



# 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)

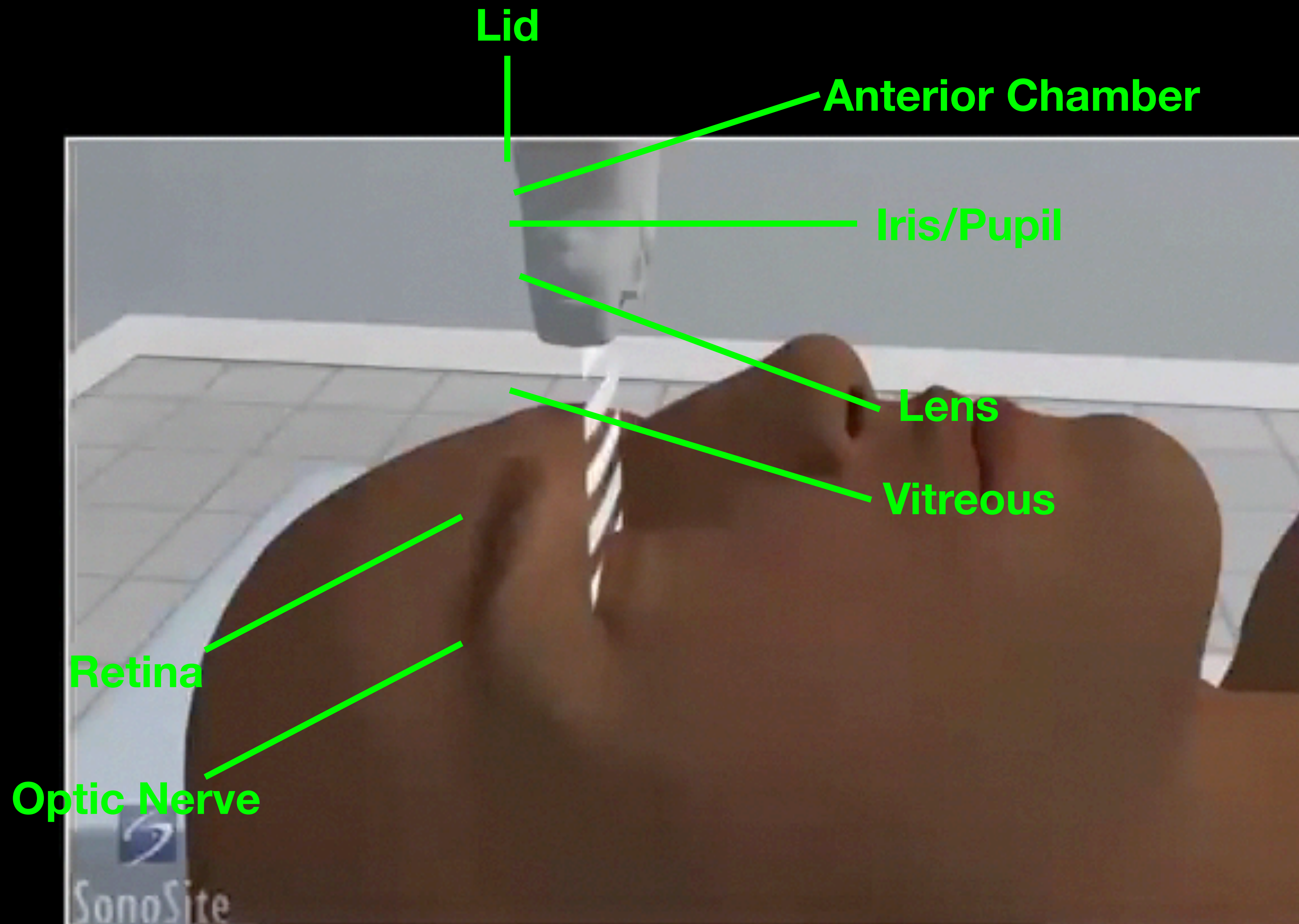
- **US Approach to the Traumatic Eye**

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





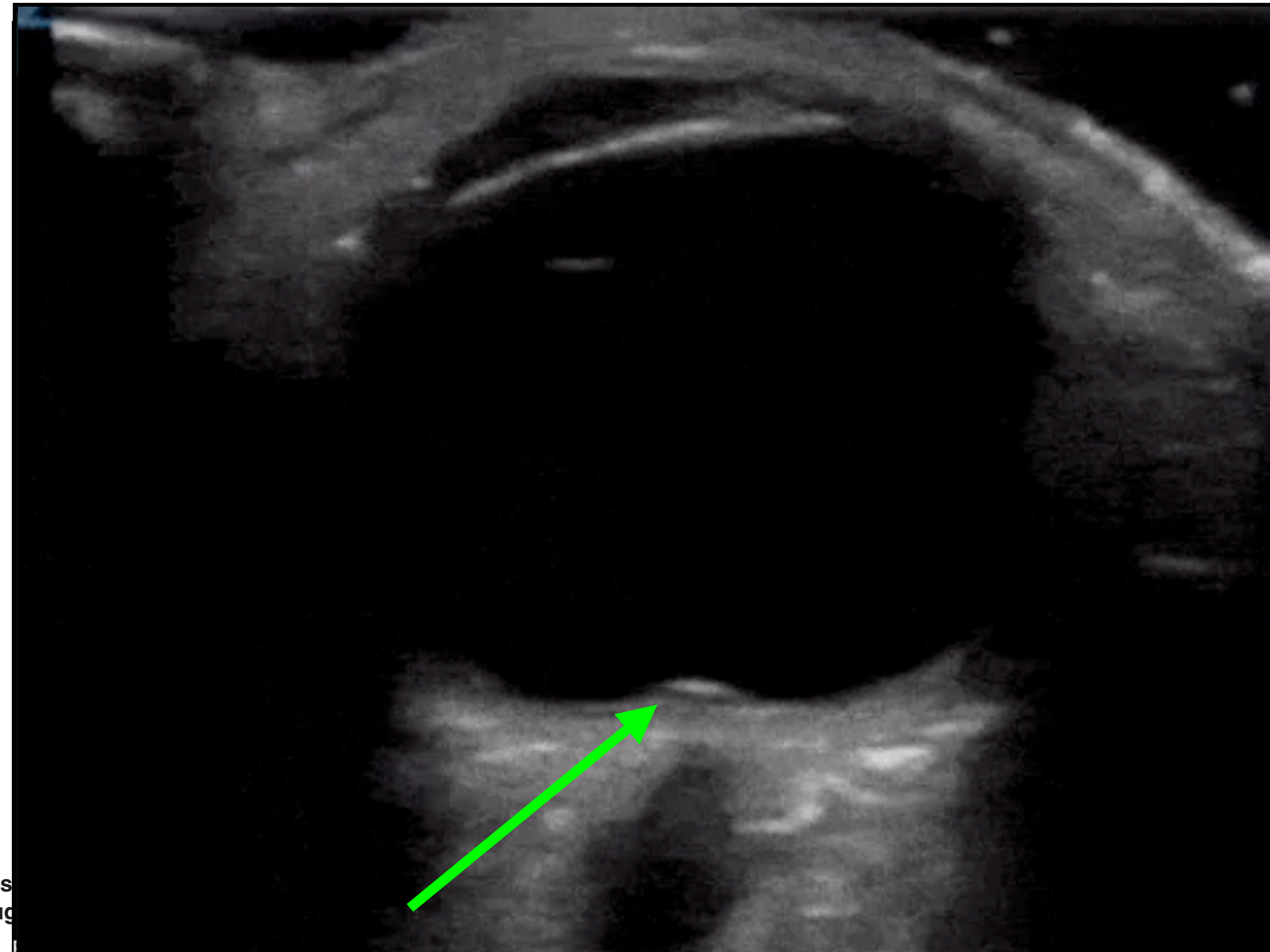
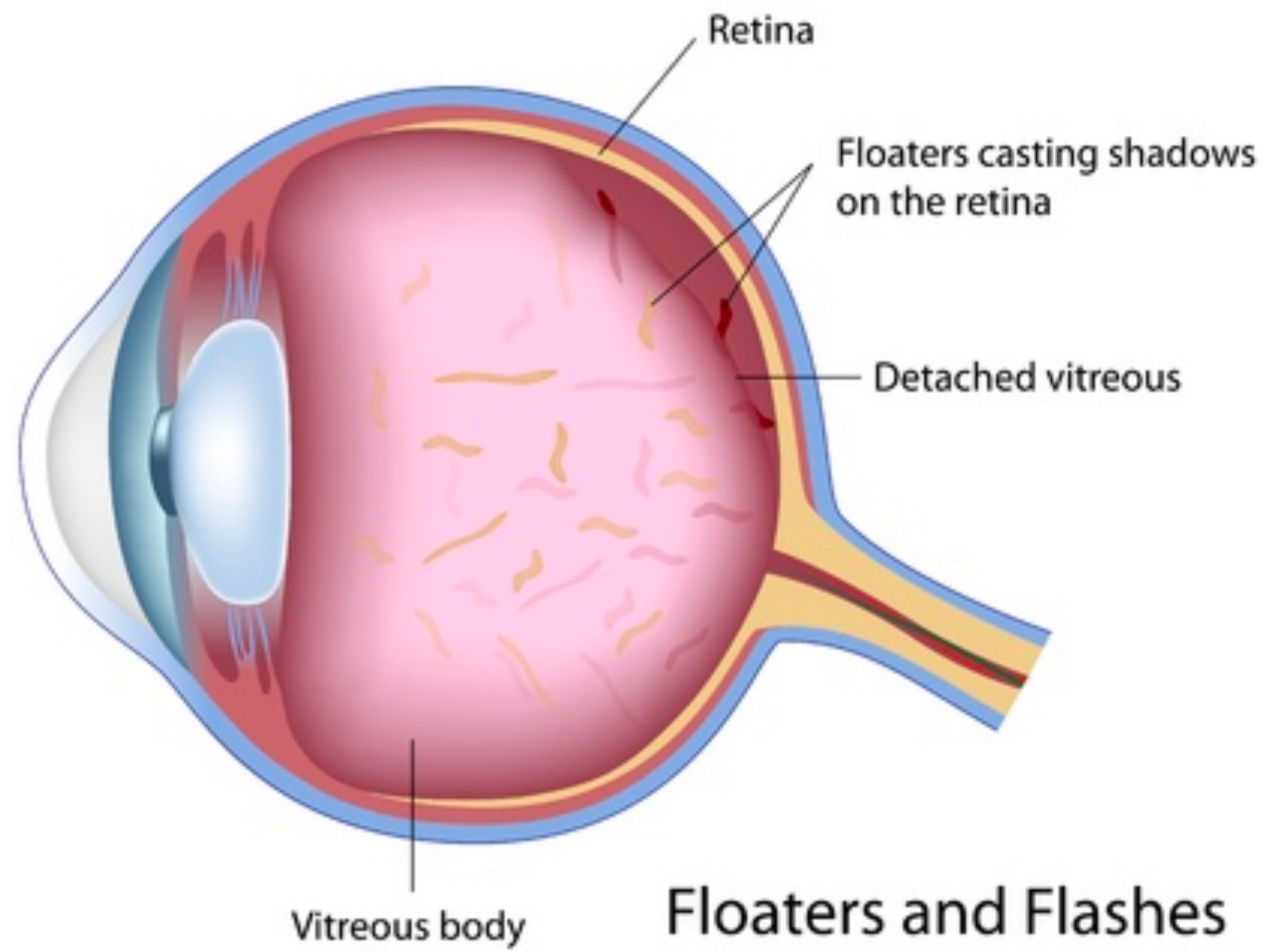
# Ocular US Set-Up





