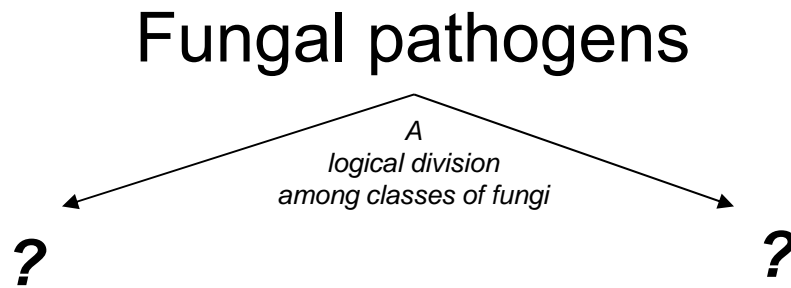
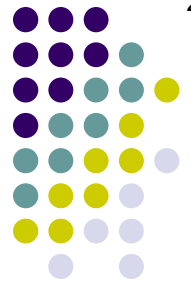


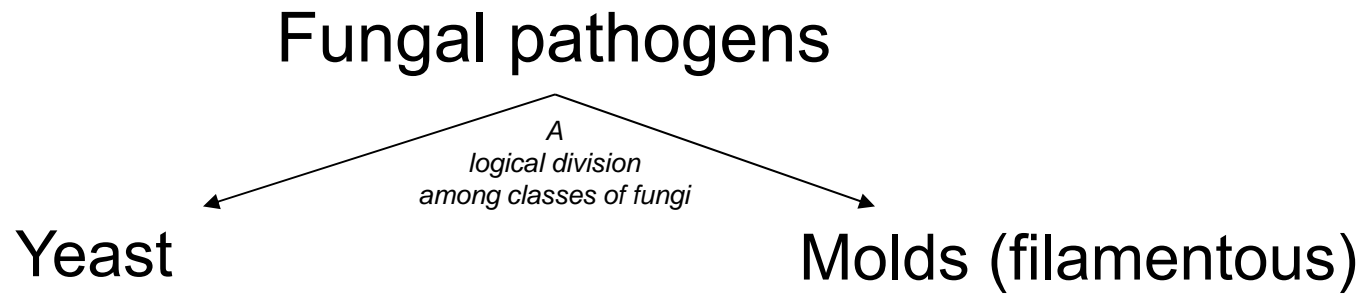


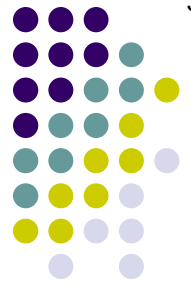
Common Ocular Fungal Pathogens



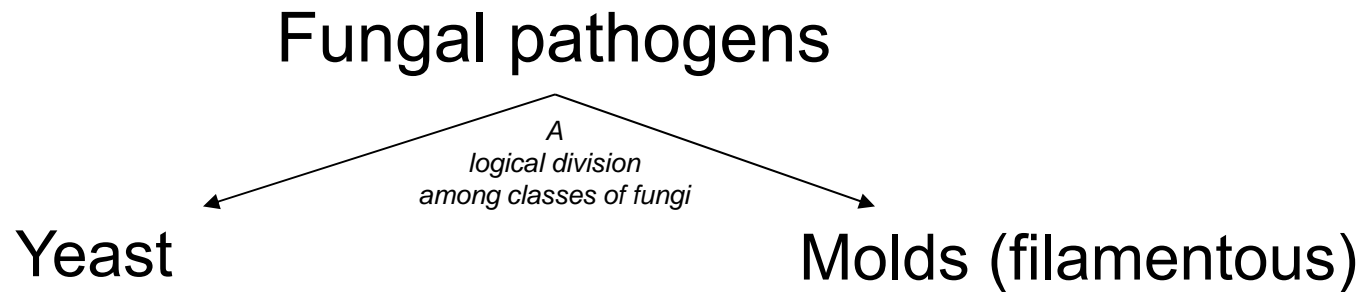


Common Ocular Fungal Pathogens





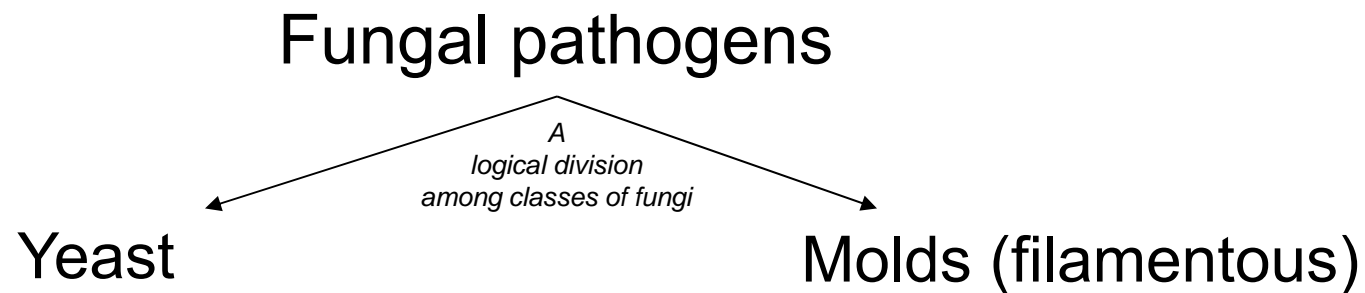
Common Ocular Fungal Pathogens



What's the difference between a yeast and a mold?



Common Ocular Fungal Pathogens

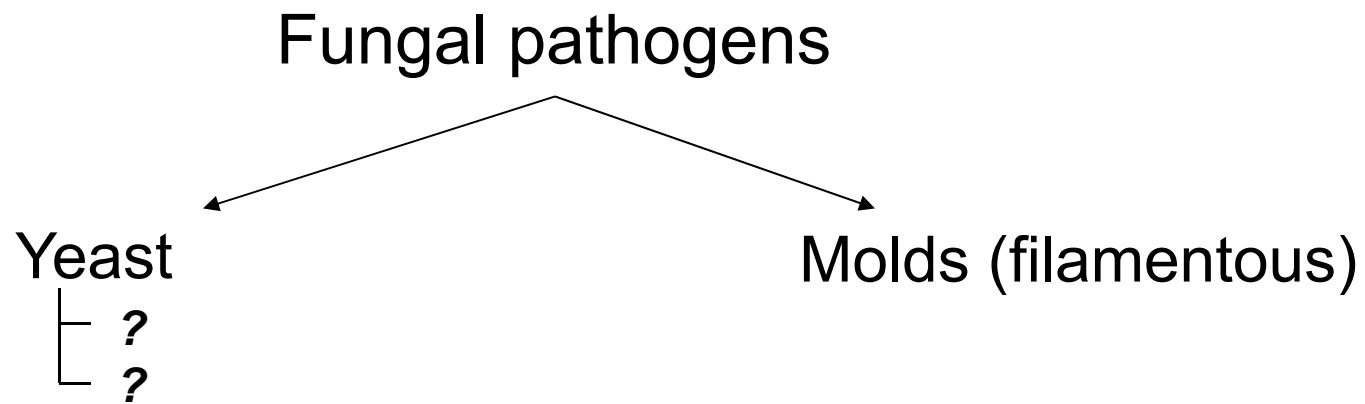


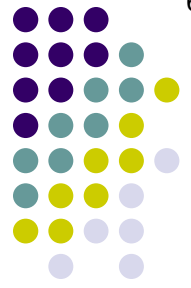
What's the difference between a yeast and a mold?

Yeast are fungi that exist mainly as unicellular entities, whereas **molds** are multicellular organisms organized as structures called **hyphae** (the fancy term for the long, branching filaments molds form as they grow)

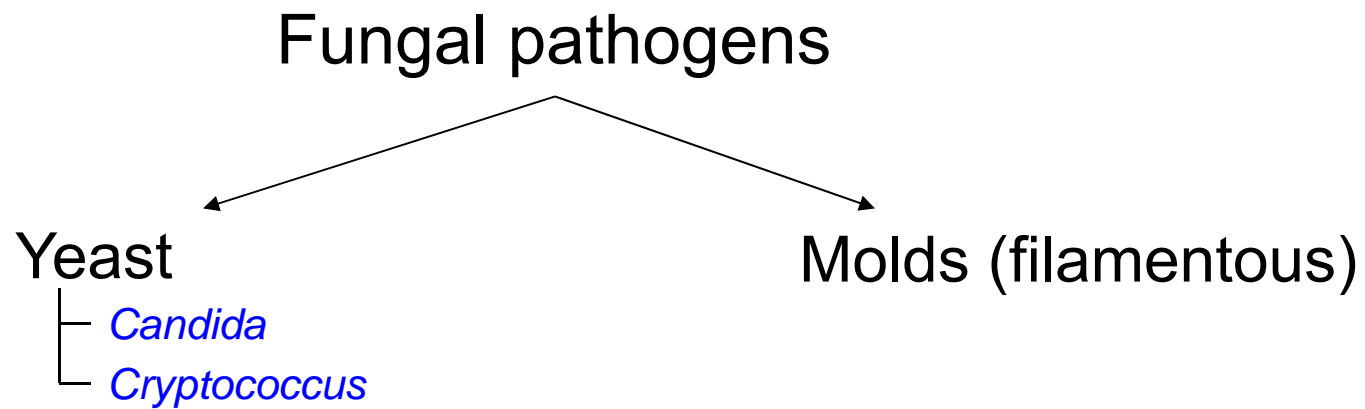


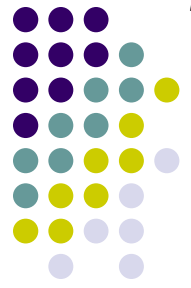
Common Ocular Fungal Pathogens



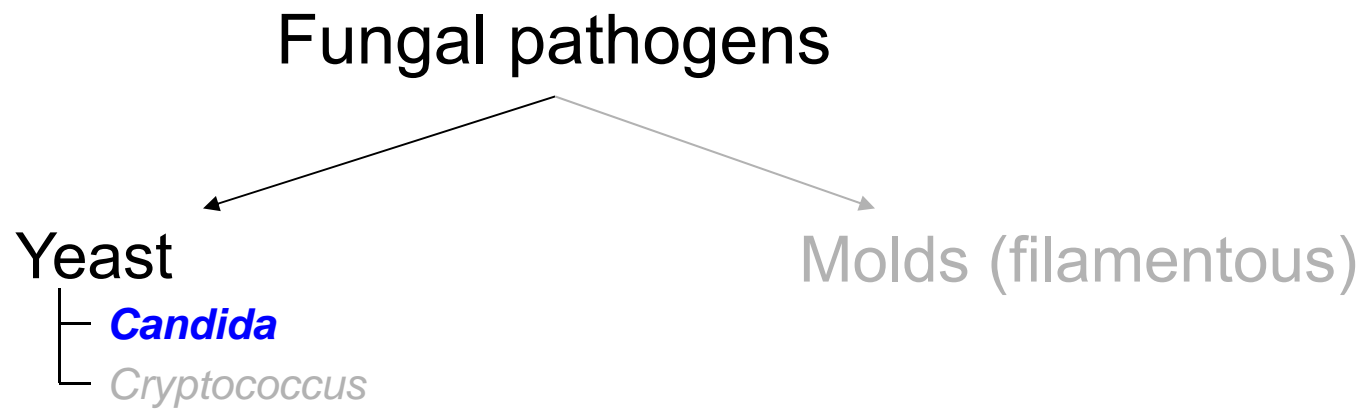


Common Ocular Fungal Pathogens





Common Ocular Fungal Pathogens



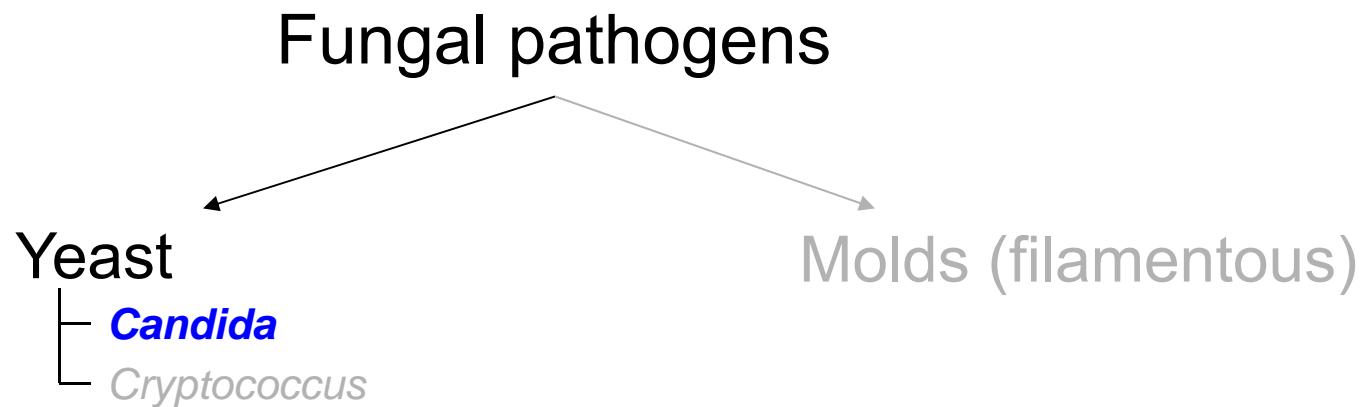
What **systemic** scenarios are associated with *Candida keratitis*?

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Common Ocular Fungal Pathogens

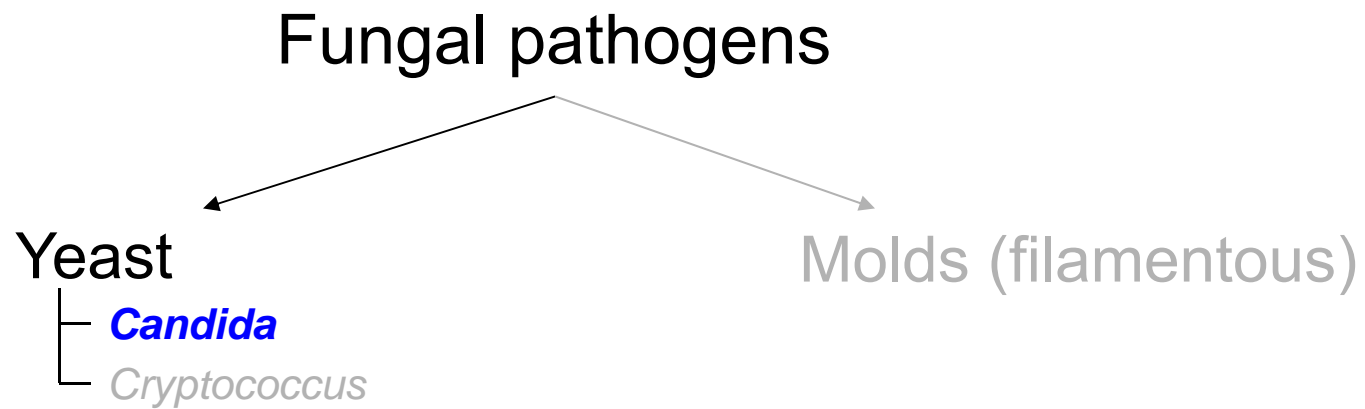


What **systemic** scenarios are associated with *Candida keratitis*?

