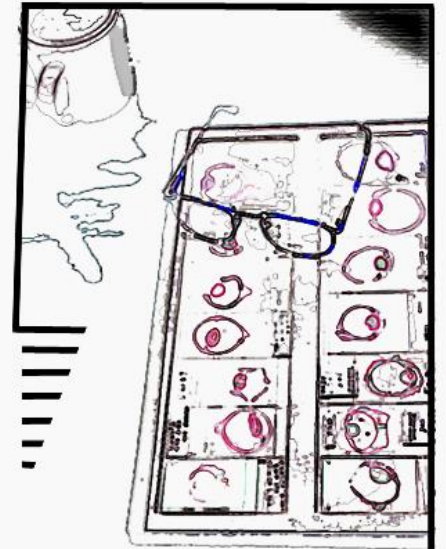


The Glaucomas of Cats

Dick Dubielzig



Glaucomas in Cats

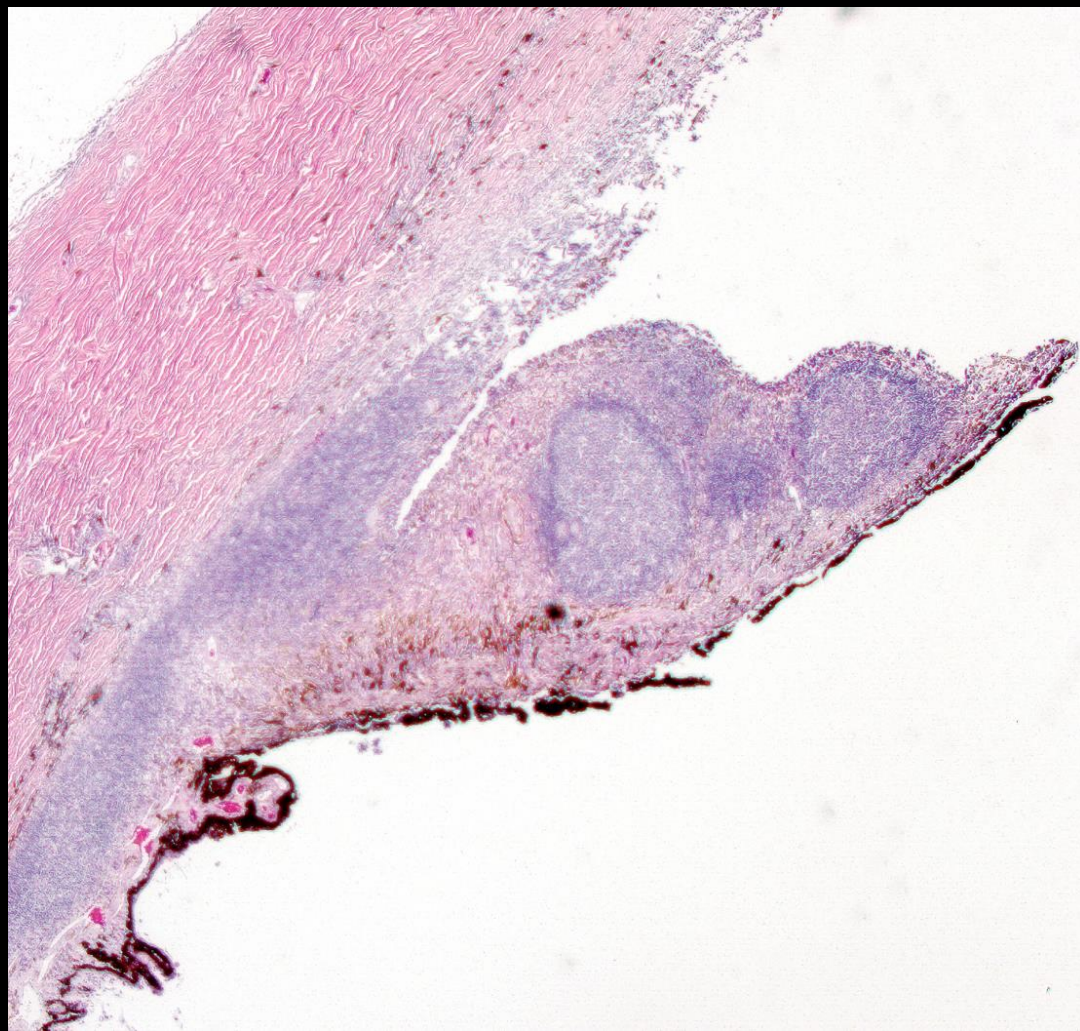
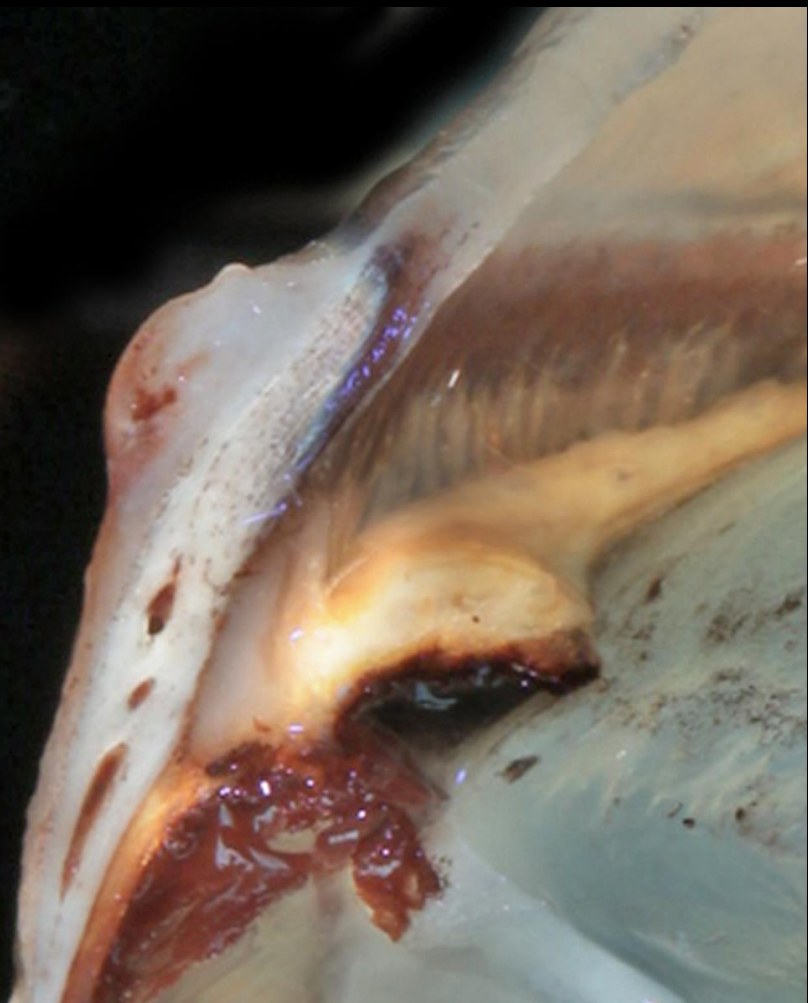
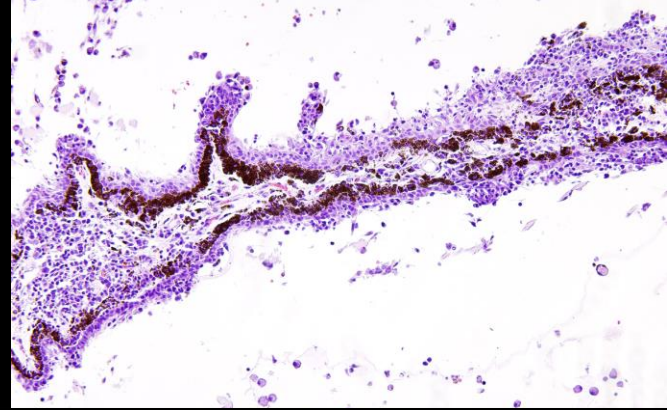
- Relatively common indication for enucleation.
 - 29% of submissions to COPLOW

| Classification of Feline glaucoma | |
|-----------------------------------|---------------------------------------|
| Congenital Glaucoma | Anterior Segment Dysgenesis |
| Primary Glaucoma | Open Angle Glaucoma |
| | |
| | |
| Secondary Glaucoma | Anterior uveitis |
| | Lens luxation (trauma/primary/catarac |
| | Hyphema |
| | Intraocular tumors |
| | Aqueous misdirection syndrome |

The Glaucomas of Cats

Lymphoplasmacytic Uveitis

861 cases



Lymphoplasmacytic Uveitis in Cats by Sex

| Feline Lymphoplasmacytic Uveitis | | | | | |
|----------------------------------|-----|---|-----------------------------|----|---|
| No Granular Protein n = 1009 | | | Granular Protein n = 113 | | |
| 26.1% | 263 | F | 21.2% | 24 | F |
| 2.7% | 27 | i | 21.2% | 24 | s |
| 23.3% | 235 | s | 75.2% | 85 | M |
| 0.1% | 1 | X | 2.7% | 3 | i |
| 70.5% | 711 | M | 72.6% | 82 | n |
| 4.7% | 47 | i | 3.5% | 4 | X |
| 65.8% | 664 | n | 3.5% | 4 | X |
| 3.5% | 35 | X | | | |
| 3.5% | 35 | X | | | |