# Atraumatic Ocular US Approach

## ***VIGMO***





# Case

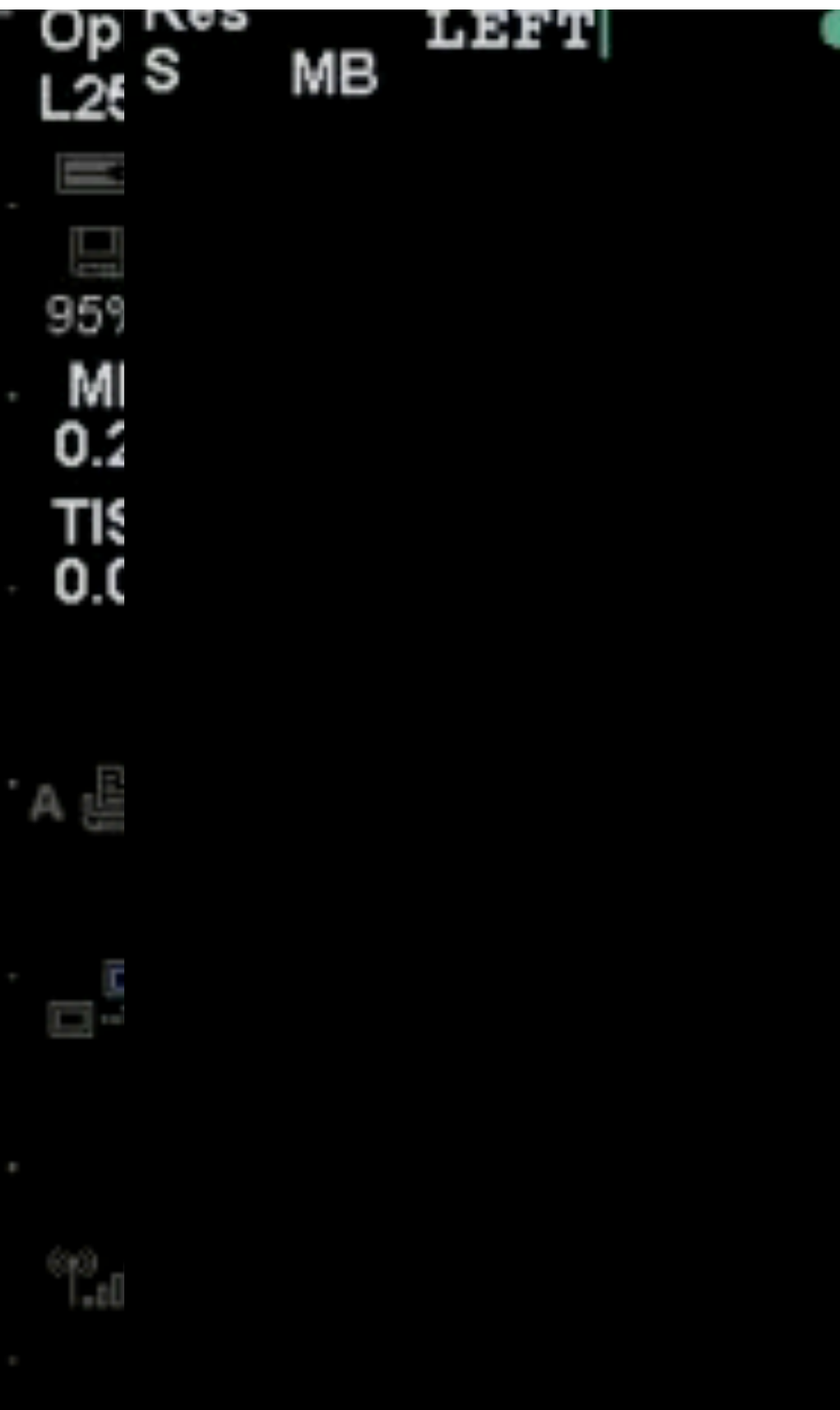
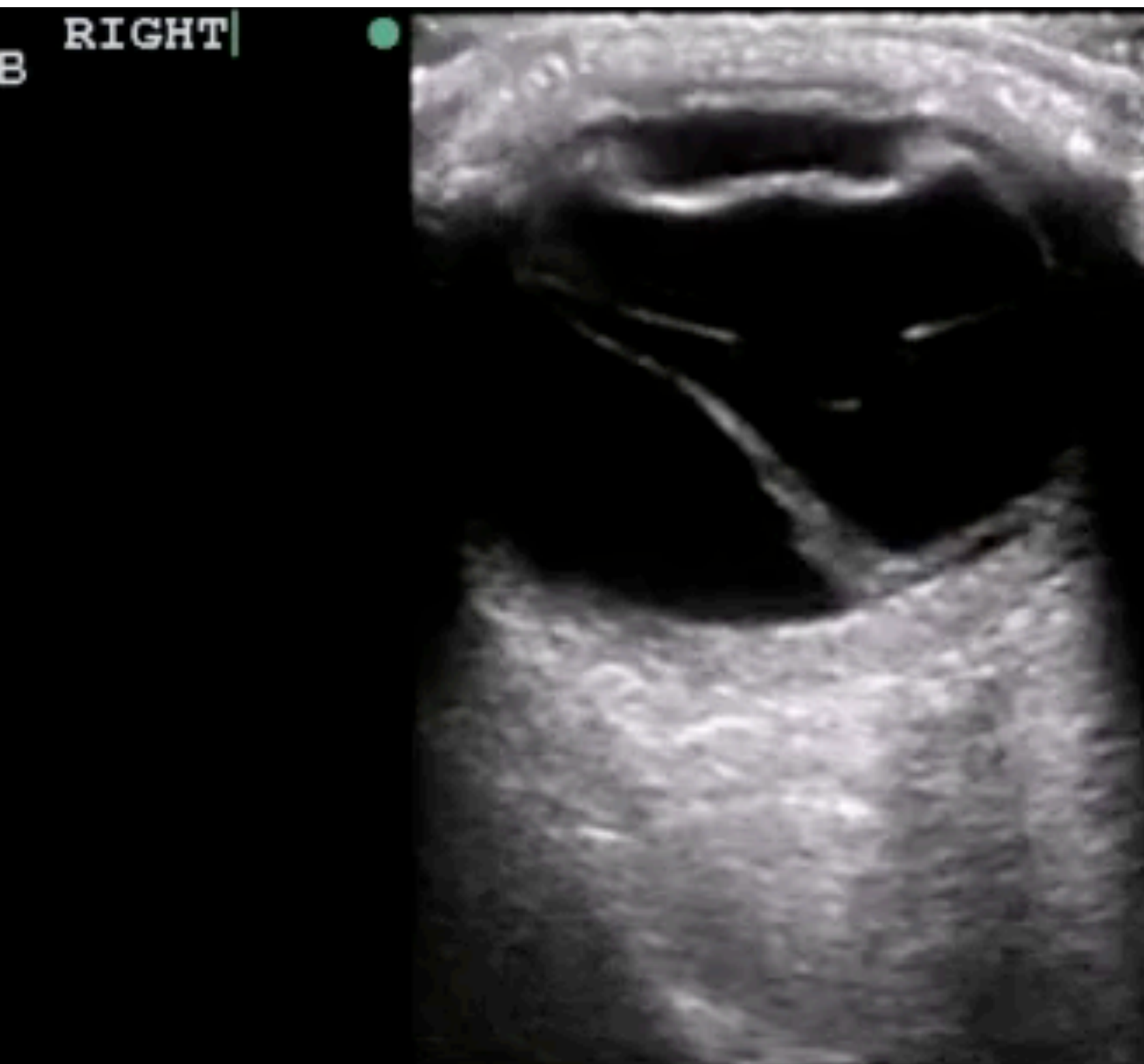
- 50 y/o man with HIV (off ART) with right monocular painless vision loss x 2 months and new painless left vision changes x 2 weeks.
  - ADLs are difficult
  - OD- Light only
  - OS- 20/400