- Immunosuppression
- Chronic antibiotic use

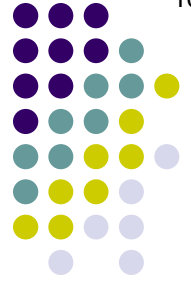


Common Ocular Fungal Pathogens

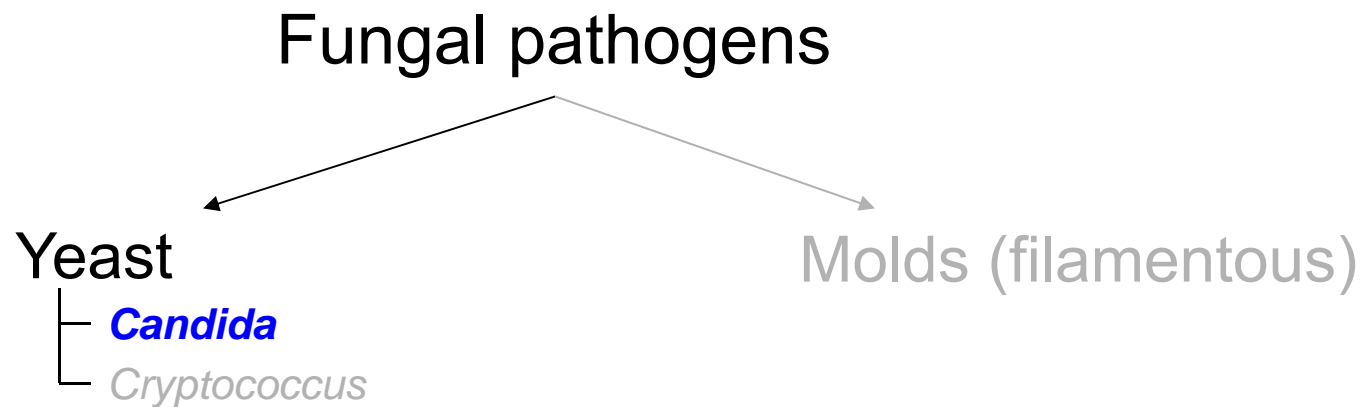


What **systemic** scenarios are associated with *Candida keratitis*?
--Immunosuppression
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What **ocular** conditions are associated with *Candida keratitis*?
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Common Ocular Fungal Pathogens

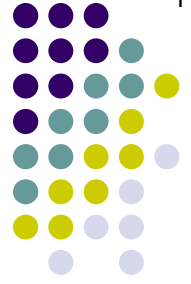


What **systemic** scenarios are associated with *Candida keratitis*?

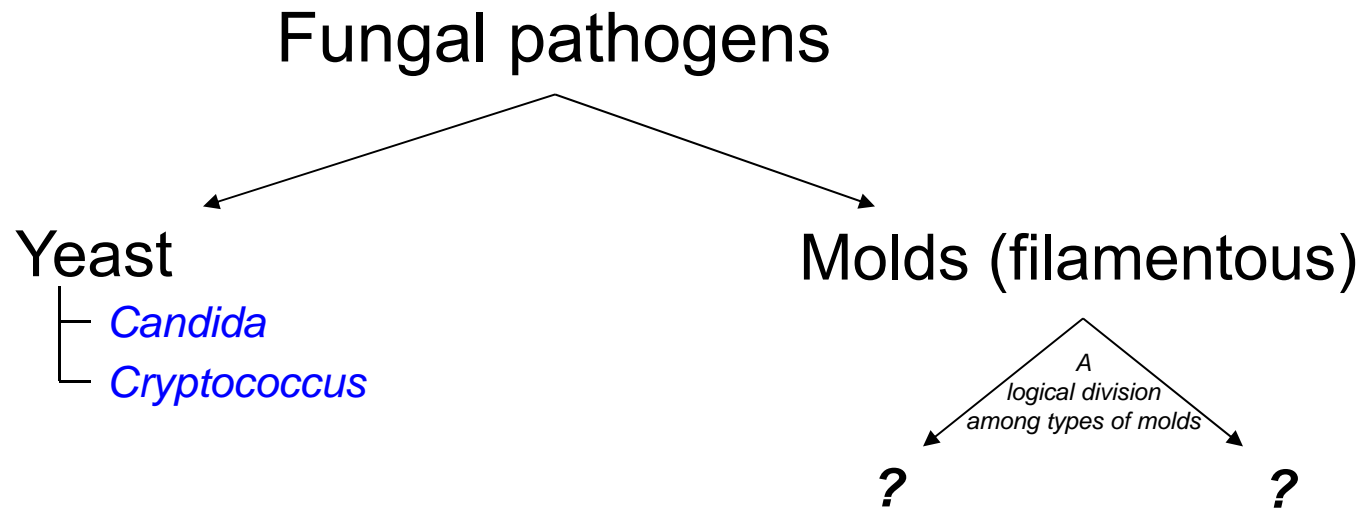
- Immunosuppression
- Chronic antibiotic use

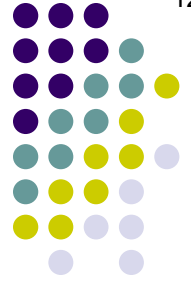
What **ocular** conditions are associated with *Candida keratitis*?

- Chronic topical steroid use
- Longstanding epithelial defect

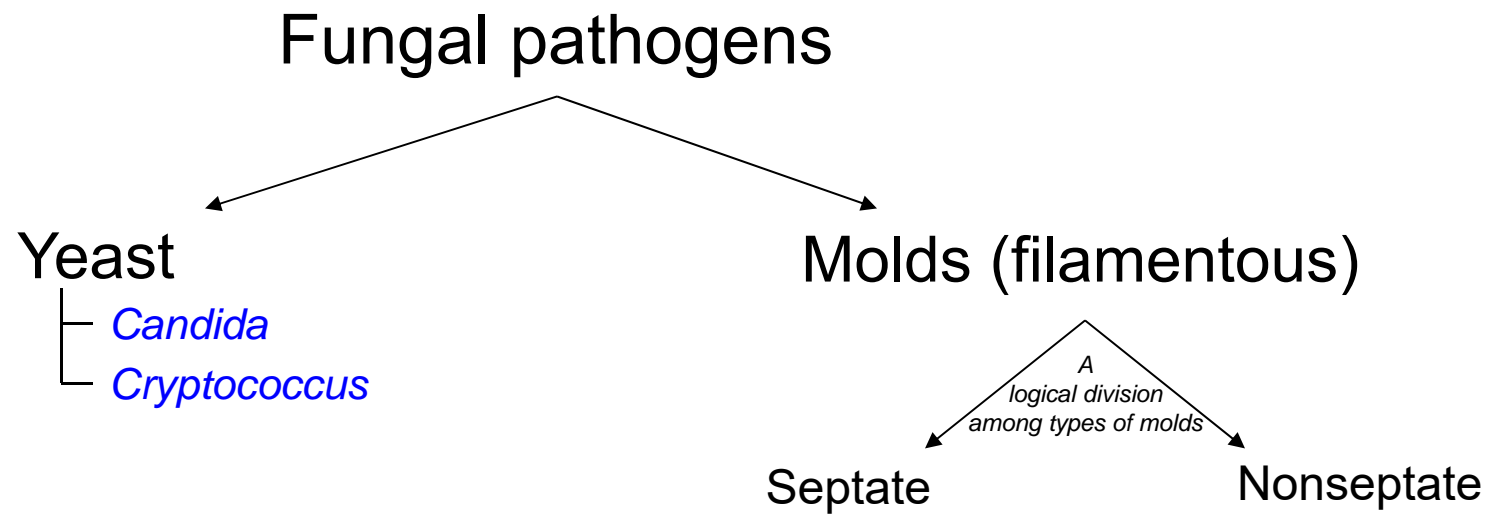


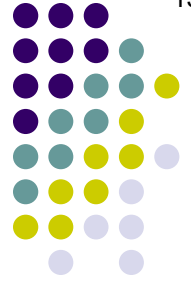
Common Ocular Fungal Pathogens



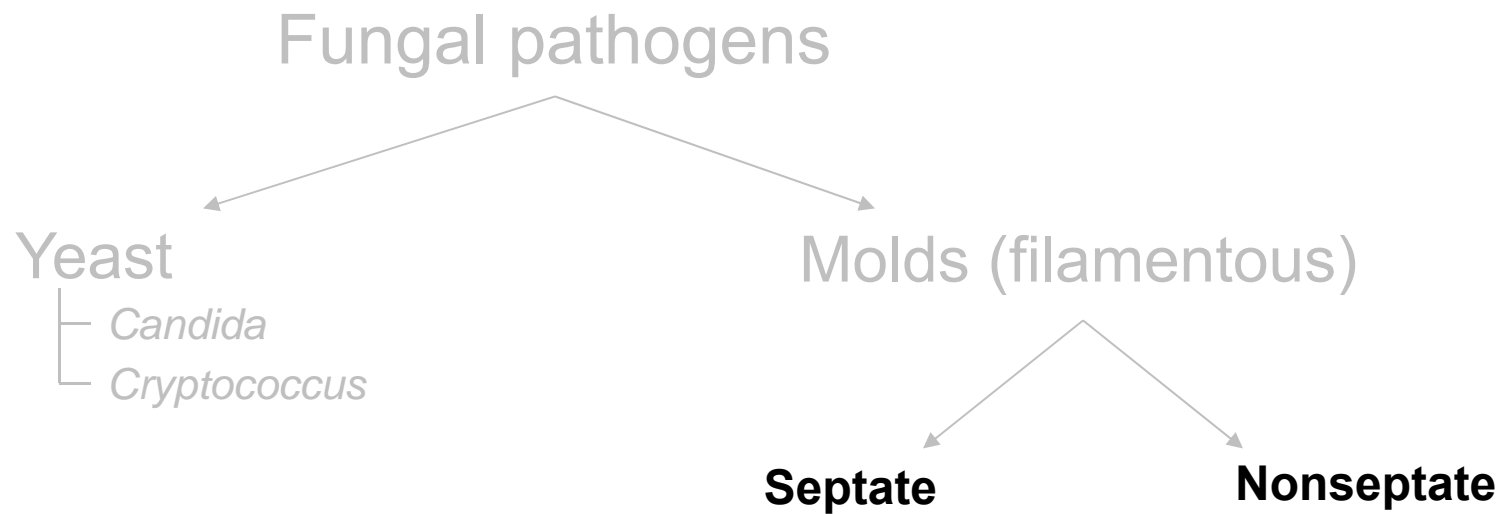


Common Ocular Fungal Pathogens

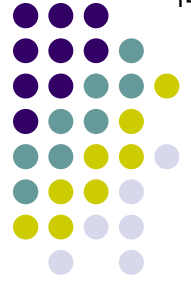




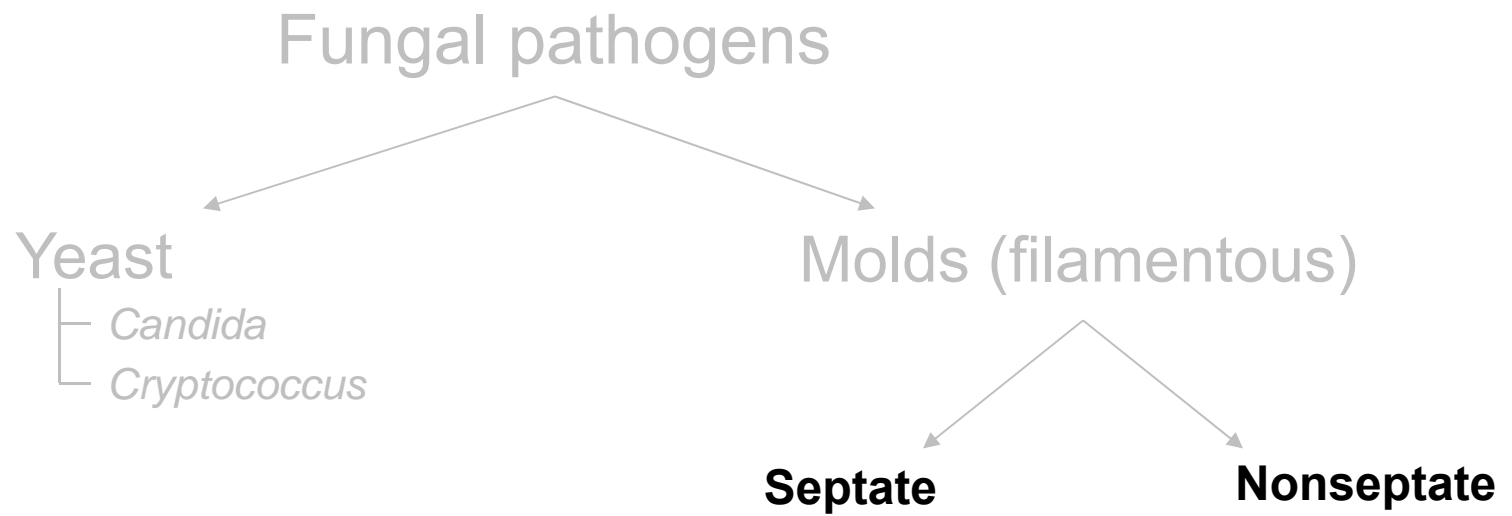
Common Ocular Fungal Pathogens



What are septa?

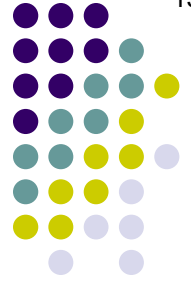


Common Ocular Fungal Pathogens

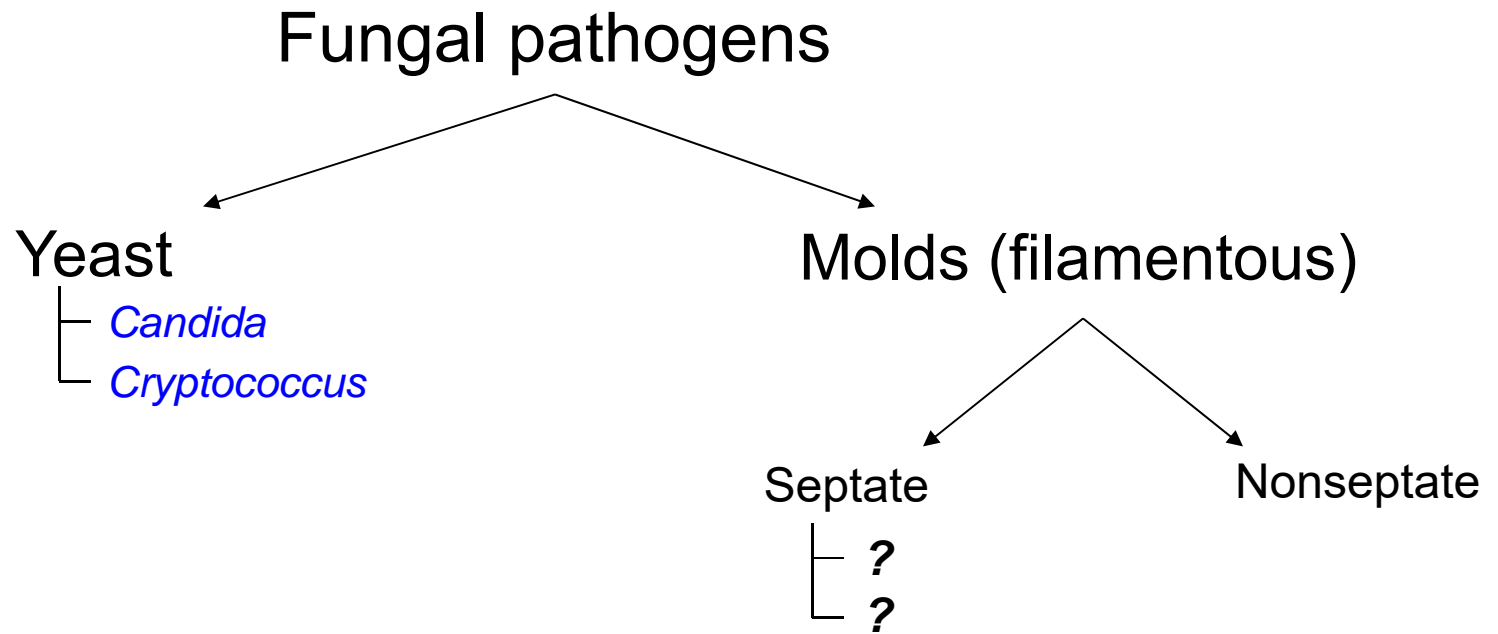


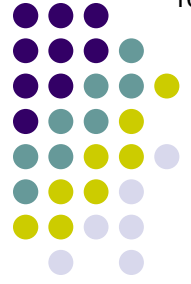
What are septa?

