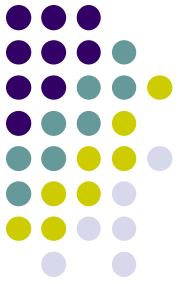


Q

Infectious keratitis: Short answers

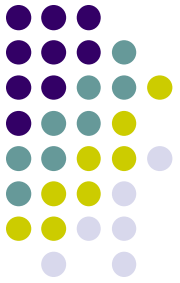
- What is the #1 bacterium in CL-related K ulcer?



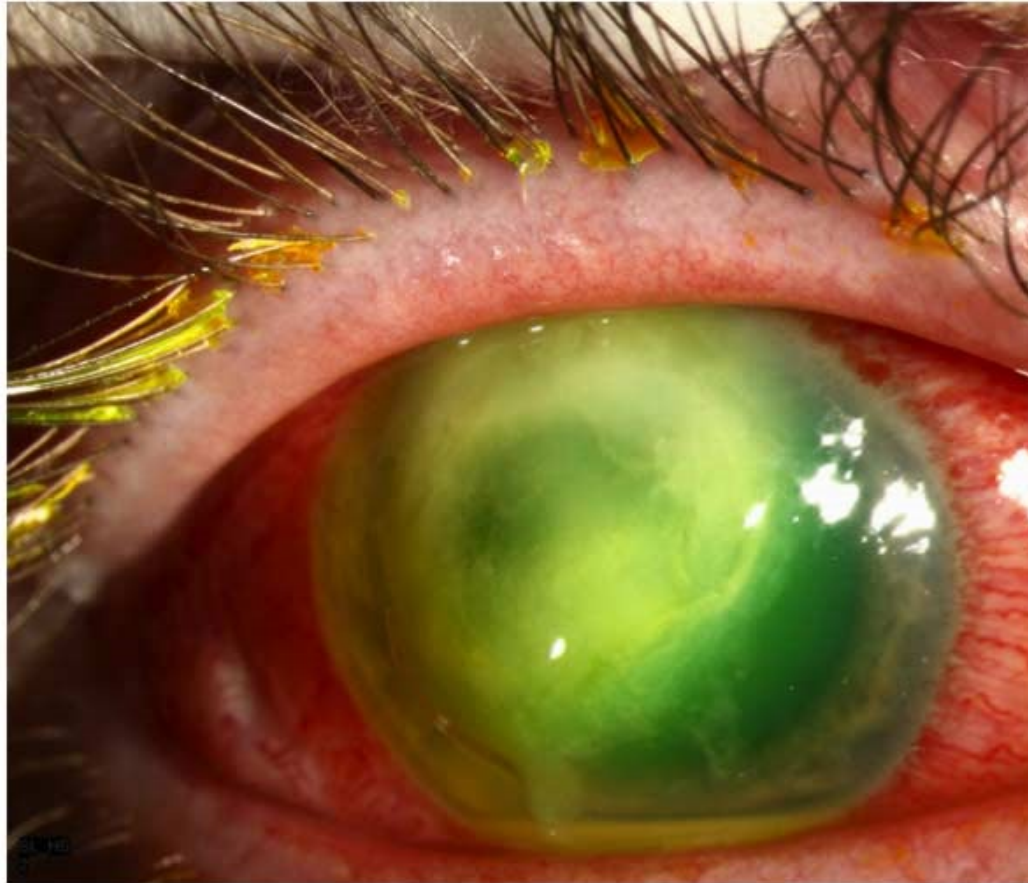
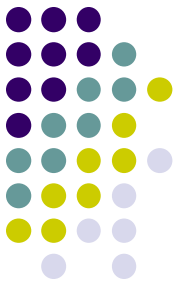
A

Infectious keratitis: Short answers

- What is the #1 bacterium in CL-related K ulcer? *Pseudomonas*



Infectious keratitis: Short answers

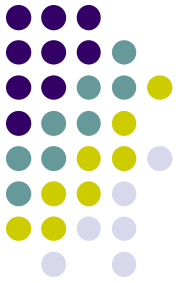


Pseudomonas corneal ulcer associated with CL wear

Q

Infectious keratitis: Short answers

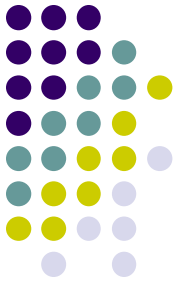
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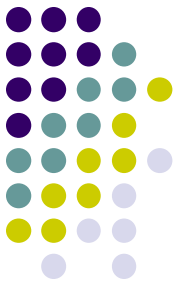
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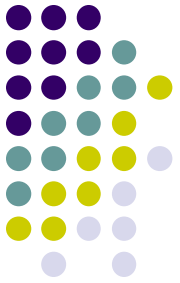
Infectious keratitis: Short answers



