Organizing pneumonia: A great mimicker

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Keywords:	organizing pneumonia, consolidation, HRCT
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Learning objectives

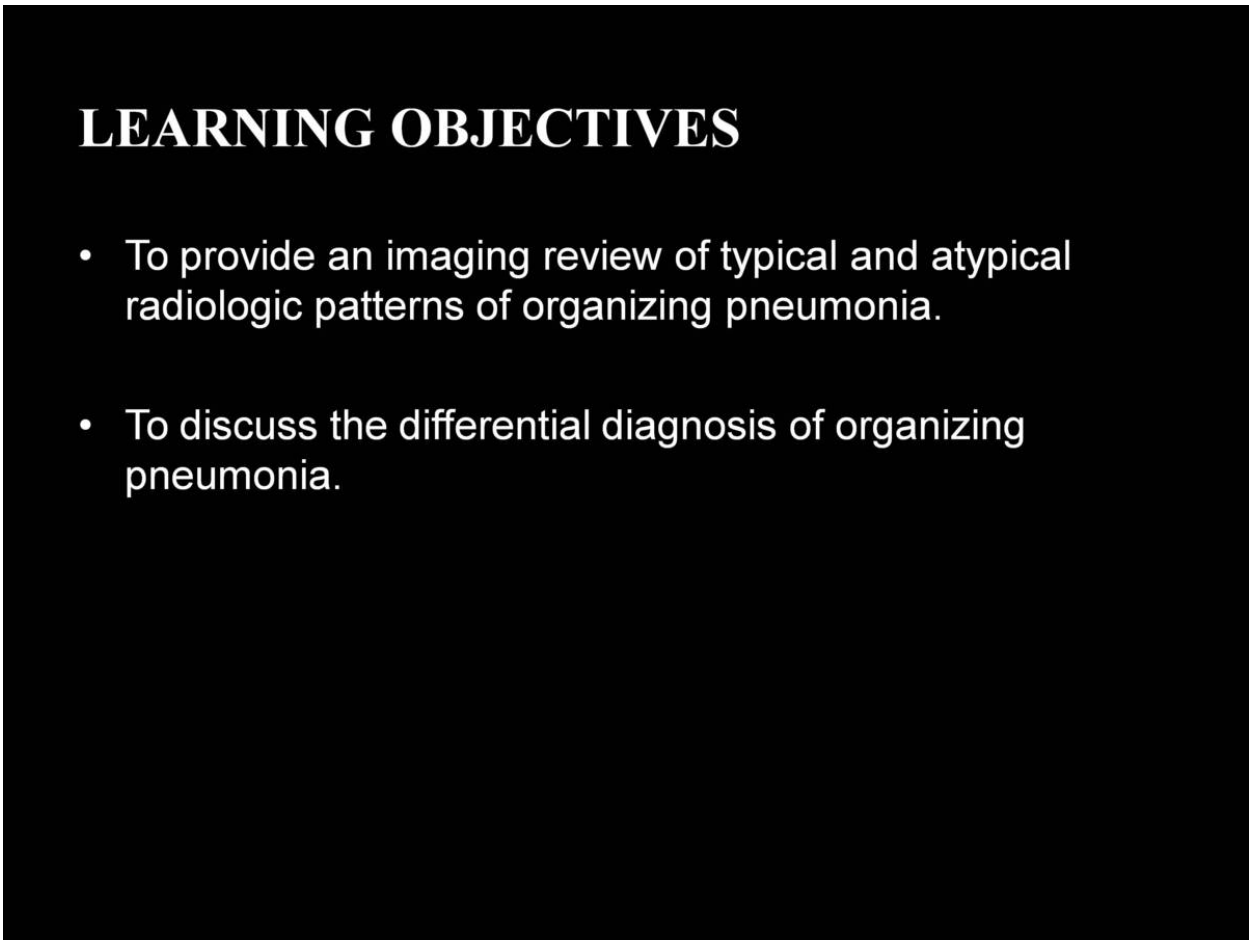
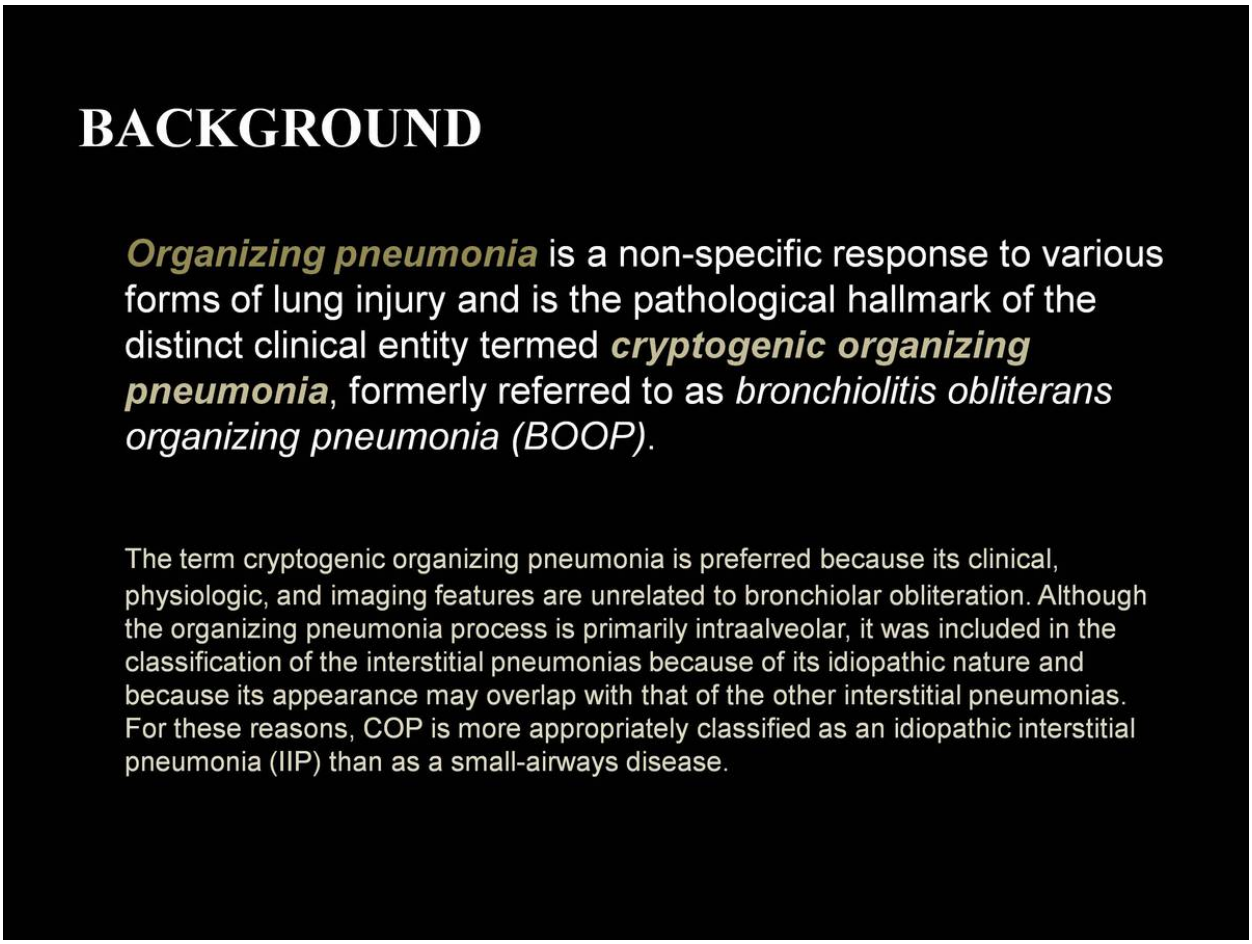


Fig.
References: C. Paulino; Serviço de Imagiologia, Hospitais da Universidade de Coimbra, Coimbra, PORTUGAL

Background



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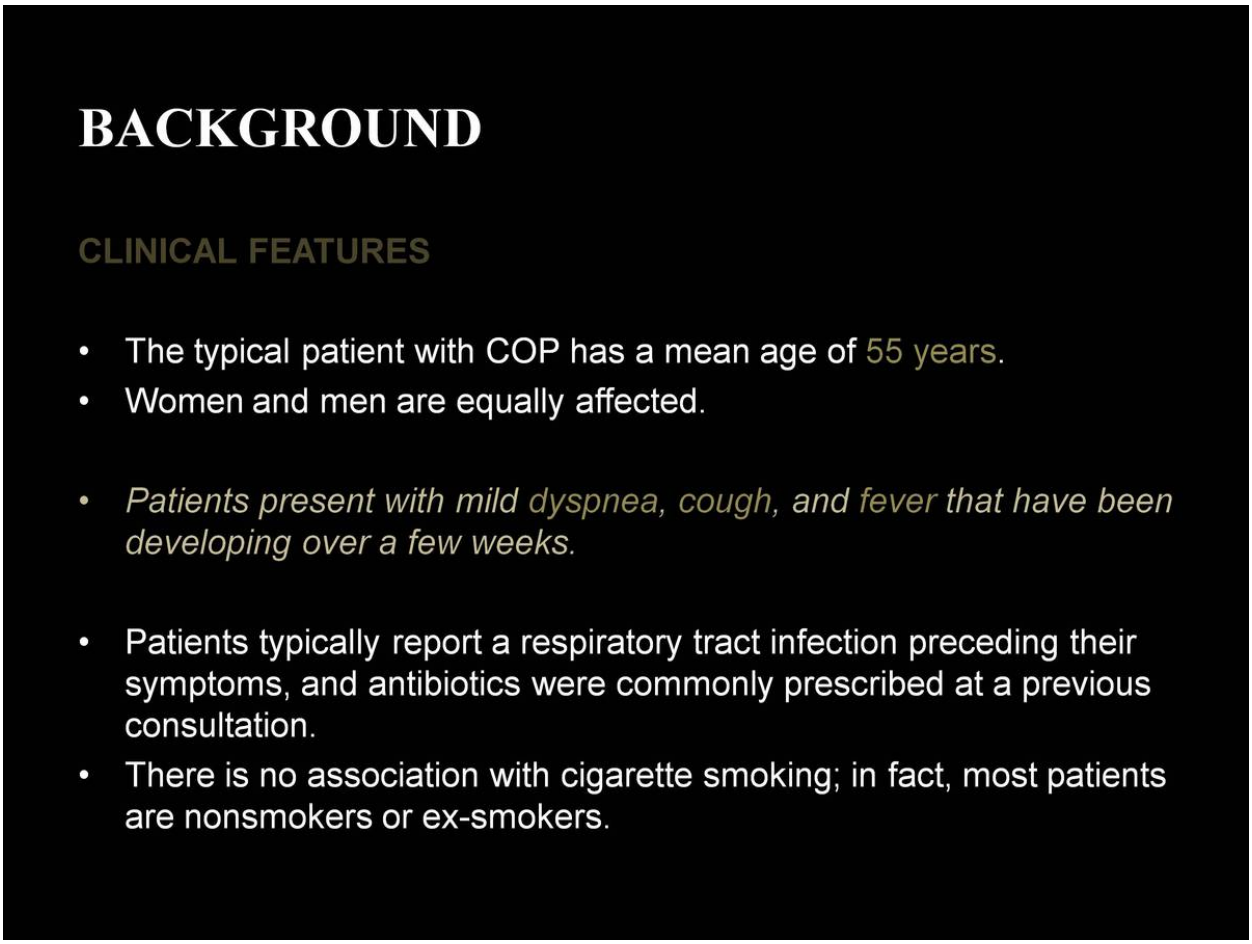