Cross-walls within hyphae that subdivide them into a series of individual compartments. Septate molds have these cross-walls; nonseptate molds do not.

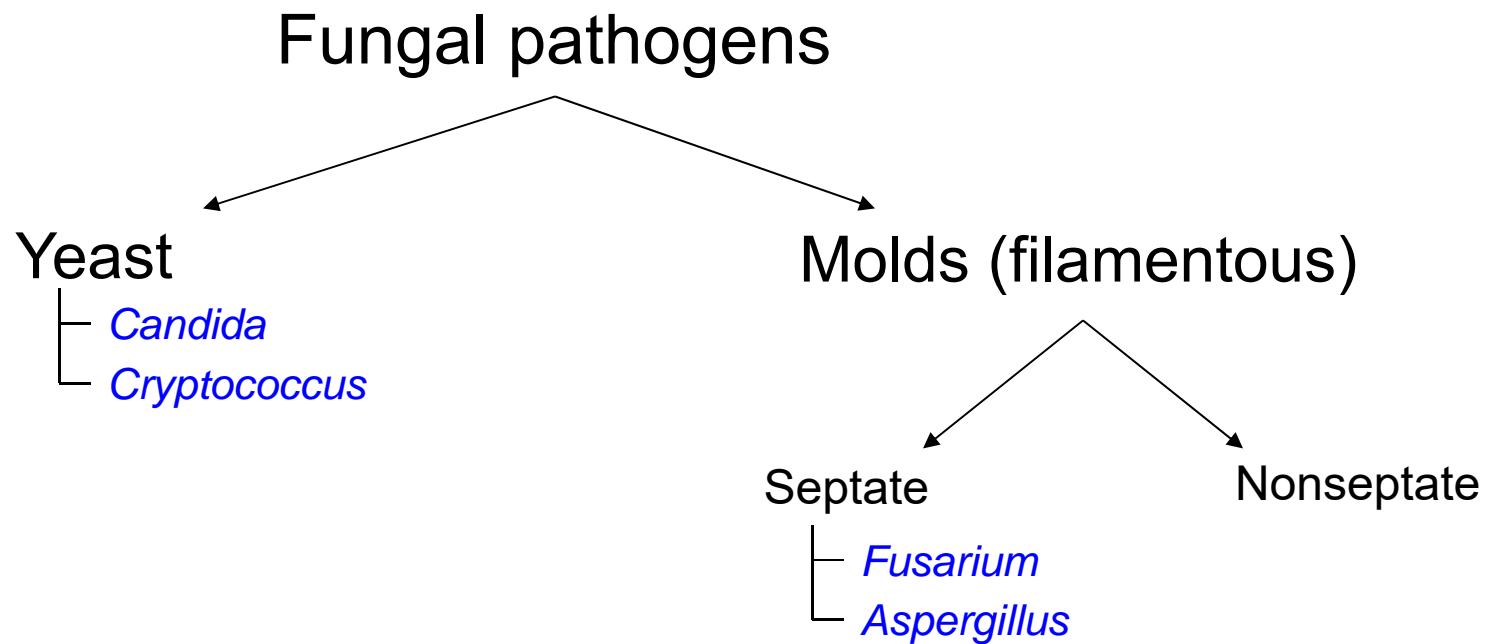


Common Ocular Fungal Pathogens



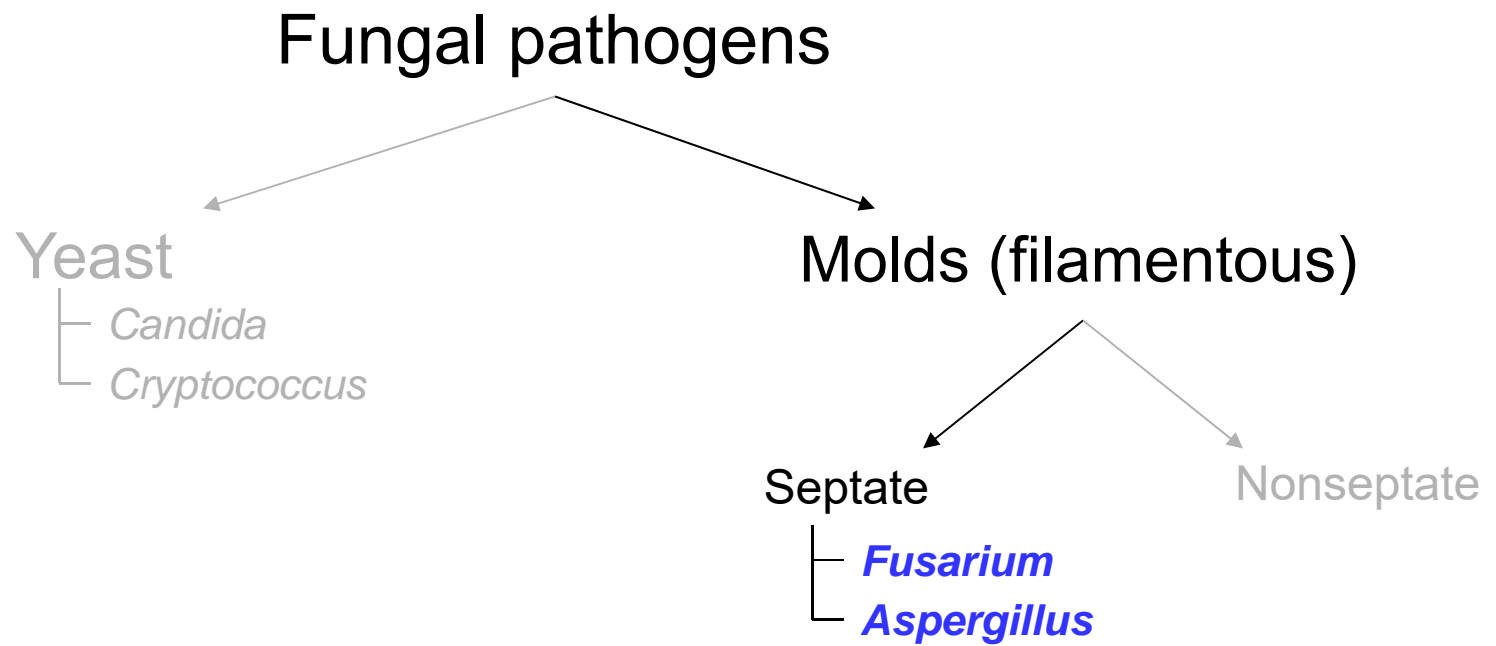


Common Ocular Fungal Pathogens





Common Ocular Fungal Pathogens

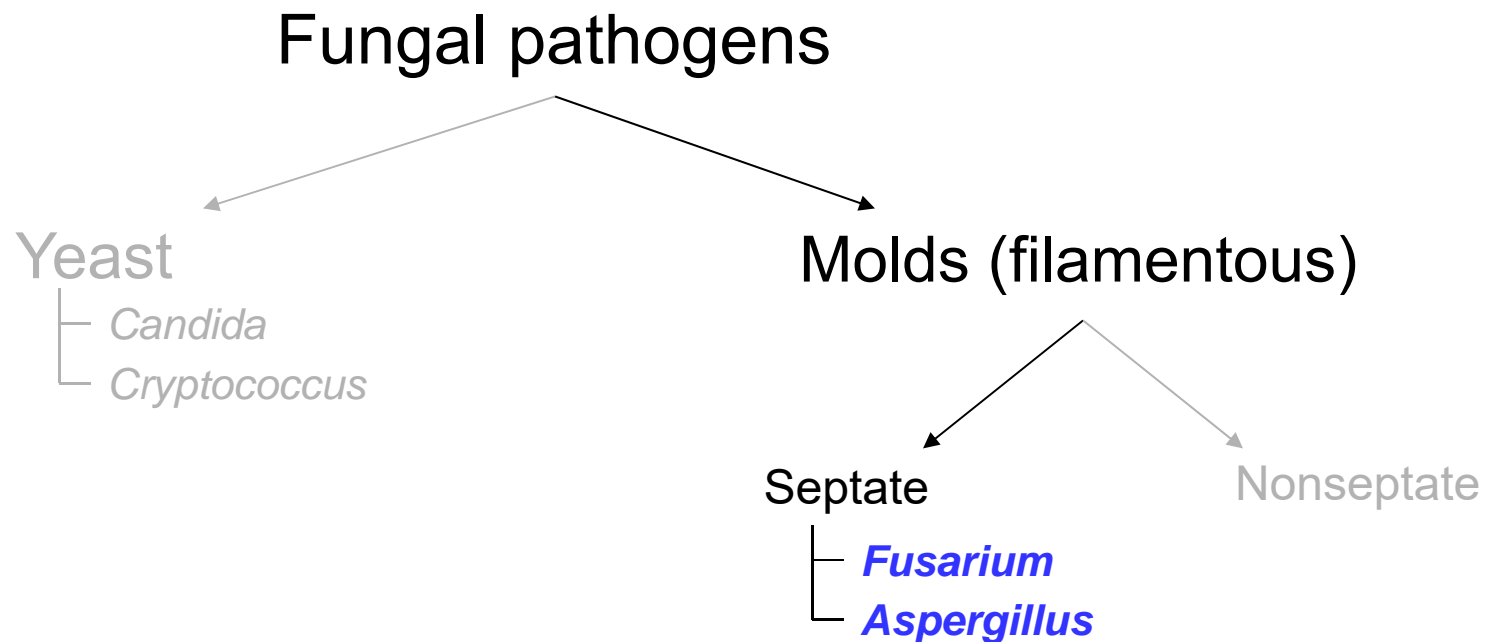


What two conditions are classically associated with Fusarium and Aspergillus keratitis?

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Common Ocular Fungal Pathogens

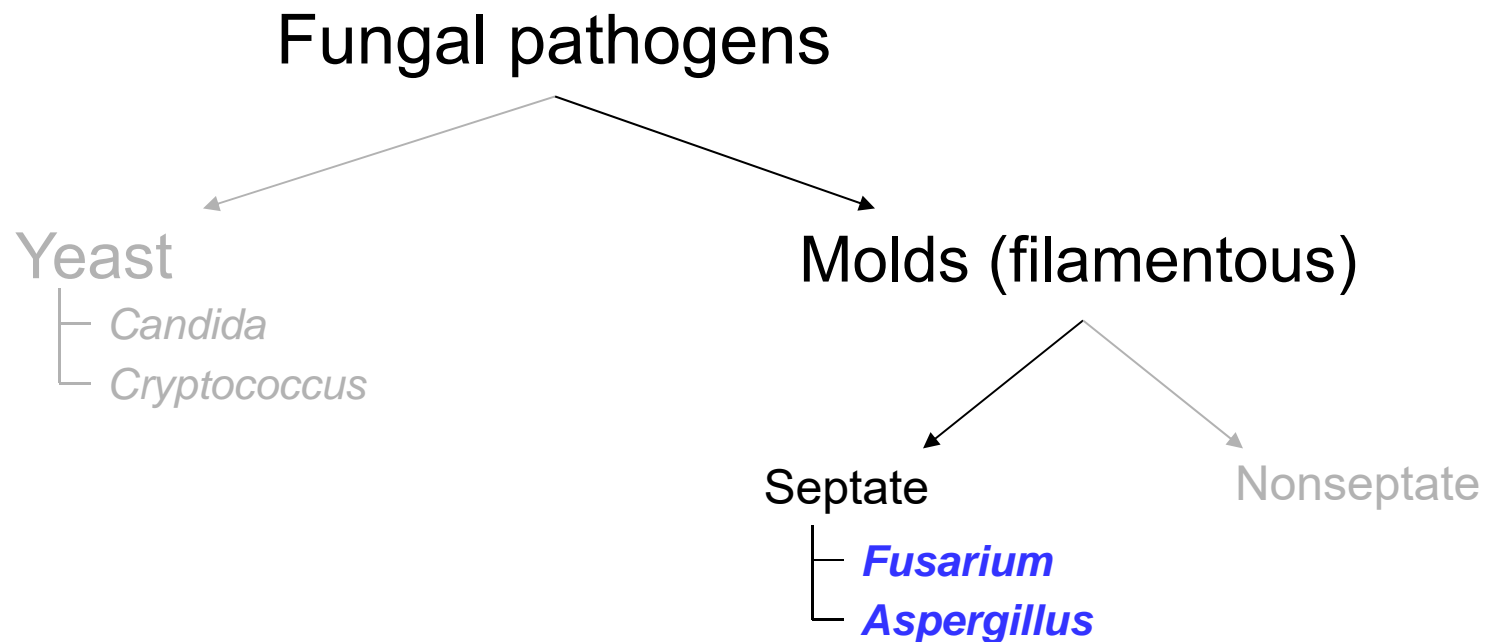


What two conditions are classically associated with *Fusarium* and *Aspergillus keratitis*?