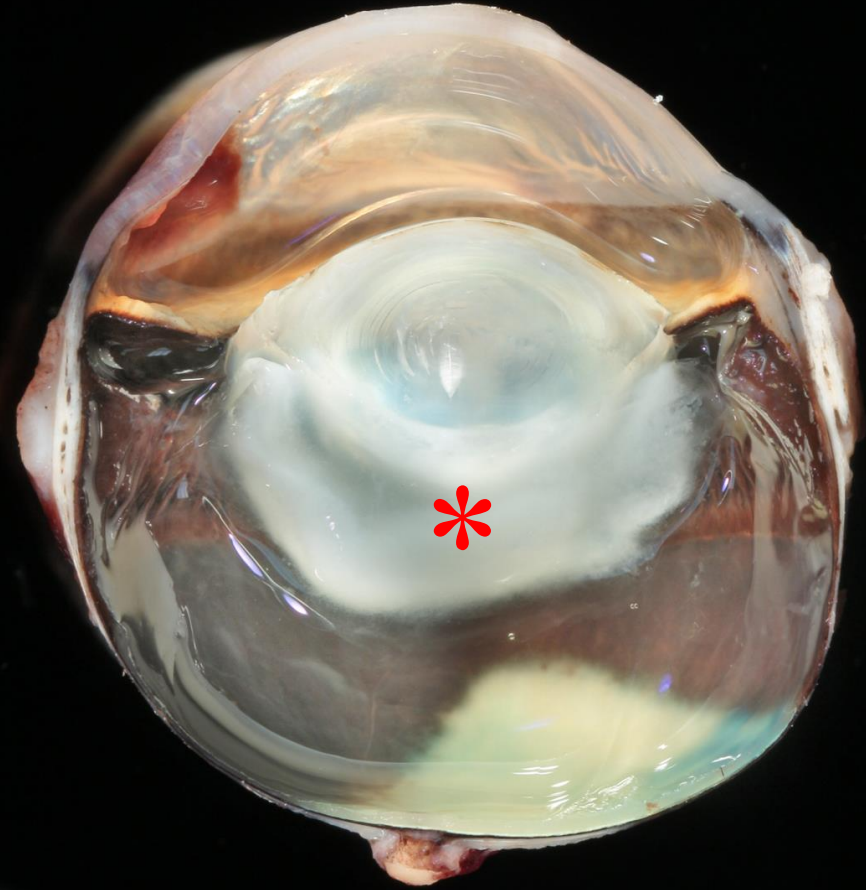
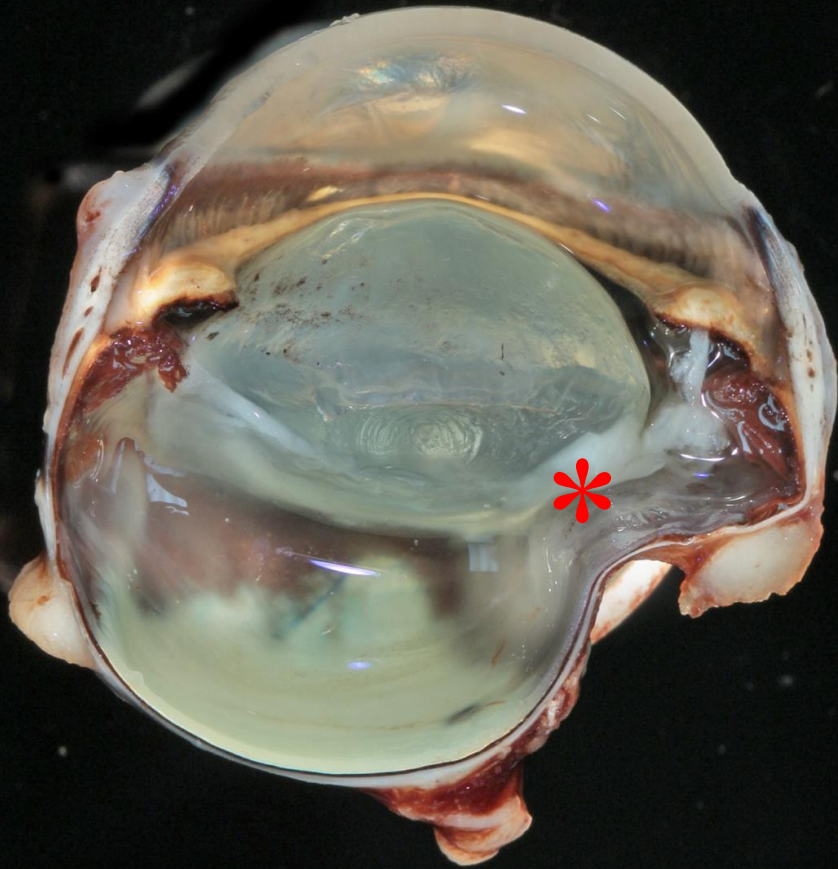
Total cats: 41% Female & 54% Male
n = 10,300

Melanoma: 45% Female & 52% Male
n = 2763

Strong Male Bias

The Glaucomas of Cats

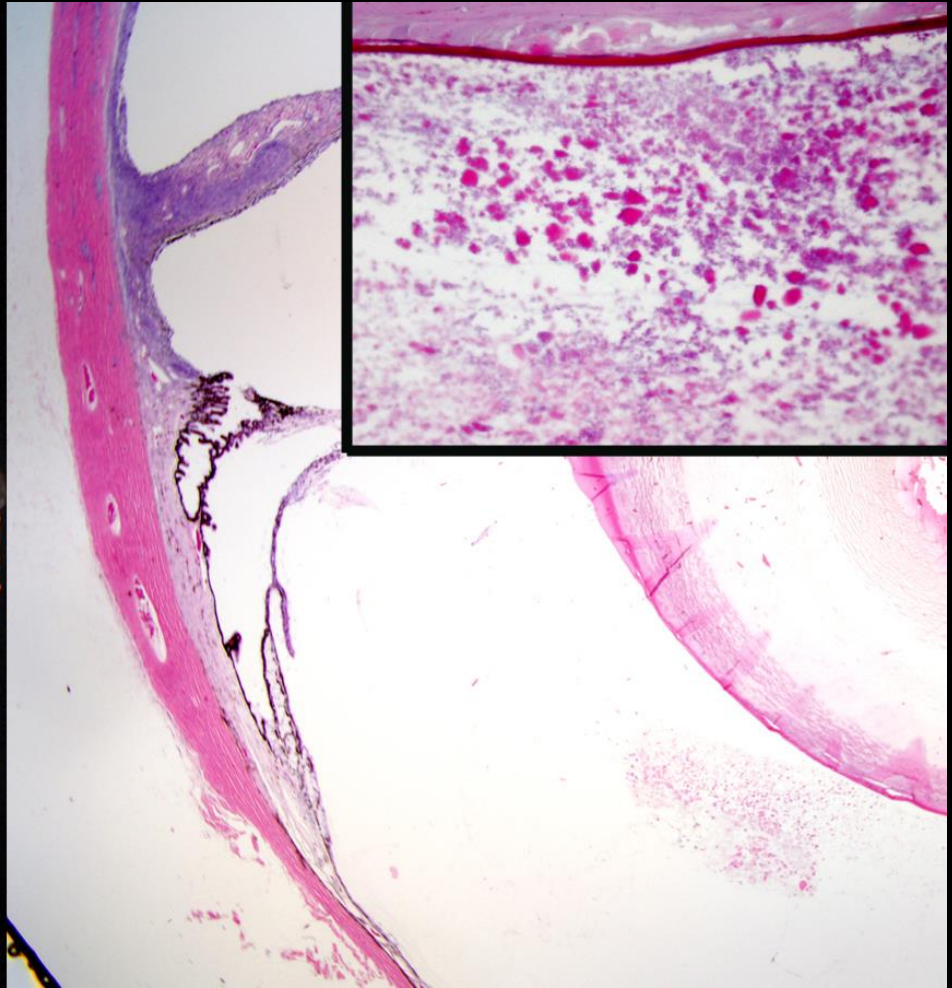
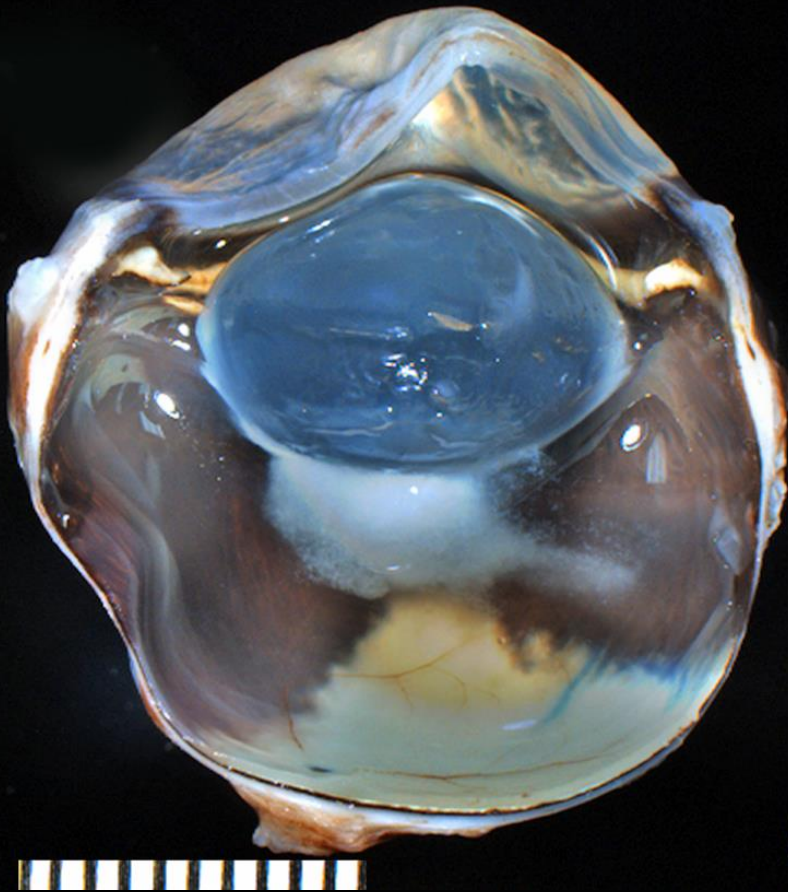
Lymphoplasmacytic Uveitis



