

RadPath

Lesions of the Orbit from MEEI

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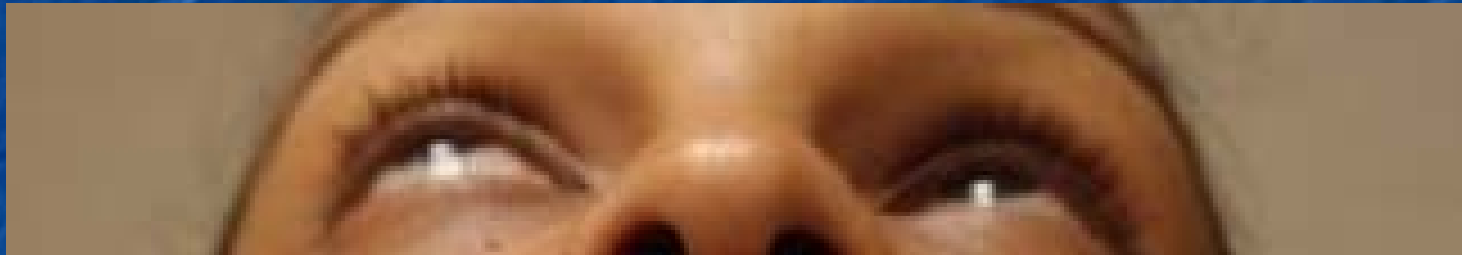


I have no disclosures, though I wish
I did.



Case 1

- 30 year old female with one week of decreased vision in right eye (OD)
- Painless
- No recent illness/infection
- Physical Exam
 - Optic Nerve Head Edema (ONH Edema)
 - OD: 20/400 OS: 20/20
 - PERRL, No evidence of inflammation/infection



Returns one month later with.....

Case 1

- Returns one month later, symptoms worse
 - Proptosis
 - 'Need to rule out orbital mass. To order ultrasound of orbit'
- Referred to Plastic Surgery
 - CT obtained

ACR Appropriateness Criteria

Clinical Condition:

Orbits, Vision and Visual Loss

Variant 3:

Adult with sudden onset of painless or painful visual loss.

Radiologic Procedure	Rating	Comments	RRL*
MRI head and orbit without and with contrast	8	CT may be considered the preferred imaging modality when rhinologic or paranasal sinus disease is the suspected etiology for the symptoms and signs. See statement regarding contrast in text under "Anticipated Exceptions."	O
MRI head and orbit without contrast	7	CT may be considered the preferred imaging modality when rhinologic or paranasal sinus disease is the suspected etiology for the symptoms and signs.	O
CT head with contrast	6	CT may be considered the preferred imaging modality when rhinologic or paranasal sinus disease is the suspected etiology for the symptoms and signs. Thin slices dedicated to the orbits are useful for orbit disease and may be substituted for the complete head examination in selected patients.	⊕ ⊕ ⊕
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CTA head and neck with contrast	5	If vascular disease is suspected.	⊕ ⊕ ⊕
MRA head and neck without contrast	4		O
MRA head and neck without and with contrast	4	See statement regarding contrast in text under "Anticipated Exceptions."	O
X-ray orbit	1		⊕
Rating Scale: 1,2,3 Usually not appropriate; 4,5,6 May be appropriate; 7,8,9 Usually appropriate			*Relative Radiation Level

Clinical Condition:

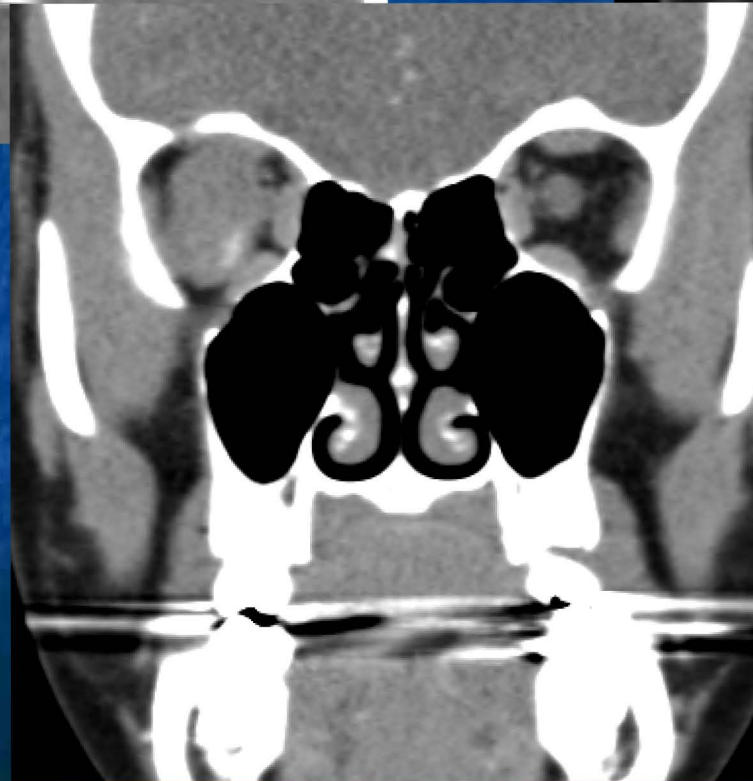
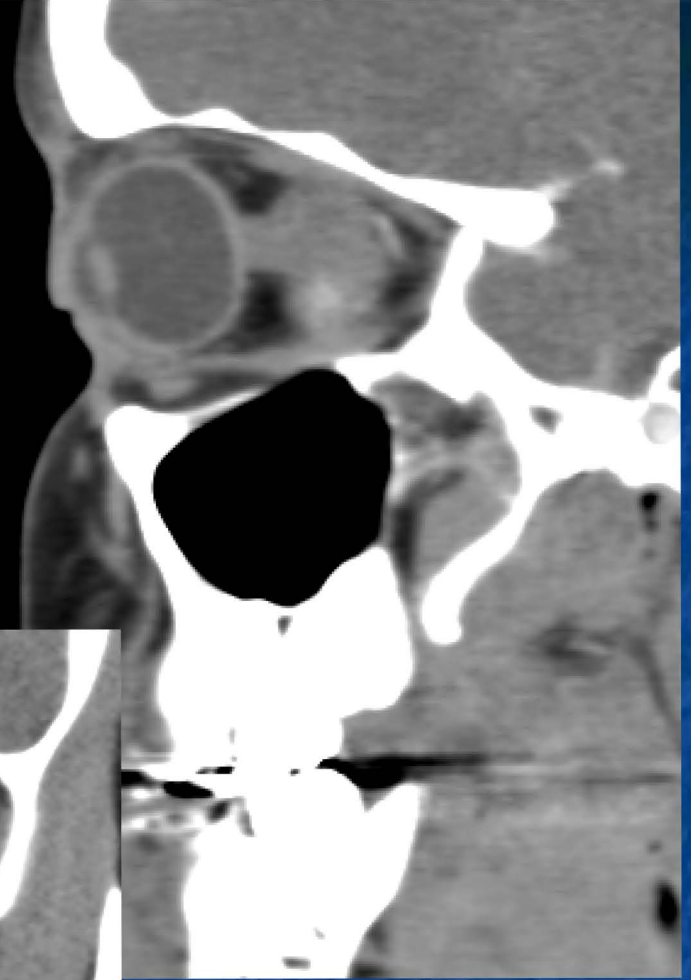
Orbits, Vision and Visual Loss

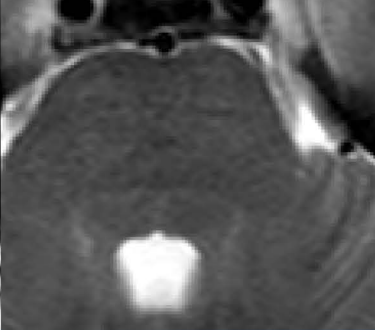
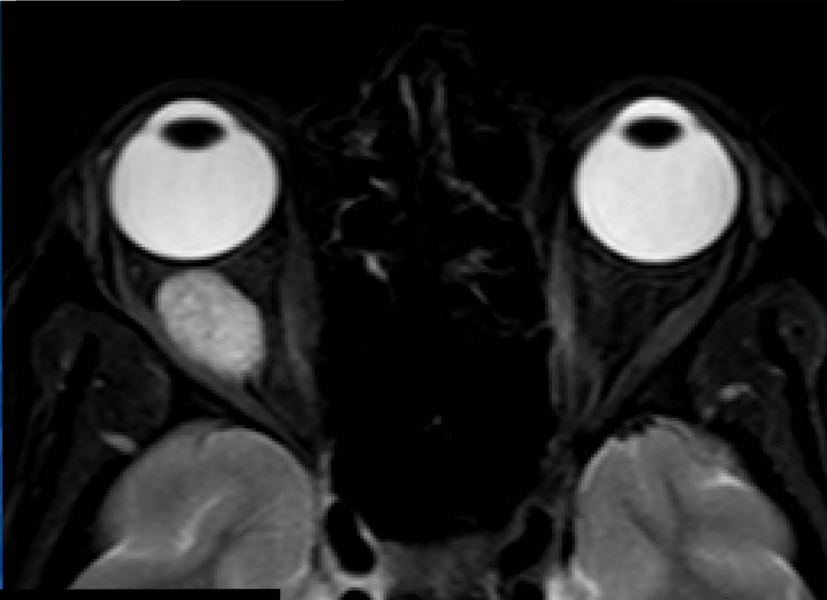
Variant 4:Adult patient with proptosis and/or painful visual loss.