# Ocular US

High Gain

High Gain





# Case

50 y/o with acute monocular painless vision changes.

Low Gain

High Gain

12/04/2023 13:54

12/04/2023 13:57



0 -

-

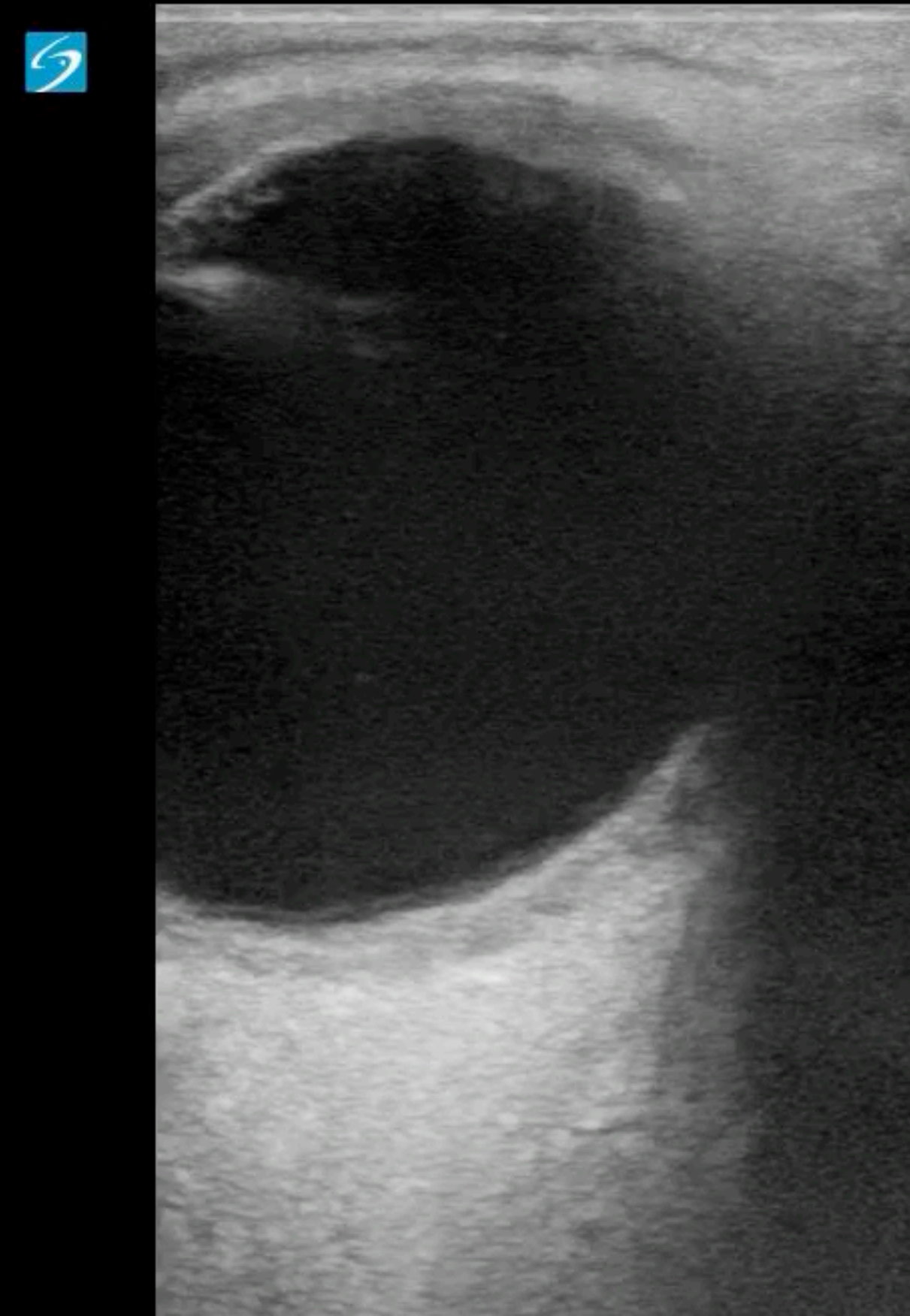
1 -

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2 -

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3 -



0 -

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1 -

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2 -

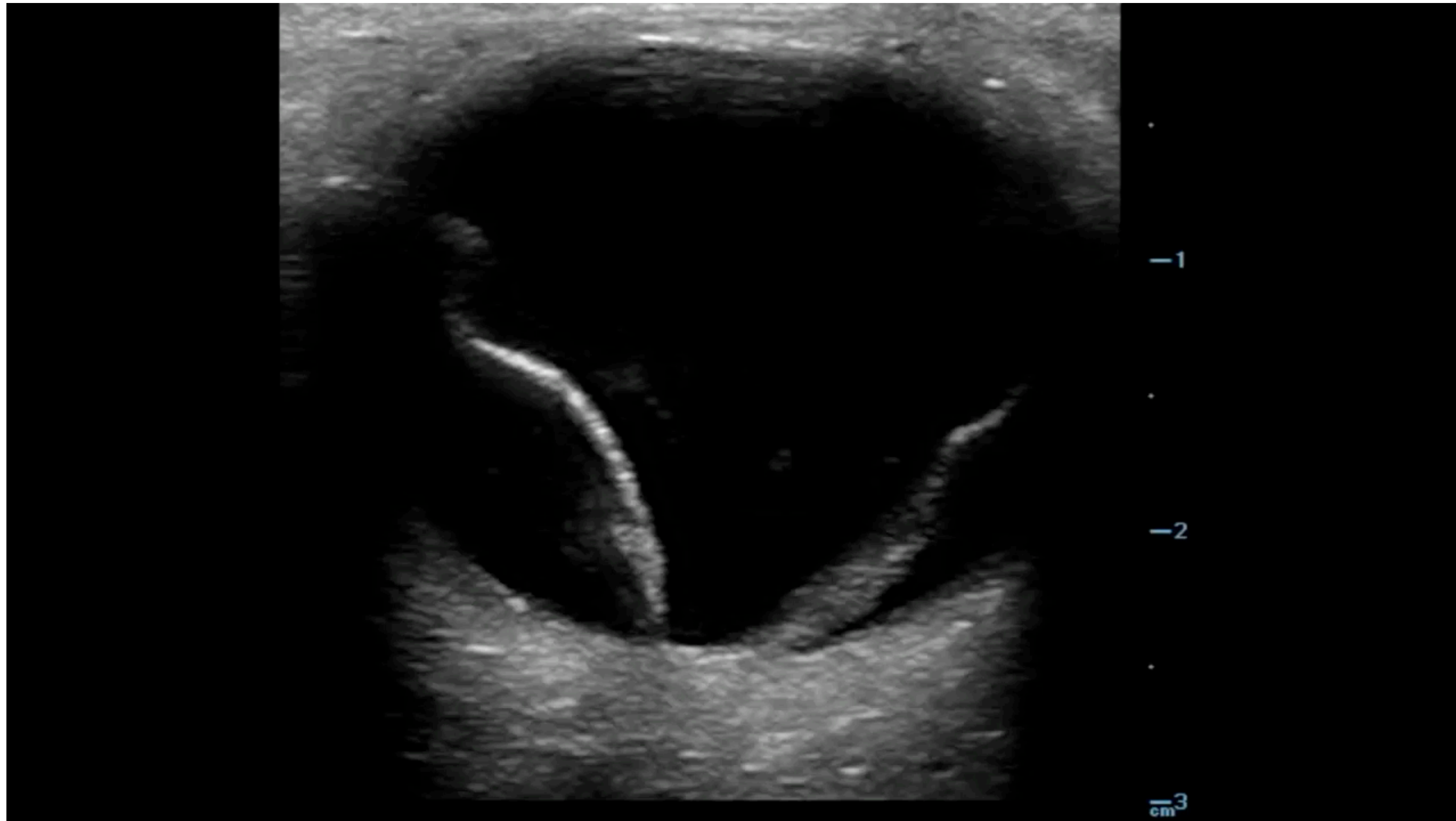
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# Case

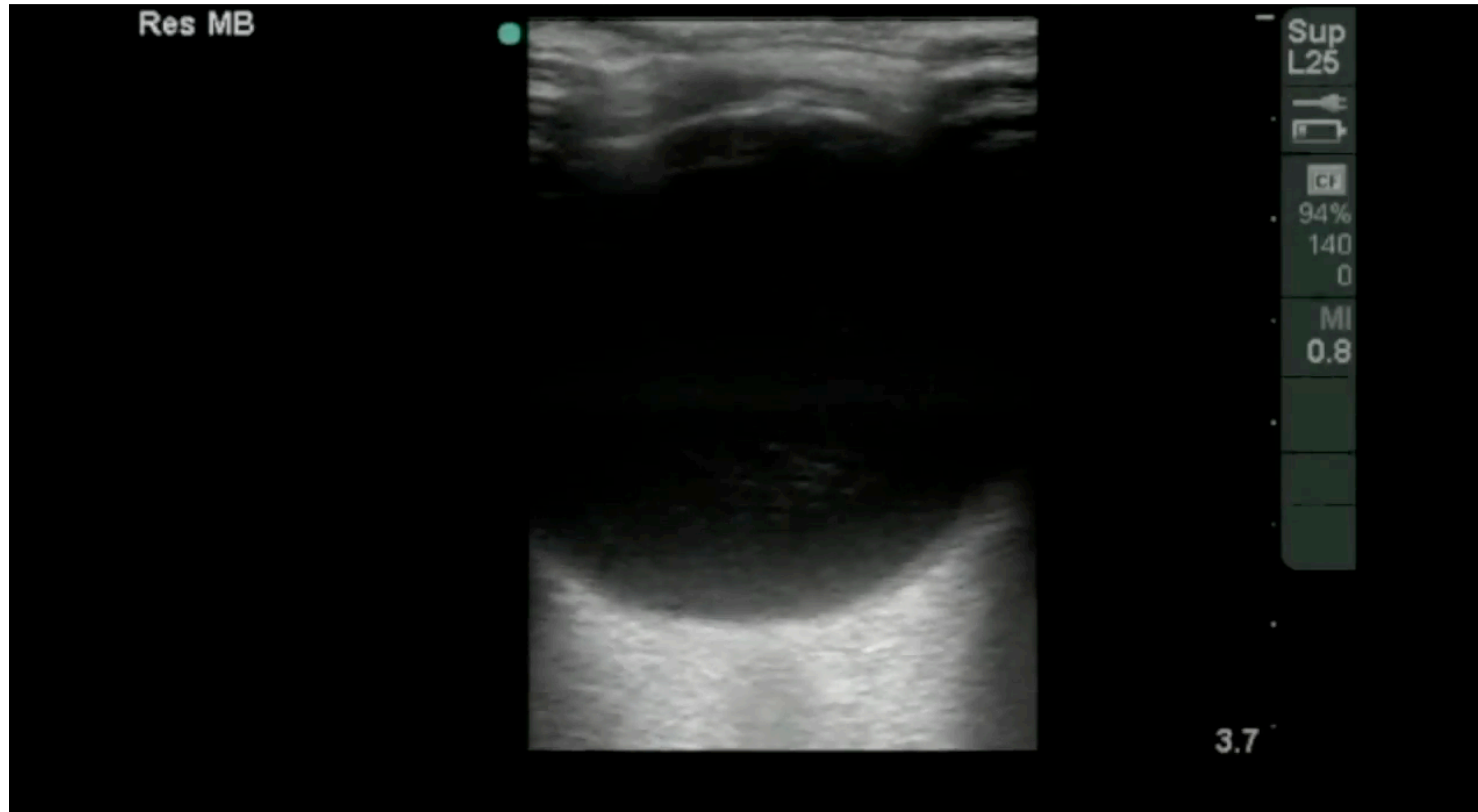
50 y/o with acute monocular painless vision changes.