120 cases with presumed lens protein leakage

The Glaucomas of Cats

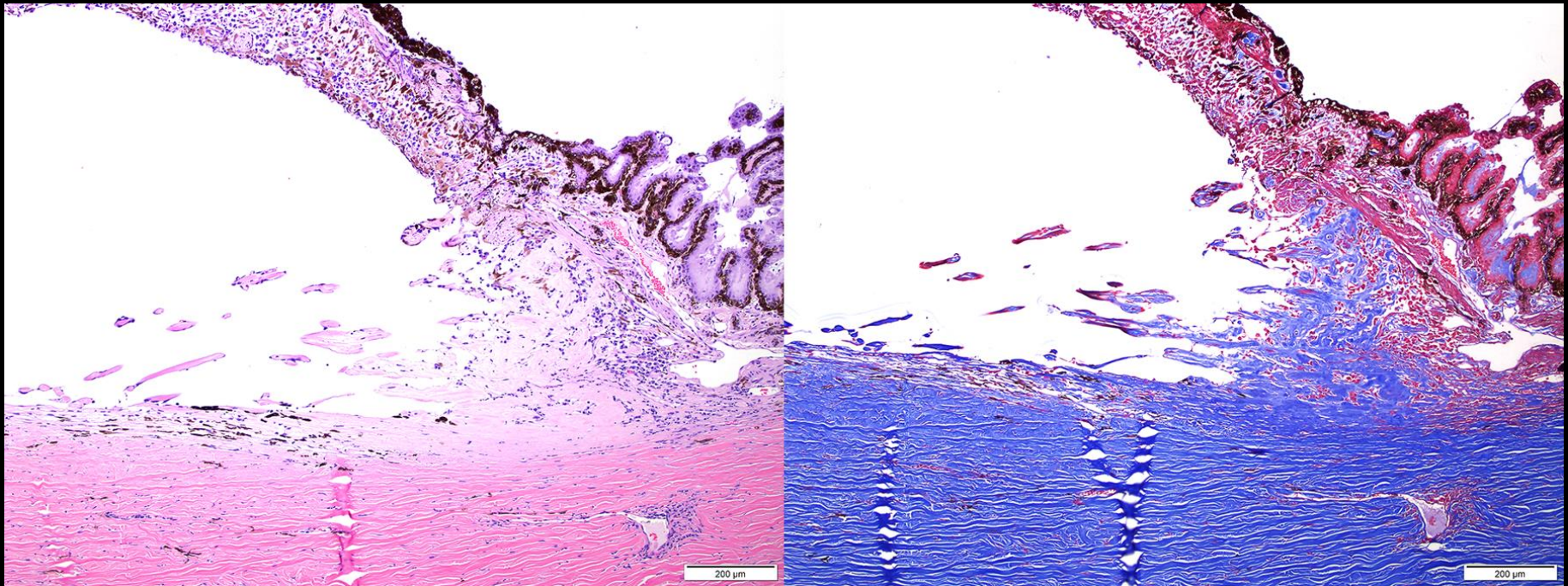
Lymphoplasmacytic Uveitis



120 cases with presumed lens protein leakage

The Glaucomas of Cats

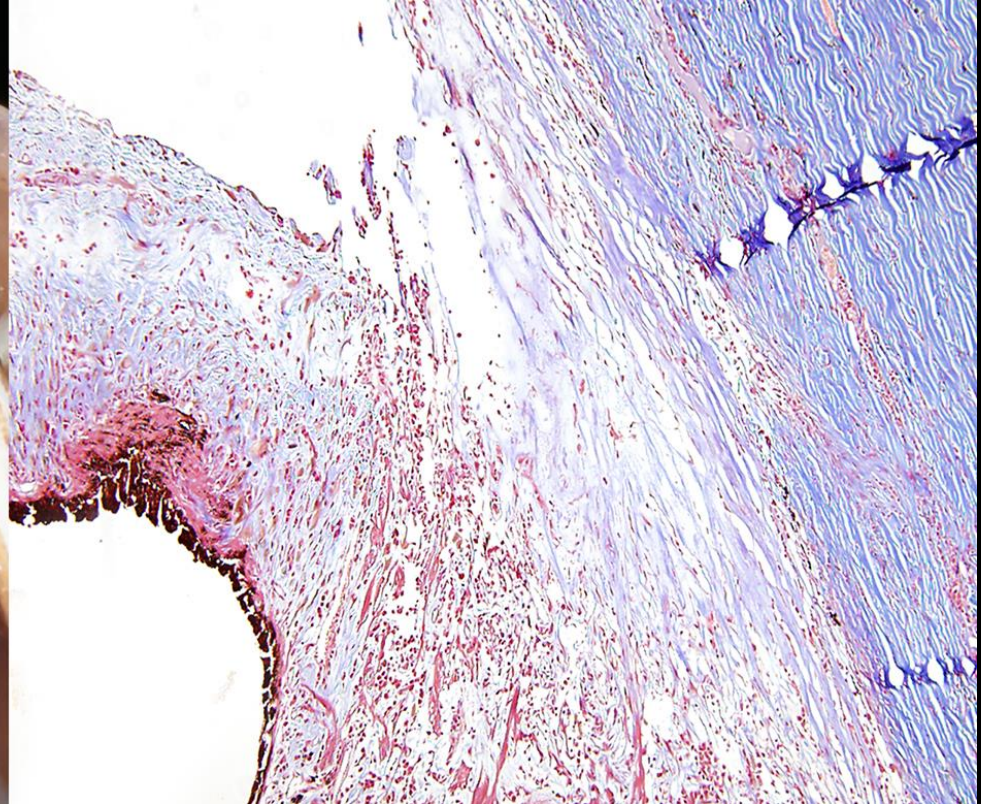
Lymphoplasmacytic Uveitis



Trabecular meshwork fibrosis

The Glaucomas of Cats

Lymphoplasmacytic Uveitis

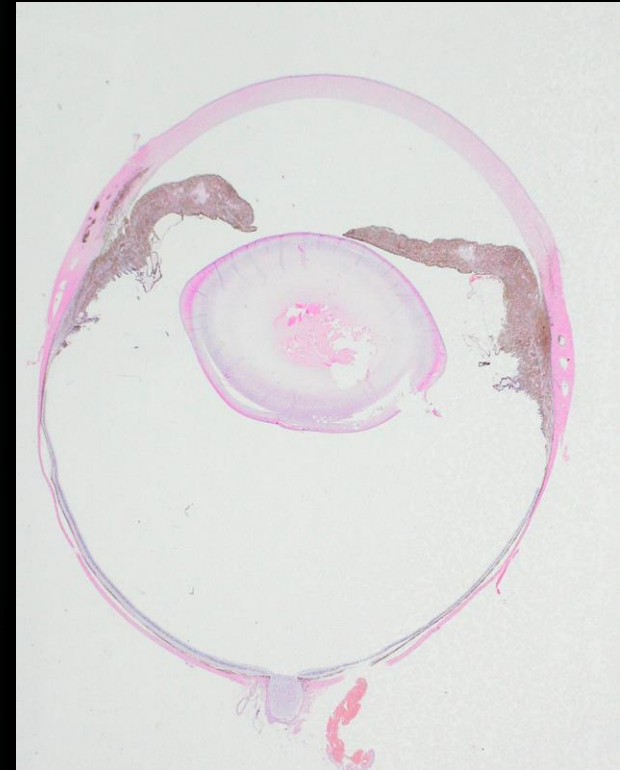
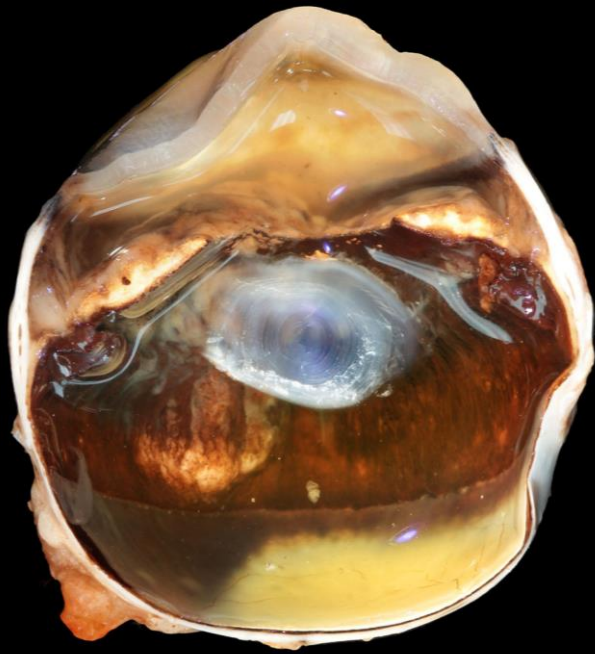


Trabecular meshwork fibrosis

The Glaucomas of Cats

Feline Diffuse Iris Melanoma

1244 Cases



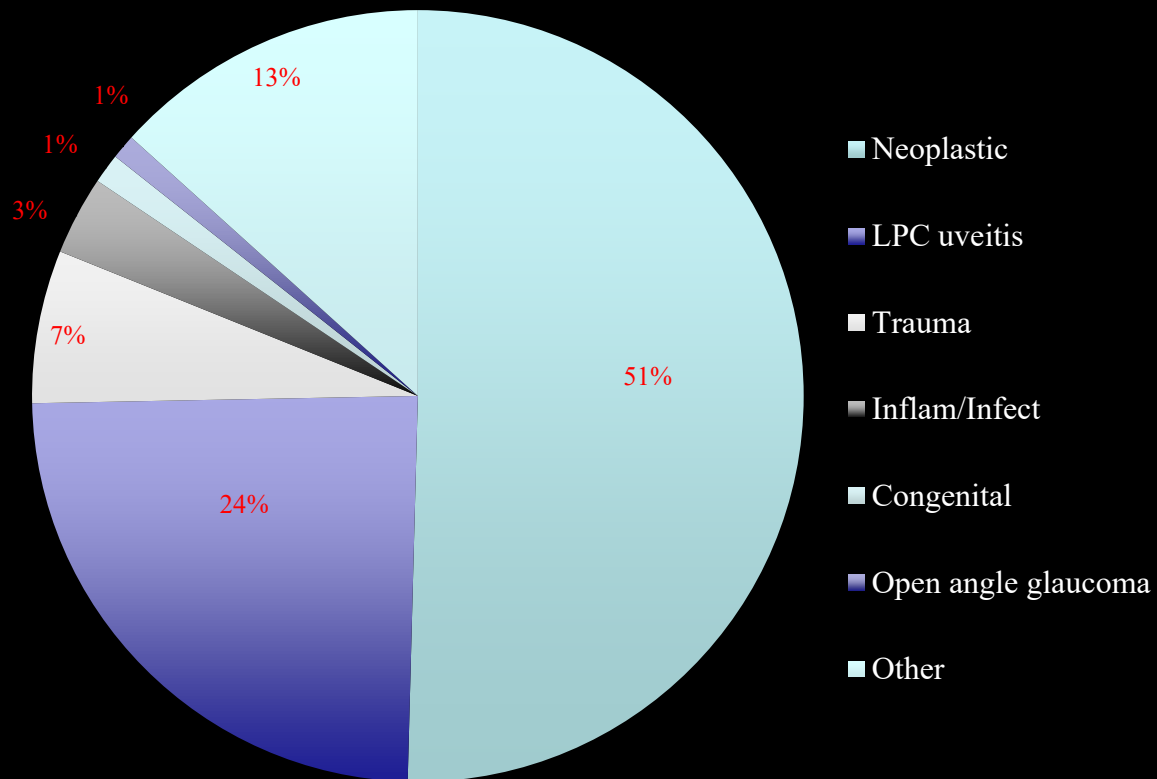
Feline Open Angle Glaucoma

Veterinary Ophthalmology (2008) 11, 3, 162–165

Feline primary open angle glaucoma

Susan Jacobi* and Richard R. Dubielzig†

- Increase in IOP and optic nerve and retinal glaucomatous lesions with absence of significant ocular abnormalities.
 - “Open angle, open cleft”.
- 8 cats
- Mean age 9.1 years
- Unilateral presentation
- Burmese, DSH and DLH