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X-ray orbit	1		⦿
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Because of its absence of radiation and the utility of fat-suppressed contrast enhanced images, MRI has emerged as the procedure of choice for orbital disorders, with the exception of trauma and assessment for foreign bodies

Ultrasound and fluorescein angiography are also important modalities; however, these special procedures are usually performed by the ophthalmologist









Imaging Findings

- CT:

- 22 x 17 x 11 mm ovoid, well-margined, enhancing intraconal mass

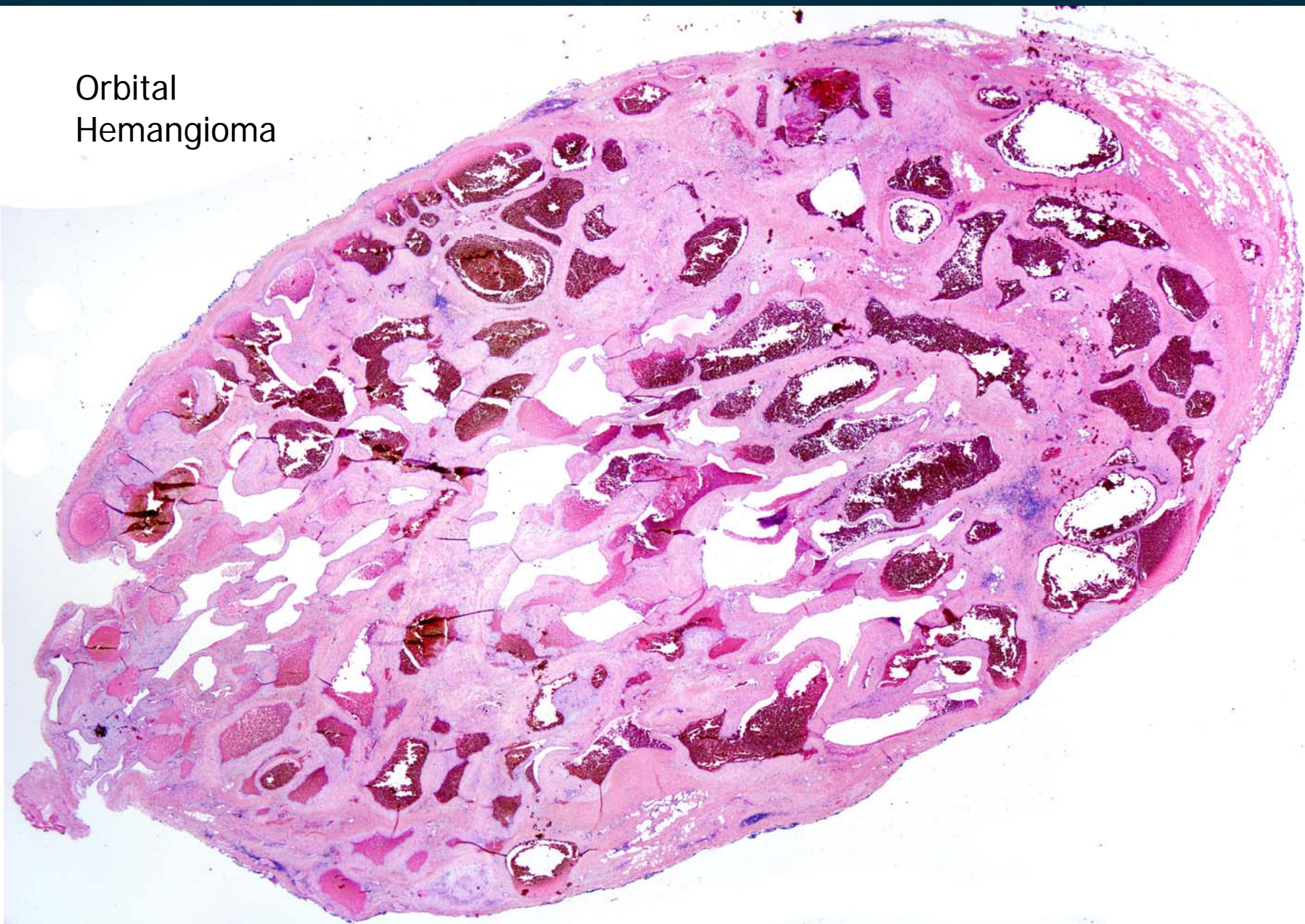
- MRI

- T1 hypointense, T2 hyperintense mass with patchy enhancement.
- Local mass effect with lateral bulging of lateral rectus muscle and medial displacement of optic nerve
- DWI: No restriction

DDx for intraconal mass

- Glioma
- Meningioma
- Orbital pseudotumor
- Cavernous hemangioma
- Retrobulbar hematoma

Orbital
Hemangioma



Case 2

- 59 male with 'foggy' superotemporal visual field and decreased visual acuity of right eye (OD) with 'Flashes' for 3 weeks
- Painless, No Ophthalmoplegia
 - Retinal Detachment
- Referred to Retina Clinic
 - Choroidal mass found at retina clinic
- Underwent surgery and treatment
- Follow up scans

