



# LUNG ULTRASOUND

MIKE BREUNIG, PA-C

Indianapolis, IN  
AAPA 2022



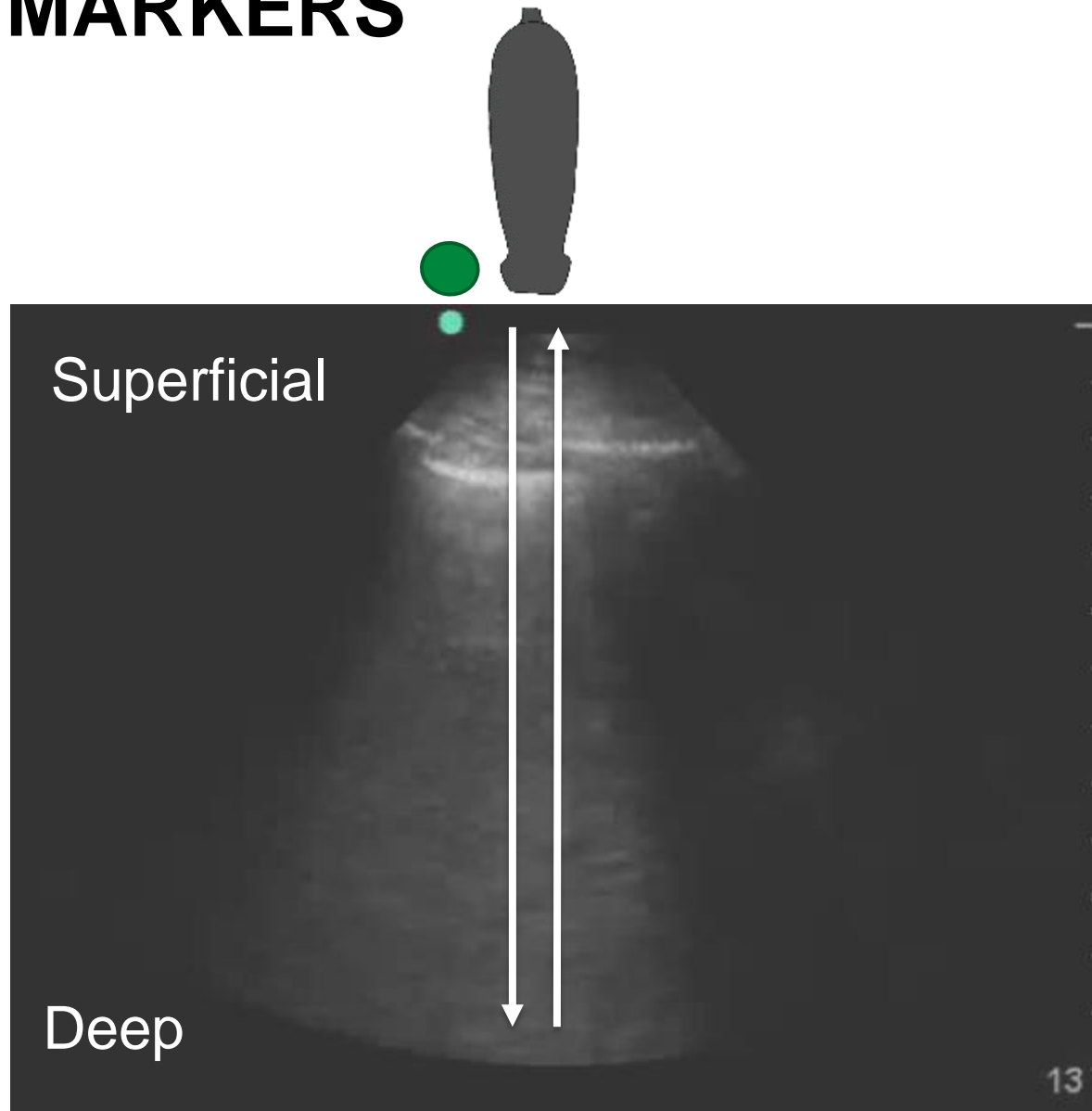
# DISCLOSURES

None

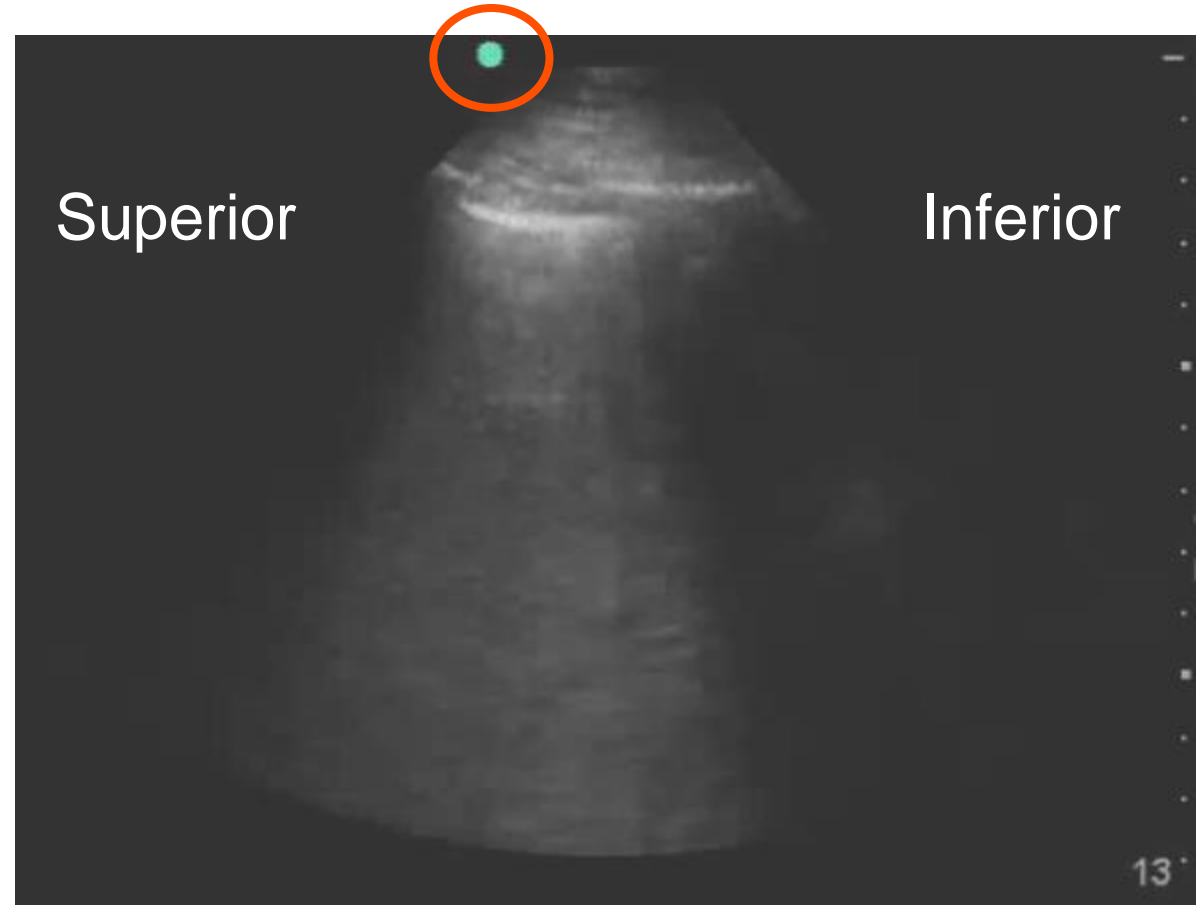
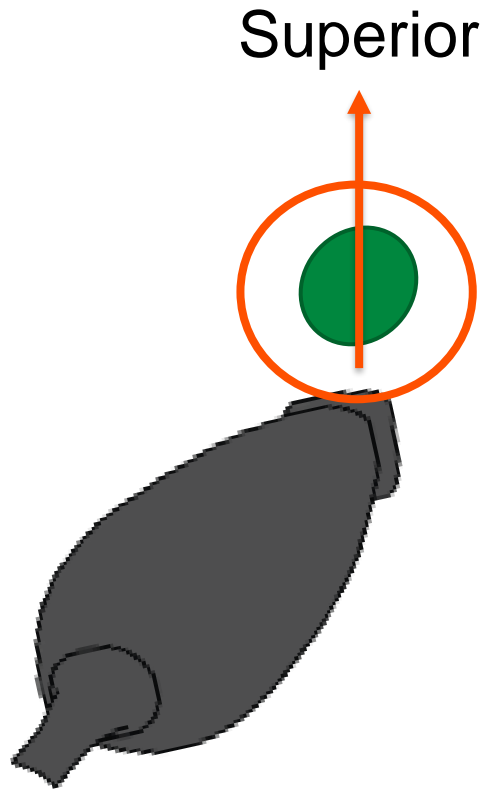
# LEARNING OBJECTIVE

- Identify the scope and indications of lung ultrasound
- Contrast normal and abnormal findings on lung ultrasound
- Obtain lung ultrasound images

# INDICATOR MARKERS



# INDICATOR MARKERS

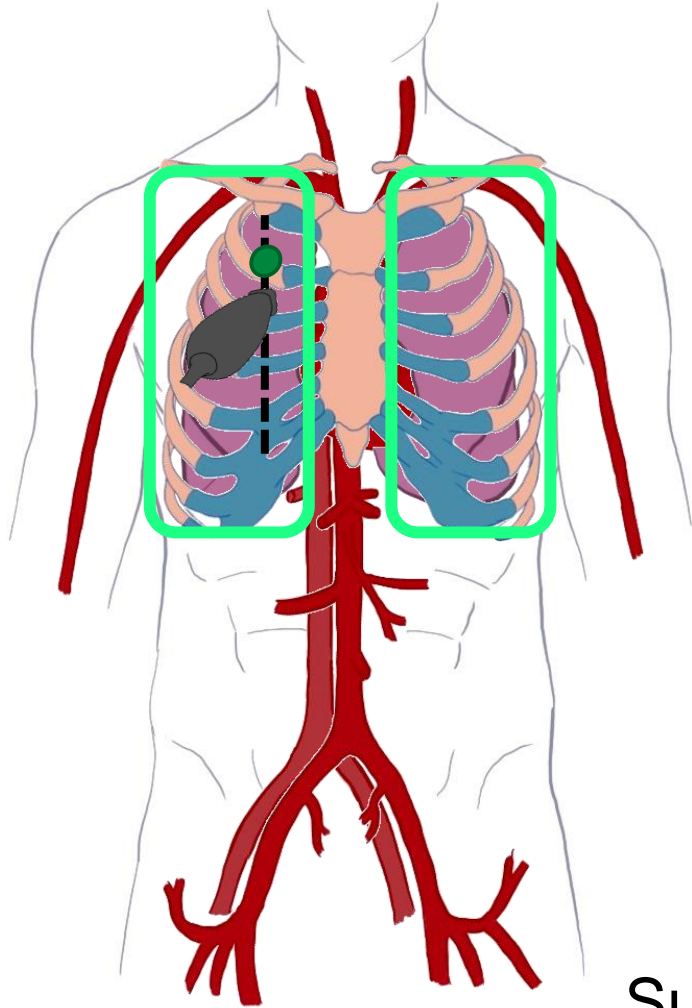


# LUNG ULTRASOUND

- Scope:
  - Pulmonary Edema
  - Pneumonia (viral and bacterial)
  - Pleural effusions (simple vs complex)
  - Pneumothorax
- Indications:
  - Dyspnea
  - Hypoxia
  - Respiratory Failure
  - Intravascular volume assessment

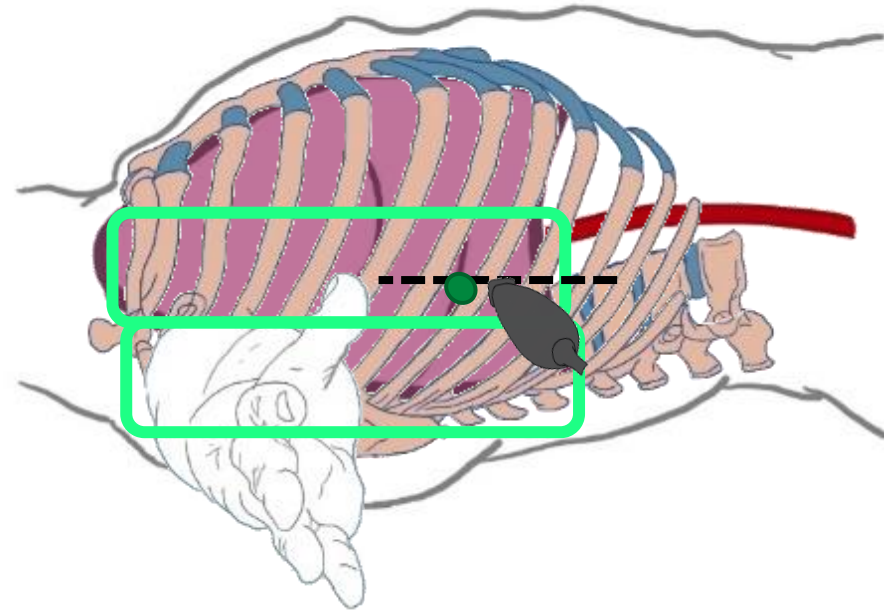
# LUNG ULTRASOUND

Zone 1

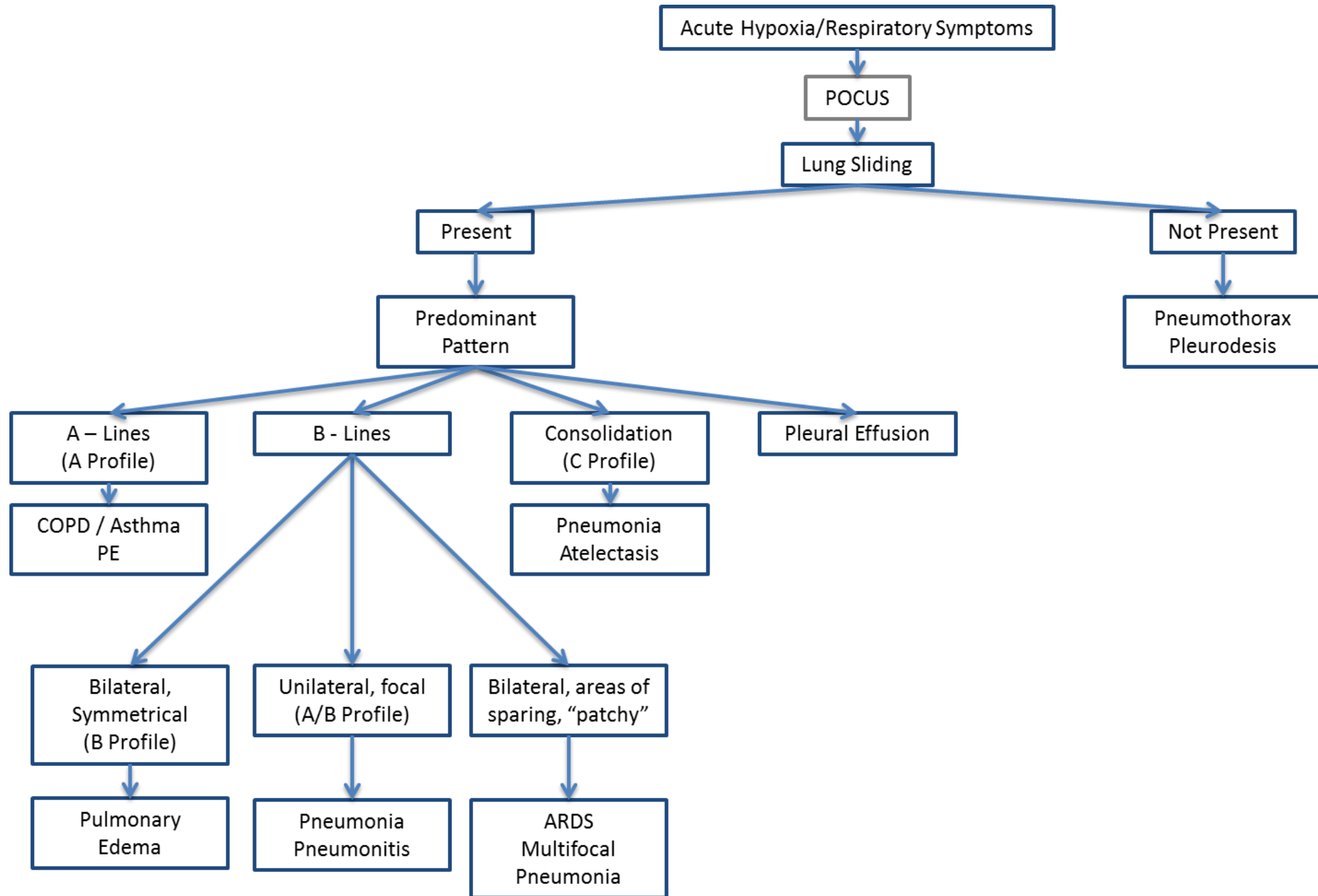


Zone 2

Zone 3



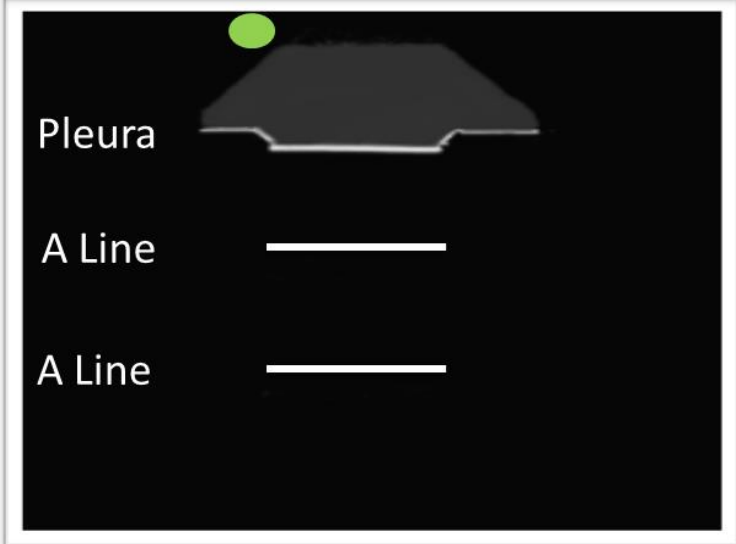
