

Key Injury: Chest

Strongly consider grouping together chest, abdomen and pelvis for injury-specific imaging (see **Appendix A** for discussion of evidence on *Imaging Chest, Abdominal and Pelvic Injuries*).

a) Chest XR (AP supine)

- Needed after placement of intrinsic tubes, such as endotracheal or chest tubes
- To rule out critical diagnoses contributing to hypotension, including major pneumothorax and major hemothorax
- If tension pneumothorax is suspected because of hypotension in the setting of absent/diminished breath sounds, respiratory distress, possible tracheal shift and/or hypoxia, then chest decompression should precede CXR
- Other important findings include stigmata of blunt aortic injury, diaphragm disruption, thoracic spine injury, major rib fractures

b) Standard Trauma Imaging CT Protocol

- The basic set of CT imaging that will most often be used and should be considered the starting point for CT imaging of the severely injured patient
- Includes CT angiogram (CTA) of thoracic aorta with IV contrast.
- Non-contrast CT examinations of the chest is considered inadequate unless there is a history of allergy to iodinated contrast and other imaging modalities are not available.
- Criteria for the ordering of this standard CT Protocol can be found in **Appendix C**

c) Delayed Phase CT Imaging of Chest

- Generally not necessary
- Consider if patient is hemodynamically unstable and chest is suspected to be source of active bleeding
- Delay: 2-5 min. after injection

d) Volume Rendered Reconstructions

- For flail chest
- Can use data already obtained from initial CT