Acanthamoeba keratitis associated with CL wear

Q

Infectious keratitis: Short answers

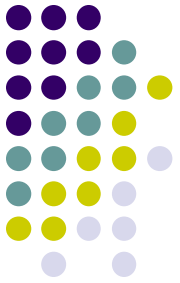


- What is the #1 bacterium in CL-related K ulcer? *Pseudomonas*
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 - fungus 1
 - fungus 2 and fungus 3

A

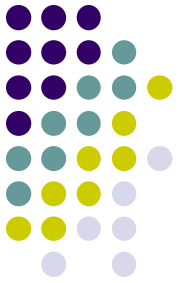
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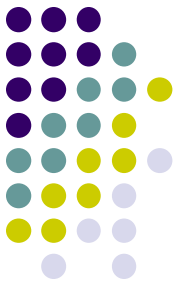
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In what basic way does Candida differ from Aspergillus/Fusarium?



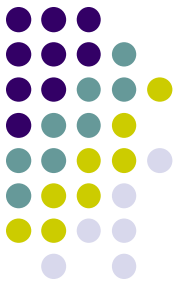
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 - *Aspergillus* and *Fusarium* → are...

In what basic way does Candida differ from Aspergillus/Fusarium?

Candida is a , whereas *Aspergillus* and *Fusarium* are ;

A

Infectious keratitis: Short answers

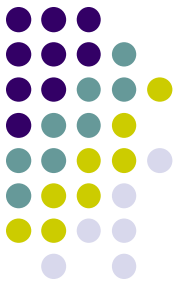


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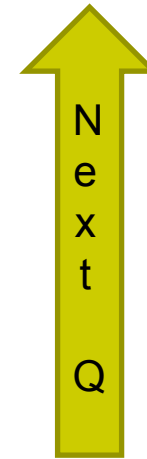
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Q

Infectious keratitis: Short answers

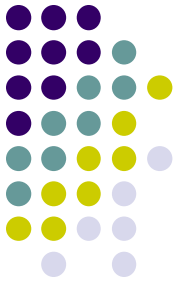


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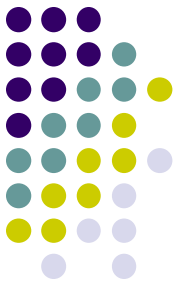
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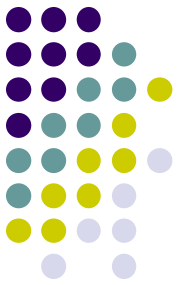
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(Referring here to the northern and southern United States)

A

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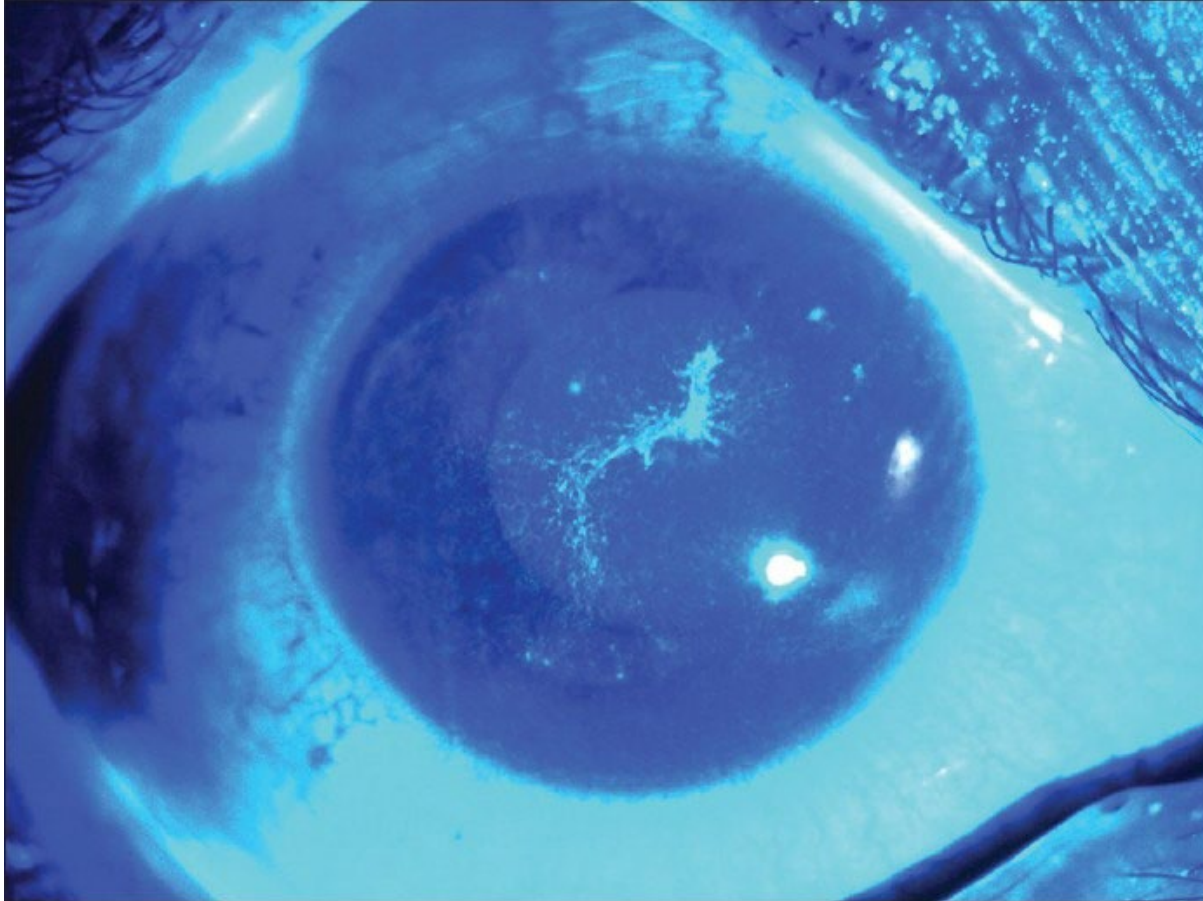
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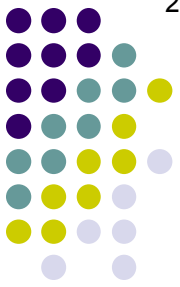
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Infectious keratitis: Short answers



Acanthamoeba: (Pseudo)dendrites



Q

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In what key way might the presenting complaint of an Acanthamoeba keratitis patient differ from that of an HSV keratitis patient?

A

Infectious keratitis: Short answers



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*In what key way might the presenting complaint of an *Acanthamoeba* keratitis patient differ from that of an HSV keratitis patient?*

The patient with *Acanthamoeba* keratitis will complain of pain that seems out of proportion to the clinical picture, while the HSV keratitis patient will have **less** pain than would be expected given the appearance of the cornea

Q

Infectious keratitis: Short answers



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Why is *Acanthamoeba* keratitis exceptionally painful?



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*Why is *Acanthamoeba* keratitis exceptionally painful?*

Because the bug has a propensity for

two words

A

Infectious keratitis: Short answers



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Why is *Acanthamoeba* keratitis exceptionally painful?
Because the bug has a propensity for perineural invasion

Q

Infectious keratitis: Short answers



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Why is *Acanthamoeba* keratitis exceptionally painful?

Because the bug has a propensity for perineural invasion, resulting in a condition known as

two words

A

Infectious keratitis: Short answers



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Why is *Acanthamoeba* keratitis exceptionally painful?
Because the bug has a propensity for perineural invasion, resulting in a condition known as **radial keratoneuritis**

Q

Infectious keratitis: Short answers



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The patient with
clinical picture, v
appearance of th

Why is this condition called 'radial keratoneuritis'?

Because of its slit-lamp appearance—whitish lines oriented radially in the cornea)

How specific for Acanthamoeba is this finding?

The Cornea book says it's "nearly pathognomonic for amebic keratitis"

Why is Acanthamoeba keratitis exceptionally painful?

Because the bug has a propensity for perineural invasion, resulting in a condition known as **radial keratoneuritis**

A

Infectious keratitis: Short answers



- What is the #1 bacterium in CL-related K ulcer? ***Pseudomonas***
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In what key way might the presenting complaint of an Acanthamoeba keratitis patient differ from that of an HSV keratitis patient?

