



Weill Cornell Medicine

Hospital Medicine Point of Care Ultrasound
(HM POCUS) Program

Cardiac Image Optimization

Parasternal Short-Axis View (PSAx)

PSAx (PM level)

1. The most round LV attainable
2. Both PMs visible and approximately the same size
3. MV and AV do not come into view at any time
4. Both LV and RV are fully visible
5. Centered on LV



PSAx (PM level)

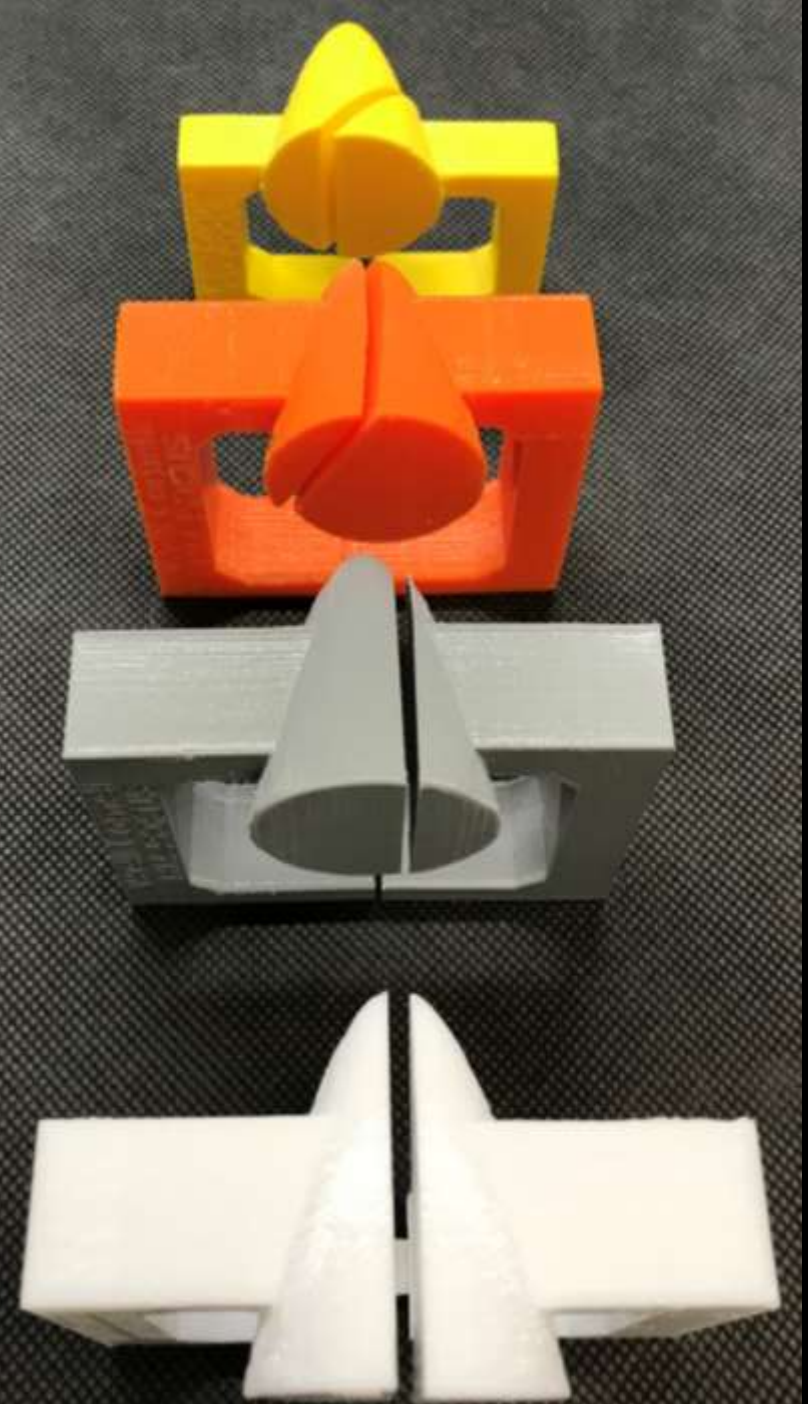
1. The most round LV attainable

Exercise 1

This squid-like shape, a paraboloid, represents an LV



Open a phantom
with a green-blue
lid



Exercise 1

- Find a shape showing a perfect transverse cut.

