

Ocular Inflammatory Diseases

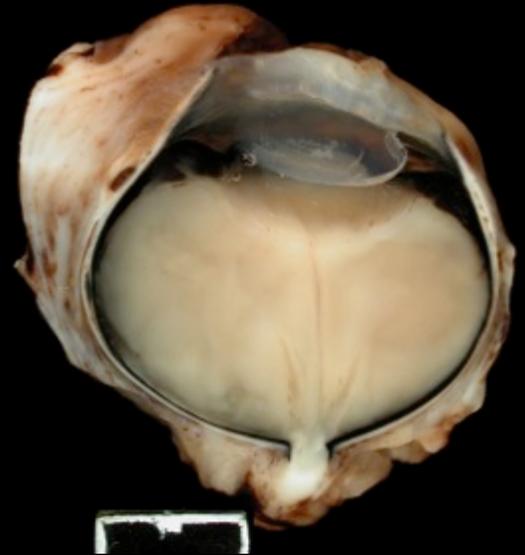
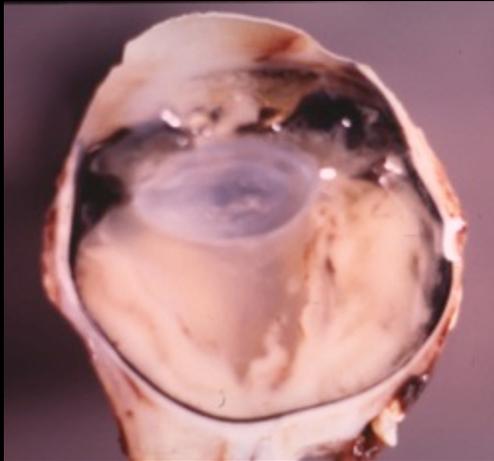
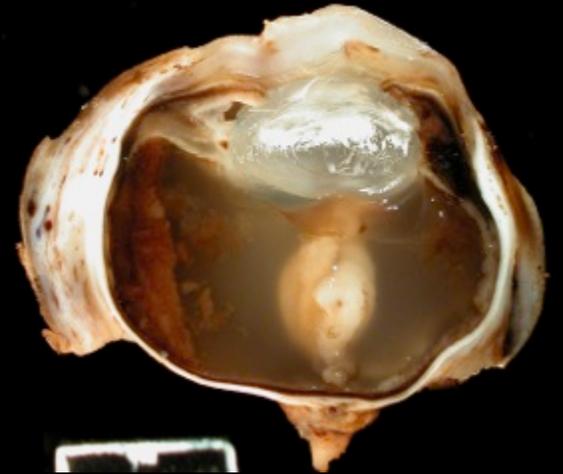
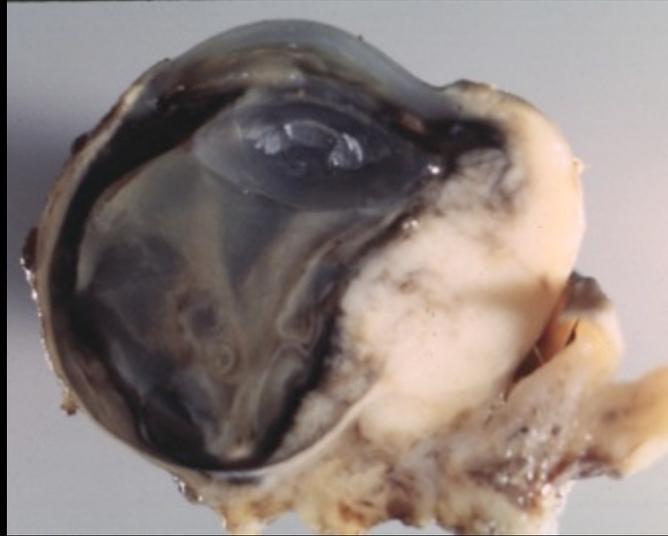
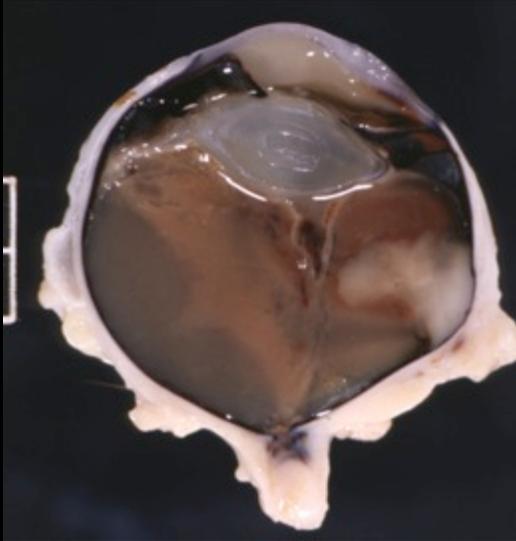
Uveitis Organisms

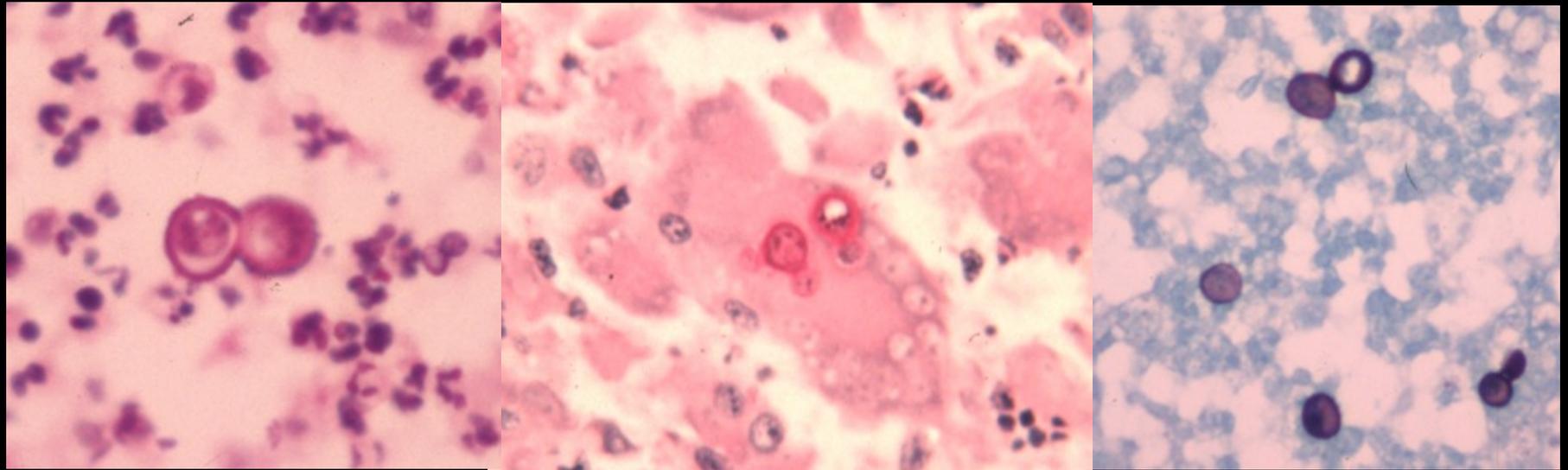
- **Blastomycosis**
- Cryptococcosis
- Coccidioidomycosis
- Histoplasmosis
- Protothecosis
- Aspergillosis

Blastomycosis

215 cases in dogs, 11 cases in cats

- *Blastomyces dermatitidis*
- Dogs more than cats
- 36 cases in Golden Retrievers 41 in Labs
- 122/226 less than 5 years old
- 20 older than 10 years old
- Mississippi River valley
- Very local hotbeds
- Soil fungus spread through inhalation from the soil
- Encapsulated with broad-based budding





Blastomycosis

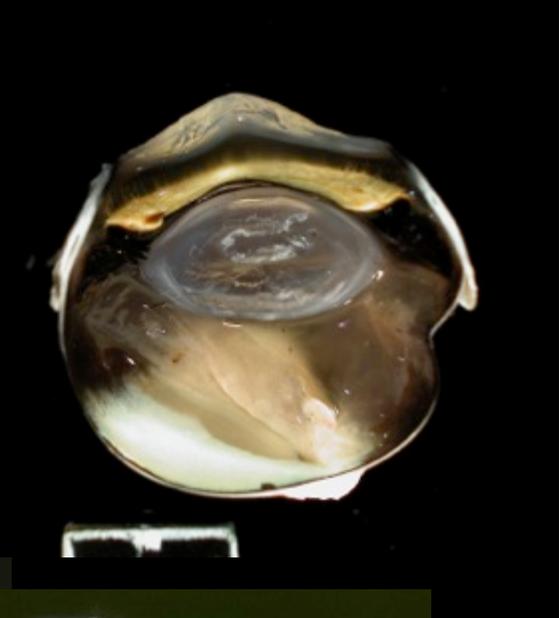
Uveitis Organisms

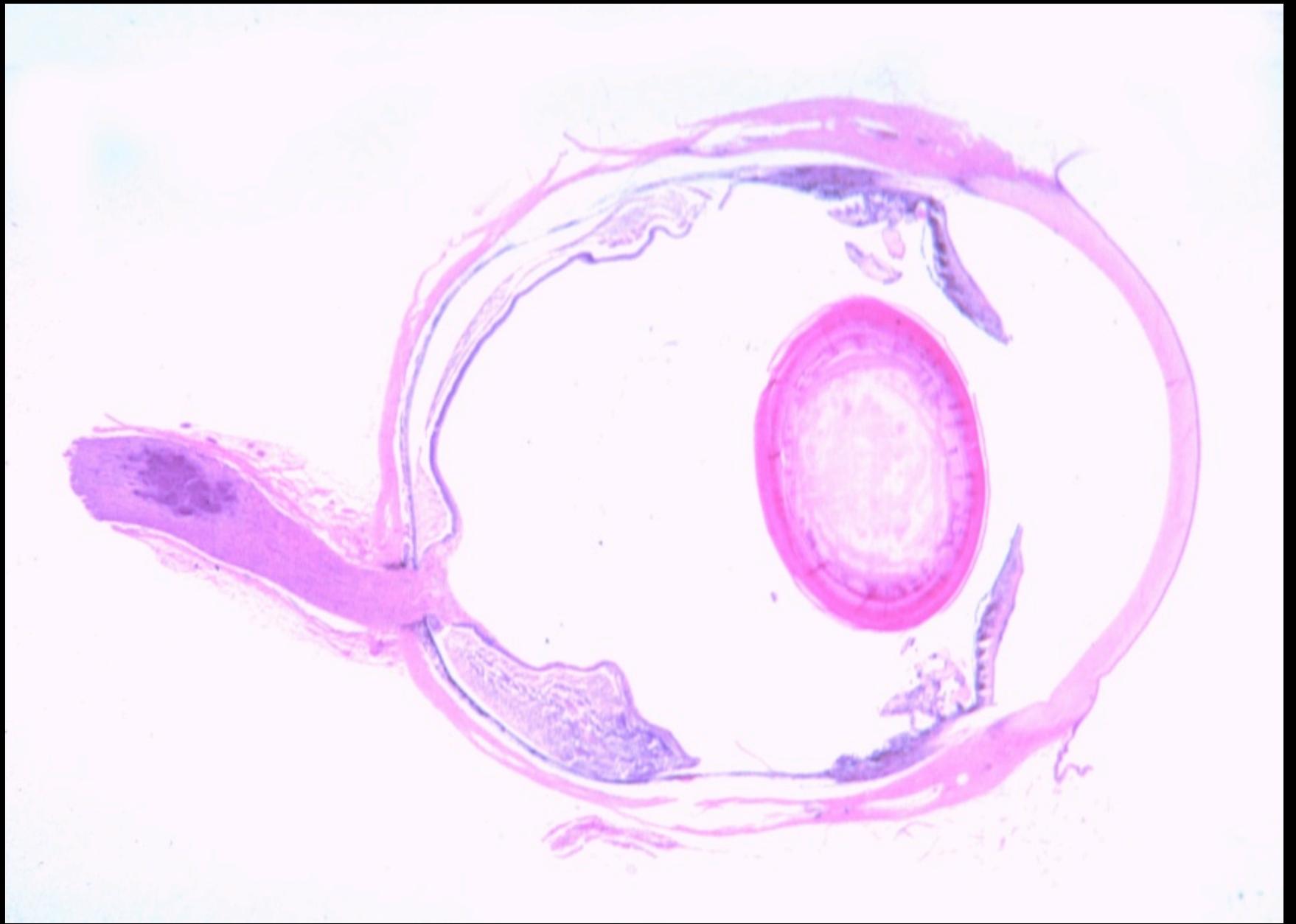
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Cryptococcosis

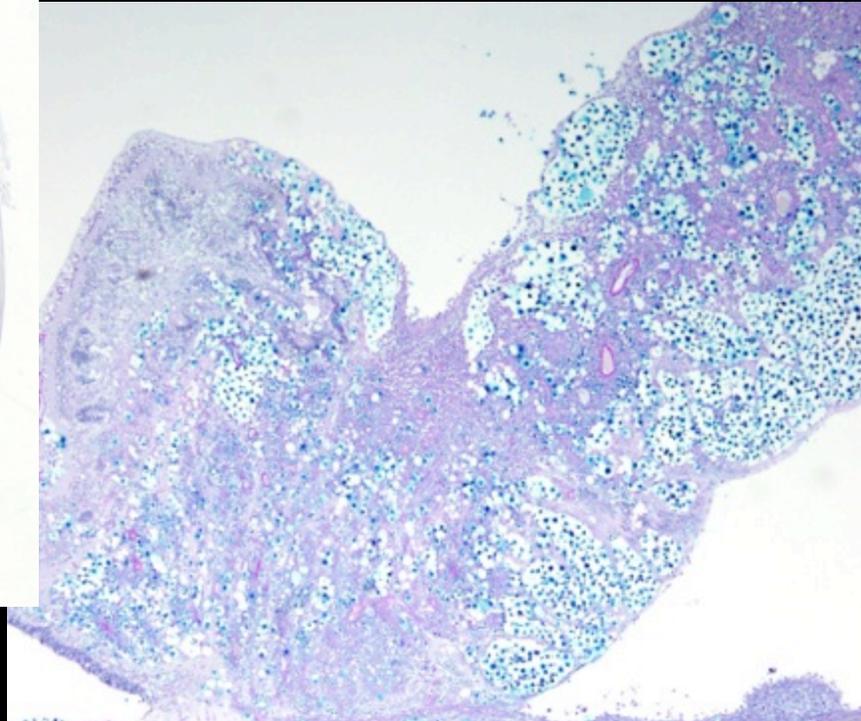
11 cases in dogs, 27 cases in cats

- *Cryptococcus neoformans*
- Spread from soil rich with pigeon droppings
- Cats more than dogs
- 7 to 10 micron poorly staining cell body surrounded by mucinous capsule

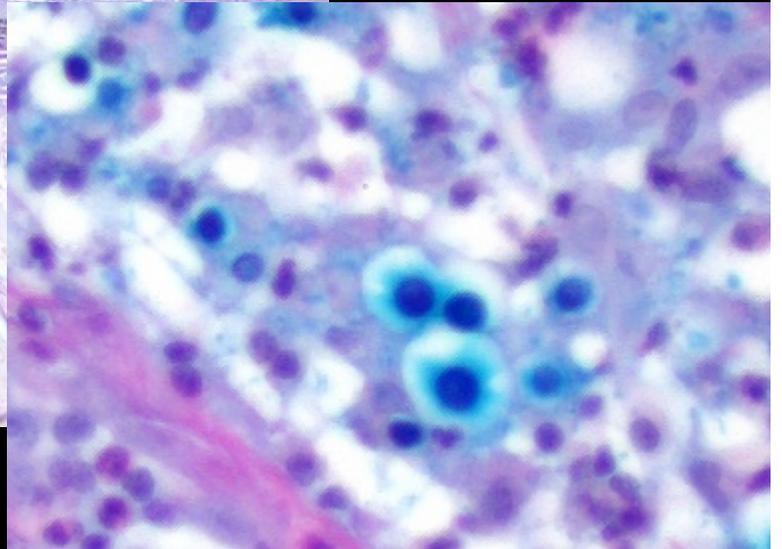
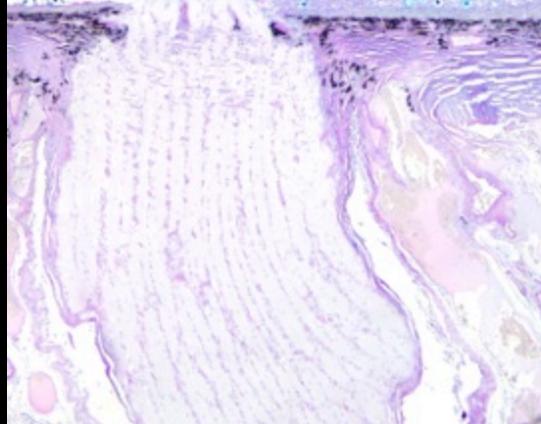


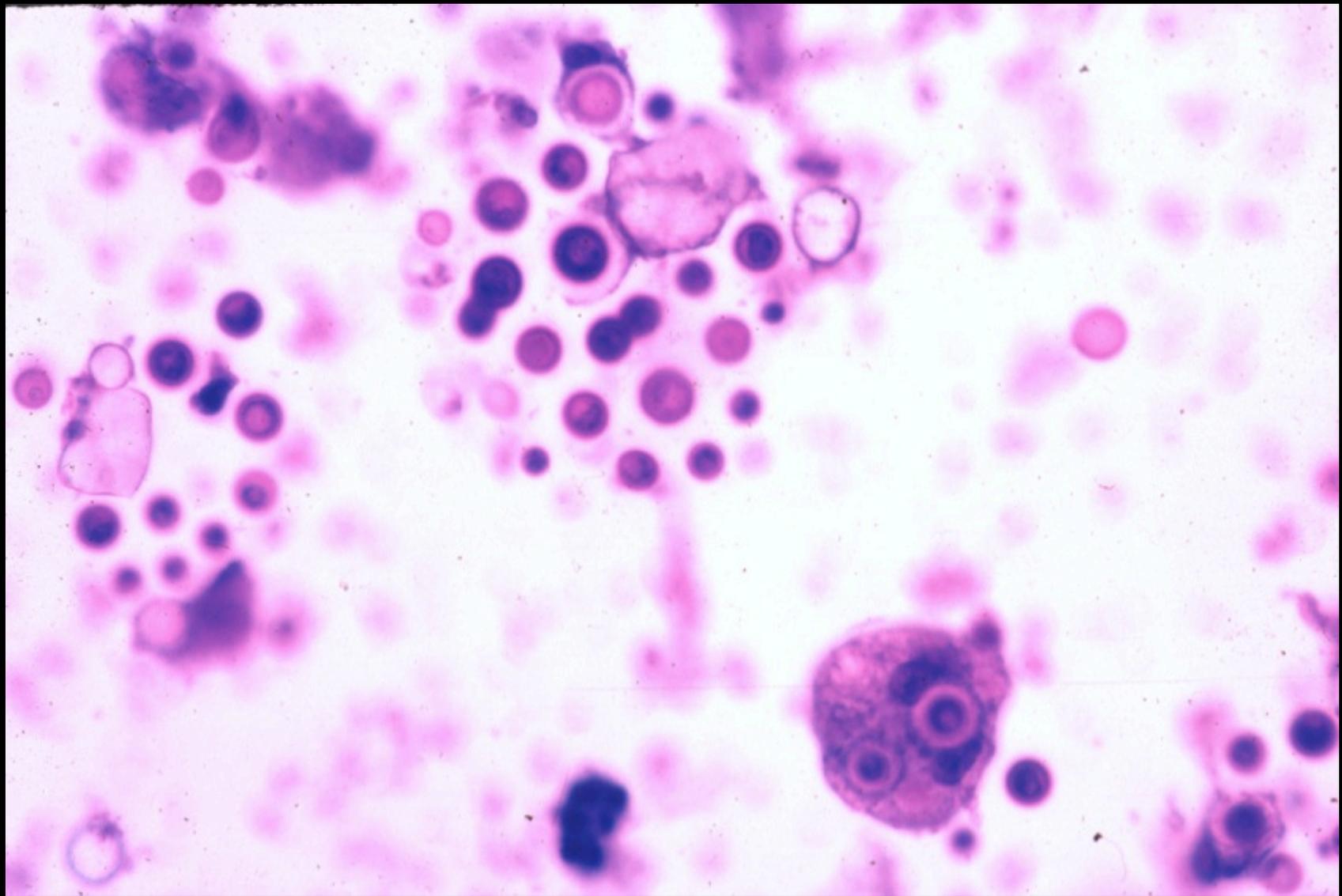


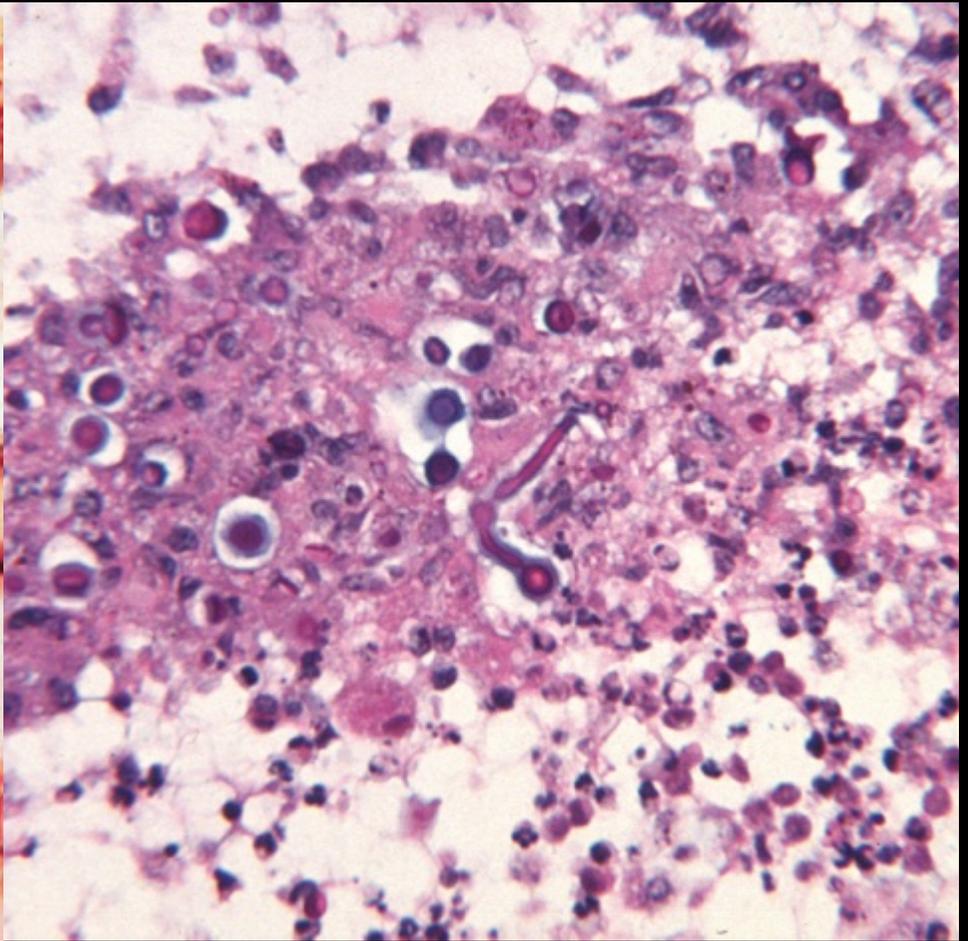
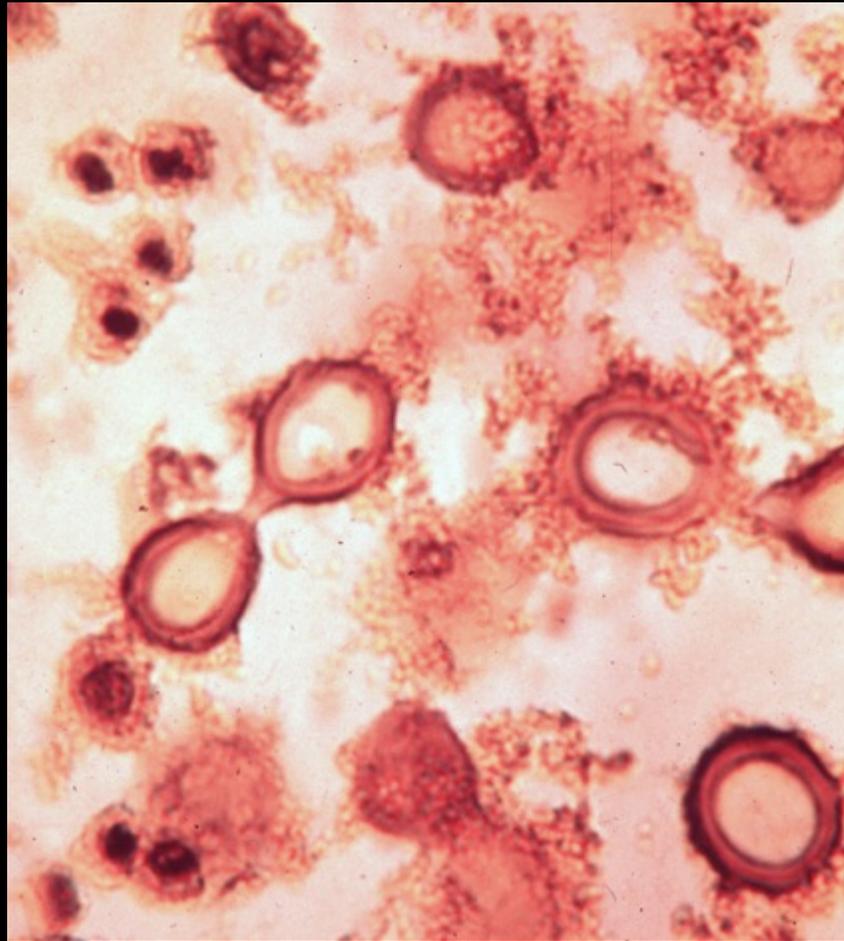
Cryptococcosis