The patient with
clinical picture, v
appearance of th

Why is this condition called 'radial keratoneuritis'?

Because of its slit-lamp appearance—whitish lines oriented radially in the cornea)

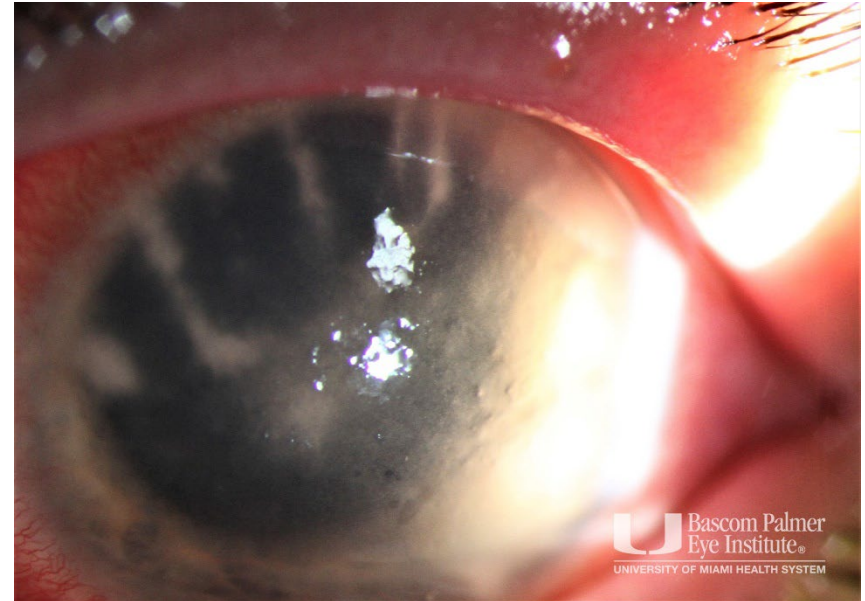
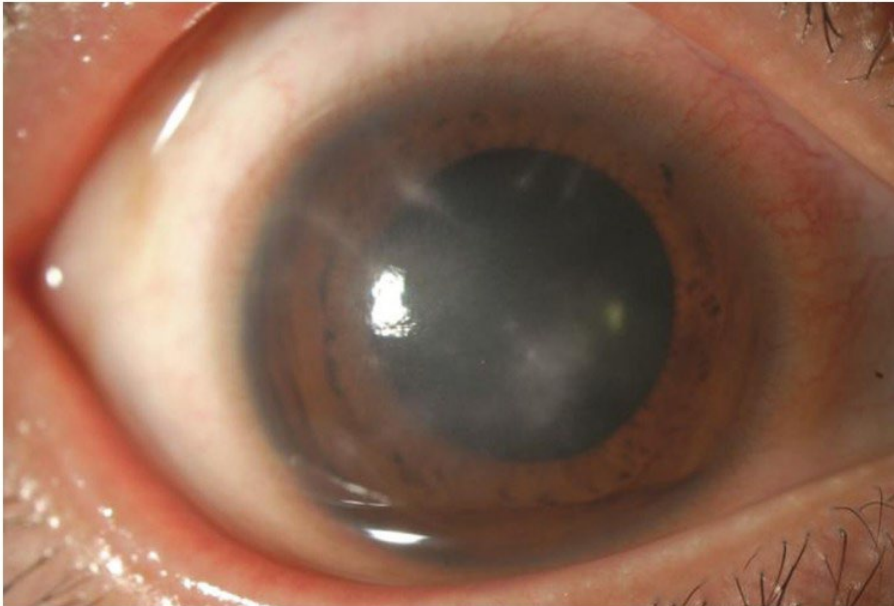
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Infectious keratitis: Short answers



Acanthamoeba: Radial keratoneuritis (aka 'radial perineuritis,' BTW)

Q

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In what key way do the dendrites of Acanthamoeba keratitis differ from those of HSV keratitis?