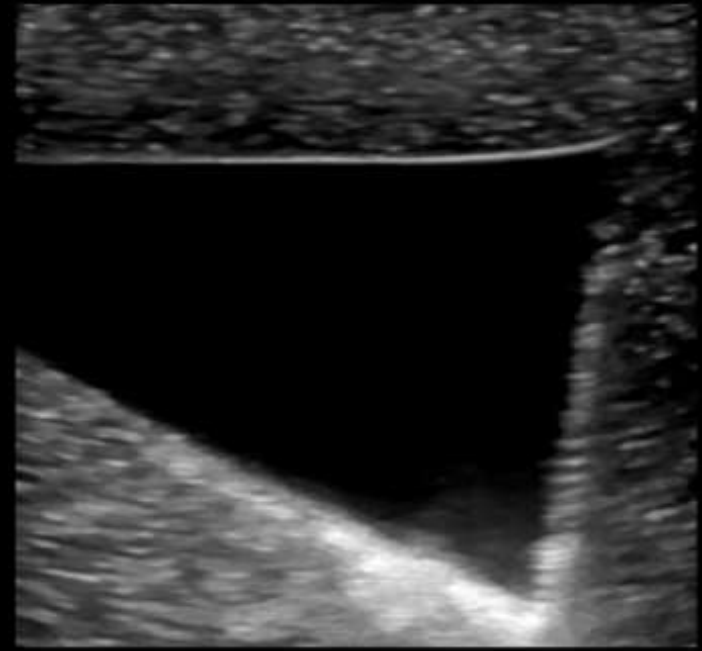
Exercise 1

- Find a shape showing a perfect transverse cut.
- Scan the phantom. Orient the probe marker towards the dot on the container.

Exercise 1

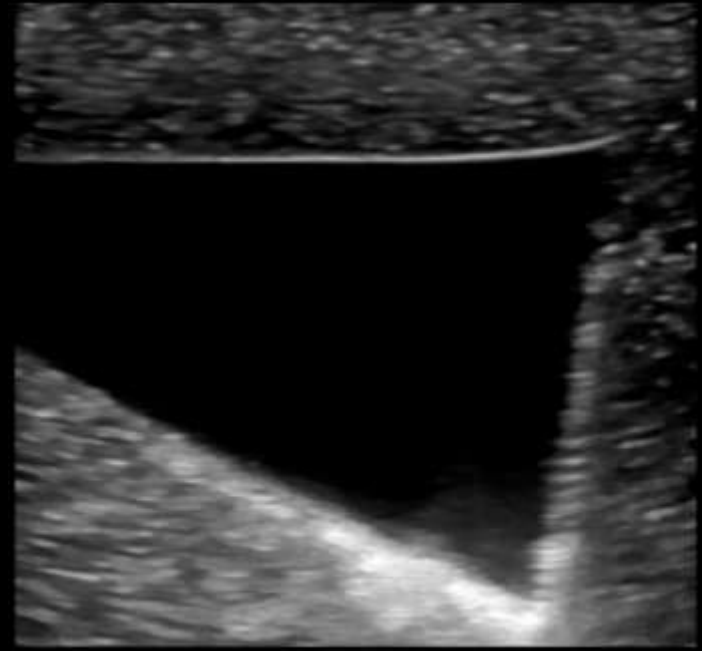
- Find a shape showing a perfect transverse cut.
- Scan the phantom. Orient the probe marker towards the dot on the container.
- Obtain a perfect long axis view.

The view should mimic PLAx



Exercise 1

- Find a shape showing a perfect transverse cut.
- Scan the phantom. Orient the probe marker towards the dot on the container.
- Obtain a perfect long axis view.
The view should mimic PLAx
- Rotate 90° to obtain transverse view



Exercise 1

- Find a shape showing a perfect transverse cut.



- Scan the phantom. Orient the probe marker towards the dot on the container.
- Obtain a perfect long axis view.