# Case

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

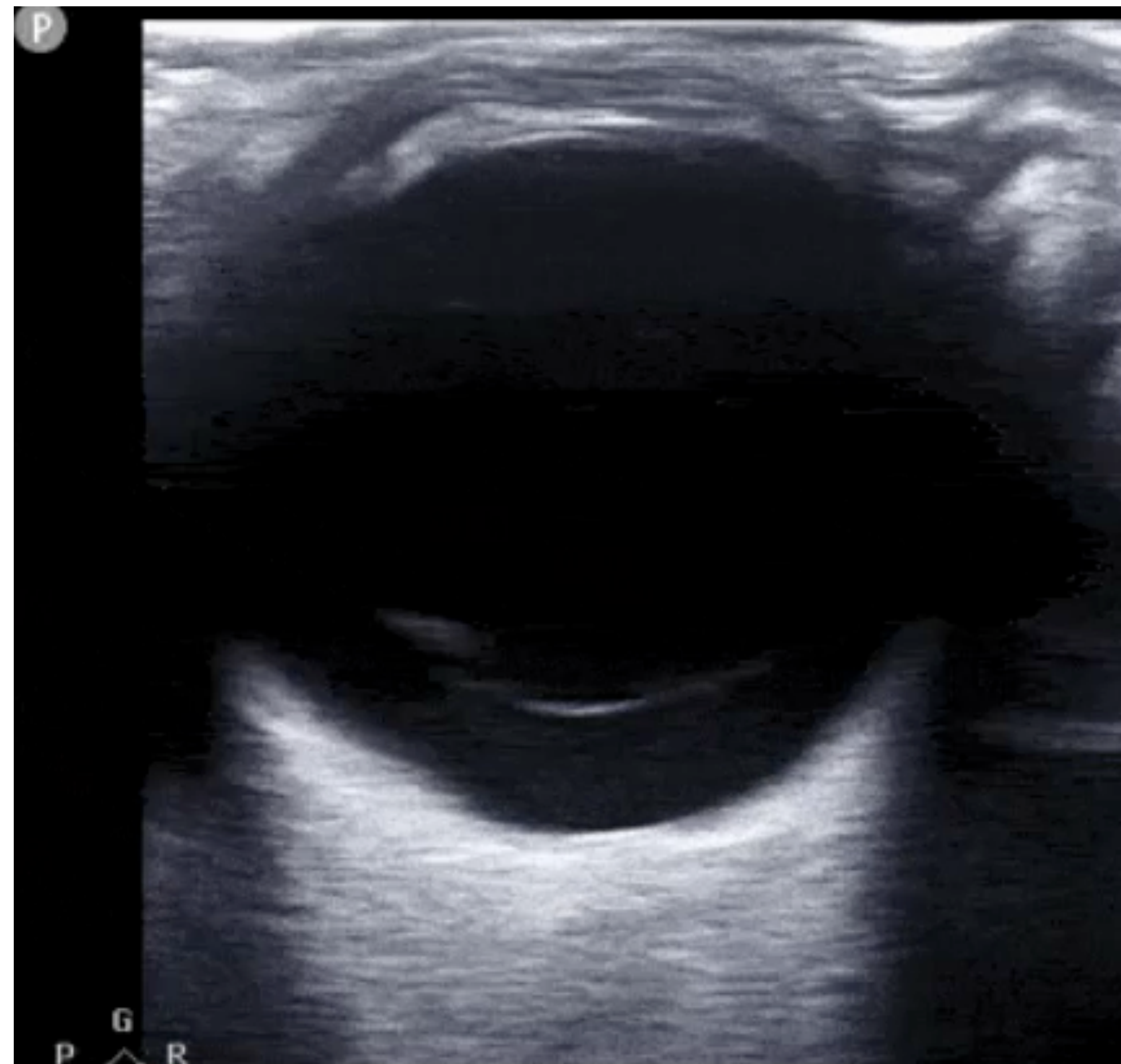




# Case

50 y/o with acute monocular painless vision changes.

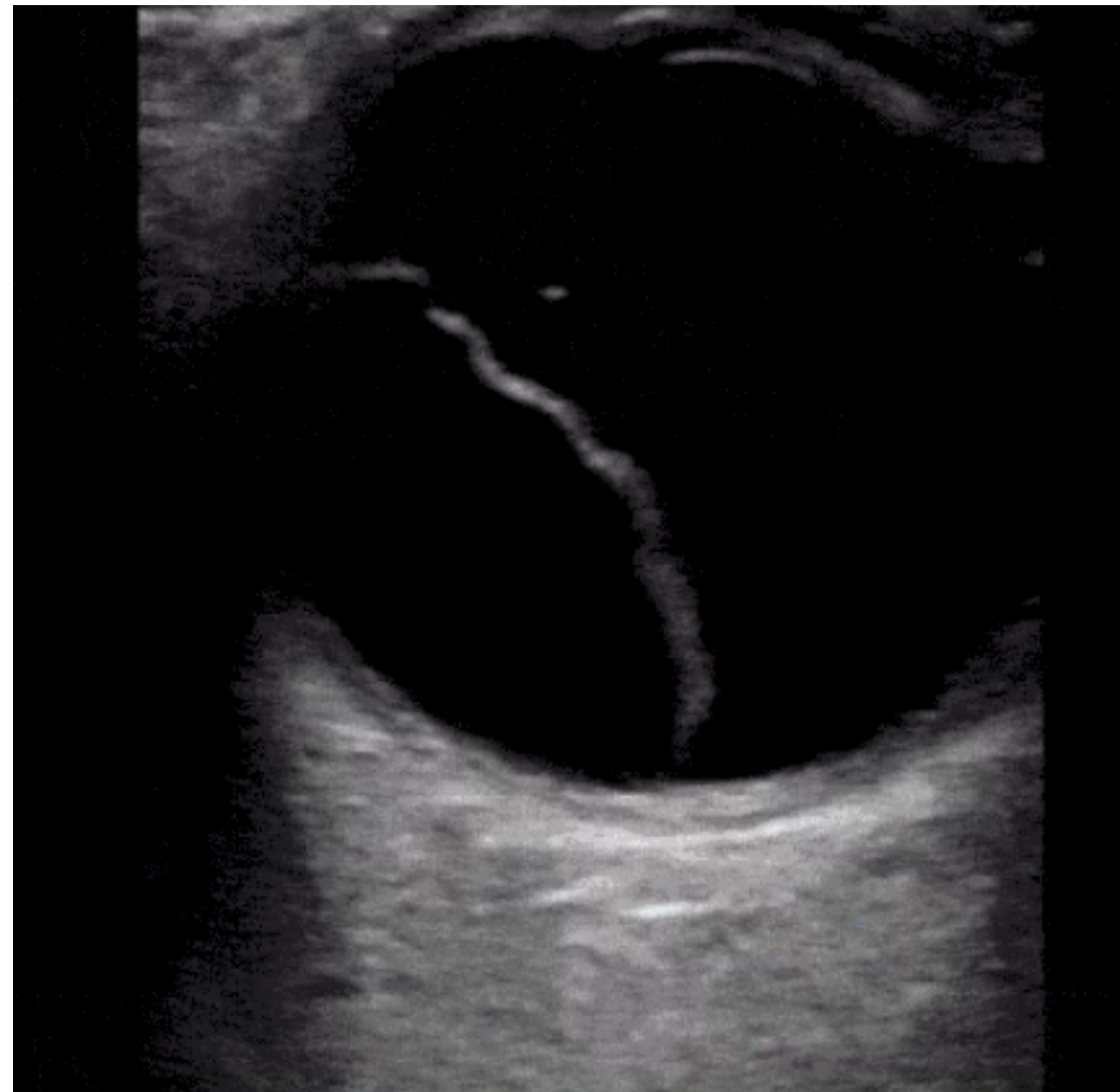
## High Gain



# Case

50 y/o with acute monocular painless vision changes.

High Gain

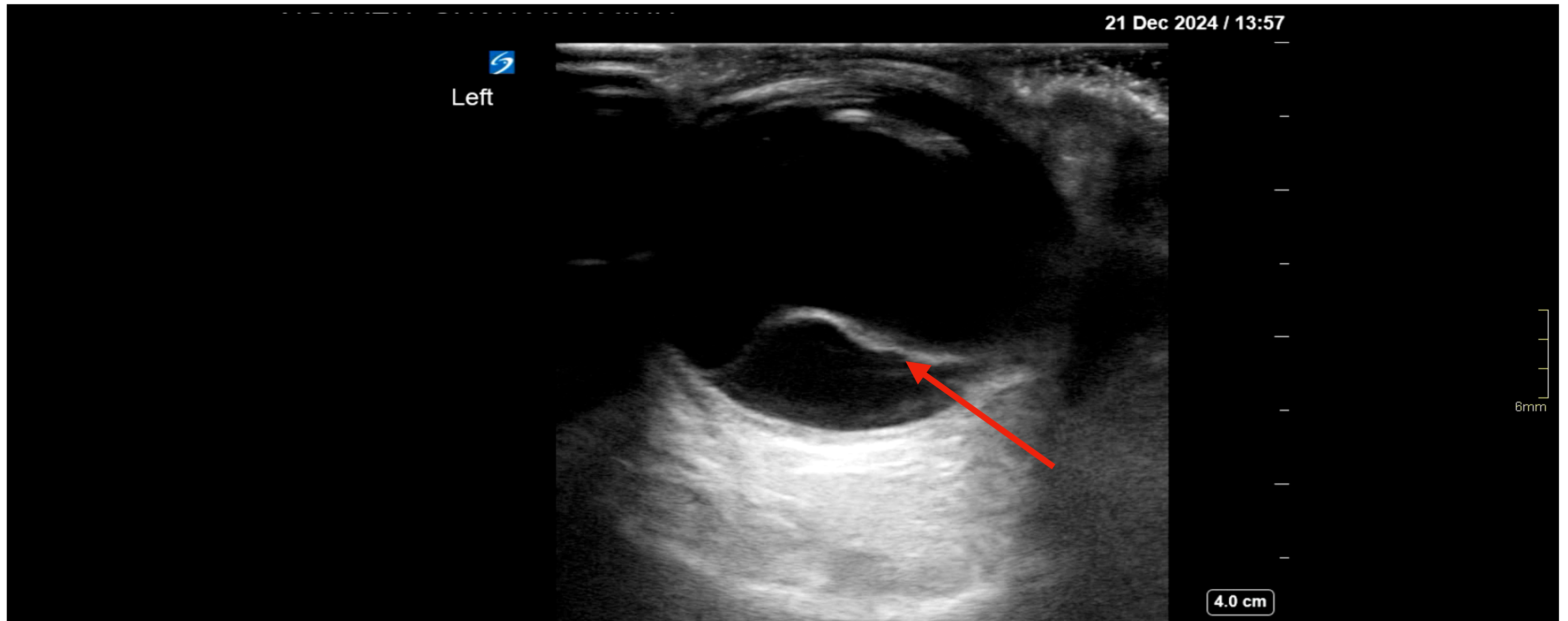




# Case

65 y/o with acute monocular painless vision changes.