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 HSV dendrites usually have **two words**, whereas *Acanthamoeba* dendrites don't

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In what key way do the dendrites of *Acanthamoeba* keratitis differ from those of HSV keratitis? HSV dendrites usually have terminal bulbs, whereas *Acanthamoeba* dendrites don't

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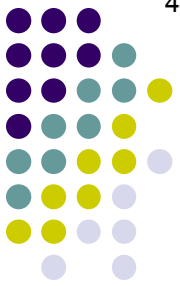
Infectious keratitis: Short answers



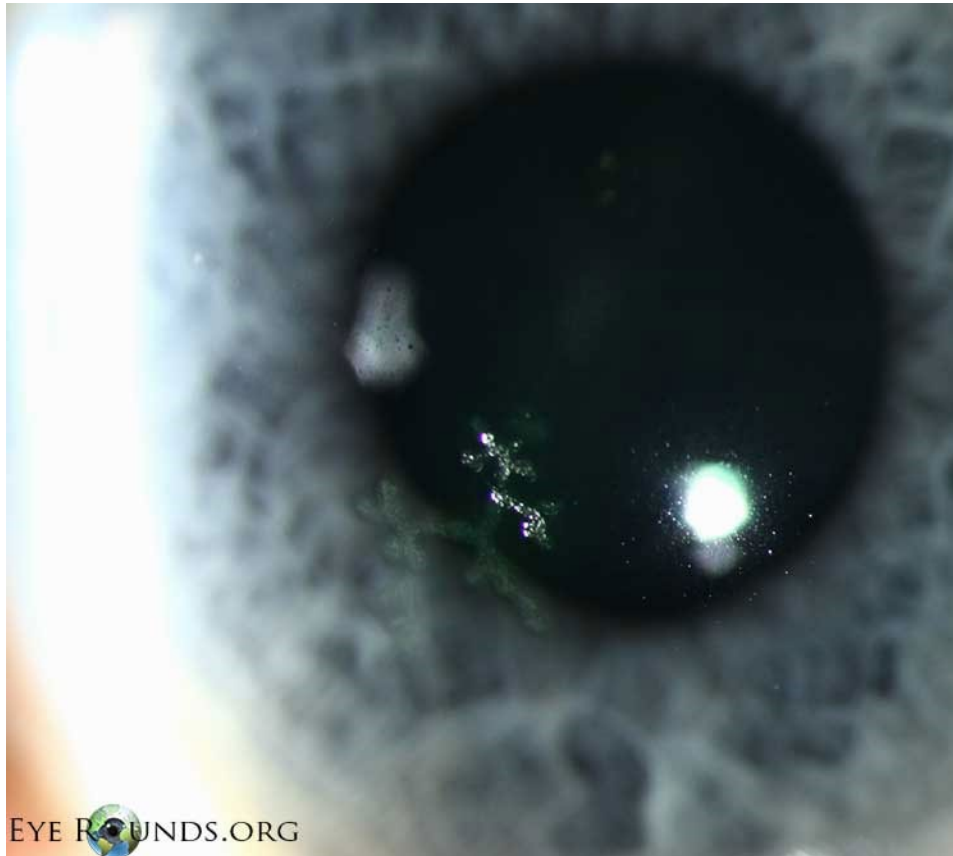
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In what key way do the dendrites of Acanthamoeba keratitis differ from those of HSV keratitis? HSV dendrites usually have terminal bulbs, whereas Acanthamoeba dendrites don't. Be sure to evaluate any dendritic keratitis carefully for the presence/absence of terminal bulbs!



Infectious keratitis: Short answers



HSV dendrites: Terminal bulbs (look carefully)

Q

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In fact, topical therapy is often **ineffective** in deep stromal *Acanthamoeba* infections, which may require **PK** (coupled with antiamebic meds) to rid the host of infection.

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- Which form of infectious keratitis can be diagnosed definitively without stains, culture or biopsy, and how?