Alcian Blue PAS







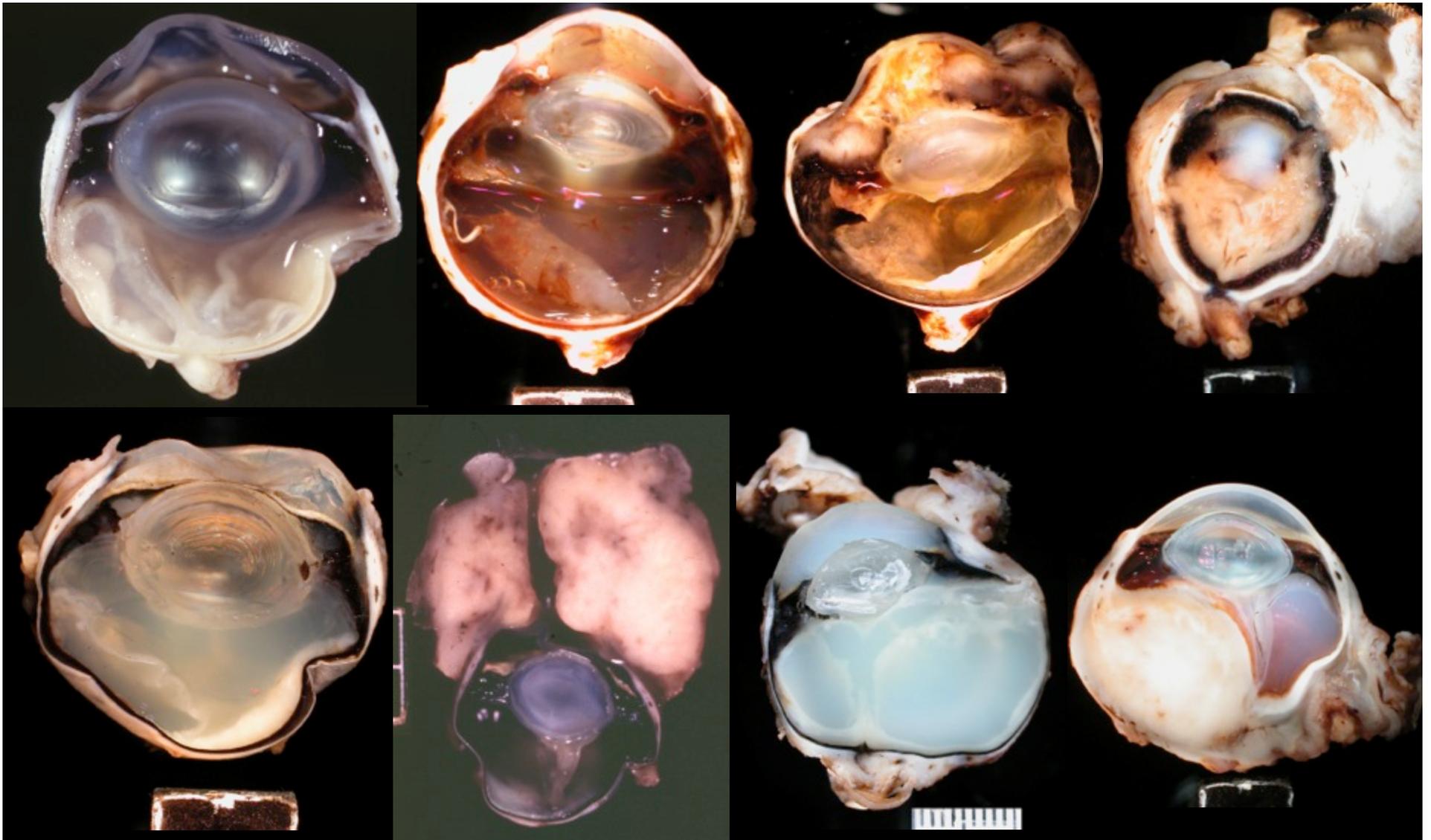
Uveitis Organisms

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- **Coccidioidomycosis**
- Histoplasmosis
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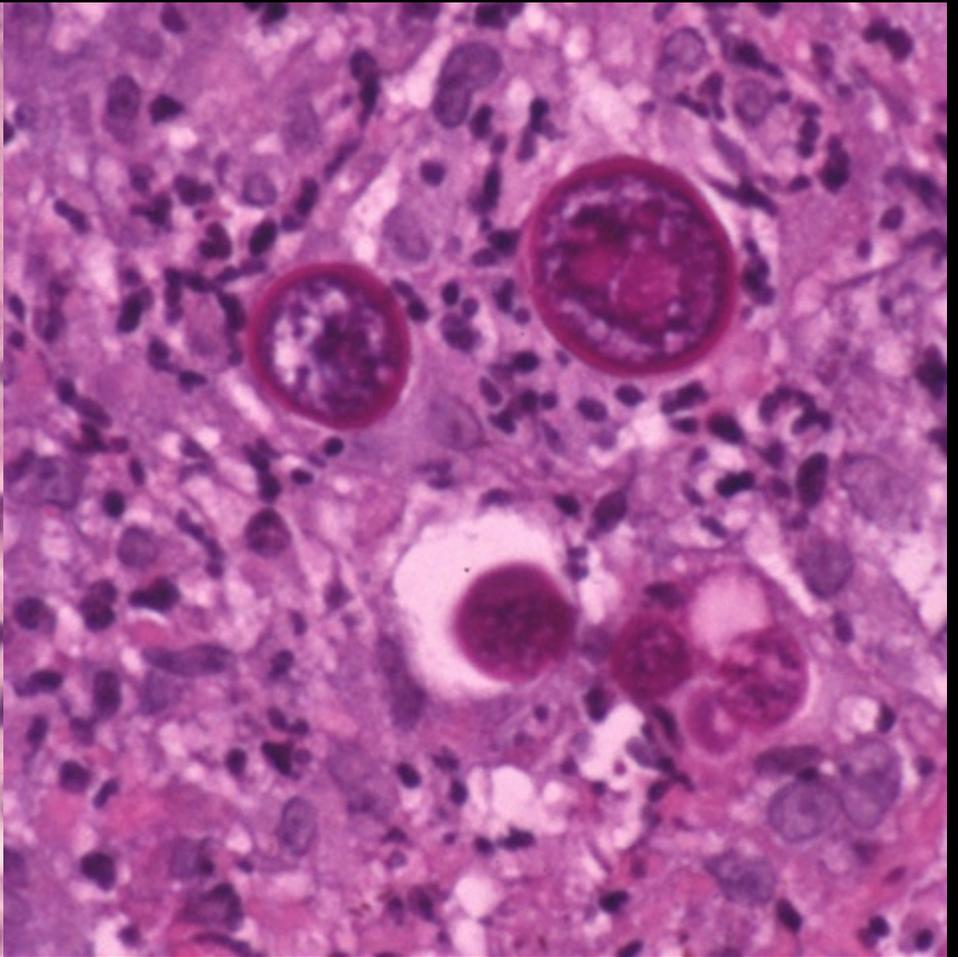
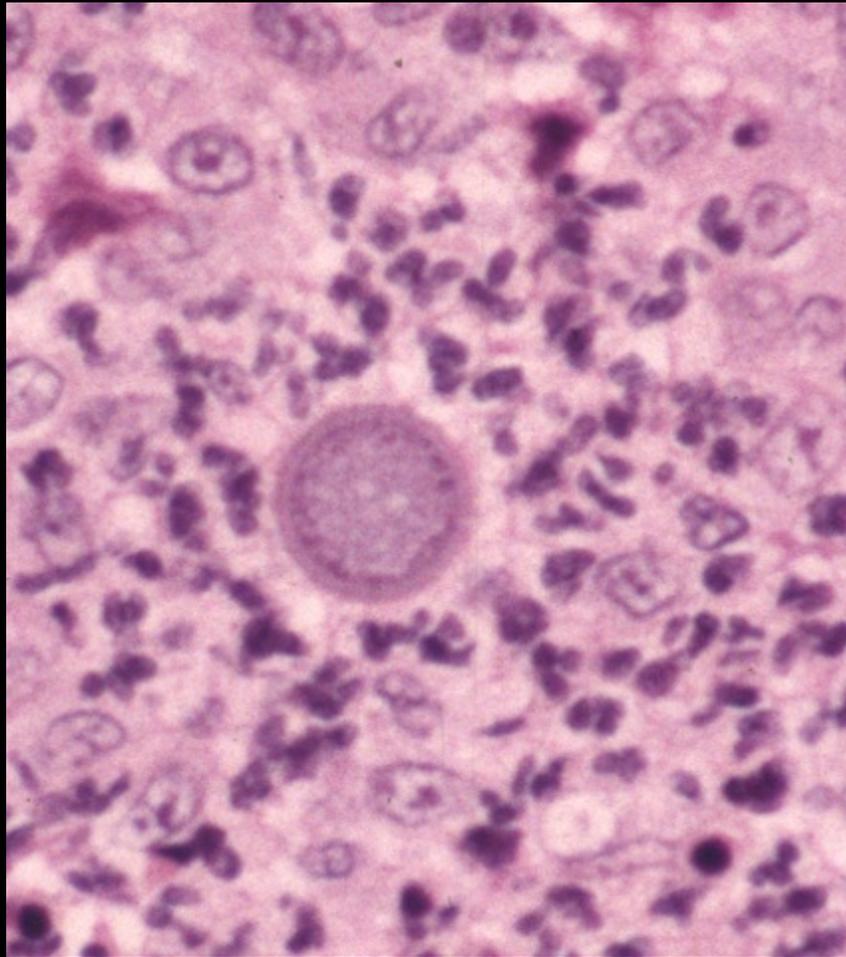
Coccidioidomycosis

34 cases in dogs, 11 cases in cats

- *Coccidioides immitis*
- Soil organism from Southwestern desert
- Infects many species
- Organism easier to find in cats than dogs
- 20 to 40 micron spherule with enclosed endospores
- Does not have a budding form



Coccidioidomycosis



Uveitis Organisms

- Blastomycosis
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- **Histoplasmosis**
- Protothecosis
- Aspergillosis

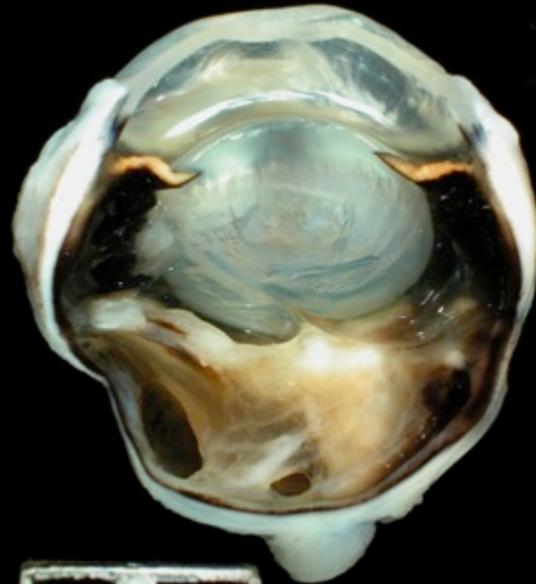
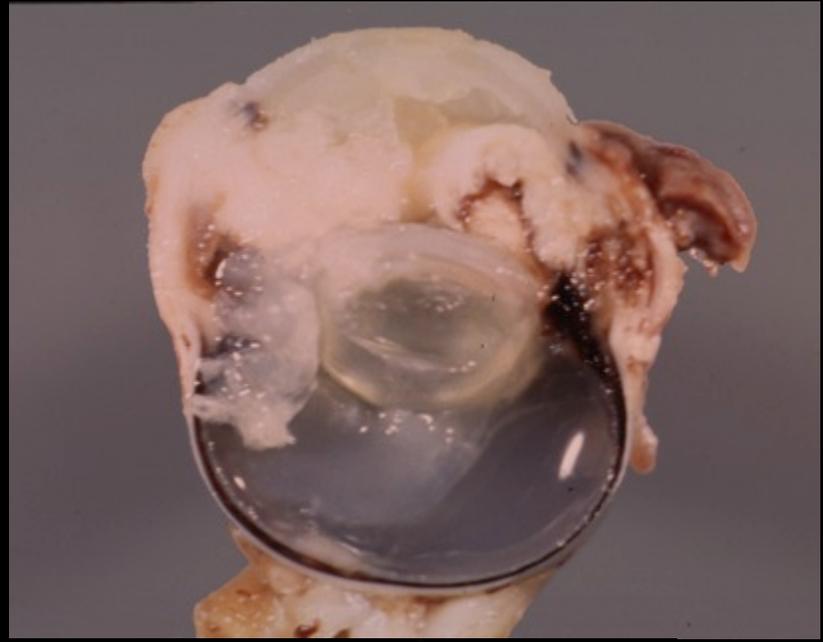
Histoplasmosis

2 cases in dogs, 28 cases in cats

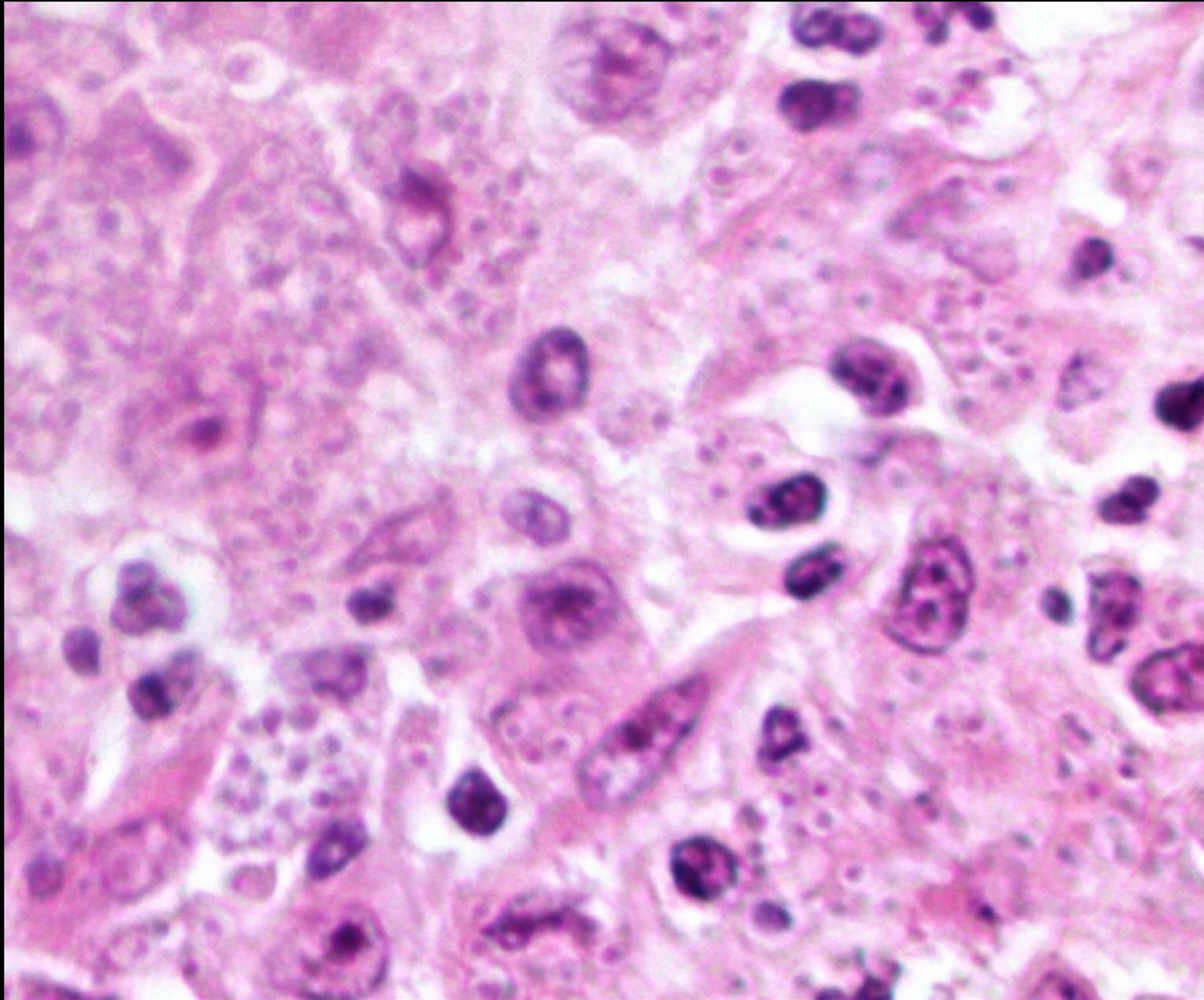
- *Histoplasma capsulatum*
- Found in soil contaminated with bird droppings
- Affects many tissues
- Ohio River valley
- 4 micron intracellular organism

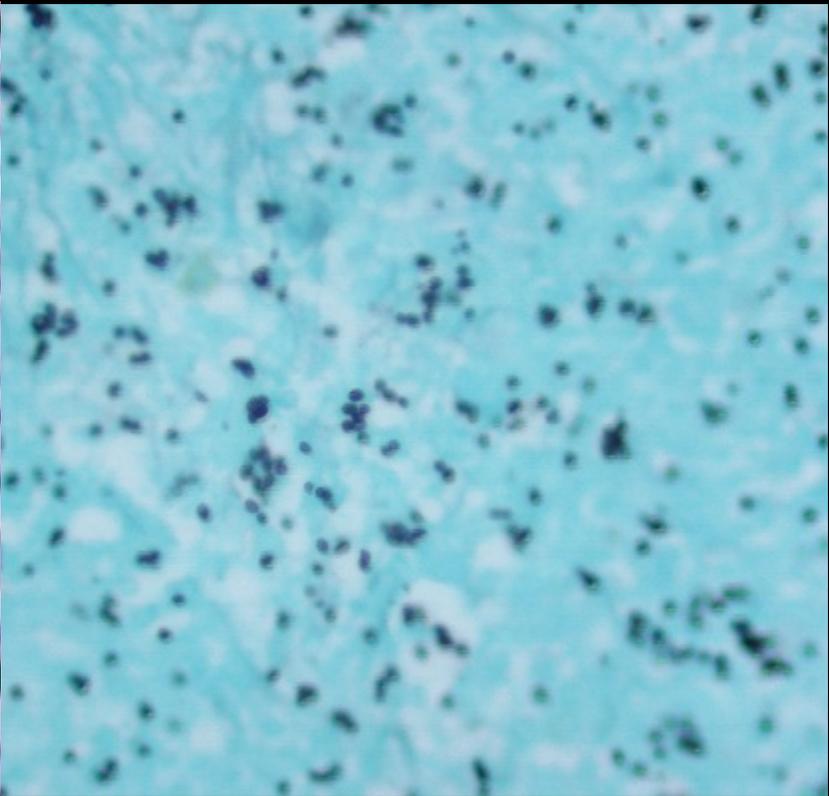
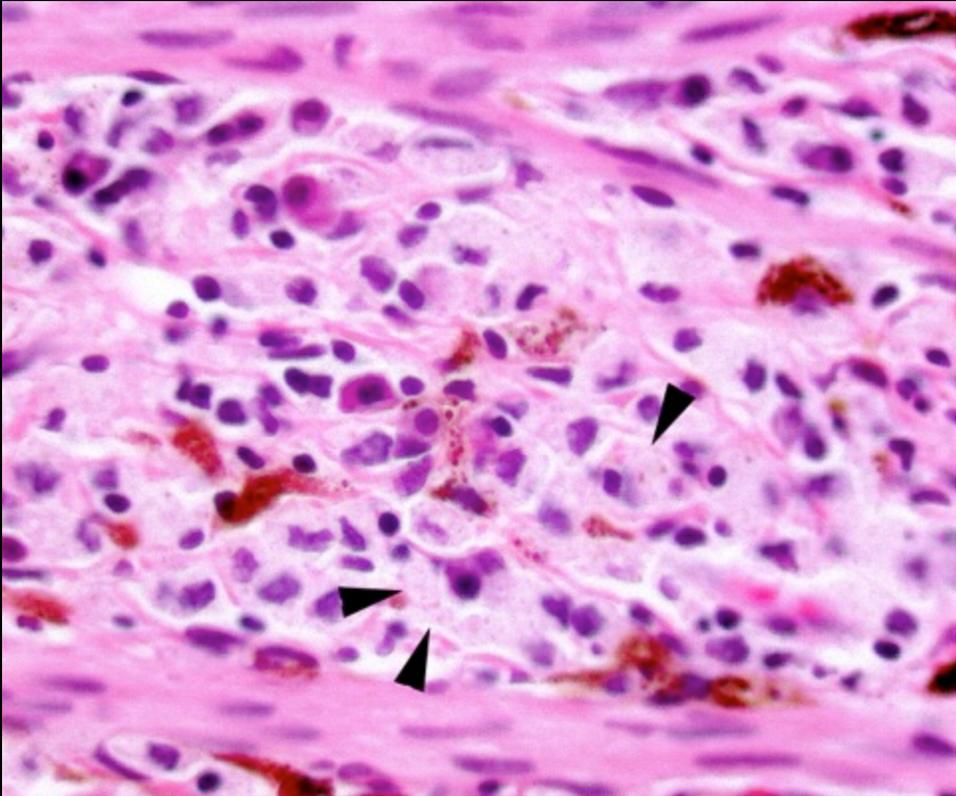
Histoplasmosis

