



Eye Emergencies: US Approach

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Outline

- **US Approach to the Non-Traumatic Eye**

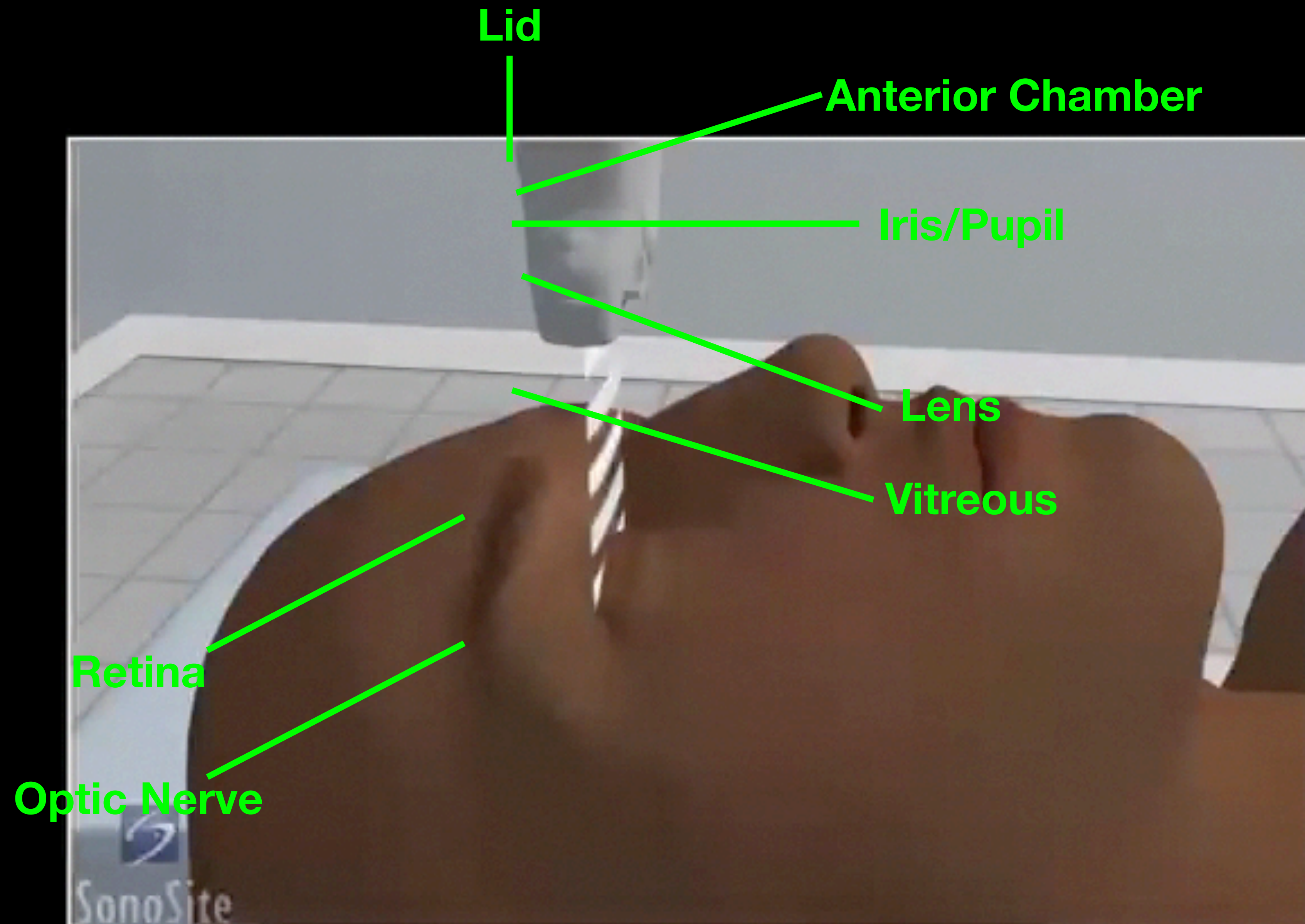
- Retinal Detachment (RD)
- Posterior Vitreous Detachment (PVD)
- Vitreous Hemorrhage (VH)

- **US Approach to the Traumatic Eye**

- Traumatic Eye Exam
- Ruptured Globe
- RD, PVD, VH
- Retrobulbar hematoma
- Lens Dislocation