## High Gain



# Atraumatic Ocular US Approach

## ***VIGMO***

**V**itreous evaluation

**G**ain (High & Low)

**M**ovement (Kinetics)

**O**ptic disc evaluation





# US Approach to Traumatic Eye





# Ocular Trauma Exam

- Pupillary Response
- EOMs
- Globe Assessment



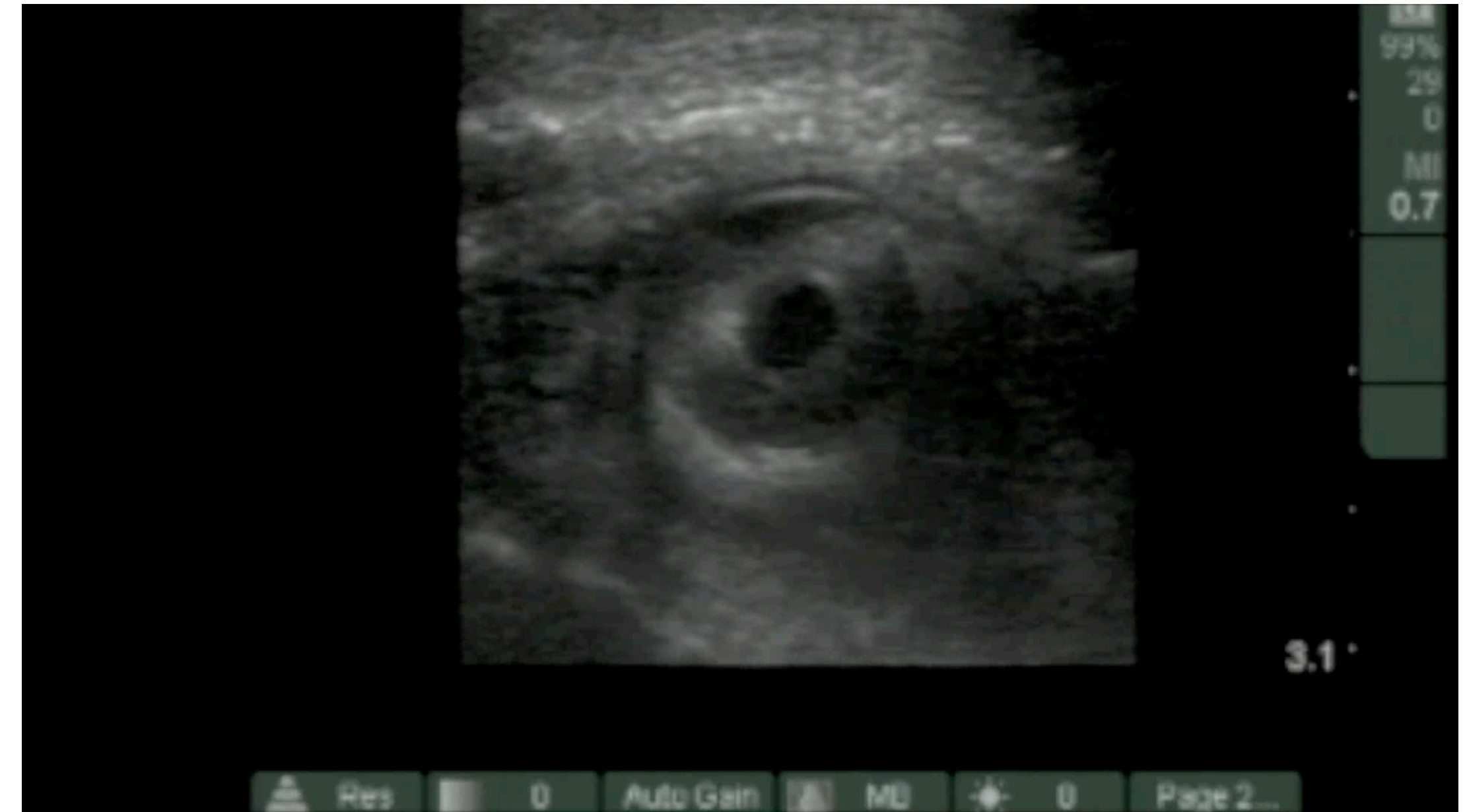


# Pupil Exam





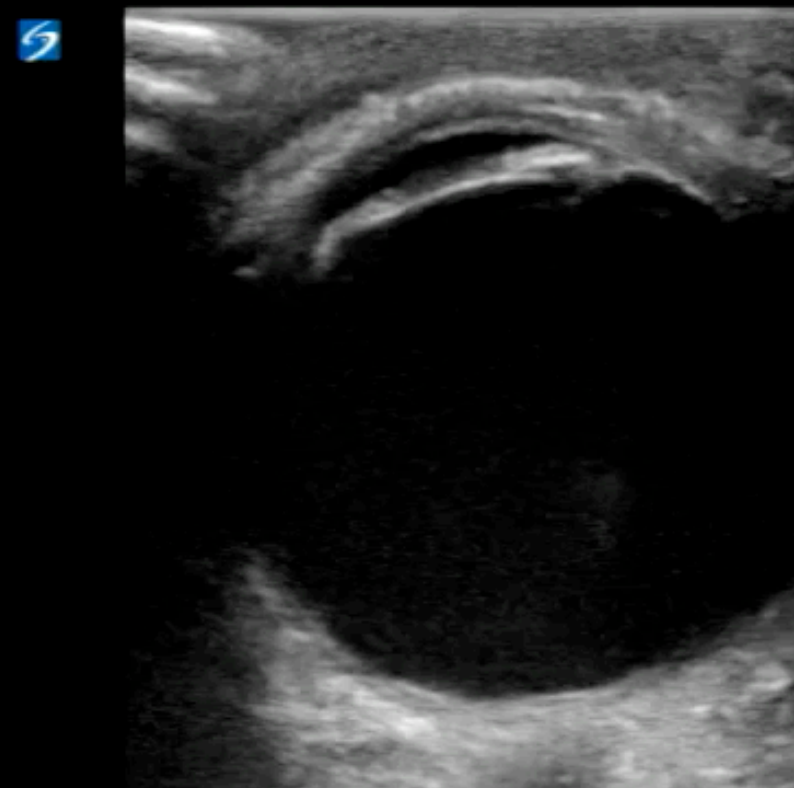
# Pupil Exam



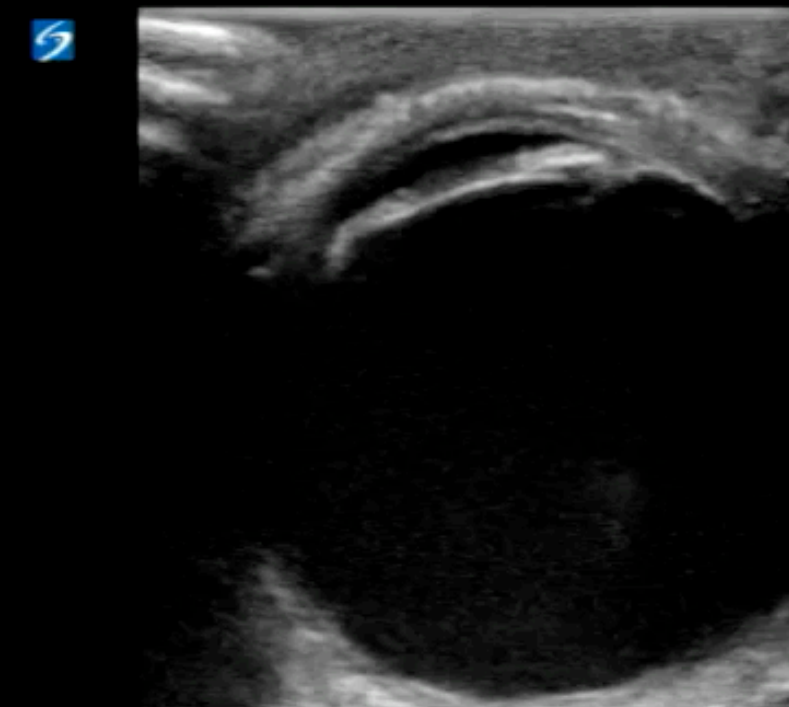


# Extraocular Muscle Exam

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 transgender women with acute ocular trauma s/p assault





# Case

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





# Case

42 y/o h/o B/L corneal transplant with acute ocular trauma and vision changes s/p assault