ACR Appropriateness Criteria

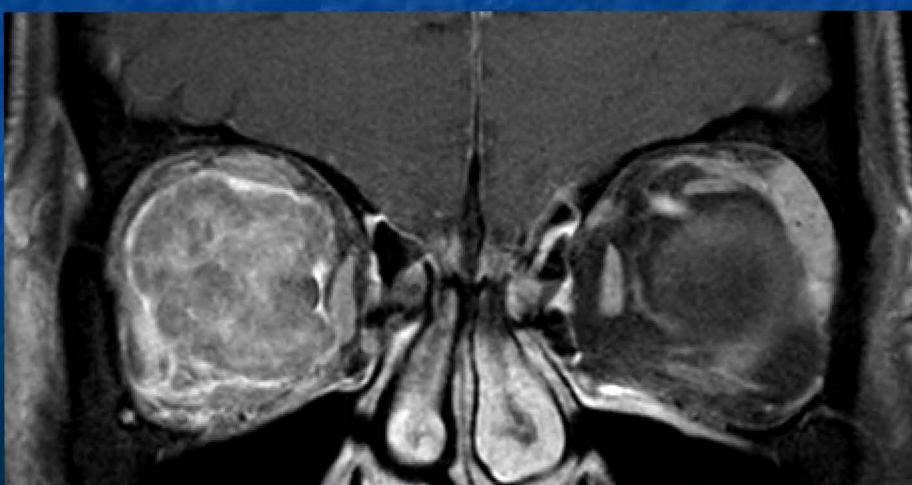
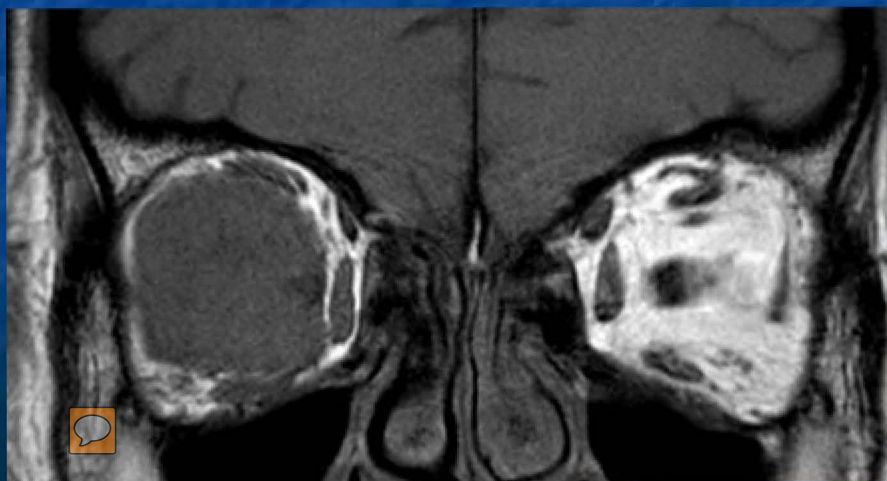
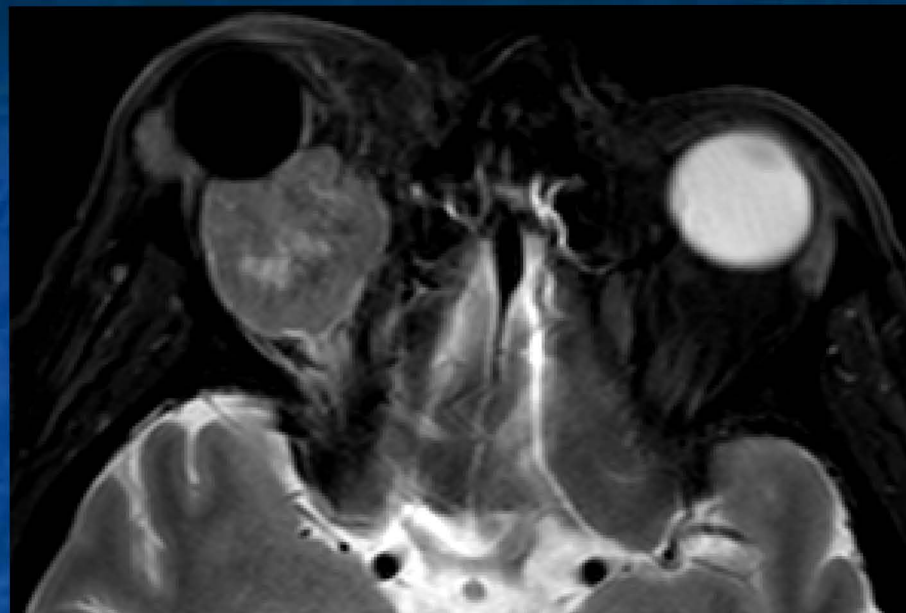
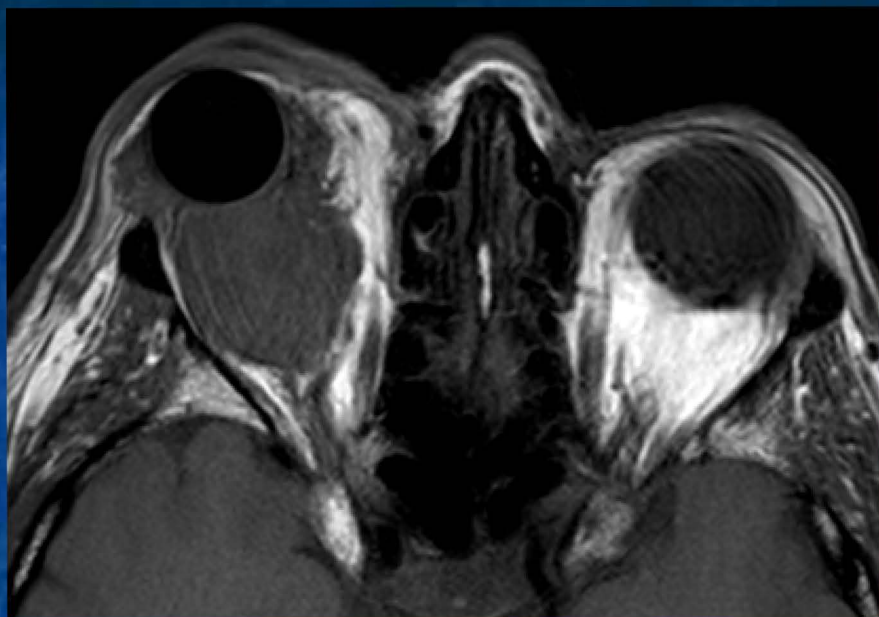
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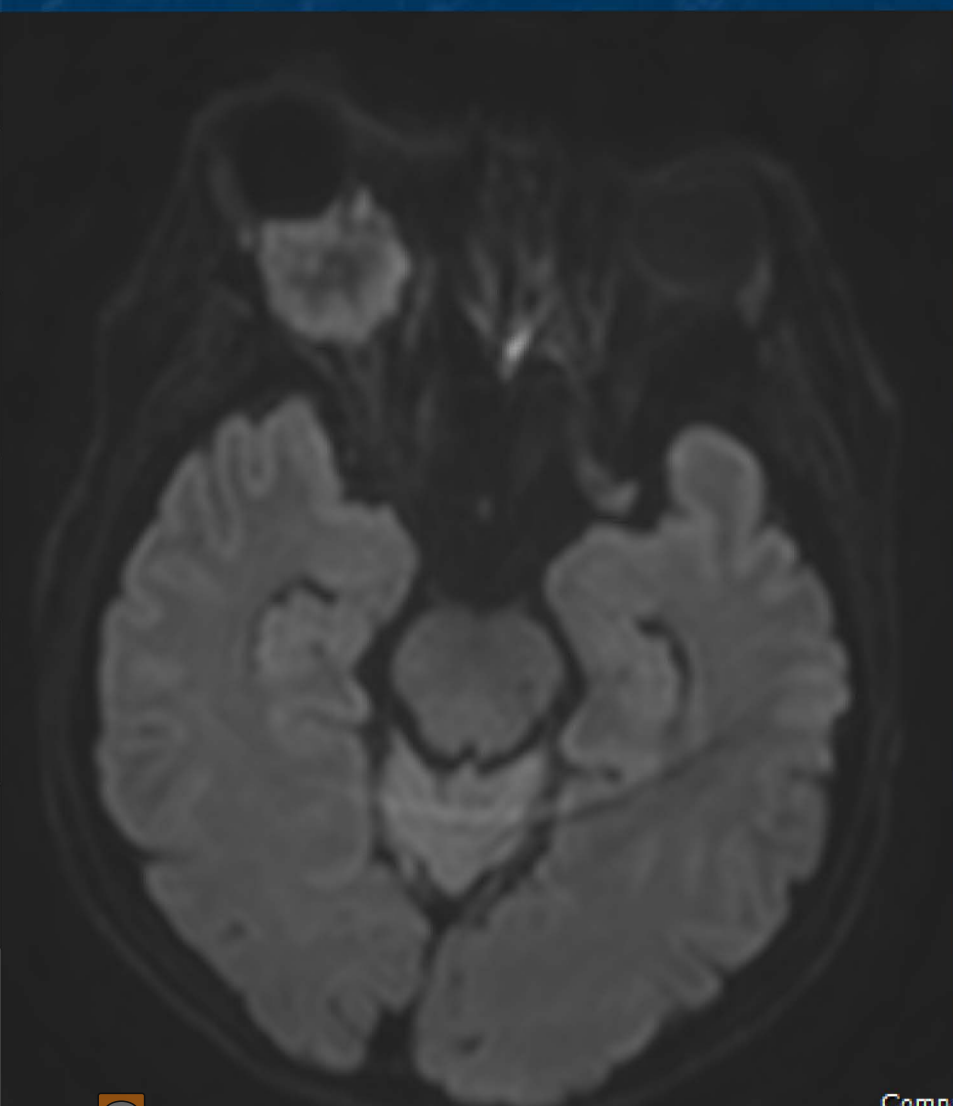
Orbits, Vision and Visual Loss

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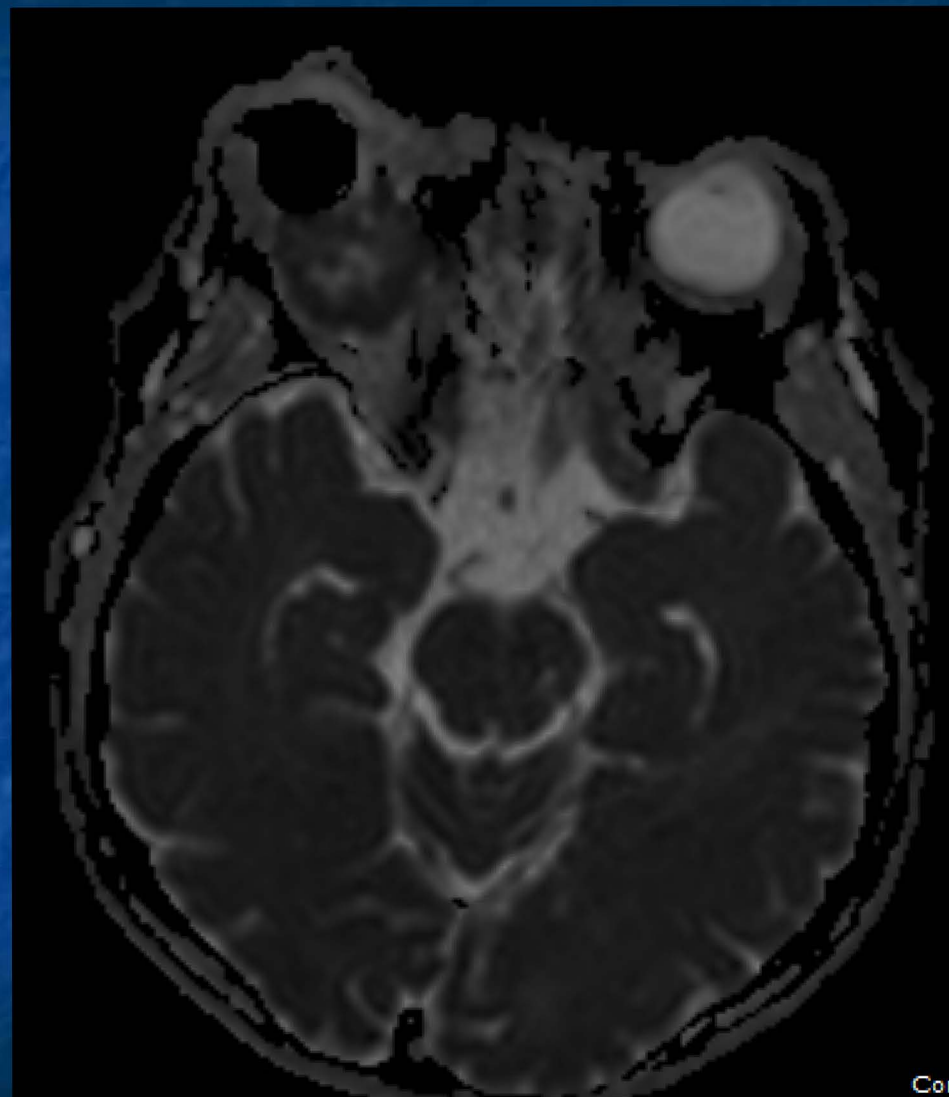
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Common



Common



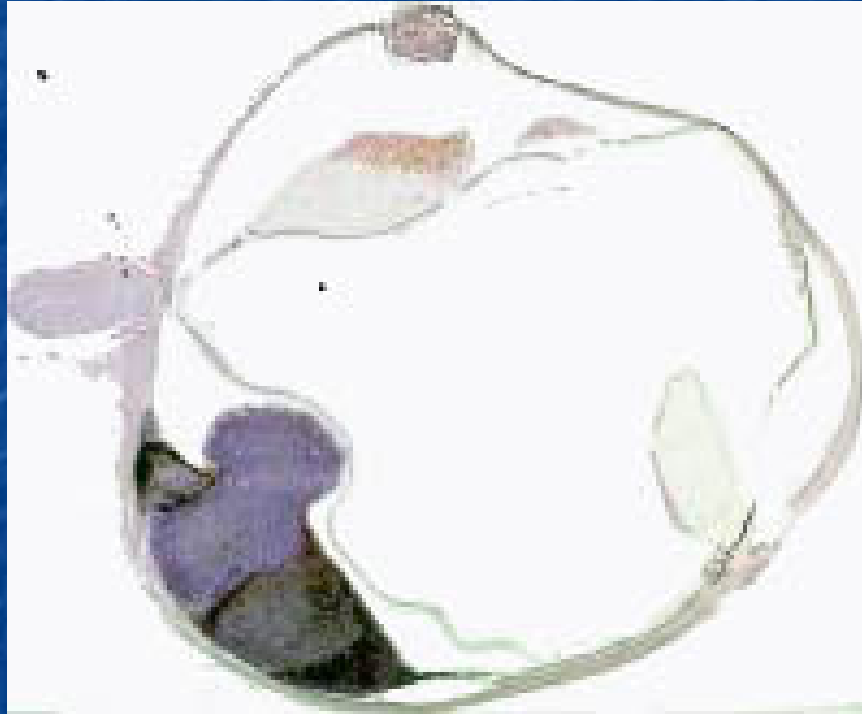
Imaging Findings

- 2.5 cm T1 hypointense, T2 heterogeneous enhancing mass in the right orbit
- Inseparable from superior, inferior and lateral rectus muscles. Extends along optic nerve.
- Tumor surrounds the medial and inferior portion of the orbital prosthesis and causes proptosis

DDx for ill-defined orbital mass

- Idiopathic orbital inflammatory disease (pseudotumor)
- Melanoma
- Lymphoproliferative lesions
- Lymphatic Malformation
- Metastasis
- Rhabdomyosarcoma
- Wegener's granulomatosis

Choroidal Melanoma



Case 3

- 35 F presents to ED with left eye pain for 6 weeks, worse in the evening, presents with worsening of her pain.
- Tells staff she has a 'rare eye disease' diagnosed somewhere else
- Sent to MEEI infirmary

ACR Appropriateness Criteria

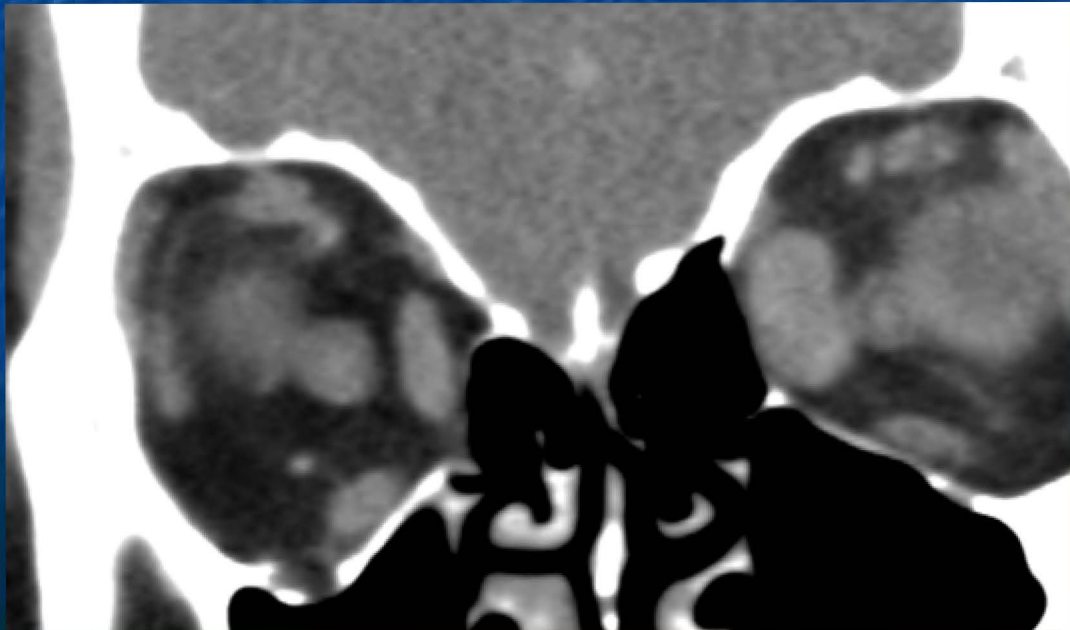
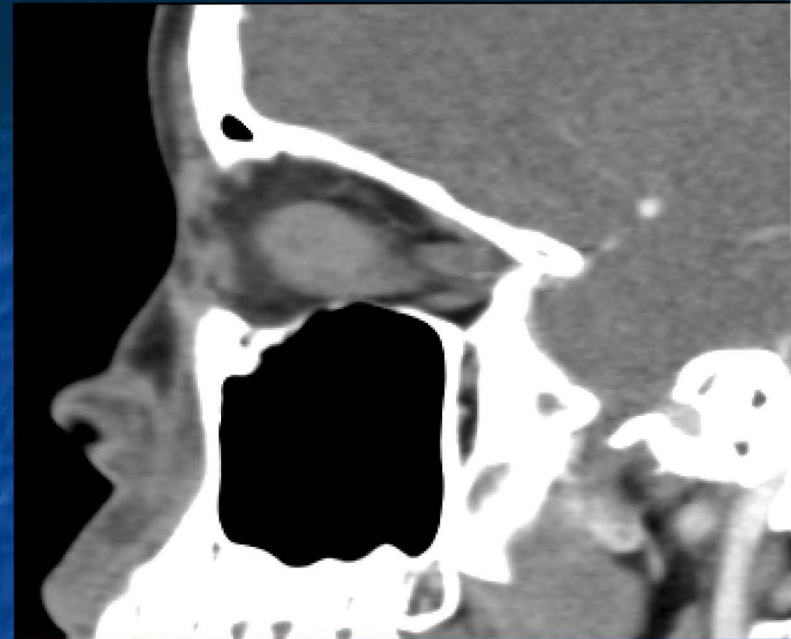
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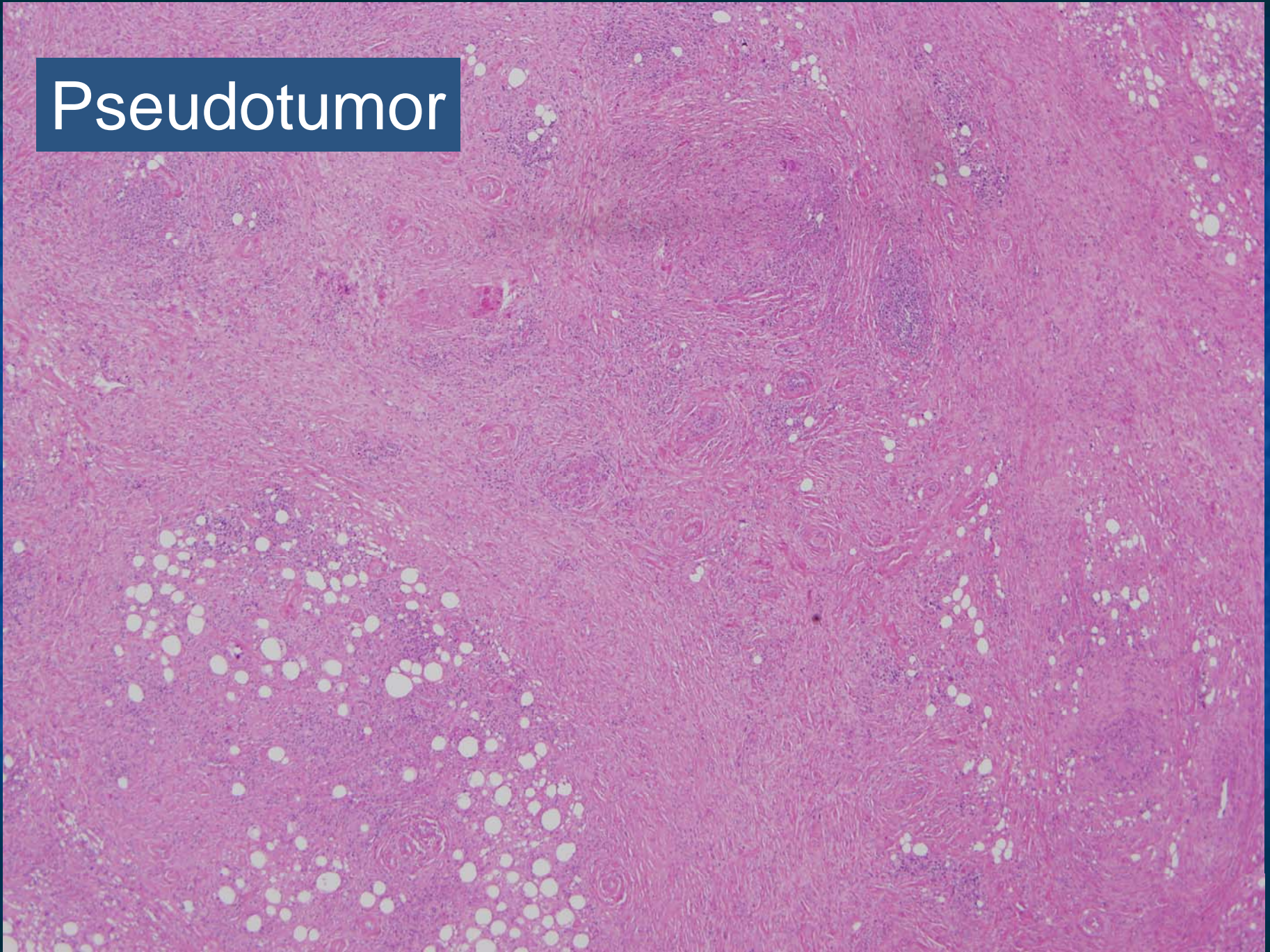
Imaging Findings

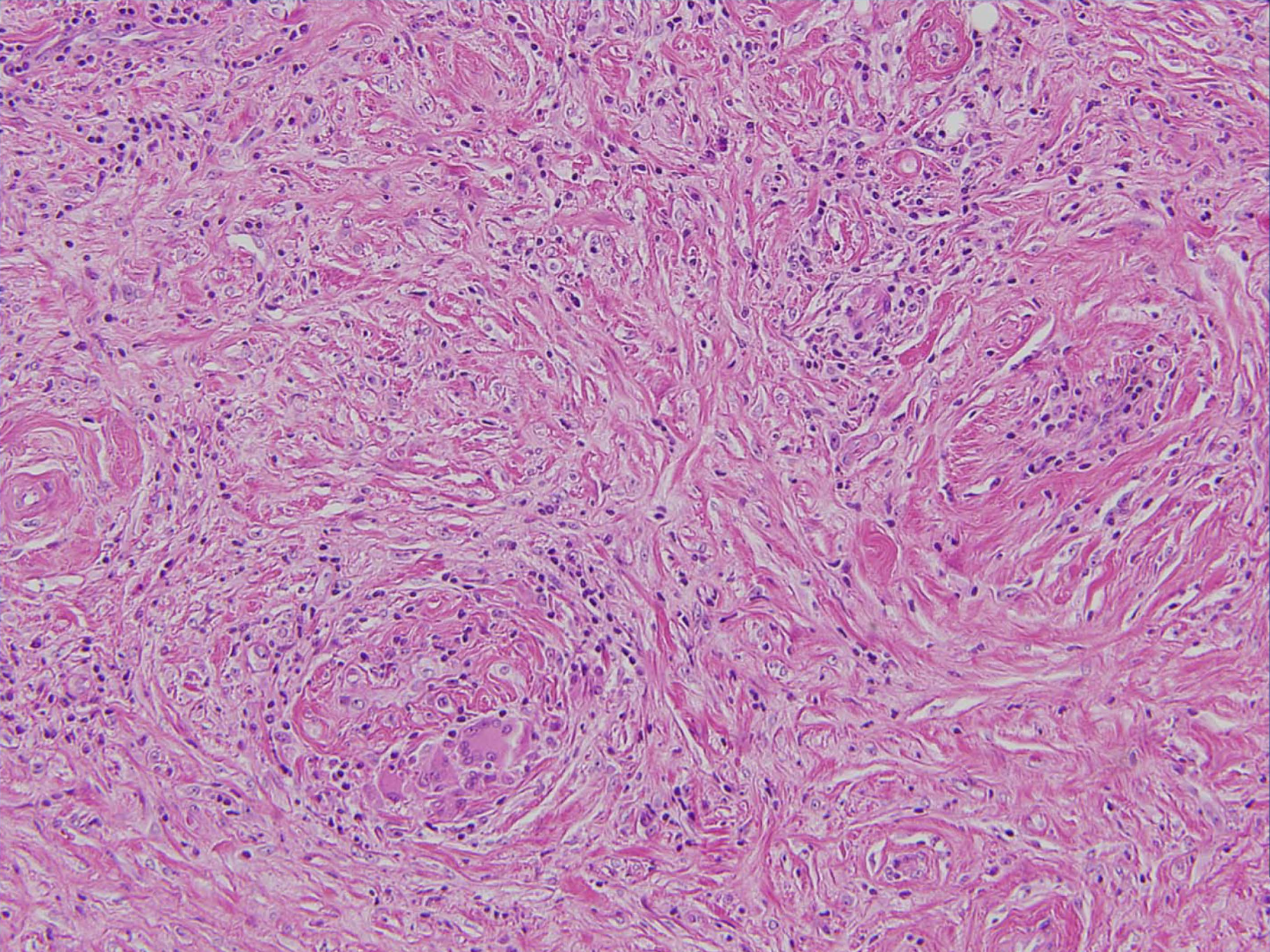
- Diffusely enlarged left medial rectus muscle with minimal surrounding fat stranding