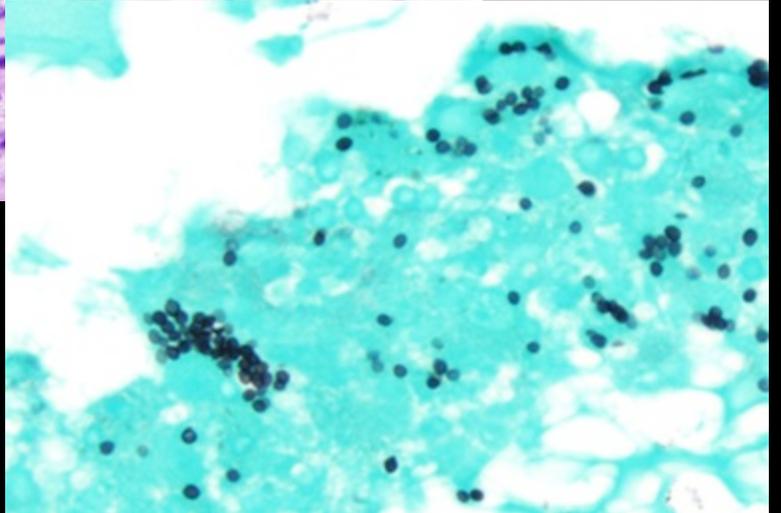
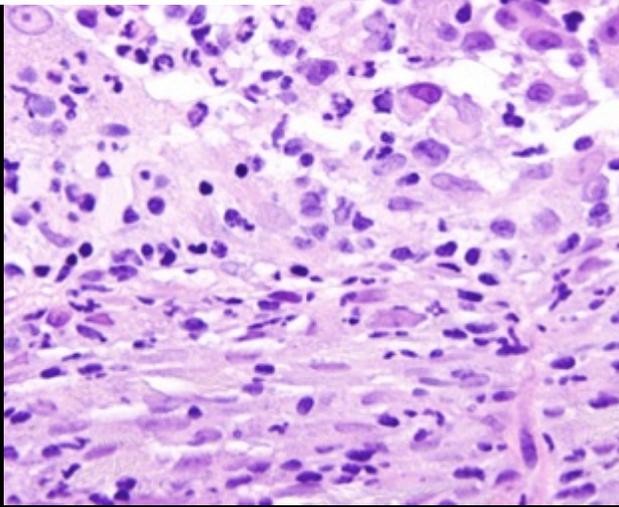
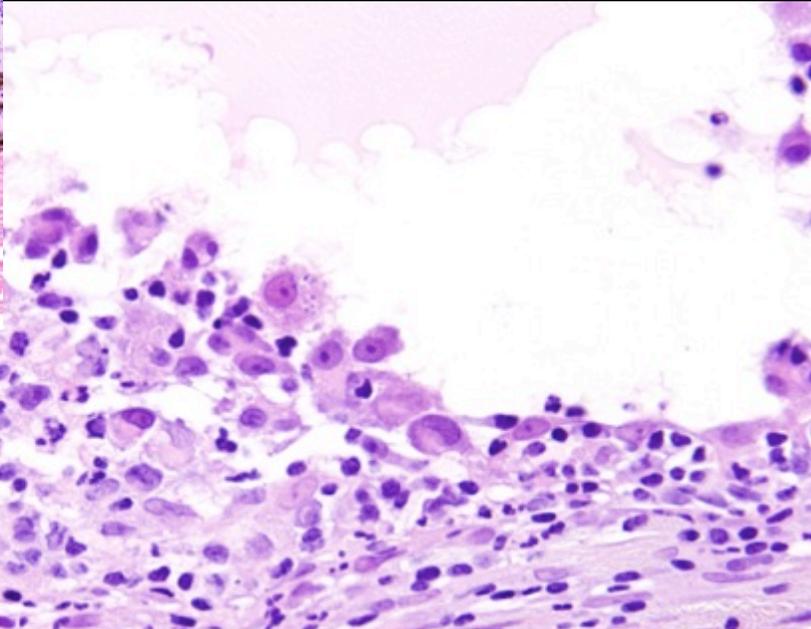
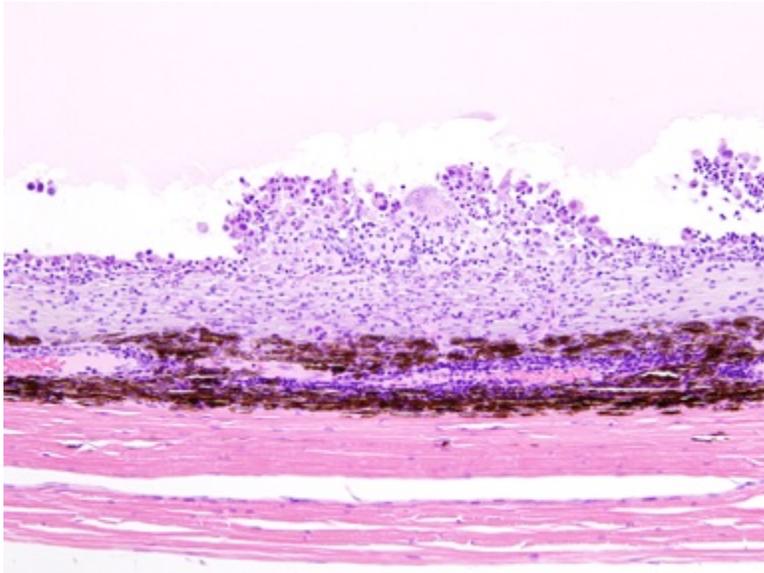




Histoplasmosis







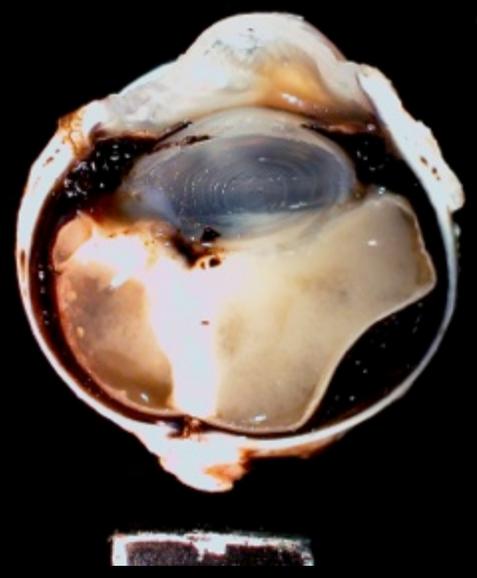
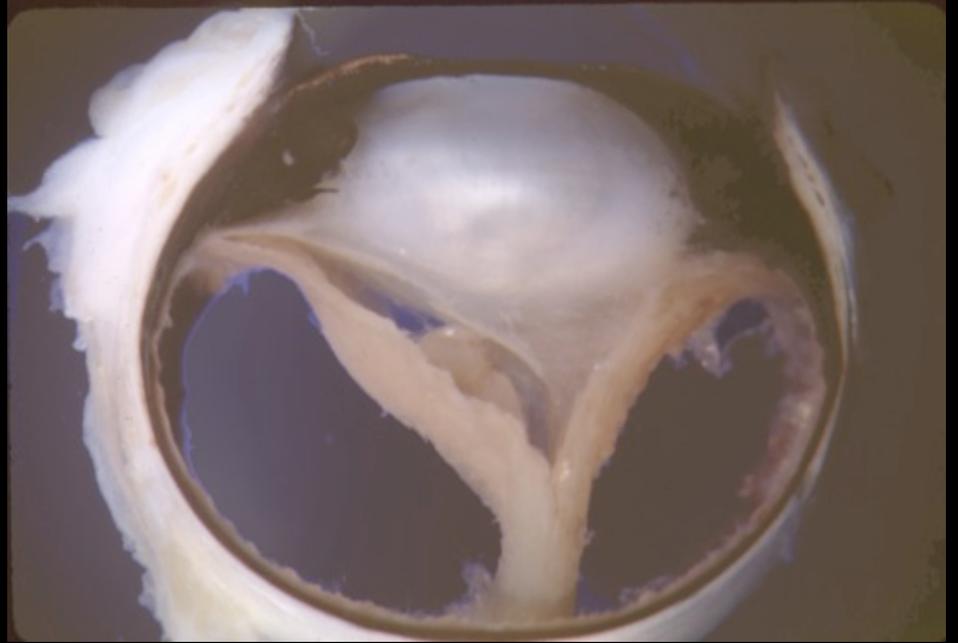
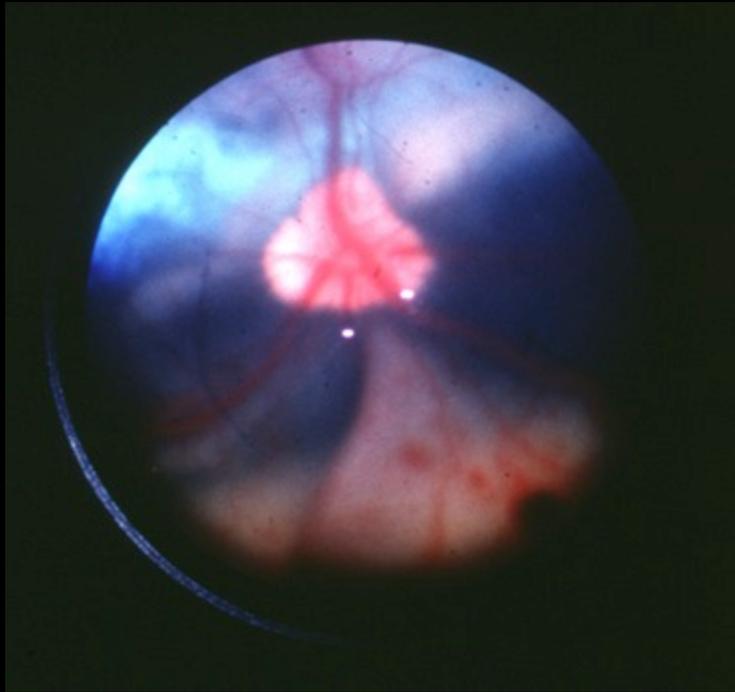
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Protothecosis

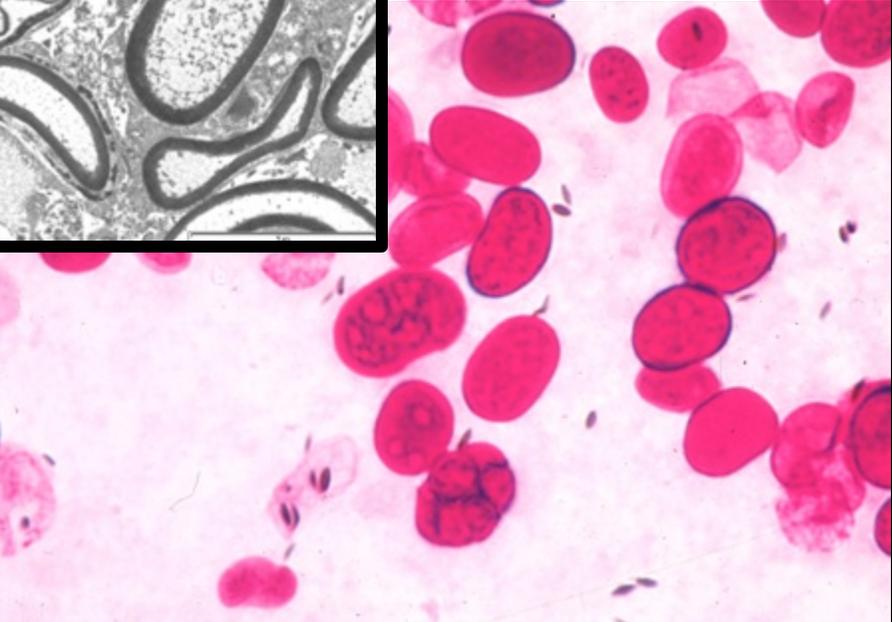
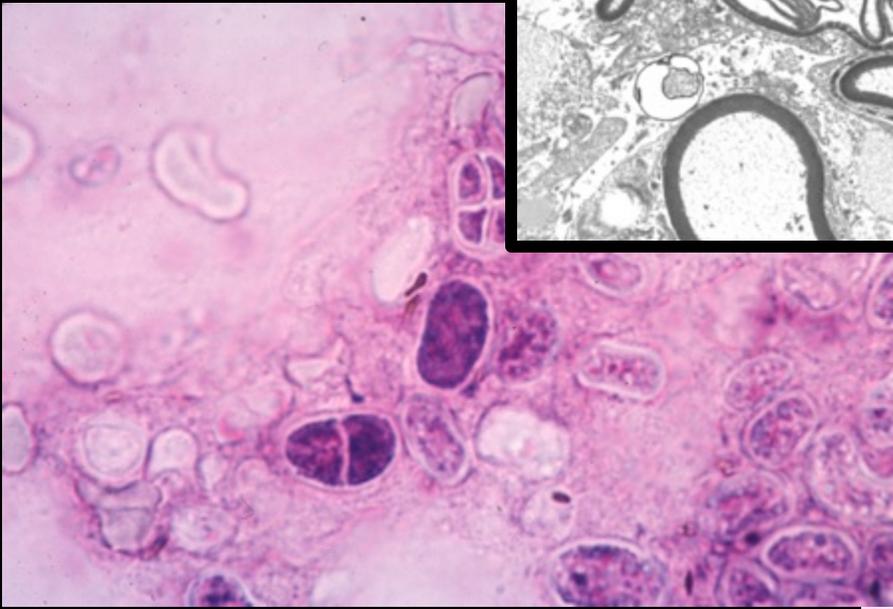
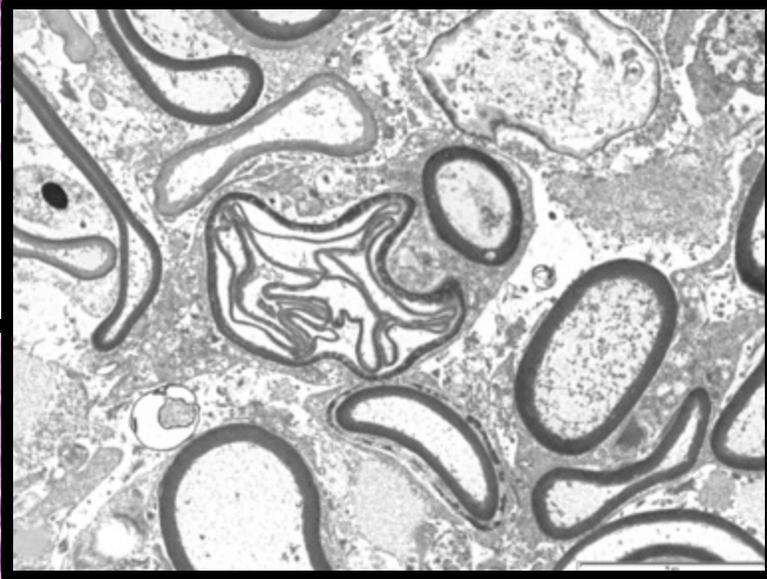
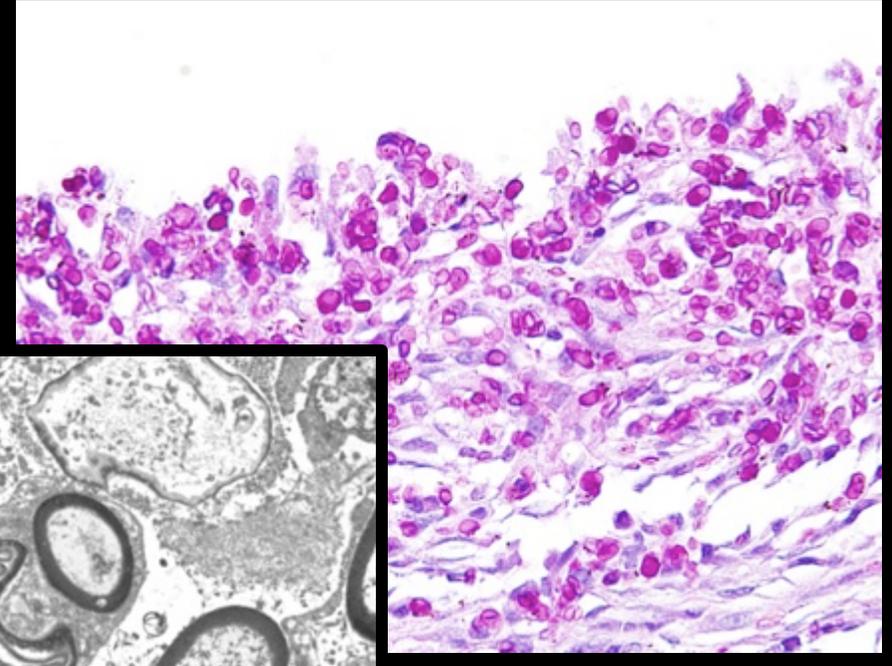
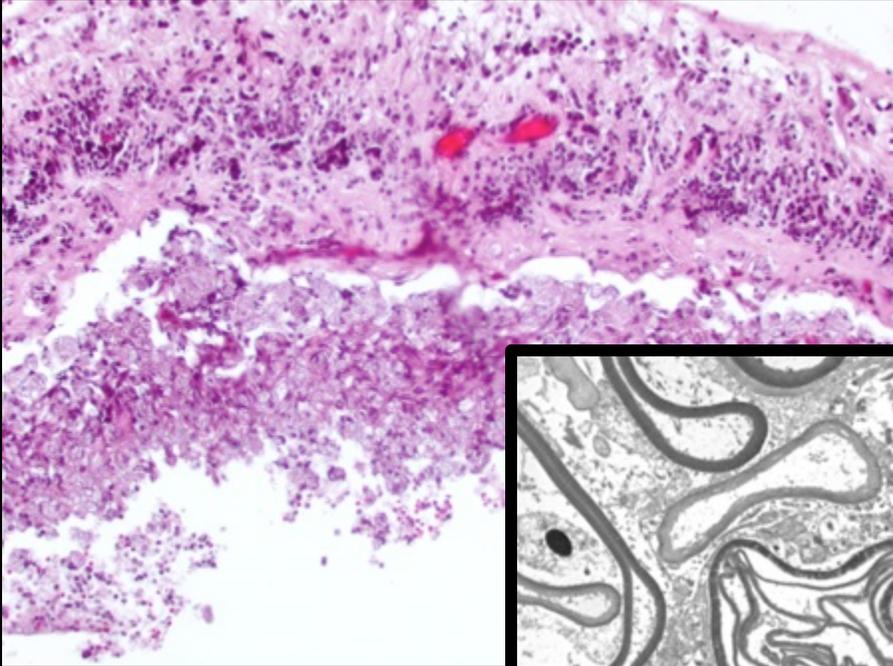
15 cases in dogs, 0 in cats

- *Prototheca zopfii*, *Prototheca wickerhamii*
- Saprophytic achlorophyllous algae
- Worldwide distribution infecting several species
- Associated with contaminated water and susceptible host





Protothecosis



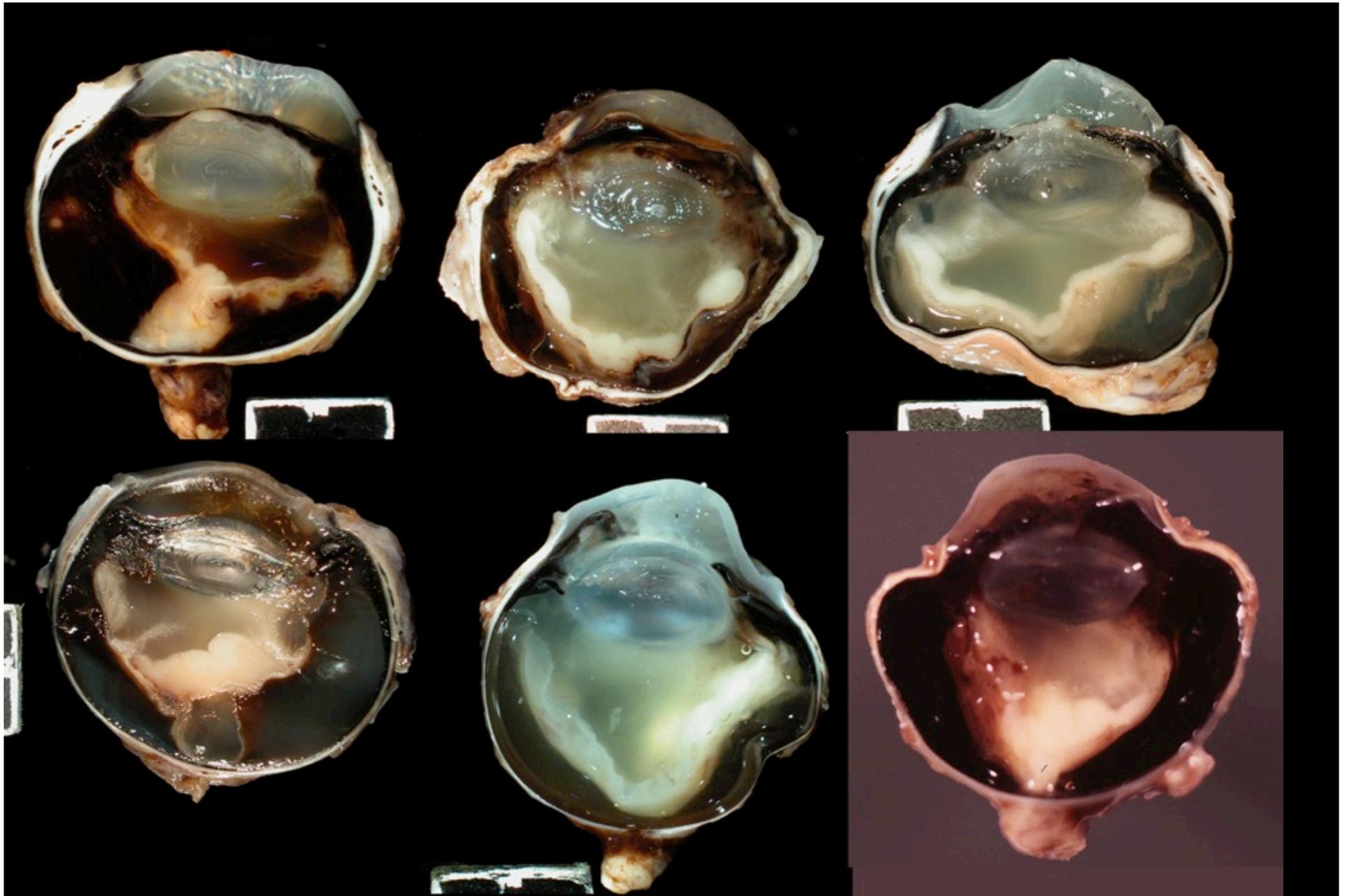
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Canine Systemic Aspergillosis