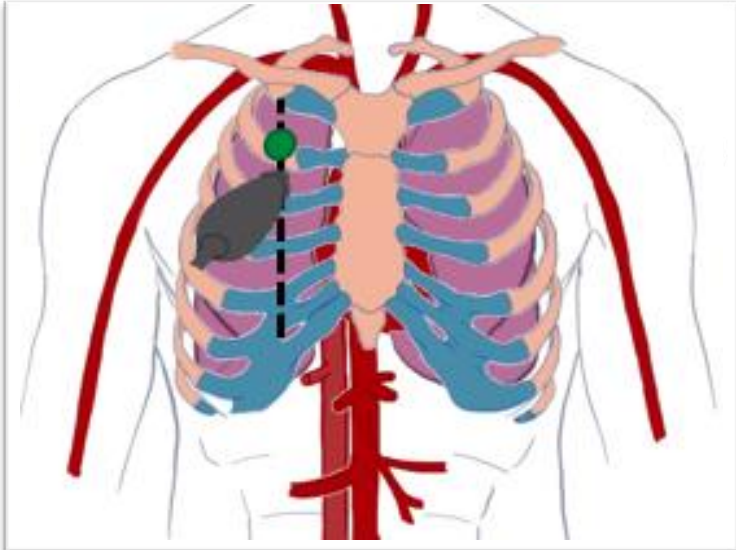
Superior + Inferior Points





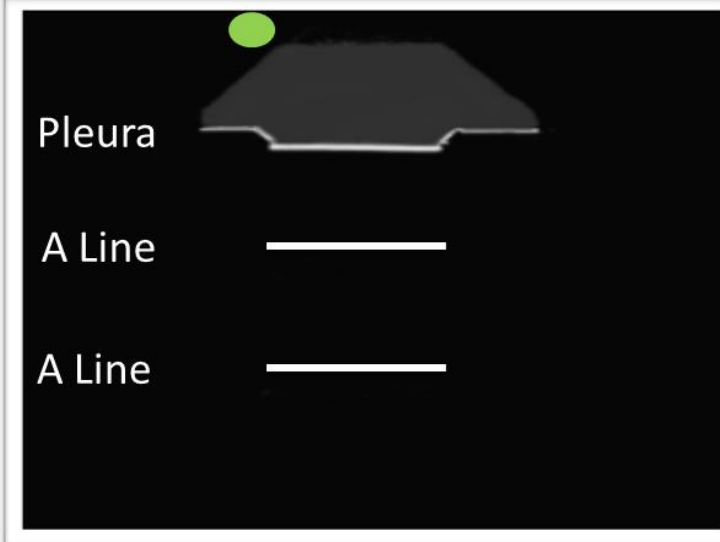
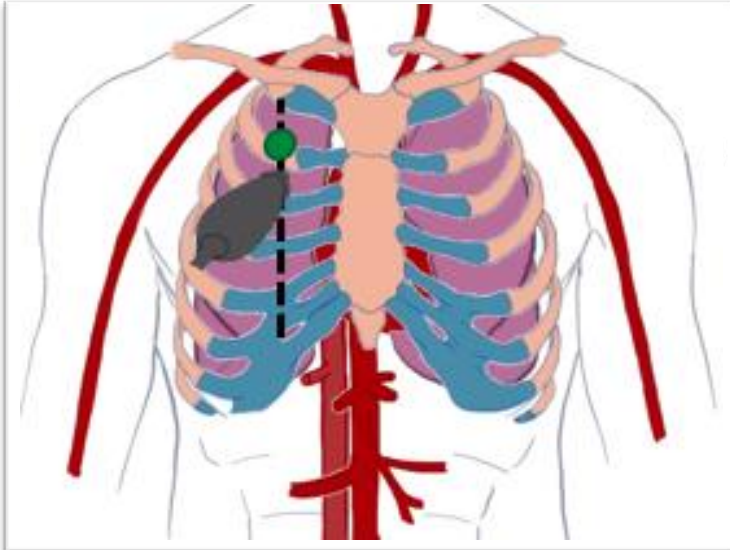
# LUNG ULTRASOUND