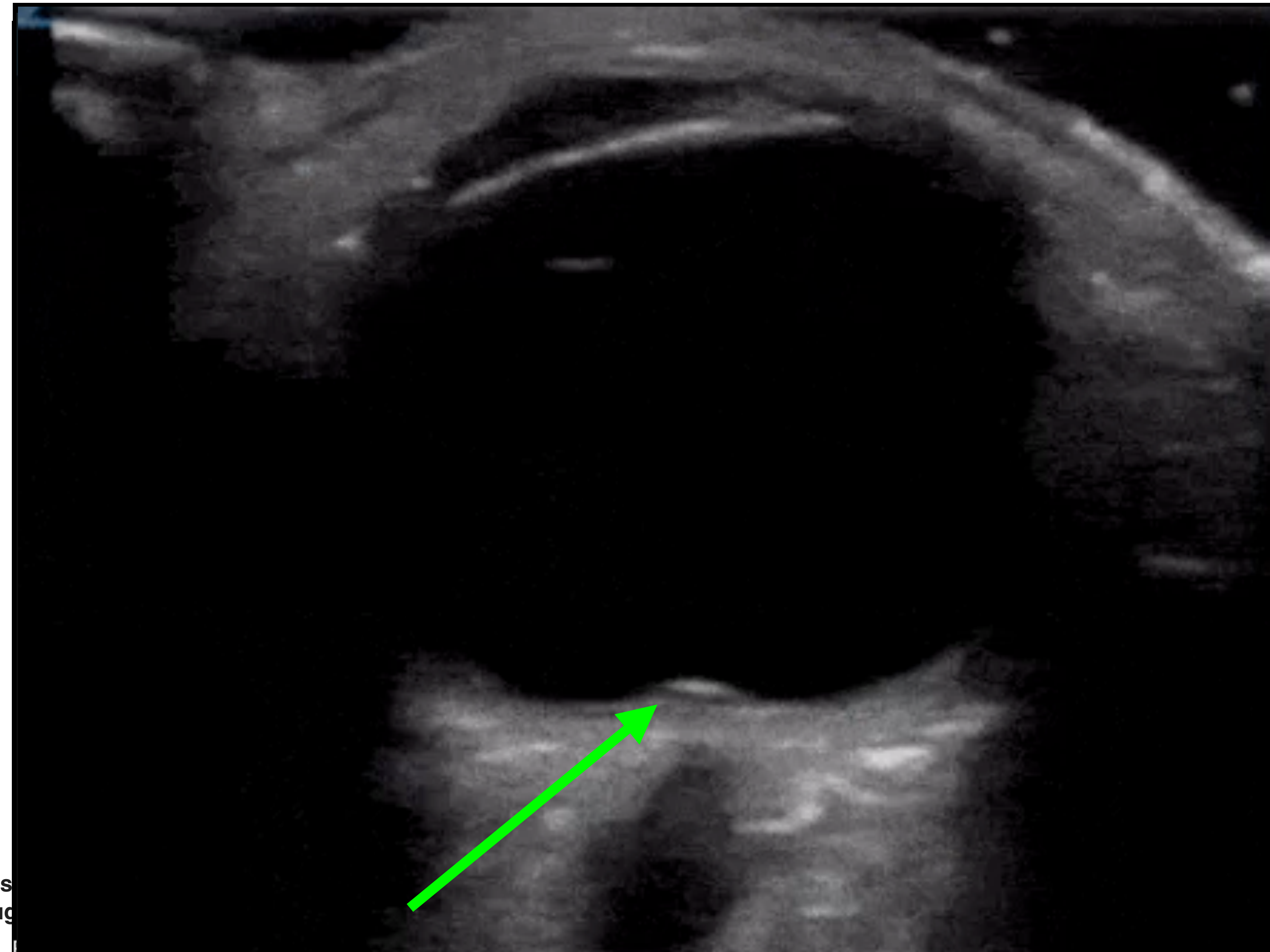
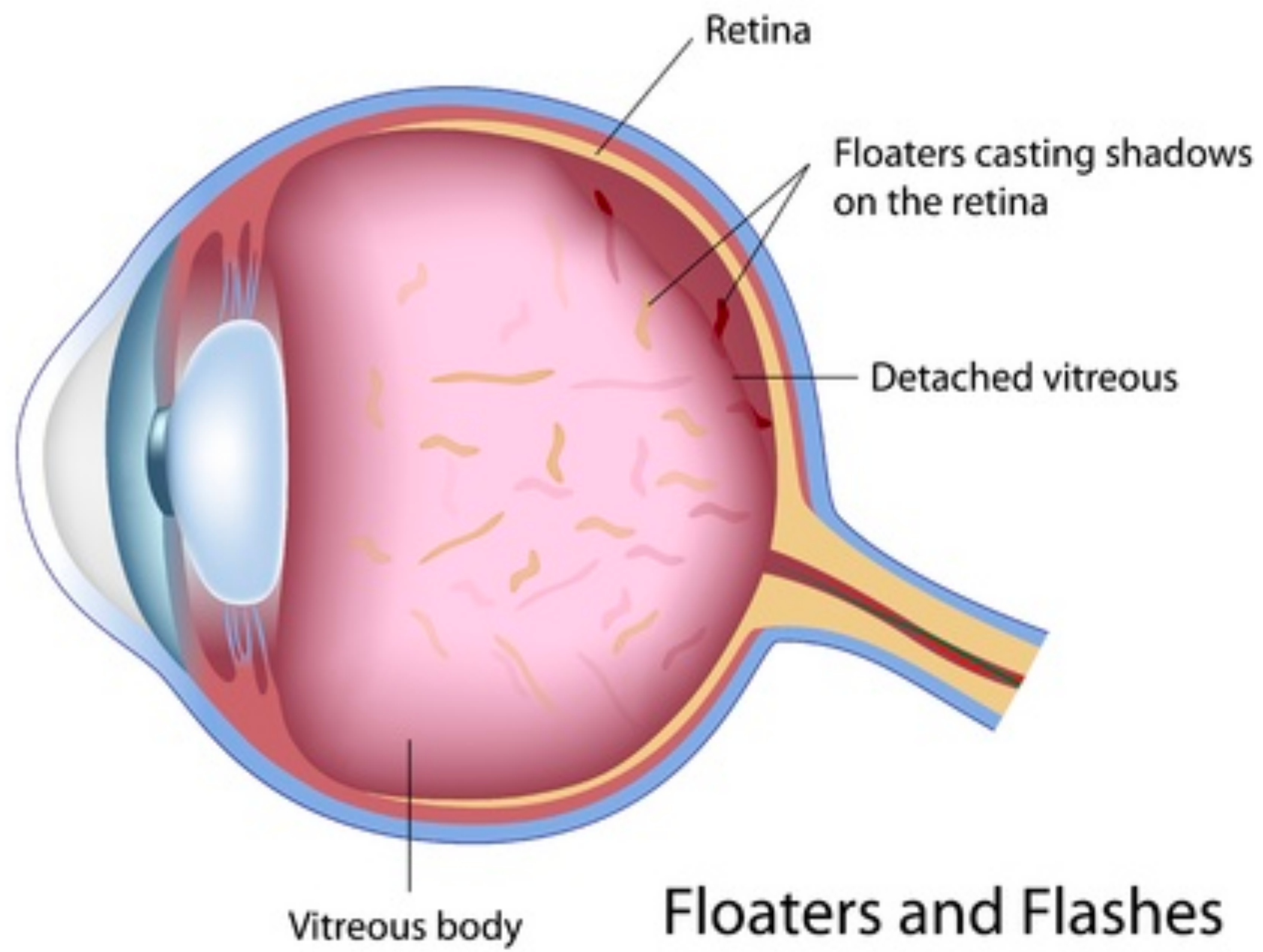


Ocular US Set-Up



Atraumatic Ocular US Approach

VIGMO



Case

- 50 y/o man with HIV (off ART) with right monocular painless vision loss x 2 months and new painless left vision changes x 2 weeks.
 - ADLs are difficult
 - OD- Light only
 - OS- 20/400

Ocular US

High Gain

High Gain

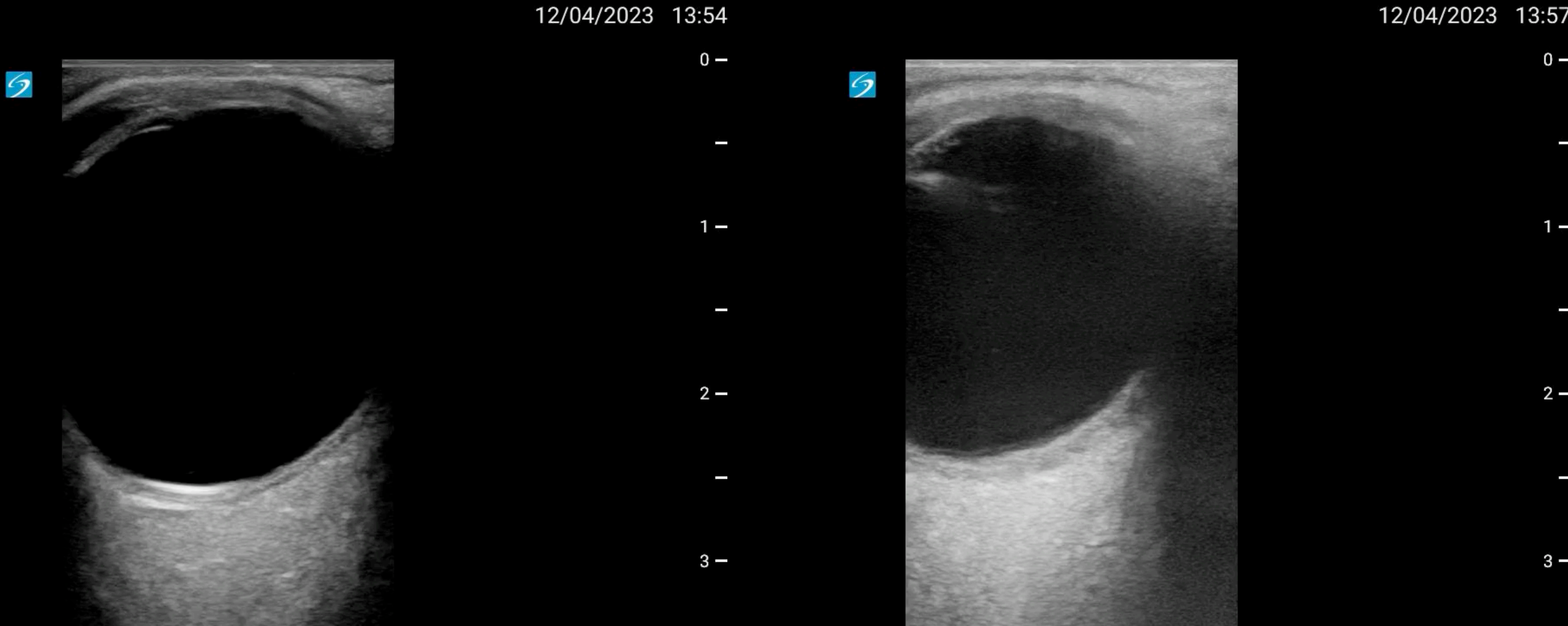


Case

50 y/o with acute monocular painless vision changes.

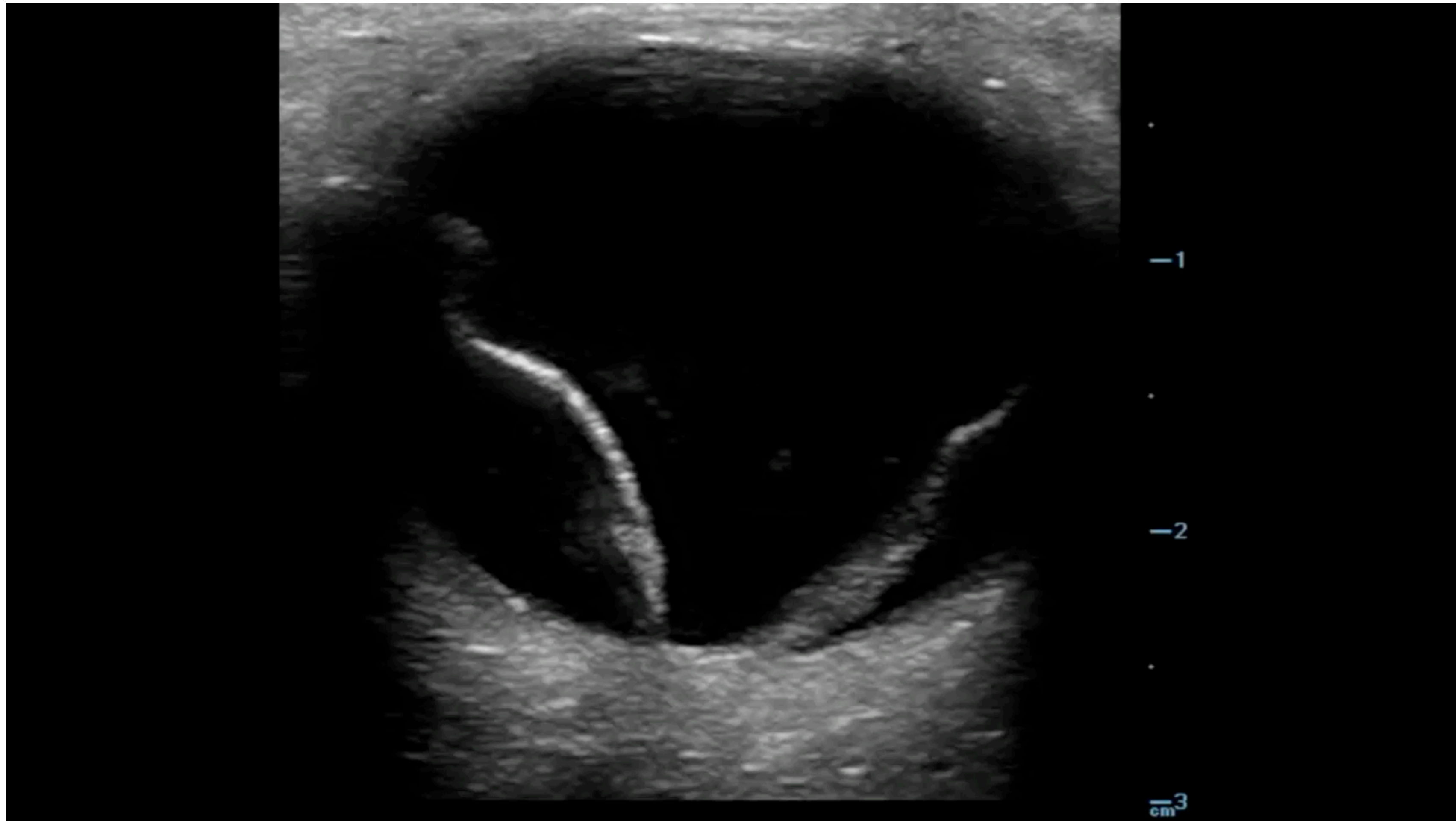
Low Gain

High Gain



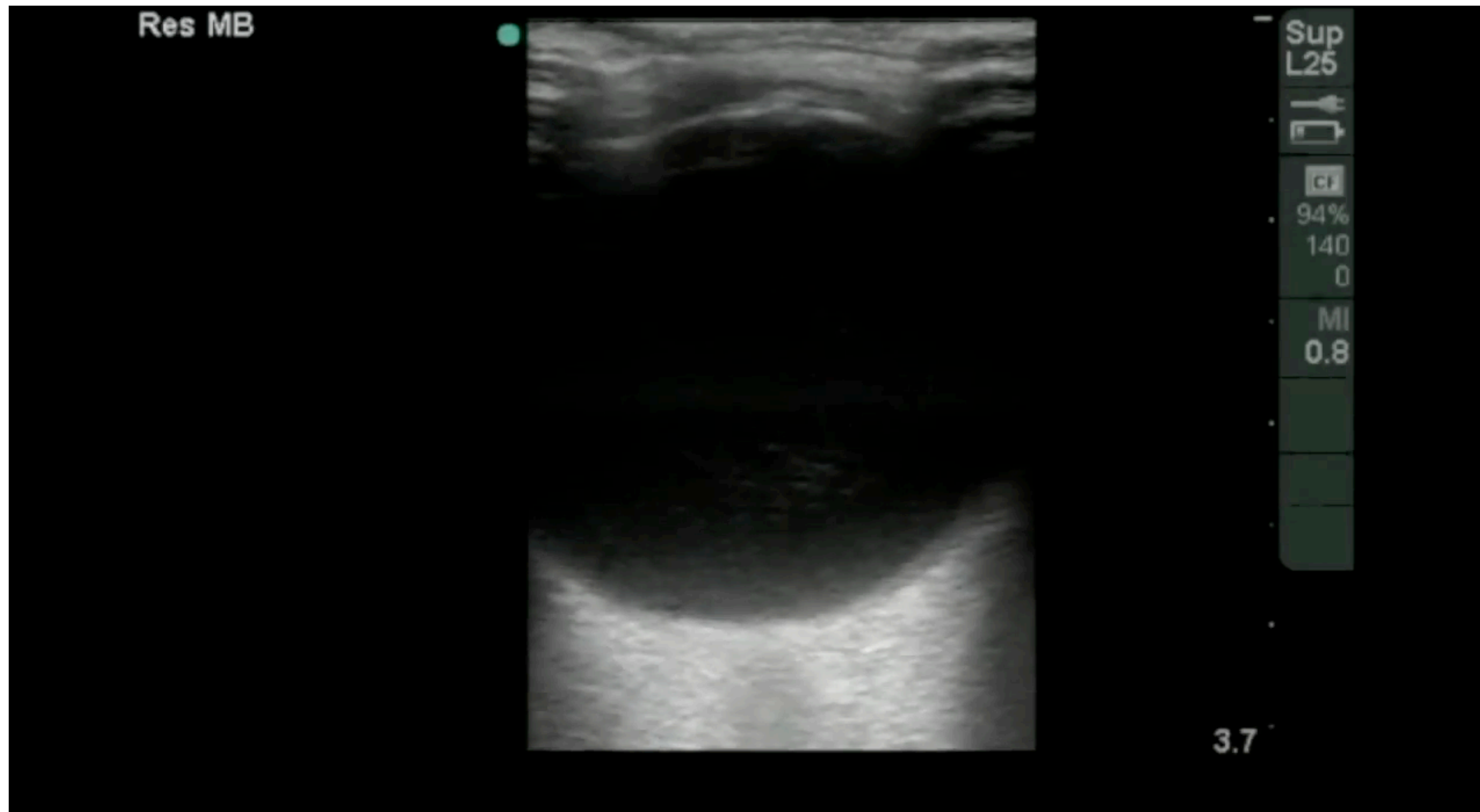
Case

50 y/o with acute monocular painless vision changes.



