Pneumocystis pneumonia (PCP)

- Life-threatening respiratory infection occurring in immunocompromised individuals
- Caused by fungus *Pneumocystis jirovecii*
- Consider PCP in HIV-infected patients with severe immunosuppression, subacute respiratory symptoms, and bilateral ground-glass opacities

CT

- Ground-glass opacities
- Lung cysts
- Crazy-paving pattern
- Diffuse consolidation
- Intralobular lines and interlobular septal thickening
- Spontaneous pneumothorax
- Less common findings: Lung nodules, mass, lobar consolidation, mediastinal/hilar lymphadenopathy, pleural effusion
- Chronic PCP: Architectural distortion, traction bronchiectasis

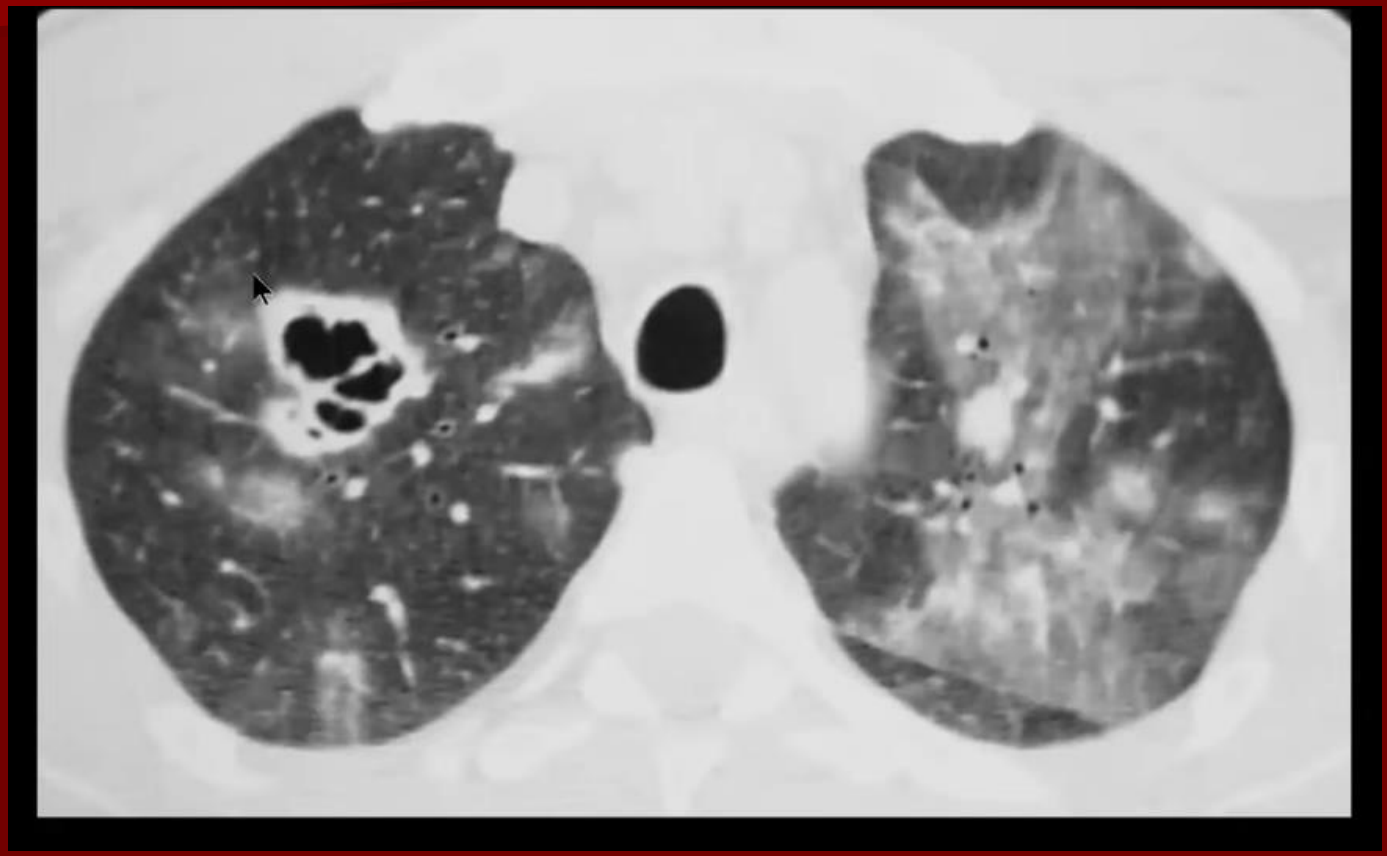
Clinical issues

- Human immunodeficiency virus (HIV) infected
  - Younger patients
  - Subacute clinical course
- Non-HIV infected: Older, abrupt onset of respiratory insufficiency

