32M AMS, SOB

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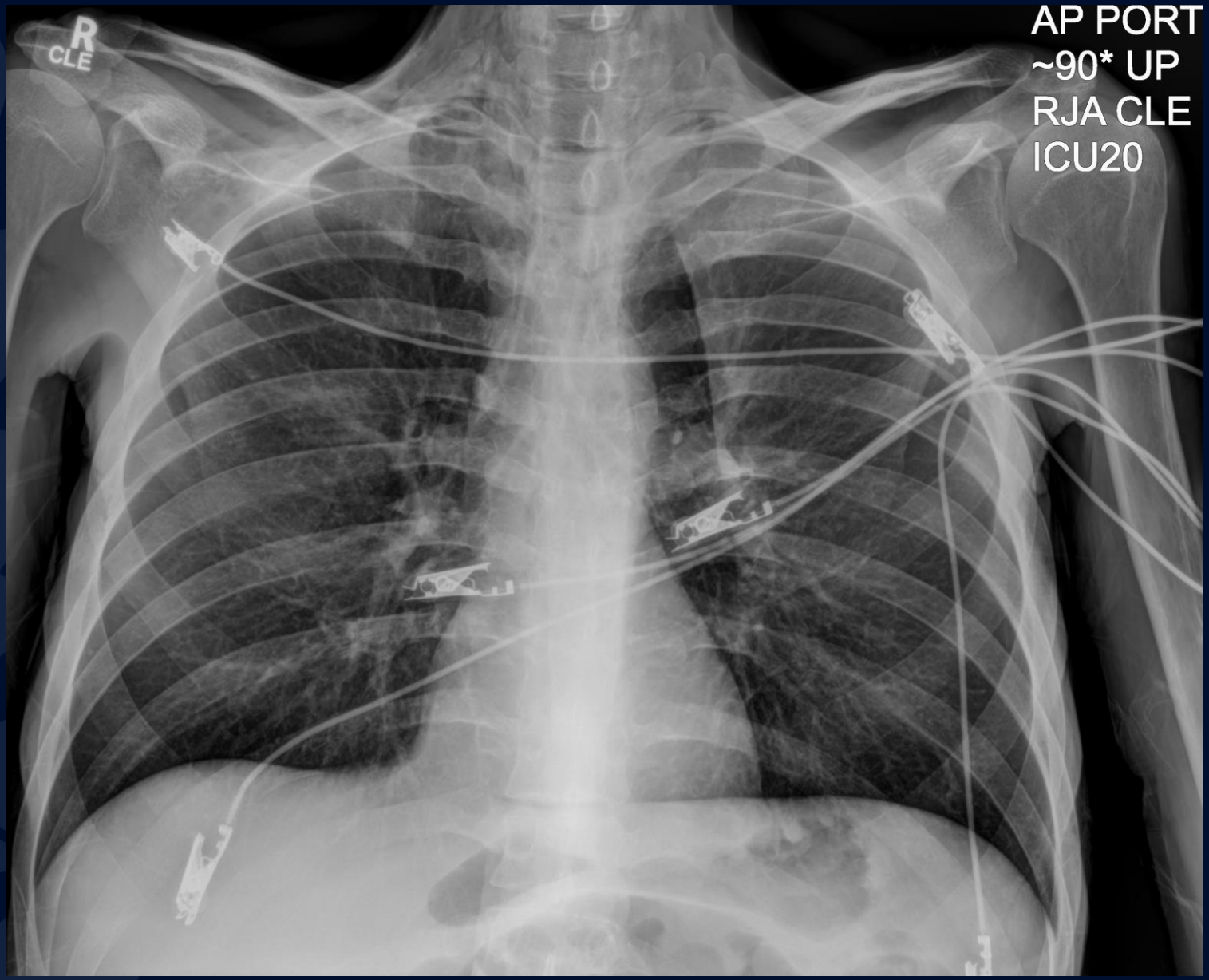