Feline Open Angle Glaucoma

33 total cases

- **Sex:** 68% female spayed; 32% male neutered
- **Mean age at presentation:** 10.1 years-old (range 5-18)
- **Breeds:**
 - DSH (n16)
 - DLH (n8)
 - DMH (n4)
 - Burmese (n3)
 - Persian (n2)

Feline Open Angle Glaucoma

Presenting complaints

- Dilated pupils
- Enlarged globe
- Vision loss

Ophthalmic findings

- Absent pupillary light reflexes
- Buphthalmos
- Dilated pupils
- ON atrophy

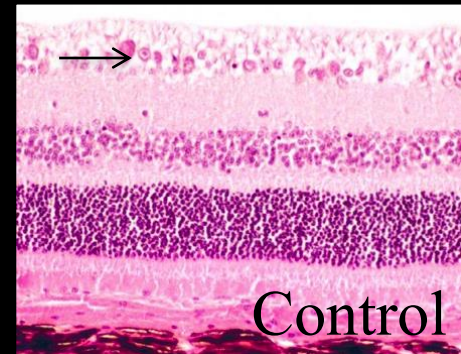
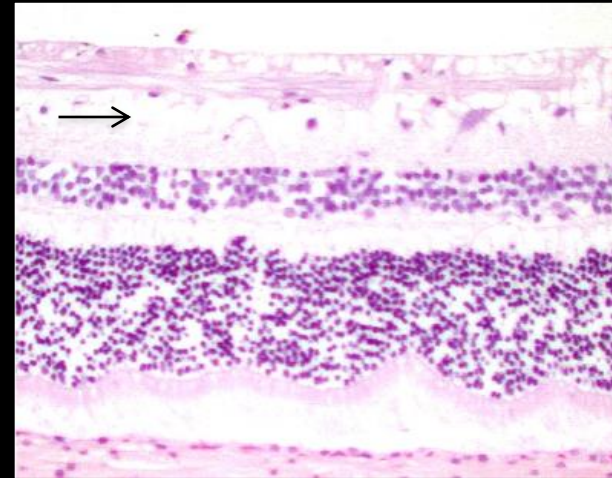


Feline Open Angle Glaucoma

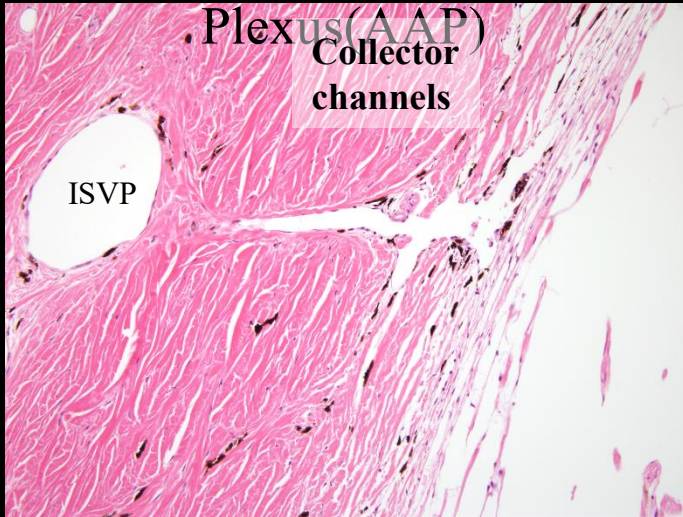
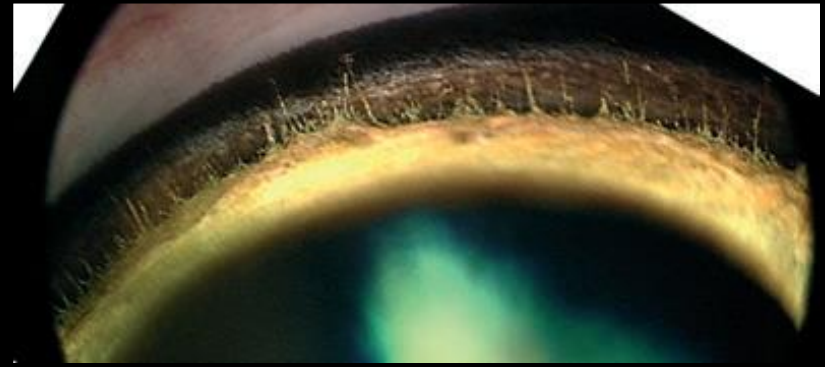
- **Mean IOP at enucleation:** 47.7mmHg (range 25-67)
- **Laterality:**
 - 58% Bilaterally affected (17/29)
 - 24% OD only (7/29)
 - 17% OS only (5/29)
- **Glaucoma in the contralateral eye:**
 - 29% (5/17) Glaucoma OU at first presentation
 - 53% (9/17) Developed glaucoma other eye < 1 year.
 - 17% (3/17) Developed glaucoma other eye > 1 year.
 - **Average time to glaucoma in the 2nd eye after diagnosis:**
10 months (range 3 weeks-5 years).



Feline Open Angle Glaucoma



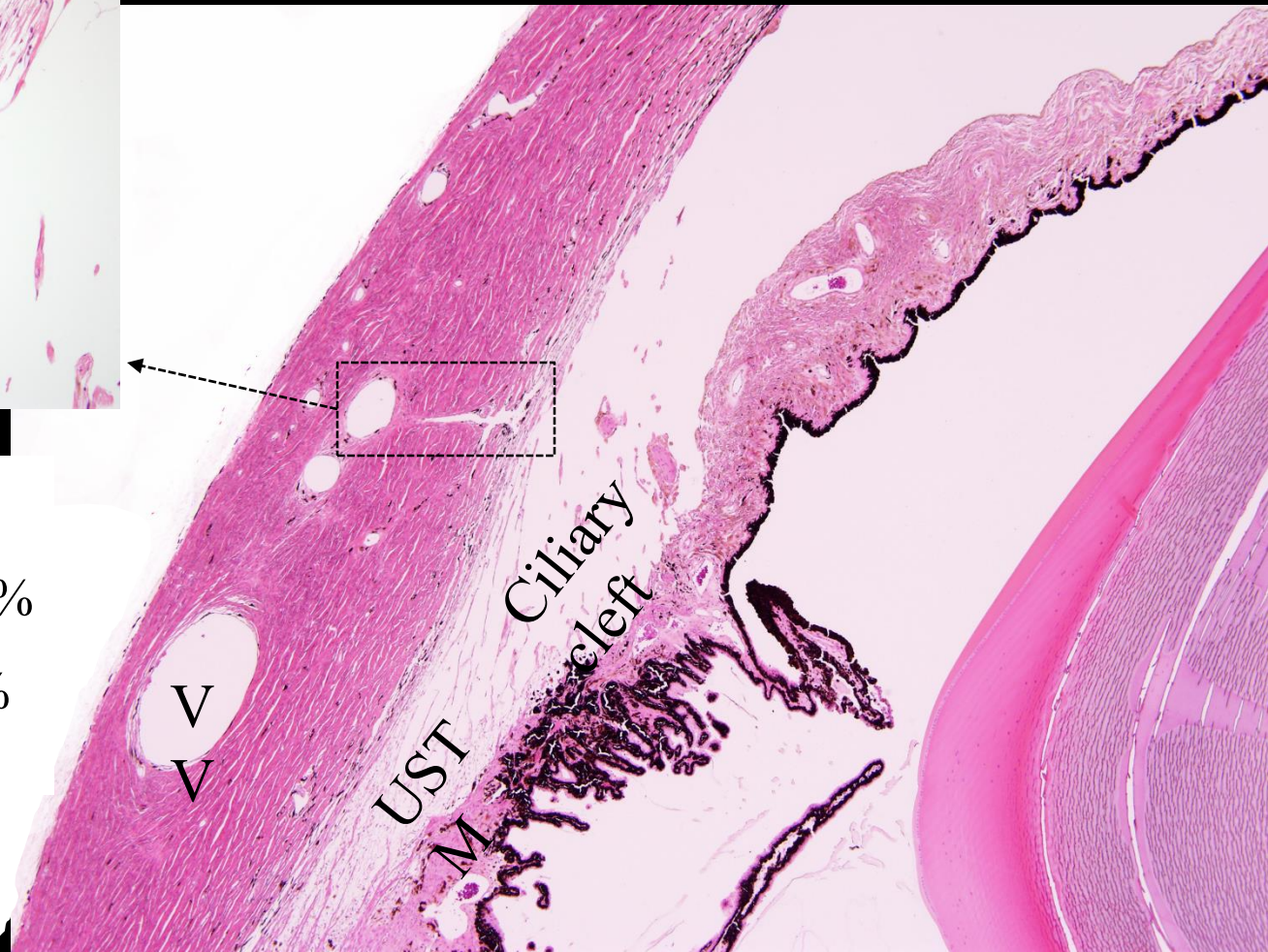
ICA and aqueous outflow anatomy in cats



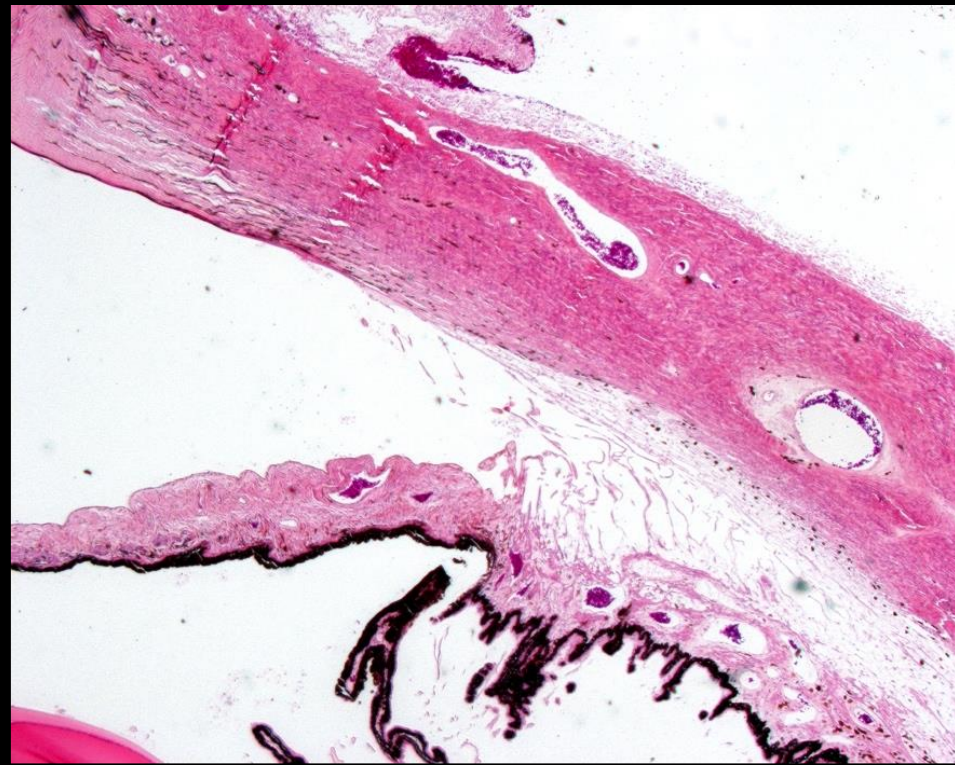
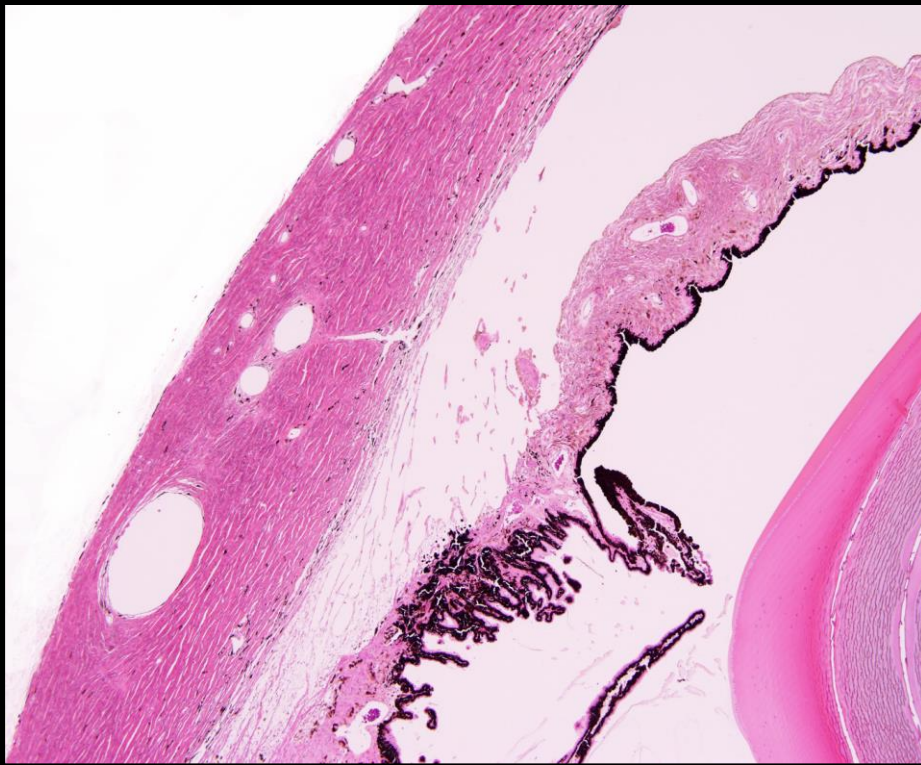
Cat Aqueous outflow

Conventional Pathway 97%

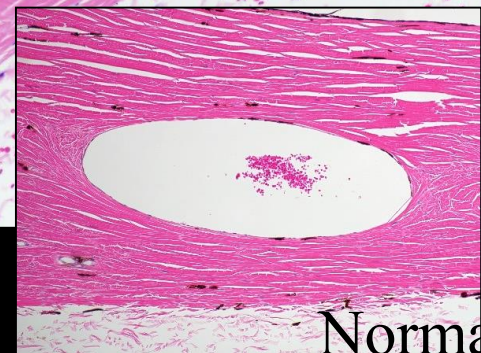
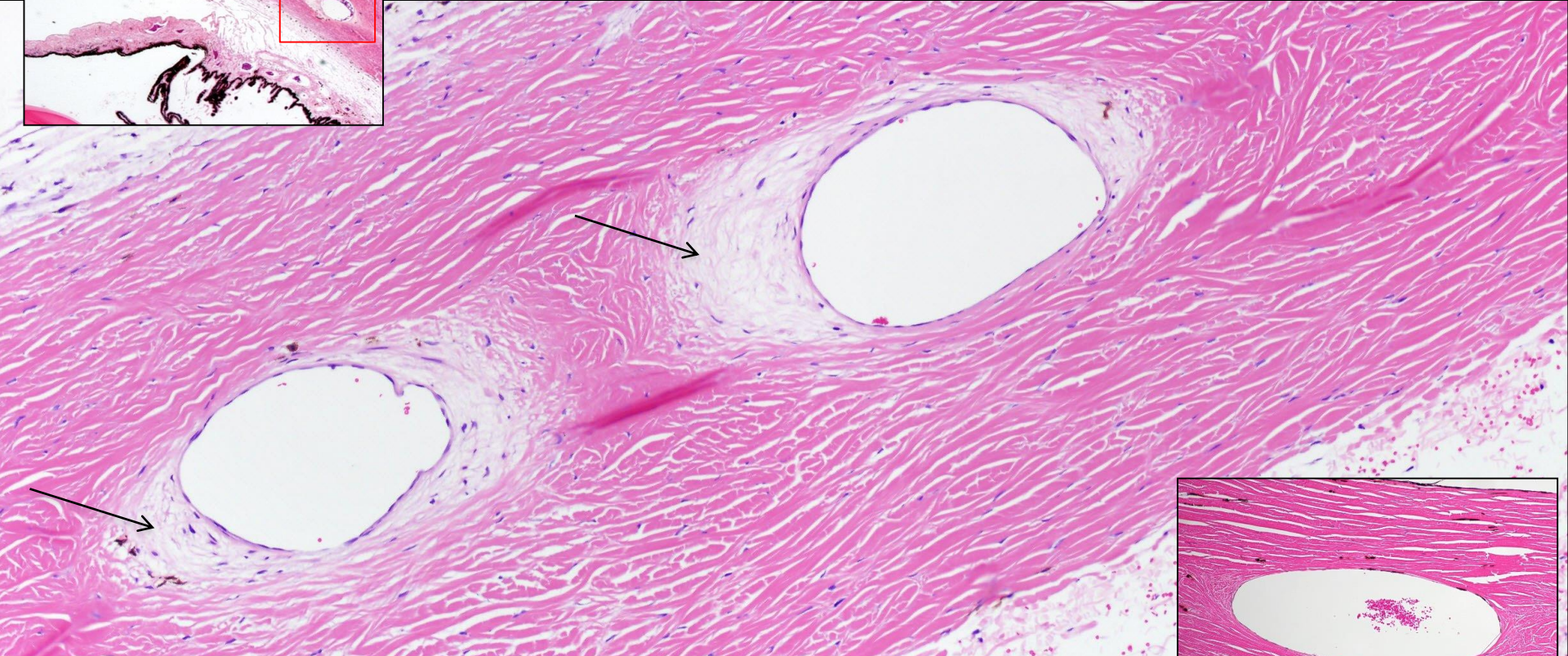
Uveal scleral pathway 3%



Feline Open Angle Glaucoma

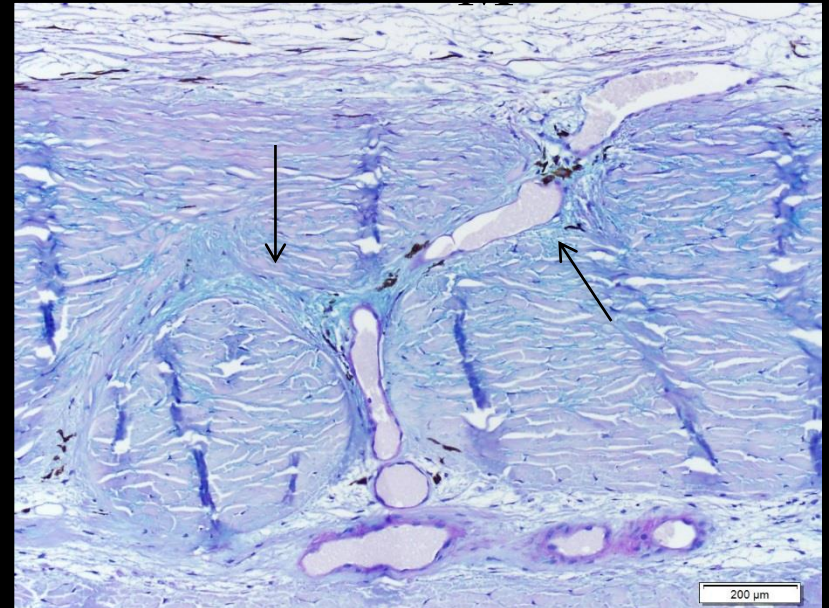
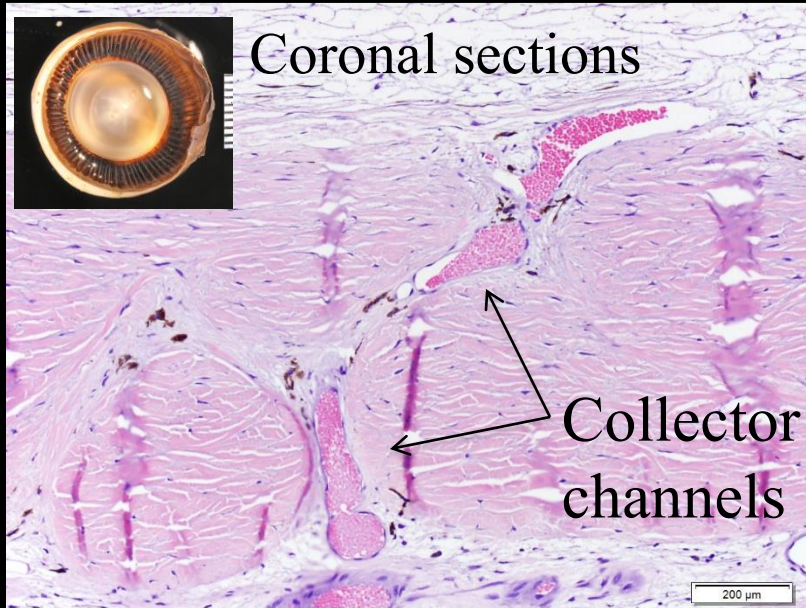
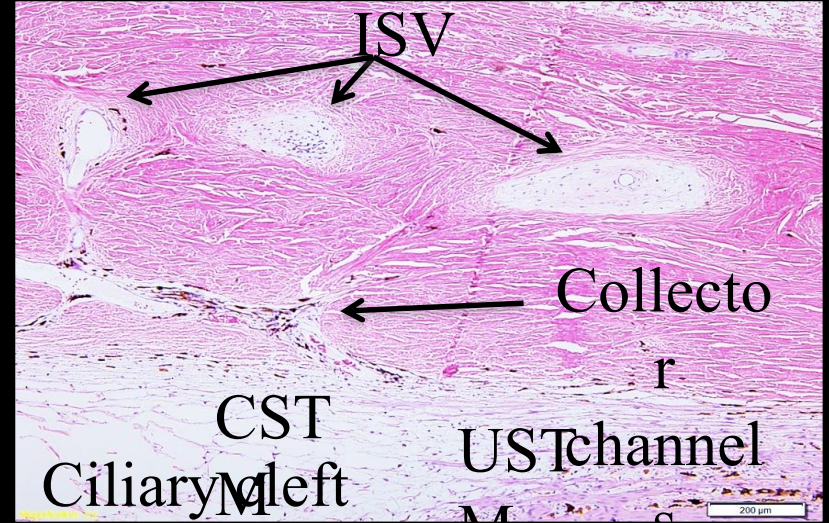
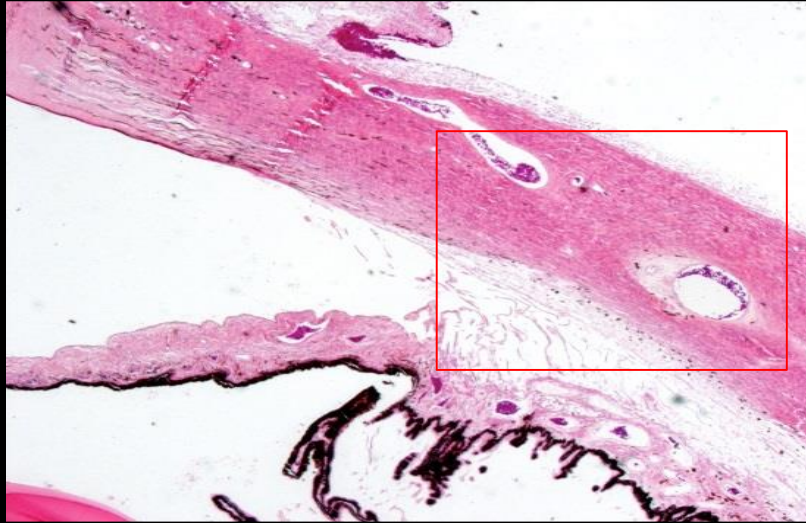