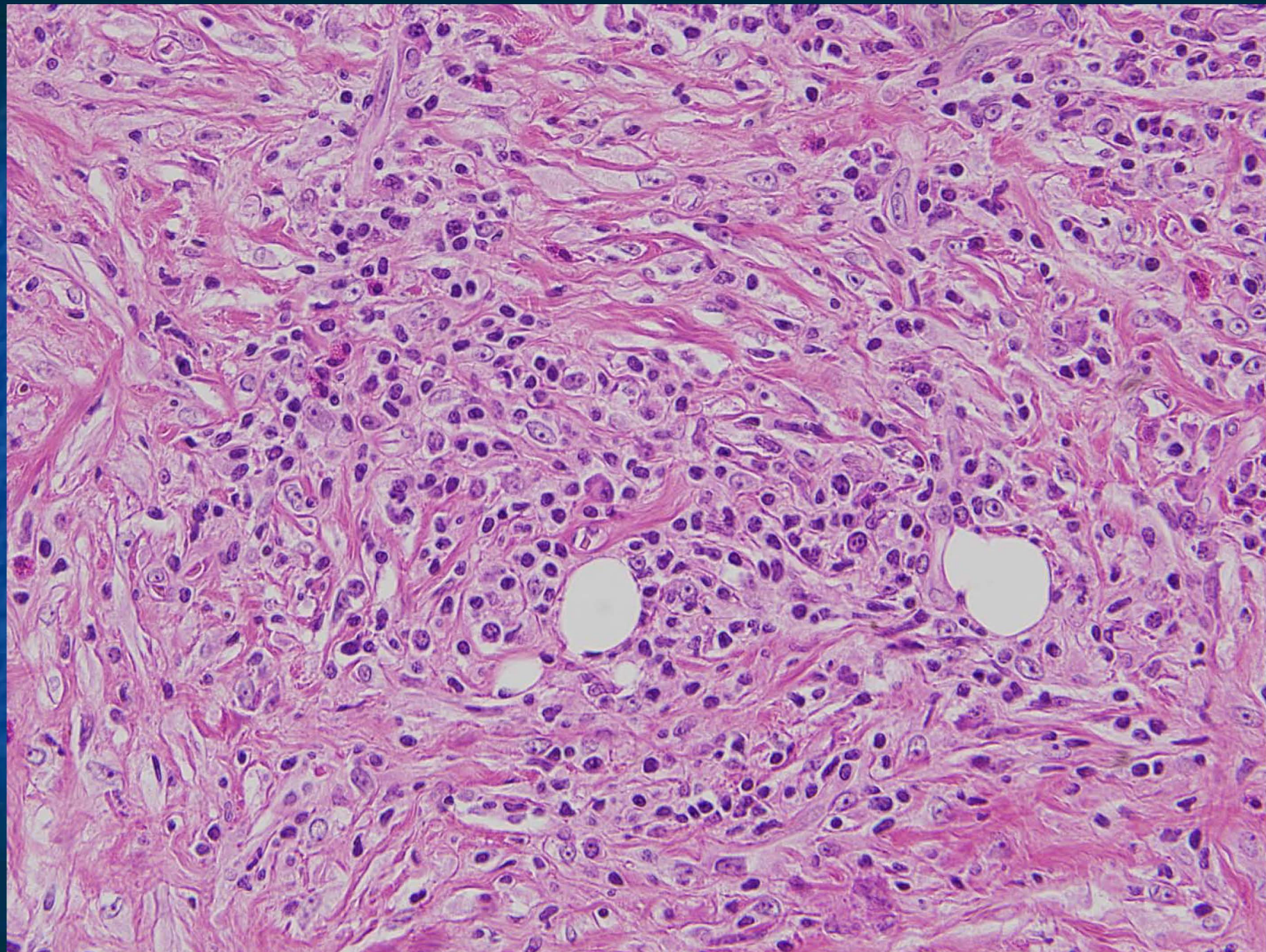
DDx

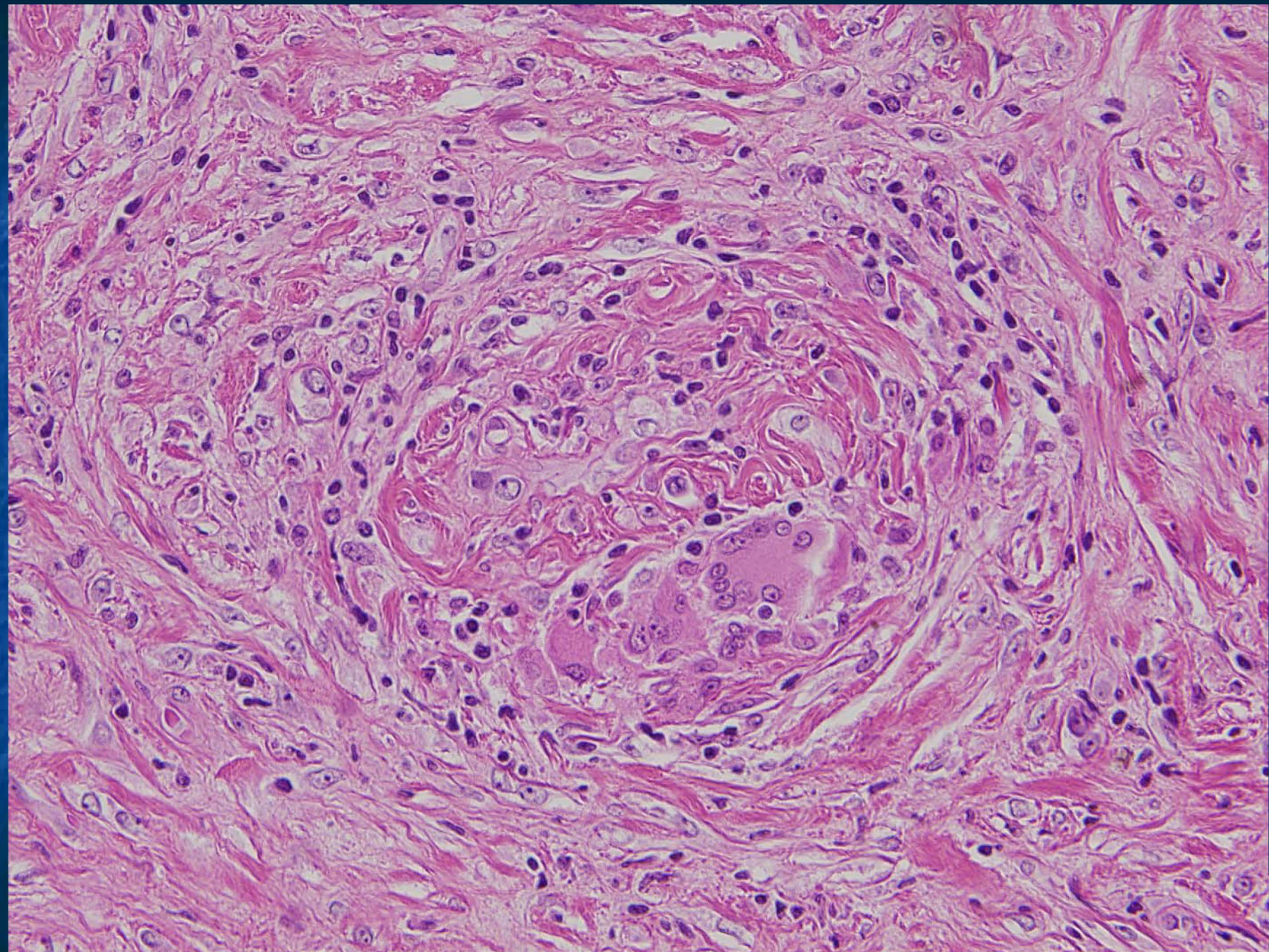
- Idiopathic orbital inflammatory disease (pseudotumor)
- Infection/ abscess
- Sarcoidosis
- Wegener's granulomatosis
- Sjogren syndrome

Pseudotumor









Inflammatory Pseudotumor

- Diffuse yellowish/tan mass assoc with orbit
- Areas of dense sclerotic collagen with mixed inflammatory infiltrate.
- Idiopathic
- DDX: lymphoproliferative disorders.