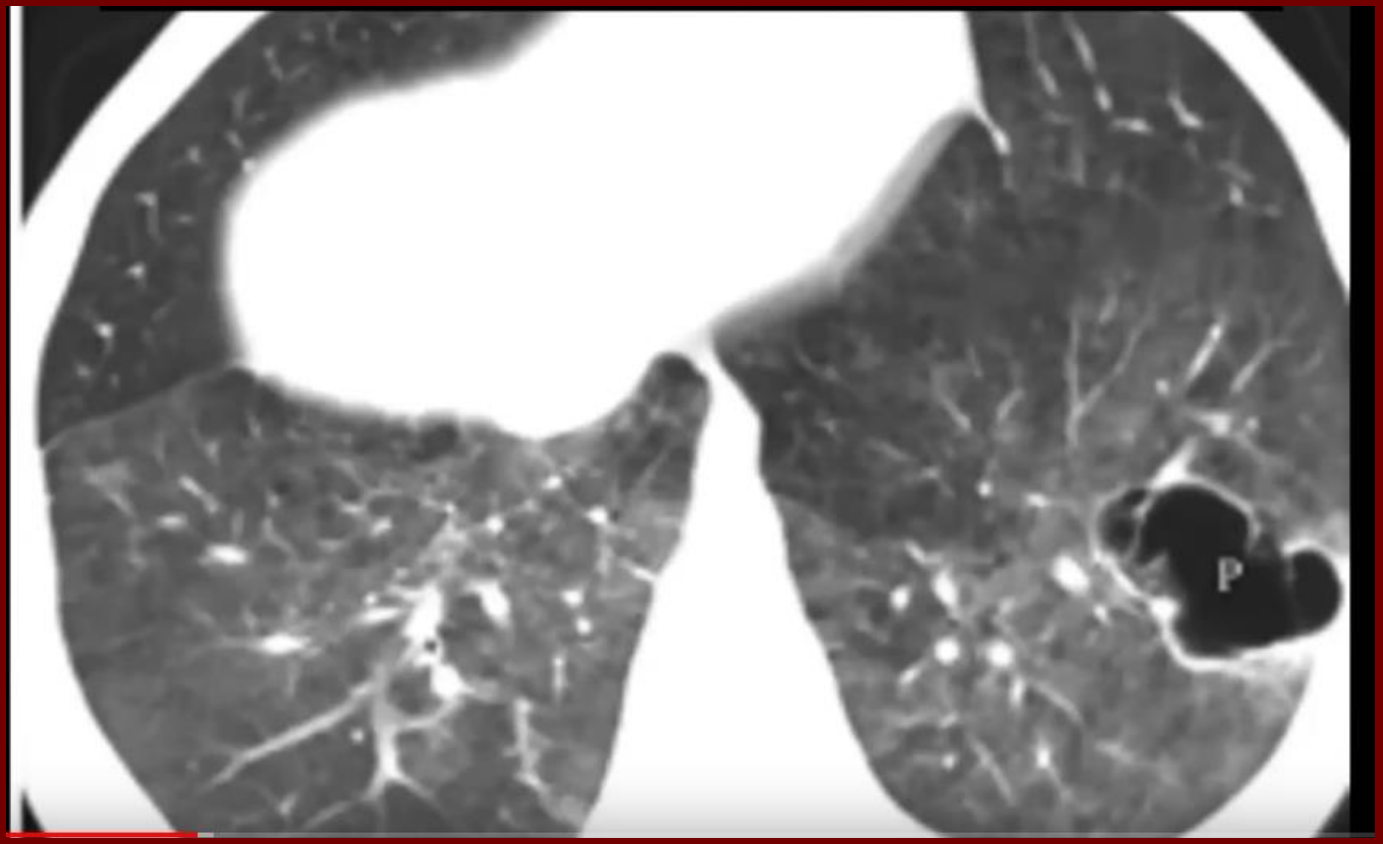
Cysts

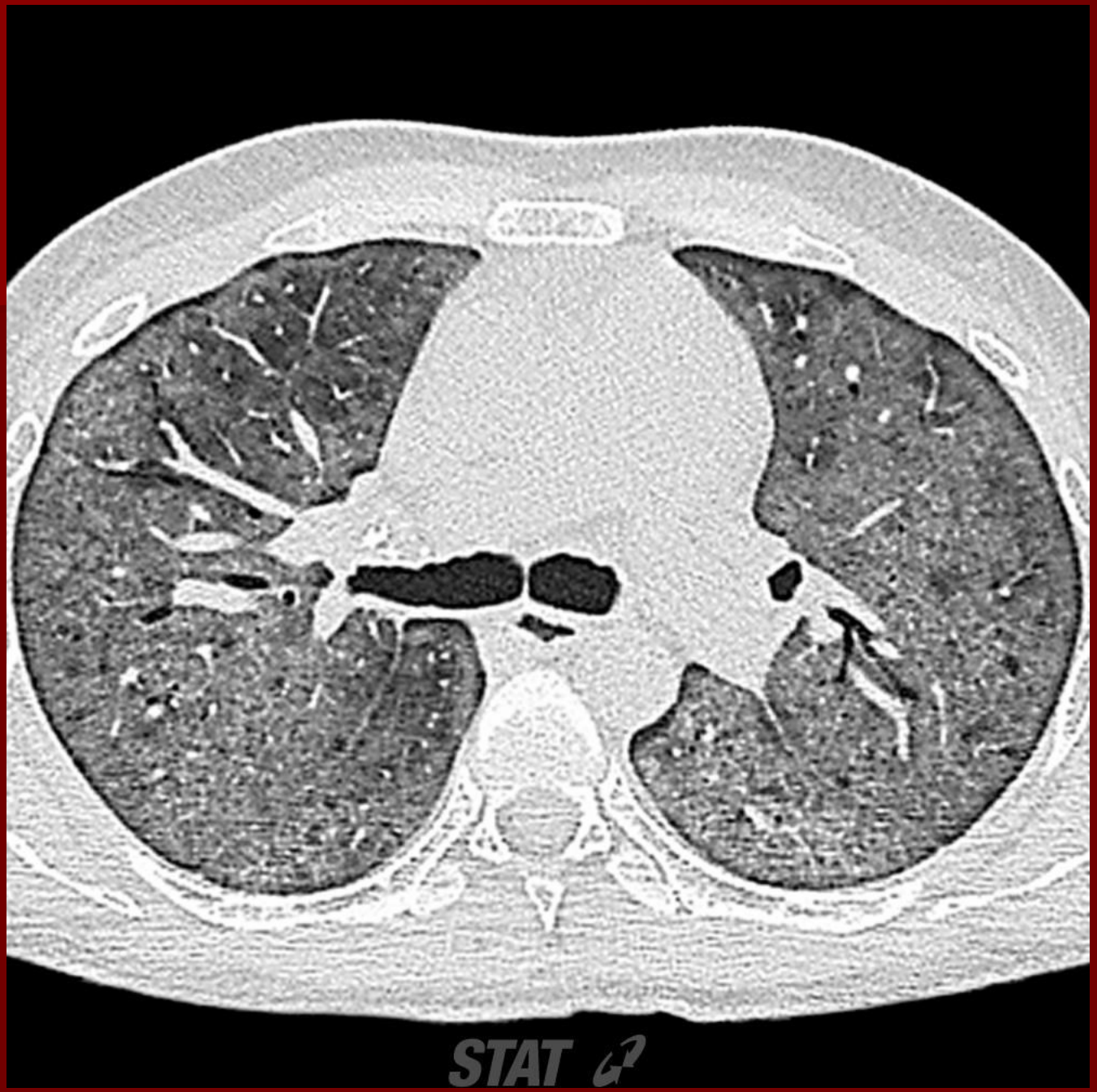
- Multilocular
- Can be multiple or single
- Can be thin wall
- Or can be thick wall.