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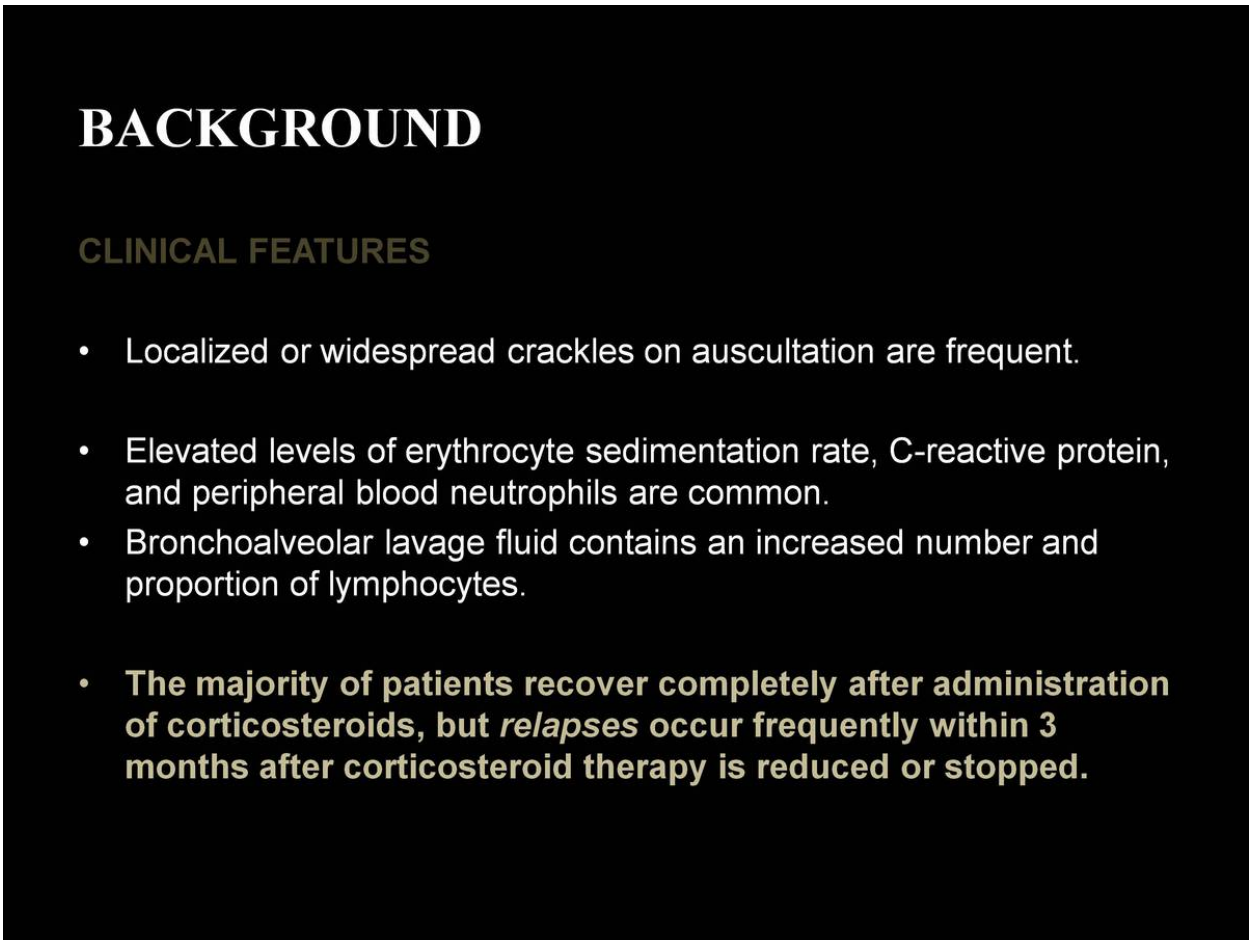

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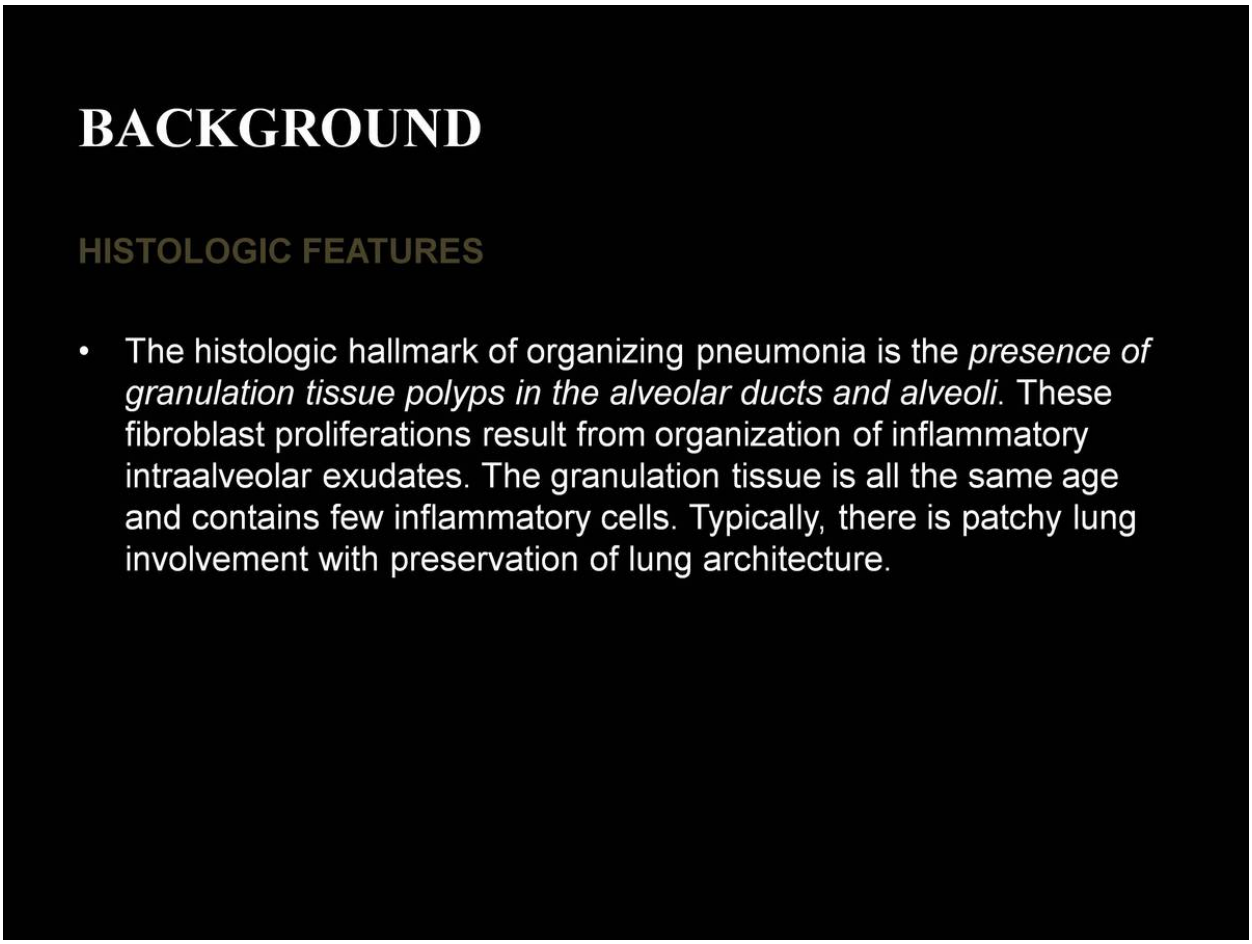

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Imaging findings OR Procedure details

TYPICAL IMAGING FINDINGS

CHEST RADIOGRAPH

- The chest radiograph usually shows *unilateral or bilateral patchy consolidations* that resemble pneumonic infiltrates.

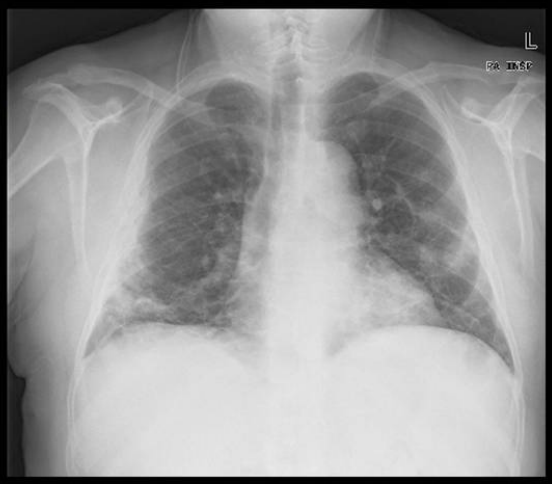

Figure 1. Radiograph showing predominantly mid- and lower zone air space opacities in a patient with cryptogenic organizing pneumonia.

Fig.

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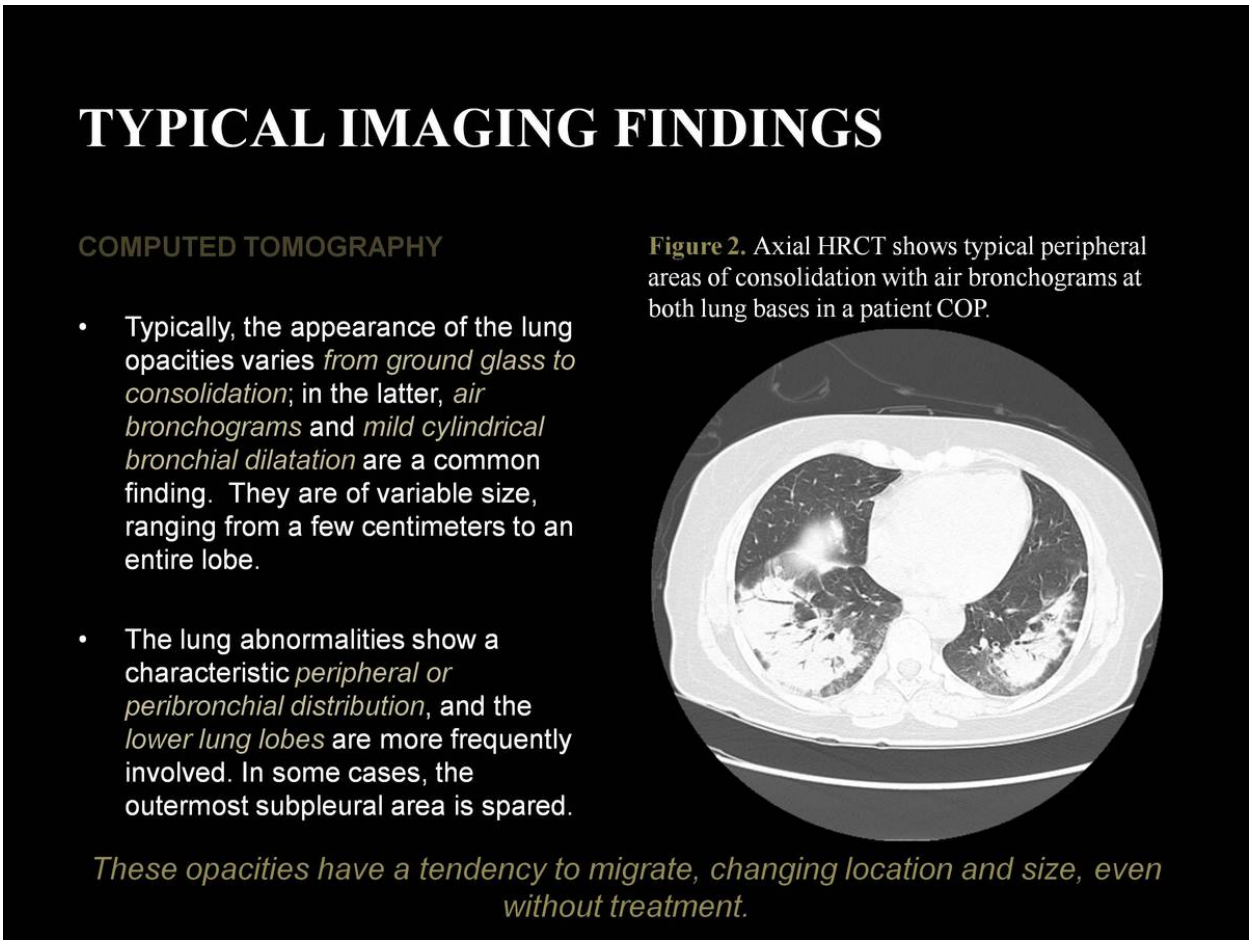

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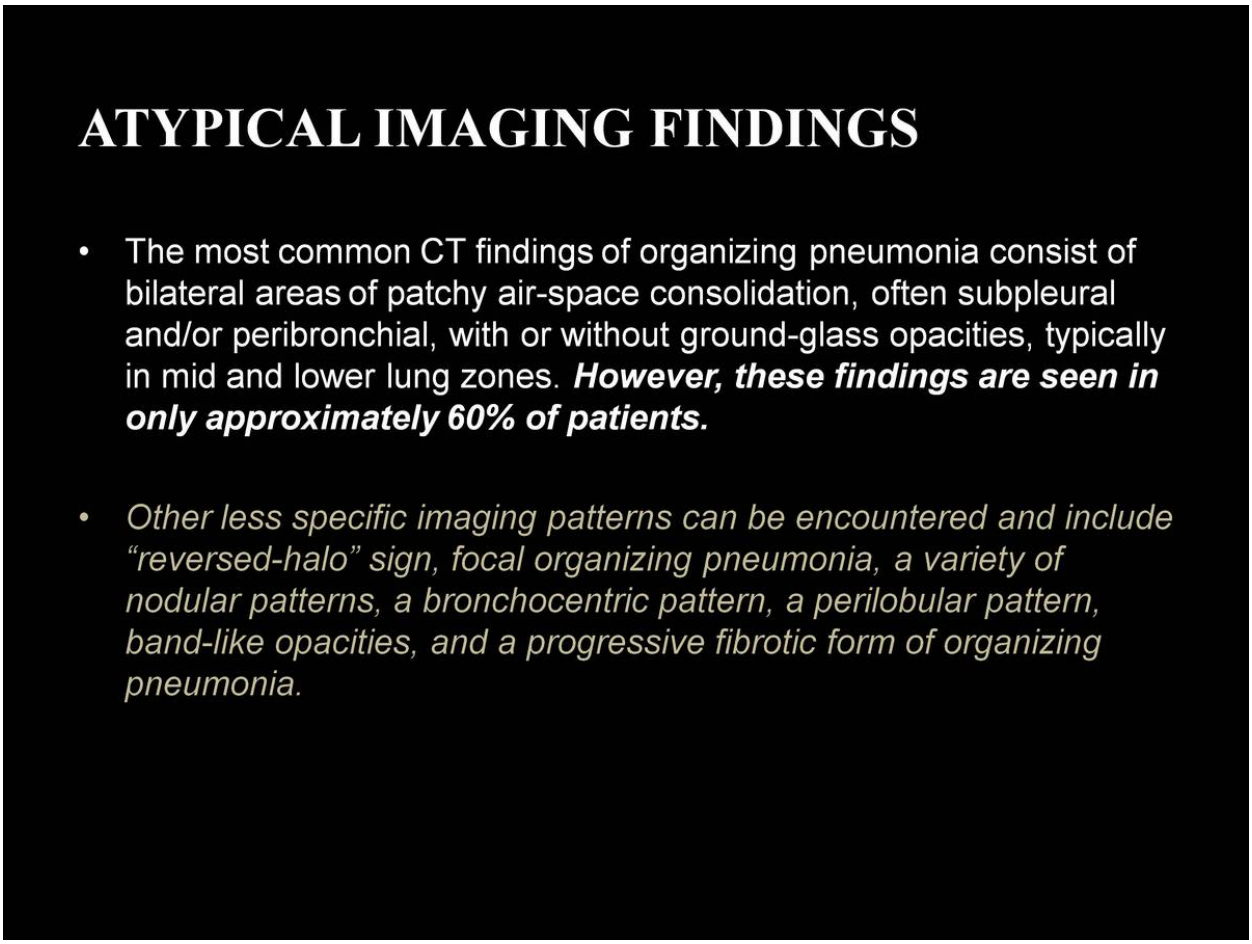

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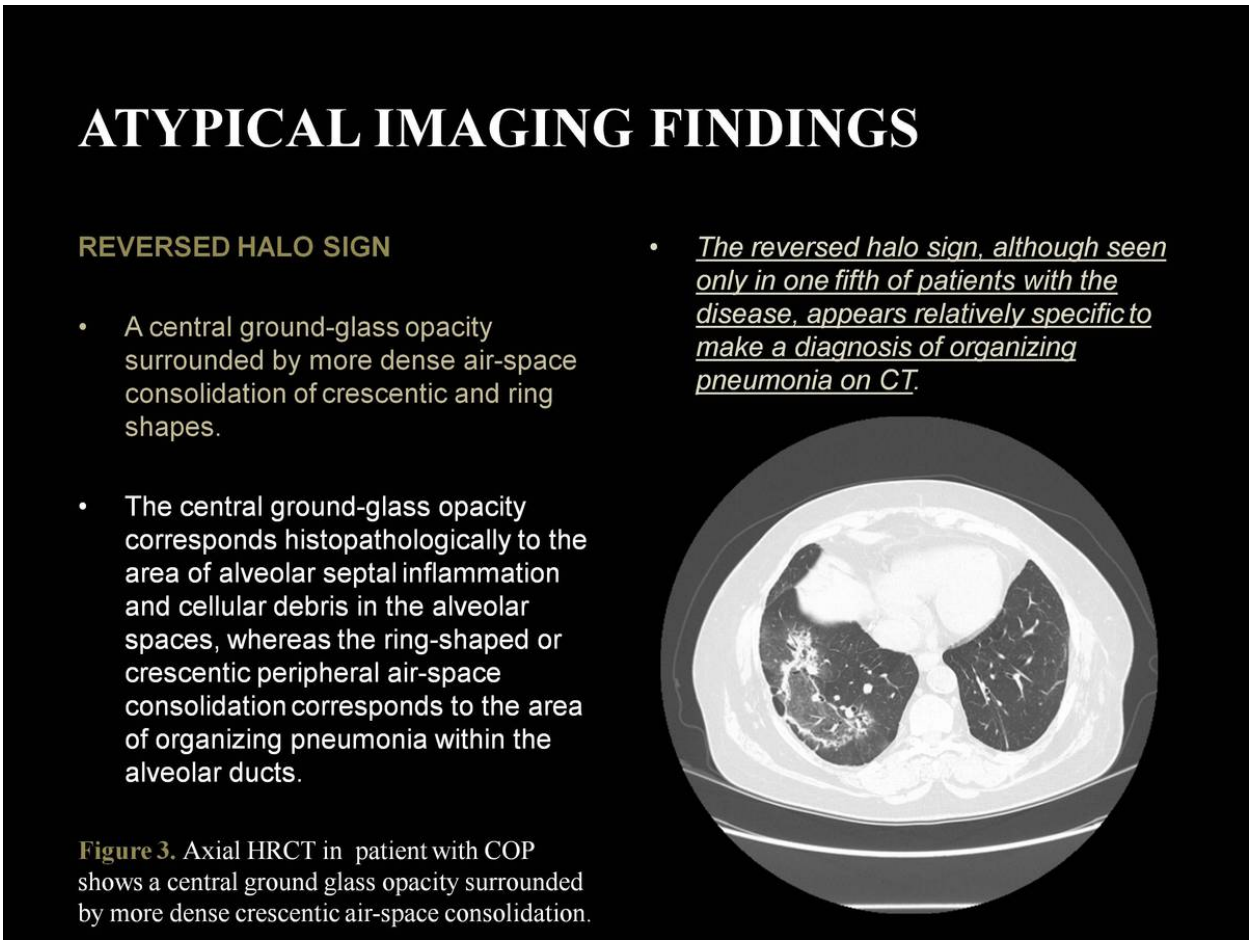

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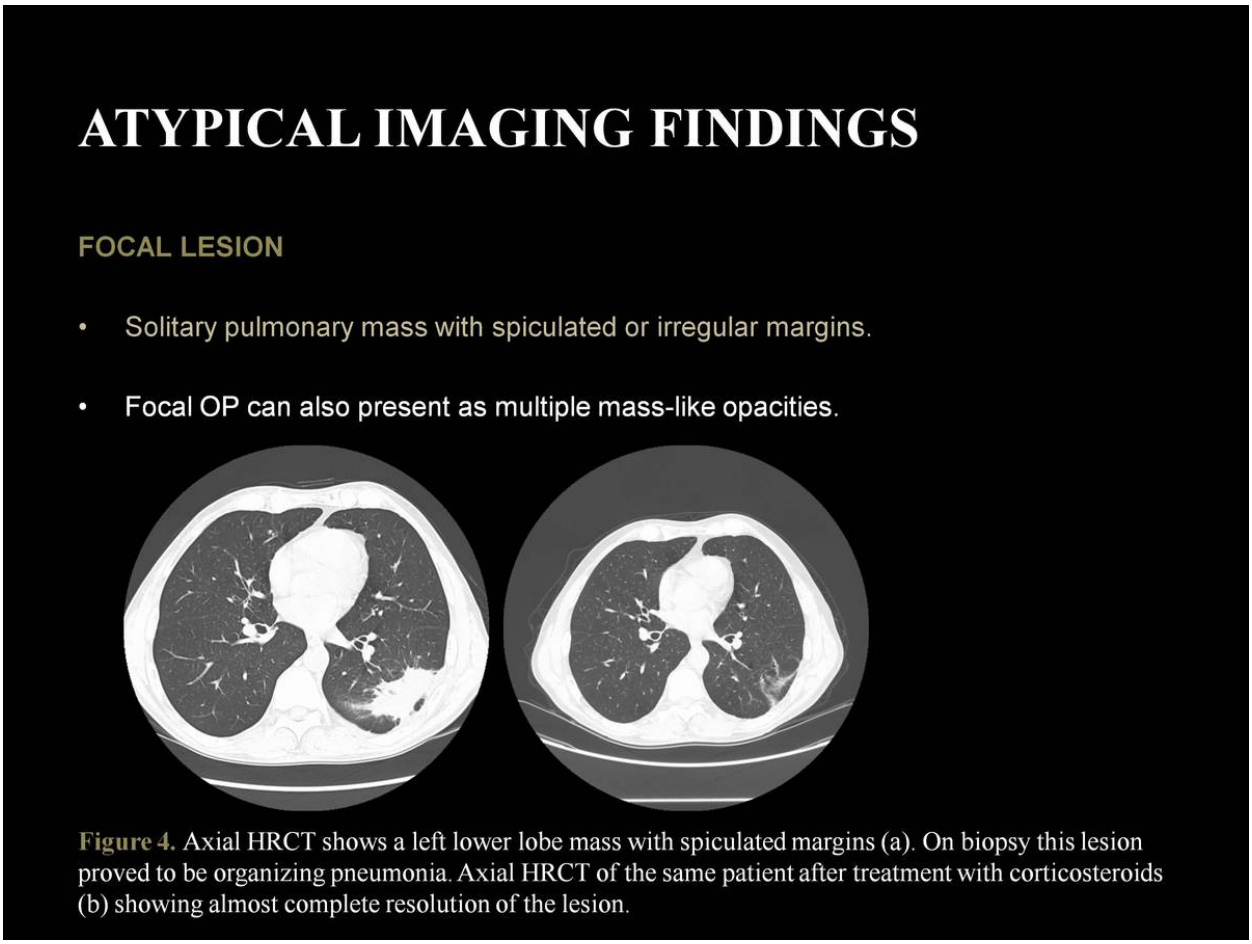

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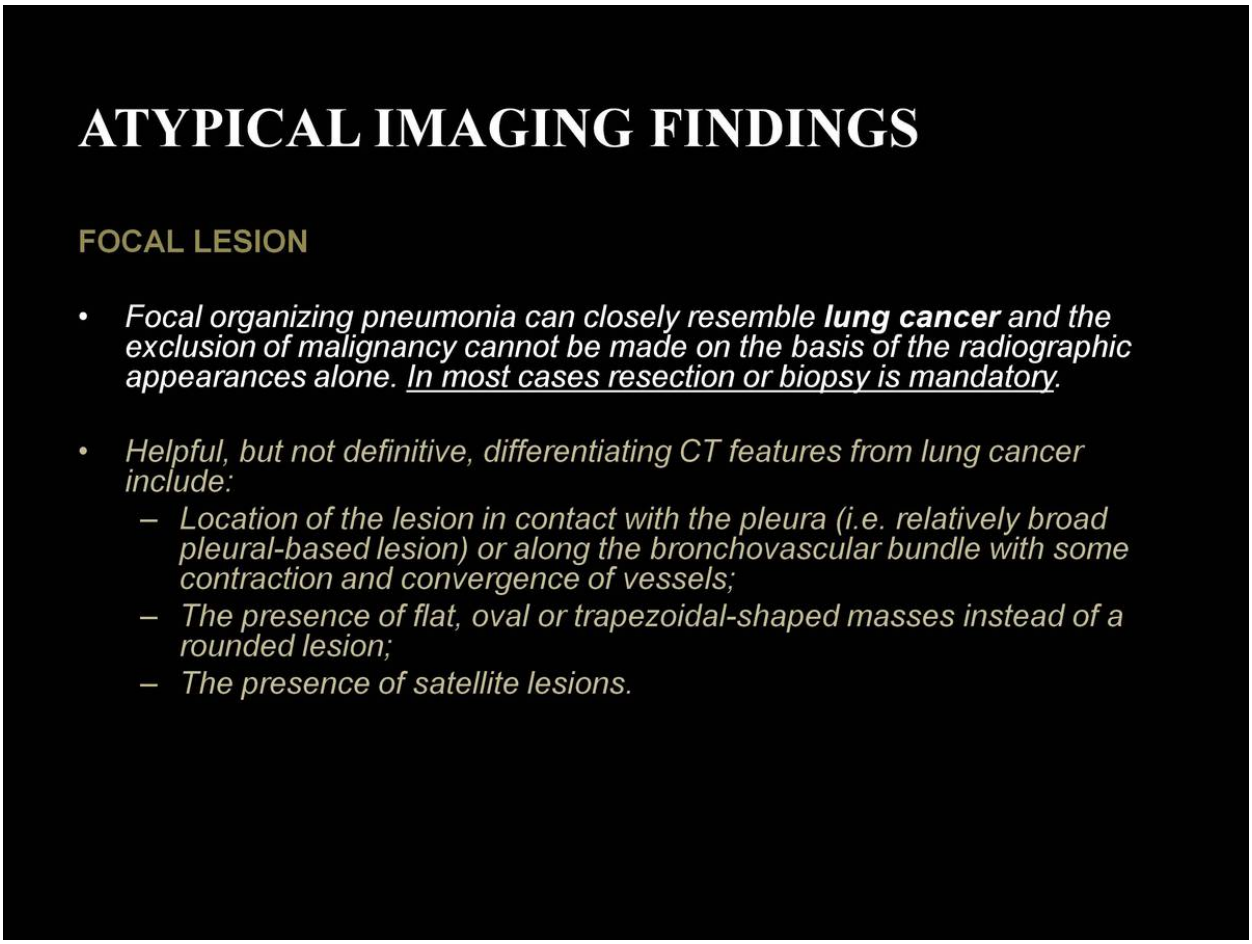

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ATYPICAL IMAGING FINDINGS

NODULAR PATTERN

- Nodules usually randomly distributed in lungs.
- Organizing pneumonia can present as one of two nodular patterns:
  - a well-defined "acinar" pattern with nodules of approximately 8 mm in diameter and randomly distributed;
  - a more subtle poorly defined (micro)nodular pattern.

