T**
- Usual age of presentation is late teens to early 20s  **F**
- Treatment is topical steroids and cycloplegia  **T**
- Most patients have bilateral disease  **T**
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease  **T**
- Symptoms include tearing and photophobia  **T**
- Usual age of presentation is late teens to early 20s  **F**
- Treatment is topical steroids and cycloplegia  **T**
- **Most patients have bilateral disease**  **T**

**Re bilateral IK, do both eyes always present simultaneously?**
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease  **T**
- Symptoms include tearing and photophobia  **T**
- Usual age of presentation is late teens to early 20s  **F**
- Treatment is topical steroids and cycloplegia  **T**
- Most patients have bilateral disease  **T**

Re bilateral IK, do both eyes always present simultaneously?  **No**
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease  **T**
- Symptoms include tearing and photophobia  **T**
- Usual age of presentation is late teens to early 20s  **F**
- Treatment is topical steroids and cycloplegia  **T**
- Most patients have bilateral disease  **T**

*Re bilateral IK, do both eyes always present simultaneously?*
No

*Is the extent of involvement always equal between the eyes?*
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease  **T**
- Symptoms include tearing and photophobia  **T**
- Usual age of presentation is late teens to early 20s  **F**
- Treatment is topical steroids and cycloplegia  **T**
- Most patients have bilateral disease  **T**

> **Re bilateral IK, do both eyes always present simultaneously?**
> No

> **Is the extent of involvement always equal between the eyes?**
> No, involvement can be asymmetric
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease **T**
- Symptoms include tearing and photophobia **T**
- Usual age of presentation is late teens to early 20s **F**
- Treatment is topical steroids and cycloplegia **T**
- Most patients have bilateral disease **T**
- About 50% of congenital syphilis cases manifest IK
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease **T**
- Symptoms include tearing and photophobia **T**
- Usual age of presentation is late teens to early 20s **F**
- Treatment is topical steroids and cycloplegia **T**
- Most patients have bilateral disease **T**
- About 50% of congenital syphilis cases manifest IK **F**
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease **T**
- Symptoms include tearing and photophobia **T**
- Usual age of presentation is nine years **F**
- Treatment is topical steroids and cycloplegia **T**
- Most patients have bilateral disease **T**
- About 10% of congenital syphilis cases manifest IK **F**
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease — True
- Symptoms include tearing and photophobia — True
- Usual age of presentation is late teens to early 20s — False
- Treatment is topical steroids and cycloplegia — True
- Most patients have bilateral disease — True
- About 50% of congenital syphilis cases manifest IK — False

What is the natural course of syphilitic IK if it goes untreated?

- It tends to burn itself out in a matter of weeks to months

Irrespective of whether it was treated, what are the common corneal stigmata of resolved IK that may be seen at the slit lamp?

- Formerly-perfused, now-empty stromal blood vessels (aka ghost vessels)
- Corneal scarring may produce visually significant haze and/or astigmatism
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease  **T**
- Symptoms include tearing and photophobia  **T**
- Usual age of presentation is late teens to early 20s  **F**
- Treatment is topical steroids and cycloplegia  **T**
- Most patients have bilateral disease  **T**
- About 50% of congenital syphilis cases manifest IK  **F**

What is the natural course of syphilitic IK if it goes untreated?

- It tends to burn itself out in a matter of weeks to months

About 50% of congenital syphilis cases manifest IK  **F**
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease  
  - T
- Symptoms include tearing and photophobia  
  - T
- Usual age of presentation is late teens to early 20s  
  - F
- Treatment is topical steroids and cycloplegia  
  - T
- Most patients have bilateral disease  
  - T
- About 50% of congenital syphilis cases manifest IK  
  - T

What is the natural course of syphilitic IK if it goes untreated?
- It tends to burn itself out in a matter of weeks to months

Irrespective of whether it was treated, what are the common corneal stigmata of resolved IK that may be seen at the slit lamp?

About 50% of congenital syphilis cases manifest IK  
- F
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease **T**
- Symptoms include tearing and photophobia **T**
- Usual age of presentation is late teens to early 20s **F**
- Treatment is topical steroids and cycloplegia **T**
- Most patients have bilateral disease **T**
- About 50% of congenital syphilis cases manifest IK **F**

**What is the natural course of syphilitic IK if it goes untreated?**
It tends to burn itself out in a matter of weeks to months

**Irrespective of whether it was treated, what are the common corneal stigmata of resolved IK that may be seen at the slit lamp?**
- Formerly-perfused, now-empty stromal blood vessels (aka *ghost vessels*)
- Corneal scarring may produce visually significant haze and/or astigmatism

About 50% of congenital syphilis cases manifest IK **F**
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease  T
- Symptoms include tearing and photophobia  T
- Usual age of presentation is late teens to early 20s  F
- Treatment is topical steroids and cycloplegia  T
- Most patients have bilateral disease  T
- About 50% of congenital syphilis cases manifest IK  F

What is the natural course of syphilitic IK if it goes untreated?
It tends to burn itself out in a matter of weeks to months

Irrespective of whether it was treated, what are the common corneal stigmata of resolved IK that may be seen at the slit lamp?
--Formerly-perfused, now-empty stromal blood vessels (aka *ghost vessels*)

About 50% of congenital syphilis cases manifest IK  F
Ghost vessels

Congenital syphilis: Interstitial keratitis
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease \( T \)
- Symptoms include tearing and photophobia \( T \)
- Usual age of presentation is late teens to early 20s \( F \)
- Treatment is topical steroids and cycloplegia \( T \)
- Most patients have bilateral disease \( T \)
- About 50% of congenital syphilis cases manifest IK \( F \)

What is the natural course of syphilitic IK if it goes untreated?

