INDICATION:
Decompression of tension pneumothorax causing hemodynamic instability in a chest injury victim.

SIGNS AND SYMPTOMS OF TENSION PNEUMOTHORAX CAUSING HEMODYNAMIC INSTABILITY:
Signs include:
- Chest injury, either blunt or penetrating (often with flail chest, palpable subcutaneous air, or "sucking" chest wound on side of suspected pneumothorax).
- Absence of breath sounds on the side of the suspected pneumothorax (if breathing); while presence of breath sounds on side without pneumothorax.
- Distended neck veins.
Symptoms include:
- Progressive dyspnea or respiratory arrest
- Circulatory collapse, manifested by hypotension or signs of poor perfusion

PROCEDURE:
- Base Contact (if in the setting of an MCI, remote rescue, or tactically unstable scene proceed without base contact and document).
- Explain procedure to patient if conscious.
- Assemble equipment:
  - 3.25 inch ARS chest decompression needle (10 G, catheter over needle); or 14 G, minimum 2.5 inch catheter over needle
  - Antiseptic skin wipes
  - Sterile Vaseline gauze or 4" X 4" dressings and tape
- Identify second intercostal space, midclavicular line.
- Prepare site with sterile skin wipe.
- Insert needle using steady pressure and ninety degree angle (perpendicular) to chest wall in lower aspect of the second intercostal space within the midclavicular line.
- Advance needle until one of the following are recognized:
  - A sudden rush of air is expelled through the needle
  - A "popping" or "giving way" is felt as the tip of the needle enters the chest cavity
  - Blood or fluid is expelled through the needle
- Remove needle and leave catheter in place (do not reinsert needle into catheter due to risk of shearing apart plastic catheter).
- Secure catheter with Vaseline gauze alone or 4" X 4" dressing and tape.
- Assess and document any improvement in respiratory status and hemodynamic status.