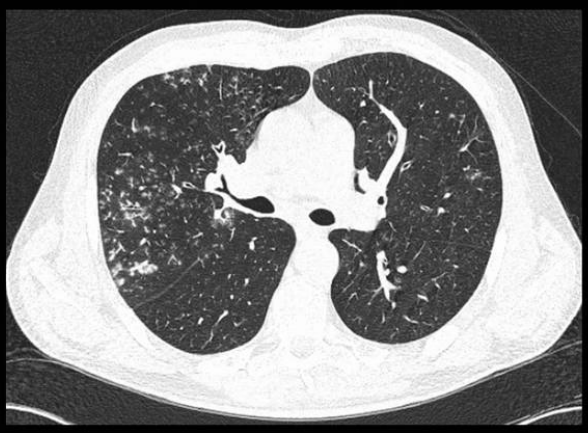

Figure 5. Axial HRCT showing combined pattern of peripheral "acinar" nodules and smaller nodules, some of which resemble a tree-in-bud pattern in the right upper lobe. Biopsy-proven organizing pneumonia.

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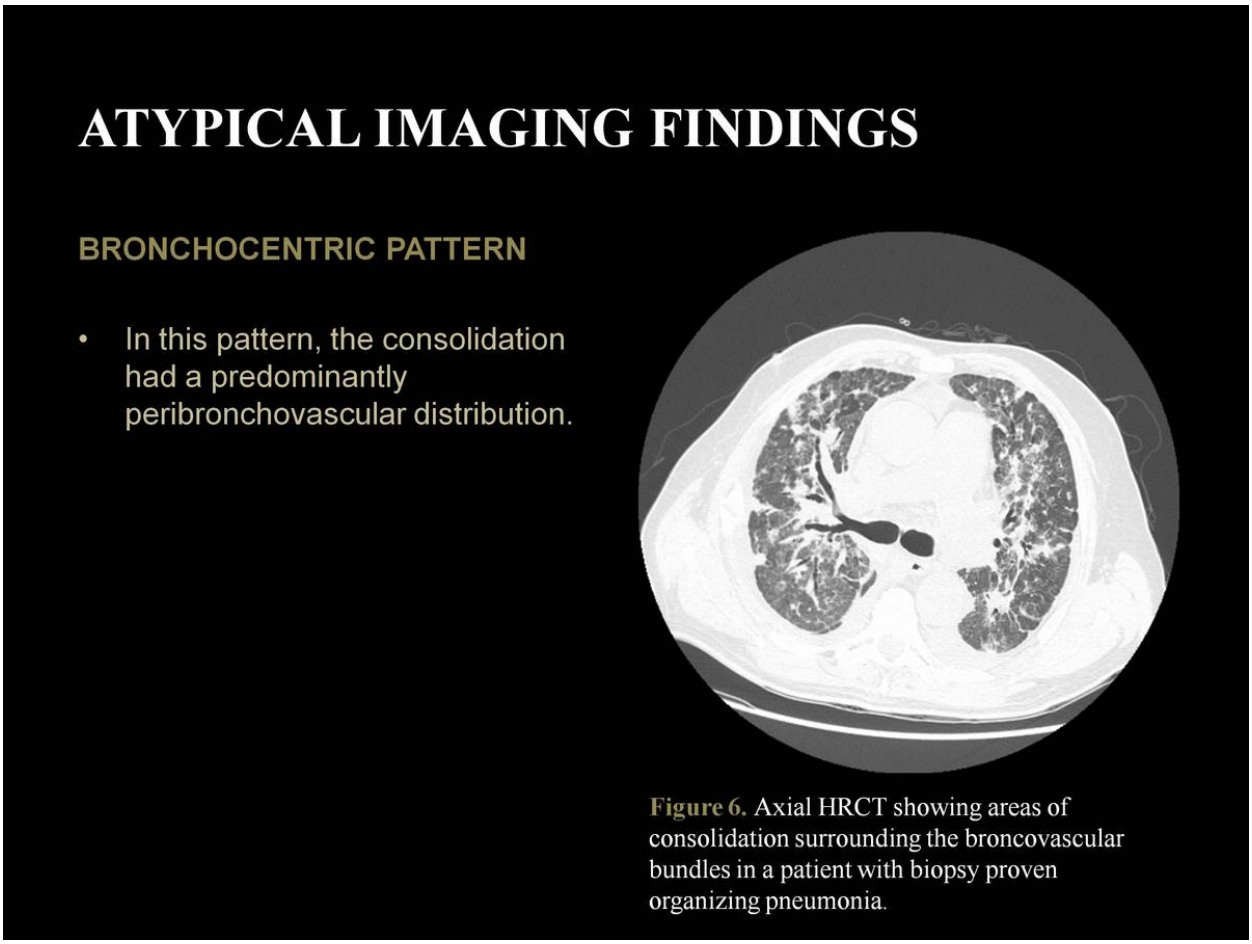

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ATYPICAL IMAGING FINDINGS

PERILOBULAR PATTERN

- In perilobular pattern, there is opacification around the periphery of individual secondary lobules resembling poorly defined thickened interlobular septa.

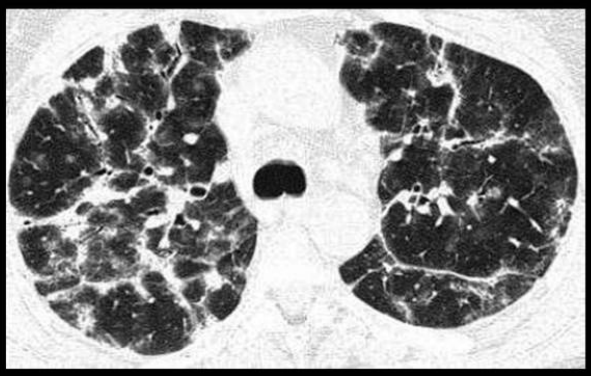

Figure 7. Axial HRCT showing opacification around the periphery of individual secondary lobules resembling poorly defined thickened interlobular septa in a patient with biopsy proven organizing pneumonia.

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ATYPICAL IMAGING FINDINGS

LINEAR AND BAND-LIKE PATTERN

- A linear or band-like pattern of OP is unusual and striking and has been described in isolation or in combination with other patterns.
- It is seen on CT as lines or bands longer than 2 cm, smooth or irregular sometimes forming arcades and/or containing air bronchograms. These lines or bands are usually at least 8 mm in width.
- These linear opacities are usually associated with multifocal areas of consolidation.
- *It is associated with increased risk of persistent or progressive disease.*

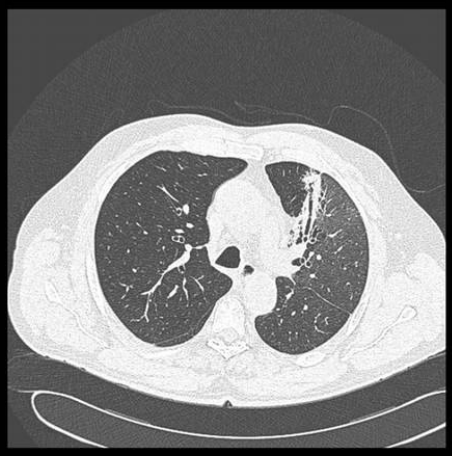

Figure 8. Axial HRCT shows a band-like opacity containing air-bronchogram in the left upper lobe.

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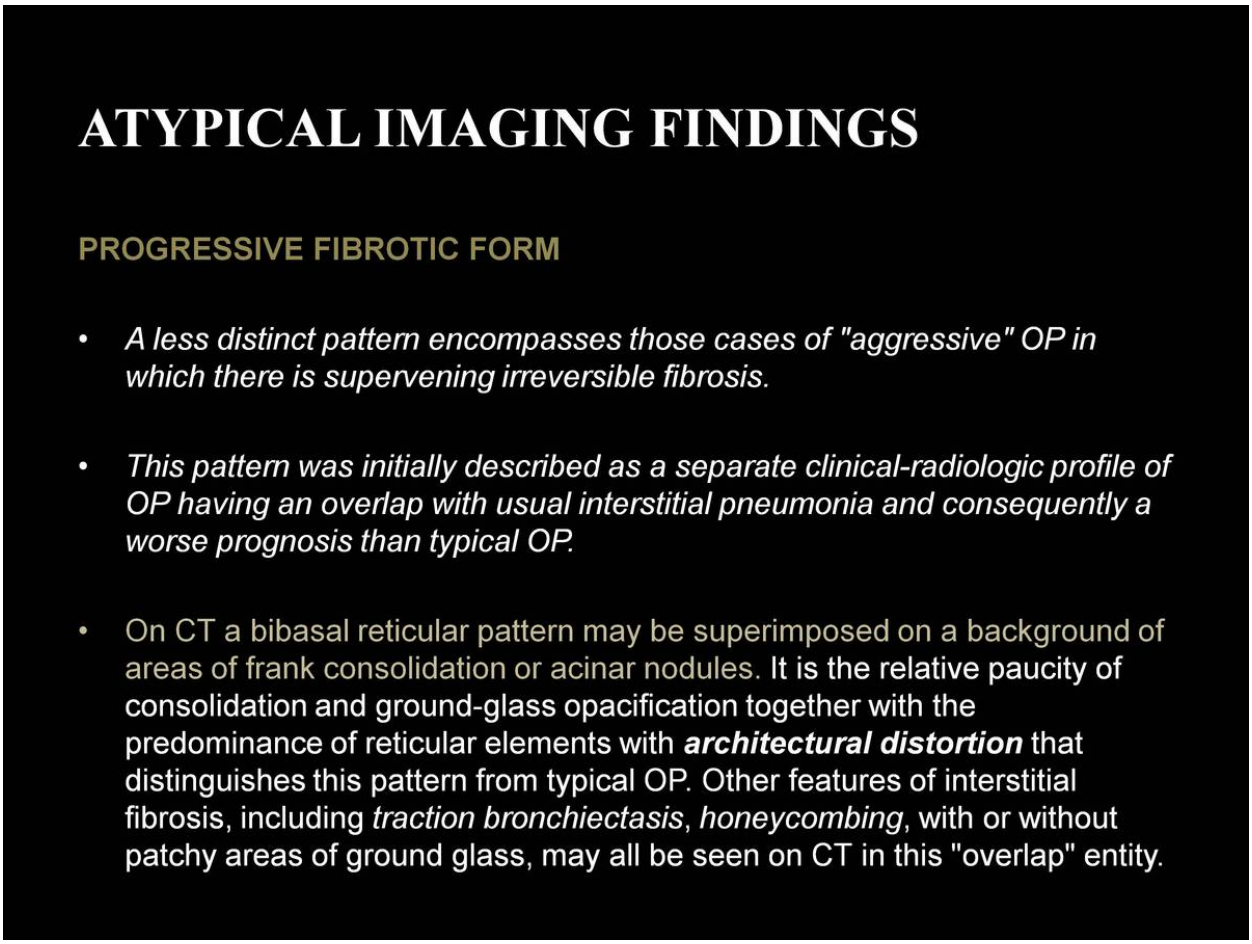