Case

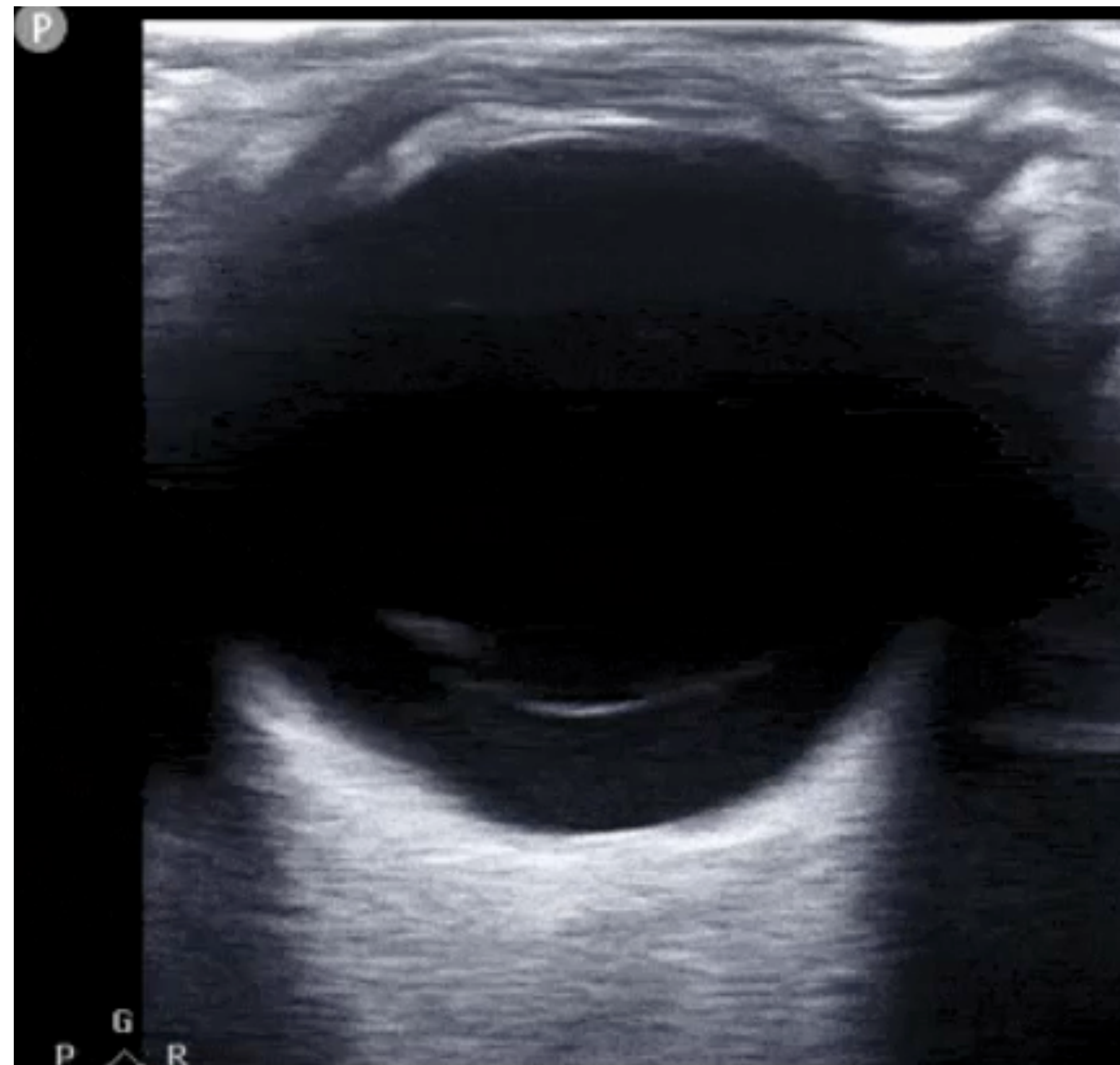
50 y/o with DM and acute monocular painless vision changes.



Case

50 y/o with acute monocular painless vision changes.

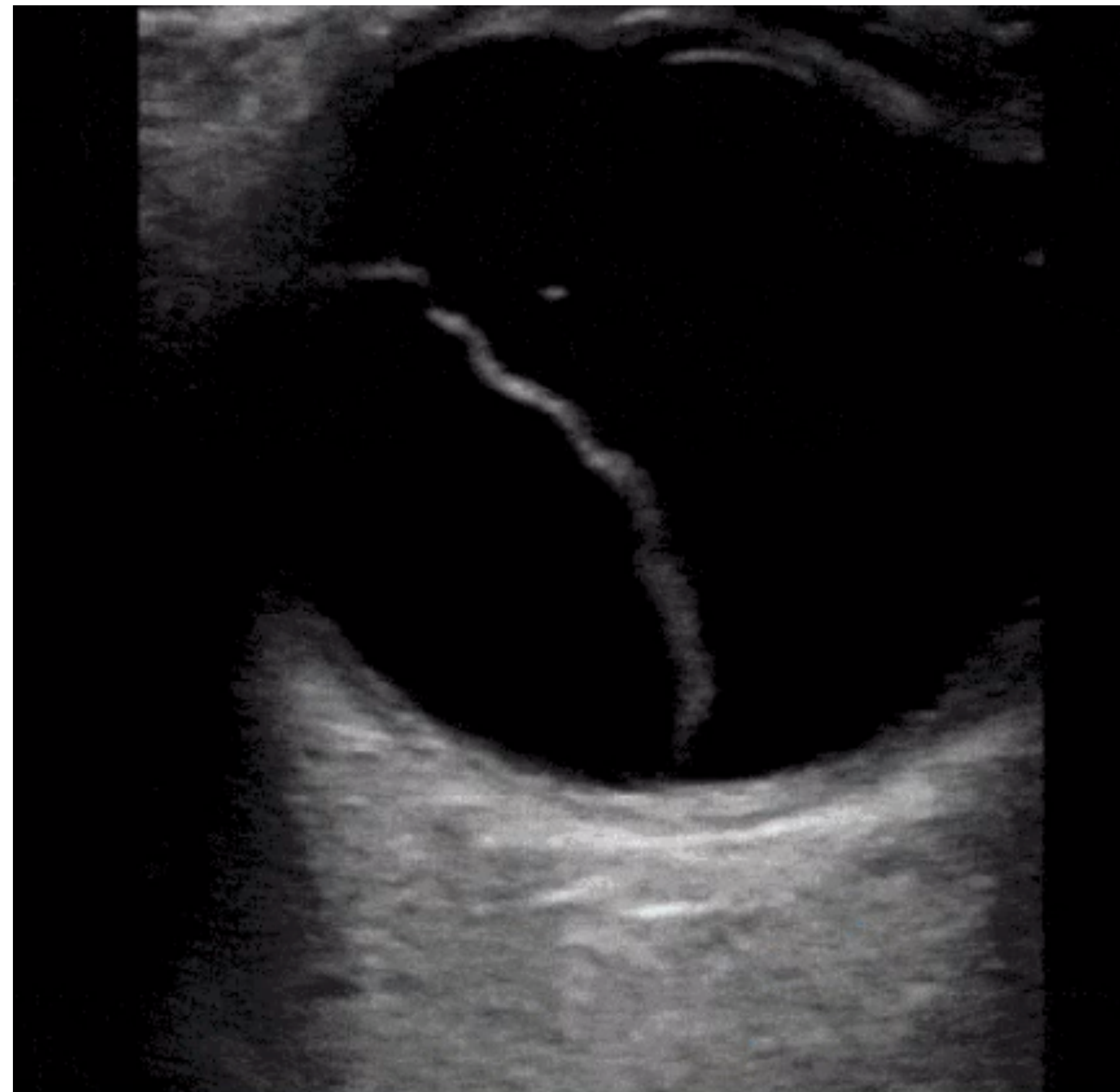
High Gain



Case

50 y/o with acute monocular painless vision changes.