Cyst -multiloculated

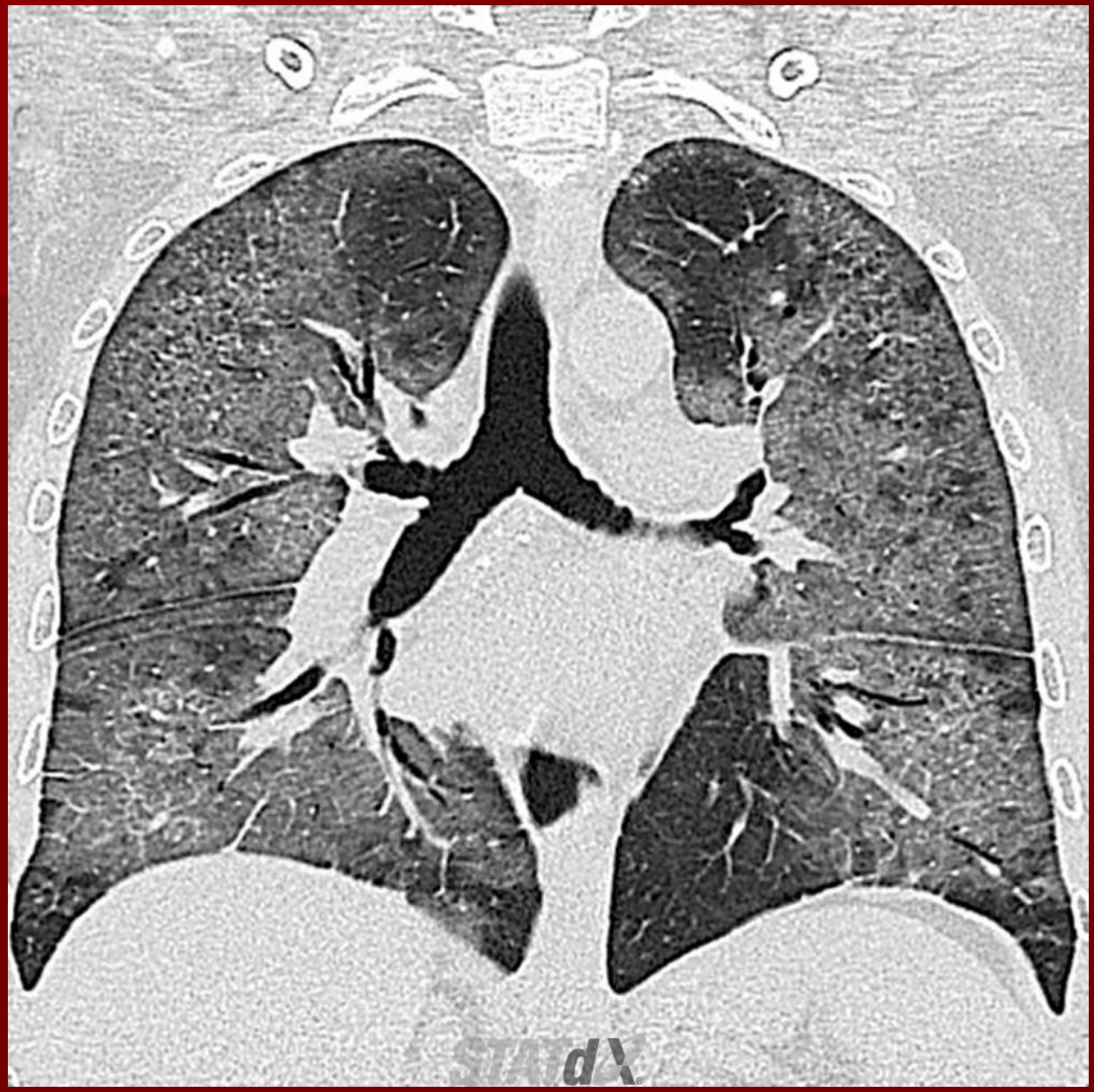


Cyst – (pneumatoceles)