Case 4

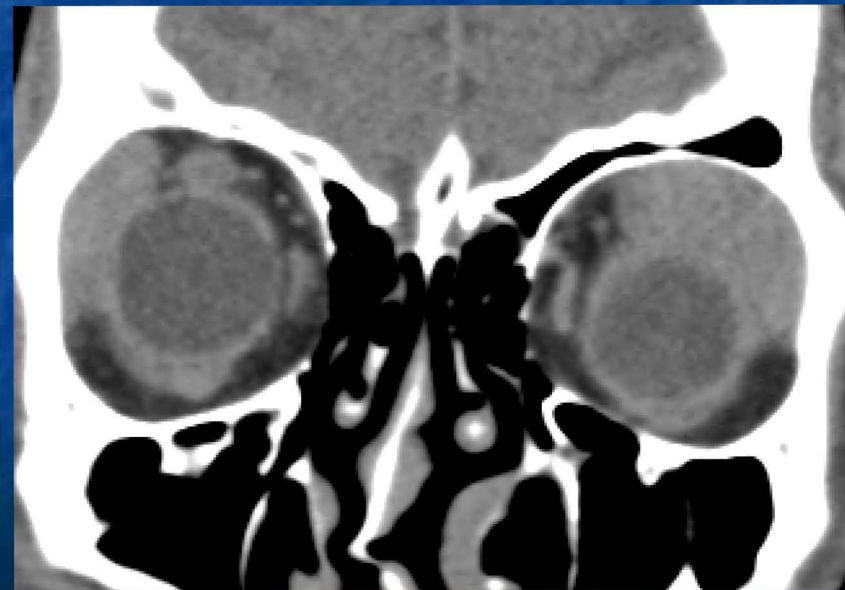
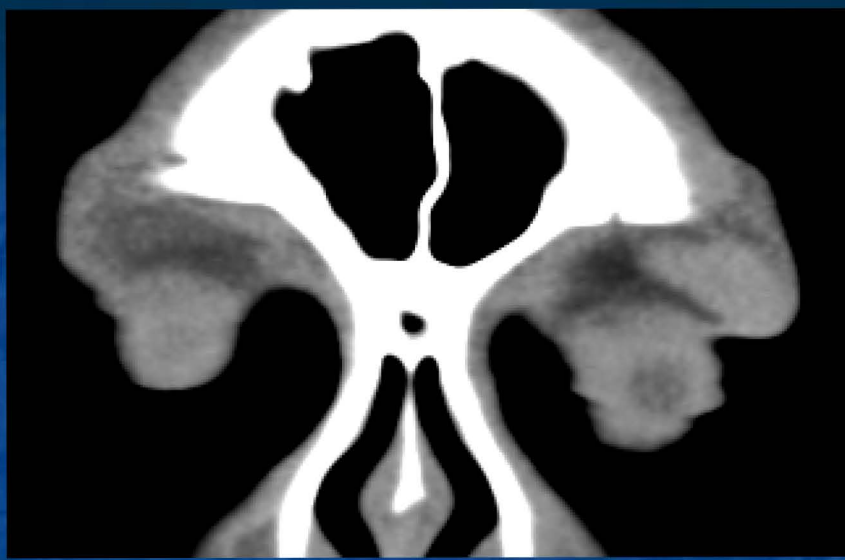
- 66 male with a foreign body type sensation of left eye. No change in vision, though eye feels irritated.
- Physical exam:
 - 1 cm nodule on left upper eyelid
 - Scleritis

ACR Appropriateness Criteria

Clinical Condition: Orbits, Vision and Visual Loss

Variant 5: Adult patient with uveitis, scleritis, and visual loss.

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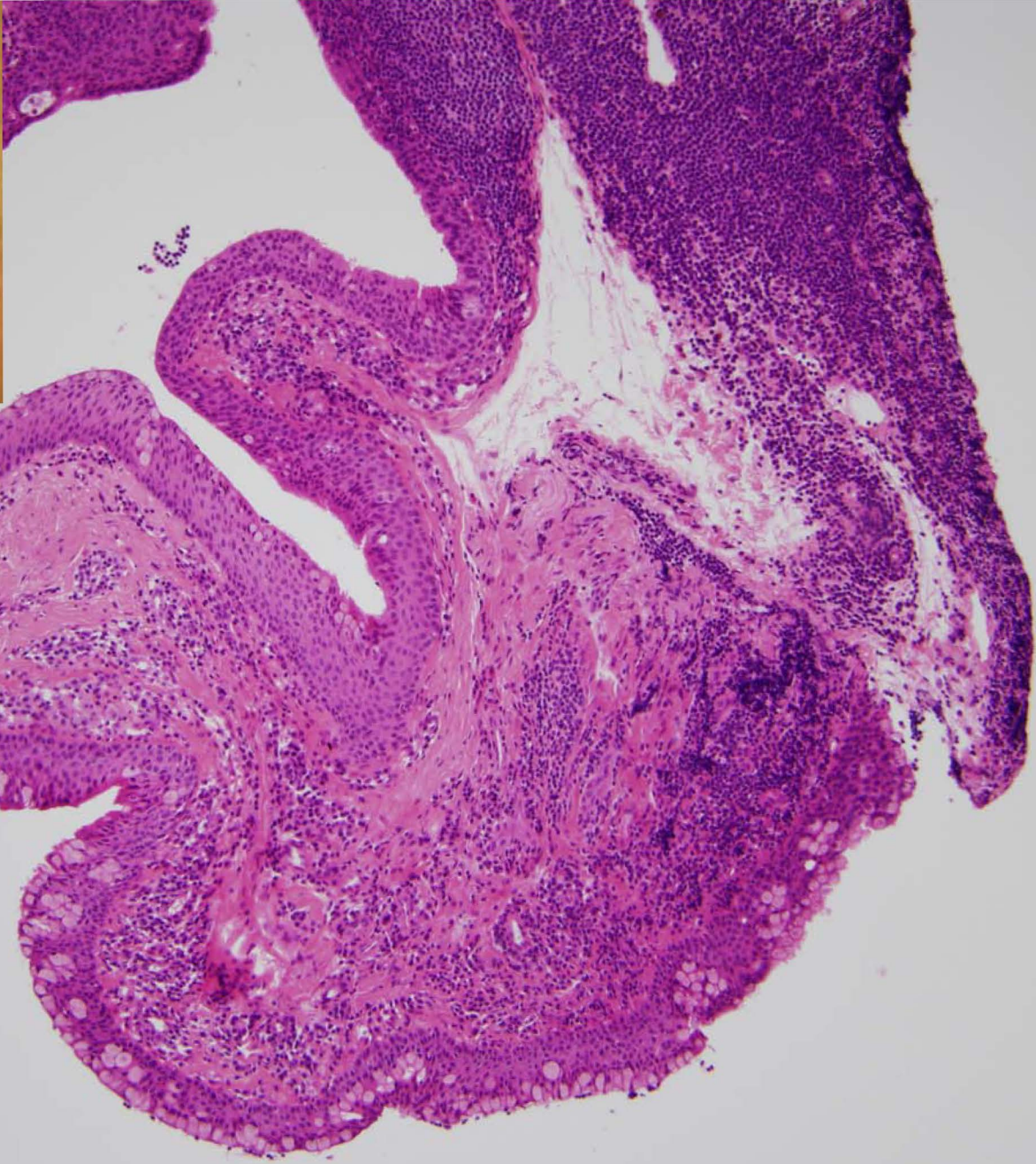