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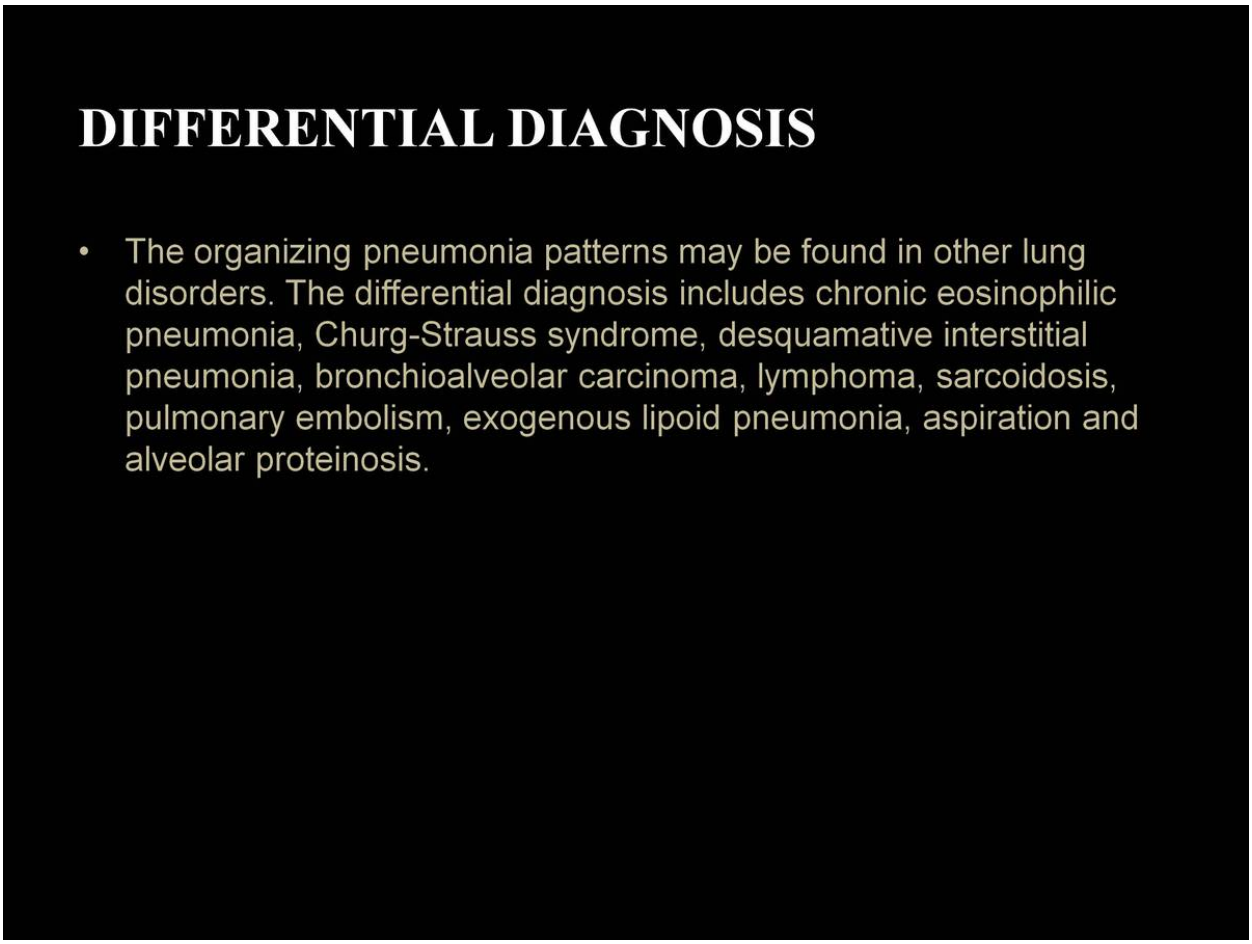

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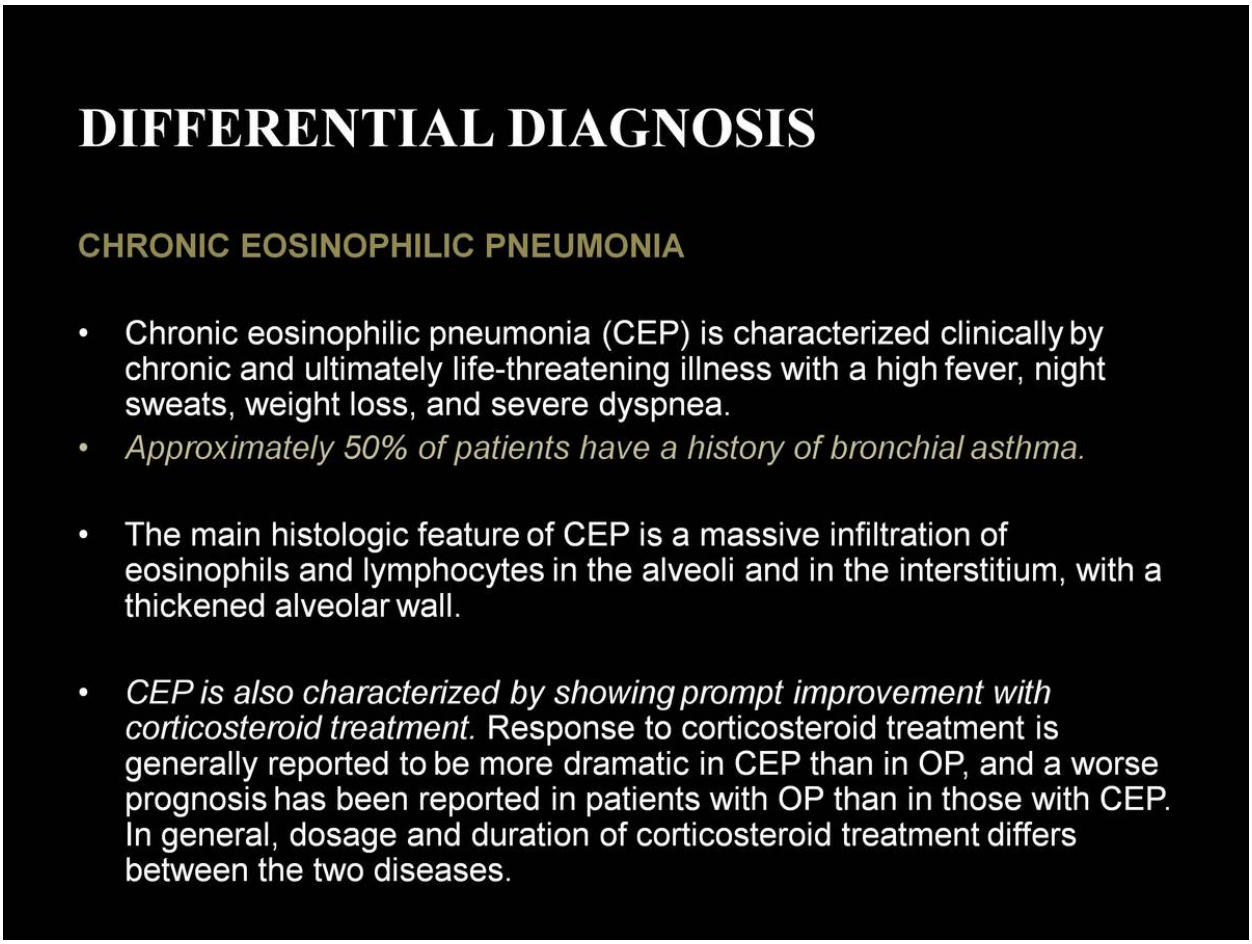

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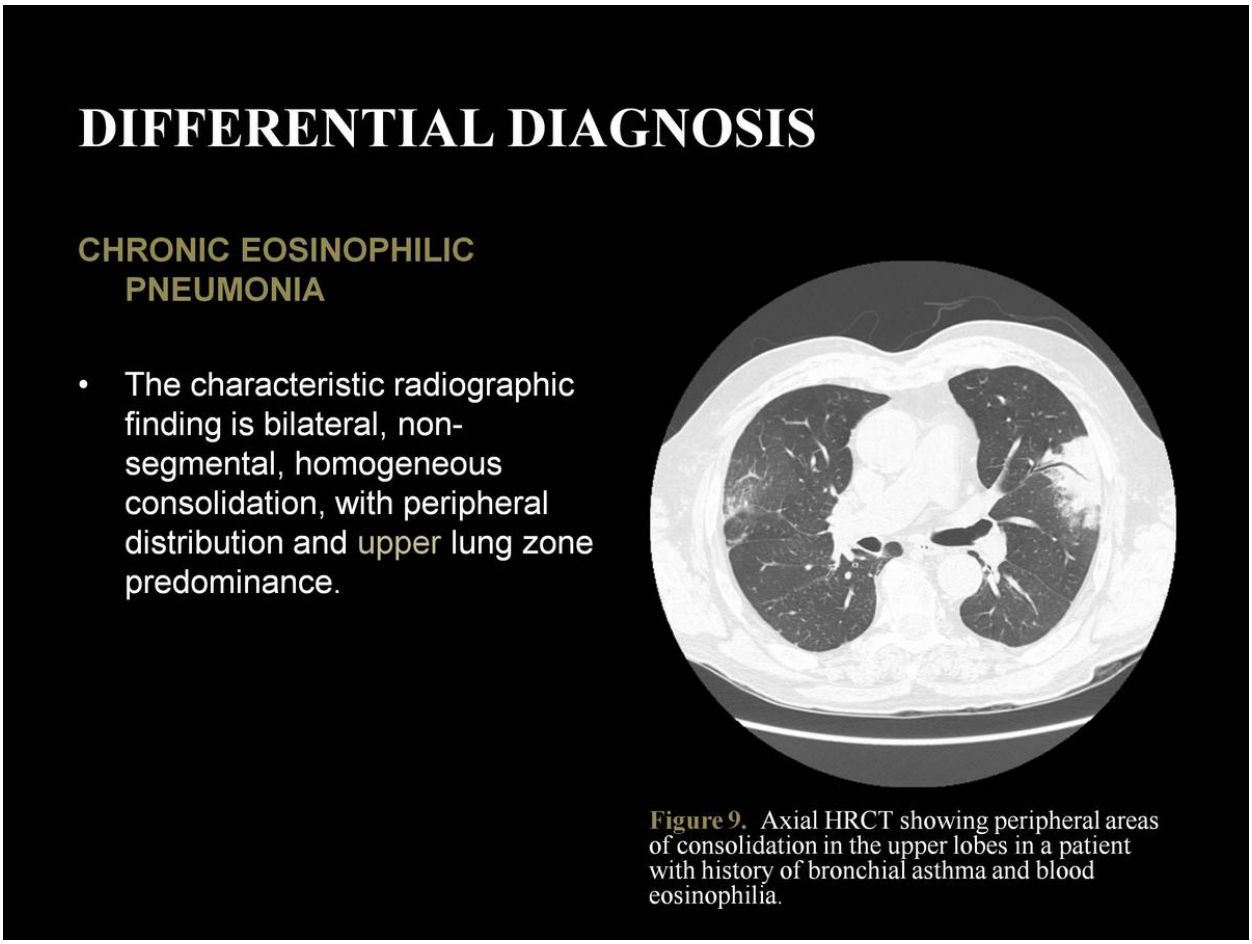

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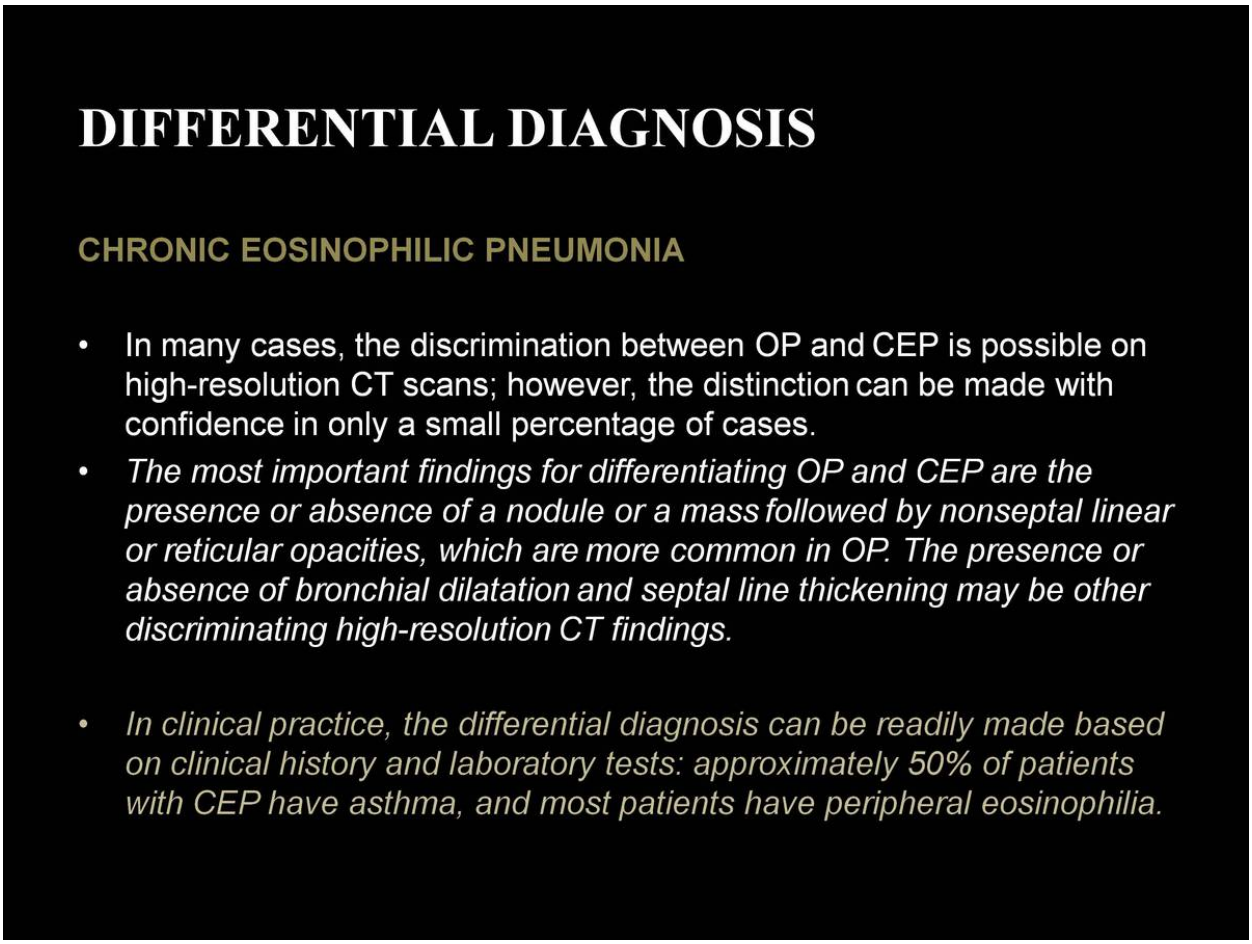