Left



SonoSite



# Take Home Points

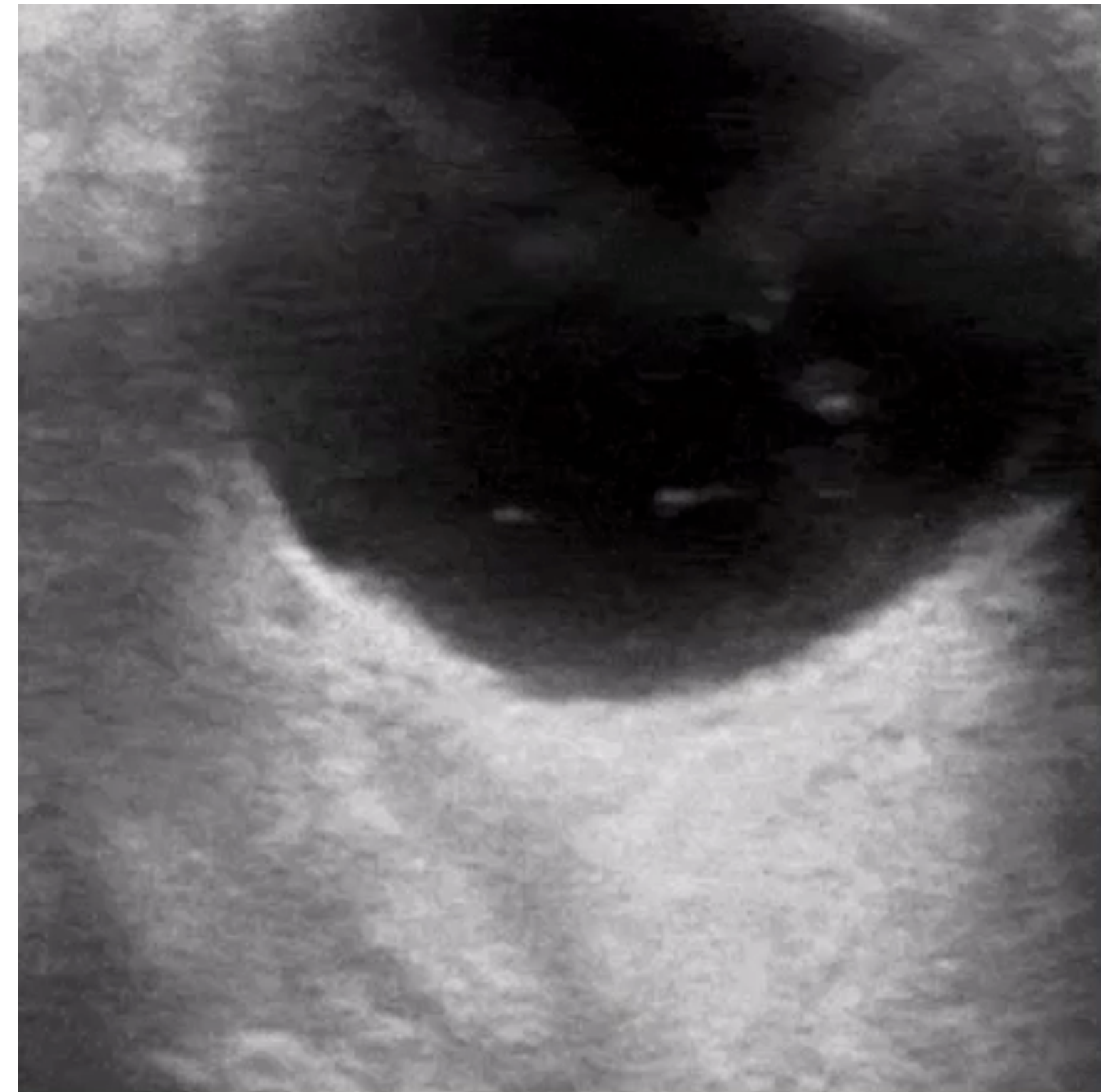
## Atraumatic Ocular US Approach

**V**itreous evaluation

**G**ain (High & Low)

**M**ovement (Kinetics)

**O**ptic disc evaluation