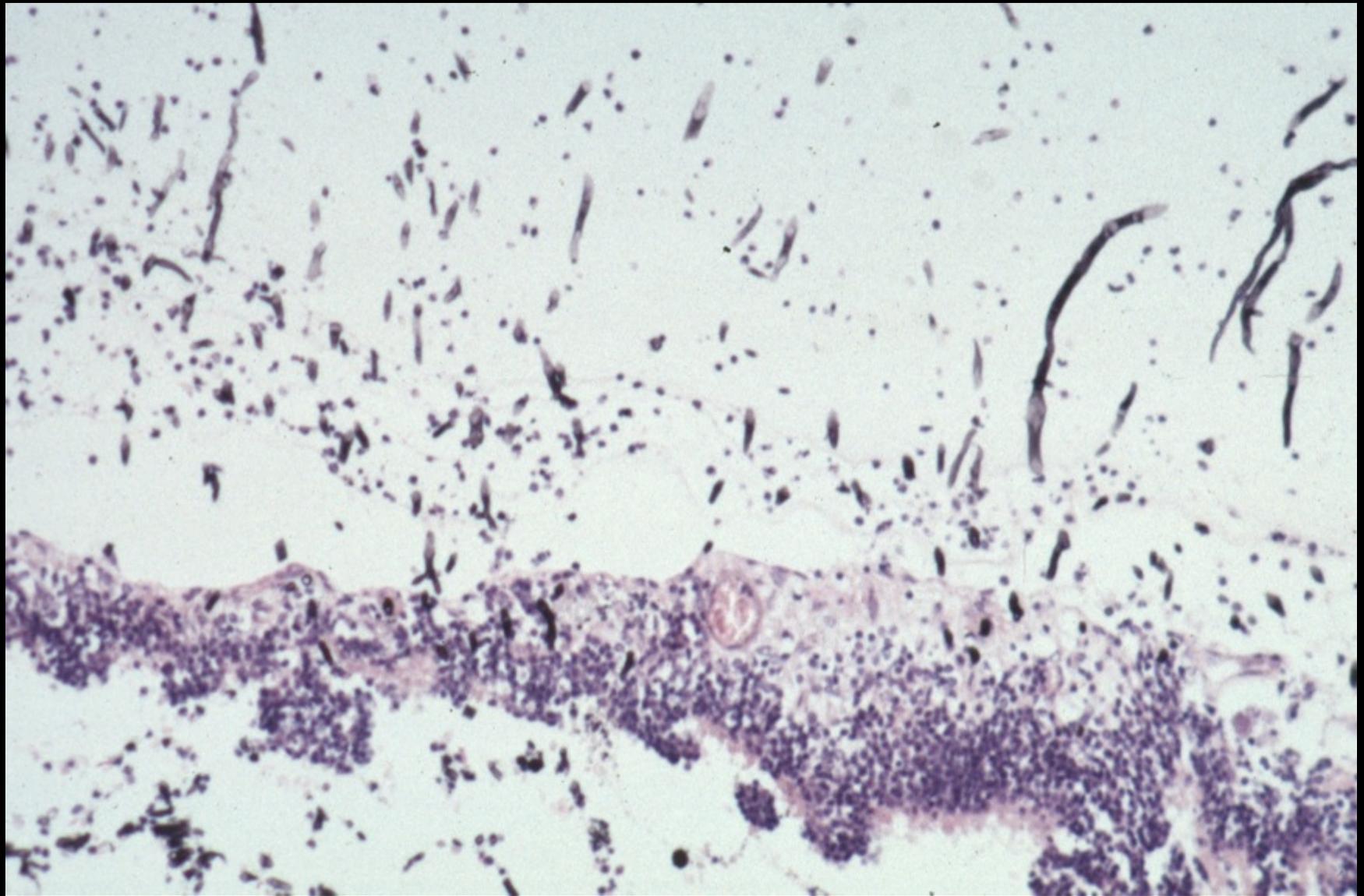
36 Cases

- Worldwide distribution
- German Shepherd breed at risk (17/36 cases)
- Systemic disease with vasculitis
- Poor prognosis



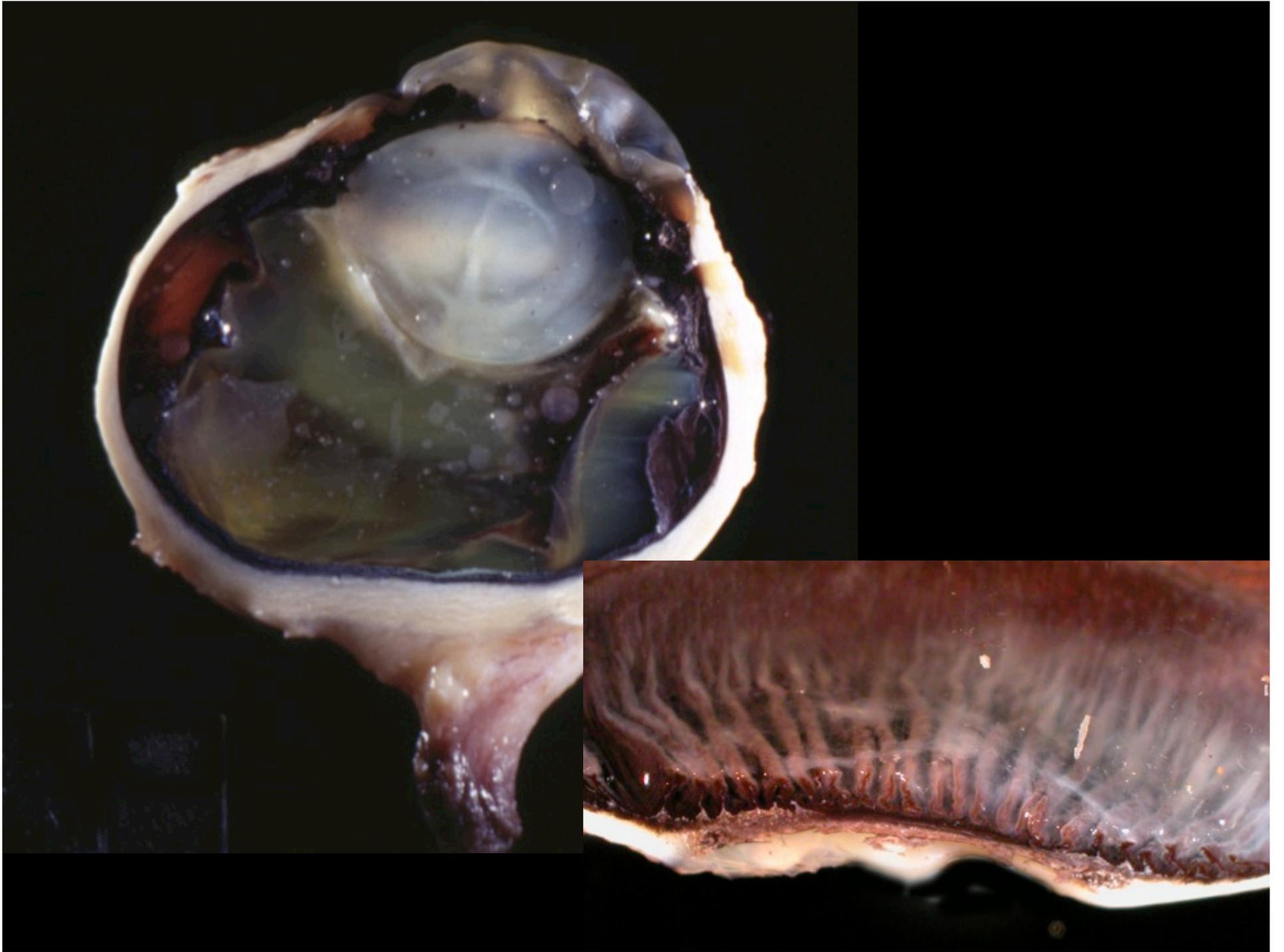
Systemic Aspergillosis

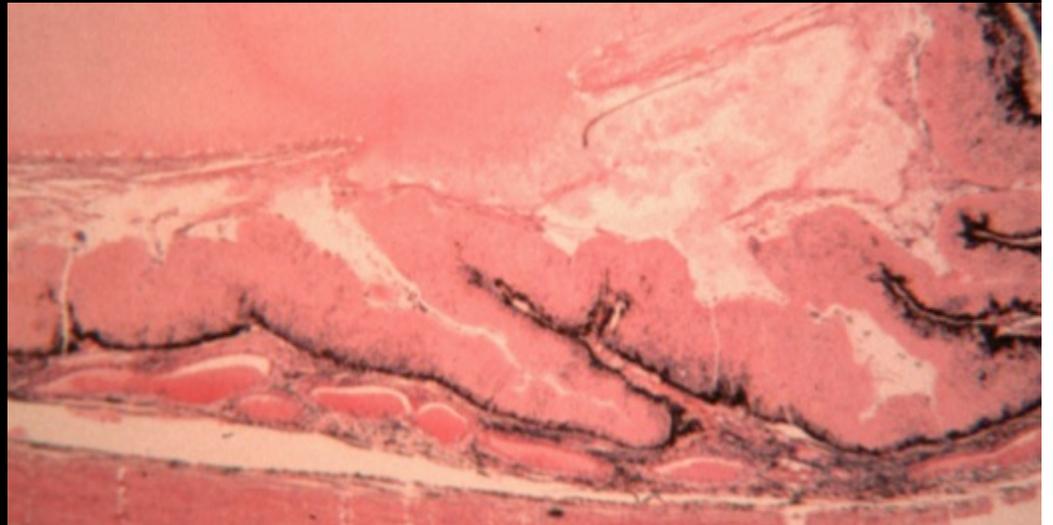
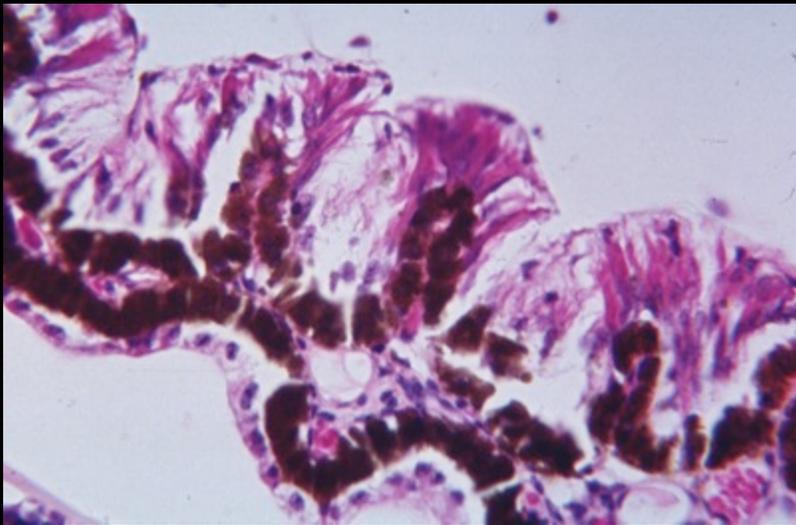
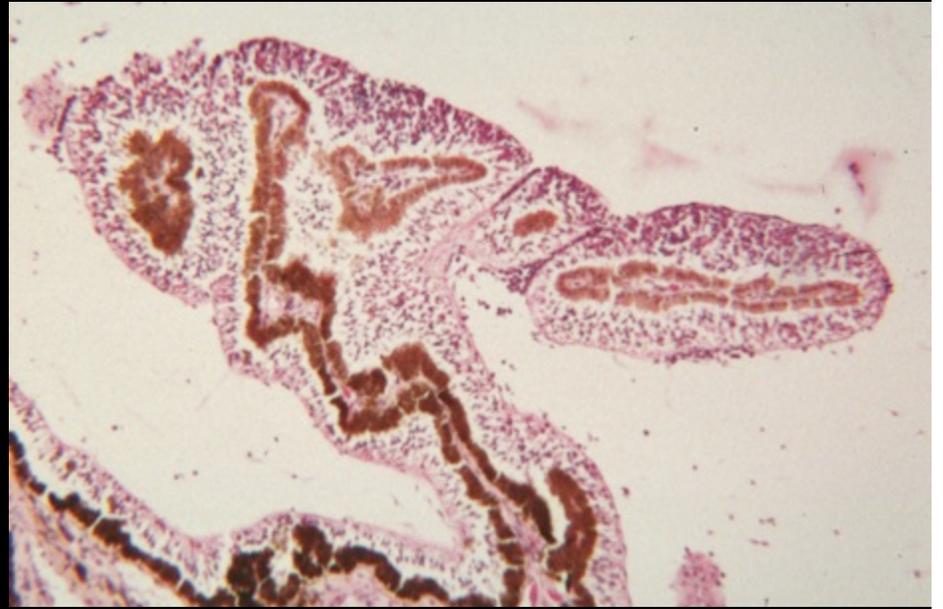
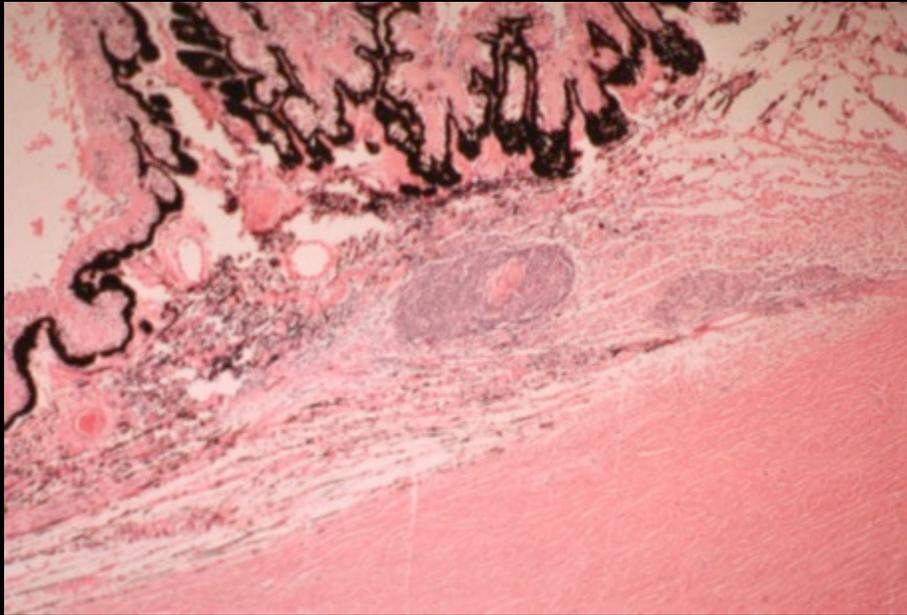


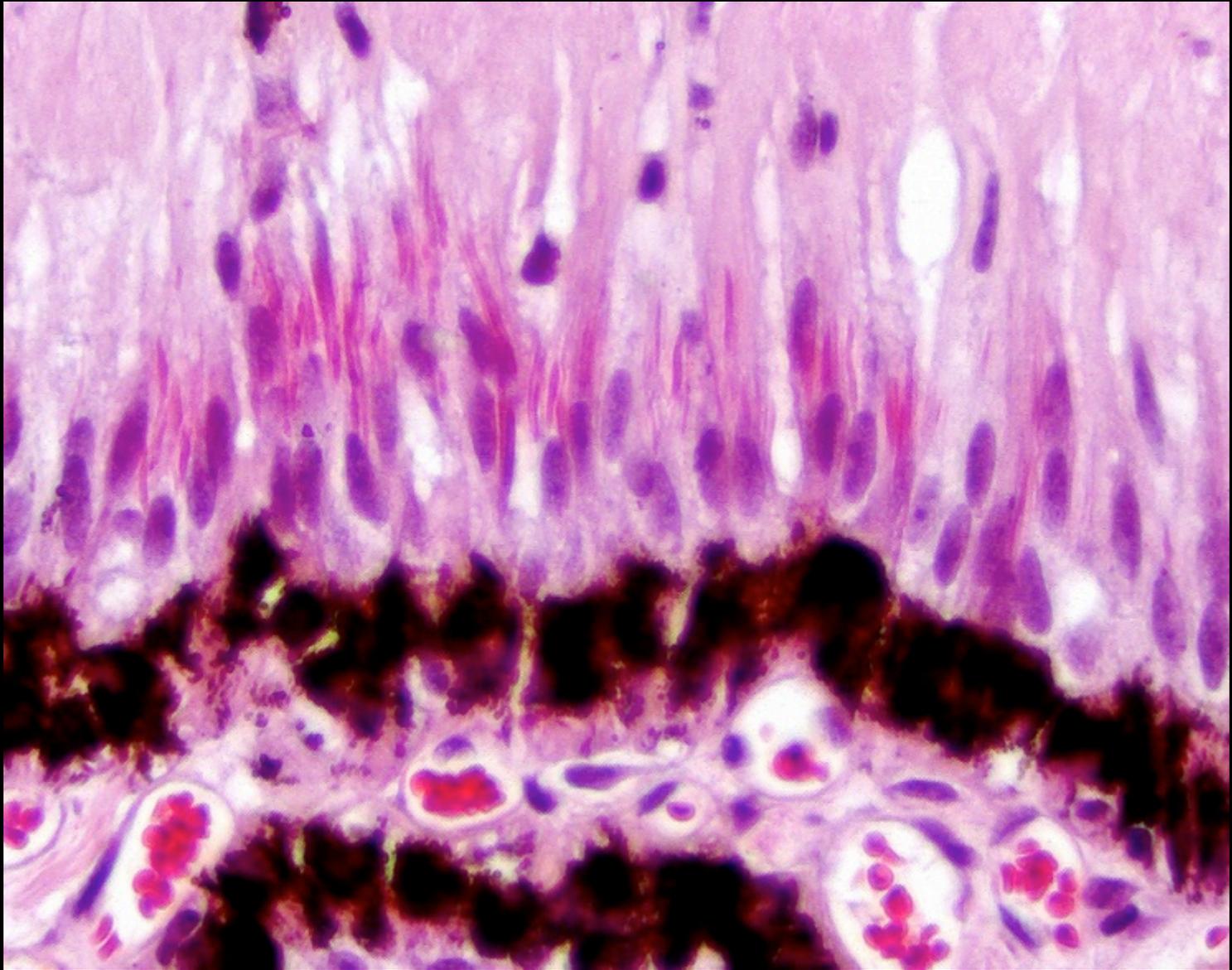


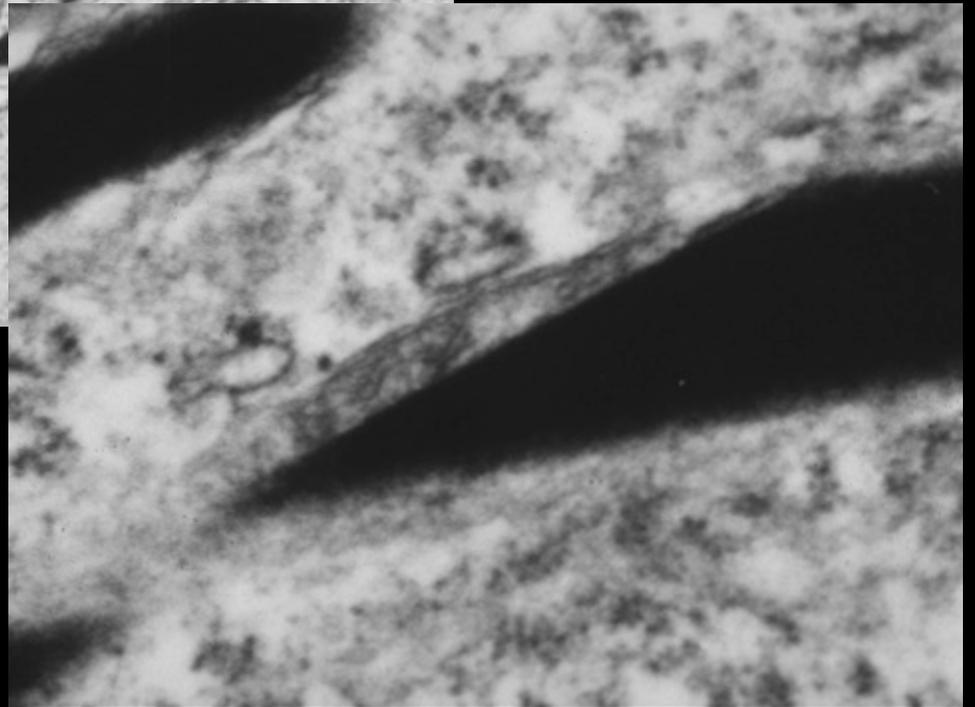
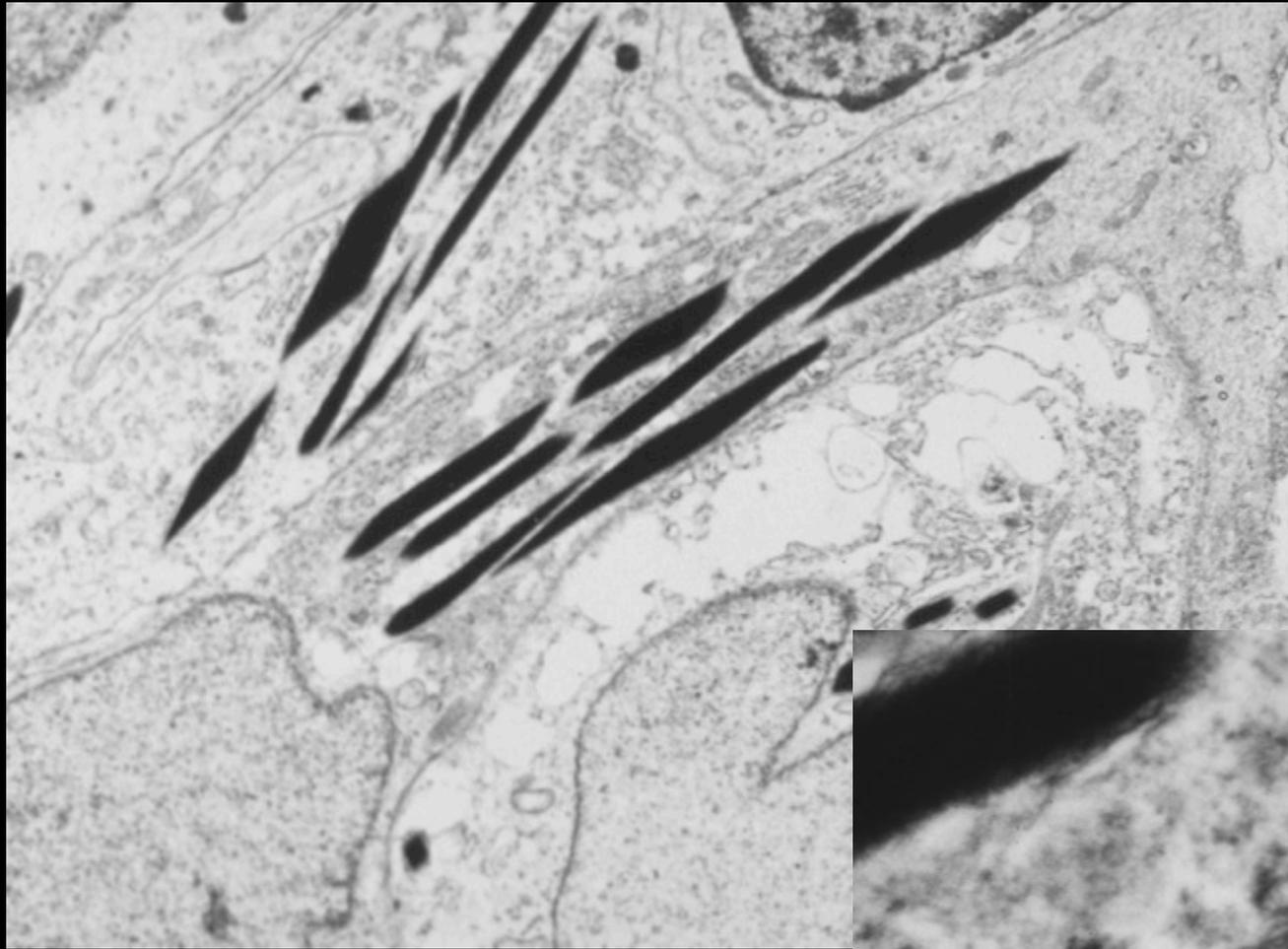
Equine Recurrent Uveitis (ERU)