- It tends to burn itself out in a matter of weeks to months

Irrespective of whether it was treated, what are the common corneal stigmata of resolved IK that may be seen at the slit lamp?

- Formerly-perfused, now-empty stromal blood vessels (aka **ghost vessels**)
- Corneal scarring may produce visually significant one word

About 50% of congenital syphilis cases manifest IK \( F \)
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease  ✔
- Symptoms include tearing and photophobia  ✔
- Usual age of presentation is late teens to early 20s  ❌
- Treatment is topical steroids and cycloplegia  ✔
- Most patients have bilateral disease  ✔
- About 50% of congenital syphilis cases manifest IK  ✔

What is the natural course of syphilitic IK if it goes untreated?
It tends to burn itself out in a matter of weeks to months

Irrespective of whether it was treated, what are the common corneal stigmata of resolved IK that may be seen at the slit lamp?
- Formerly-perfused, now-empty stromal blood vessels (aka ghost vessels)
- Corneal scarring may produce visually significant haze and/or astigmatism

About 50% of congenital syphilis cases manifest IK  ✔
Corneal scarring/haze

Congenital syphilis: Interstitial keratitis
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?
- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- **Circumoral scars**
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

What is the formal term for these circumoral scars?
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- **Circumoral scars**
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

*What is the formal term for these circumoral scars?* ‘Rhagades’
Congenital syphilis: Rhagades
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

What is the classic description of Hutchinson teeth?
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- **Hutchinson teeth**
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

*What is the classic description of Hutchinson teeth? ‘Peg-shaped’*
Congenital syphilis: Teephus
abnormal teeth...

Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

Name two other congenital eye syndromes that are associated with abnormal dentition:
--
--

- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

Name two other congenital eye syndromes that are associated with abnormal dentition:

- Axenfeld-Rieger syndrome
- Incontinentia pigmenti
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

Name two other congenital eye syndromes that are associated with abnormal dentition:
- Axenfeld-Rieger syndrome
- Incontinentia pigmenti

In three words, what sort of condition is A-R?
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

Name two other congenital eye syndromes that are associated with abnormal dentition:
- Axenfeld-Rieger syndrome
- Incontinentia pigmenti

In three words, what sort of condition is A-R? An anterior-segment dysgenesis.
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

Name two other congenital eye syndromes that are associated with abnormal dentition:
- Axenfeld-Rieger syndrome
- Incontinentia pigmenti

In three words, what sort of condition is A-R?
An anterior-segment dysgenesis

If limited to one word, what sort of condition is A-R?

abnormal teeth...
abnormal teeth...

Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Cognitive impairment
- CN8 deafness

Name two other congenital eye syndromes that are associated with abnormal dentition:

-- Axenfeld-Rieger syndrome
-- Incontinentia pigmenti

In three words, what sort of condition is A-R?
An anterior-segment dysgenesis

If limited to one word, what sort of condition is A-R?
A neurocristopathy
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

Name two other congenital eye syndromes that are associated with abnormal dentition:
-- Axenfeld-Rieger syndrome
-- Incontinentia pigmenti

In three words, what sort of condition is A-R?
An anterior-segment dysgenesis

If limited to one word, what sort of condition is A-R?
neurocristopathy

A ‘neurocristopathy’? What does that mean?

abnormal teeth...
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

Name two other congenital eye syndromes that are associated with abnormal dentition:
-- Axenfeld-Rieger syndrome
-- Incontinentia pigmenti

In three words, what sort of condition is A-R?
An anterior-segment dysgenesis

If limited to one word, what sort of condition is A-R?
Neurocristopathy

A ‘neurocristopathy’? What does that mean?
It means ‘a disorder stemming from abnormal neural-crest cell migration and/or differentiation’
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

Name two other congenital eye syndromes that are associated with abnormal dentition:
- Axenfeld-Rieger syndrome
- Incontinentia pigmenti

In one word, what sort of condition is IP?
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

Name two other congenital eye syndromes that are associated with abnormal dentition:
- Axenfeld-Rieger syndrome
- Incontinentia pigmenti

In one word, what sort of condition is IP? A phakomatosis
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

Name two other congenital eye syndromes that are associated with abnormal dentition:
- Axenfeld-Rieger syndrome
- Incontinentia pigmenti

In one word, what sort of condition is IP? Phakomatosis

Briefly, what is a phakomatosis?
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

Name two other congenital eye syndromes that are associated with abnormal dentition:

- Axenfeld-Rieger syndrome
- Incontinentia pigmenti

In one word, what sort of condition is IP? A phakomatosis

Briefly, what is a phakomatosis?
A congenital condition involving hamartomatous lesions of multiple organ systems, usually including the CNS, eyes and skin.
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

Name two other congenital eye syndromes that are associated with abnormal dentition:

- Axenfeld-Rieger syndrome
- Incontinentia pigmenti

In one word, what sort of condition is IP?