The view should mimic PLAx

- Rotate 90° to obtain transverse view



Exercise 2

Switch scanner

Exercise 2

Switch scanner

- Obtain short axis view



Exercise 2


Switch scanner

- Obtain short axis view
- What movement of the probe would result in a view like this?



Exercise 2

Switch scanner

- Obtain short axis view
- What movement of the probe would result in a view like this? 
- Find a shape corresponding to that cut



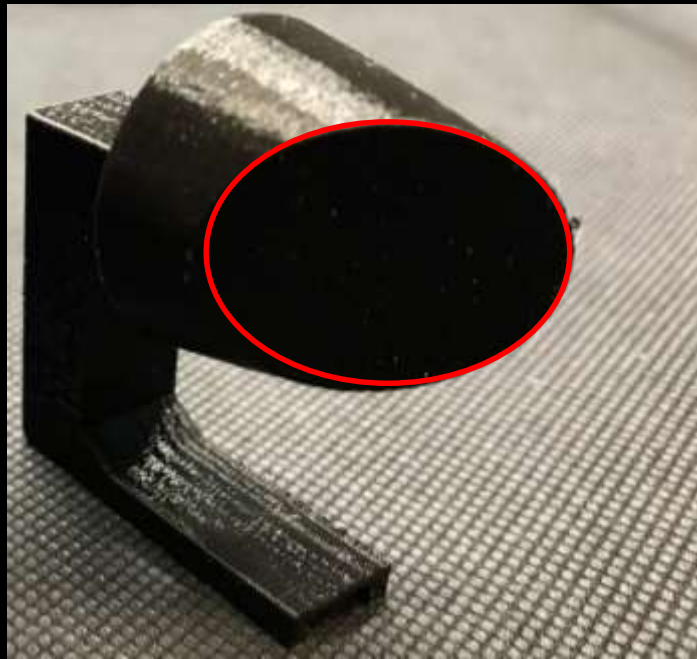
Exercise 2

Switch scanner

- Obtain short axis view
- What movement of the probe would result in a view like this?