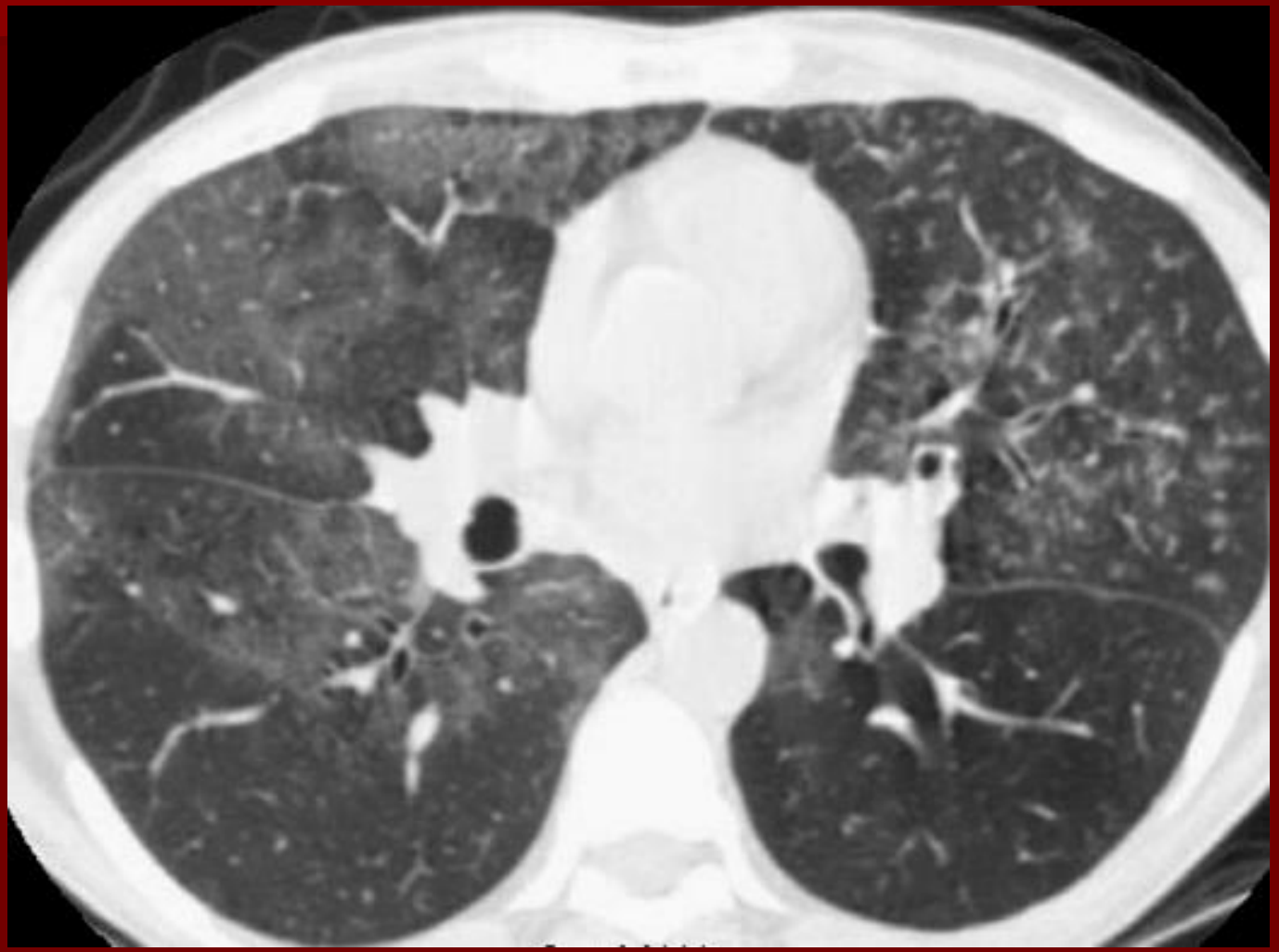


Axial HRCT of a 42-year-old renal transplant recipient with cough and dyspnea shows diffuse bilateral ground-glass opacities related to pneumocystis pneumonia.

