**ED Management of Blunt Chest Trauma**

**Hemodynamically stable?**

- No
  - Trauma resuscitation
    - Evaluation includes:
      - FAST exam including thoracic evaluation
      - AP supine CXR
      - ECG

  - Management of life threatening thoracic injuries based on findings:
    - Loss of pulses in ED, or chest tube output >20ml/kg/h blood
    - Absent breath sounds, or Needle Thoracostomy
    - Unilateral absent or diminished breath sounds, or CXR shows PTX
    - Pericardial effusion by US with Pericardiocentesis
    - Suspected tamponade
    - CXR shows significant hemothorax → Tube thoracostomy

  - Persistent hemodynamic instability or blood loss?
    - Yes:
      - OR thoracotomy
    - No:
      - Chest CT Angiography Or TEE*

- Yes
  - Initial evaluation includes:
    - FAST exam including thoracic evaluation
    - AP supine CXR
    - ECG
    - Immediate management as required

  - High-speed deceleration mechanism or significant chest wall injury?
    - Yes
      - Appropriate treatment
      - Further evaluation as indicated, generally including chest CT
    - No:
      - If patient asymptomatic:
        - Can discharge
      - If patient has symptoms:
        - May observe and repeat exam/CXR

- No
  - Secondary survey
    - PA + Lateral CXR IF ANY concerns
    - ECG if elderly or possible heart disease

  - Abnormal findings? (eg, pulmonary contusion, rib fractures, flail chest
    pneumothorax)
    - Yes
      - Appropriate treatment
      - Further evaluation as indicated, generally including chest CT
    - No:
      - If patient asymptomatic:
        - Can discharge
      - If patient has symptoms:
        - May observe and repeat exam/CXR

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AP: anterior-posterior; CT: computed tomography; CXR: chest x-ray; ECG: electrocardiogram; ED: emergency department; FAST: Focused Assessment with Sonography in Trauma; OR: operating room; PA: posterior-anterior; PTX: pneumothorax; TEE: transesophageal echocardiography; US ultrasound