Rotation

- Find a shape corresponding to that cut



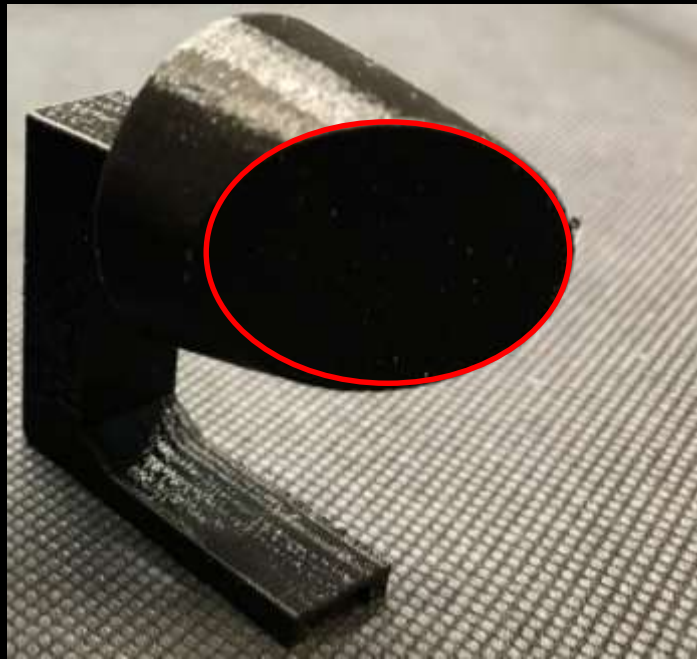
Exercise 2

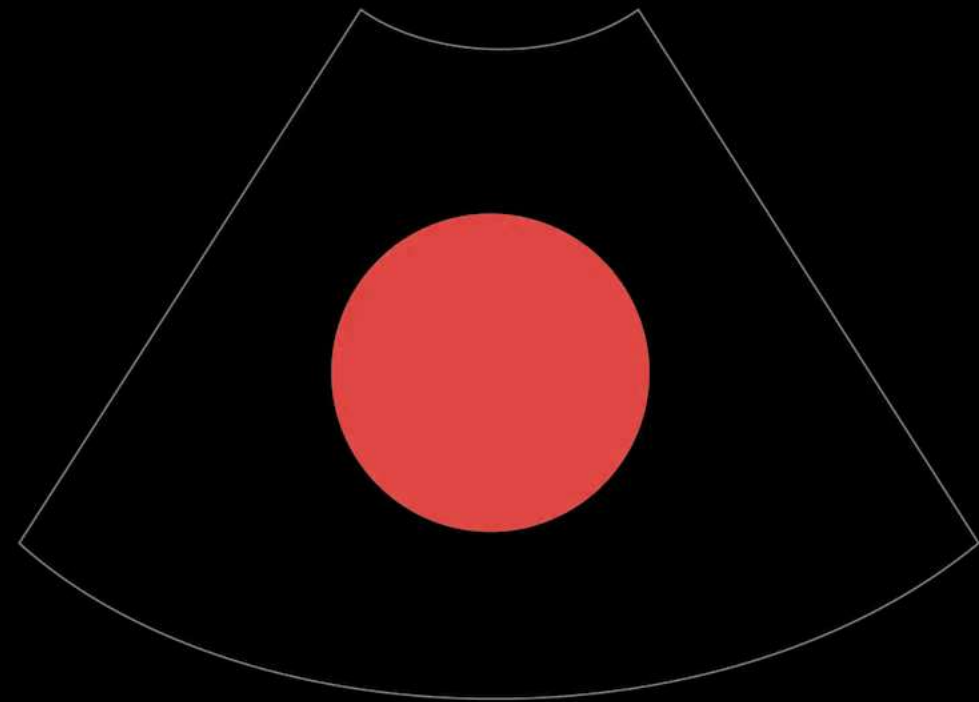
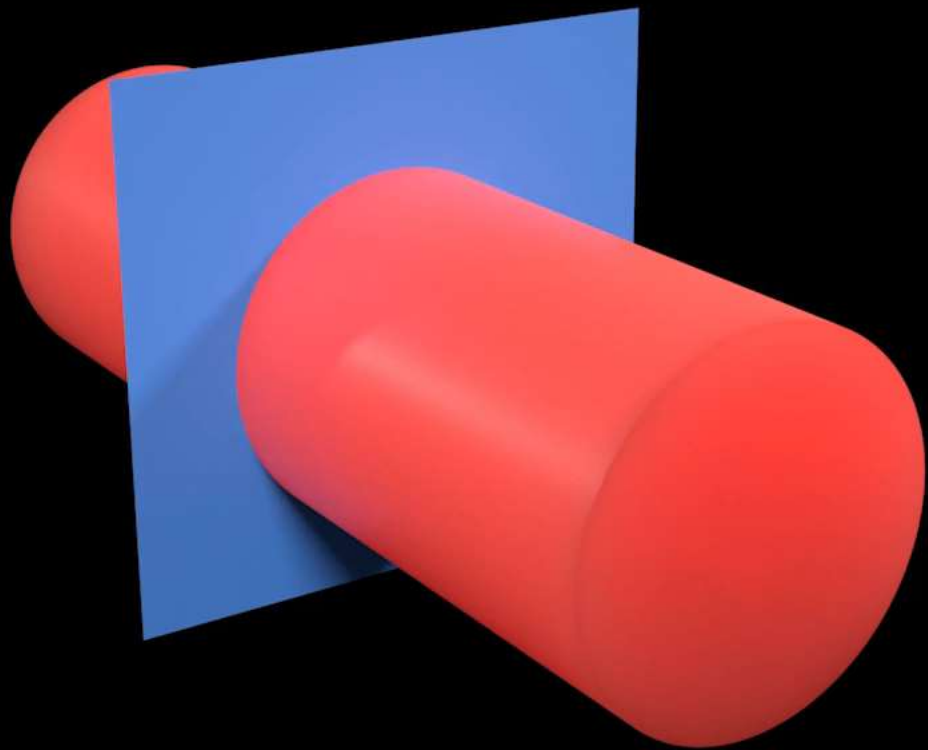
Switch scanner

- Obtain short axis view
- What movement of the probe would result in a view like this?