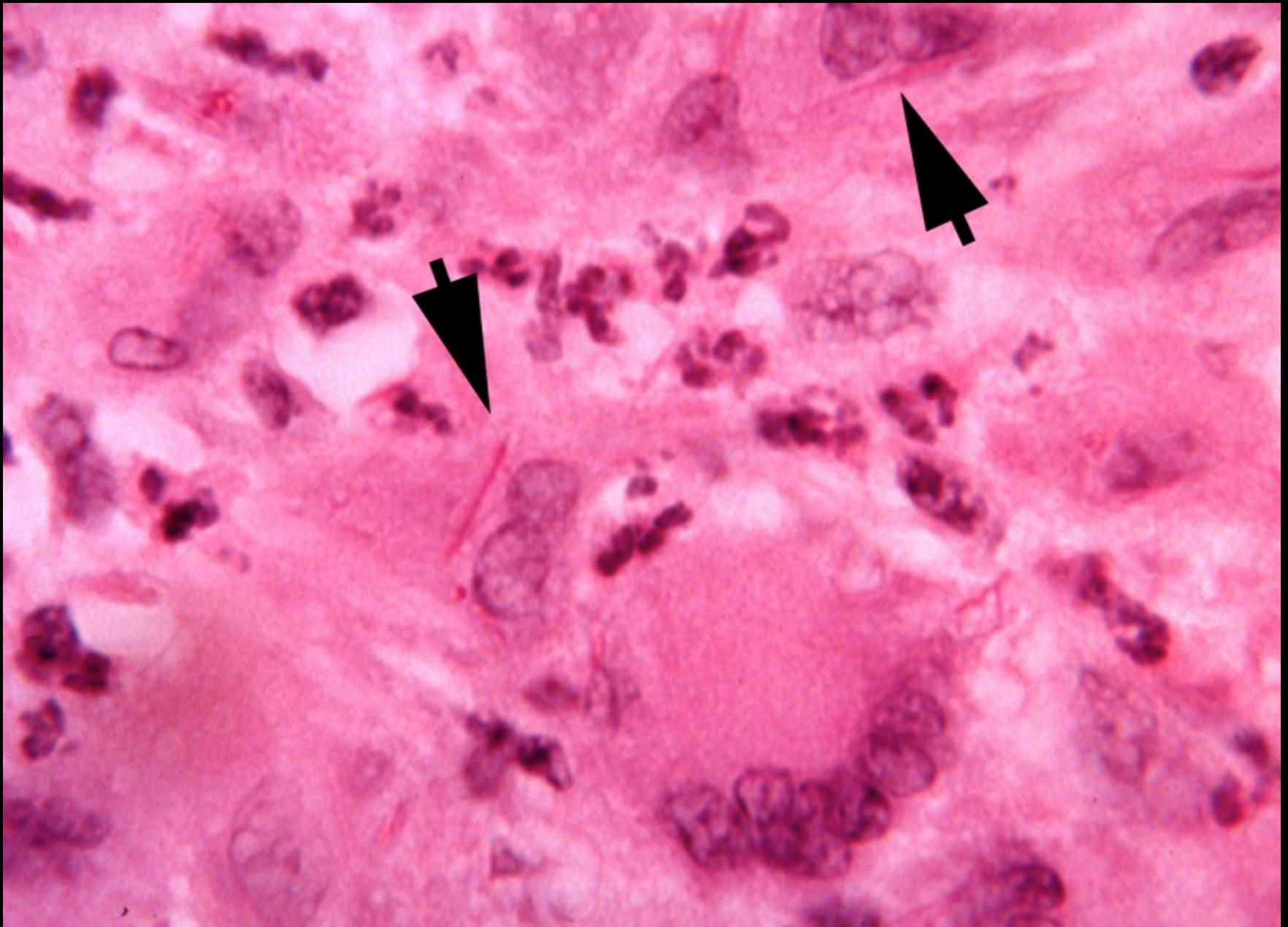
- Bilateral, but not always symmetrical
- Cyclic Uveitis
- Etiology
 - Leptospirosis
 - Autoimmunity
- Classic morphologic features
 - Lymphoplasmacytic inflammation with lymphoid follicles
 - Lymphocytes within the ciliary epithelium
 - Linear hypereosinophilic cytoplasmic inclusions in the non-pigmented ciliary epithelium
 - Amyloid deposition on the inner surface of the non-pigmented ciliary epithelium

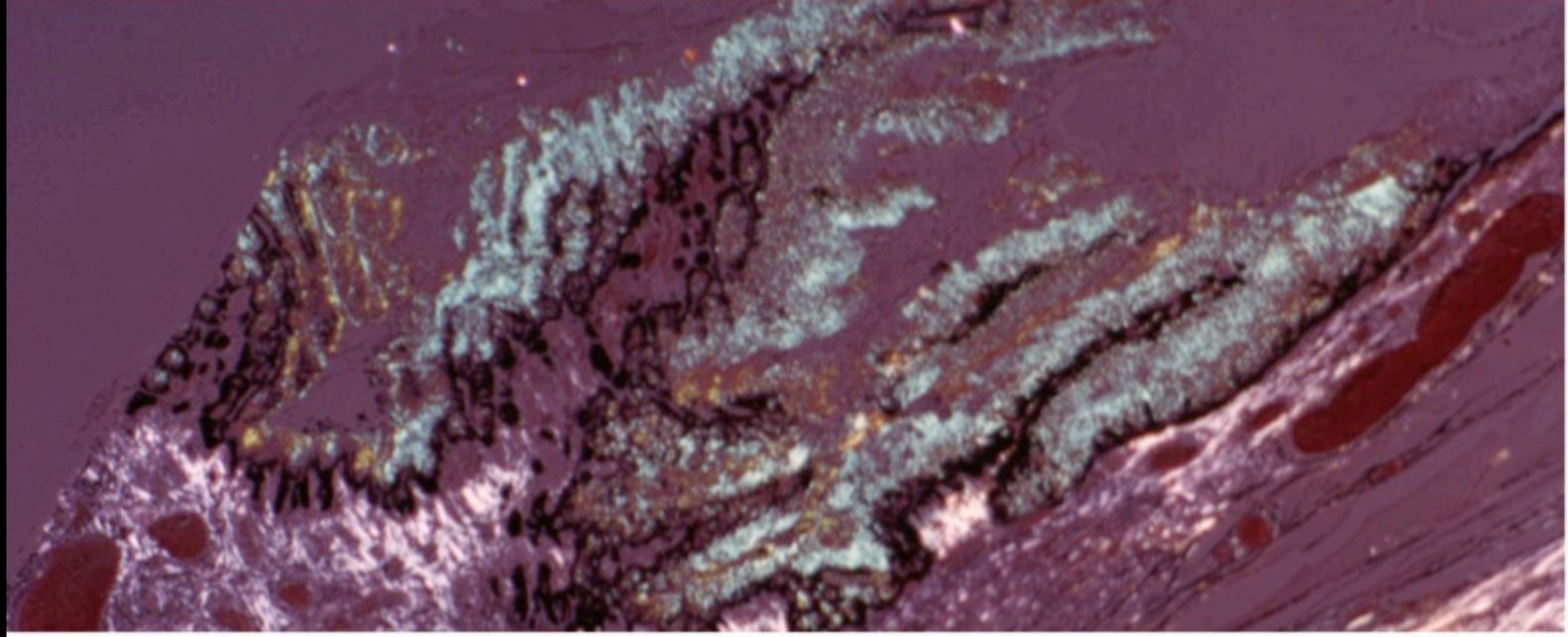
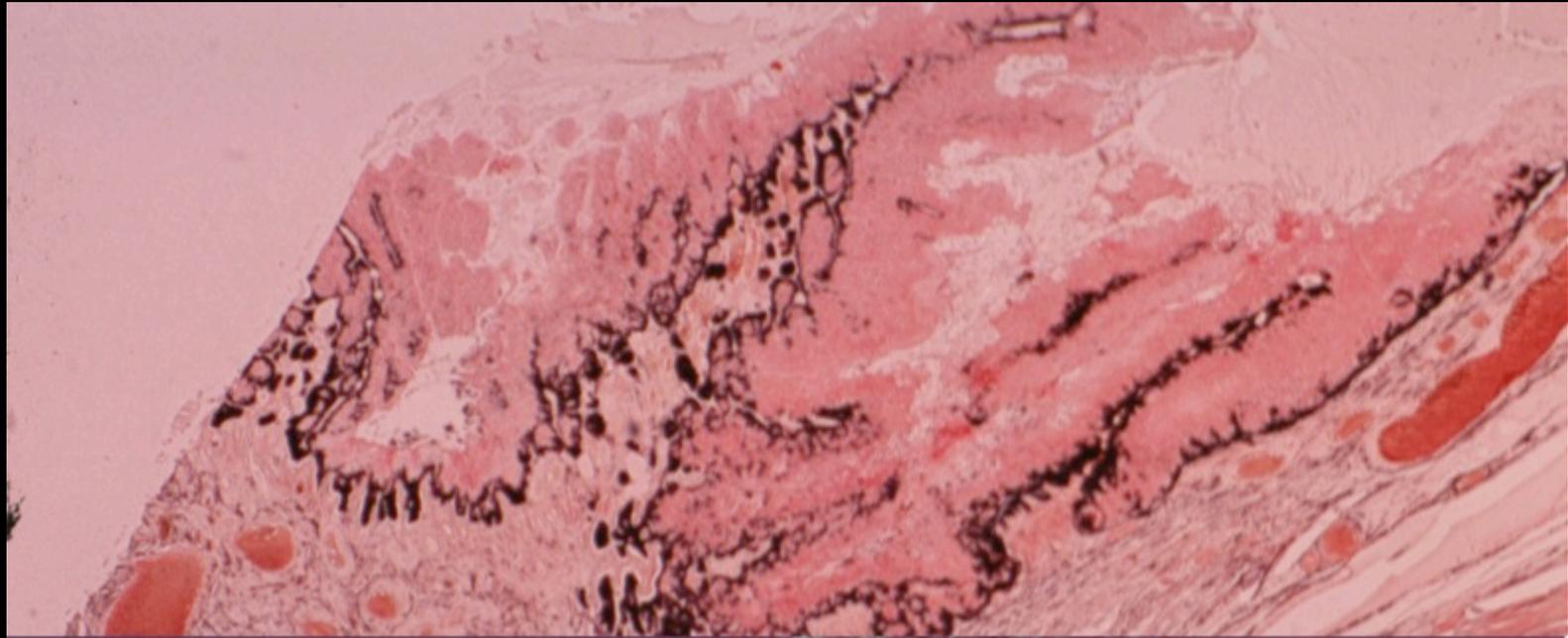


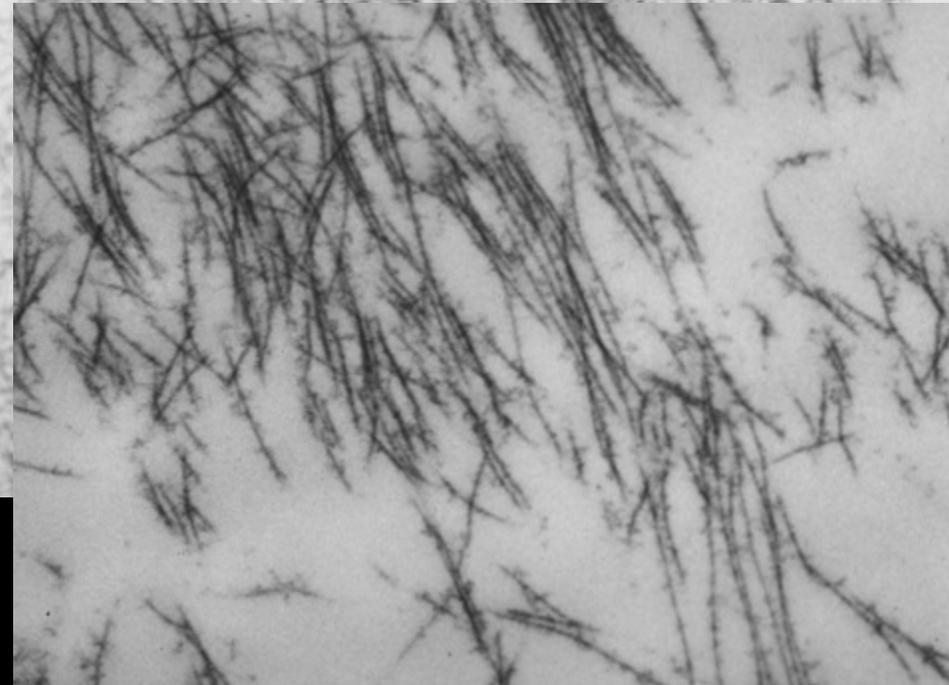
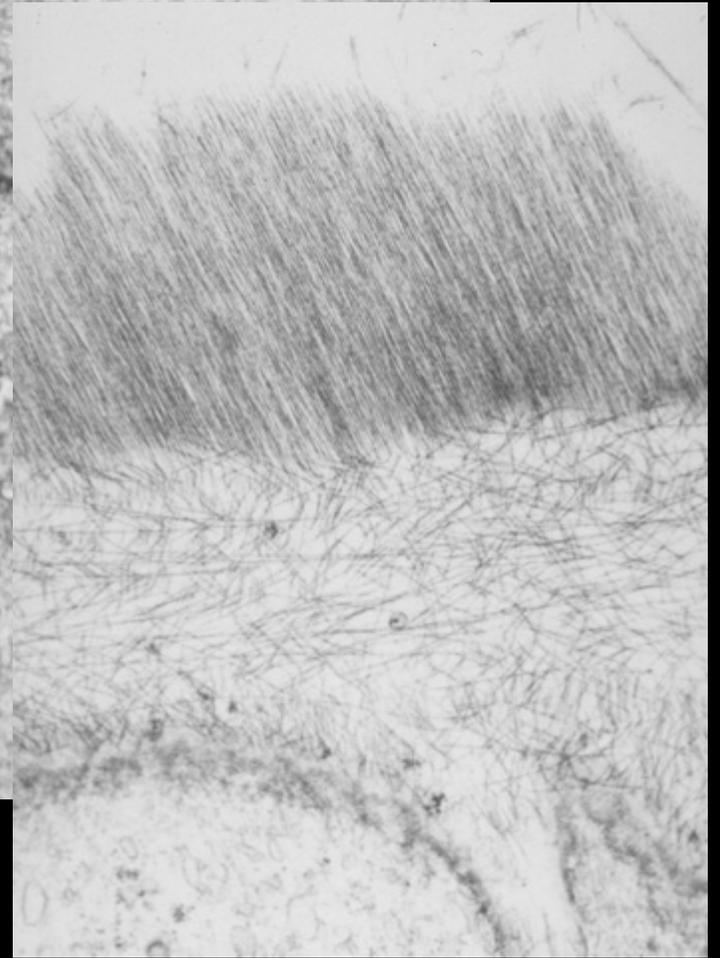
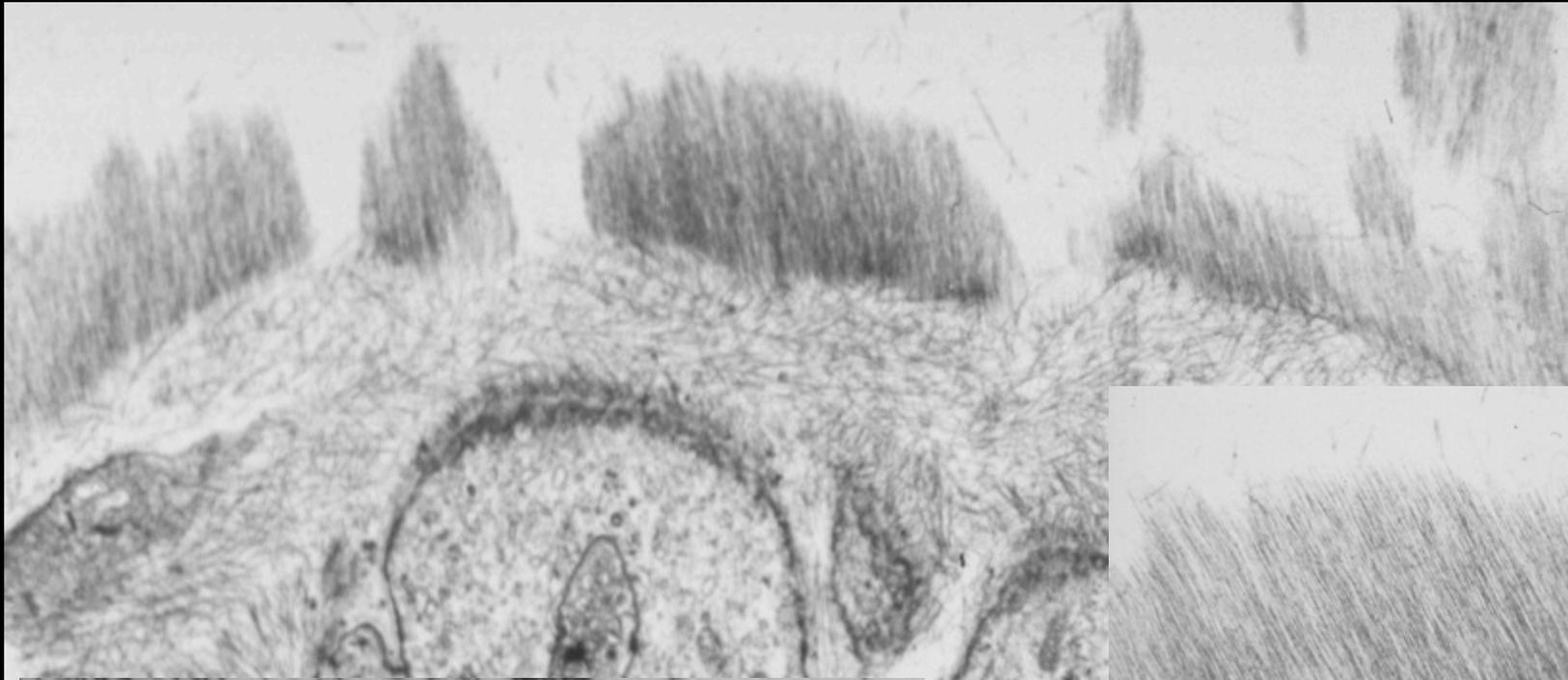


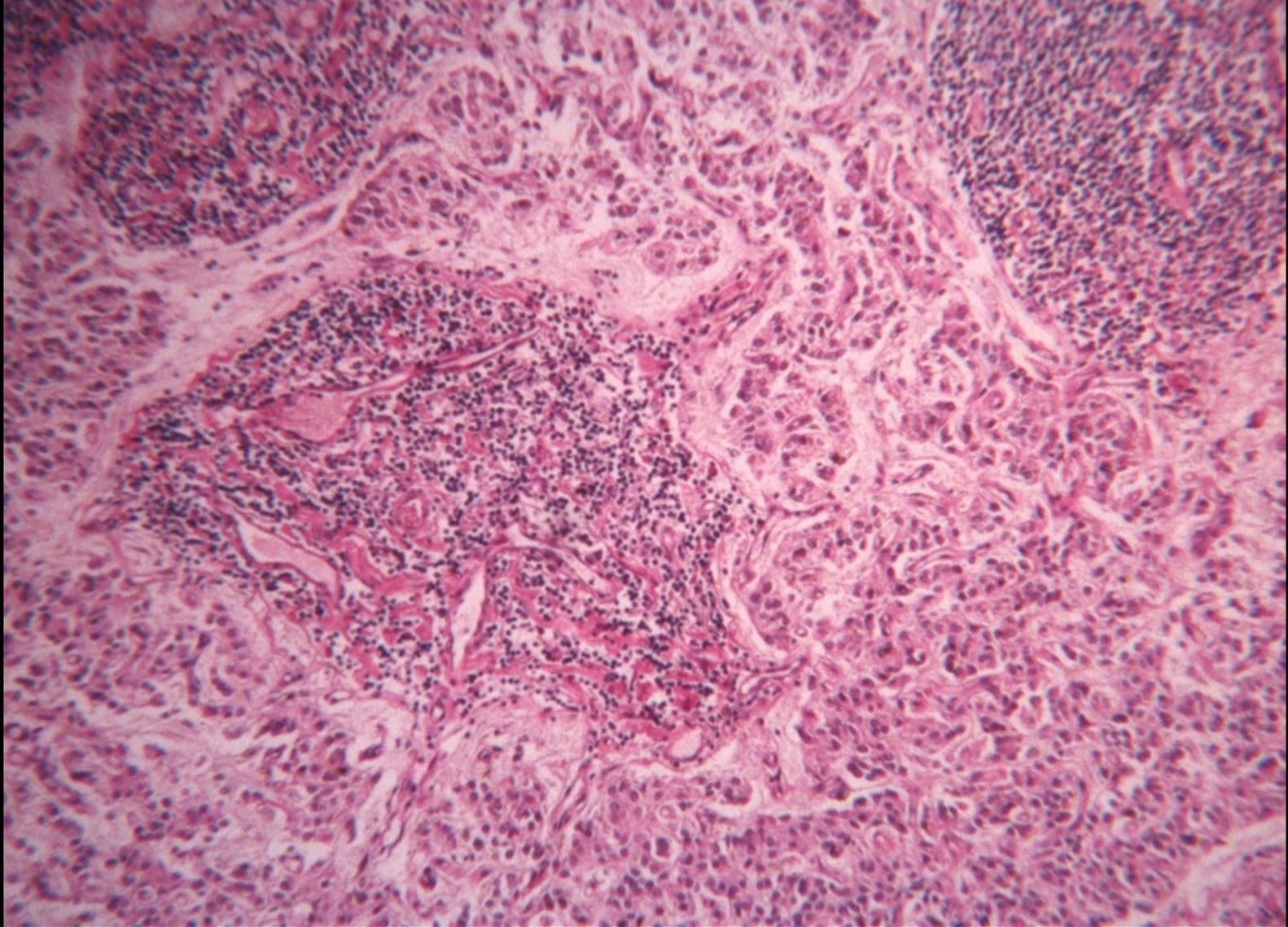






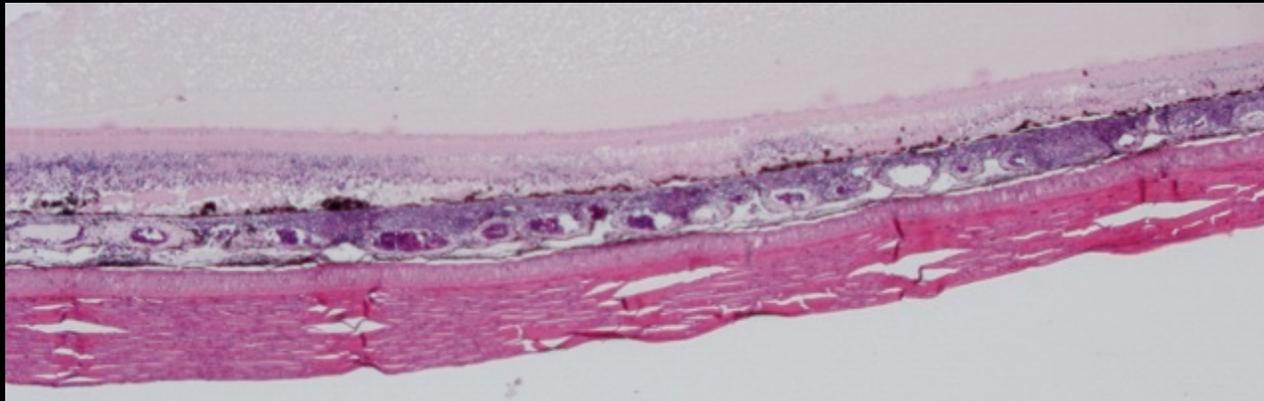
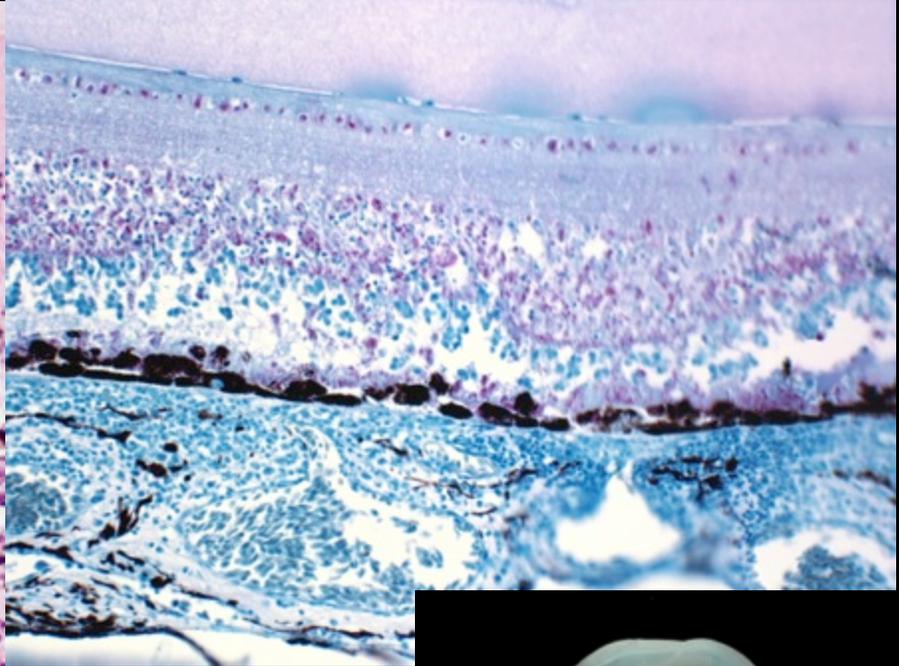
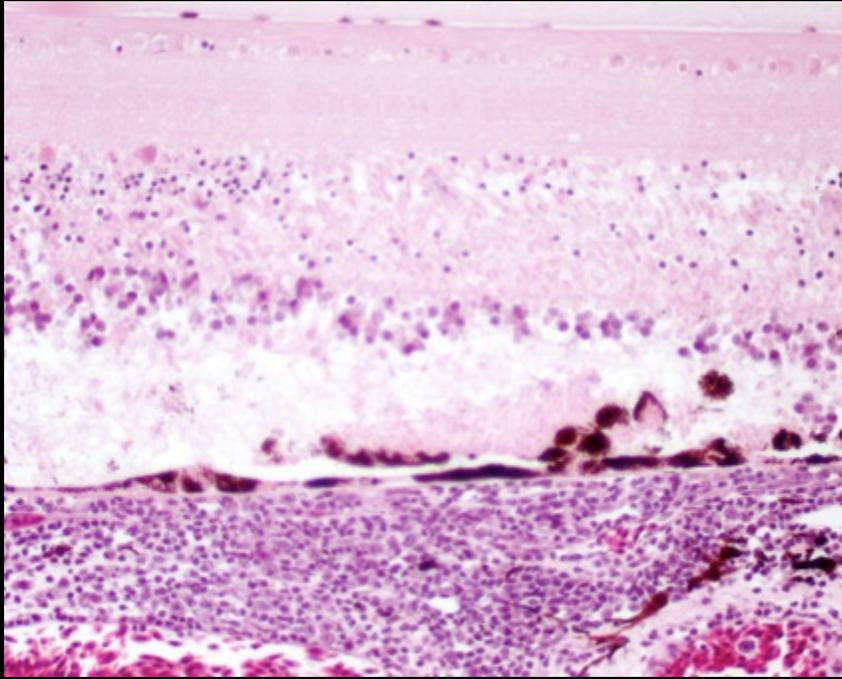






Pinealitis

West Nile Virus in Raptors



Canine Uveodermatologic Syndrome

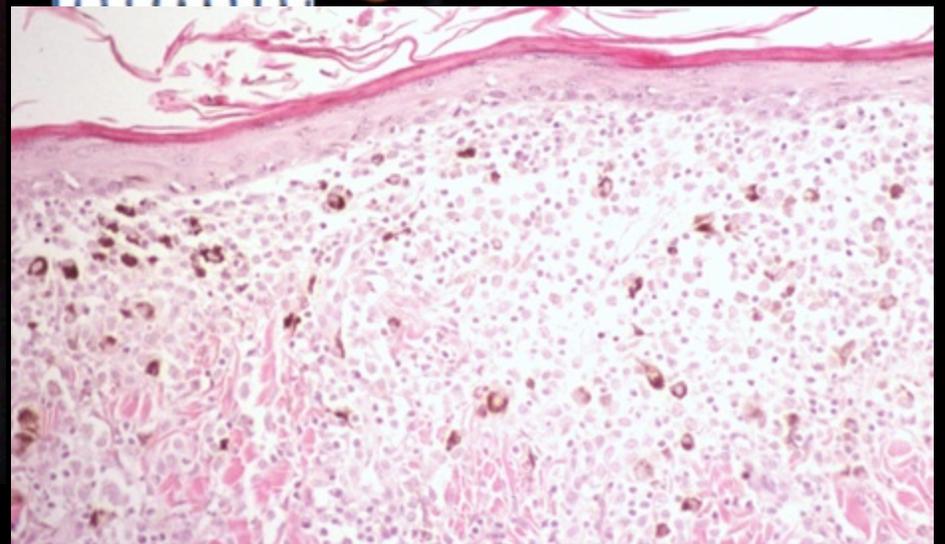
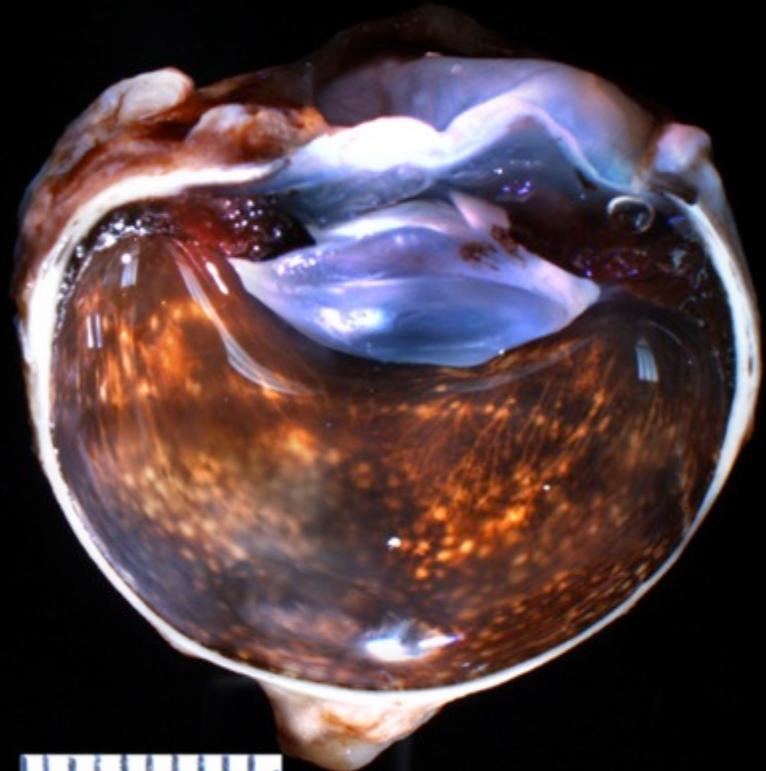
Vogt-Koyanagi-Harada Syndrome
VKH

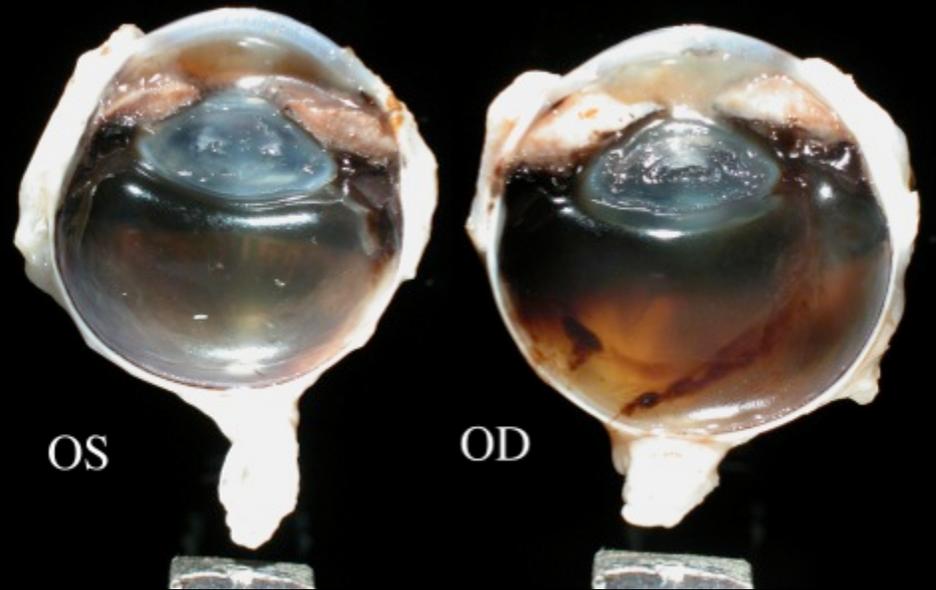
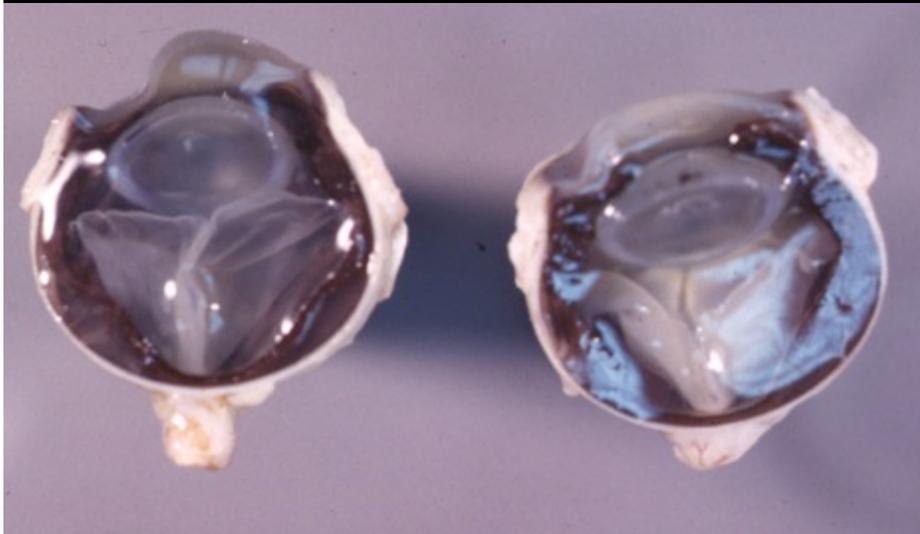
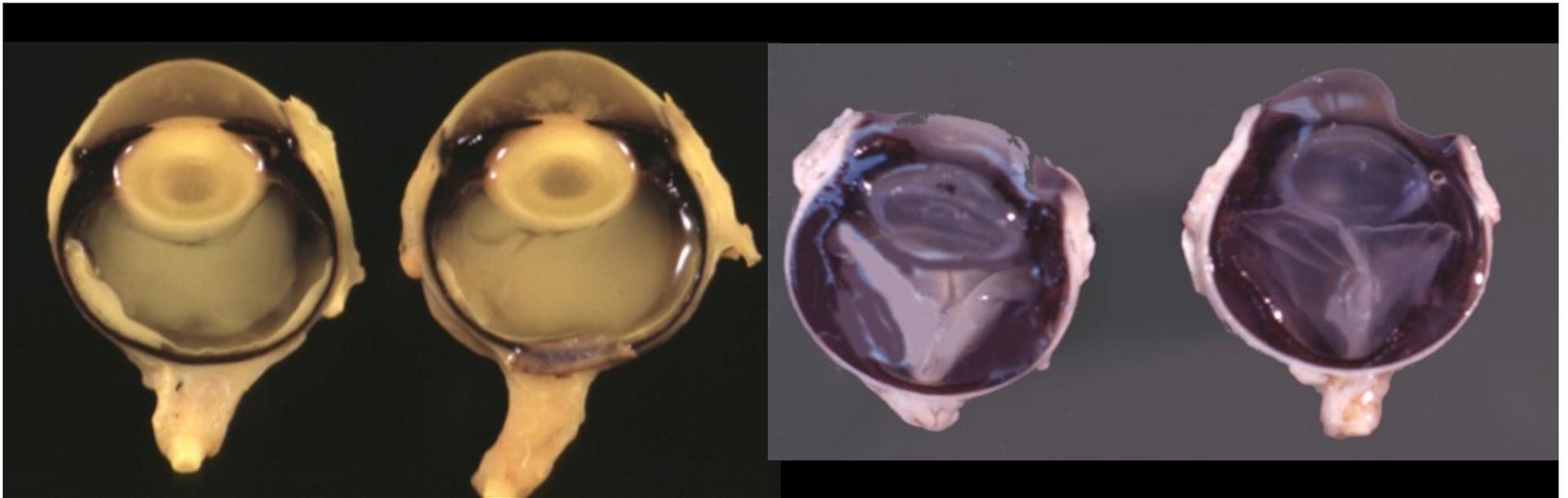
Canine Uveodermatologic Syndrome

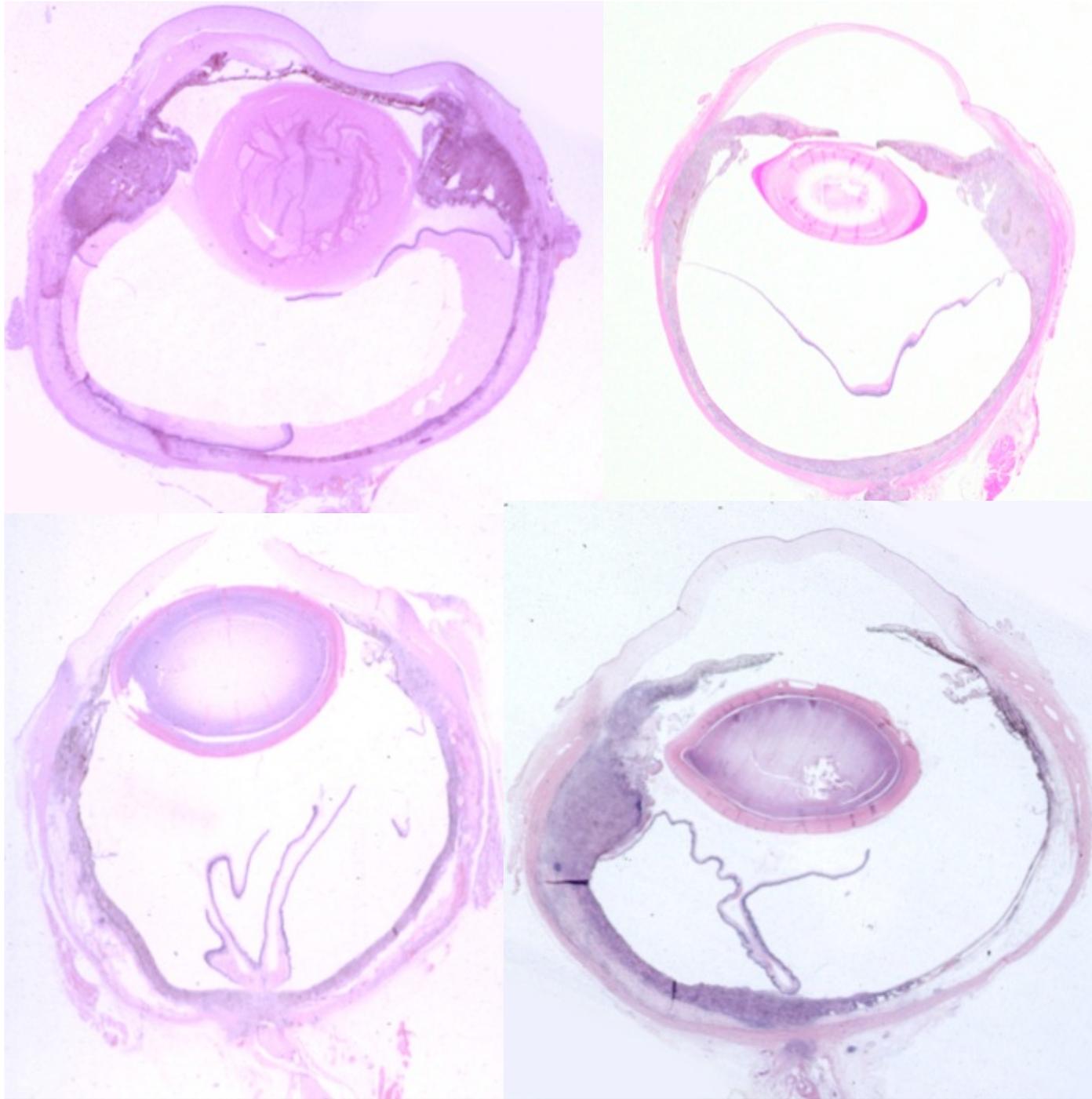
Vogt-Koyanagi-Harada Syndrome

VKH

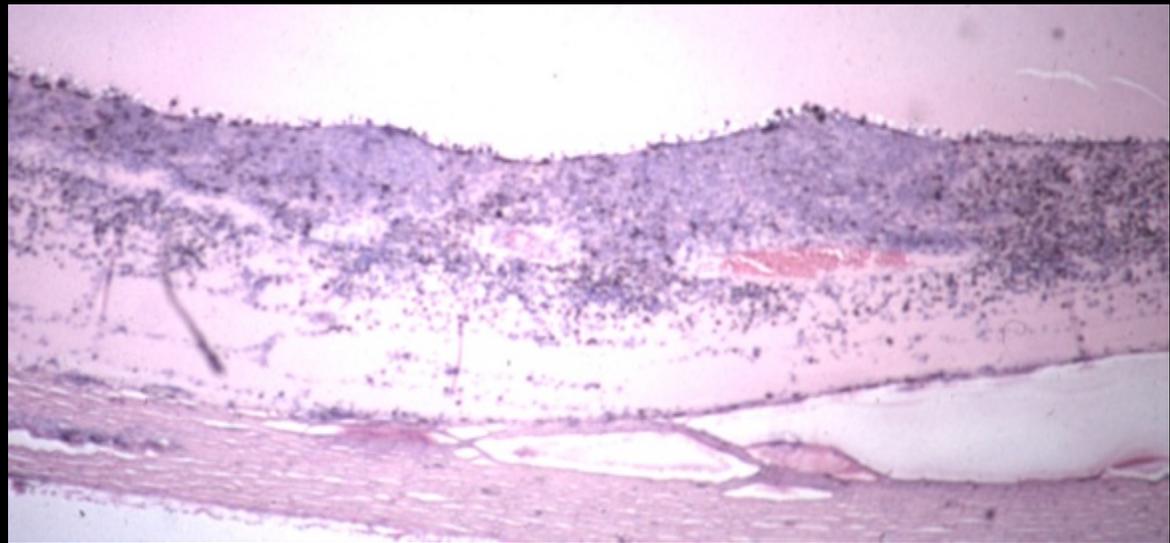
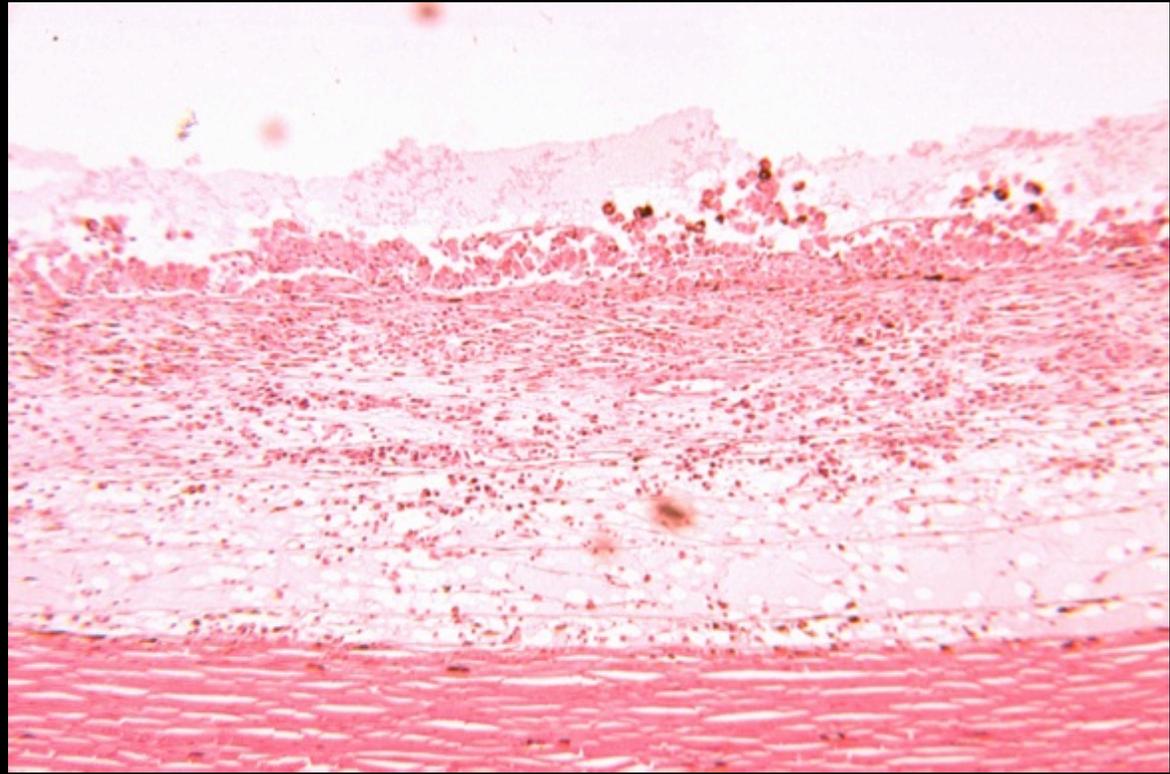
- 204 cases in the COPLOW collection
- Breeds
 - Mixed breed...51
 - Akita...33
 - Chow chow...8
 - Boxer...10
 - Husky...10
 - German Shepherd...8
- Bilateral symmetry is a distinctive feature
 - OS...58
 - OD...66
 - OU...62
- Glaucoma and retinal detachment
- Morphologically, relatively quiet eye

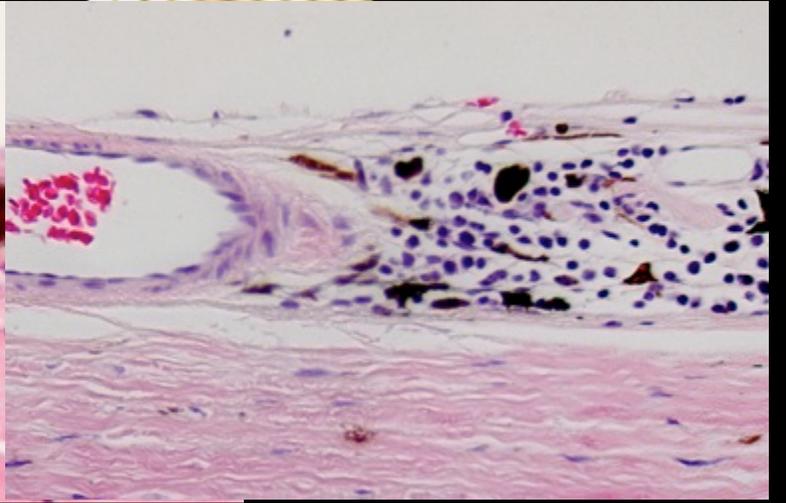
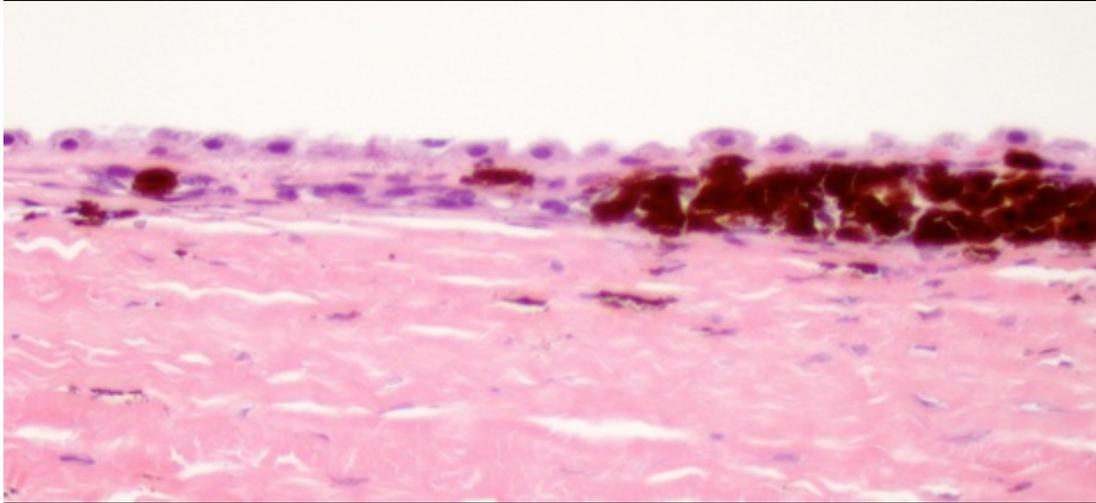
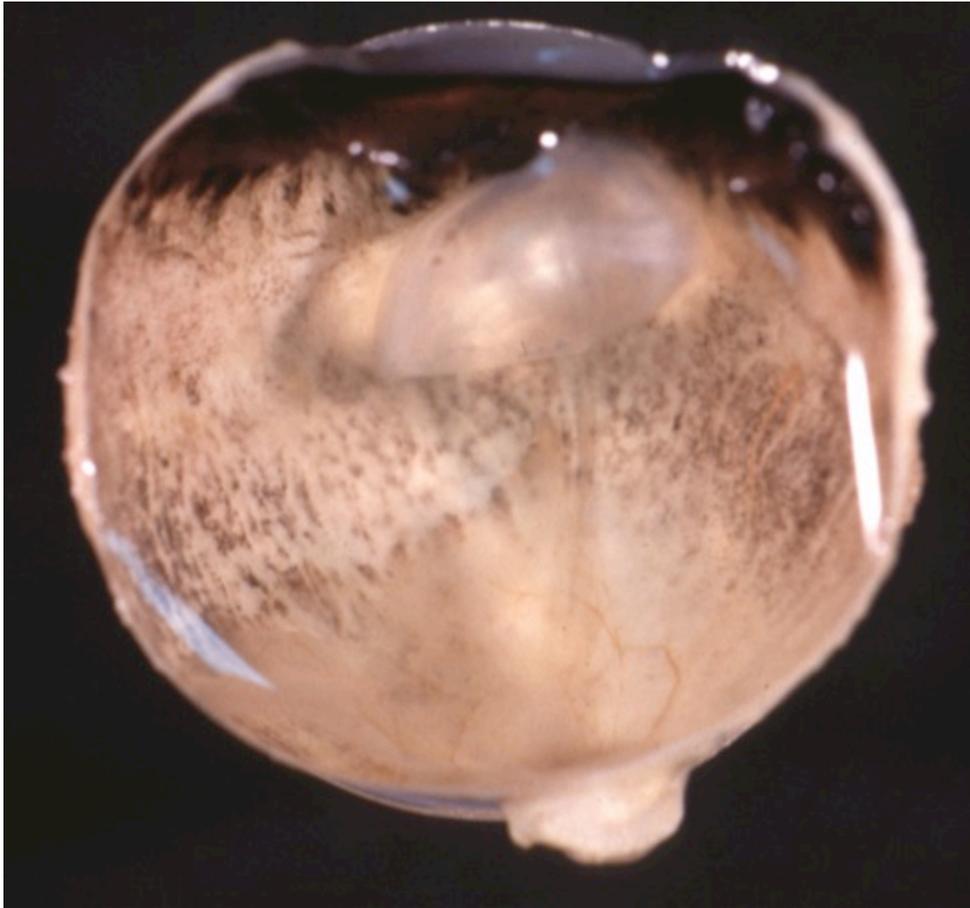






Canine
VKH





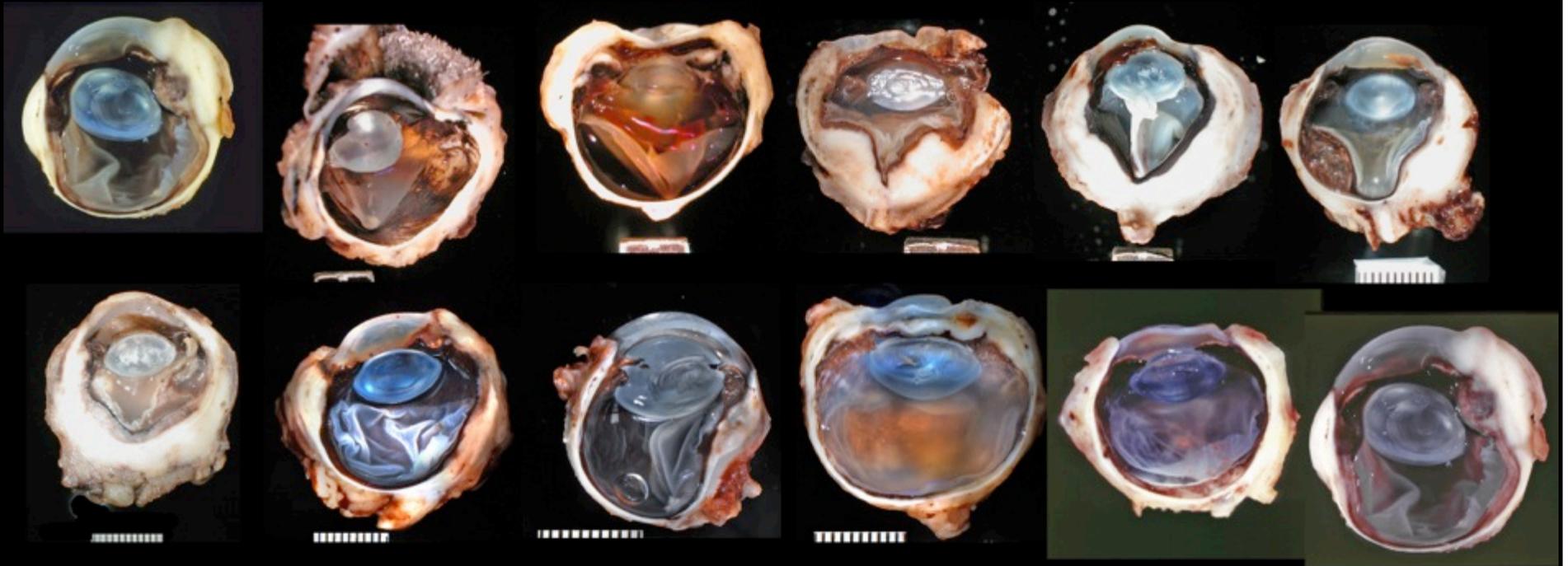
Canine Granulomatous Scleritis
104 cases: 13 Cocker Spanials, 7
Rottweilers

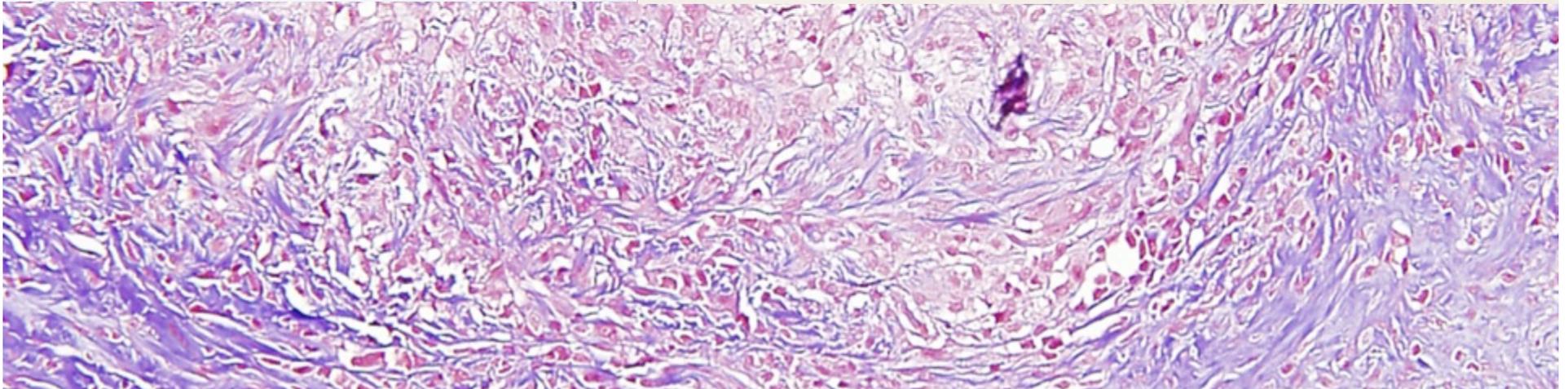
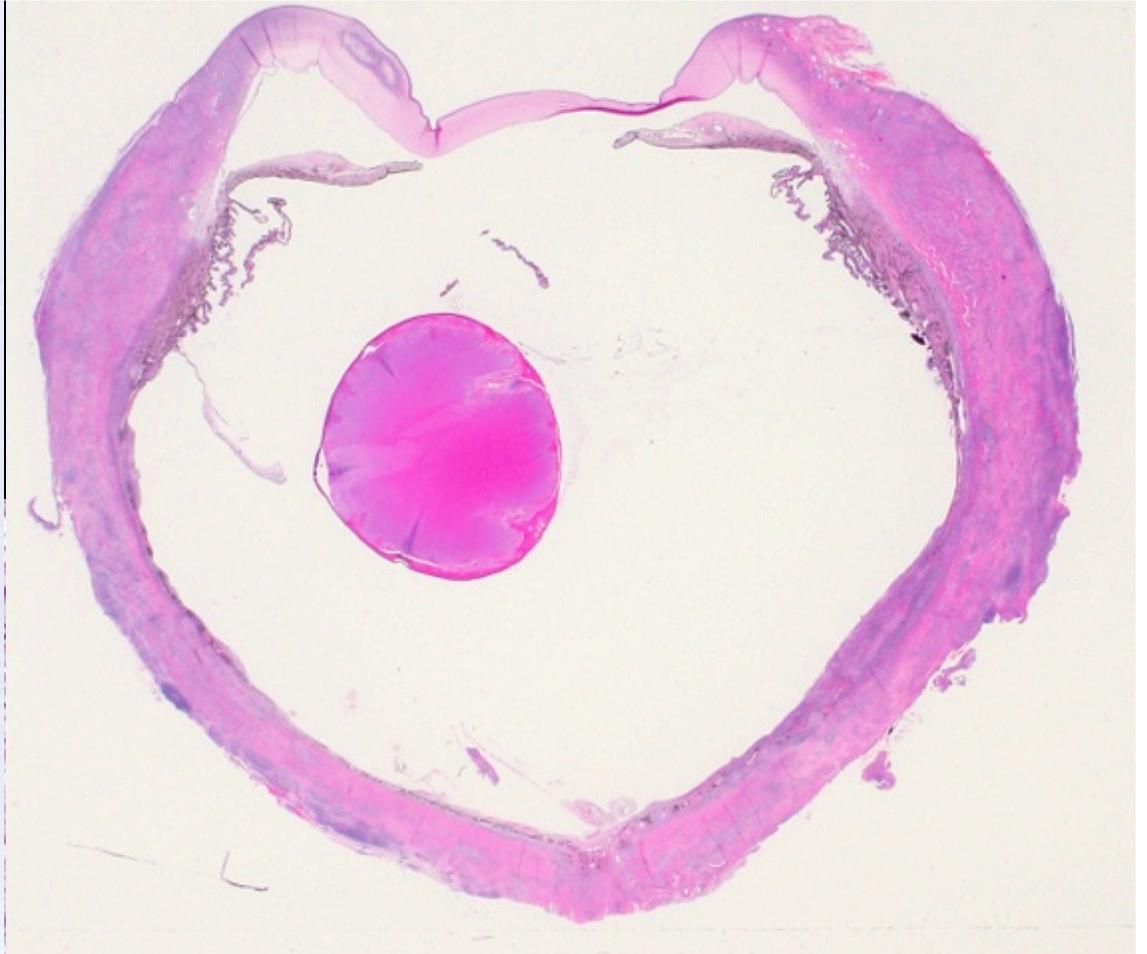
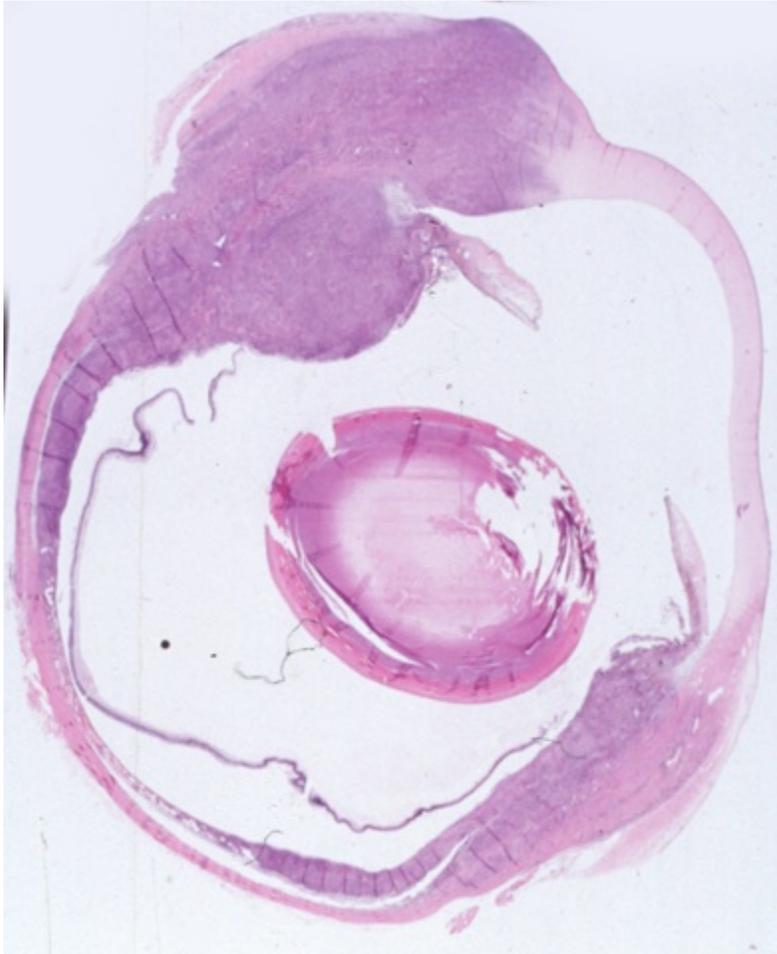
Canine Granulomatous Scleritis

Necrotizing scleritis

- The disease is defined by the scleral predilection
- You may see granulomatous uveitis, like VKH
- You may see episcleritis, like NGE
- 60 Females 40 Males

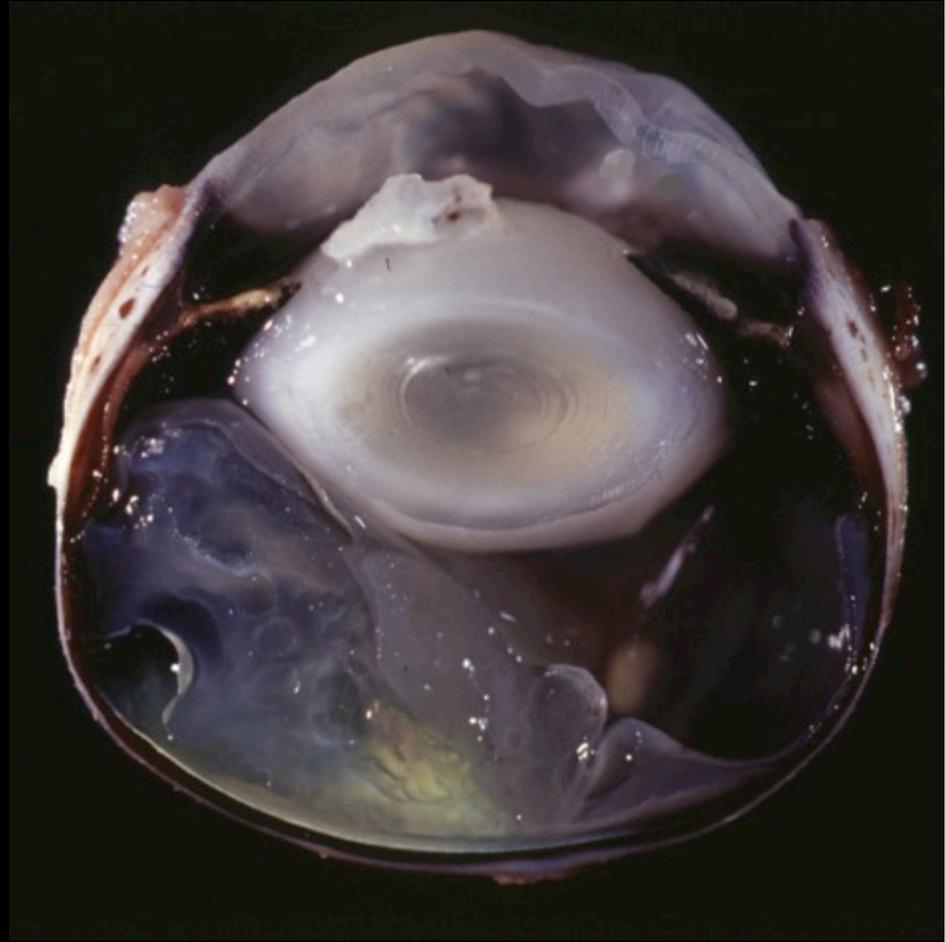
Granulomatous Scleritis



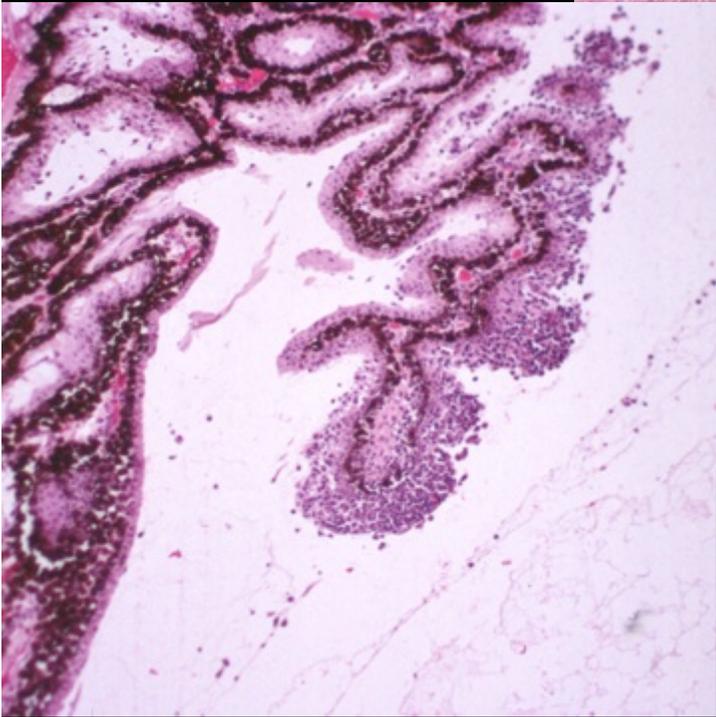
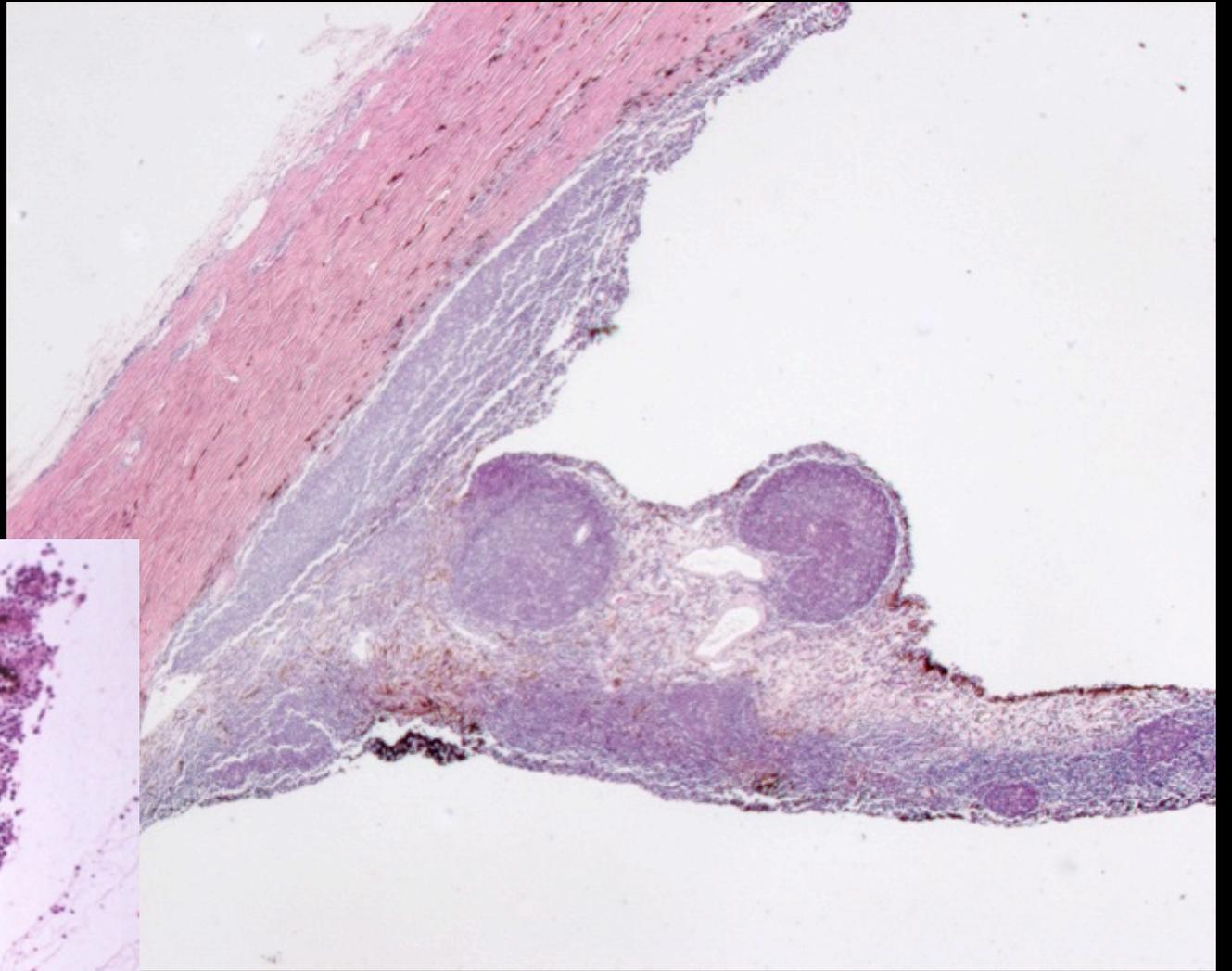


