AMSER Case of the Month: 
July 2018

67 y/o male presenting with dyspnea, hemoptysis, and weight loss

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Patient Presentation

• 67 year-old male
• 1 day of significant dyspnea
• 1 month of sporadic hemoptysis
• 6 months of unintentional weight loss, dyspnea, and cough
• PMH: hypertension, hyperlipidemia
• PSH: 40 pack year history, ~15 drinks per week, Vietnam veteran
• Fam Hx: Mother: Diabetes; Father: Testicular Cancer
• Medications: Simvastatin, Lisinopril, Hydrochlorothiazide
• Allergies: Penicillin (Rash)
Pertinent Labs

- WBC: 11,000/μL
- Hgb: 12 g/dL
- Hct: 40%
- AST: 70 units/L
- ALT: 100 units/L
- Alk Phos: 110 units/L
- T. Bili: 2.1 mg/dL
What Imaging Should We Order?
ACR Appropriateness Criteria

**Variant 2:** Persistent/recurrent hemoptysis (<30 cc) and one risk factor (>40 years old, >30 pack-year history).

<table>
<thead>
<tr>
<th>Radiologic Procedure</th>
<th>Rating</th>
<th>Comments</th>
<th>RRL*</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-ray chest</td>
<td>9</td>
<td></td>
<td>☰</td>
</tr>
<tr>
<td>CTA chest with IV contrast</td>
<td>8</td>
<td></td>
<td>☵UARIO</td>
</tr>
<tr>
<td>CT chest without IV contrast</td>
<td>6</td>
<td>Consider this procedure if there is a contraindication to iodinated contrast.</td>
<td>☵</td>
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<tr>
<td>Arteriography pulmonary</td>
<td>2</td>
<td></td>
<td>☵ROID</td>
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</tbody>
</table>

**Rating Scale:** 1,2,3 = Usually not appropriate; 4,5,6 = May be appropriate; 7,8,9 = Usually appropriate

*Relative Radiation Level

This imaging modality was ordered by the ER physician.
Findings (unlabeled)
Findings: (labeled)

A: S-sign of Golden
B: Lung Mass
C: Elevated right hemidiaphragm
D: Right upper lobe atelectasis
Final Dx:
Right Upper Lobe Lung Mass with Associated Post-obstructive Atelectasis
“S” Sign of Golden

• Noted first by R. Golden in 1925.
  • Proposed that medial convex border from bronchial pus and secretions

• Reverse ‘S’ Sign – represents displacement of the minor fissure with atelectasis of the right upper lobe.

• Anatomy of the Right Upper Lobe
  • Anterior to major fissure
  • Superior to minor fissure

• Changes to anatomy with atelectasis
  • Displacement of major/minor fissure
  • Shift of mediastinal structures
  • Increased opacity of collapsed lung
  • Elevation of the hemidiaphragm
“S” Sign of Golden

• Cause: central mass leading to post-obstructive atelectasis
  • Bronchogenic carcinomas
    • Small Cell Carcinoma
    • Non-Small Cell Carcinoma
References: