

Bony Thorax Review

Structures of the Bony Thorax

The bony thorax is made up of:

- Sternum (manubrium, body, xiphoid process)
- 12 pairs of ribs
- Thoracic vertebrae (T1–T12)

Types of Ribs

- True ribs (1–7): Attach directly to the sternum
- False ribs (8–10): Attach indirectly to the sternum
- Floating ribs (11–12): No anterior attachment

Purpose of the Bony Thorax

- Protects heart, lungs, and major blood vessels
- Assists with respiration

Chest (Thorax) Radiography Review

Chest X-Ray Projections

- PA Chest (preferred)
 - Patient faces the image receptor
 - Reduces heart magnification
- AP Chest
 - Used when patient cannot stand

Breathing Instructions

- Chest x-ray: Take a deep breath and hold at full inspiration
 - Expands lungs
 - Lowers diaphragm

Structures Evaluated on Chest X-Ray

- Lungs
- Heart
- Bony thorax
- Diaphragm

Common Conditions Seen

- Pneumonia
- Fluid in lungs
- Heart enlargement
- Rib fractures

Diaphragm Review

- Muscular structure separating:
 - Thoracic cavity
 - Abdominal cavity
- Moves down on inspiration
- Moves up on expiration

Abdomen (KUB) Review

What Does KUB Stand For?

- Kidneys
- Ureters
- Bladder

Breathing Instructions

- Hold breath at end of expiration
 - Reduces motion
 - Raises diaphragm for better abdominal visualization

Anatomy Seen on Abdomen X-Ray

- Kidneys
- Ureters
- Bladder
- Gas patterns in intestines
- Lower ribs (8–12)

Abdominal Quadrants

- Right Upper Quadrant (RUQ):
 - Liver (mostly)
 - Gallbladder
- Left Upper Quadrant (LUQ):
 - Stomach
 - Spleen
- Right Lower Quadrant (RLQ):
 - Appendix
- Left Lower Quadrant (LLQ):
 - Colon

Positioning & Landmarks

Important Landmarks

- Iliac crests → L4–L5
- Xiphoid process → around T9–T10

IR Orientation

- Chest x-ray: Portrait
- Abdomen x-ray: Portrait

Quick Memory Tips for Students

- PA Chest = Less heart magnification
- Chest = Full inspiration
- Abdomen = Expiration
- True ribs = 1–7
- Floating ribs = 11–12
- KUB = Kidneys, Ureters, Bladder