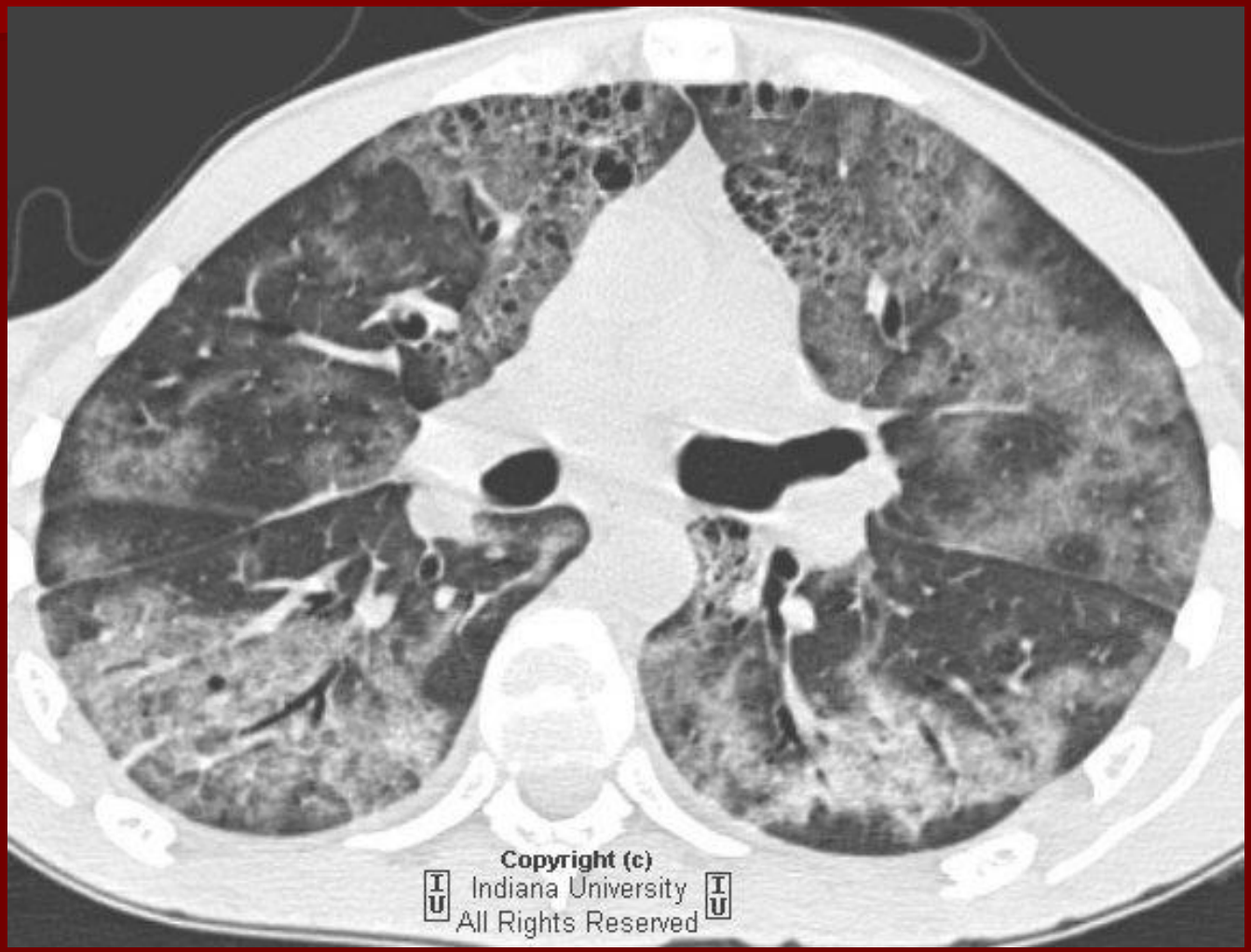


Coronal HRCT of the same patient shows extensive bilateral ground-glass opacities and a geographic distribution of the spared lung parenchyma. While nonspecific, these findings are characteristic of pneumocystis pneumonia in immunocompromised patients, and should always be considered in the appropriate clinical setting.

PCP



Chronic repeated bouts of PCP



Nodular form of PCP