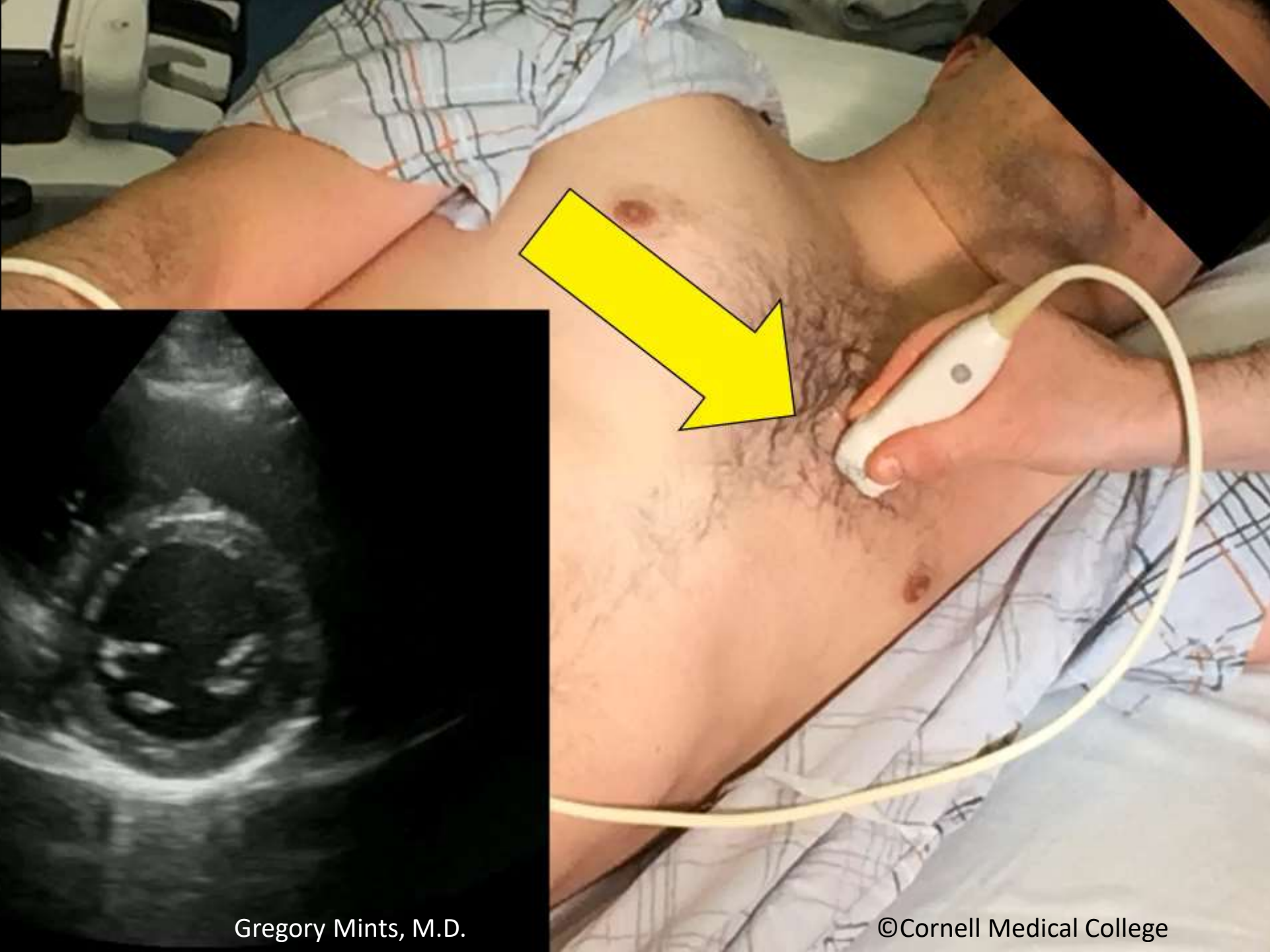
Rotation

- Find a shape corresponding to that cut









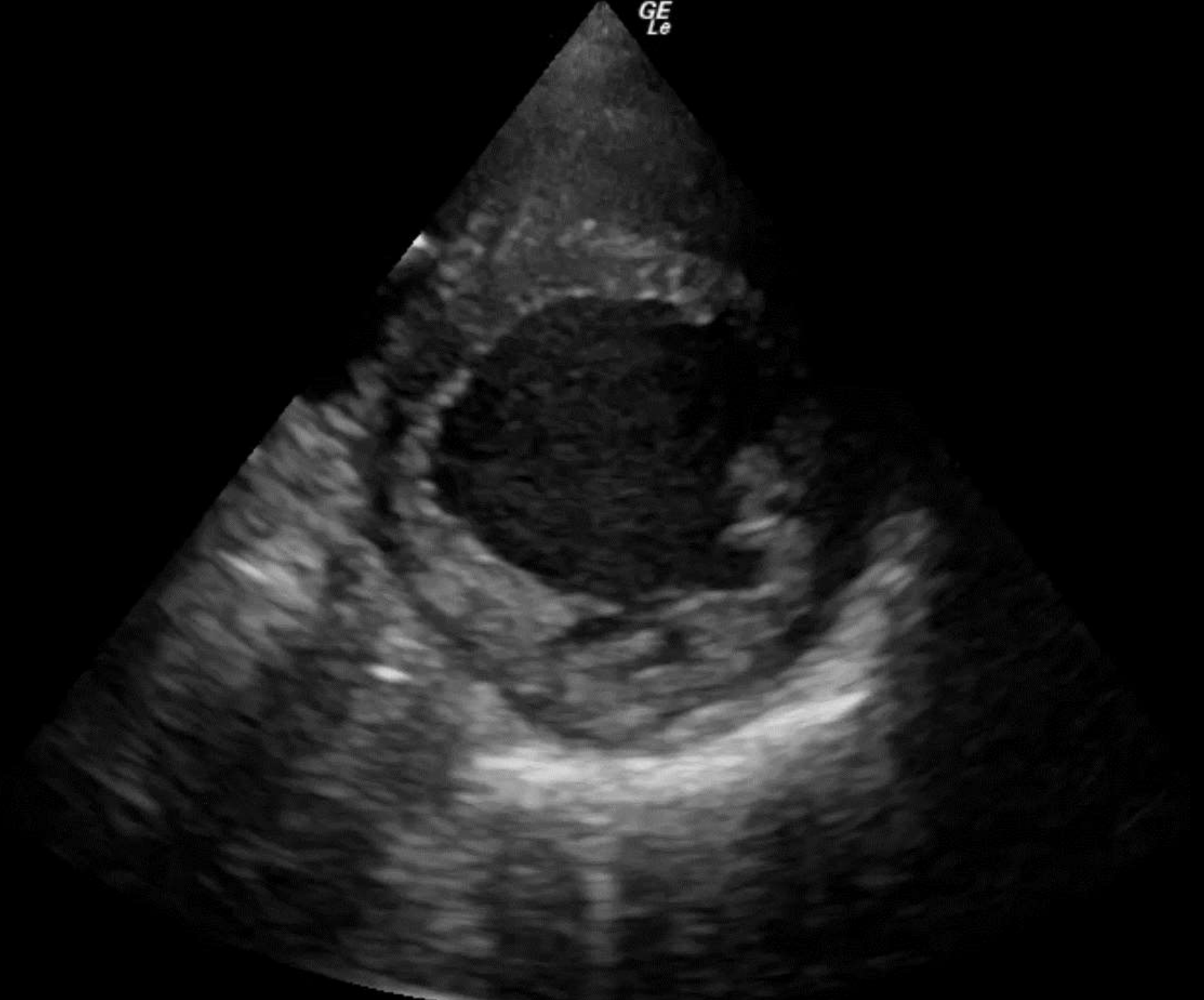
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9PM GE
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GE
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PSAx (PM level)