Feline Open Angle Glaucoma

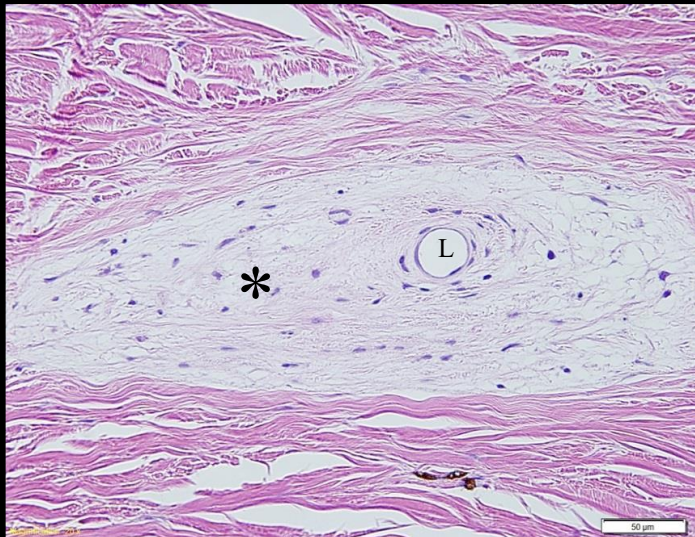
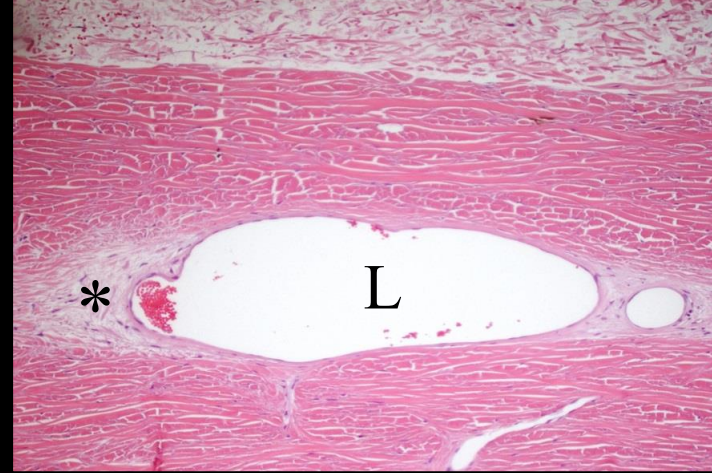


Normal

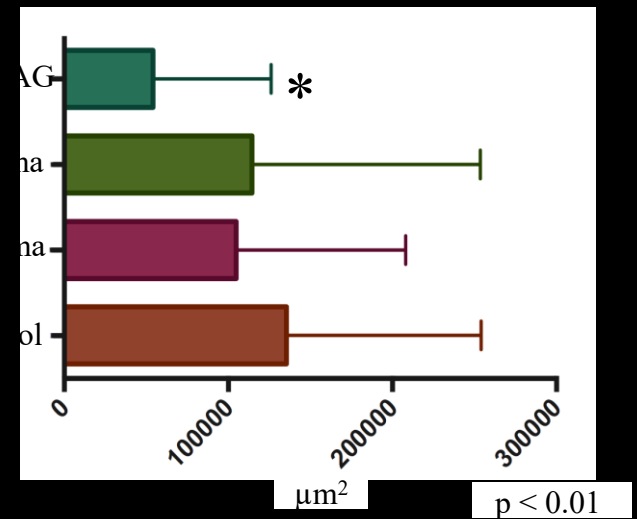
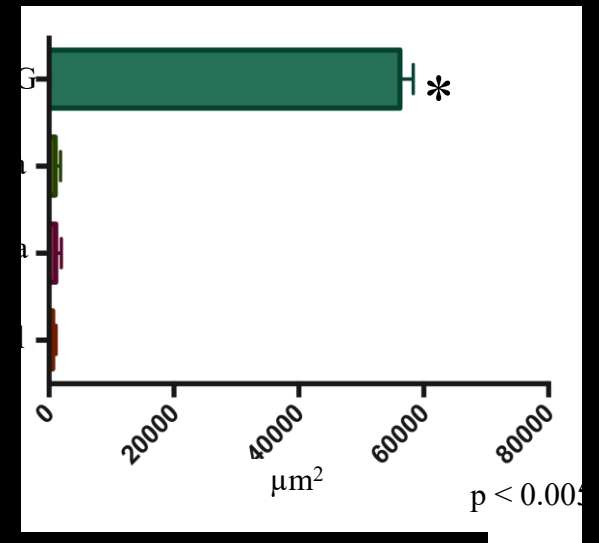
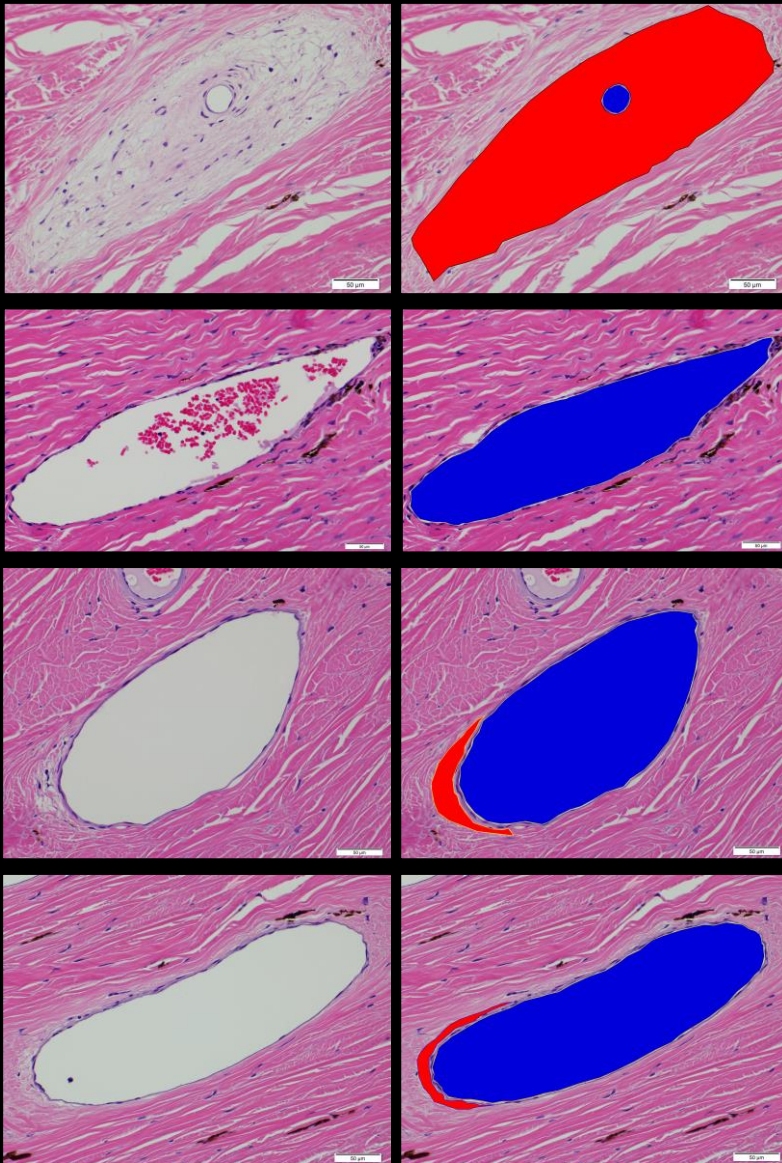
Feline Open Angle Glaucoma