## A LINES + LUNG SLIDING



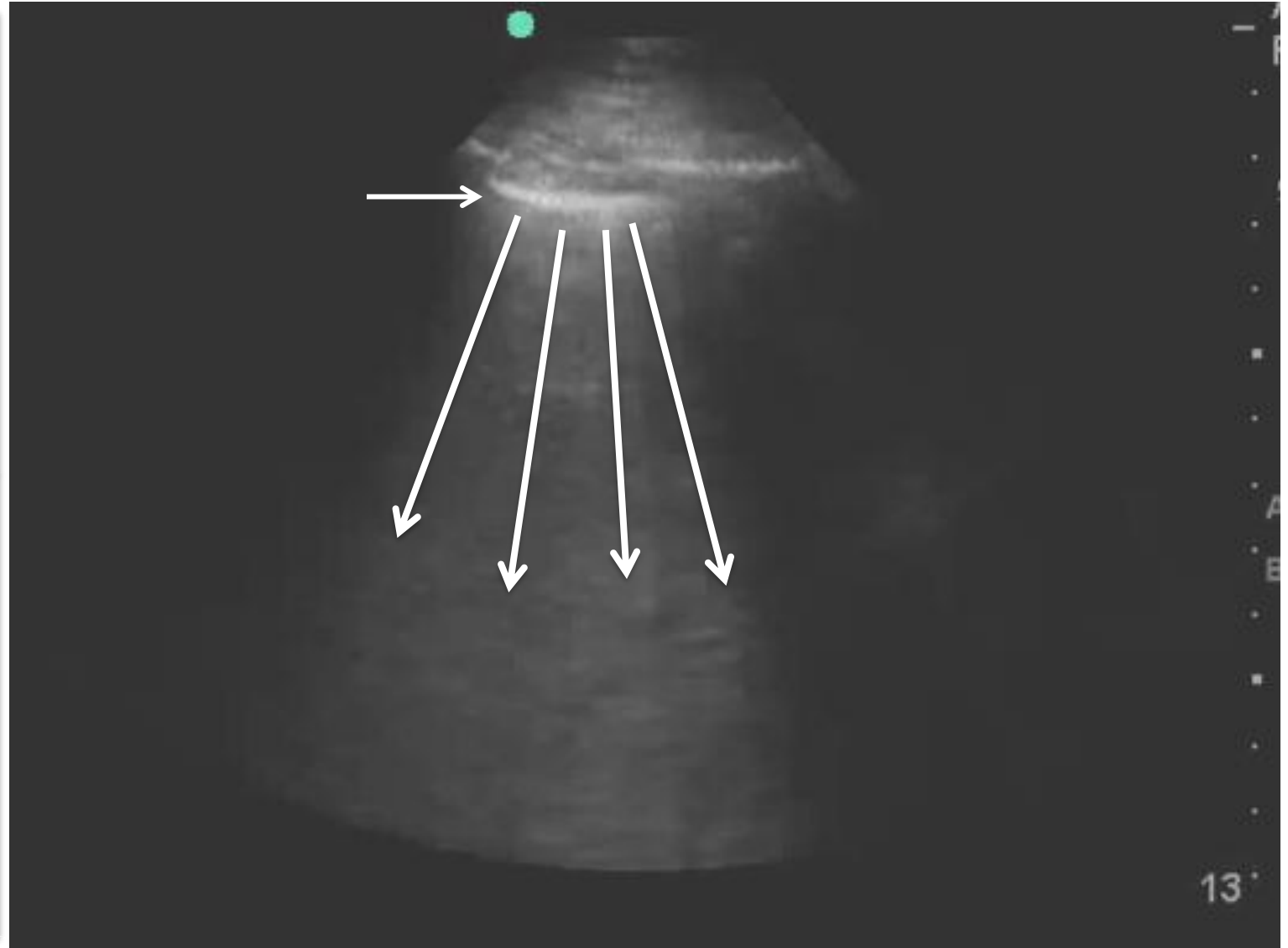
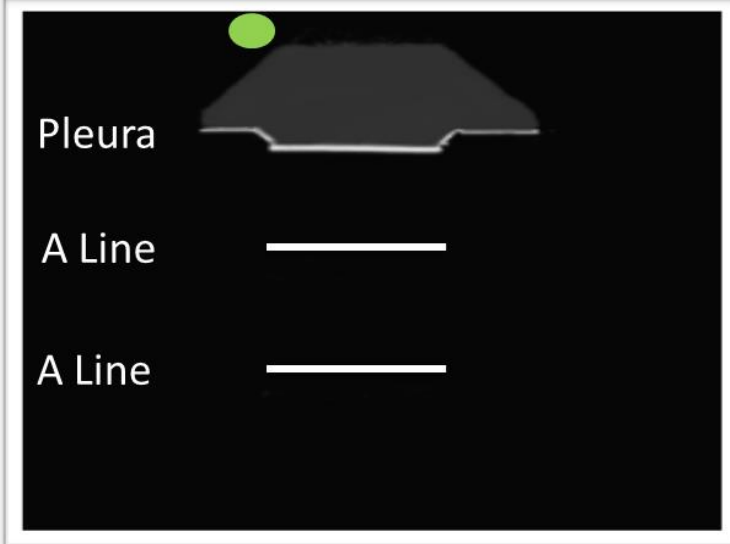
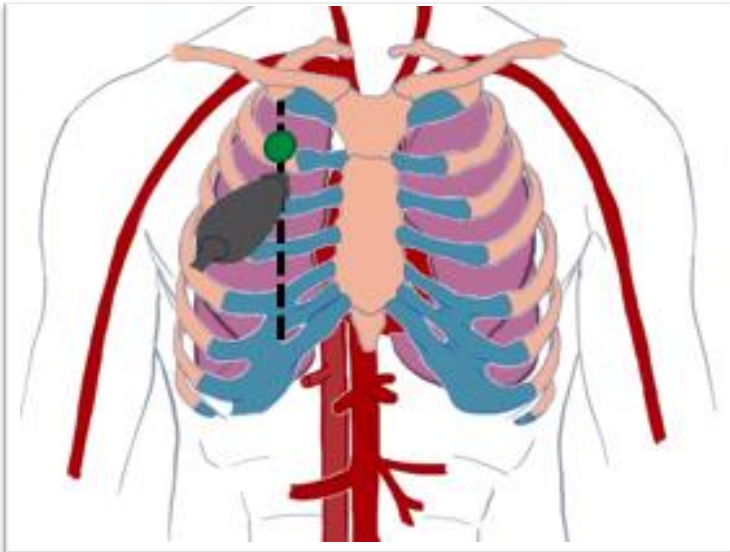
# LUNG ULTRASOUND