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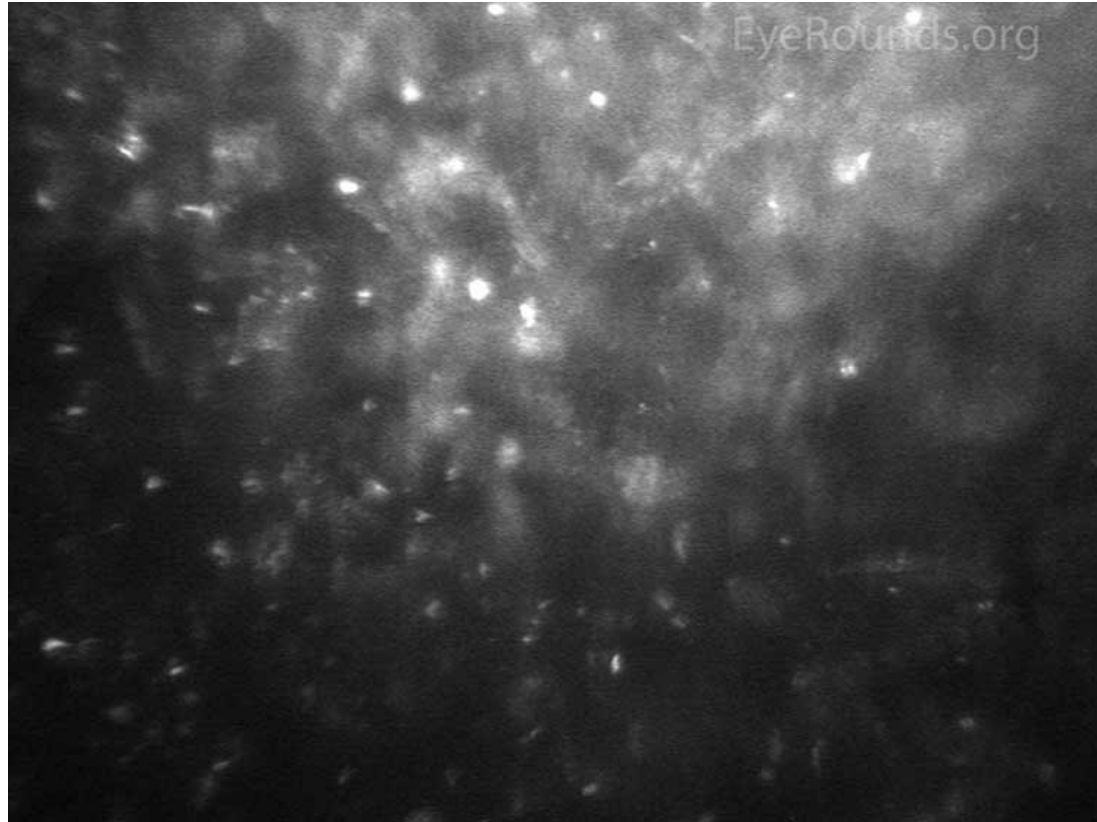
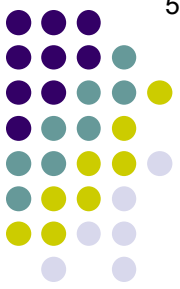
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If you want to add a PO antifungal for:
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Infectious keratitis: Short answers



Confocal microscopy demonstrating high-contrast round objects consistent with *Acanthamoeba* cysts (and irregular forms suggestive of *Acanthamoeba* trophozoites)

Q

Infectious keratitis: Short answers



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or **What medium is used when culturing for *Acanthamoeba*?**
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Non-nutrient agar with *E. coli* overlay
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- **What constitutes a positive 'culture'?**
- Which form of infectious keratitis can be diagnosed definitively without stains, culture or biopsy, and how? ***Acanthamoeba* can be diagnosed via confocal in vivo microscopy (cysts will be seen in the stroma)**

If you want to add a PO antifungal for:
--*Fusarium* and *Aspergillus*: Ketoconazole
--*Candida*: Fluconazole

A

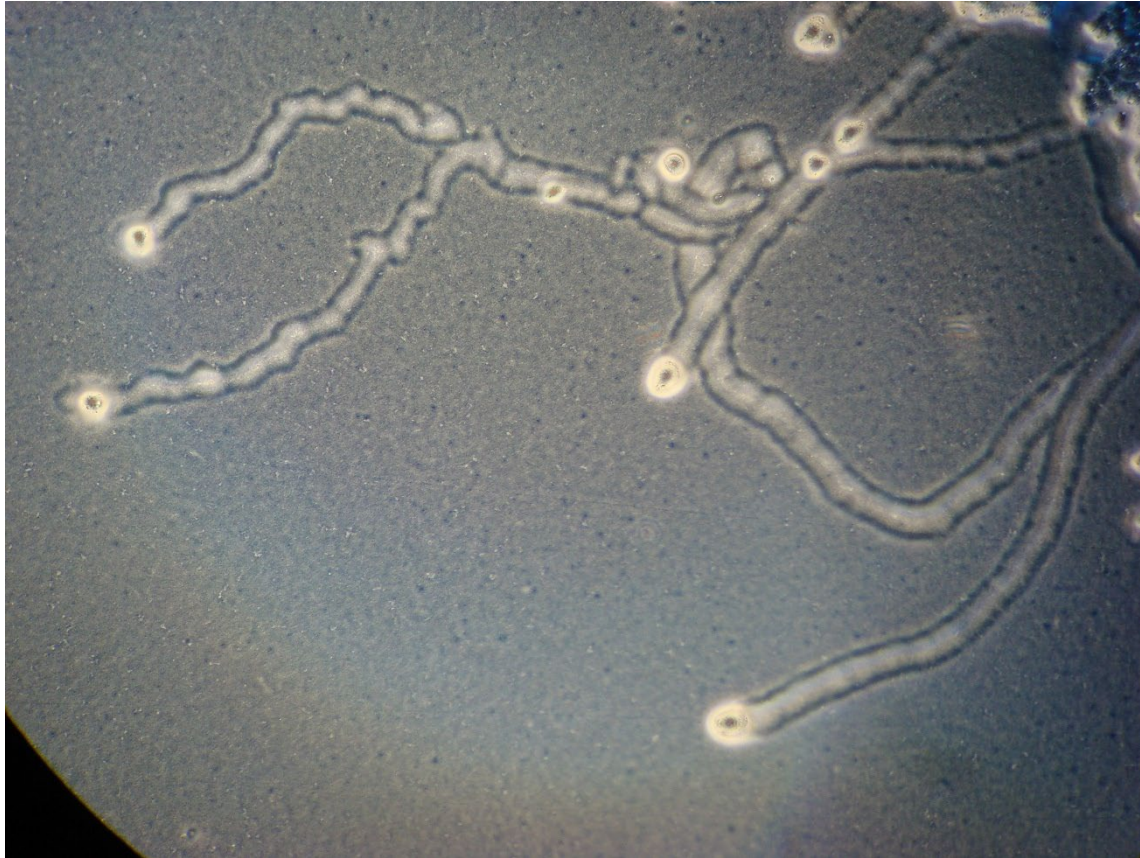
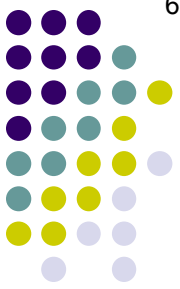
Infectious keratitis: Short answers



- What is the #1 bacterium in CL-related K ulcer? ***Pseudomonas***
- What is the #1 risk factor for *Acanthamoeba* keratitis? **CL wear**
- What are the three main culprits in fungal keratitis? What is the topical antifungal of choice for each?
 - ***Candida*: Topical...Ampho B**
 - ***Aspergillus* and *Candida*: Topical...Natamycin**
- What simple maneuver can increase topical antifungal corneal penetrance? **Scrape off the epithelium**
- What role does geography play in fungal keratitis? ***Fusarium* is more common in the South; *Aspergillus* and *Candida* in the North**
- What is the most common misdiagnosis of early *Acanthamoeba* keratitis? **HSV keratitis. Early *Acanthamoeba* keratitis is limited to the epithelium and is very often dendritic in appearance.**
- **What medium is used when culturing for *Acanthamoeba*?**
 - **Non-nutrient agar with *E. coli* overlay**
- **What constitutes a positive 'culture'?**
 - **When placed on such a culture plate, the motile trophozoite form of the amoeba will respond by grazing its way around the plate, in the process leaving **observable trails** in the agar**
- Which form of infectious keratitis can be diagnosed definitively without stains, culture or biopsy, and how? ***Acanthamoeba* can be diagnosed via confocal in vivo microscopy (cysts will be seen in the stroma)**

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Infectious keratitis: Short answers



Acanthamoeba: Feeding tracks on non-nutrient agar *E coli* plate

Q

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- What keratitis bug is the classic association with AIDS? **How is it treated? *Microsporidia*. Topical fumagillin**
- What is the treatment for *Acanthamoeba* keratitis? **What is the time course? There are multiple options; a good choice is topical chlorhexidine + propamidine. Epithelial disease can be cured in a mere 3-4 months; stromal disease requires 8-12 months.**
- Which form of infectious keratitis can be diagnosed definitively without stains, culture or biopsy, and how? ***Acanthamoeba* can be diagnosed via confocal in vivo microscopy (cysts will be seen in the stroma)**
- What two slow-growing, fastidious organisms can produce a nonsuppurative infiltrate with intact overlying epithelium?

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