- Ocular trauma, especially if it involves one word matter
- CL wear (especially one of the bugs)

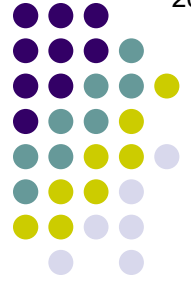


Common Ocular Fungal Pathogens

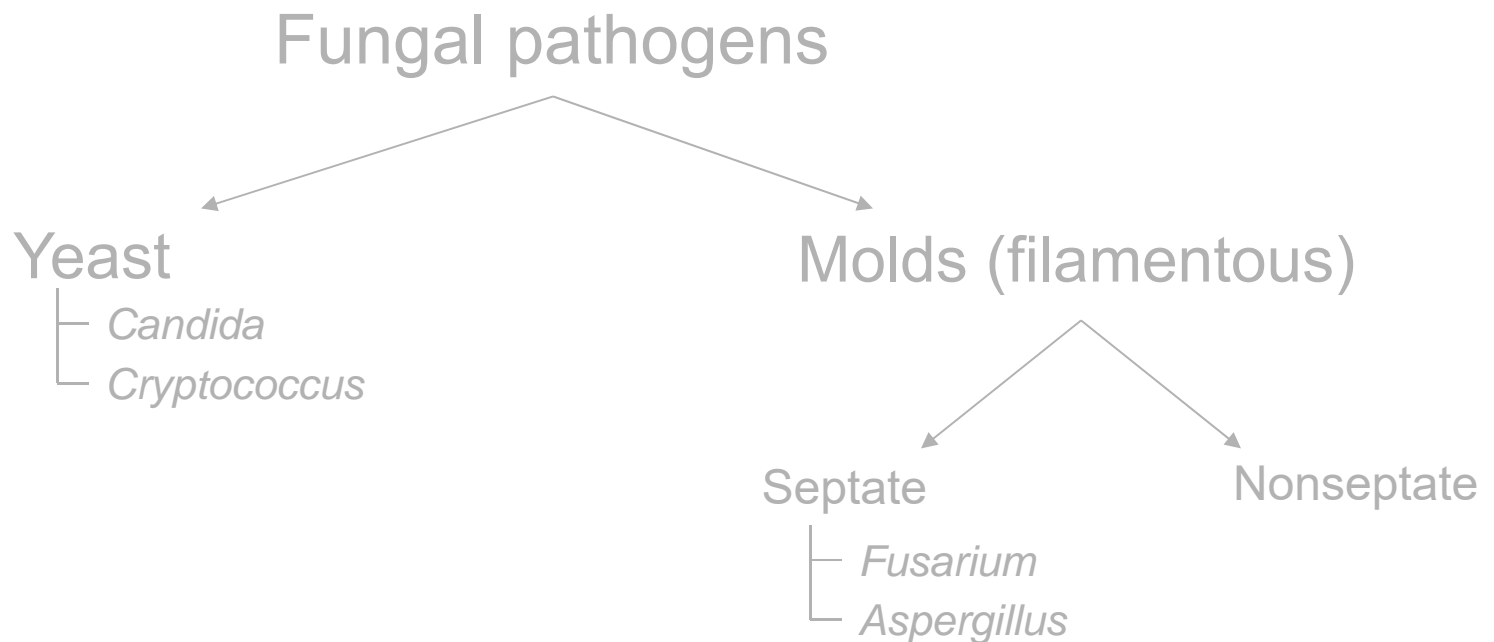


What two conditions are classically associated with Fusarium and Aspergillus keratitis?

- Ocular trauma, especially if it involves vegetative matter
- CL wear (especially *Fusarium*)



Common Ocular Fungal Pathogens

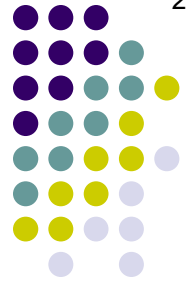


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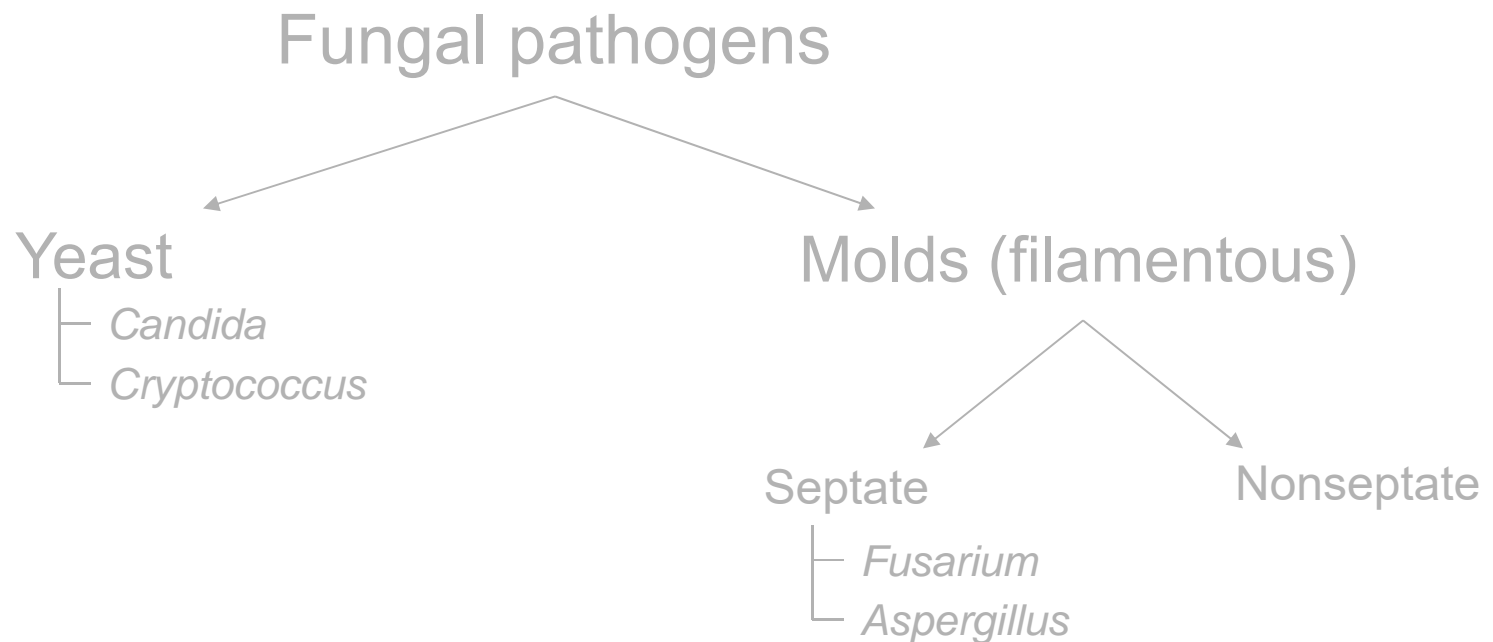
--Ocular trauma, especially if it involves vegetative matter

--CL wear (especially *Fusarium*)

As an aside: What horrible bacterial endophthalmitis is associated with penetrating vegetative trauma?



Common Ocular Fungal Pathogens



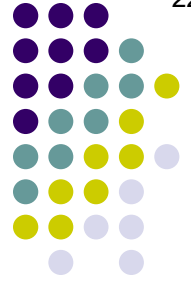
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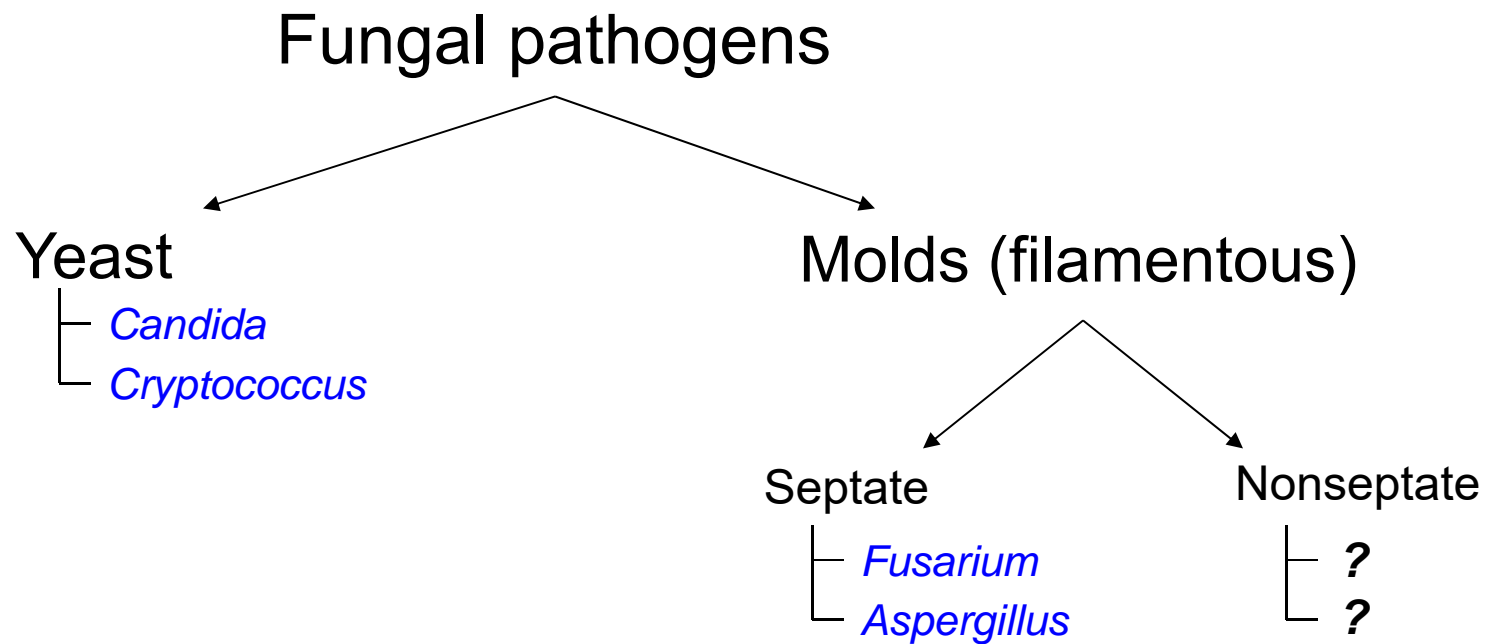
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As an aside: What horrible bacterial endophthalmitis is associated with penetrating vegetative trauma?

Bacillus cereus

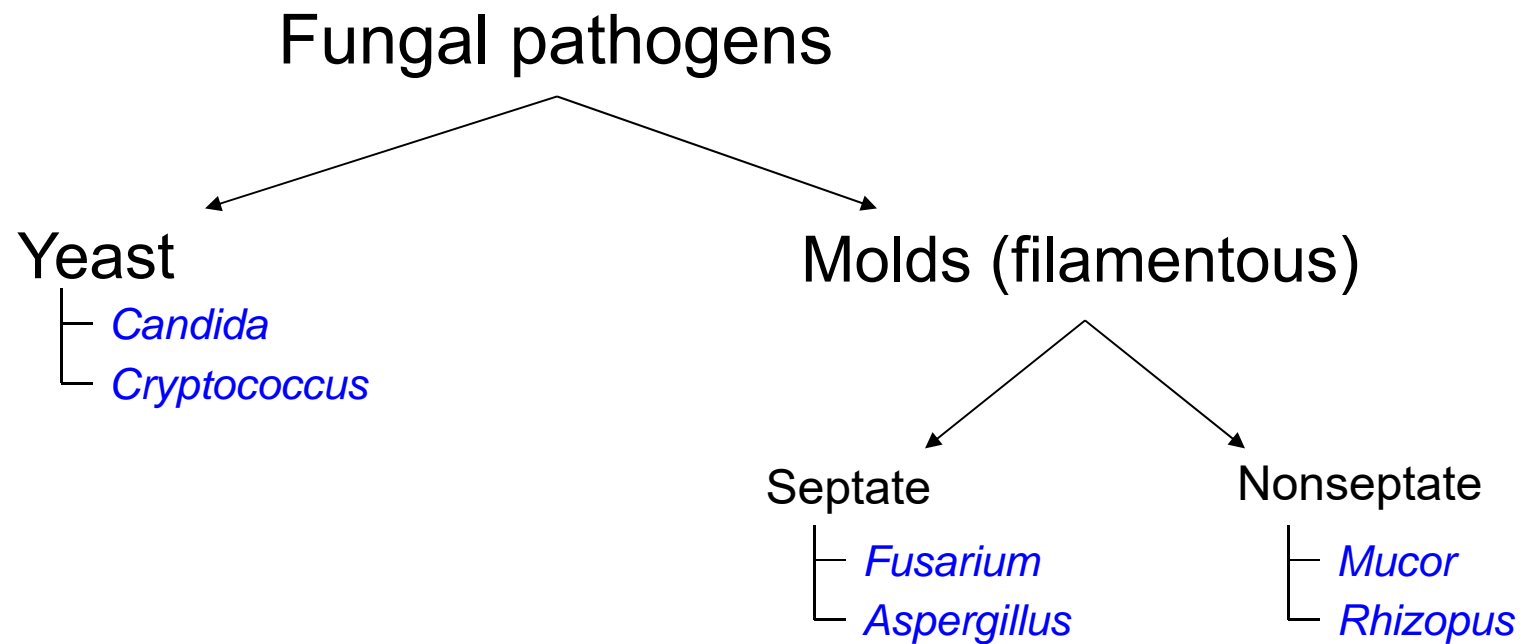


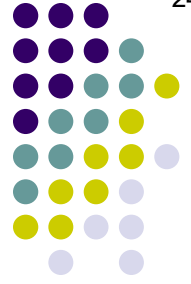
Common Ocular Fungal Pathogens



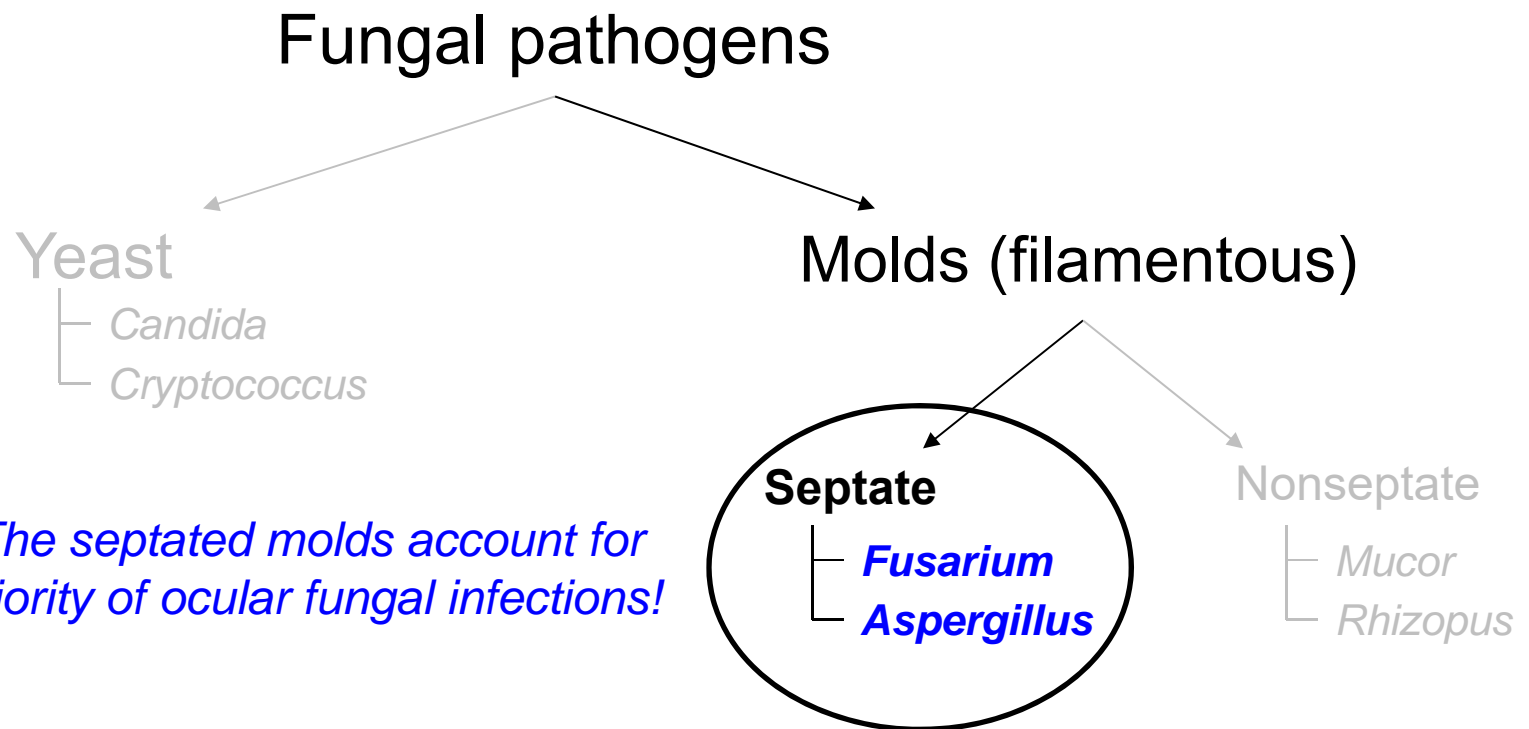


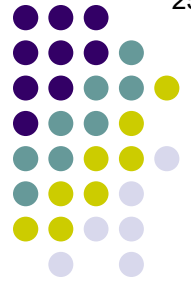
Common Ocular Fungal Pathogens





Common Ocular Fungal Pathogens





Common Ocular Fungal Pathogens

Fungal pathogens

What is the classic systemic medical problem associated with Mucor/Rhizopus infection?