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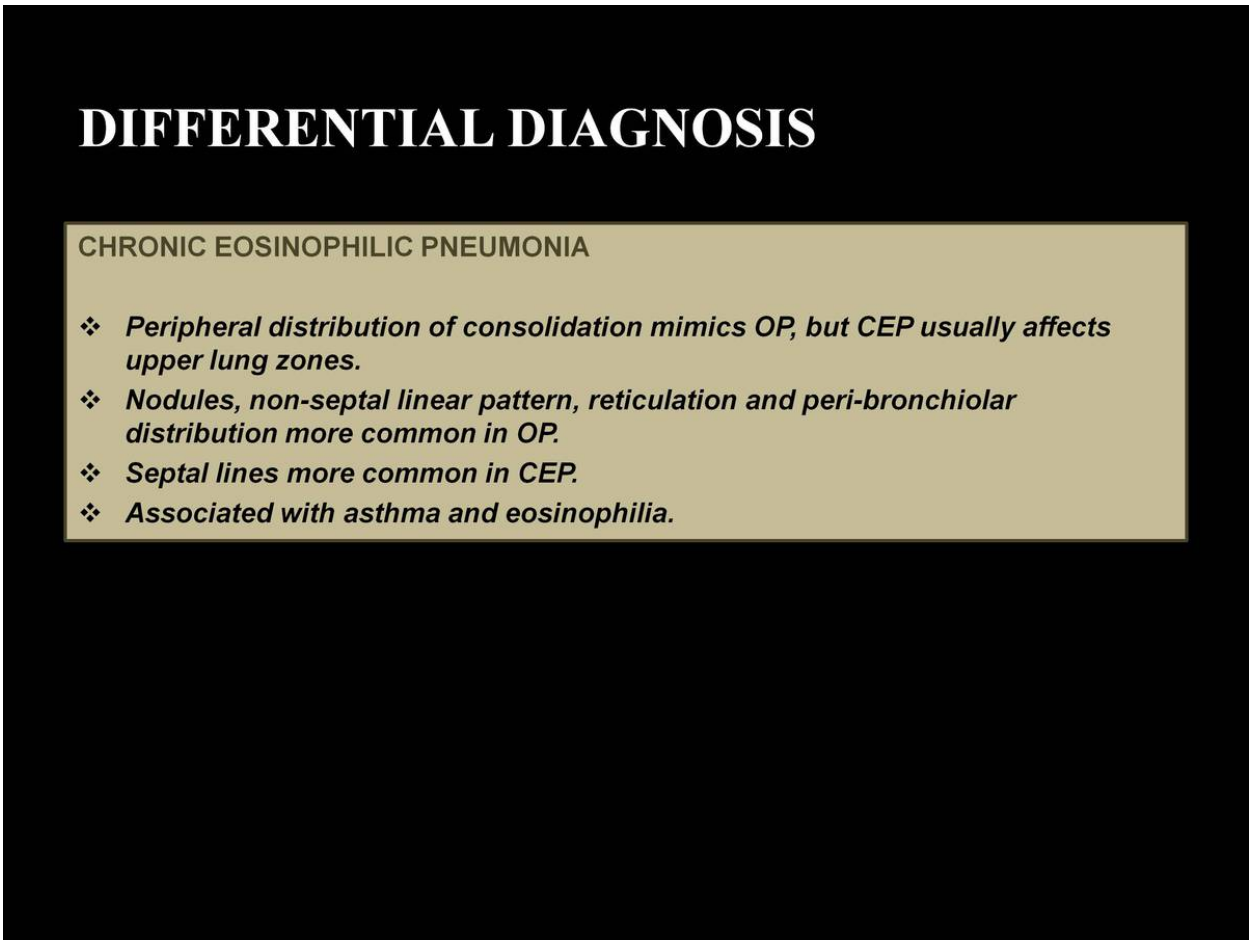

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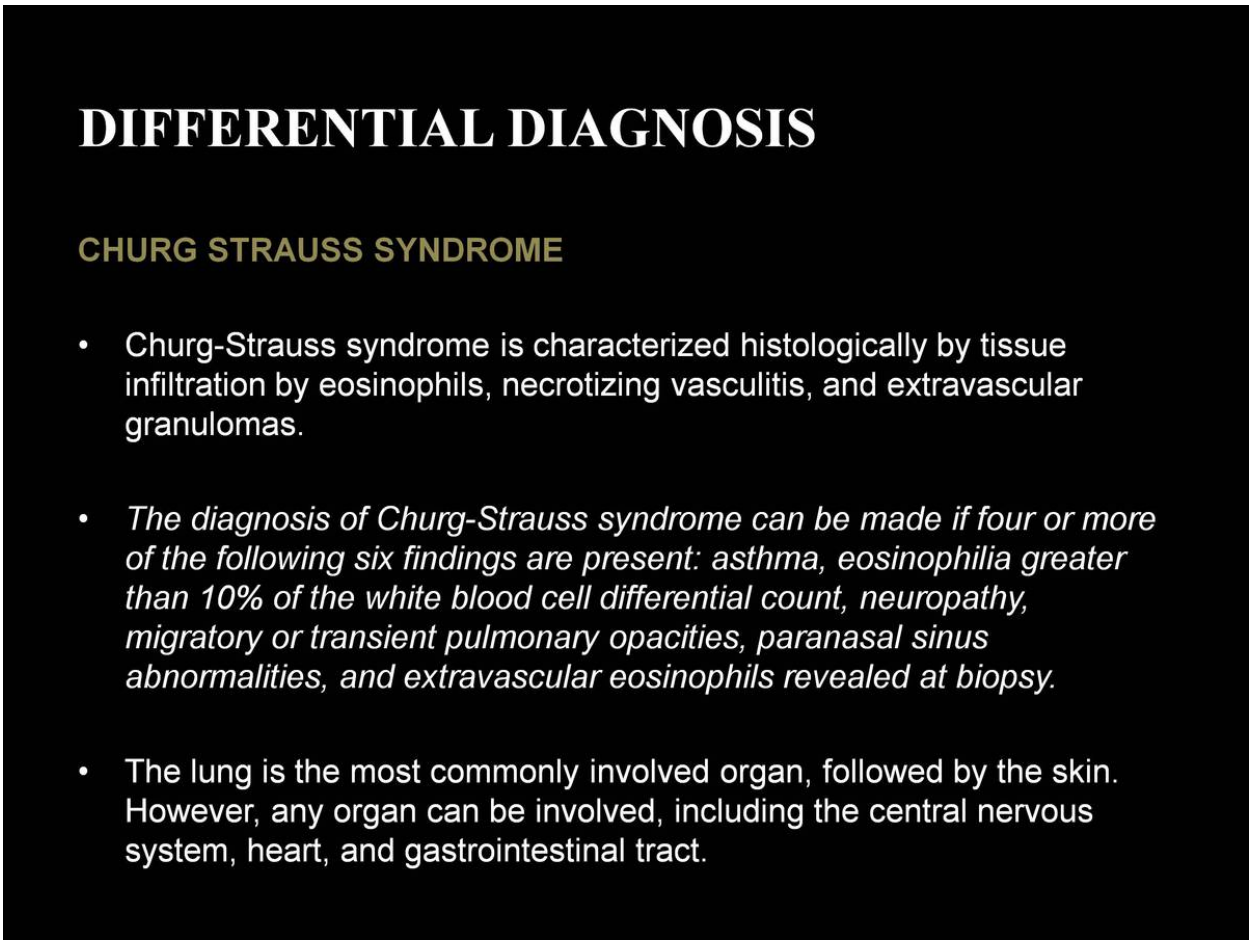

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DIFFERENTIAL DIAGNOSIS

CHURG STRAUSS SYNDROME

- At radiography, Churg-Strauss syndrome usually appears as bilateral nonsegmental consolidation or reticulonodular opacities.
- The most common thin-section CT findings include sub-pleural ground-glass opacity or consolidation with a lobular distribution, centrilobular nodules, bronchial wall thickening, and interlobular septal thickening.
- Less common findings include hyperinflation, mediastinal or hilar lymphadenopathy, and pleural or pericardial effusion.

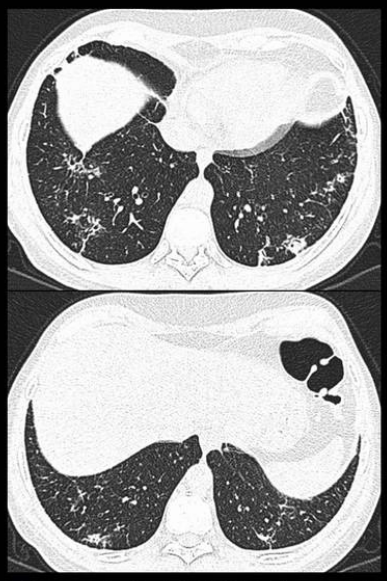

Figure 10. Axial HRCT shows subpleural focal lobular consolidation, centrilobular nodules and bronchial wall thickening in both lung bases in an asthmatic patient with arthralgias, skin rash and 43% peripheral eosinophilia.

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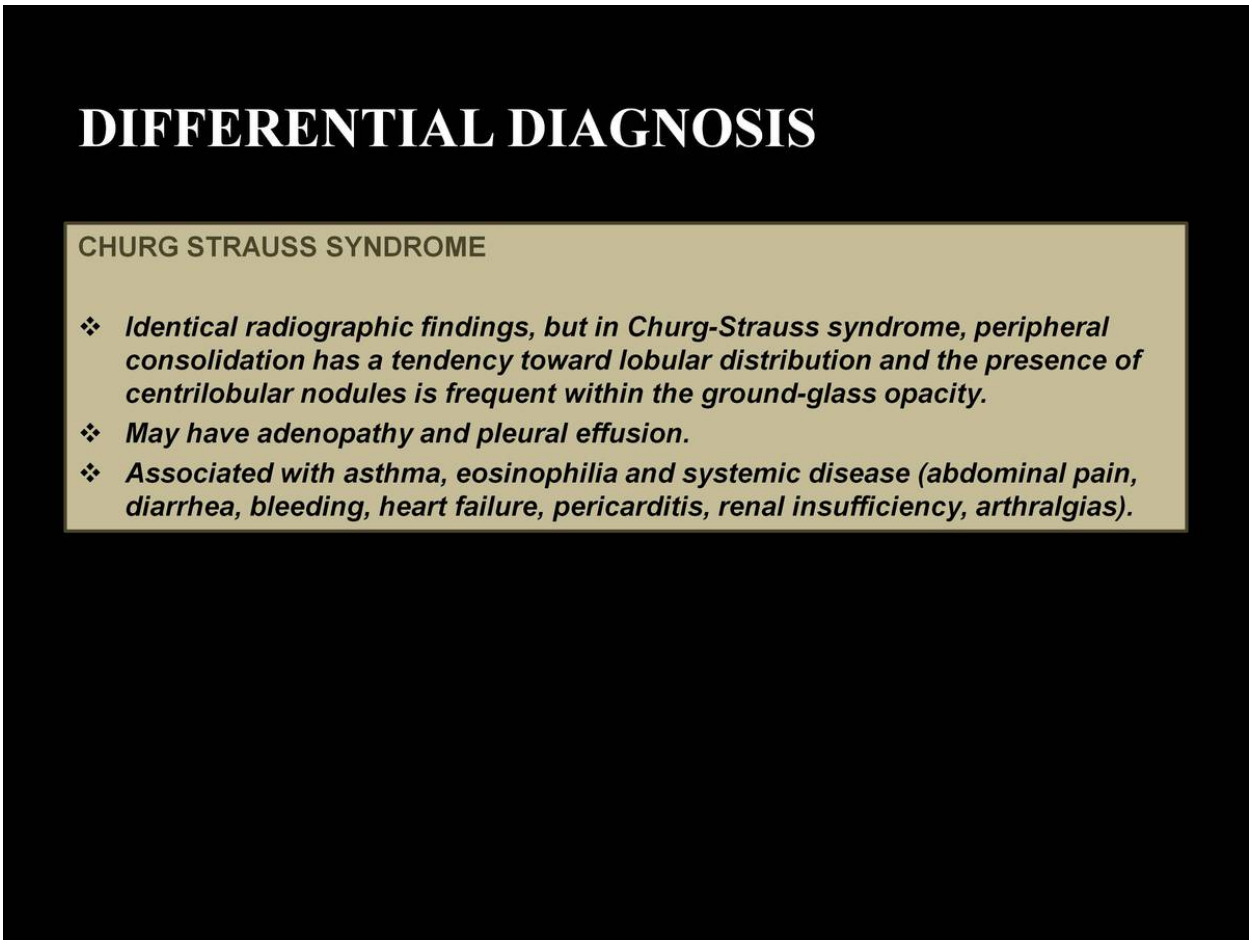