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GE Medical Systems

GE
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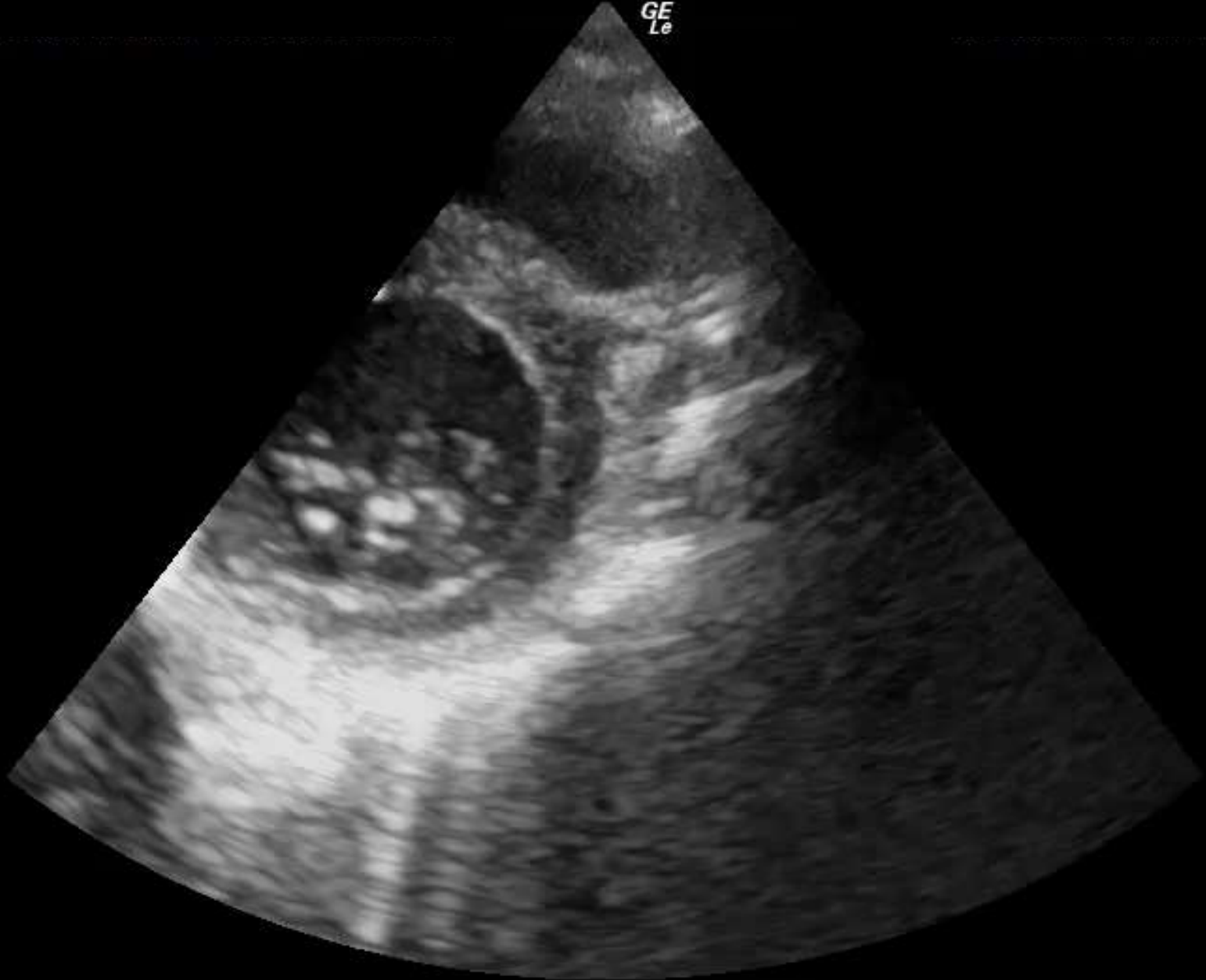
GE Medical Systems



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PSAx (PM level)

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5-

M

10-

	Problem	Possible Cause	Solution
1	Oval LV and/or flat septum	Over-rotated, resulting in oblique cut	rotate
2	One PM is larger	Over-rotated, resulting in oblique cut	rotate
3	MV or AV are visible	Wrong level of PSAX: MV or AV level	tilt
4	Either LV or RV are not fully in the view	Probe is rocked to far to one side	rock
5	LV is off center	Probe is rocked to far to one side	rock