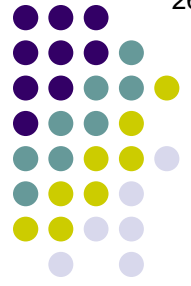
Molds (filamentous)

Septate

— *Fusarium*
— *Aspergillus*

Nonseptate

— *Mucor*
— *Rhizopus*



Common Ocular Fungal Pathogens

Fungal pathogens

What is the classic systemic medical problem associated with Mucor/Rhizopus infection?
A diabetic in DKA

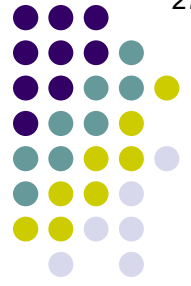
Molds (filamentous)

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Fusarium
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Common Ocular Fungal Pathogens

Fungal pathogens

*What is the classic systemic medical problem associated with Mucor/Rhizopus infection?
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Another associated medical condition is acute renal failure. What do ARF and DKA have in common that accounts for this?

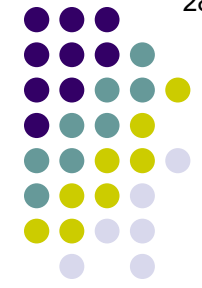
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Common Ocular Fungal Pathogens

Fungal pathogens

What is the classic systemic medical problem associated with Mucor/Rhizopus infection?
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Another associated medical condition is acute renal failure. What do ARF and DKA have in common that accounts for this?
 Both produce systemic **metabolic derangement**, which interferes with **immune cell action**

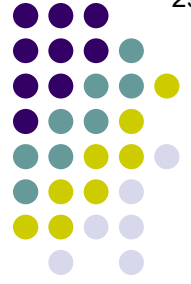
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Common Ocular Fungal Pathogens

Fungal pathogens

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A diabetic in DKA*

Another associated medical condition is acute renal failure. What do ARF and DKA have in common that accounts for this?

Both produce systemic acidosis, which interferes with phagocytosis

What ophthalmic condition is Mucor/Rhizopus most likely to cause?

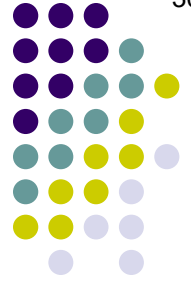
Molds (filamentous)

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Common Ocular Fungal Pathogens

Fungal pathogens

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Orbital cellulitis

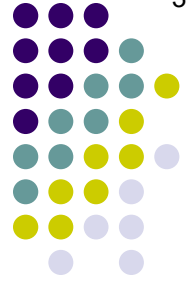
Molds (filamentous)

Septate

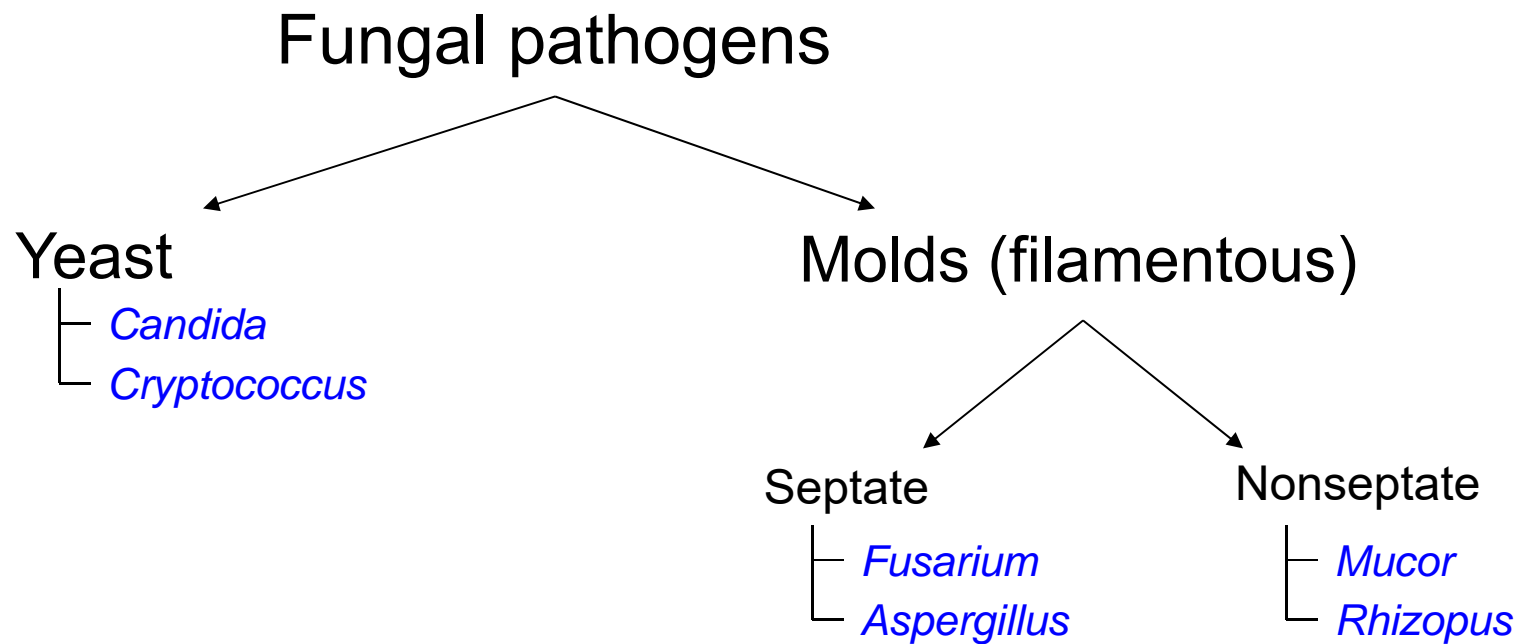
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— *Aspergillus*

Nonseptate

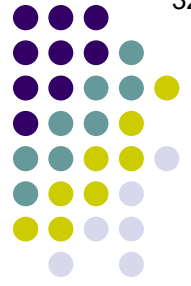
— *Mucor*
— *Rhizopus*



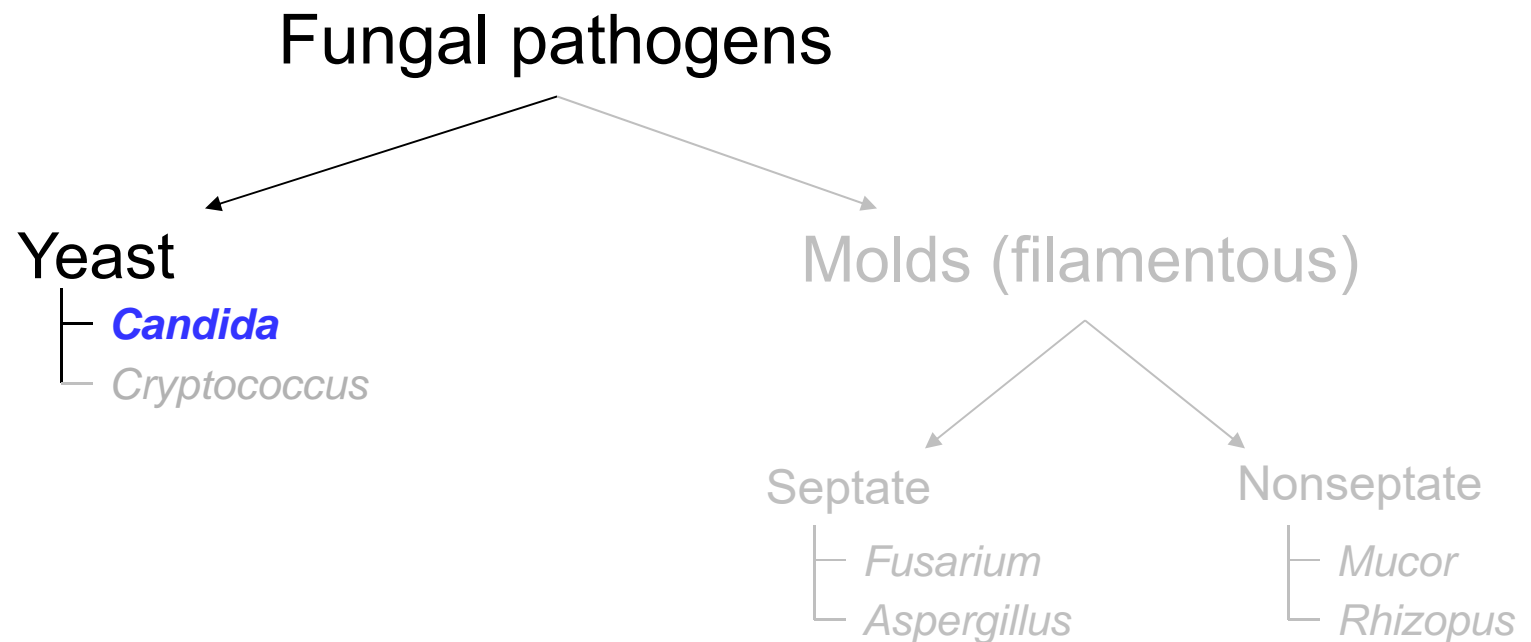
Common Ocular Fungal Pathogens



Which is the only fungus that will take a Gram stain?