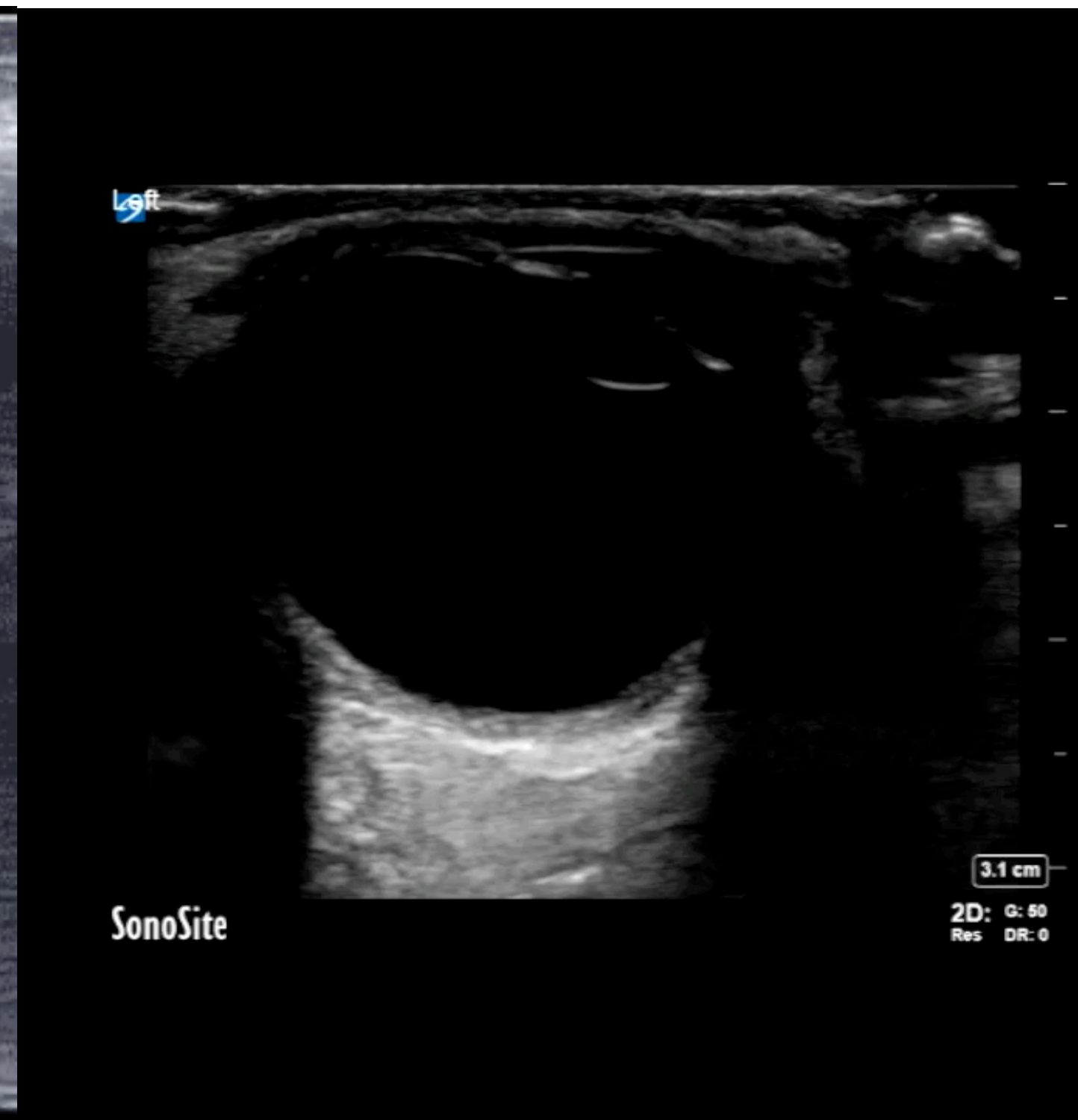
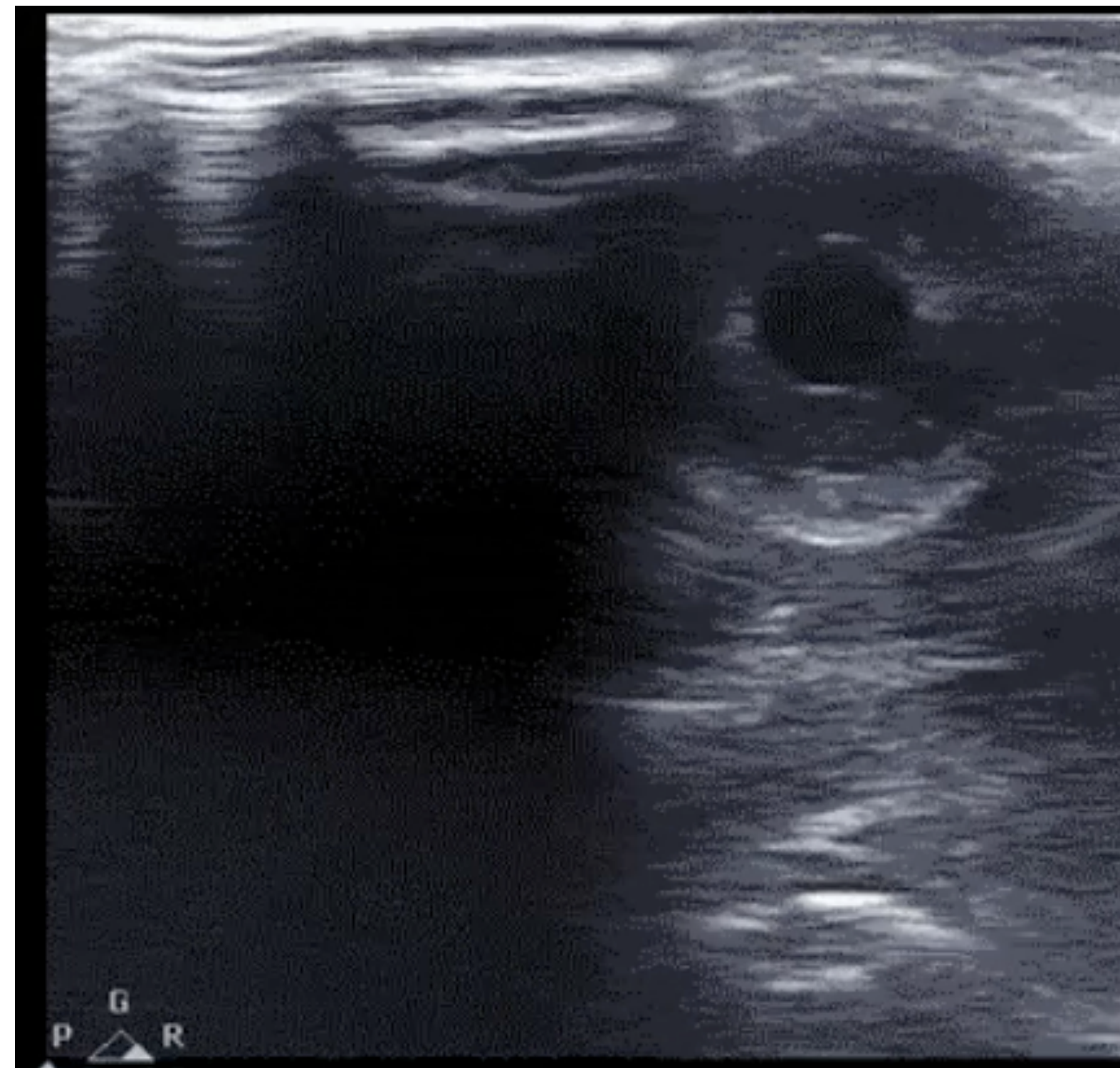




# Take Home Points

## Traumatic Ocular US Approach

- Pupillary Response
- EOMs
- Globe Assessment





# Thank You