Feline Open Angle Glaucoma

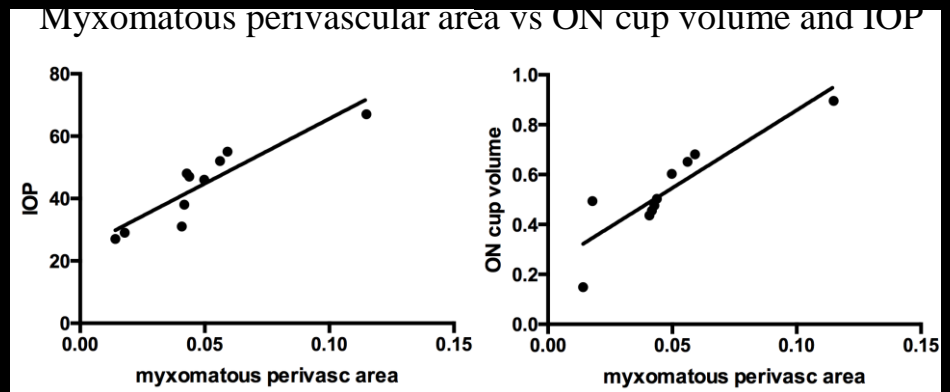
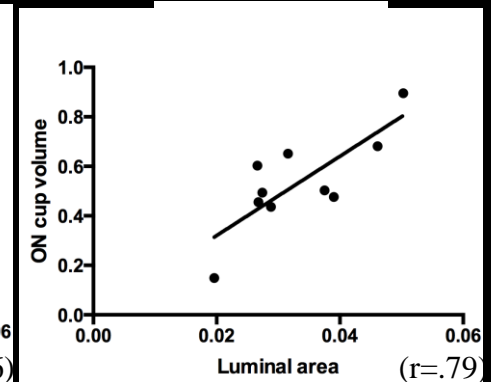
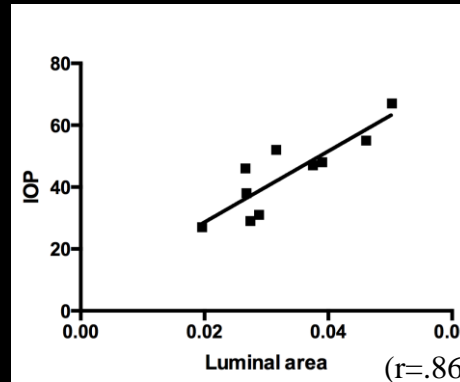
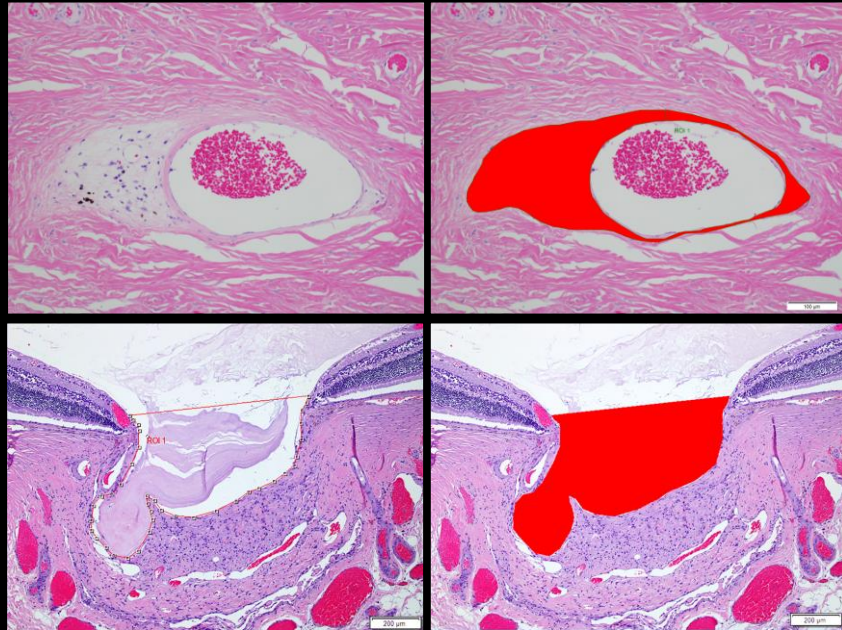


Feline Open Angle Glaucoma



Feline Open Angle Glaucoma

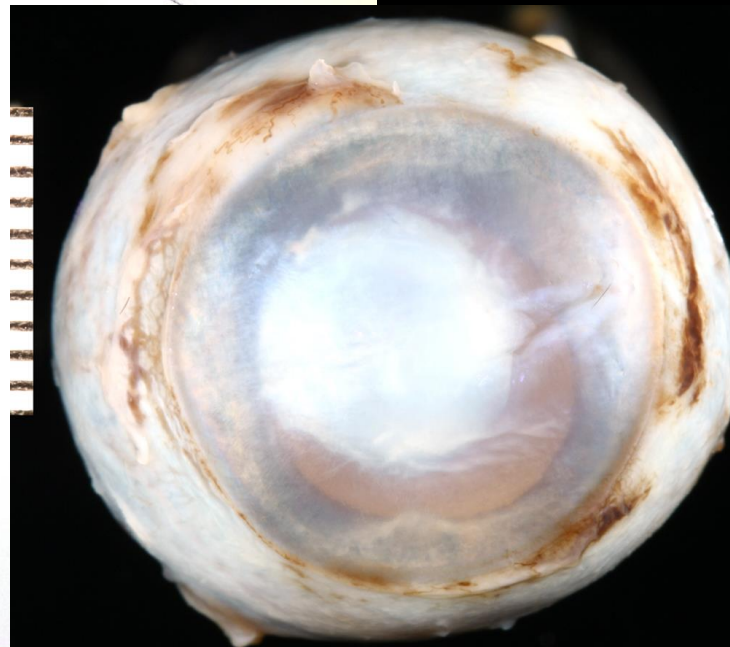
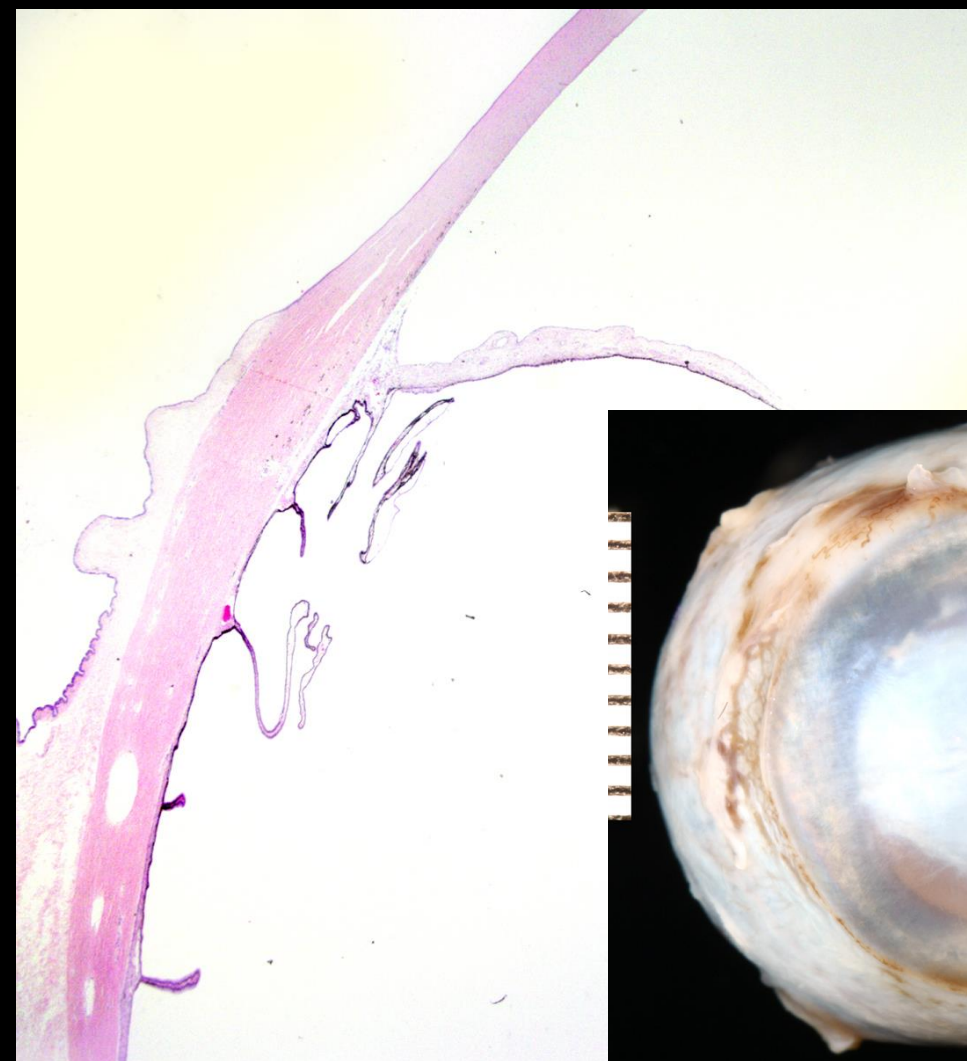
Luminal and Perivascular Myxomatous Tissue Area Correlates with IOP and Optic Nerve Cup Area