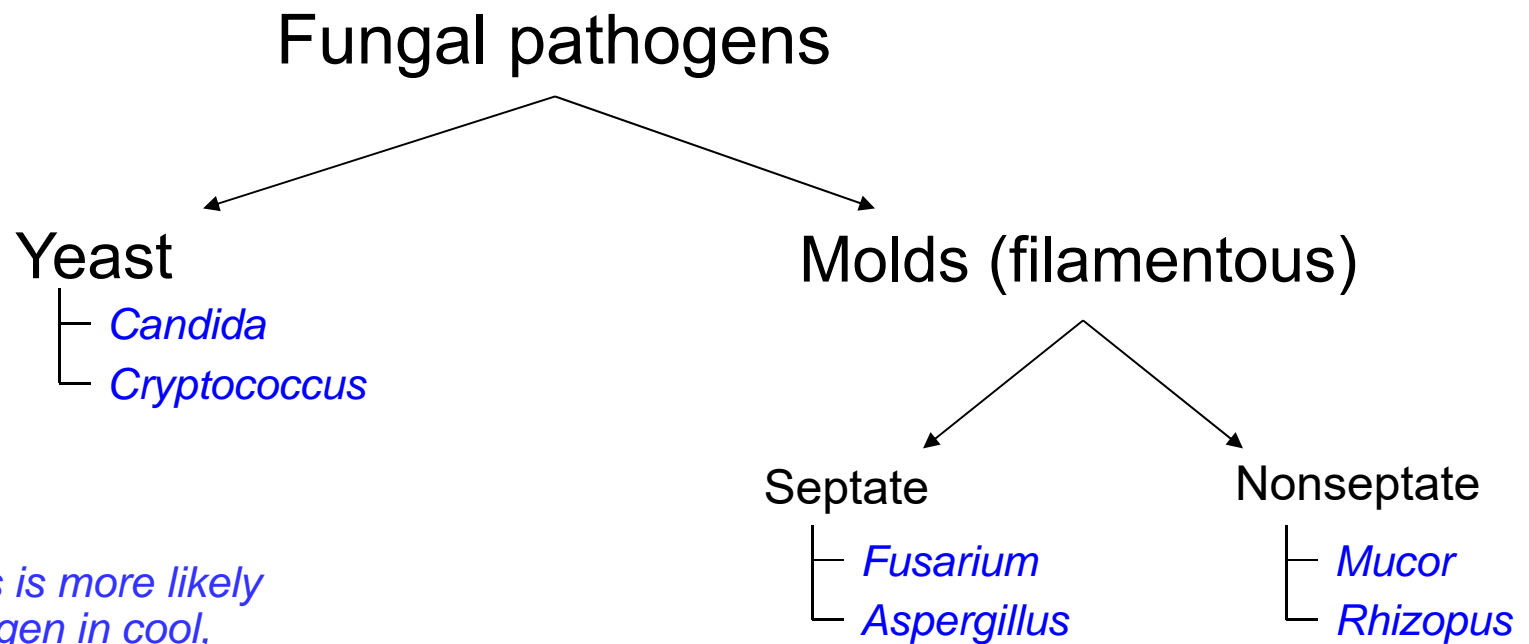
Common Ocular Fungal Pathogens



Which is the only fungus that will take a Gram stain?
Candida

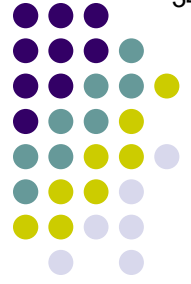


Common Ocular Fungal Pathogens

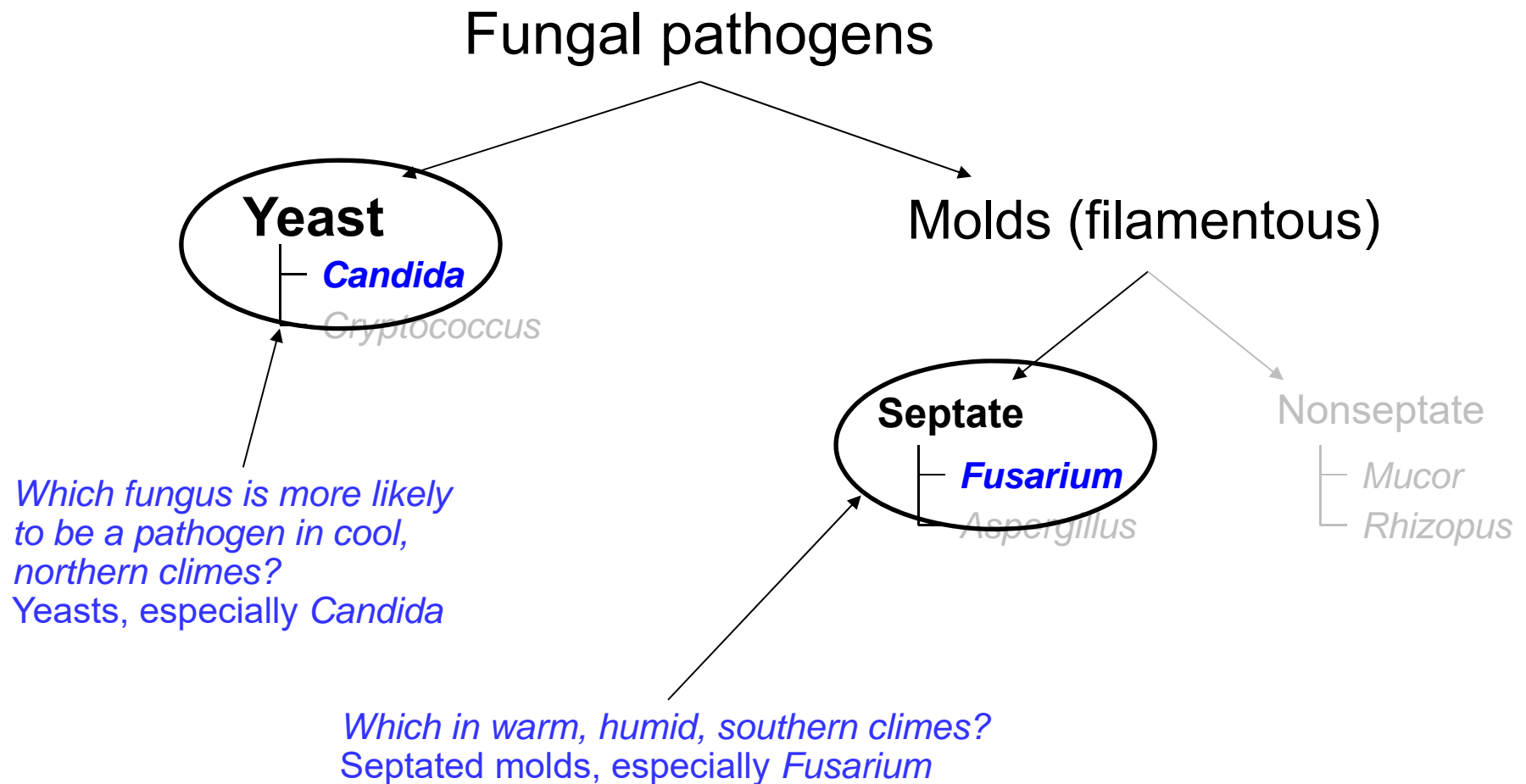


Which fungus is more likely to be a pathogen in cool, northern climes?

Which in warm, humid, southern climes?

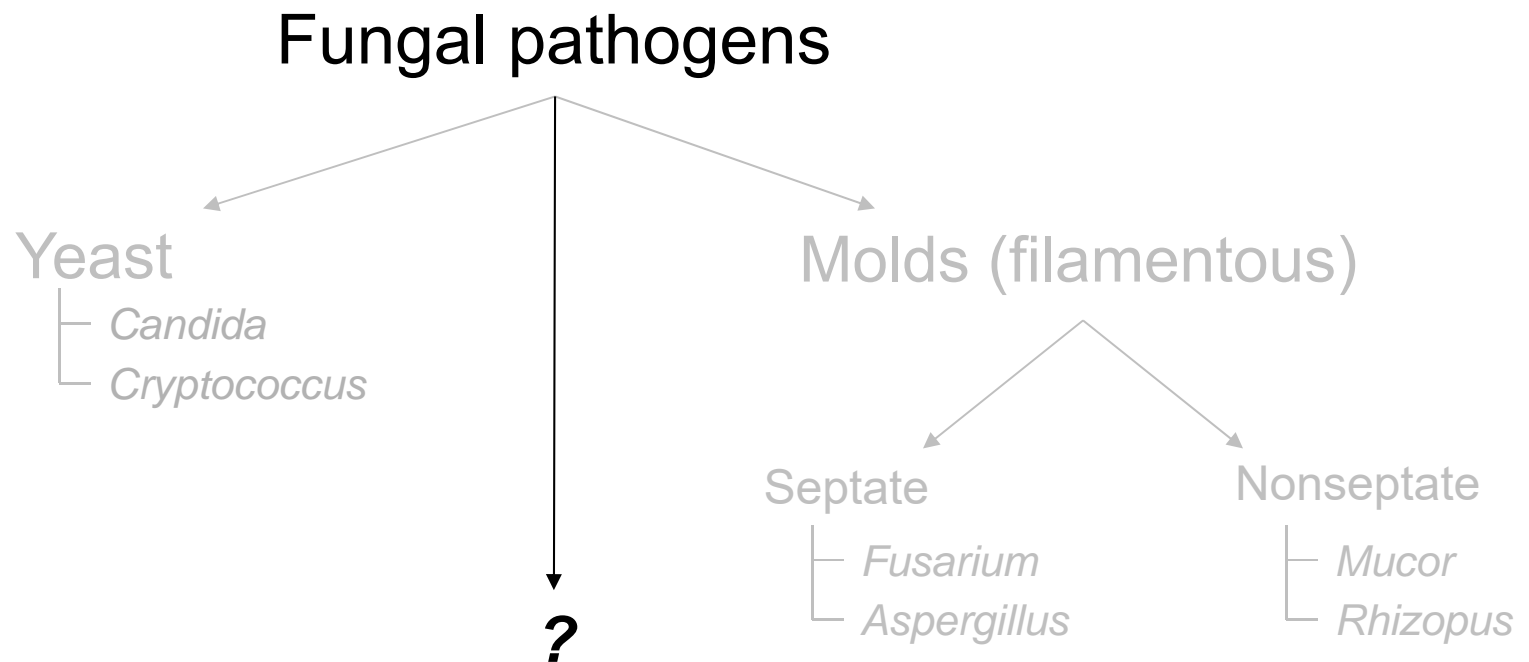


Common Ocular Fungal Pathogens

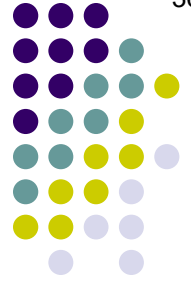




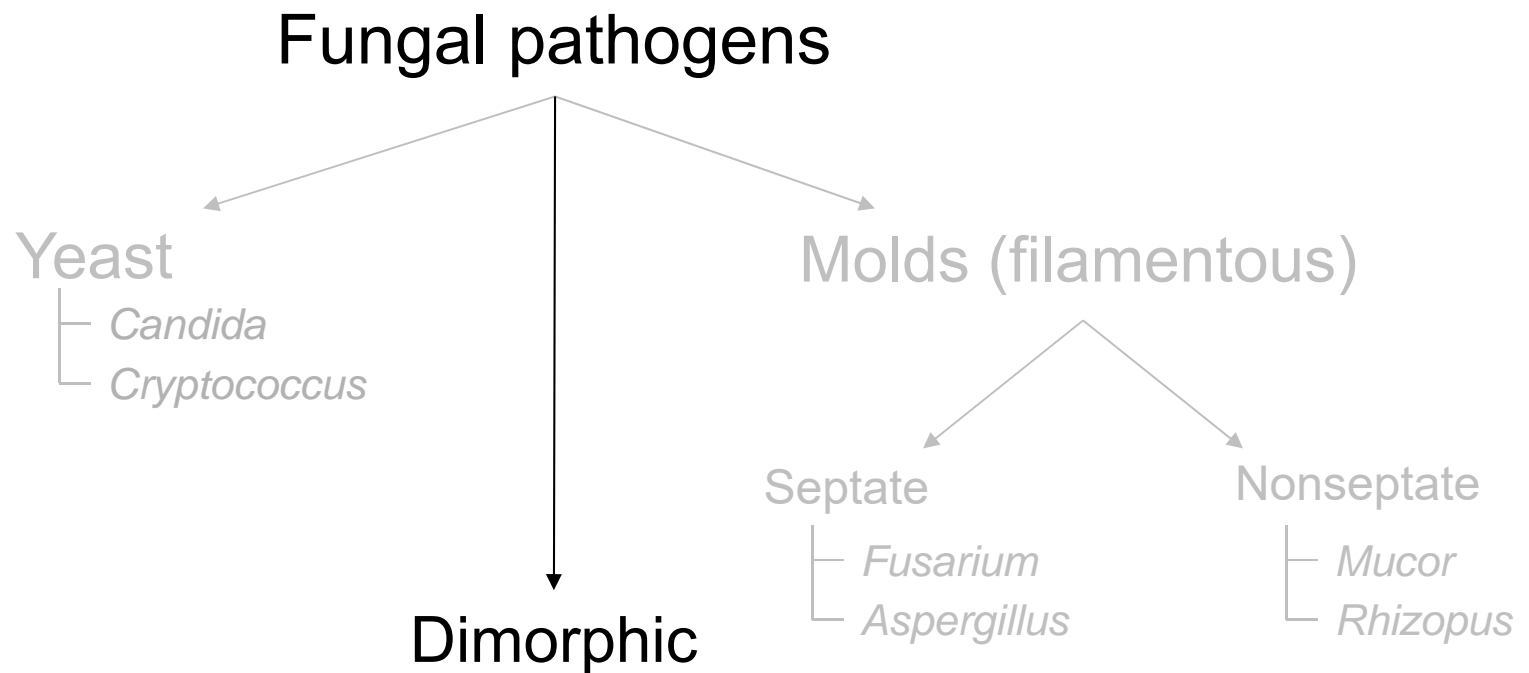
Common Ocular Fungal Pathogens



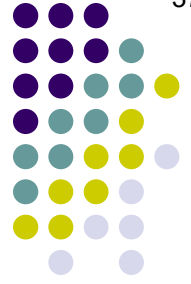
Some fungi exist as yeast in the body, but as mold in the environment. What is the term for such fungi?



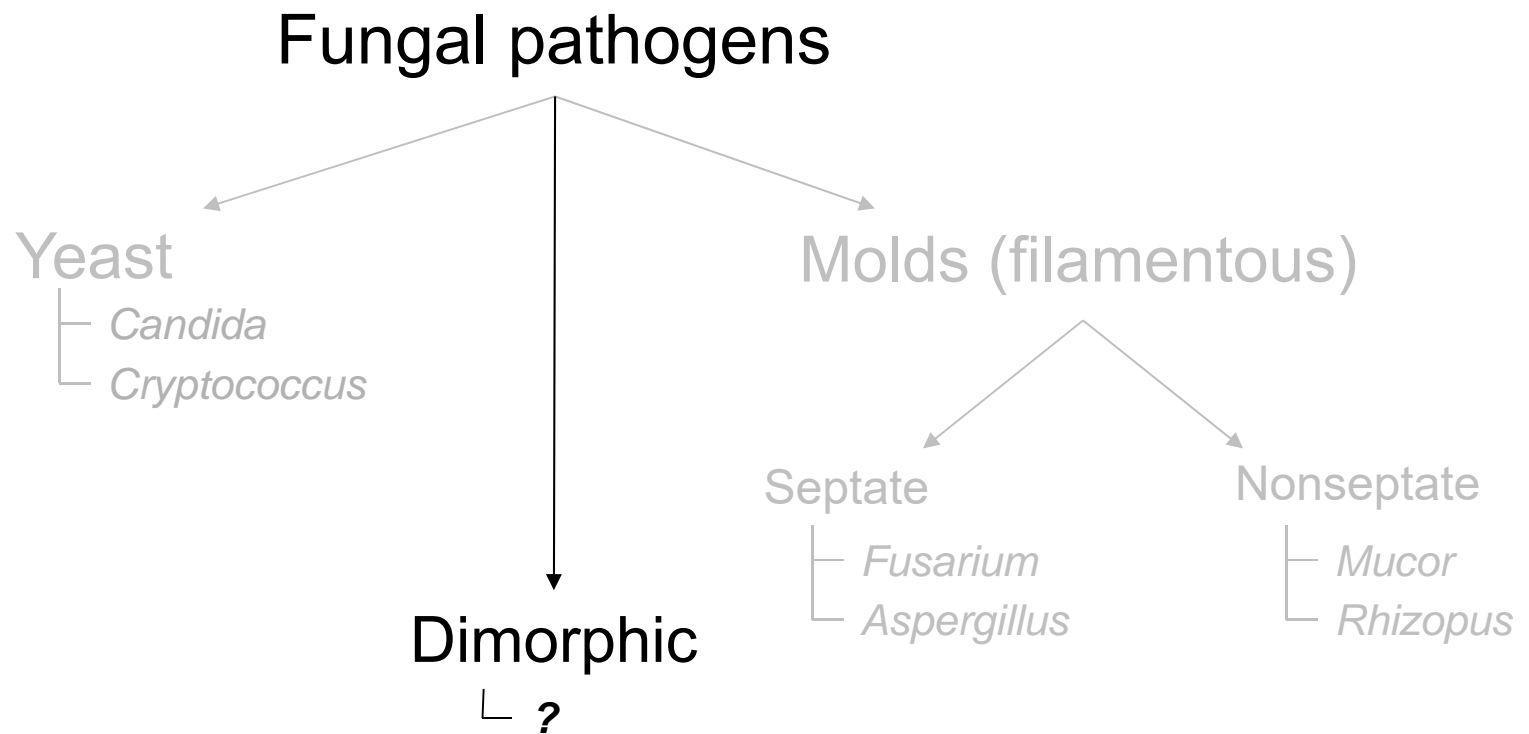
Common Ocular Fungal Pathogens



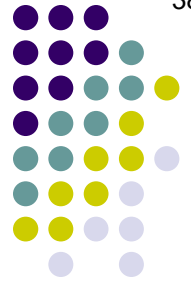
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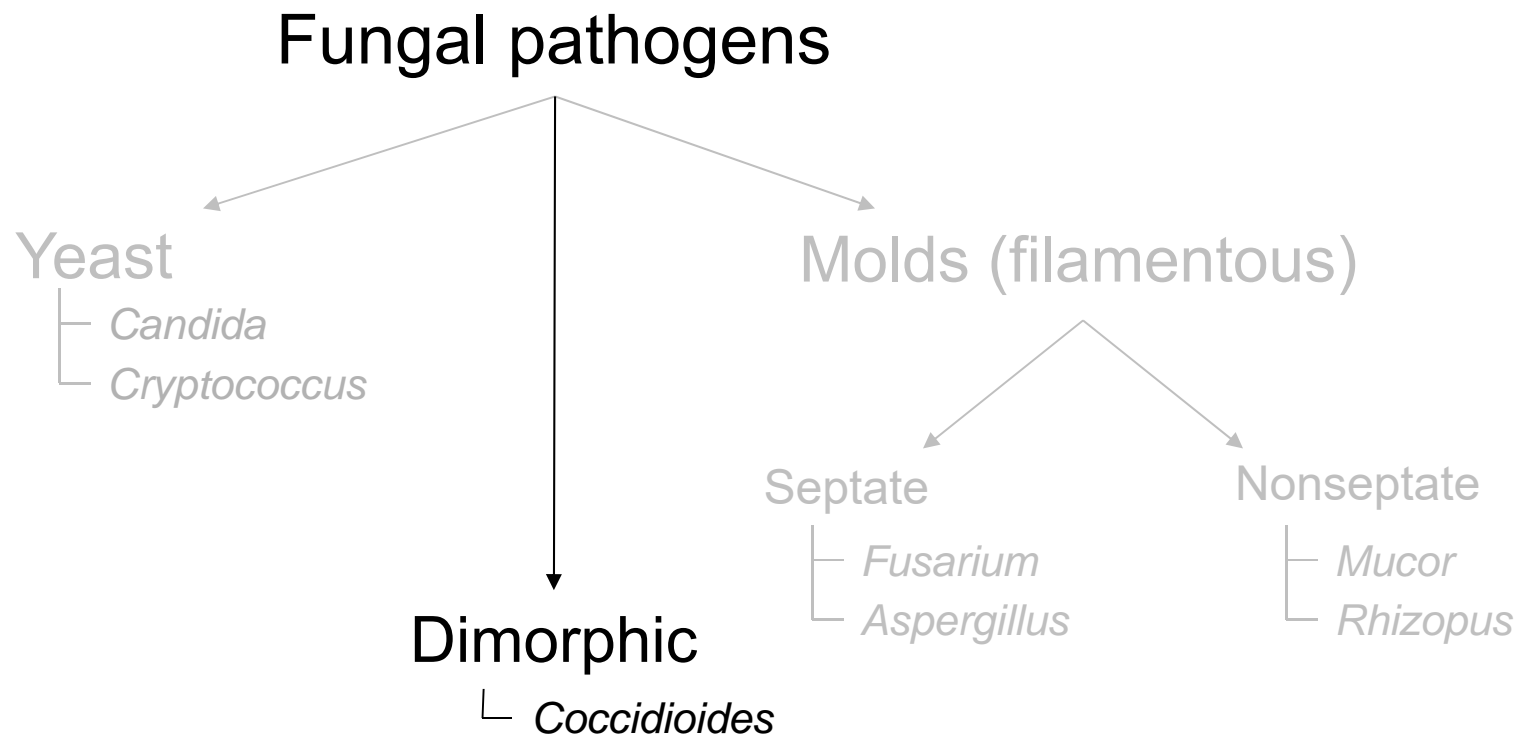
Common Ocular Fungal Pathogens



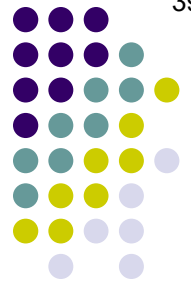
Which dimorphic fungus is most commonly implicated as an ocular pathogen?