Phakomatosis

Briefly, what is a phakomatosis?

A congenital condition involving hamartomatous lesions of multiple organ systems, usually including the CNS, eyes and skin.

By what more-descriptive name does the BCSC Peds book refer to them?

Neuro-oculocutaneous syndromes
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

Name two other congenital eye syndromes that are associated with abnormal dentition:
- Axenfeld-Rieger syndrome
- Incontinentia pigmenti

In one word, what sort of condition is IP?

A phakomatosis

Briefly, what is a phakomatosis?
A congenital condition involving hamartomatous lesions of multiple organ systems, usually including the CNS, eyes and skin

By what more-descriptive name does the BCSC Peds book refer to them?
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

Name two other congenital eye syndromes that are associated with abnormal dentition:
- Axenfeld-Rieger syndrome
- Incontinentia pigmenti

In one word, what sort of condition is IP?

A phakomatosis

Briefly, what is a phakomatosis?
A congenital condition involving hamartomatous lesions of multiple organ systems, usually including the CNS, eyes, and skin.

By what more-descriptive name does the BCSC Peds book refer to them?
As neuro-
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

Name two other congenital eye syndromes that are associated with abnormal dentition:

- Axenfeld-Rieger syndrome
- Incontinentia pigmenti

In one word, what sort of condition is IP? **Phakomatosis**

Briefly, *what is a phakomatosis?*

A congenital condition involving hamartomatous lesions of multiple organ systems, usually including the CNS, eyes, and skin.

By what more-descriptive name does the BCSC Peds book refer to them? **Neuro-oculo**
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

Name two other congenital eye syndromes that are associated with abnormal dentition:
- Axenfeld-Rieger syndrome
- Incontinentia pigmenti

In one word, what sort of condition is IP?

Incontinentia pigmenti (IP)

Briefly, what is a phakomatosis?

A congenital condition involving hamartomatous lesions of multiple organ systems, usually including the CNS, eyes, and skin.

By what more-descriptive name does the BCSC Peds book refer to them?

As neuro-oculocutaneous syndromes
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- **Saddle nose**

If a pt with it had peripheral ulcerative keratitis (PUK) rather than IK, what two diagnoses should you consider?
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- **Saddle nose**

Speaking of saddle-nose deformity... If a pt with it had peripheral ulcerative keratitis (PUK) rather than IK, what two diagnoses should you consider? Relapsing polychondritis (RP), and granulomatosis with polyangiitis (formerly known as two words).
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose

Speaking of saddle-nose deformity…If a pt with it had peripheral ulcerative keratitis (PUK) rather than IK, what two diagnoses should you consider?
Relapsing polychondritis (RP), and granulomatosis with polyangiitis (formerly known as Wegener’s granulomatosis)
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?
- Circumoral scars
- Hutchinson teeth
- **Saddle nose**

Speaking of saddle-nose deformity... If a pt with it had peripheral ulcerative keratitis (PUK) rather than IK, what two diagnoses should you consider? Relapsing polychondritis (RP), and **granulomatosis with polyangiitis** (formerly known as Wegener’s granulomatosis).

Why formerly? Why is the term Wegener’s no longer preferred?
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose

Speaking of saddle-nose deformity... If a pt with it had peripheral ulcerative keratitis (PUK) rather than IK, what two diagnoses should you consider? Relapsing polychondritis (RP), and granulomatosis with polyangiitis (formerly known as Wegener’s granulomatosis).

Why formerly? Why is the term Wegener’s no longer preferred? Because Dr Wegener was a Nazi.
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose

Speaking of saddle-nose deformity…If a pt with it had peripheral ulcerative keratitis (PUK) rather than IK, what two diagnoses should you consider?

- Relapsing polychondritis (RP), and granulomatosis with polyangiitis (formerly known as Wegener’s granulomatosis)

With respect to a saddle-nose pt with PUK, what would push you toward a dx of:

--RP?
--Granulomatosis with polyangiitis?
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- **Saddle nose**

**Speaking of saddle-nose deformity**…If a pt with it had peripheral ulcerative keratitis (PUK) rather than IK, what two diagnoses should you consider?

**Relapsing polychondritis** (RP), and **granulomatosis with polyangiitis** (formerly known as Wegener’s granulomatosis)

With respect to a saddle-nose pt with PUK, what would push you toward a dx of:

--**RP**? The presence of ear-cartilage inflammation and/or deformity

--**Granulomatosis with polyangiitis**?
Auricular damage in RP

Acute inflammation

Post-inflammation deformity
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- **Saddle nose**

Speaking of saddle-nose deformity…If a pt with it had peripheral ulcerative keratitis (PUK) rather than IK, what two diagnoses should you consider?

**Relapsing polychondritis** (RP), and **granulomatosis with polyangiitis** (formerly known as Wegener’s granulomatosis)

*With respect to a saddle-nose pt with PUK, what would push you toward a dx of:*

--RP? The presence of ear-cartilage inflammation and/or deformity

--Granulomatosis with polyangiitis?
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- **Saddle nose**

Speaking of saddle-nose deformity…If a pt with it had peripheral ulcerative keratitis (PUK) rather than IK, what two diagnoses should you consider? **Relapsing polychondritis** (RP), and **granulomatosis with polyangiitis** (formerly known as Wegener’s granulomatosis).

With respect to a saddle-nose pt with PUK, what would push you toward a dx of:

--**RP**? The presence of ear-cartilage inflammation and/or deformity

--**Granulomatosis with polyangiitis**? The presence of chronic sinusitis
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- **Saddle nose**

Speaking of saddle-nose deformity... If a pt with it had peripheral ulcerative keratitis (PUK) rather than IK, what two diagnoses should you consider?

**Relapsing polychondritis** (RP), and **granulomatosis with polyangiitis** (formerly known as Wegener’s granulomatosis)

With respect to a saddle-nose pt with PUK, what would push you toward a dx of:

--**RP**? The presence of ear-cartilage inflammation and/or deformity
--**Granulomatosis with polyangiitis**? The presence of chronic sinusitis (especially if the nasal discharge is **bloody**)

Saddle-nose deformity
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- **Saddle nose**

Speaking of saddle-nose deformity…If a pt with it had peripheral ulcerative keratitis (PUK) rather than IK, what two diagnoses should you consider?

**Relapsing polychondritis** (RP), and **granulomatosis with polyangiitis** (formerly known as Wegener’s granulomatosis)

With respect to a saddle-nose pt with PUK, what would push you toward a dx of:

--**RP**? The presence of ear-cartilage inflammation and/or deformity

--**Granulomatosis with polyangiitis**? The presence of chronic sinusitis (especially if the nasal discharge is **bloody**)

Saddle-nose deformity
Speaking of congenital syphilis: What are the classic signs (other than IK, duh?)
- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

In the present context, to what does the term Hutchinson’s triad refer?
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

In the present context, to what does the term Hutchinson’s triad refer? To the three stigmata of congenital syphilis that are especially common.
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

Which three comprise Hutchinson’s triad?

In the present context, to what does the term Hutchinson’s triad refer? To the three stigmata of congenital syphilis that are especially common.
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- **Hutchinson teeth**
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

**Which three comprise Hutchinson’s triad?**
- Interstitial keratitis
- Deafness
- Hutchinson teeth

_In the present context, to what does the term Hutchinson’s triad refer? To the three stigmata of congenital syphilis that are especially common._
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

What is the classic retinal finding in congenital lues?
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

What is the classic retinal finding in congenital lues?
Salt-and-pepper retinitis
Congenital syphilis: Salt-and-pepper retinitis
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

Next we will turn our attention to HSV
You should think of anterior HSV eye dz as having two very broad forms. What are they?
1) Primary ocular disease

You should think of anterior HSV eye disease as having two very broad forms. What are they?

2) Recurrent ocular disease
1) Primary ocular disease

2) Recurrent ocular disease

*Does 'recurrence' mean the pt gets re-infected?*
1) Primary ocular disease

2) Recurrent ocular disease

Does ‘recurrence’ mean the pt gets re-infected?
No! Remember, herpes virus infection is never cleared--rather, it becomes latent within the host. Thus, recurrence means the virus is reactivated, not re-acquired.
1) Primary ocular disease

2) Recurrent ocular disease

*Does ‘recurrence’ mean the pt gets re-infected?*

No! Remember, herpes virus infection is never cleared--rather, it becomes latent within the host. Thus, recurrence means the virus is reactivated, not re-acquired.

*Where in the body do herpesviruses establish their latency?*
1) Primary ocular disease

2) Recurrent ocular disease

Does ‘recurrence’ mean the pt gets re-infected?
No! Remember, herpes virus infection is never cleared--rather, it becomes latent within the host. Thus, recurrence means the virus is reactivated, not re-acquired.

Where in the body do herpesviruses establish their latency?
Different members of the herpesvirus family take up residence in different cell types. HSV-1 and HSV-2 hole up in sensory neural ganglia.
1) Primary ocular disease

2) Recurrent ocular disease

Does ‘recurrence’ mean the pt gets re-infected?
No! Remember, herpes virus infection is never cleared--rather, it becomes latent within the host. Thus, recurrence means the virus is reactivated, not re-acquired.

Where in the body do herpesviruses establish their latency?
Different members of the herpesvirus family take up residence in different cell types. HSV-1 and HSV-2 hole up in sensory neural ganglia.

Which sensory ganglion harbors the virions responsible for recurrent ocular dz?
1) Primary ocular disease

2) Recurrent ocular disease

Does ‘recurrence’ mean the pt gets re-infected?
No! Remember, herpes virus infection is never cleared--rather, it becomes latent within the host. Thus, recurrence means the virus is reactivated, not re-acquired.

Where in the body do herpesviruses establish their latency?
Different members of the herpesvirus family take up residence in different cell types. HSV-1 and HSV-2 hole up in sensory neural ganglia.

