ACR Lung-RADS® v2022

Case Review

Ella Kazerooni, MD, MS
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CLINICAL HISTORY

- 71-year-old man
- 42 pack-year smoking hx
- Baseline LCS
How would you classify this lesion?
# Atypical Pulmonary Cysts

<table>
<thead>
<tr>
<th>Lung-RADS 3</th>
<th>Lung-RADS 4A</th>
<th>Lung-RADS 4B</th>
</tr>
</thead>
</table>
| • Growing cystic component of a thin or thick-walled cyst (total mean diameter) | • Thick-walled cyst  
• Multilocular cyst at baseline OR growing  
• Thin- or thick-walled cyst that becomes multilocular | • Increasing loculation OR  
• New or growing wall thickness/nodularity OR  
• New/increased opacity (nodular, ground glass, or consolidation) |
| 6-month LDCT | 3-month LDCT; PET-CT | CT; PET-CT; Bx; Referral |
FINDINGS

- Multilocular cyst
- Thick wall

17 mm mean
FINDINGS

- Multilocular cyst
- Thick wall

17 mm mean
FINDINGS

- Multilocular cyst
- Thick wall
- Discrete nodule

LR 4A

17 mm mean
FINDINGS

- Multilocular cyst
- Thick wall
- Discrete nodule

Manage by most concerning feature

LR 4A
LR 4A
LR 4B

17 mm mean
MANAGEMENT

- Multilocular cyst
- Thick wall
- Discrete nodule

Lung-RADS 4B

CT; PET-CT; Bx; Referral
TAKE HOME

- Lung-RADS v2022 adds classification criteria for atypical pulmonary cysts
- Based on thin vs. thick-wall; unilocular vs. multilocular; associated nodules; and growth criteria
CLINICAL HISTORY

- 68-year-old woman
- Baseline LCS
How would you classify this lesion?
## ATYPICAL PULMONARY CYSTS

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| • Growing cystic component of a thin or thick-walled cyst (total mean diameter) | • Thick-walled cyst  
• Multilocular cyst at baseline OR growing  
• Thin- or thick-walled cyst that becomes multilocular | • Increasing loculation OR  
• New or growing wall thickness/nodularity OR  
• New/increased opacity (nodular, ground glass, or consolidation) |
| 6-month LDCT | 3-month LDCT; PET-CT | CT; PET-CT; Bx; Referral |
Multilocular cyst
Possible thick wall
Baseline 12 months

Lung-RADS 4B

Diagnostic eval

- Increasing loculation
- New or growing wall thickness/nodularity
- New/increased opacity (nodular, ground glass, or consolidation)
Baseline 12 months 18 months
TAKE HOME

- Multilocular cysts  LR 4A
- Increased loculation, new or growing wall thickness, or new or increasing opacity  LR 4B
CLINICAL HISTORY

- 55-year-old man
- 60+ pack-year smoking hx
- Baseline LCS
How would you classify this nodule?
FINDINGS

- 9 mm solid nodule
- LLL peridiaphragmatic
- Lobular

Does not meet benign juxtapleural criteria
FINDINGS

- 9 mm solid nodule
- LLL peridiaphragmatic
- Lobular

Lung-RADS 4A 3-month LDCT
JUXTAPLEURAL NODULES

Lung-RADS 2

- < 10 mm mean diameter at baseline or new AND
- Solid; smooth margins AND
- Oval, lentiform, or triangular shape

12-month LDCT
Lung-RADS 2
**TAKE HOME**

- Juxtapleural solid nodules < 10 mm mean diameter, with smooth margins, & lentiform, ovoid, or triangular in shape
  - **0%** risk of malignancy
  - **LR 2**
CLINICAL HISTORY

- 62-year-old woman
- Annual LCS
How would you classify this nodule?
FINDINGS

- New, solid LLL airway nodule
- Proximal segmental

Baseline

Lung-RADS 4A

3-month LDCT
Baseline

Persistent & growing
Baseline

Lung-RADS 4B
Clinical referral
LUNG-RADS

- Persistent airway nodules are **NOT** downgraded
TAKE HOME

- Airway nodules characterized by location, morphology, and persistence
- Segmental or more proximal = LR 4A
- Subsegmental = LR 2
- Persistent at follow-up = LR 4B
CLINICAL HISTORY

- 54-year-old woman
- Baseline LCS
How would you classify this nodule?
FINDINGS

- Multilocular cyst
- Solid component < 6 mm
- Stable at 3 months
- Downgrade to next lowest Lung-RADS category
- Follow-up from date of current exam
Nodules that are stable or decreased at follow-up can be downgraded to the next lower Lung-RADS category:
CLINICAL HISTORY

- 70-year-old man
- Annual LCS
- Previously Lung-RADS 2 for stable nodules < 6 mm
How would you classify this nodule?
FINDINGS

- New lobular nodule
- If cancer, is very fast growing
- Could be infectious or inflammatory
• By size and composition

Lung-RADS 4B  Diagnostic eval
Infectious or inflammatory

Lung-RADS 0 1-3 month LDCT

At follow-up, reclassify based on the most suspicious finding
1-3 month LDCT

Lung-RADS 0

3-month LDCT

Lung-RADS 2

12-month LCS CT
**TAKE HOME**

Inflammatory or infectious nodules can be managed in several ways:

- **LR 0**
- **LR 2**
- by size & composition criteria
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Thank You!