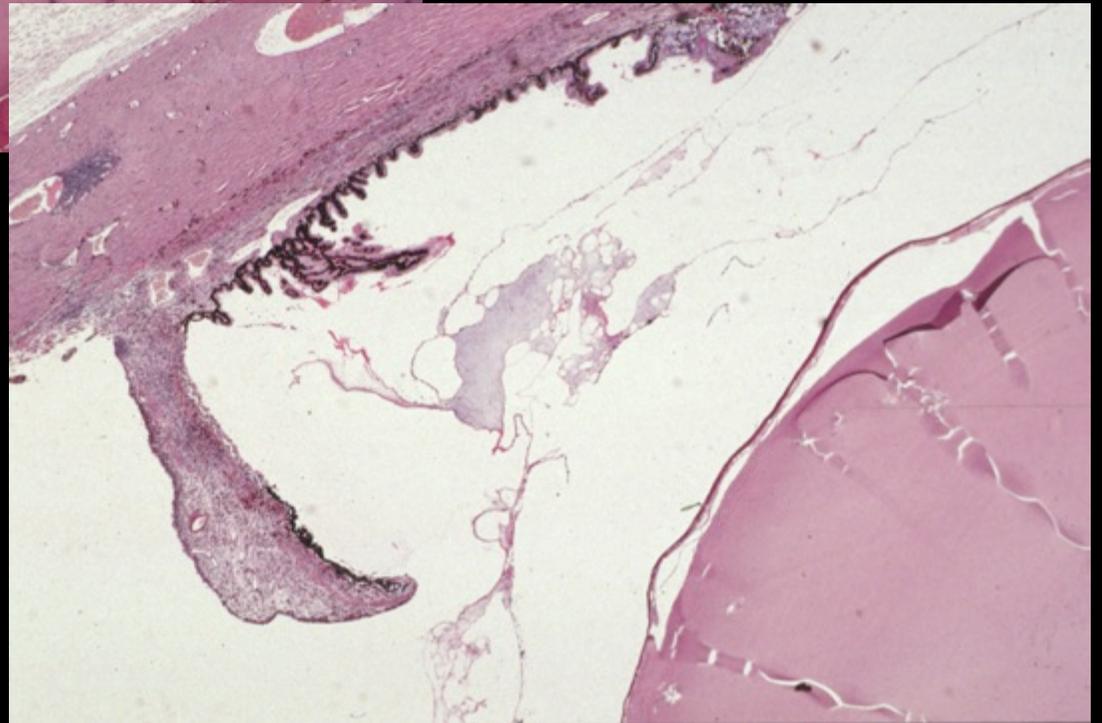
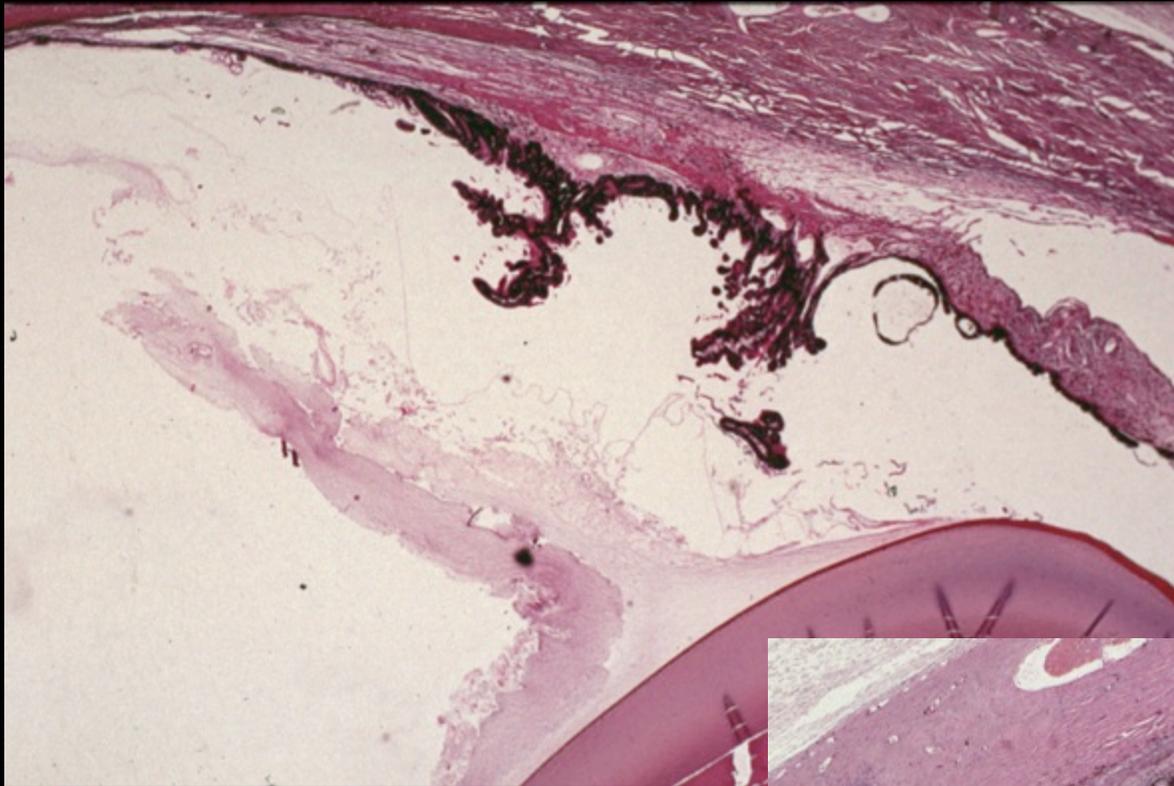
Feline Lymphoplasmacytic Uveitis (L/P Uveitis)

- 942 cases out of 8,862 total feline cases (10%)
- Second most common disease associated with glaucoma in the COPLOW pathology collection (70% of L/P uveitis submissions have glaucoma also)
- There is vitreous degeneration that is underemphasized in this disease
- About 10% have lens protein in the anterior vitreous, secondary to rupture/leakage at the level of the posterior pole
- Many possible causes have been studied or suggested, but the cause is surely nonspecific and multifactorial

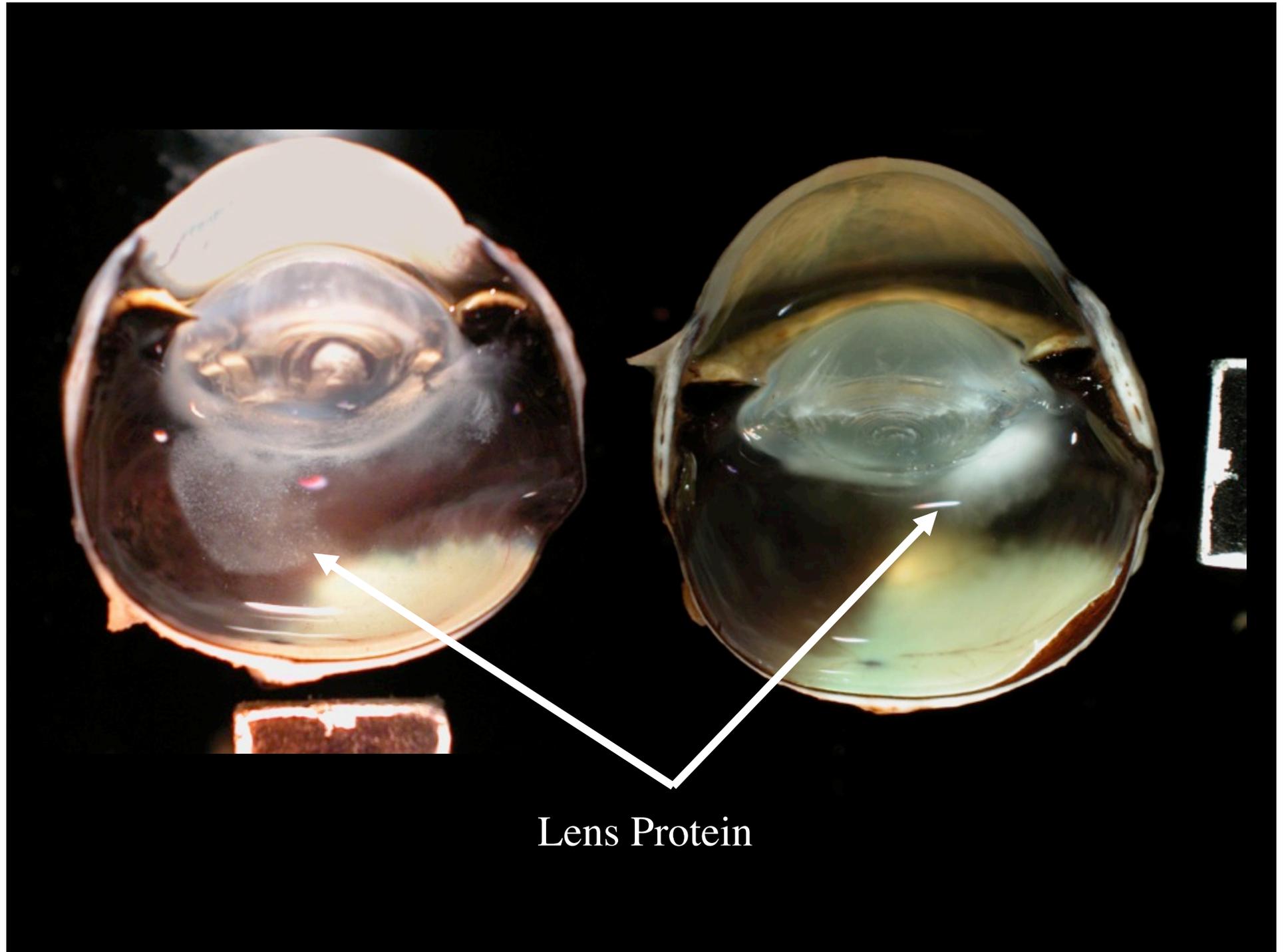




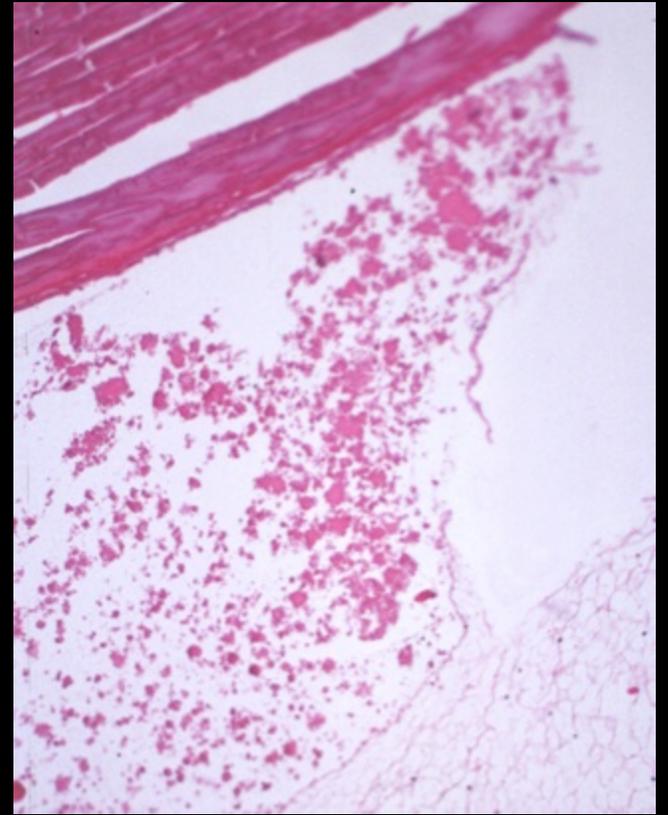
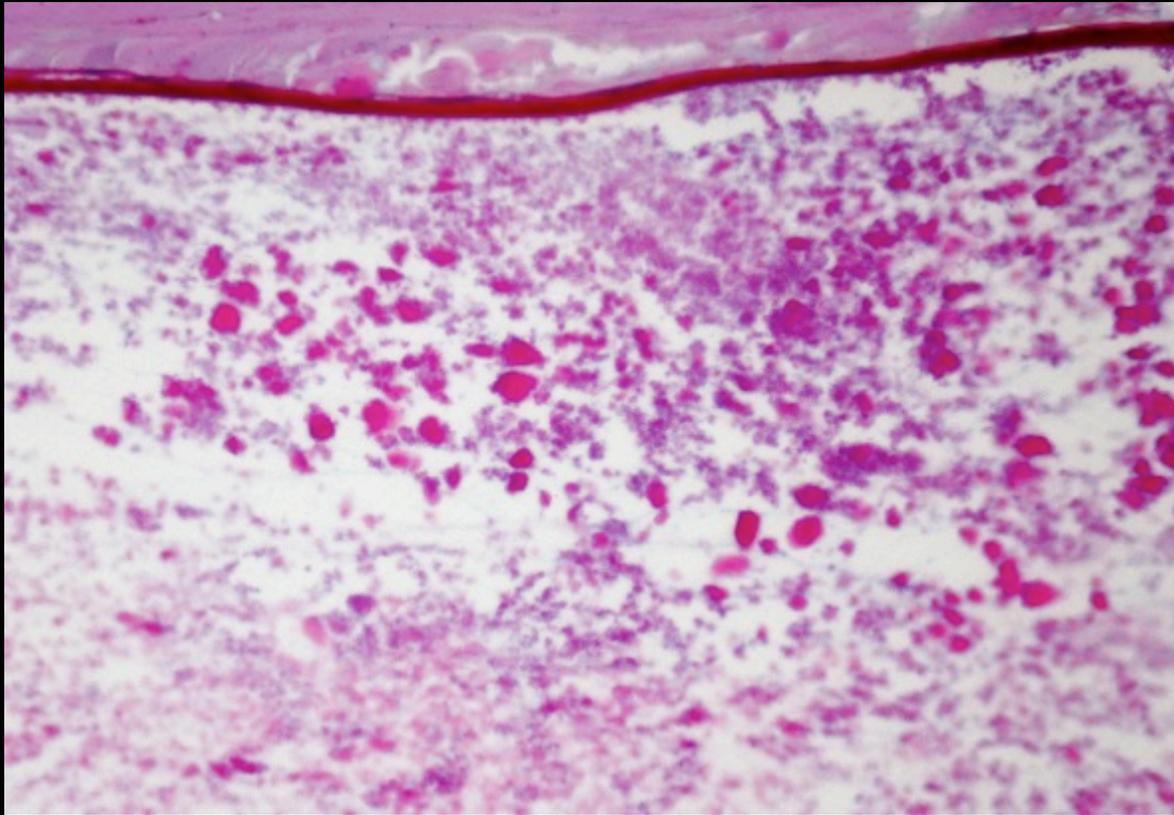




Alcian Blue PAS



Lens Protein



Lens Induced Inflammation

The Phacitis Syndromes

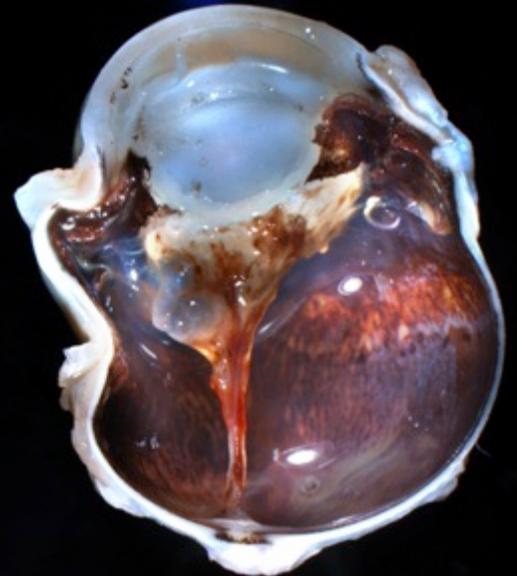
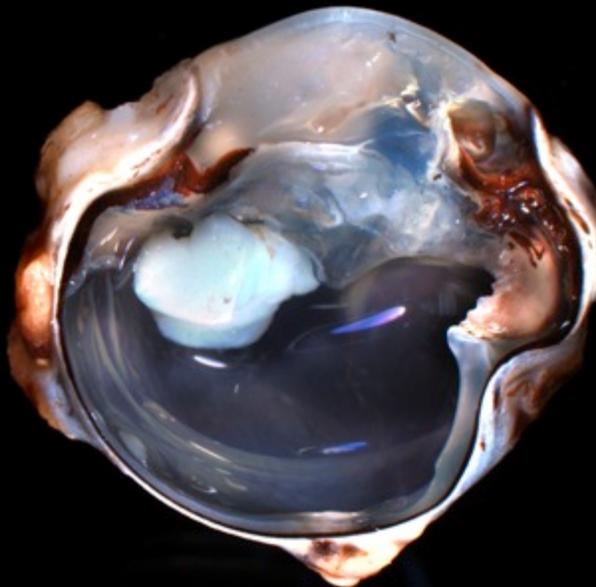
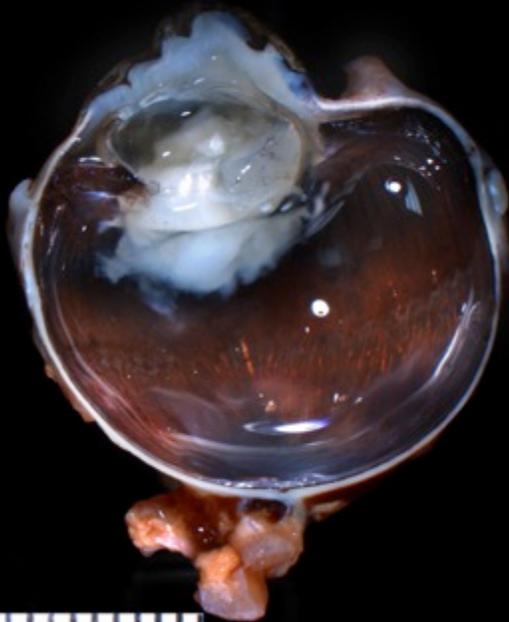
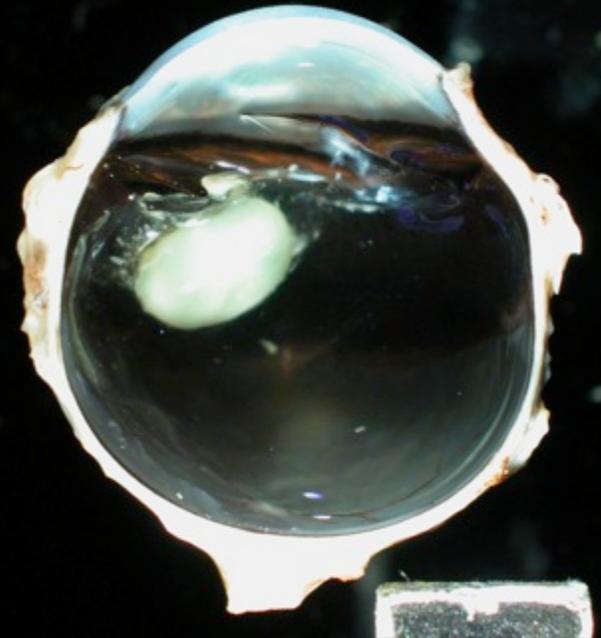
- Lens Induced Uveitis (**Phacolytic Uveitis**)
 - Hypermature cataract
 - Results in synechia followed by possible glaucoma
- Septic Implantation Syndrome
 - Cat Scratch
 - Bacteria embedded in the lens tissue
- **Phacoclastic uveitis**
 - Bland phacophagocytic inflammation
 - Lens capsule rupture or post operative exposure of lens protein
 - Purely a bland macrophage response
 - Asymmetric Uveitis – Non-diabetic
 - Robust pyogranulomatous reaction
 - Carpeting of the uvea, retina, lens, or cornea
 - Small breed dogs with the Poodle being the most common
 - Asymmetric Uveitis – Diabetic variant
 - Robust pyogranulomatous reaction identical to above
 - Miniature Schnauzers are the most common breed

Wilcock BP, Peiffer RL Jr. The pathology of lens-induced uveitis in dogs. Vet Pathol. 1987 vol. 24(6):549-53

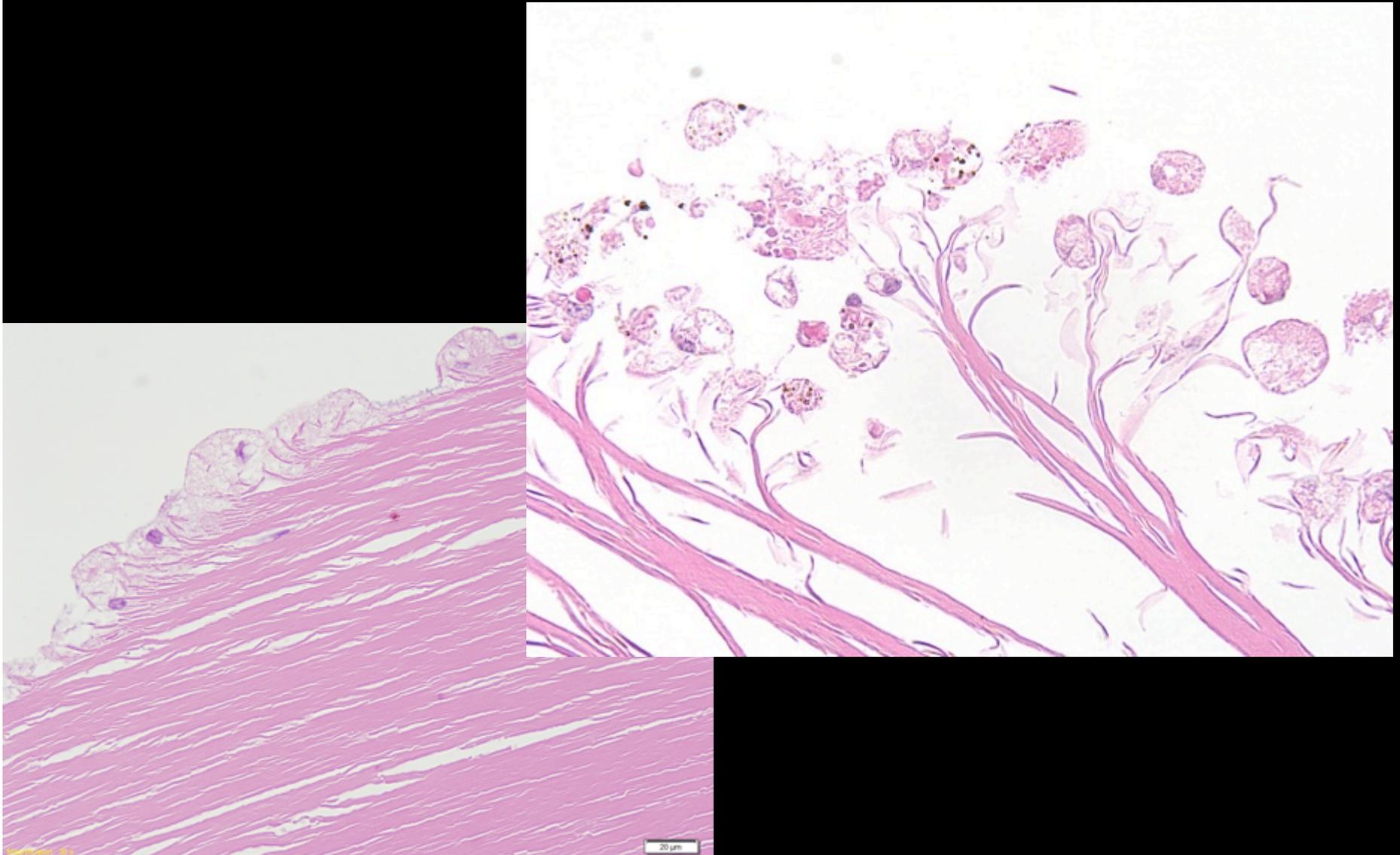
Lens Induced Uveitis

Phacolytic

Phacolytic



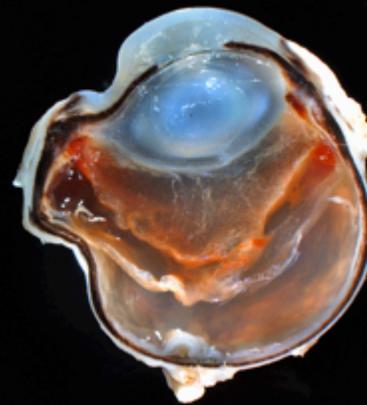
Bland Phacoclastic Uveitis



Asymmetric Uveitis

- Pyogranulomatous carpeting of the uvea, retina. Posterior cornea, or lens
- Typical Breeds (Small Breeds), Total = 168 cases
 - Poodle: 39
 - Mixed Breed: 20
 - Dachshund: 13
 - Schnauzer: 12
- Typically occurs first in one eye then the other
- Can be prevented or delayed with immune modulation
- A second form with exactly the same pathology occurs in diabetics but usually both globes at about the same time
- Breeds for Diabetic-variant, Total = 73 cases
 - Schnauzer: 22
 - Mixed Breed: 10

Asymmetric Uveitis



Asymmetric Uveitis