Which sensory ganglion harbors the virions responsible for recurrent ocular dz?
The trigeminal (CN5; ‘stellate’) ganglion
1) Primary ocular disease
   --Usually a *unilateral* blepharoconjunctivitis

2) Recurrent ocular disease
1) Primary ocular disease
--Usually a *unilateral* blepharoconjunctivitis

2) Recurrent ocular disease
1) Primary ocular disease
--Usually a *unilateral* blepharoconjunctivitis
--Presents with lid margin vesicles/ulcers and bulbar

2) Recurrent ocular disease
1) Primary ocular disease
--Usually a *unilateral* blepharoconjunctivitis
  --Presents with lid margin *vesicles/ulcers* and bulbar *conj ulcers*

2) Recurrent ocular disease
HSV blepharoconjunctivitis
1) Primary ocular disease
--Usually a unilateral blepharoconjunctivitis
--Presents with lid margin vesicles/ulcers and bulbar conj ulcers

2) Recurrent ocular disease
   a) ?
   b) ?
   c) ?
   d) ?

Four distinct ocular manifestations (think broadly and anatomically)
1) Primary ocular disease
--Usually a unilateral blepharoconjunctivitis
   --Presents with lid margin vesicles/ulcers and bulbar conj ulcers

2) Recurrent ocular disease
a) Blepharoconjunctivitis
b) Keratitis
   Four distinct ocular manifestations
      (think broadly and anatomically)

c) Iridocyclitis

d) Trabeculitis
1) Primary ocular disease
--Usually a *unilateral* blepharoconjunctivitis
  --Presents with lid margin vesicles/ulcers and bulbar conj ulcers

2) Recurrent ocular disease
a) Blepharoconjunctivitis
b) Keratitis
   --?
   --?
   --?
   Three specific and distinct keratitis subtypes
   
   c) Iridocyclitis

d) Trabeculitis
1) Primary ocular disease
   --Usually a *unilateral* blepharoconjunctivitis
     --Presents with lid margin vesicles/ulcers and bulbar conj ulcers

2) Recurrent ocular disease
   a) Blepharoconjunctivitis
   b) Keratitis
      --Epithelial
      --Stromal
      --Endotheliitis
   c) Iridocyclitis
   d) Trabeculitis

Three specific and distinct keratitis subtypes

IK? IDK IK! OMG!
1) Primary ocular disease
--Usually a *unilateral* blepharoconjunctivitis
   --Presents with lid margin vesicles/ulcers and bulbar conj ulcers

2) Recurrent ocular disease
a) Blepharoconjunctivitis
b) Keratitis
   --Epithelial: c/o three words. Classic sign:
   --Stromal
   --Endotheliitis
c) Iridocyclitis
d) Trabeculitis
1) Primary ocular disease
--Usually a *unilateral* blepharoconjunctivitis
  --Presents with lid margin *vesicles/ulcers* and bulbar *conj ulcers*

2) Recurrent ocular disease
a) *Blepharoconjunctivitis*
b) *Keratitis*
  --Epithelial: *c/o* foreign body sensation. Classic sign: *Dendrites*
  --Stromal
  --Endotheliitis
c) *Iridocyclitis*
d) *Trabeculitis*
HSV epithelial keratitis
1) Primary ocular disease
--Usually a unilateral **blepharoconjunctivitis**
   --Presents with lid margin vesicles/ulcers and bulbar conj ulcers

2) Recurrent ocular disease
a) **Blepharoconjunctivitis**
b) **Keratitis**
   --Epithelial: c/o foreign body sensation. Classic sign: **Dendrites**
   --Stromal

   --**Endotheliitis** (aka two words): Presents as ___-shaped edematous area with ___

c) **Iridocyclitis**
d) **Trabeculitis**
1) Primary ocular disease
--Usually a unilateral blepharoconjunctivitis
   --Presents with lid margin vesicles/ulcers and bulbar conj ulcers

2) Recurrent ocular disease
   a) Blepharoconjunctivitis
   b) Keratitis
      --Epithelial: c/o foreign body sensation. Classic sign: Dendrites
      --Stromal

      --Endotheliitis (aka disciform keratitis): Presents as disc-shaped edematous area with KP
   c) Iridocyclitis
   d) Trabeculitis
HSV endotheliitis/disciform keratitis
1) Primary ocular disease
   --Usually a unilateral blepharoconjunctivitis
   --Presents with lid margin vesicles/ulcers and bulbar conj ulcers

2) Recurrent ocular disease
   a) Blepharoconjunctivitis
   b) Keratitis
      --Epithelial: c/o foreign body sensation. Classic sign: Dendrites
      --Stromal
        --?
        --?
        \{ Two subtypes of stromal keratitis \}
      --Endotheliitis (aka disciform keratitis): Presents as disc-shaped edematous area with KP
   c) Iridocyclitis
   d) Trabeculitis
1) Primary ocular disease
--Usually a unilateral blepharoconjunctivitis
  --Presents with lid margin vesicles/ulcers and bulbar conj ulcers

2) Recurrent ocular disease
a) Blepharoconjunctivitis
b) Keratitis
  --Epithelial: c/o foreign body sensation. Classic sign: Dendrites
  --Stromal
    --Necrotizing
    --Interstitial
      Two subtypes of stromal keratitis
  --Endotheliitis (aka disciform keratitis): Presents as disc-shaped edematous area with KP
  c) Iridocyclitis
d) Trabeculitis
1) Primary ocular disease
   --Usually a *unilateral* blepharoconjunctivitis
     --Presents with lid margin vesicles/ulcers and bulbar conj ulcers

2) Recurrent ocular disease
   a) *Blepharoconjunctivitis*
   b) *Keratitis*
      --*Epithelial*: c/o foreign body sensation. Classic sign: Dendrites
      --*Stromal*
         --*Necrotizing*: Looks like an
      --*Interstitial*
      --*Endotheliitis* (aka *disciform keratitis*): Presents as disc-shaped edematous area with KP
   c) *Iridocyclitis*

   d) *Trabeculitis*
1) Primary ocular disease
--Usually a unilateral blepharoconjunctivitis
  --Presents with lid margin vesicles/ulcers and bulbar conj ulcers

2) Recurrent ocular disease
a) Blepharoconjunctivitis
b) Keratitis
  --Epithelial: c/o foreign body sensation. Classic sign: Dendrites
  --Stromal
    --Necrotizing: Looks like an ulcer
  --Interstitial
    --Endotheliitis (aka disciform keratitis): Presents as disc-shaped edematous area with KP
  c) Iridocyclitis

d) Trabeculitis
1) Primary ocular disease
--Usually a unilateral blepharoconjunctivitis
  --Presents with lid margin vesicles/ulcers and bulbar conj ulcers

2) Recurrent ocular disease
a) Blepharoconjunctivitis
b) Keratitis
   --Epithelial: c/o foreign body sensation. Classic sign: Dendrites
   --Stromal
      --Necrotizing: Looks like an ulcer (ie, suppurative, with an overlying epithelial defect)
      --Interstitial
      --Endotheliitis (aka disciform keratitis): Presents as disc-shaped edematous area with KP
c) Iridocyclitis
d) Trabeculitis
HSV necrotizing keratitis
1) Primary ocular disease
--Usually a unilateral blepharoconjunctivitis
  --Presents with lid margin vesicles/ulcers and bulbar conj ulcers

2) Recurrent ocular disease
a) Blepharoconjunctivitis
b) Keratitis
   --Epithelial: c/o foreign body sensation. Classic sign: Dendrites
   --Stromal
     --Necrotizing: Looks like an ulcer (ie, suppurative, with an overlying epithelial defect)
     --Interstitial: Looks like a
   --Endotheliitis (aka disciform keratitis): Presents as disc-shaped edematous area with KP

c) Iridocyclitis
d) Trabeculitis
1) Primary ocular disease
--Usually a *unilateral* blepharoconjunctivitis
--Presents with lid margin vesicles/ulcers and bulbar conj ulcers

2) Recurrent ocular disease
a) Blepharoconjunctivitis
b) Keratitis
--Epithelial: c/o foreign body sensation. Classic sign: Dendrites
--Stromal
   --Necrotizing: Looks like an ulcer (ie, suppurative, with an overlying epithelial defect)
   --Interstitial: Looks like a scar
   --Endotheliitis (aka *disciform keratitis*): Presents as disc-shaped edematous area with KP
c) Iridocyclitis
d) Trabeculitis
1) Primary ocular disease
--Usually a unilateral blepharoconjunctivitis
--Presents with lid margin vesicles/ulcers and bulbar conj ulcers

2) Recurrent ocular disease
a) Blepharoconjunctivitis
b) Keratitis
   --Epithelial: c/o foreign body sensation. Classic sign: Dendrites
   --Stromal
      --Necrotizing: Looks like an ulcer (ie, suppurative, with an overlying epithelial defect)
      --Interstitial: Looks like a scar (ie, hazy, with no overlying epithelial defect)
   --Endotheliitis (aka disciform keratitis): Presents as disc-shaped edematous area with KP
c) Iridocyclitis
d) Trabeculitis
HSV interstitial keratitis
1) Primary ocular disease
--Usually a unilateral blepharoconjunctivitis
  --Presents with lid margin vesicles/ulcers and bulbar conj ulcers

2) Recurrent ocular disease
a) Blepharoconjunctivitis
b) Keratitis
  --Epithelial: c/o foreign body sensation. Classic sign: Dendrites
  --Stromal
    --Necrotizing: Looks like an ulcer (ie, suppurative, with an overlying epithelial defect)
    ★ --Interstitial: Looks like a scar (ie, hazy, with no overlying epithelial defect)
  --Endotheliitis (aka disciform keratitis): Presents as disc-shaped edematous area with KP

For more on anterior HSV dz, see slide-set K23

d) Trabeculitis
1) Primary ocular disease
--Usually a unilateral blepharoconjunctivitis
  --Presents with lid margin vesicles/ulcers and bulbar conj ulcers

2) Recurrent ocular disease
a) Blepharoconjunctivitis
b) Keratitis
   --Epithelial: c/o foreign body sensation. Classic sign: Dendrites
   --Stromal
     --Necrotizing: Looks like an ulcer (ie, suppurative, with an overlying epithelial defect)
     --Interstitial: Looks like a scar (ie, hazy, with no overlying epithelial defect)
   --Endotheliitis (aka disciform keratitis): Presents as disc-shaped edematous area with KP

c) Iridocyclitis
   --Can be granulomatous or non-granulomatous
   --Classic sign: patchy iris transillumination defects

d) Trabeculitis

For more on anterior HSV dz, see slide-set K23

Next we will turn our attention to Cogan syndrome
Regarding interstitial keratitis (IK) associated with Cogan syndrome, which are true?
- It usually strikes children around age 9 years
Regarding interstitial keratitis (IK) associated with Cogan syndrome, which are true?

- It usually strikes **young adults**.
- It usually strikes **children around age 9 years**. **F**
Regarding interstitial keratitis (IK) associated with Cogan syndrome, which are true?

- It usually strikes children around age 9 years \( \text{F} \)
- It often follows an URTI by 1-2 weeks or so (Upper respiratory tract infection)
Regarding interstitial keratitis (IK) associated with Cogan syndrome, which are true?

- It usually strikes children around age 9 years \( \text{F} \)
- It often follows an URTI by 1-2 weeks or so \( \text{T} \)
Regarding interstitial keratitis (IK) associated with Cogan syndrome, which are true?

- It usually strikes children around age 9 years: **F**
- It often follows an URTI by 1-2 weeks or so: **T**
- Some patients have serologic evidence of granulomatosis with polyangiitis: **T**
Regarding interstitial keratitis (IK) associated with Cogan syndrome, which are true?

- It usually strikes children around age 9 years: **F**
- It often follows an URTI by 1-2 weeks or so: **T**
- Some patients have serologic evidence of granulomatosis with polyangiitis: **F**
Regarding interstitial keratitis (IK) associated with Cogan syndrome, which are true?

- It usually strikes children around age 9 years **F**
- It often follows an URTI by 1-2 weeks or so **T**
- Some patients have serologic evidence of polyarteritis nodosum **T**
- Some patients have serologic evidence of granulomatosis with polyangiitis **F**
Regarding interstitial keratitis (IK) associated with Cogan syndrome, which are true?

- It usually strikes children around age 9 years  F
- It often follows an URTI by 1-2 weeks or so  T
- Some patients have serologic evidence of granulomatosis with polyangiitis  
  polyarteritis nodosum

Some patients have serologic evidence of granulomatosis with polyangiitis. Do these pts go on to manifest a systemic vasculitic process?
Regarding interstitial keratitis (IK) associated with Cogan syndrome, which are true?

- It usually strikes children around age 9 years → F
- It often follows an URTI by 1-2 weeks or so → T
- Some patients have serologic evidence of polyarteritis nodosum → polyarteritis nodosum

Some patients have serologic evidence of granulomatosis with polyangiitis

Do these pts go on to manifest a systemic vasculitic process? Some do, and it can be life-threatening
Regarding interstitial keratitis (IK) associated with Cogan syndrome, which are true?

- It usually strikes children around age 9 years **F**
- It often follows an URTI by 1-2 weeks or so **T**
- Some patients have serologic evidence of granulomatosis with polyangiitis **F**
- Patients may complain of tinnitus and/or vertigo
Regarding interstitial keratitis (IK) associated with Cogan syndrome, which are true?

- It usually strikes children around age 9 years: **F**
- It often follows an URTI by 1-2 weeks or so: **T**
- Some patients have serologic evidence of polyarteritis nodosum: **T**
- Patients may complain of tinnitus and/or vertigo: **T**
- Some patients have serologic evidence of granulomatosis with polyangiitis: **F**
Regarding interstitial keratitis (IK) associated with Cogan syndrome, which are true?

- It usually strikes children around age 9 years. **F**
- It often follows an URTI by 1-2 weeks or so. **T**
- Some patients have serologic evidence of granulomatosis with polyangiitis. **F**
- Patients may complain of tinnitus and/or vertigo. **T**
- Topical steroids are the sole treatment.
Regarding interstitial keratitis (IK) associated with Cogan syndrome, which are true?

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- Patients may complain of tinnitus and/or vertigo **T**
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Regarding interstitial keratitis (IK) associated with Cogan syndrome:

- It usually strikes children around age 9 years **F**
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- Patients may complain of tinnitus and/or vertigo **T**
- Topical steroids are the sole treatment **F**

*Does this mean topical steroids play no role in managing Cogan syndrome?*

Patients may complain of tinnitus and/or vertigo.

**Topical steroids are the sole treatment** **F**
Regarding interstitial keratitis (IK) associated with Cogan syndrome, which are true?

- It usually strikes children around age 9 years **F**
- It often follows an URTI by 1-2 weeks or so **T**
- Some patients have serologic evidence of granulomatosis with polyangiitis **F**
- Patients may complain of tinnitus and/or vertigo **T**
- Topical steroids are the sole treatment **F**

Does this mean topical steroids play no role in managing Cogan syndrome? Not at all; in fact, topical steroids are the mainstay of treatment for the IK component of Cogan syndrome.

Patients may complain of tinnitus and/or vertigo.

**Topical steroids are the sole treatment** **F**
Regarding interstitial keratitis (IK) associated with Cogan syndrome, which are true?

- It usually strikes children around age 9 years
- It often follows an URTI by 1-2 weeks or so
- Some patients have serologic evidence of granulomatosis with polyangiitis
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Does this mean topical steroids play no role in managing Cogan syndrome? Not at all; in fact, topical steroids are the mainstay of treatment for the IK component of Cogan syndrome.

What other med(s) is/are indicated in managing Cogan syndrome?

- PO steroids (or on occasion, IMT) are used to treat the CNS manifestations
- How urgent is the need to start systemic steroids?
  - Quite. Cogan’s tends to progress rapidly, and profound, permanent hearing loss and even death can result if systemic steroid therapy isn’t initiated promptly
Regarding interstitial keratitis (IK) associated with Cogan syndrome, which are true?

- It usually strikes children around age 9 years
- It often follows an upper respiratory tract infection (URTI) by 1-2 weeks or so
- Some patients have serologic evidence of granulomatosis with polyangiitis
- Patients may complain of tinnitus and/or vertigo
- Topical steroids are the sole treatment

**Does this mean topical steroids play no role in managing Cogan syndrome?**

Not at all; in fact, topical steroids are the mainstay of treatment for the IK component of Cogan syndrome.

**What other med(s) is/are indicated in managing Cogan syndrome?**

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How urgent is the need to start systemic steroids? Quite. Cogan's tends to progress rapidly, and profound, permanent hearing loss and even death can result if systemic steroid therapy isn't initiated promptly.
Regarding interstitial keratitis (IK) associated with Cogan syndrome, which are true?

- It usually strikes children around age 9 years  F
- It often follows an URTI by 1-2 weeks or so  T
- Some patients have serologic evidence of granulomatosis with polyangiitis  F
- Patients may complain of tinnitus and/or vertigo  T
- Topical steroids are the sole treatment  F

**Does this mean topical steroids play no role in managing Cogan syndrome?**
Not at all; in fact, topical steroids are the mainstay of treatment for the IK component of Cogan syndrome.

**What other med(s) is/are indicated in managing Cogan syndrome?**
PO steroids (or on occasion, IMT) are used to treat the CNS manifestations.

**How urgent is the need to start systemic steroids?**
Quite. Cogan’s tends to progress rapidly, and profound, permanent hearing loss and even death can result if systemic steroid therapy isn’t initiated promptly.
Regarding interstitial keratitis (IK) associated with Cogan syndrome, which are true?

- It usually strikes children around age 9 years: **F**
- It often follows an URTI by 1-2 weeks or so: **T**
- Some patients have serologic evidence of granulomatosis with polyangiitis: **F**
- Patients may complain of tinnitus and/or vertigo: **T**
- Topical steroids are the sole treatment: **F**
- Cogan’s is diagnosed via a serum antibody test: **F**
Regarding interstitial keratitis (IK) associated with Cogan syndrome, which are true?

- It usually strikes children around age 9 years: **F**
- It often follows an URTI by 1-2 weeks or so: **T**
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- Patients may complain of tinnitus and/or vertigo **T**
- Topical steroids are the sole treatment **F**
- Cogan’s is diagnosed via serum antibody test **F**

**What test is used to diagnose Cogan’s?**
Regarding interstitial keratitis (IK) associated with Cogan syndrome, which are true?

- It usually strikes children around age 9 years  F
- It often follows an URTI by 1-2 weeks or so  T
- Some patients have serologic evidence of granulomatosis with polyangiitis  F
- Patients may complain of tinnitus and/or vertigo  T
- Topical steroids are the sole treatment  F
- Cogan’s is diagnosed a via serum antibody test  F

What test is used to diagnose Cogan’s?
There is none—it is a diagnosis of exclusion
Regarding interstitial keratitis (IK) associated with Cogan syndrome, which are true?

- It usually strikes children around age 9 years \textbf{F}
- It often follows an URTI by 1-2 weeks or so \textbf{T}
- Some patients have serologic evidence of granulomatosis with polyangiitis \textbf{F}
- Patients may complain of tinnitus and/or vertigo \textbf{T}
- Topical steroids are the sole treatment \textbf{F}
- Cogan’s is diagnosed \textbf{via serum antibody test} \textbf{F}

\textbf{Q:} What test is used to diagnose Cogan’s?

\textbf{A:} There is none—it is a diagnosis of exclusion.

So does this mean no testing is necessary?
Regarding interstitial keratitis (IK) associated with Cogan syndrome, which are true?

- It usually strikes children around age 9 years  F
- It often follows an URTI by 1-2 weeks or so  T
- Some patients have serologic evidence of granulomatosis with polyangiitis  F
- Patients may complain of tinnitus and/or vertigo  T
- Topical steroids are the sole treatment  F
- Cogan’s is diagnosed via serum antibody test  F

What test is used to diagnose Cogan’s?
There is none—it is a diagnosis of exclusion

So does this mean no testing is necessary?
It does not. When faced with a case of IK of uncertain origin, must be ruled out via serologic testing (and consideration should be given to assessing for systemic inflammatory causes as well)
Regarding interstitial keratitis (IK) associated with Cogan syndrome, which are true?

- It usually strikes children around age 9 years  F
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- Some patients have serologic evidence of granulomatosis with polyangiitis  F
- Patients may complain of tinnitus and/or vertigo  T
- Topical steroids are the sole treatment  F
- Cogan’s is diagnosed via serum antibody test  F

What test is used to diagnose Cogan’s?
There is none—it is a diagnosis of exclusion

So does this mean no testing is necessary?
It does not. When faced with a case of IK of uncertain origin, syphilis must be ruled out via serologic testing (and consideration should be given to assessing for systemic inflammatory causes as well)