## ABSENT LUNG SLIDING

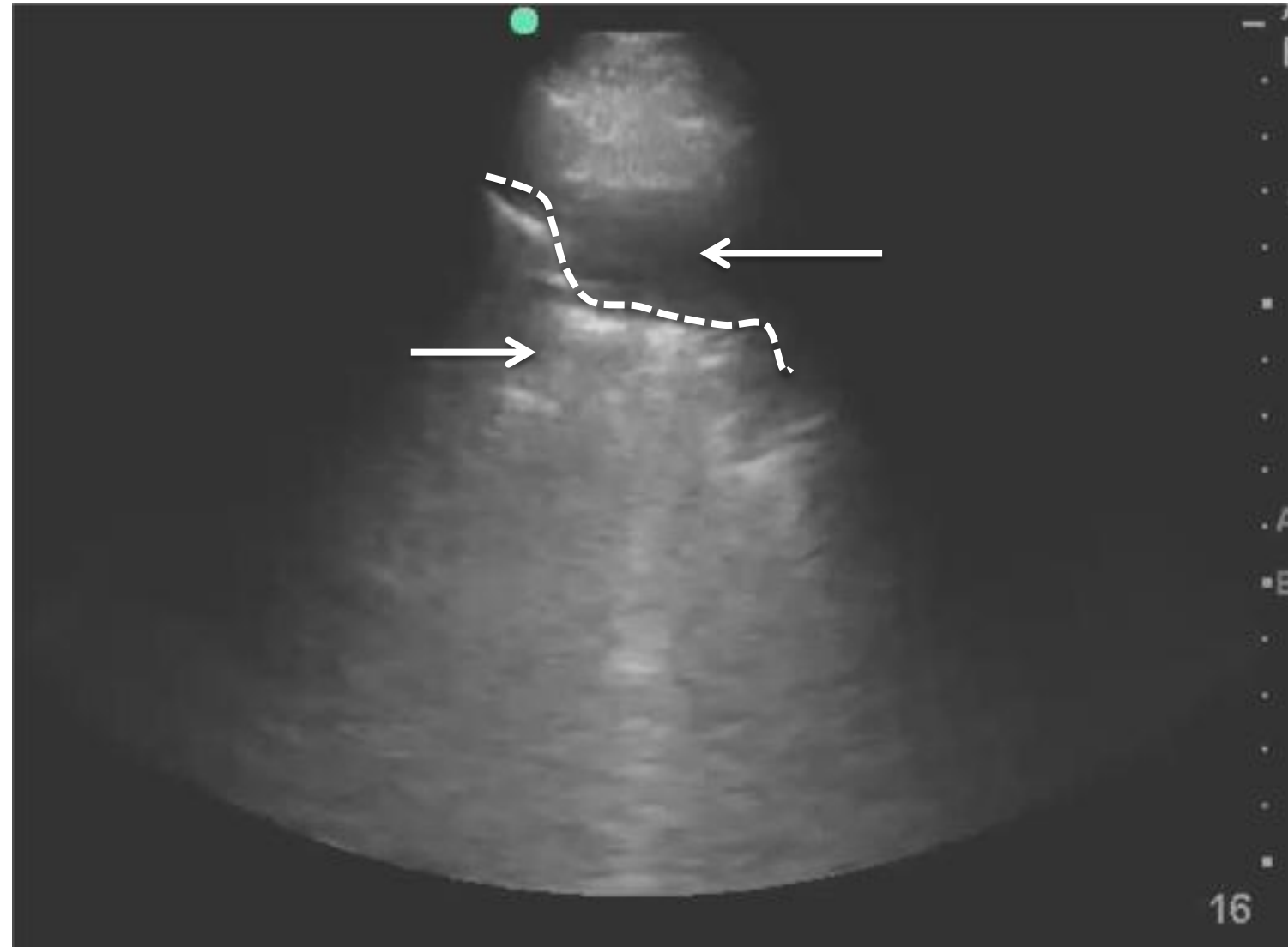
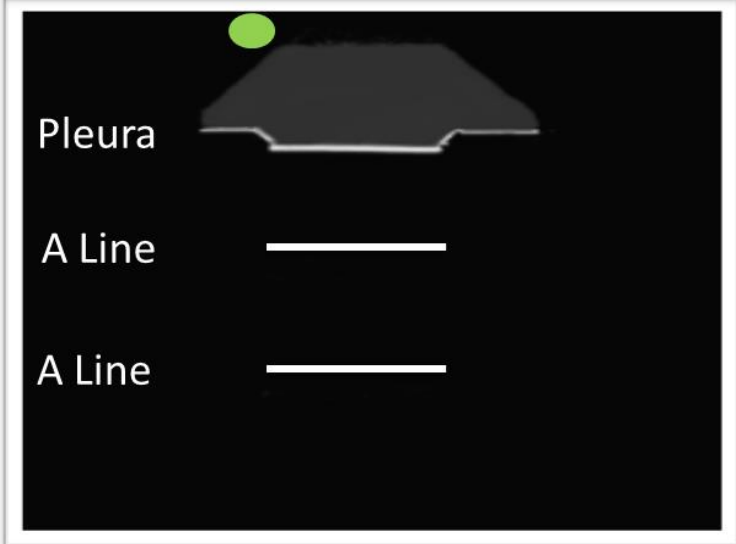
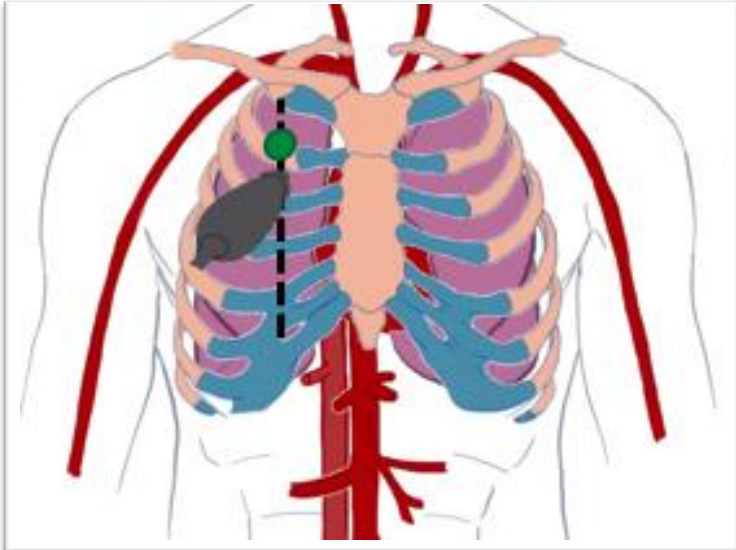