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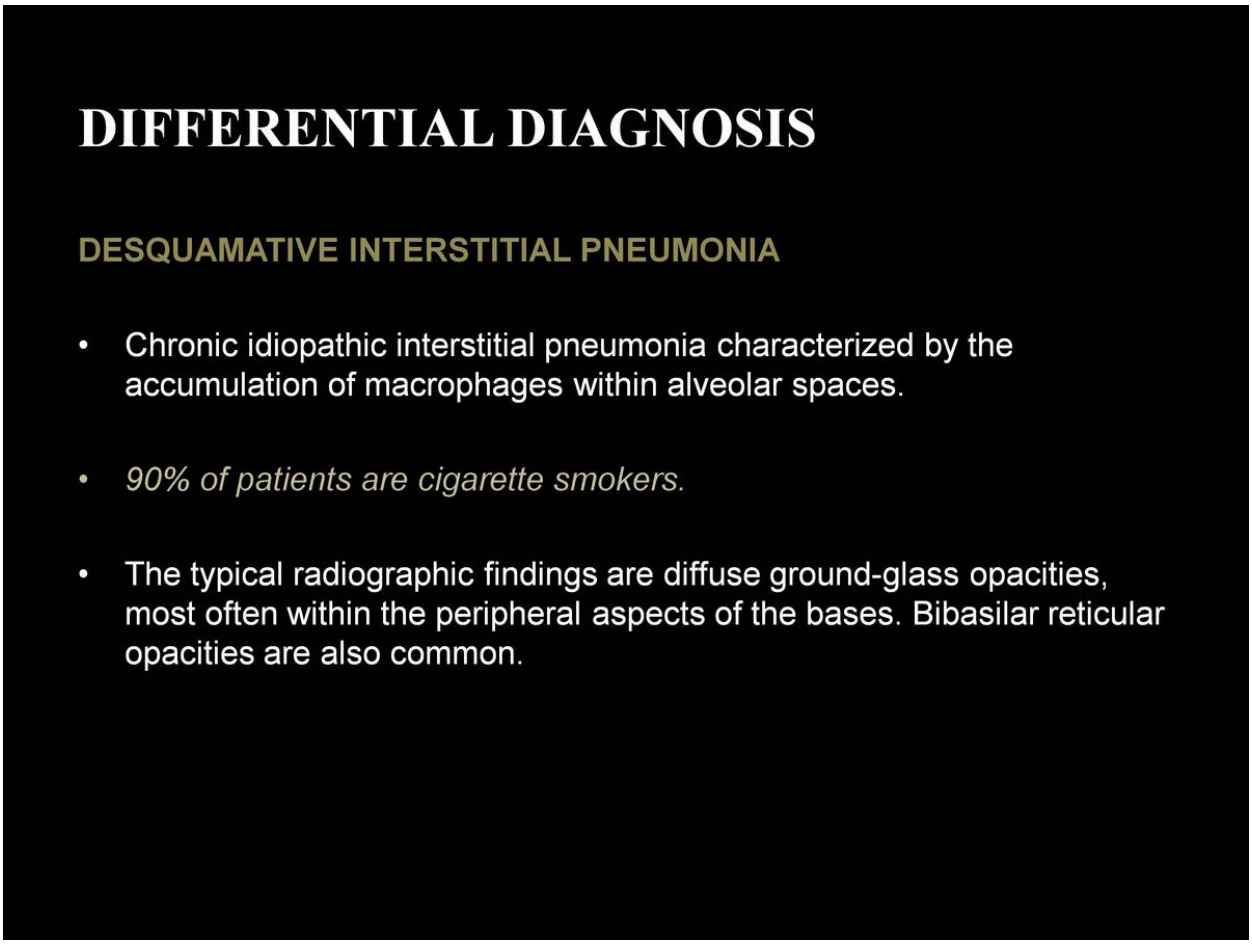

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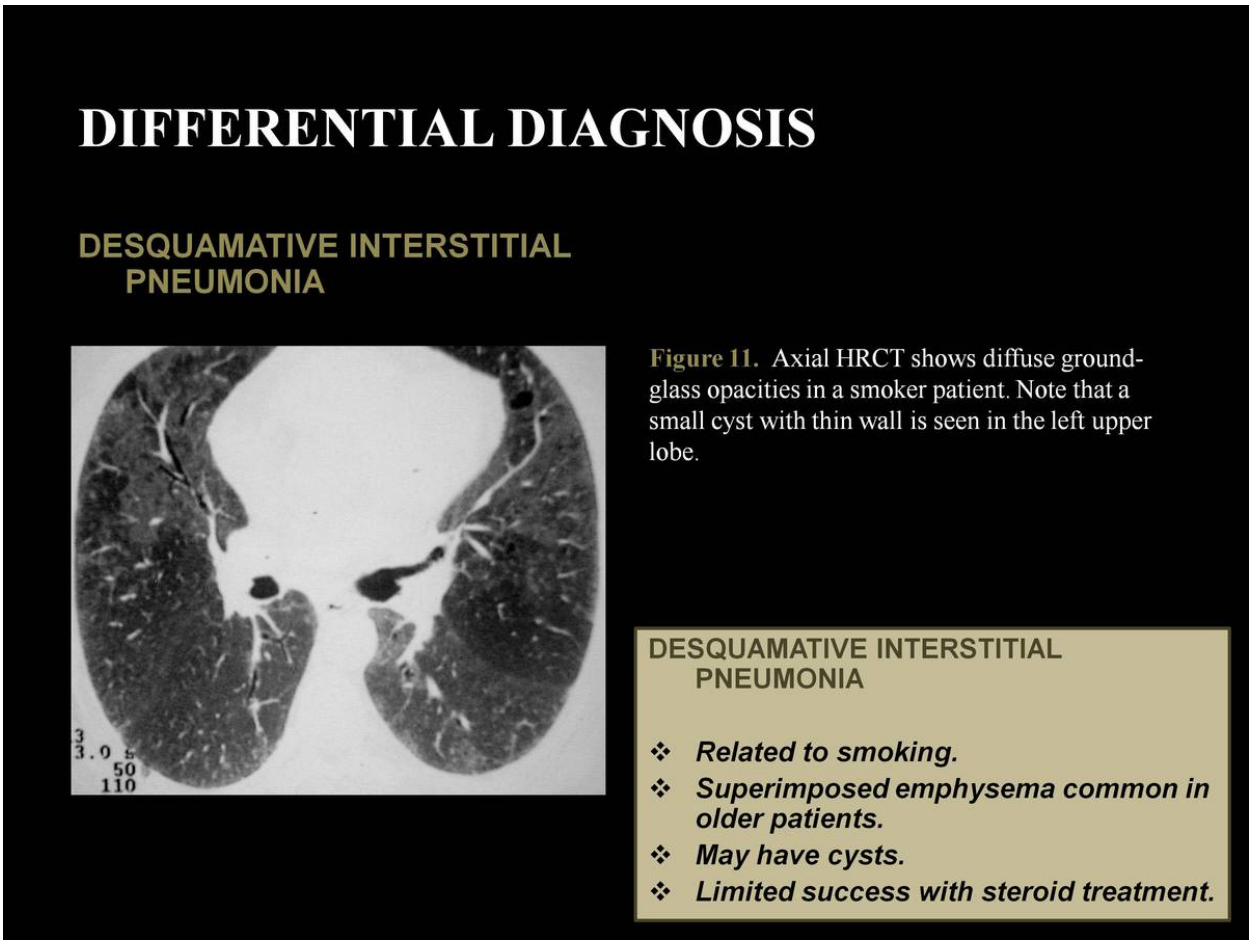

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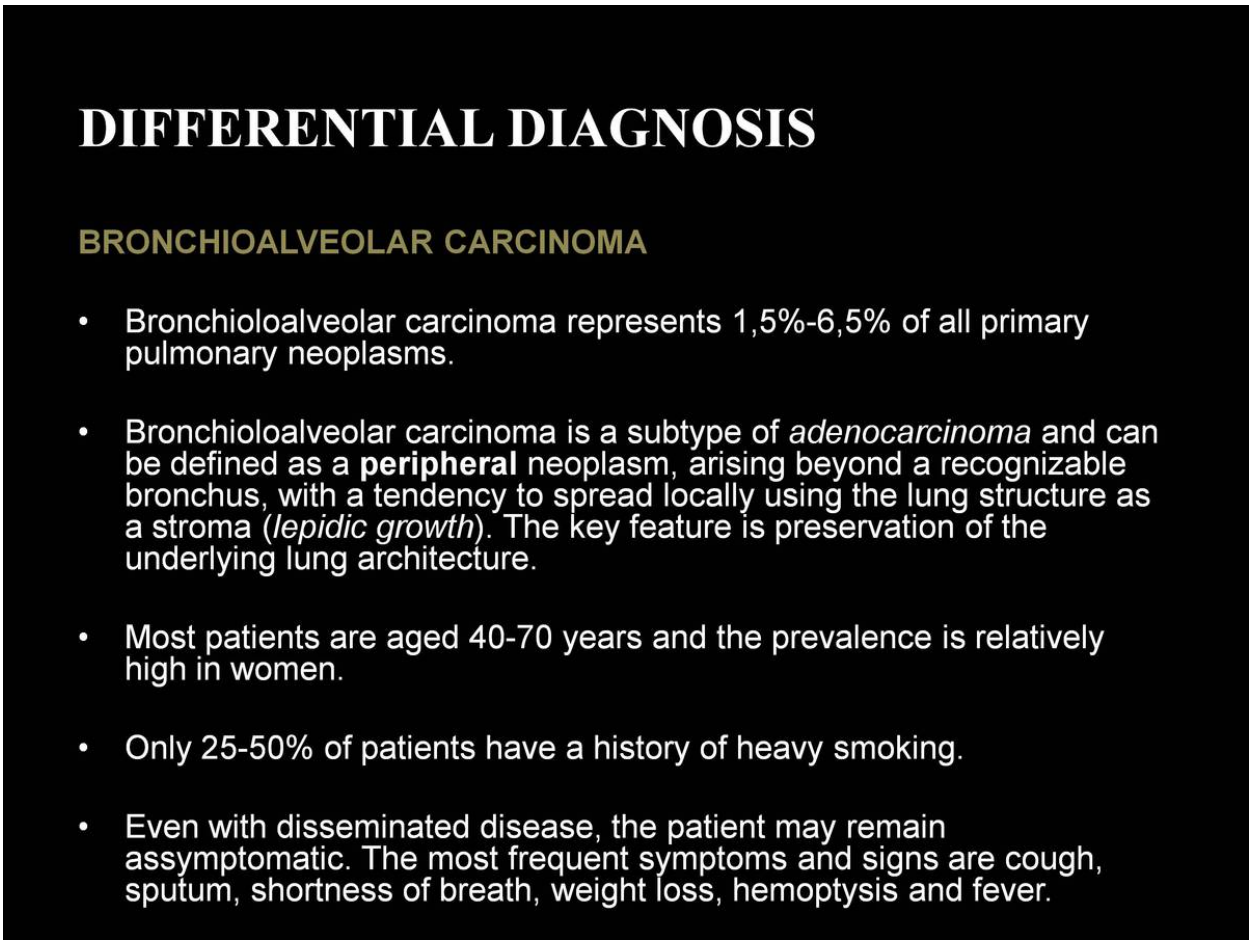

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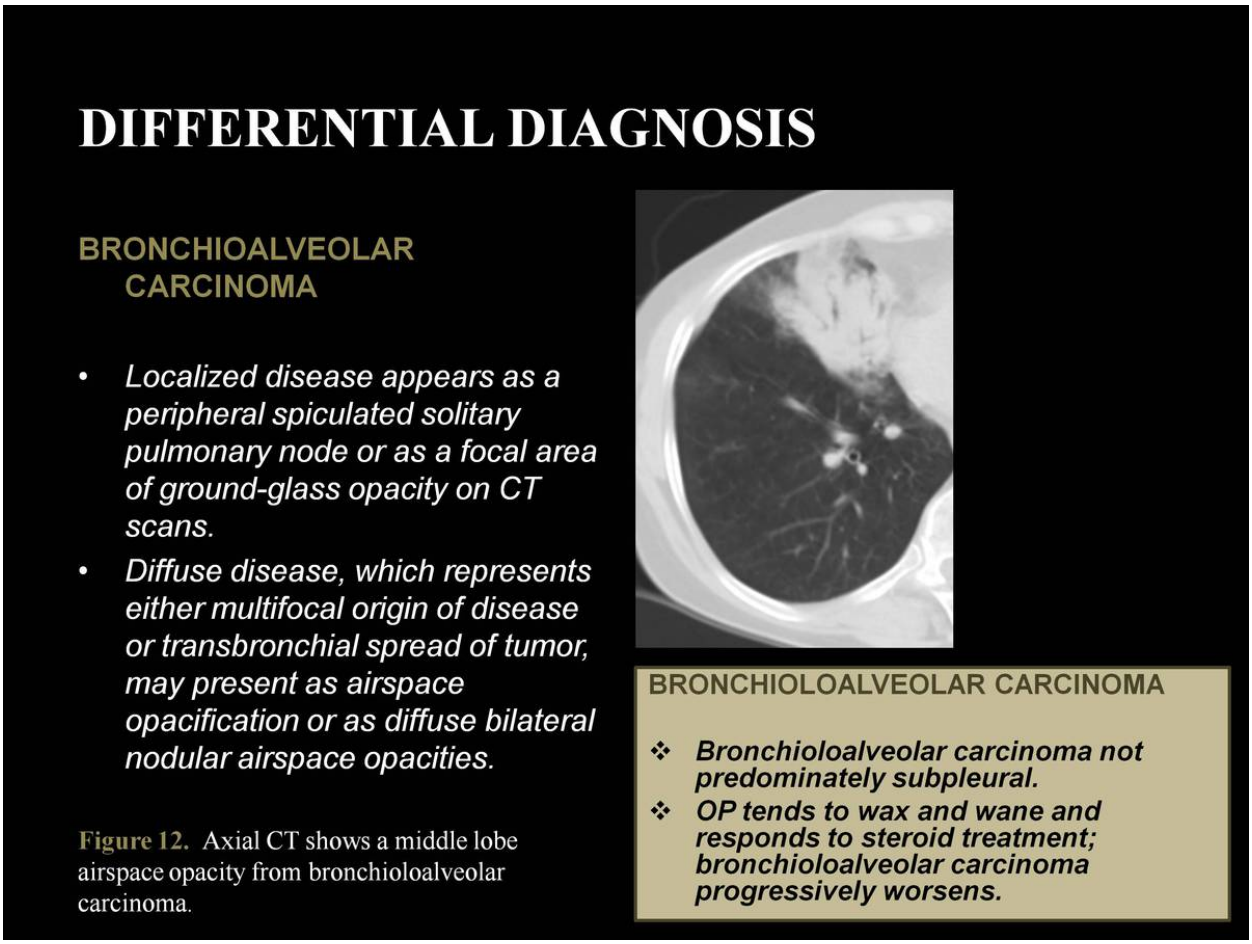