Common Ocular Fungal Pathogens



Which dimorphic fungus is most commonly implicated as an ocular pathogen?



Common Ocular Fungal Pathogens

Fungal pathogens

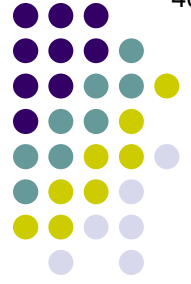
Coccidioides has a definite geographic preponderance in the United States. What is it?

Dimorphic

└ ***Coccidioides***

└ *Aspergillus*

└ *Rhizopus*



Common Ocular Fungal Pathogens

Fungal pathogens

Coccidioides has a definite geographic preponderance in the United States. What is it?
The Southwest, particularly the three words of California

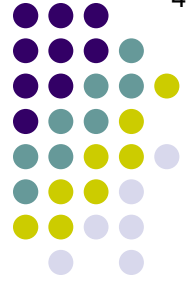
Dimorphic

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└ *Rhizopus*

e



Common Ocular Fungal Pathogens

Fungal pathogens

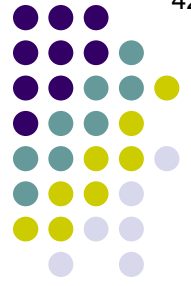
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Common Ocular Fungal Pathogens

Fungal pathogens

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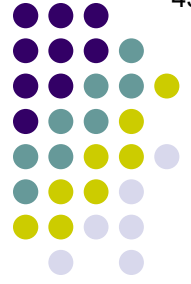
What sort of ocular involvement is most commonly associated with *Coccidioides*?

Dimorphic

└ ***Coccidioides***

└ *Aspergillus*

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Common Ocular Fungal Pathogens

Fungal pathogens

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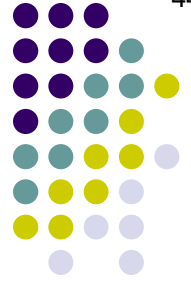
What sort of ocular involvement is most commonly associated with *Coccidioides*?
Surface infection, usually conjunctivitis

Dimorphic

└ ***Coccidioides***

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Common Ocular Fungal Pathogens

Fungal pathogens

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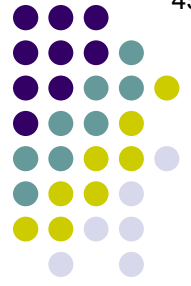
Very rarely, *Coccidioides* is implicated in a particularly dreadful ocular condition. What is it?

Dimorphic

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Common Ocular Fungal Pathogens

Fungal pathogens

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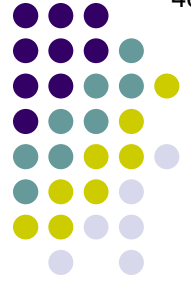
Very rarely, *Coccidioides* is implicated in a particularly dreadful ocular condition. What is it?
Endogenous endophthalmitis (it is one of the nonneoplastic causes of 'masquerade syndrome')

Dimorphic

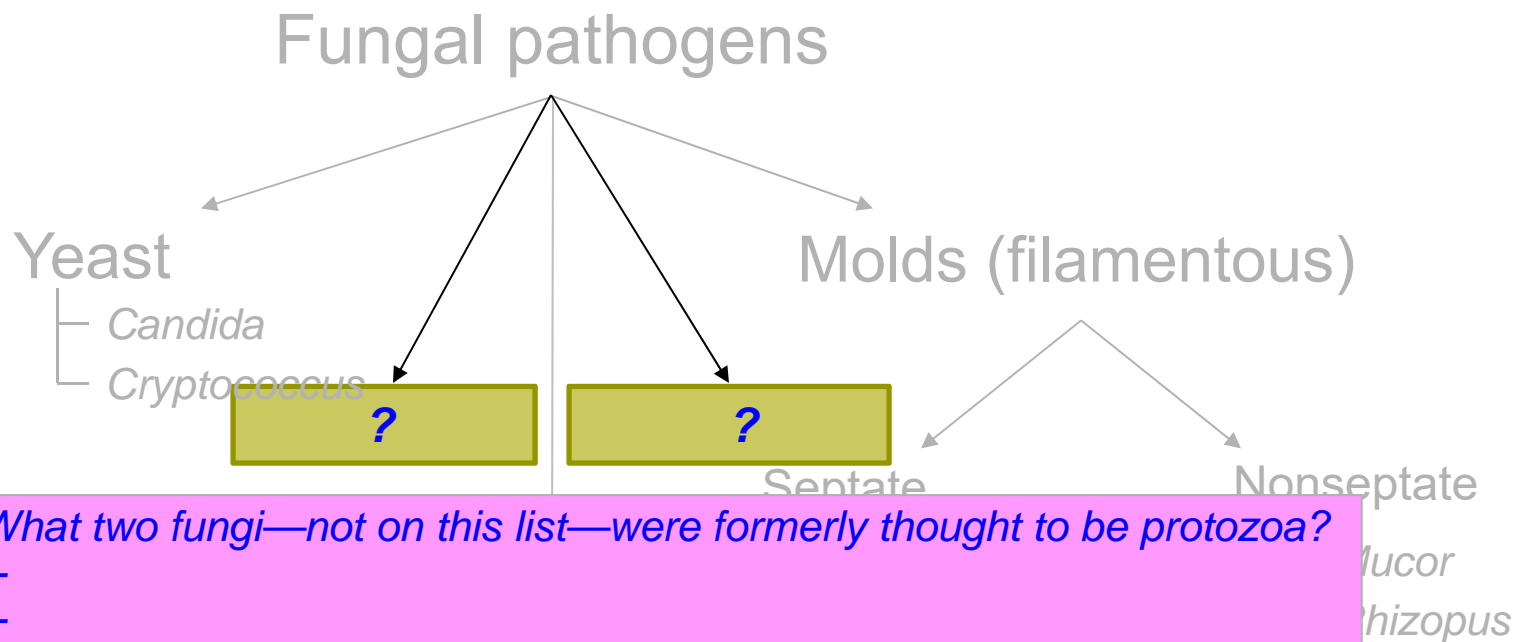
└ ***Coccidioides***

└ *Aspergillus*

└ *Rhizopus*

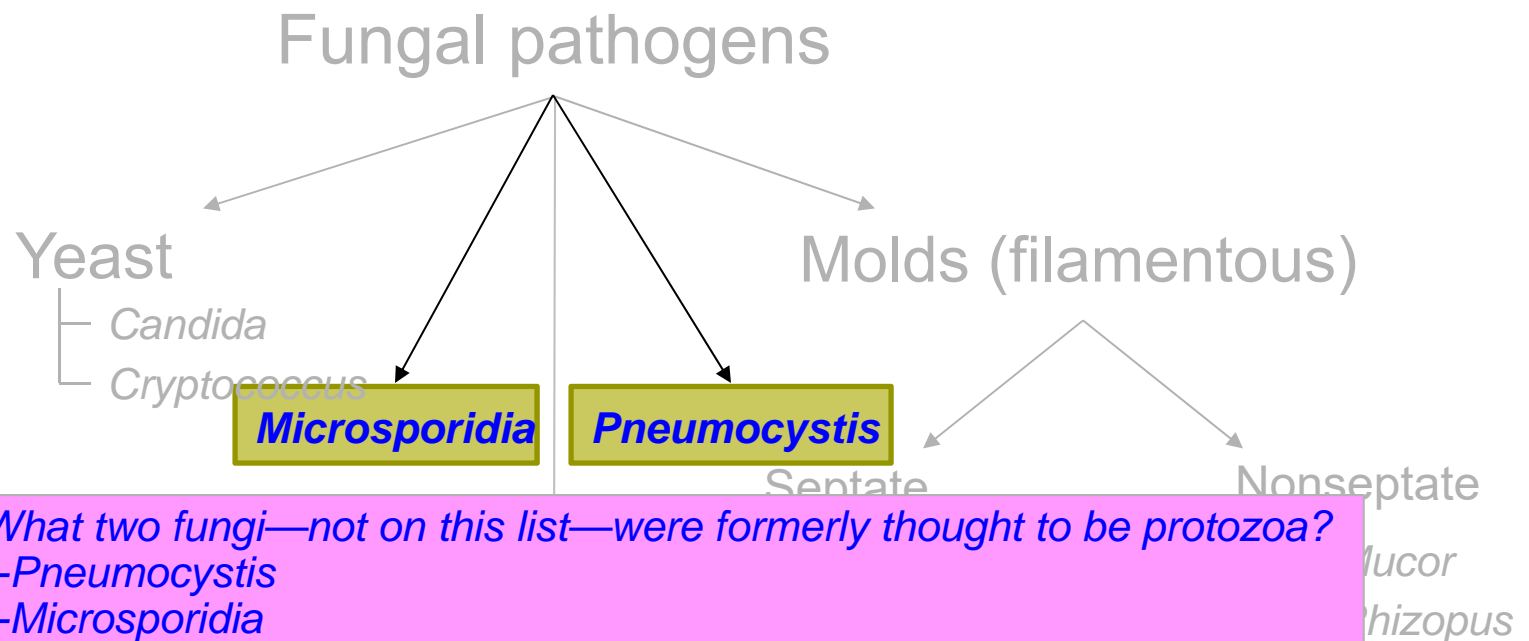


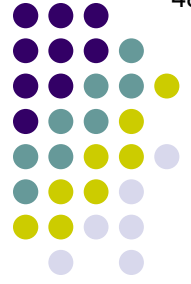
Common Ocular Fungal Pathogens



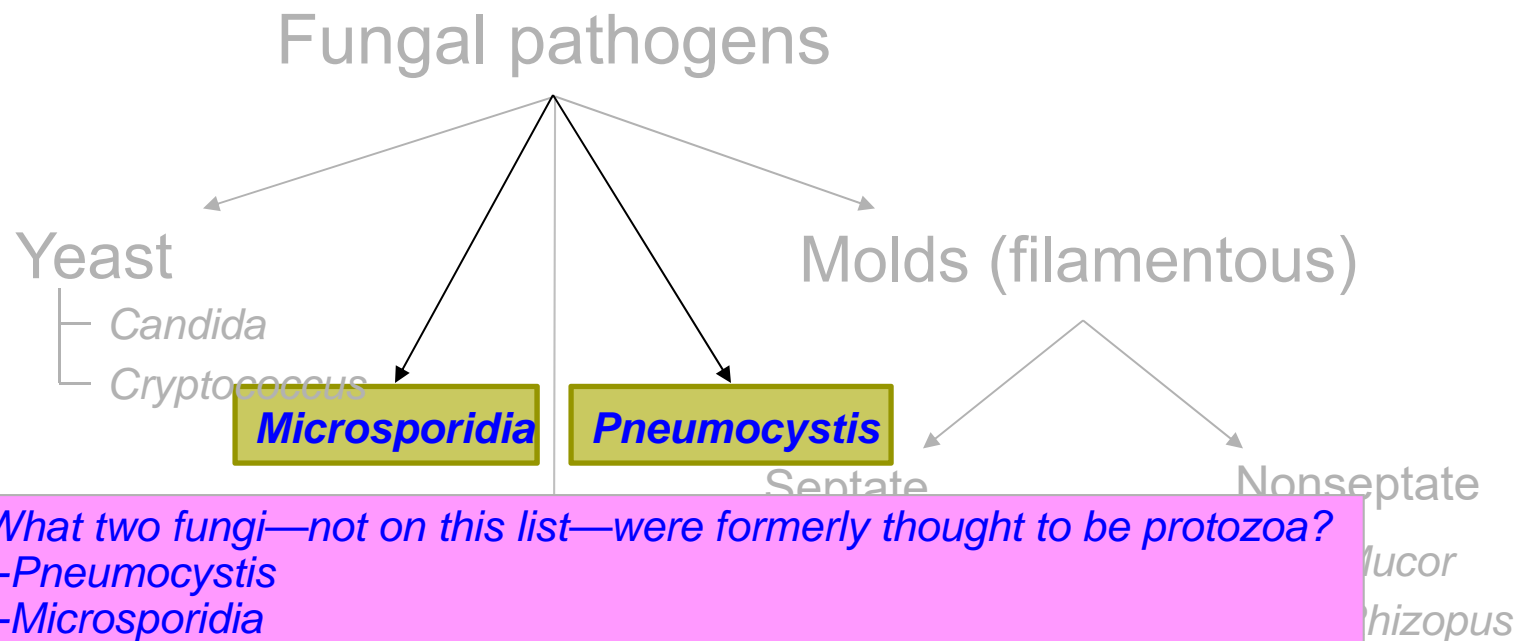


Common Ocular Fungal Pathogens





Common Ocular Fungal Pathogens

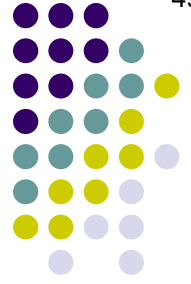


What two fungi—not on this list—were formerly thought to be protozoa?