High Gain



Atraumatic Ocular US Approach

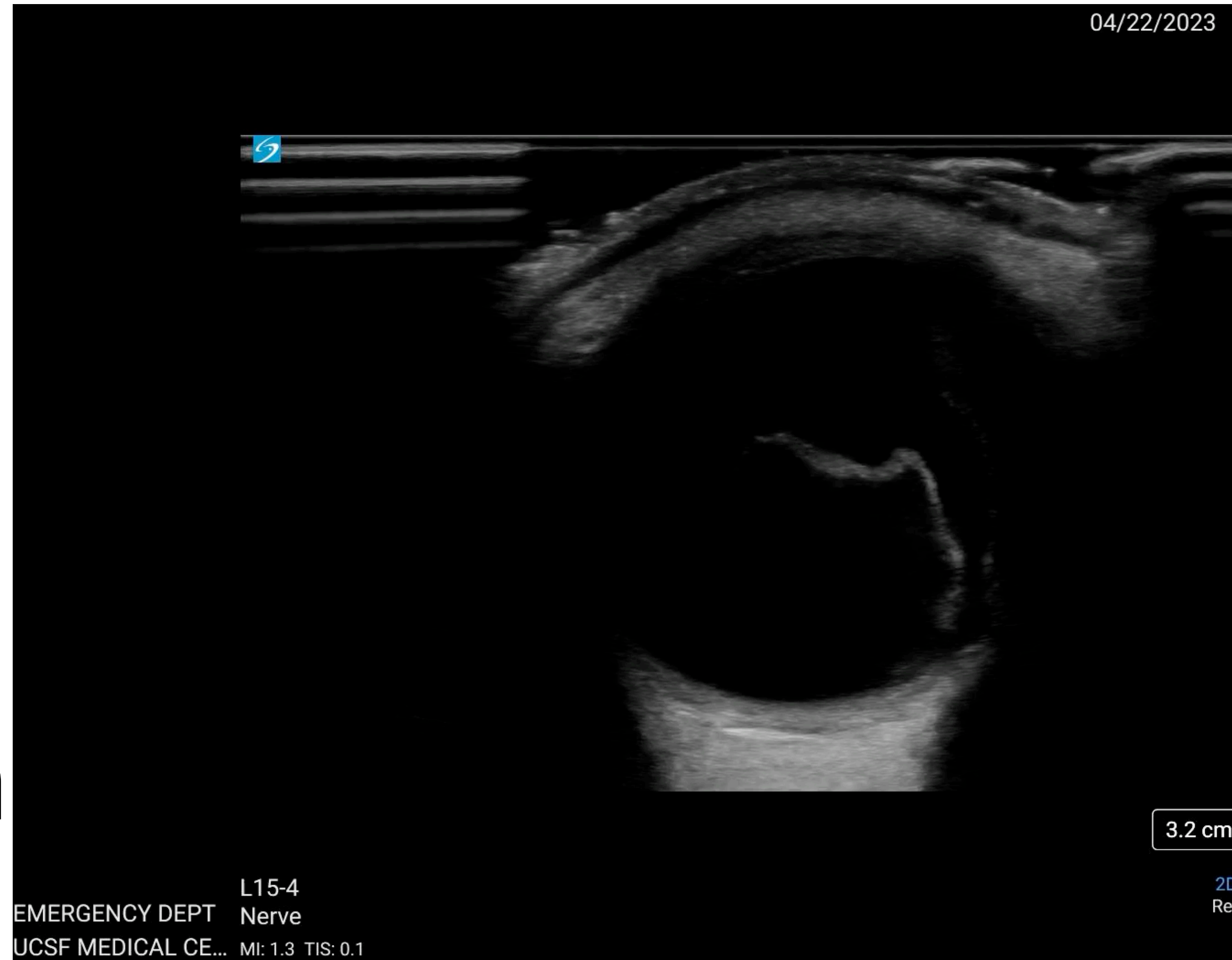
VIGMO

Vitreous evaluation

Gain (High & Low)

Movement (Kinetics)

Optic disc evaluation

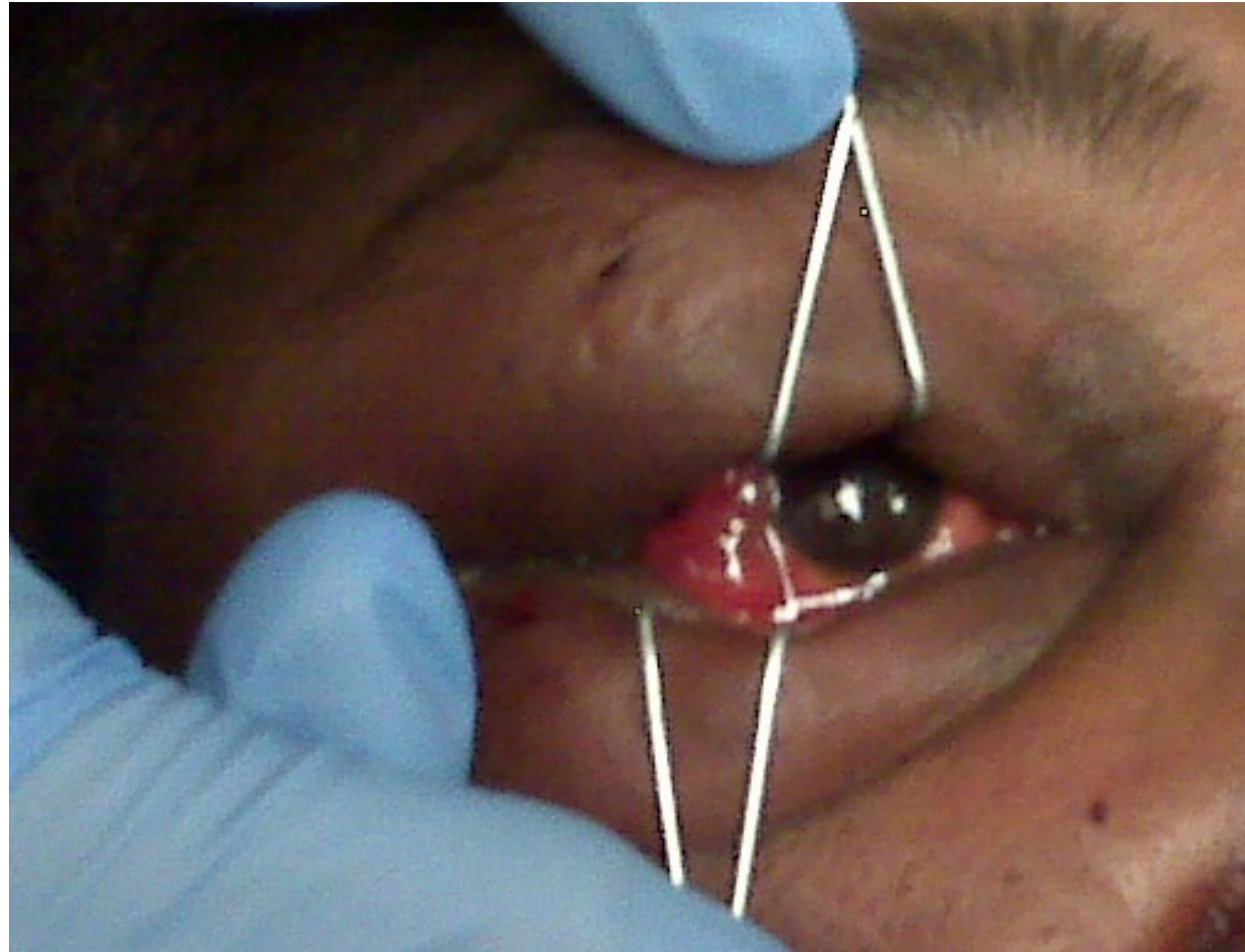


US Approach to Traumatic Eye



Ocular Trauma Exam

- Pupillary Response
- EOMs
- Globe Assessment



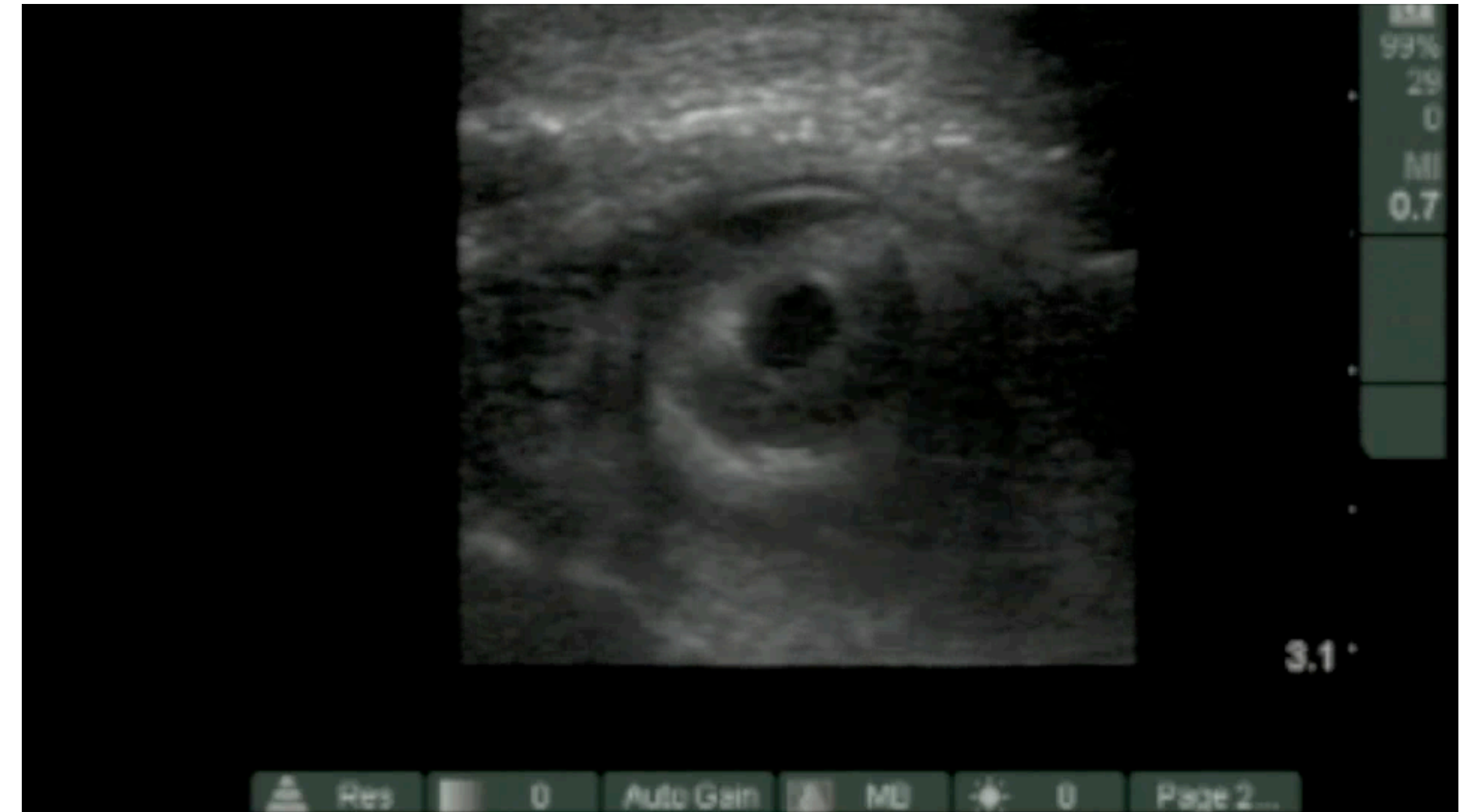
Pupil Exam



SonoSite
HFL38xp/13-6 Small Parts
MI: 0.7 TIS: 0.3

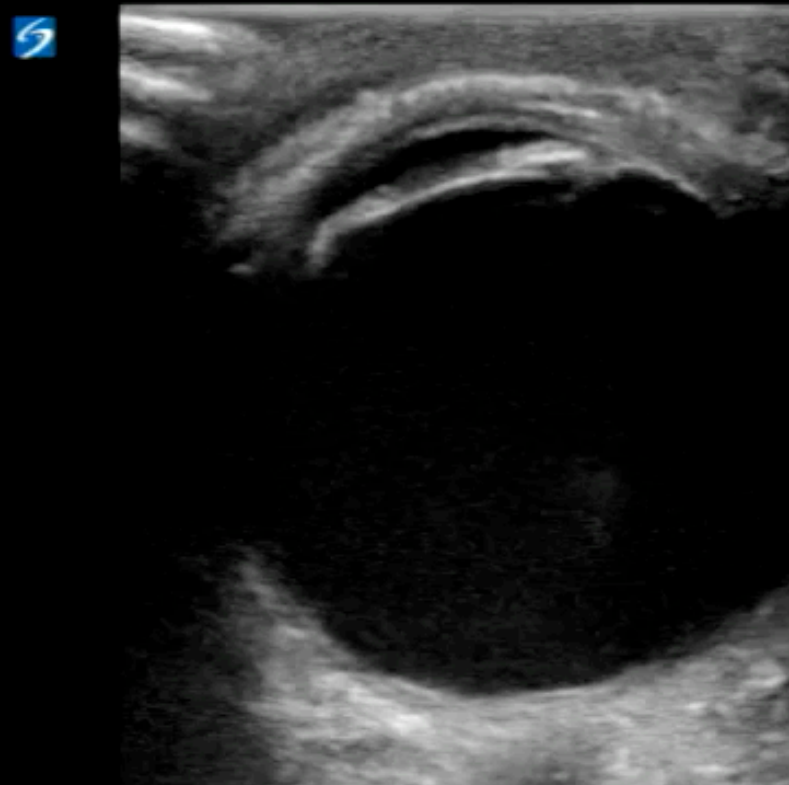
2D: G: 82
Res DR: 0
MB

Pupil Exam

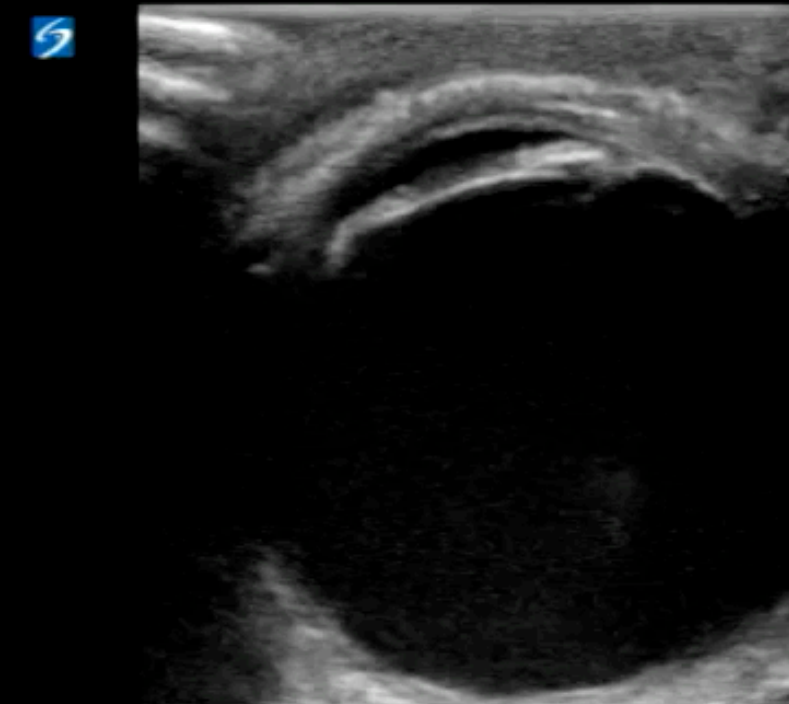


Extraocular Muscle Exam

Medial-Lateral

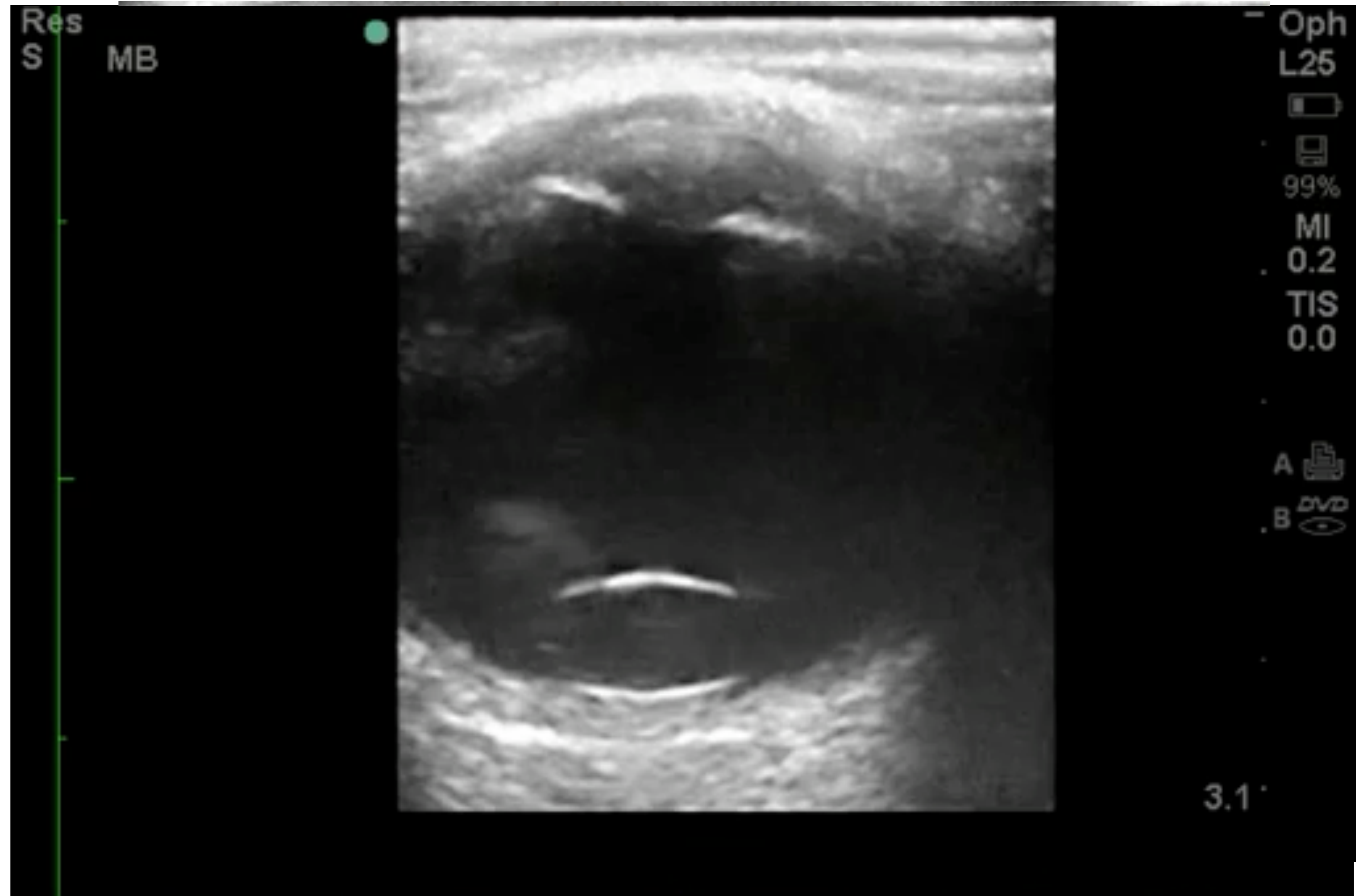


Superior-Inferior