# LUNG ULTRASOUND

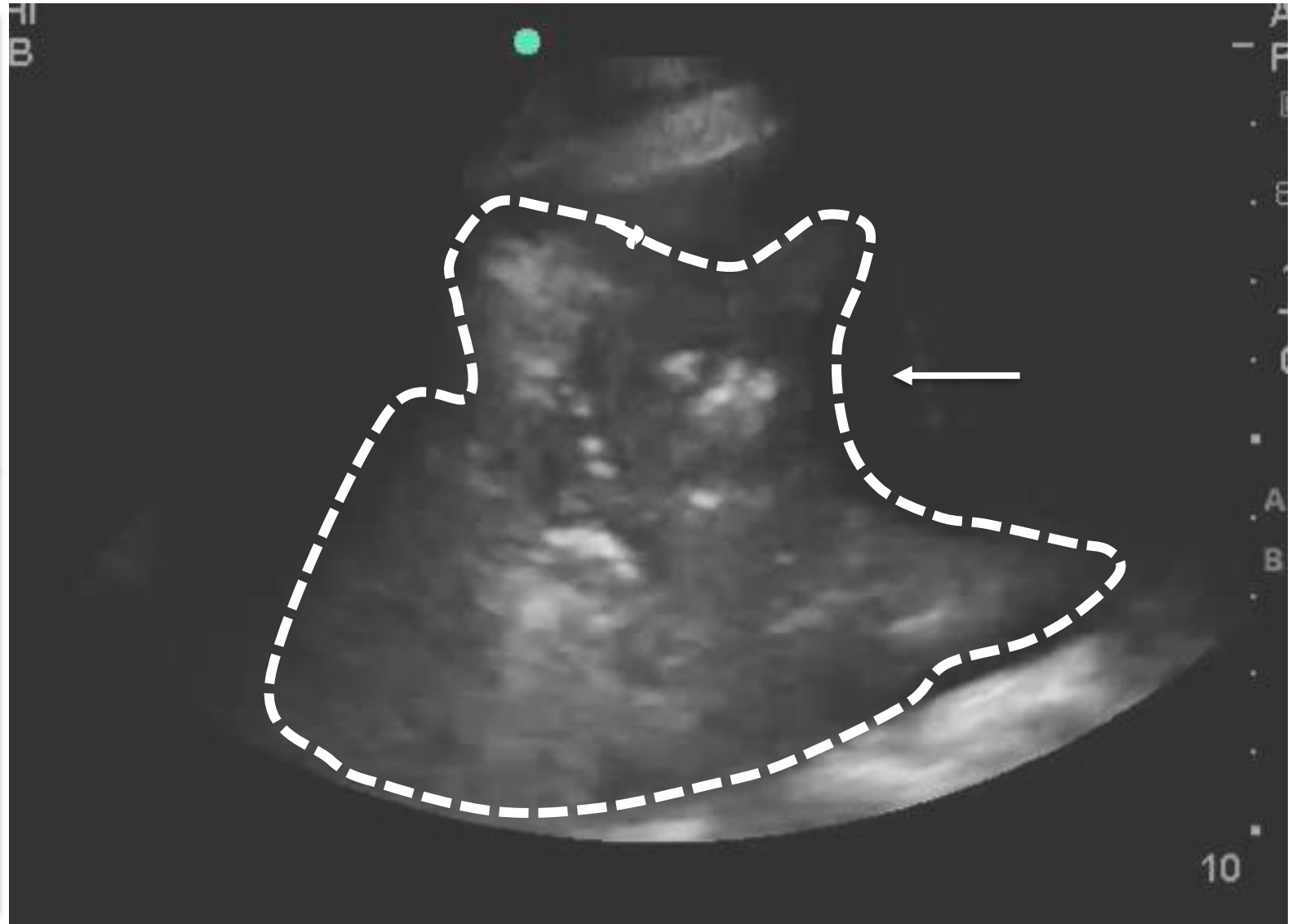
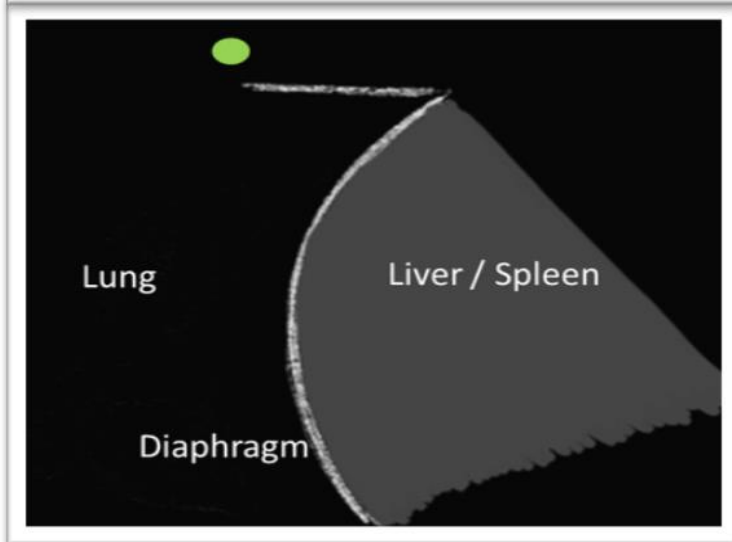
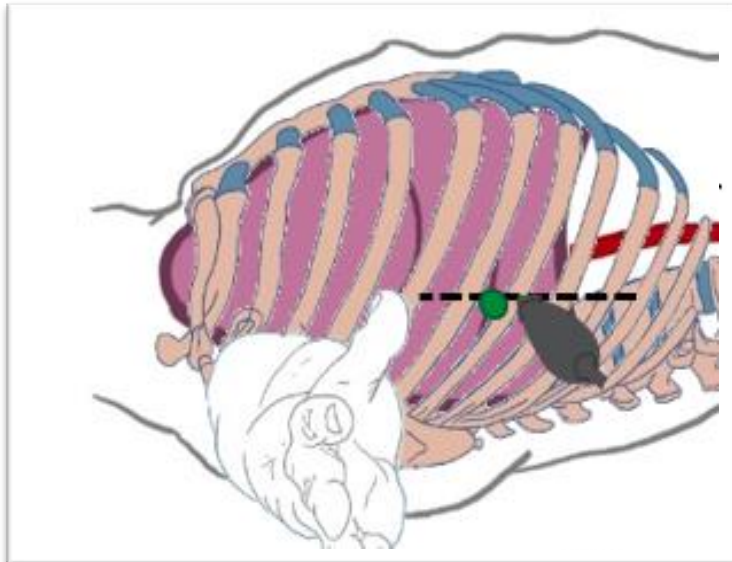
## B LINES



# LUNG ULTRASOUND CONSOLIDATION

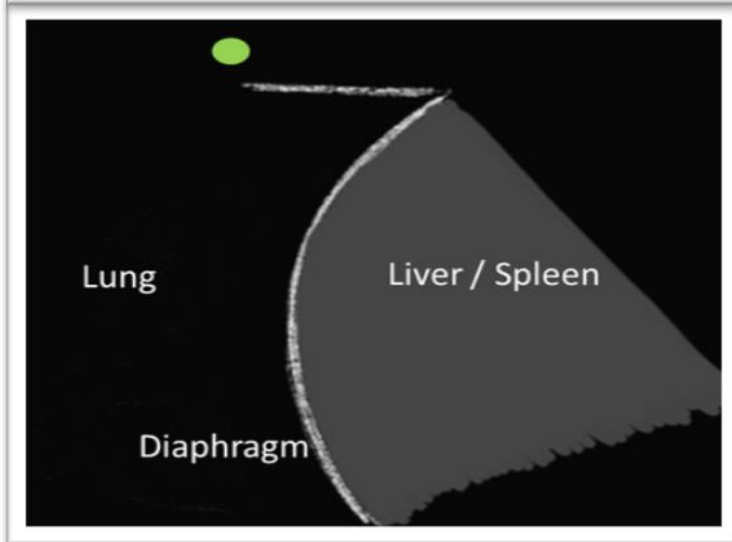
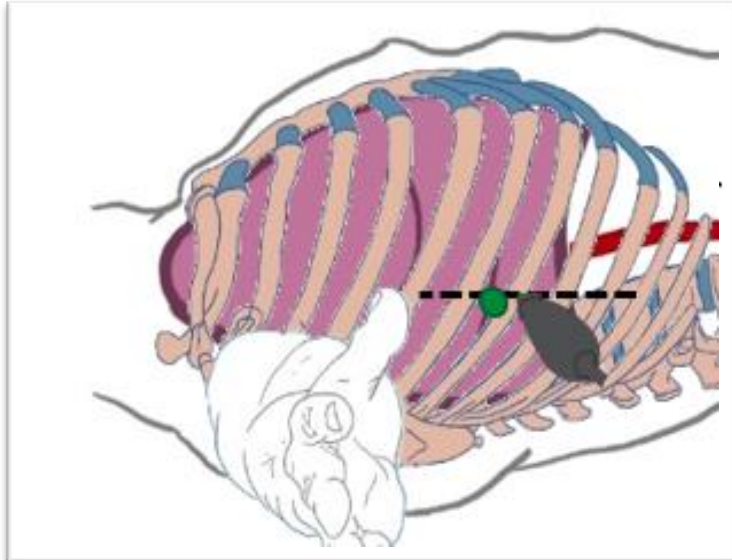


# LUNG ULTRASOUND CONSOLIDATION



# LUNG ULTRASOUND

## PLEURAL EFFUSION



# QUESTIONS AND DISCUSSION

[Breunig.Michael@mayo.edu](mailto:Breunig.Michael@mayo.edu)