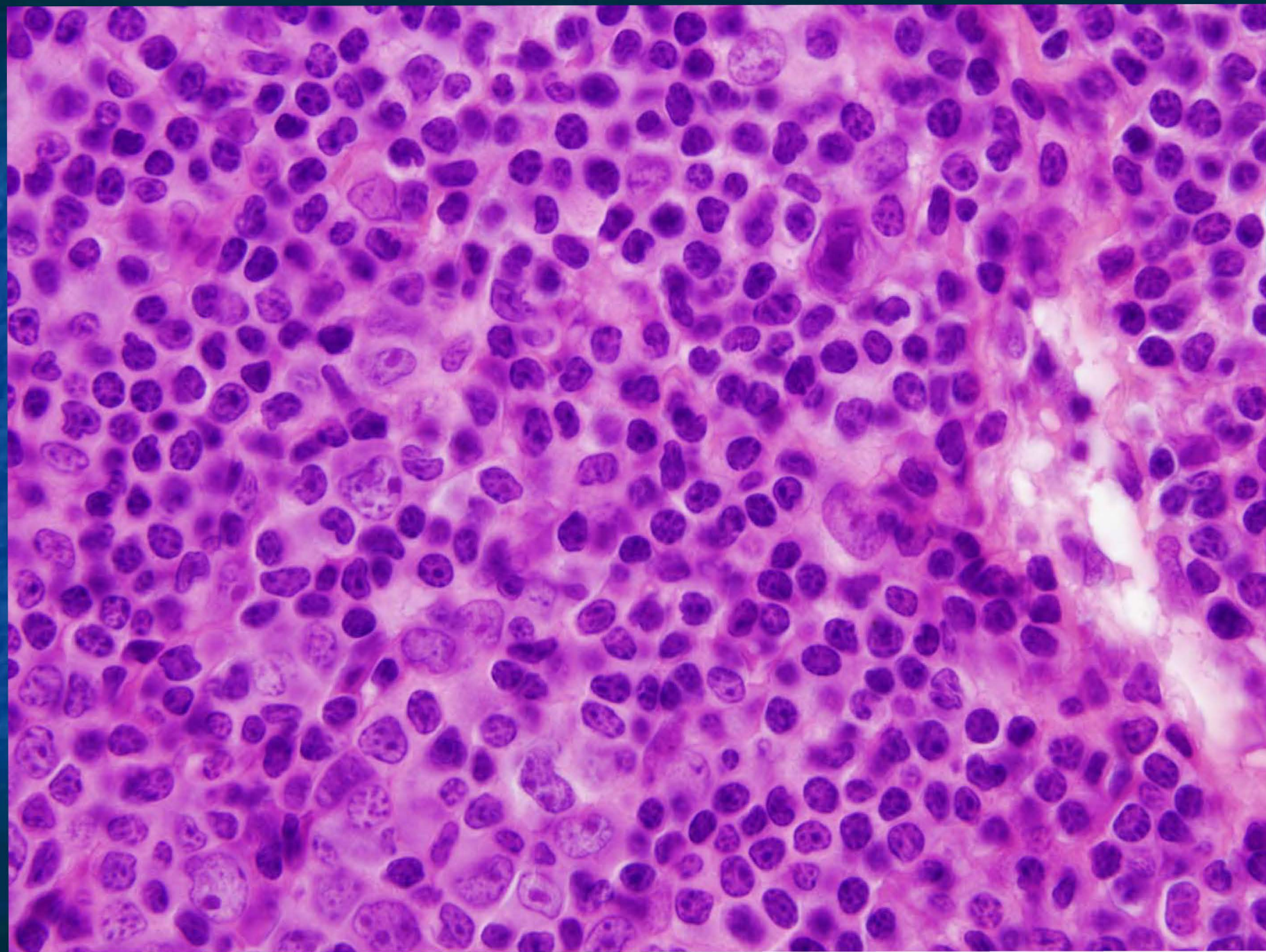
Imaging Findings

- Expansile bilateral lacrimal masses, left > right
- Molds to the shape of the adjacent orbital structures, without significant mass effect
- Apparent involvement of both palpebral and intraorbital components

DDx for Lacrimal Gland Lesion

- Benign mixed tumor, lacrimal
- Lacrimal lymphoma
- Idiopathic orbital inflammatory disease
- Adenoid cystic carcinoma, lacrimal
- Sarcoidosis, lacrimal
- Sjogren Syndrome
- Dermoid and epidermoid, orbit







MALT lymphoma

- Extranodal marginal zone lymphoma of mucosa associated lymphoid tissue
- Low-grade lymphoma arising at extranodal sites, presumably in marginal zones of reactive follicles
- Arise from inflammation
 - H.pylori (gastric) +/- t(11q:18)
 - Campylobacter jejuni (sm int)
 - Chlamydia psittaci (orbital)
 - Borrelia burgdorferi (cutaneous)
 - Sjogren, Hashimoto's, etc.
- Can transform to DLBCL
- DDX
 - Reactive hyperplasia
 - Mantle cell lymphoma
 - Follicular lymphoma
 - Plasmacytoma



Mantle Cell Lymphoma

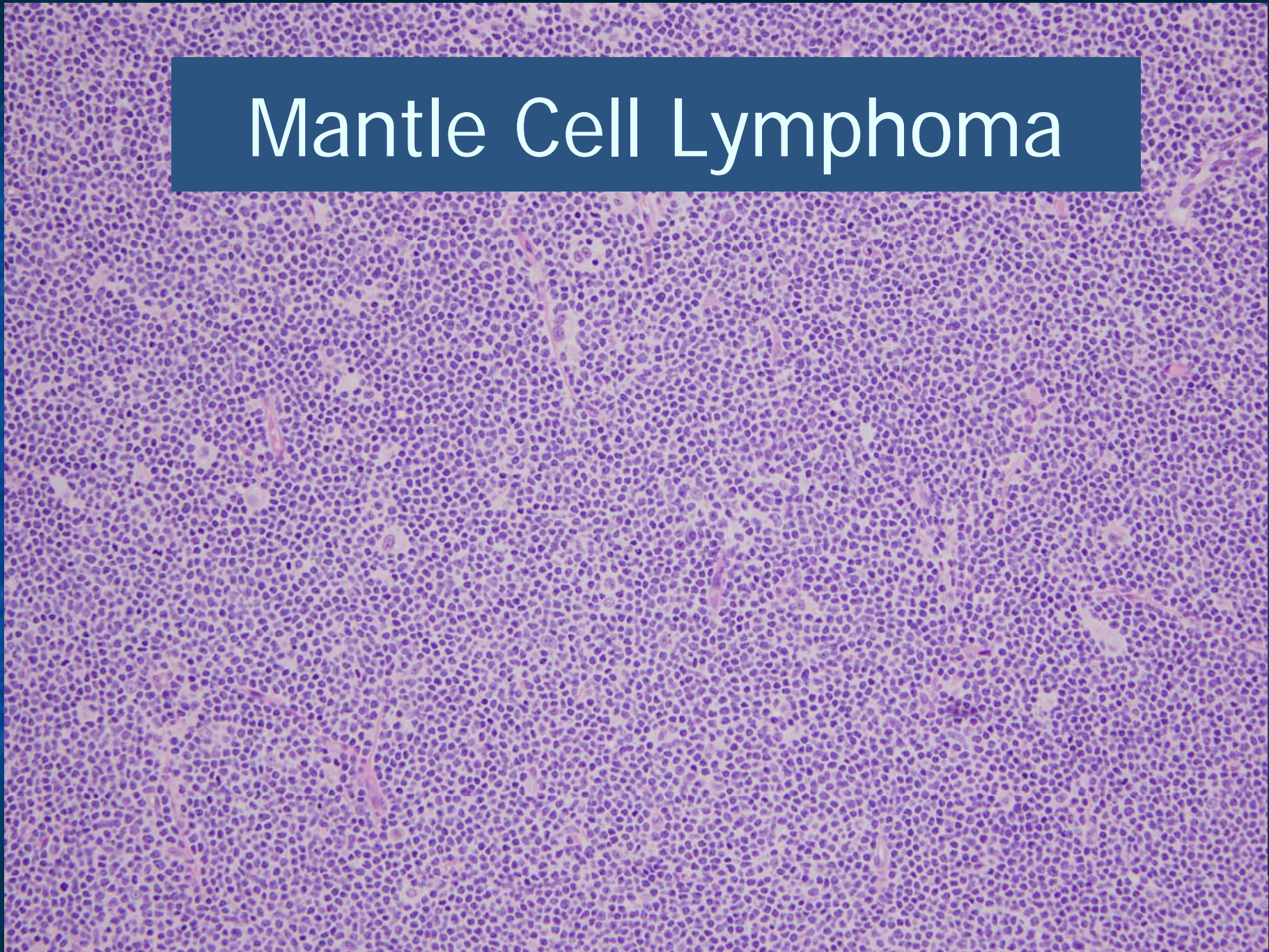
- Aggressive B-cell lymphoma
- Monomorphic sm-med sized lymphs
- T(11;14)/CCND-1-IgH
- DDX: Reactive follicular hyperplasia, CCL/SLL, Foll lymph, Extranodal Marginal B cell lymphoma, Castleman disease, hyaline vascular variant.

Immunophenotype

Pos: Cyclin D1, Sox11, MIB-I,

Neg: CD10, CD11c, CD23

Mantle Cell Lymphoma



Mantle Cell Lymphoma