Ocular Trauma Pathology

Lens Dislocation



PEARL

Ocular Trauma POCUS

- Pupil Exam
- EOMs
- Retrobulbar Hematoma
- Ruptured Globe
- RD/VH
- Lens Dislocation

Case

14 y/o with acute ocular trauma s/p fireworks accident



Case

50 y/o transwomen with acute ocular trauma s/p assault



Case

30 y/o with acute ocular trauma and vision changes s/p assault



Take Home Points

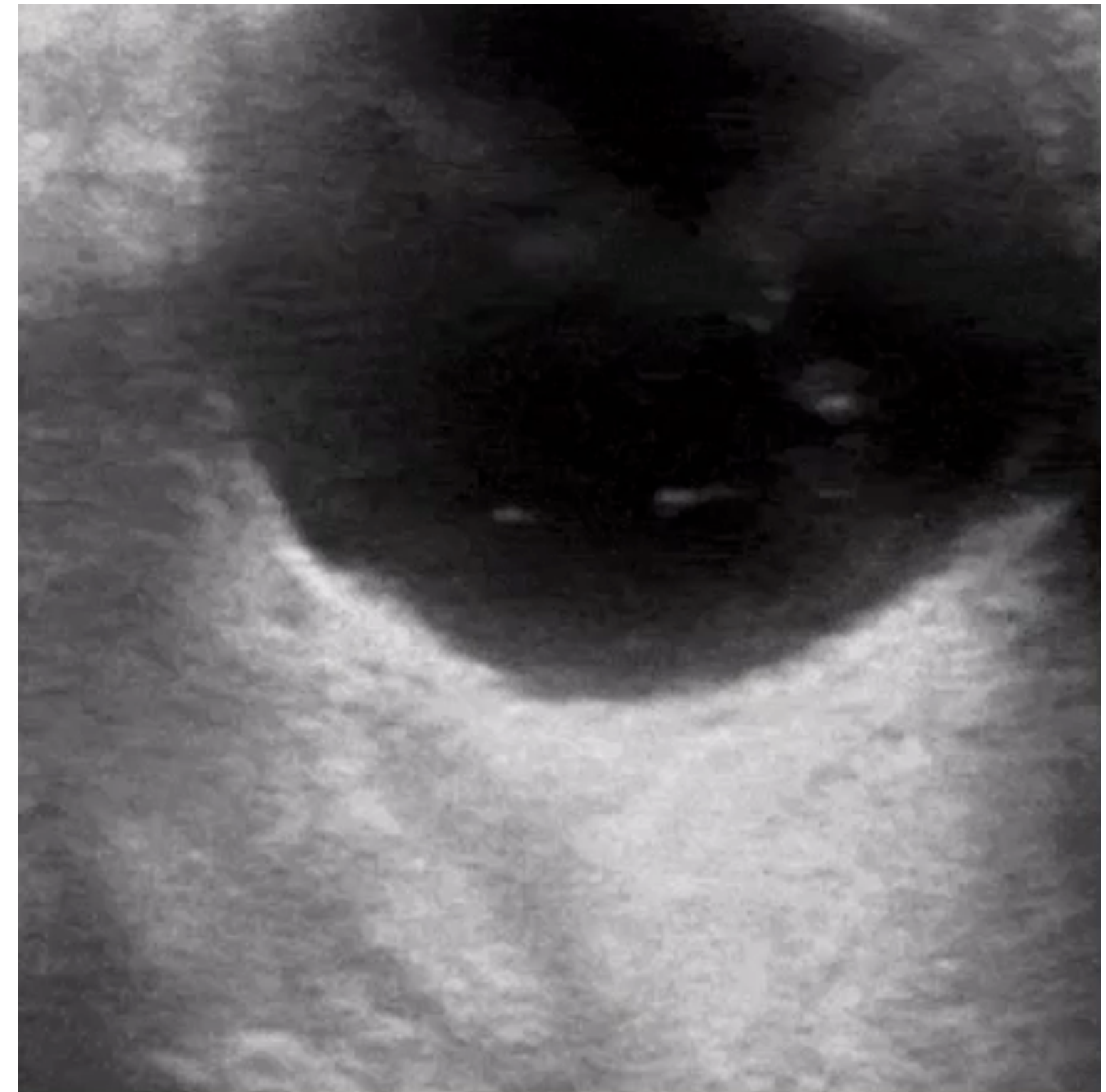
Atraumatic Ocular US Approach

Vitreous evaluation

Gain (High & Low)