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Pneumomediastinum

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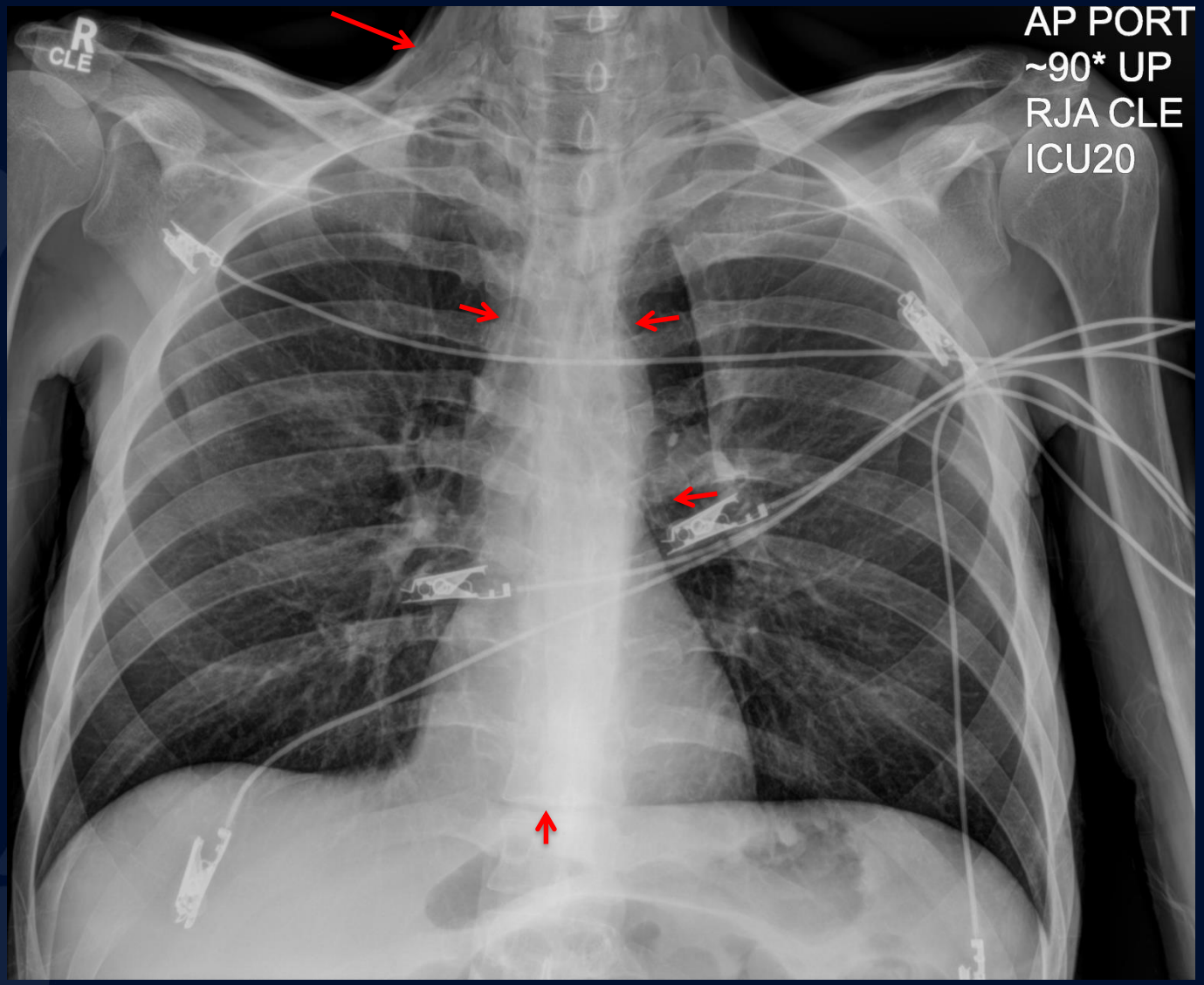

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Radiographic findings on CXR

- Air ant/post to heart
- Air surrounds/outlines mediastinal structures
- Air dissects superiorly into neck SQ tissue and inferiorly into retroperitoneum
- Lateral view more sensitive than frontal radiograph (and CT more sensitive than radiography).
- Decubitus radiography – air does NOT shift to nondependent positions

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Signs of Pneumomediastinum

- SubQ air in neck/chest well (70% will have this)
- Interstitial air - double bronchial wall - air on both sides of airway wall.
- Ring around artery sign – air surrounding artery/vein seen en face
- Tubular artery sign – air surrounding vessels along its length
- Continuous diaphragm sign – air outlining inferior aspect of heart above diaphragm
- Naclerio V sign – paravertebral air adjacent to left hemidiaphragm and descending aorta (suspicious for esophageal tear).
- "Spinnaker Sail sign"- elevation of thymic lobes in peds