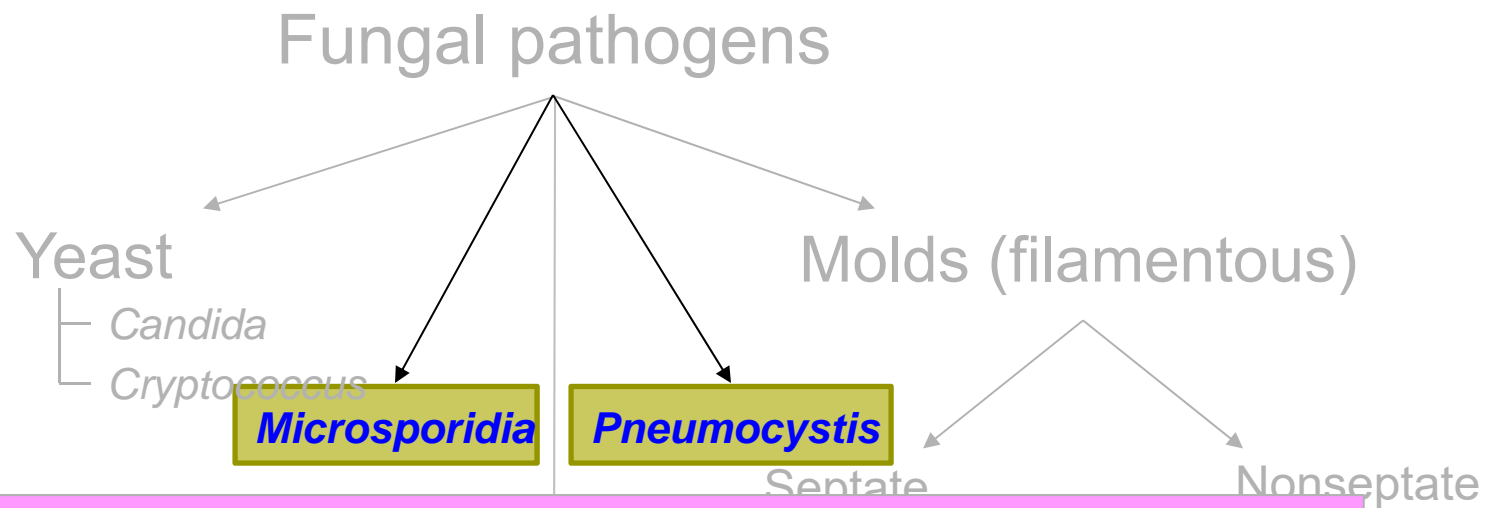
--Pneumocystis

--Microsporidia

Who is at risk for these?



Common Ocular Fungal Pathogens



What two fungi—not on this list—were formerly thought to be protozoa?

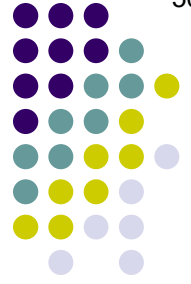
--*Pneumocystis*

--*Microsporidia*

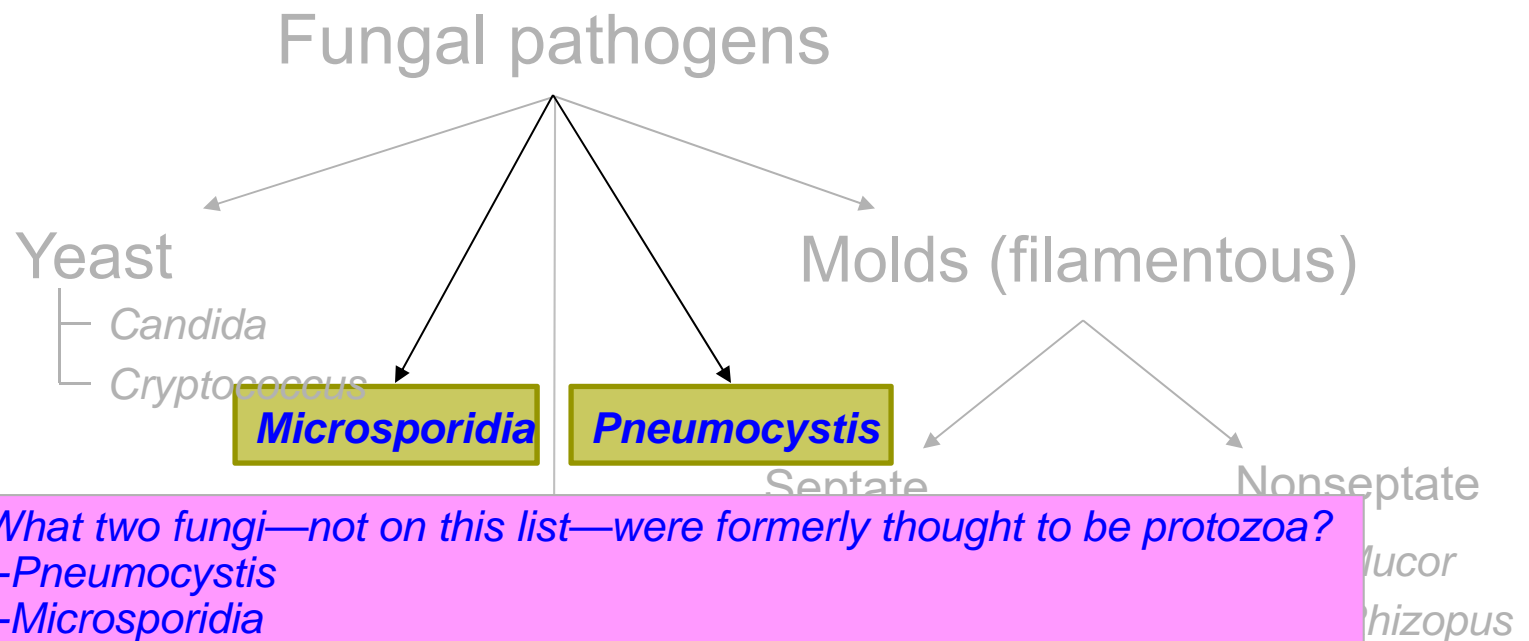
Who is at risk for these?

AIDS pts

Mucor
Rhizopus



Common Ocular Fungal Pathogens



What two fungi—not on this list—were formerly thought to be protozoa?

--Pneumocystis

--Microsporidia

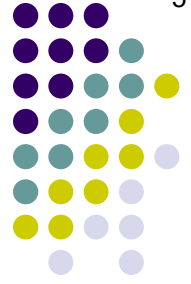
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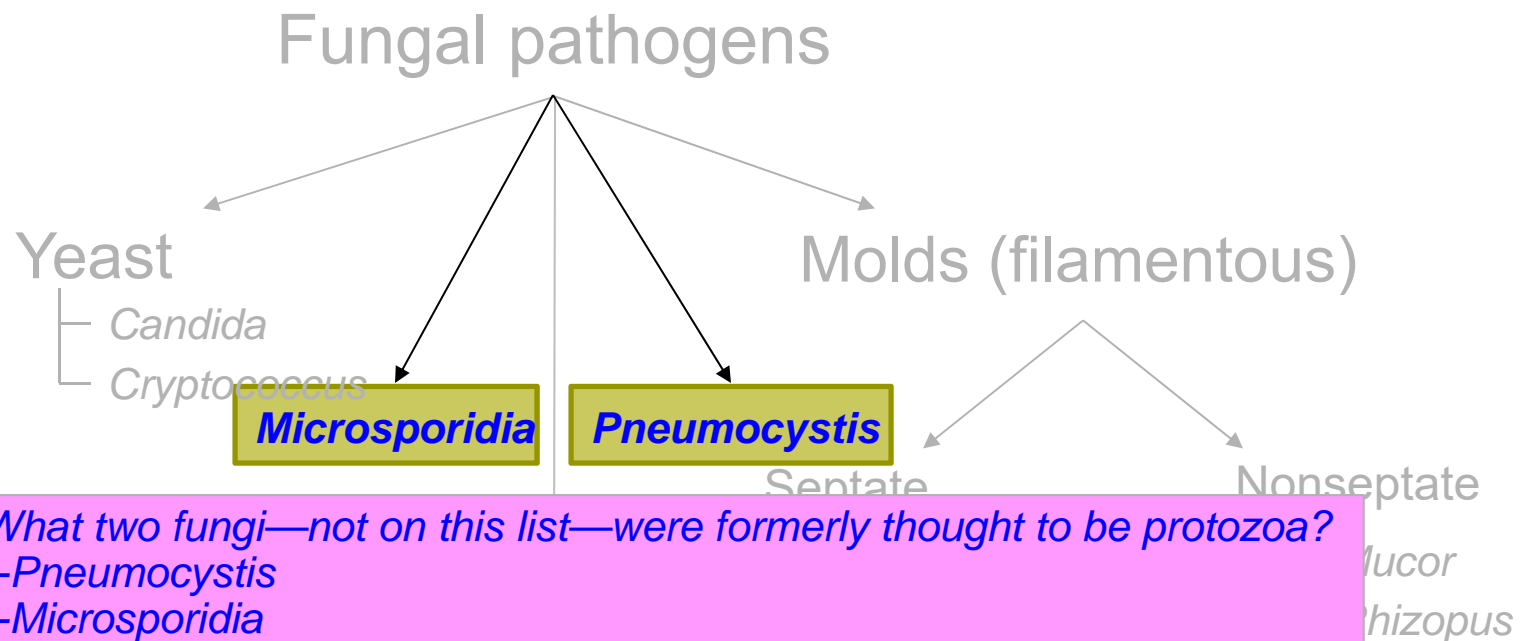
What ocular disease does each cause in AIDS pts?

--Pneumocystis:

--Microsporidia:



Common Ocular Fungal Pathogens



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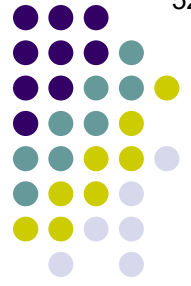
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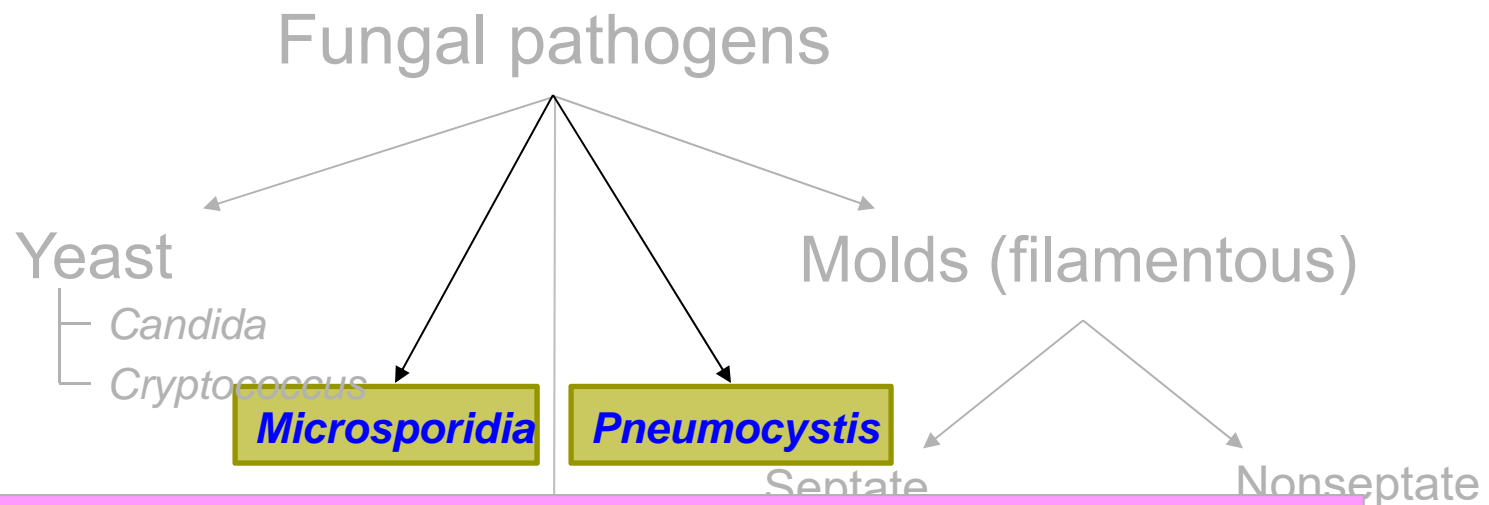
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--Pneumocystis: Choroiditis

--Microsporidia:



Common Ocular Fungal Pathogens



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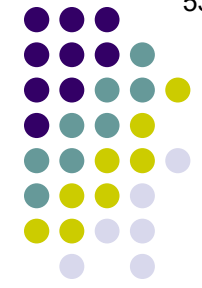
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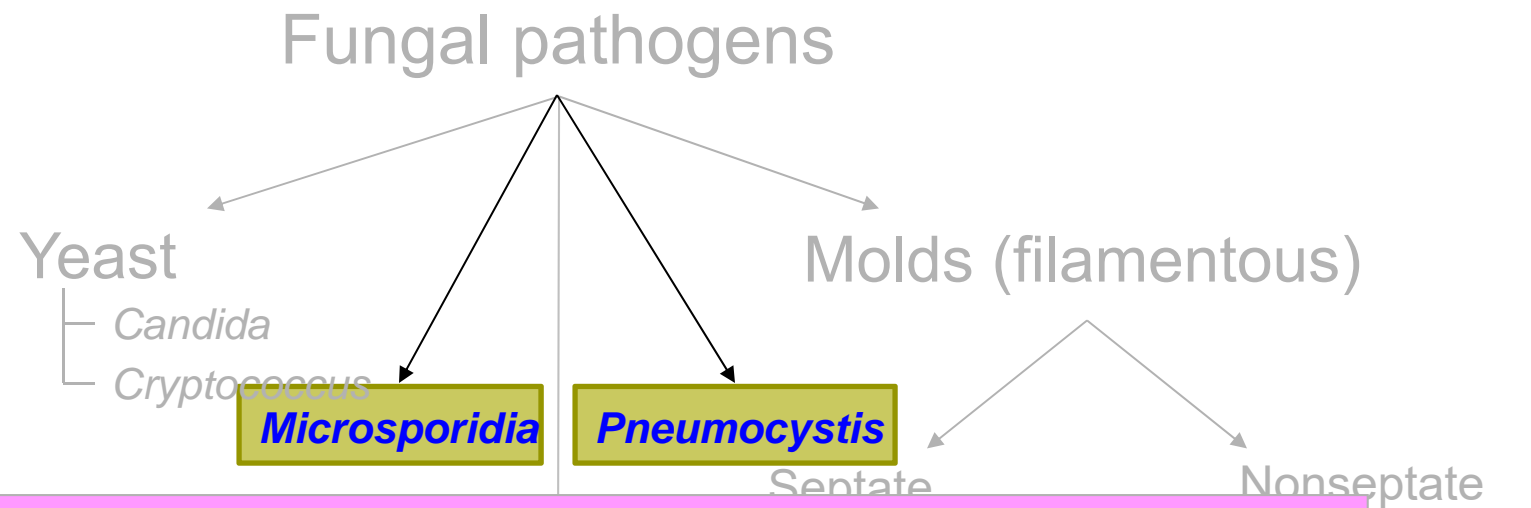
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Common Ocular Fungal Pathogens



What two fungi—not on this list—were formerly thought to be protozoa?
 --Pneumocystis
 --Microsporidia

Who is at risk for these?
 AIDS pts

What ocular disease does each cause in AIDS pts?
 --Pneumocystis: Choroiditis
 --Microsporidia: Epithelial keratitis