Movement (Kinetics)

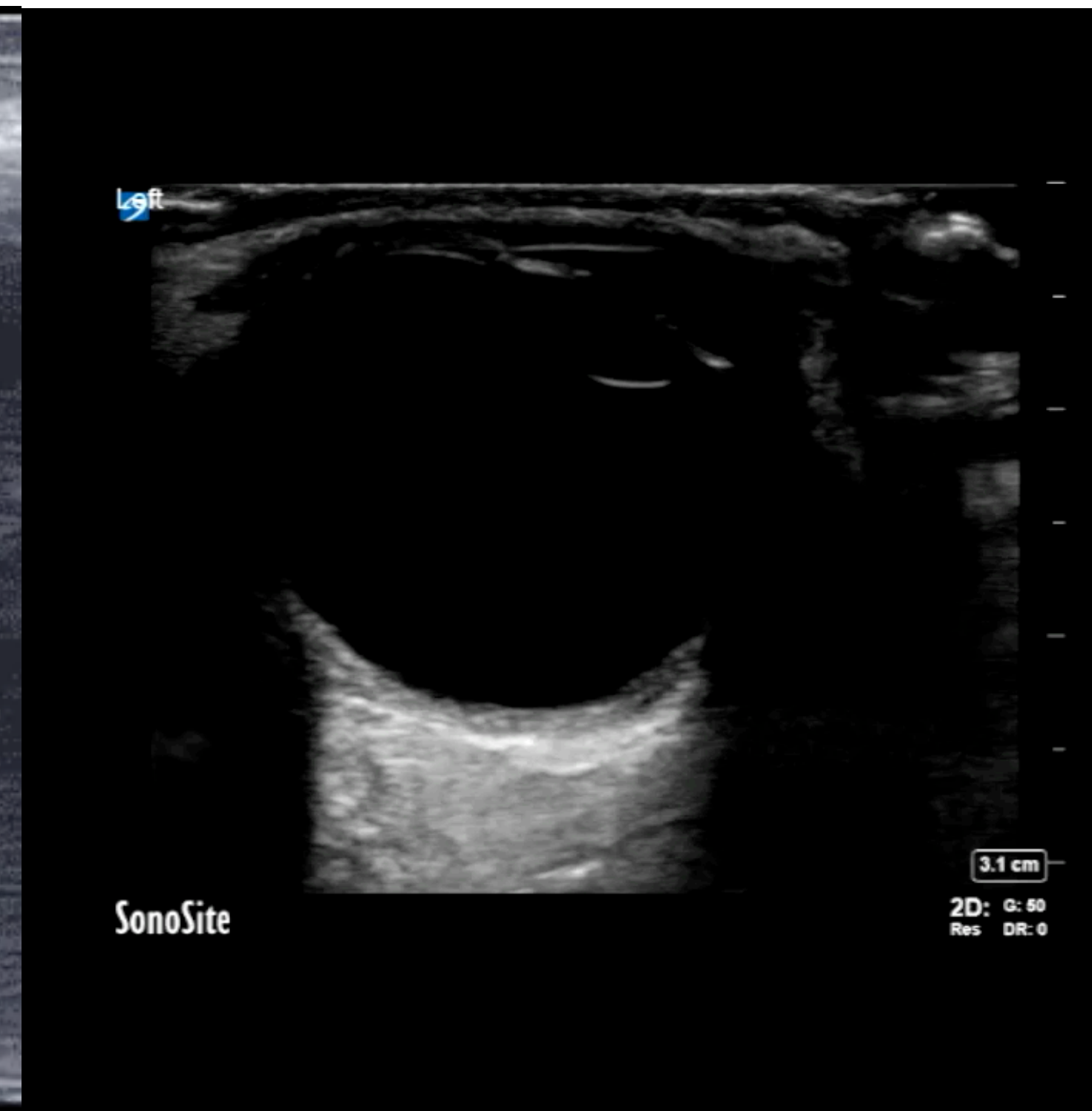
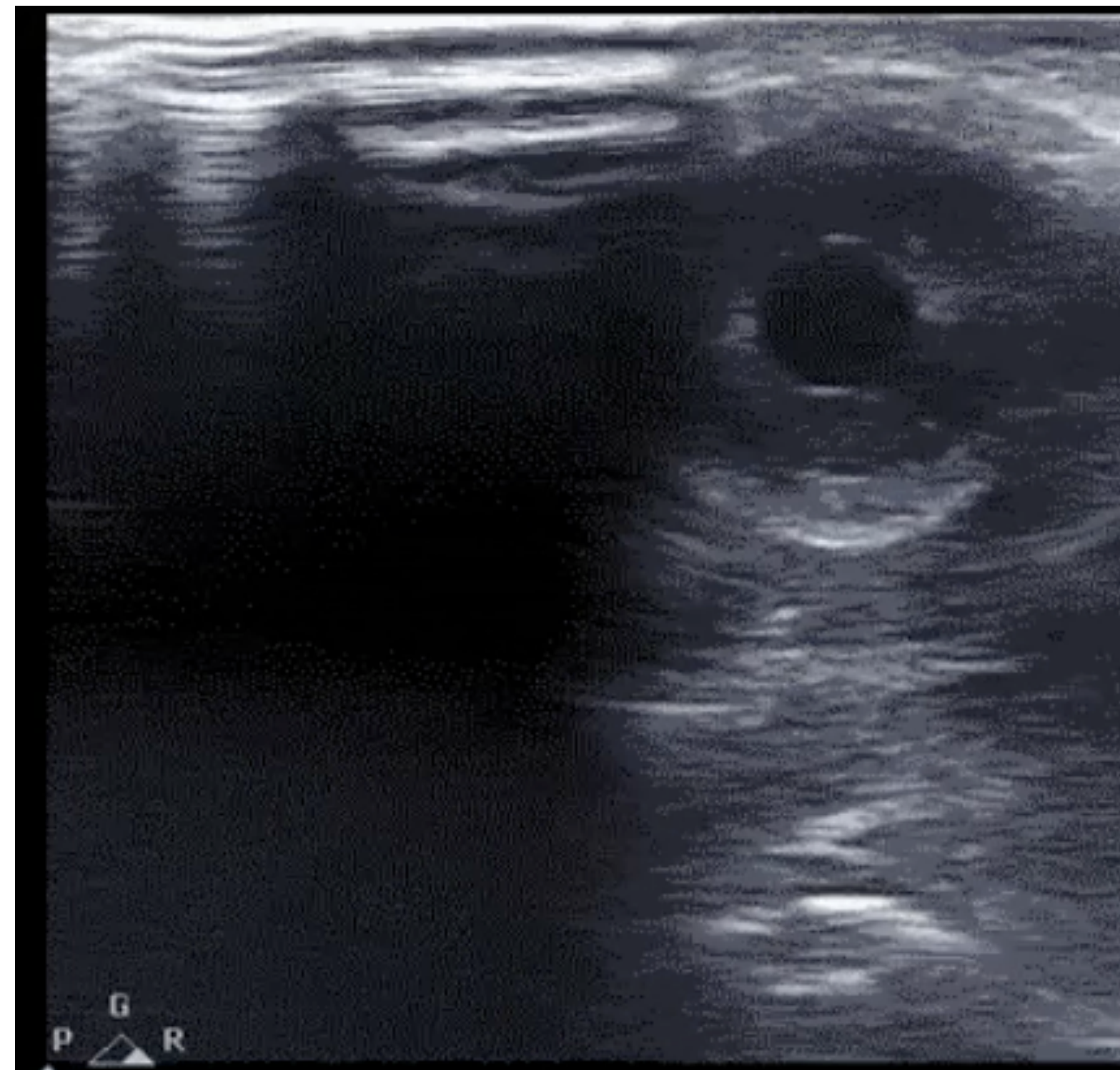
Optic disc evaluation



Take Home Points

Traumatic Ocular US Approach

- Pupillary Response
- EOMs
- Globe Assessment



Thank You

