AMSER Case of the Month:
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29 year old Female presenting with severe left thoracic back pain, fever and pleuritic chest pain

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Patient Presentation

• HPI: 29 year old female transferred from outside hospital for 3 day history of severe left thoracic back pain and pleuritic chest pain

• PMH: IV drug abuse and depression

• PSH: noncontributory
Pertinent Labs

At outside hospital 4/11/18
• Temp 39.3
• HR: 140
• RR: 22
• SpO2: 100% on room air
• BP: 136/83
• Labs significant for WBC of 15.9

At hospital
• Labs significant for WBC of 12.61
• Blood cultures positive for MRSA
• UDS positive for cocaine and opiates
What Imaging Should We Order?
These imaging modalities were initially ordered by the hospitalist.

CT scan was performed one week after the echocardiogram.
TEE (unlabeled)
Mobile vegetation along the tricuspid valve (arrows)
Findings (unlabeled)
Findings: (labeled)

There are multiple cavitary lesions
Findings (unlabeled) Chest CT (lung windows)
Cavitary lesions are better seen on CT.
Final Dx:

Pulmonary emboli from bacterial endocarditis
Right Sided Infective Endocarditis

- Less common than left sided infective endocarditis
- 90% of right sided infective endocarditis involves the tricuspid valve
- Risk factors:
  - IV drug use
  - Pacemaker leads, defibrillator leads, vascular access for dialysis
- Micro
  - Predominant causative organism (60-90%): Staph aureus
  - Other causes: Pseudomonas aeruginosa, other gram negative micro-organisms, fungi, enterococci, streptococci, and poly-microbial infections
- Diagnosis
  - Persistent fever and bacteremia
- Treatment:
  - Antibiotics
  - 5-16% require surgical intervention (in instances of failed medical therapy, large vegetations >20mm, recurrent septic pulmonary embolism)
Septic Pulmonary Emboli

- Diagnosis
  - Chest pain, cough, occasional hemoptysis
- Findings
  - Chest X-ray: nonspecific findings
  - CT: bilateral nodules or multifocal infiltrates, often involving peripheral lung zones, associated with cavitation
- Important tests to order
  - CT of chest, blood cultures, echocardiogram
- Complications
  - Lung abscesses, pleural effusion, empyema, and pneumothorax