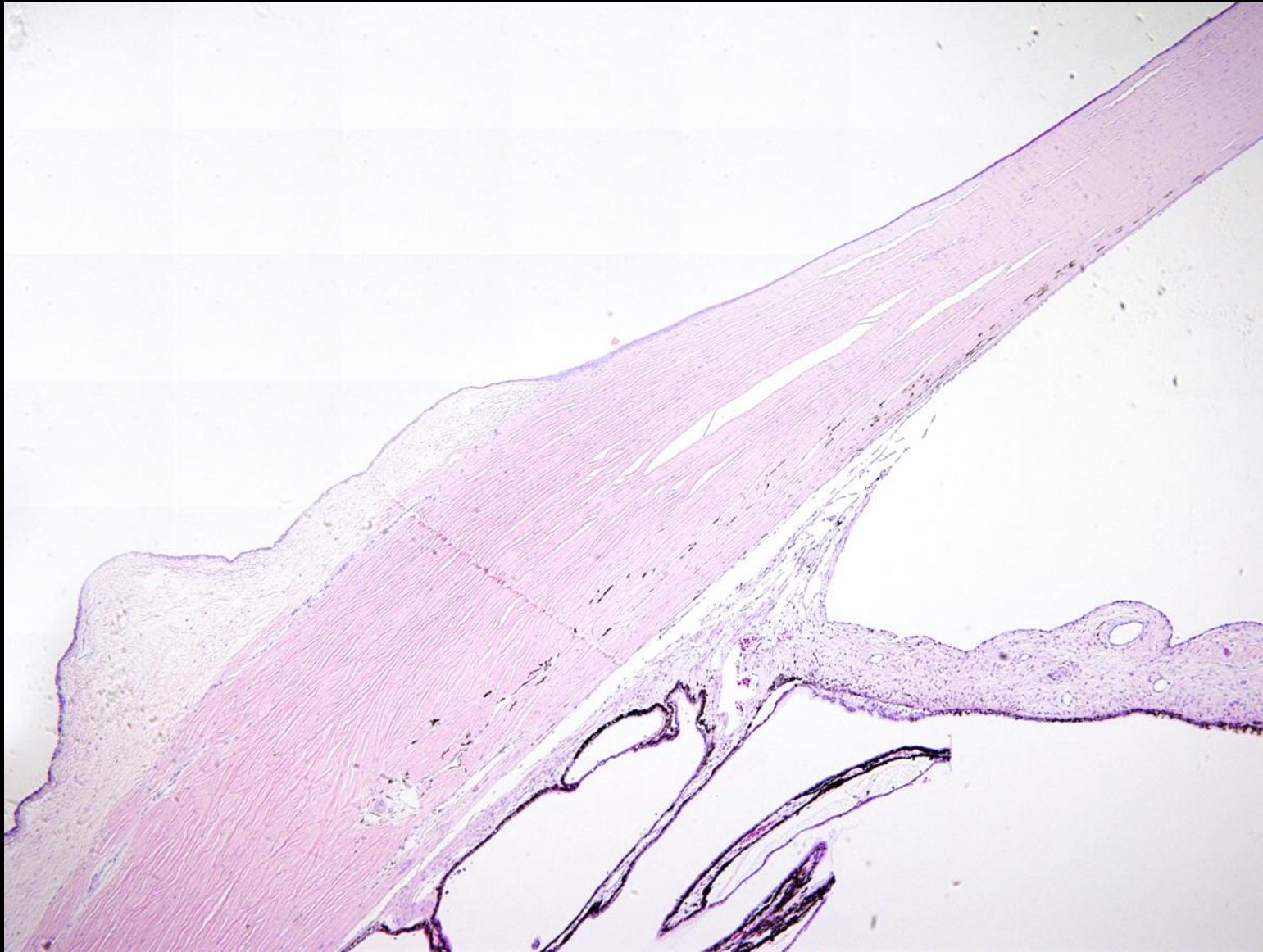
Feline Open Angle Glaucoma

- FOAG uncommon and insidious disease.
 - Adult, females, bilateral, no breed predilection.
- Morphology suggest a post-trabecular obstruction of aqueous outflow.
- Perivascular deposition of myxomatous matrix and luminal narrowing correlate with glaucoma markers.
- Pathophysiology still poorly understood.

Congenital Glaucoma



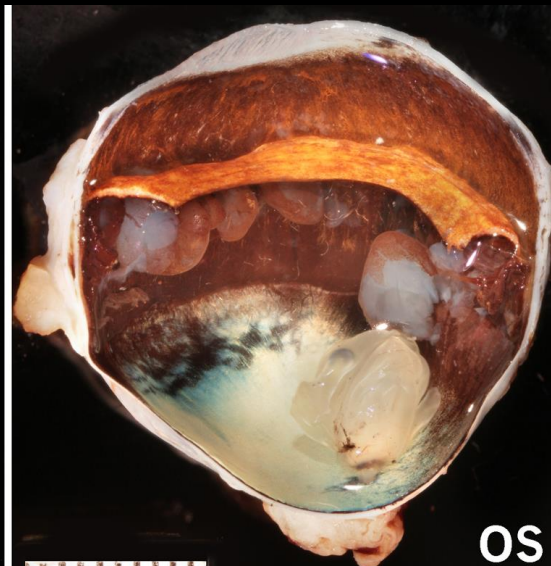
Congenital Glaucoma



Congenital Glaucoma

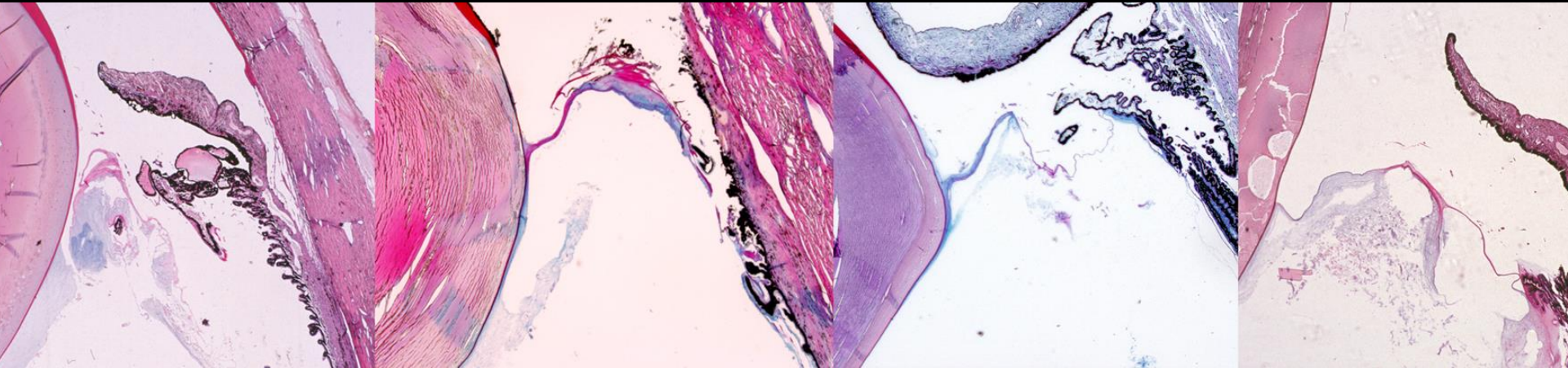


OD

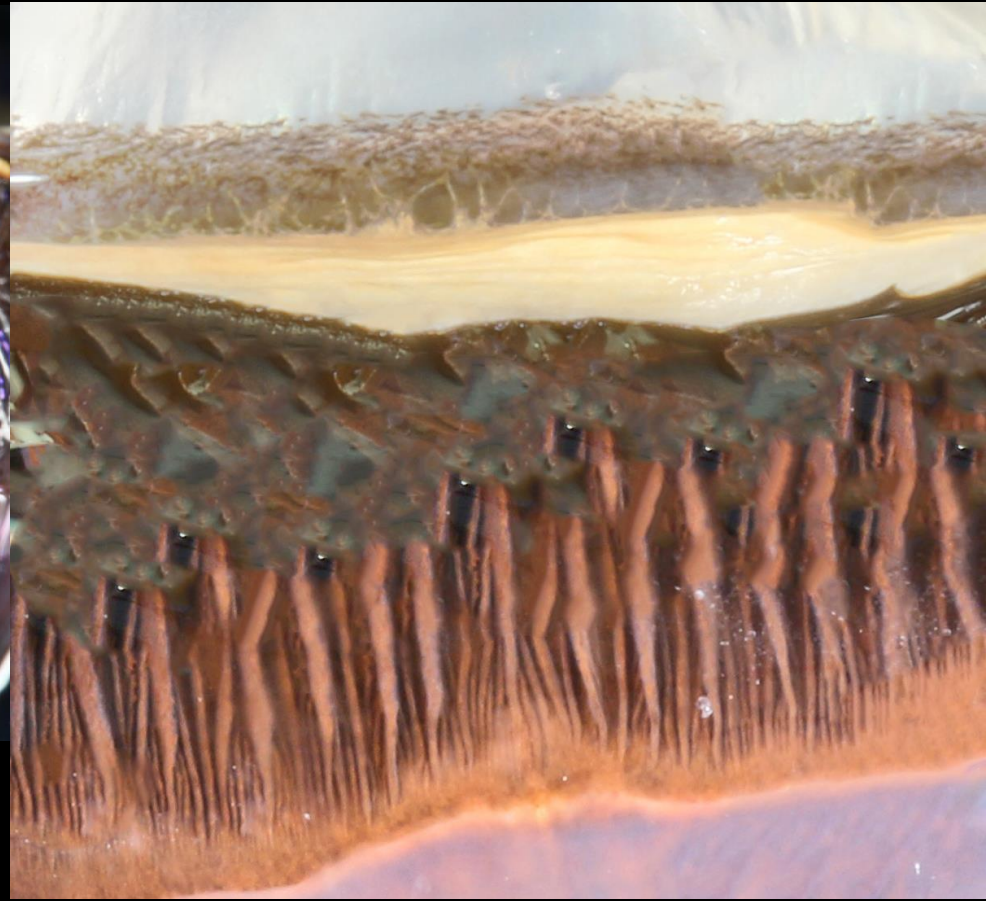
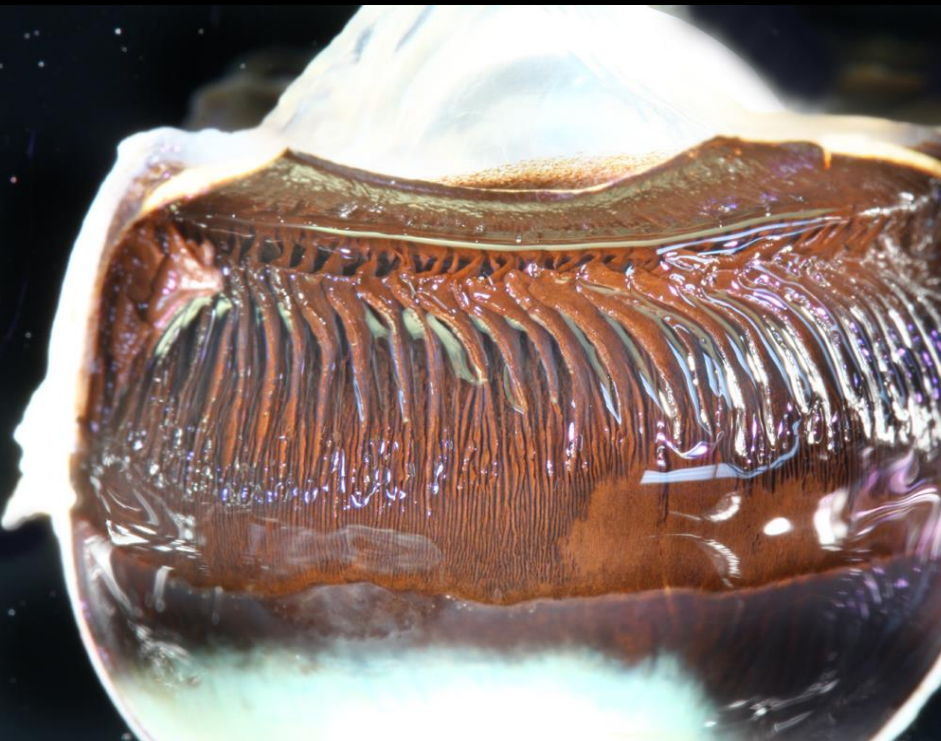


OS

Aqueous Misdirect Syndrome



Primary Lens Luxation Cats



Primary Lens Luxation Cats

