Clinically Suspected or Radiographically Diagnosed Pneumothorax

- Needle decompression in 2nd ICS at MCL
  - Evidence of tension physiology?
    - Yes
    - Small bore (14 Fr. or less) tube thoracostomy if no hemothorax
  - No

Evidence of tension physiology?
- Marked dyspnea
- JVD
- Tracheal deviation
- Hypoxia
- Hypotension
- Tachycardia

Identify Mechanism
- Traumatic
- Spontaneous
- Iatrogenic

Traumatic
- Overt Traumatic PTX (PTX diagnosed by CXR or clinical exam)
  - Small bore (14 Fr or less) tube thoracostomy if no hemothorax
- Occult Traumatic PTX (PTX diagnosed by CT only)
  - Admission with observation. No intervention required even if patient requiring PPV.

Spontaneous
- Continue on Pg. 2

Iatrogenic
- Is patient on Positive Pressure Ventilation?
  - Yes
  - Tube Thoracostomy
  - No
  - Observation vs. small bore (14 Fr. or less) tube thoracostomy
Identify as Primary or Secondary Spontaneous Pneumothorax*

**Large PTX
- ACCP (American College of Chest Physicians): 
  >3 cm apex-to-cupola distance
- BTS: (British Thoracic Society):
  >2 cm intrapleural distance at the level of the hilum

Patient symptomatically dyspneic or hemodynamically unstable
- RR > 24
- P< 60 or > 120
- Hypotension
- SpO2 < 90% on RA or unable to speak in full sentences.

Primary Spontaneous

Is PTX large, patient symptomatically dyspneic or hemodynamically unstable?**

No

Yes

Secondary Spontaneous

Is PTX large, patient symptomatically dyspneic or hemodynamically unstable?**

No

Yes

Observe with NC O₂ in ED for 3-6 hours. Repeat CXR. If no worsening and still no symptoms discharge with close follow-up

Tube thoracostomy with 8-14 intrapleural drain with or without Heimlich valve

* Suggest Secondary Spontaneous Pneumothorax
- Age > 50 yrs
- Significant smoking history
- Lung disease seen on CXR

ACCP (American College of Chest Physicians):
- >3 cm apex-to-cupola distance

BTS: (British Thoracic Society):
- >2 cm intrapleural distance at the level of the hilum

Patient symptomatically dyspneic or hemodynamically unstable
- RR > 24
- P< 60 or > 120
- Hypotension
- SpO2 < 90% on RA or unable to speak in full sentences.

** If < 1 cm intrapleural distance at hilum, consider conservative approach with admission and O₂ and observation

If > 1 cm consider tube thoracostomy (14 Fr. or less)