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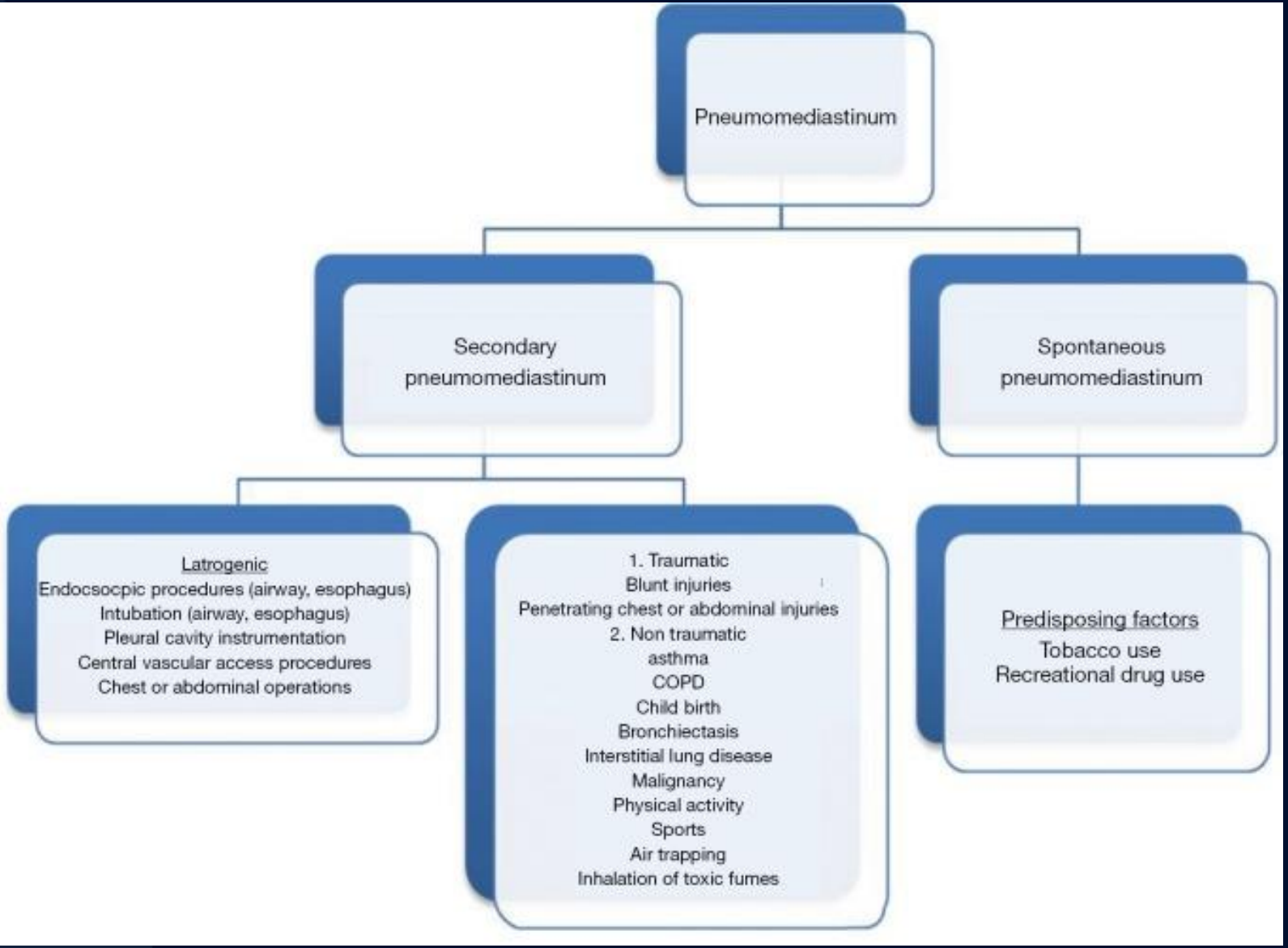

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4332083/figure/f1/

Presentation

- Chest and/or neck pain(50-90%)
- Cough and/or dyspnea
- SubQ air – palpable crepitus
- Dysphagia
- Rhinolalia
- Hoarseness/neck swelling
- Hamman Sign –”crunching” sound timed with the cardiac cycle, diminished heart sounds
- Decreased cardiac output possible in tension pneumomediastinum/pneumopericardium.

- Demographics:
  - Rare: ER 1/44,500; natural birth 1/100,000
  - peak incidence 20-40yo
  - Male>female
- Course:
  - Benign course usually resolves in 7 days (4-41days)
    - Typically the case. Clinical hx needed to exclude occult condition.
  - Mortality >50% in Boerhaave syndrome
- Next step in management:
  - Spontaneous – observe for tension ptx
  - If esophageal or airway injury suspected – esophagram/bronchoscopy

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References

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- Radiopaedia
- https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4332083
- http://casereports.bmj.com/content/2014/bcr-2014-203704.abstract
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