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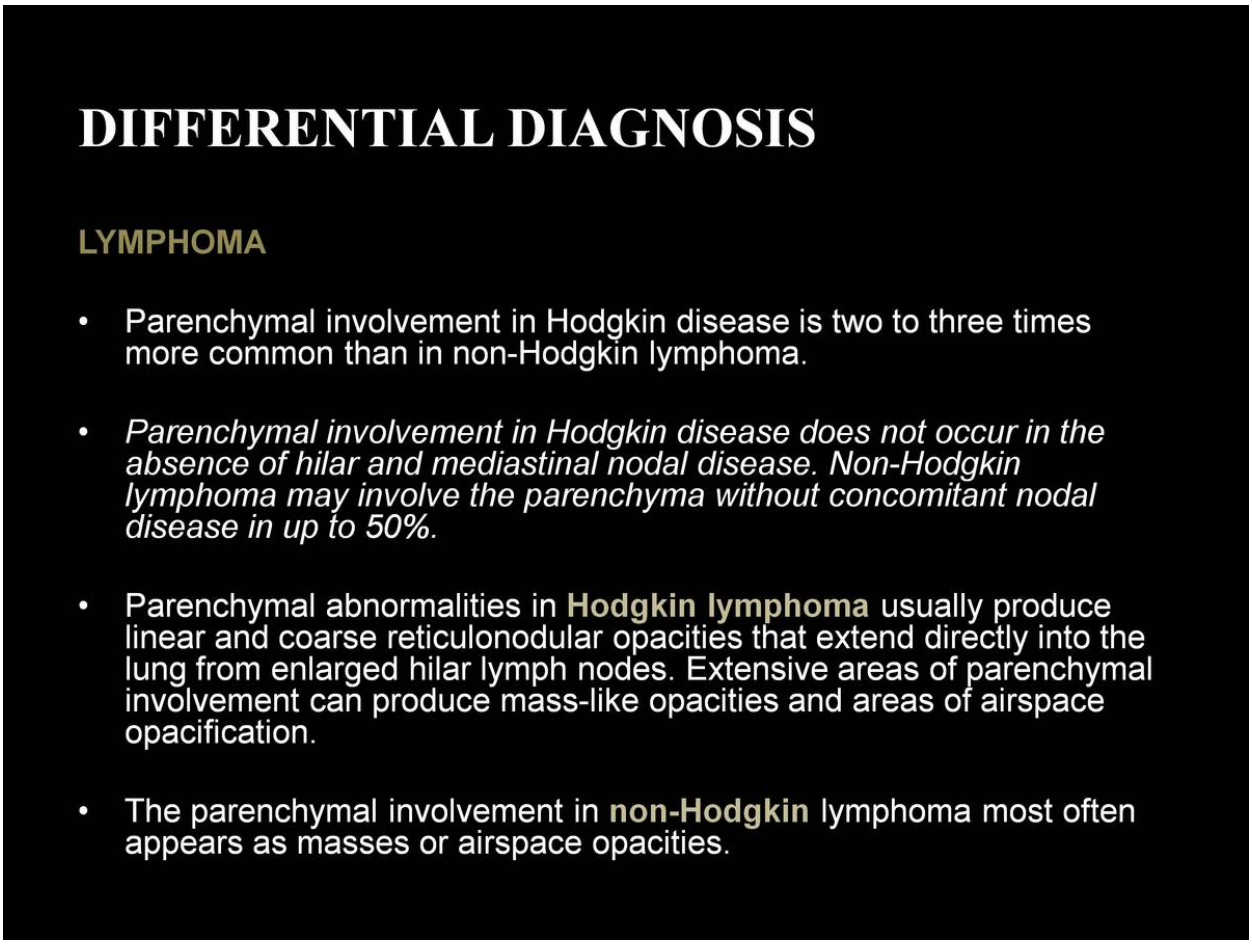

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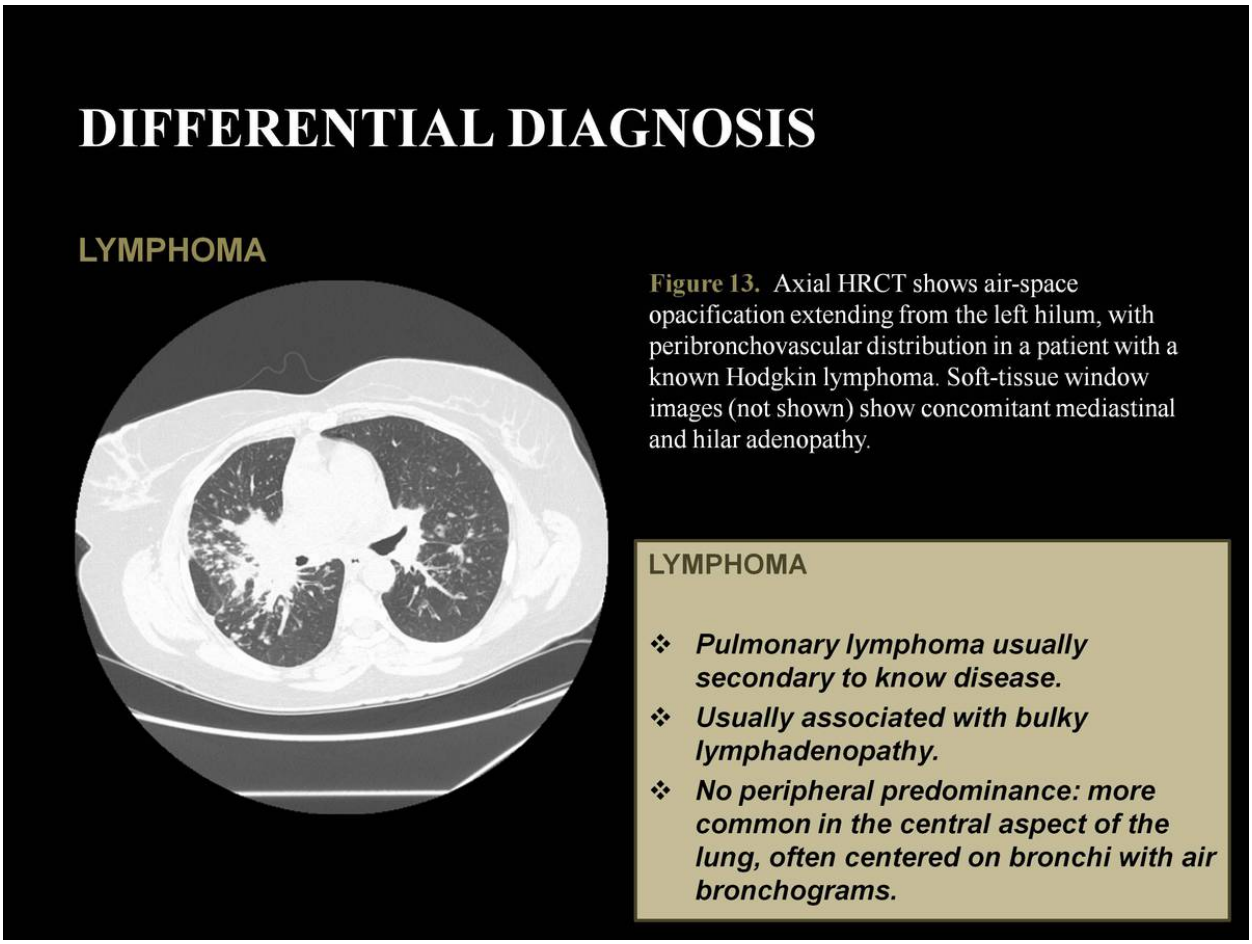

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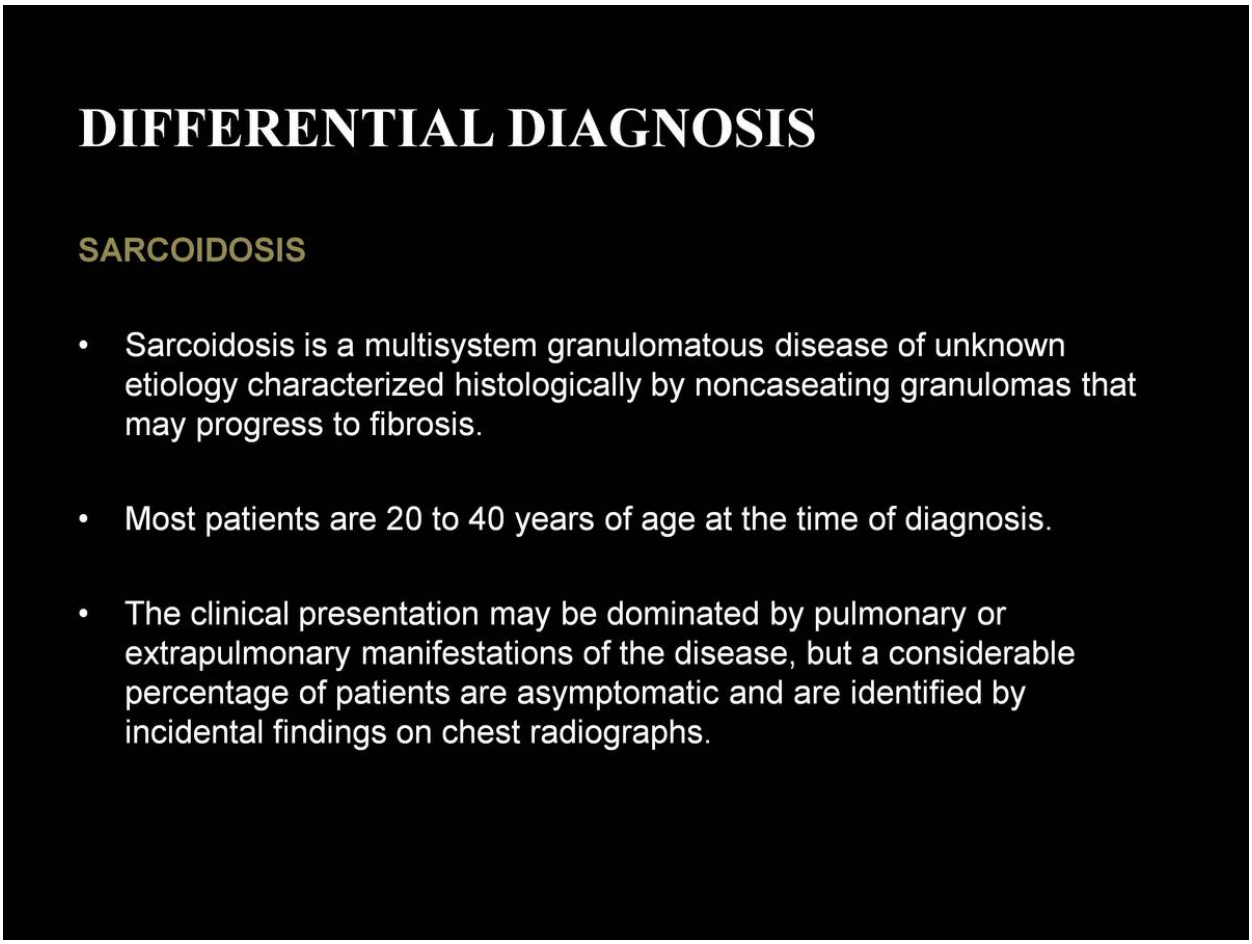

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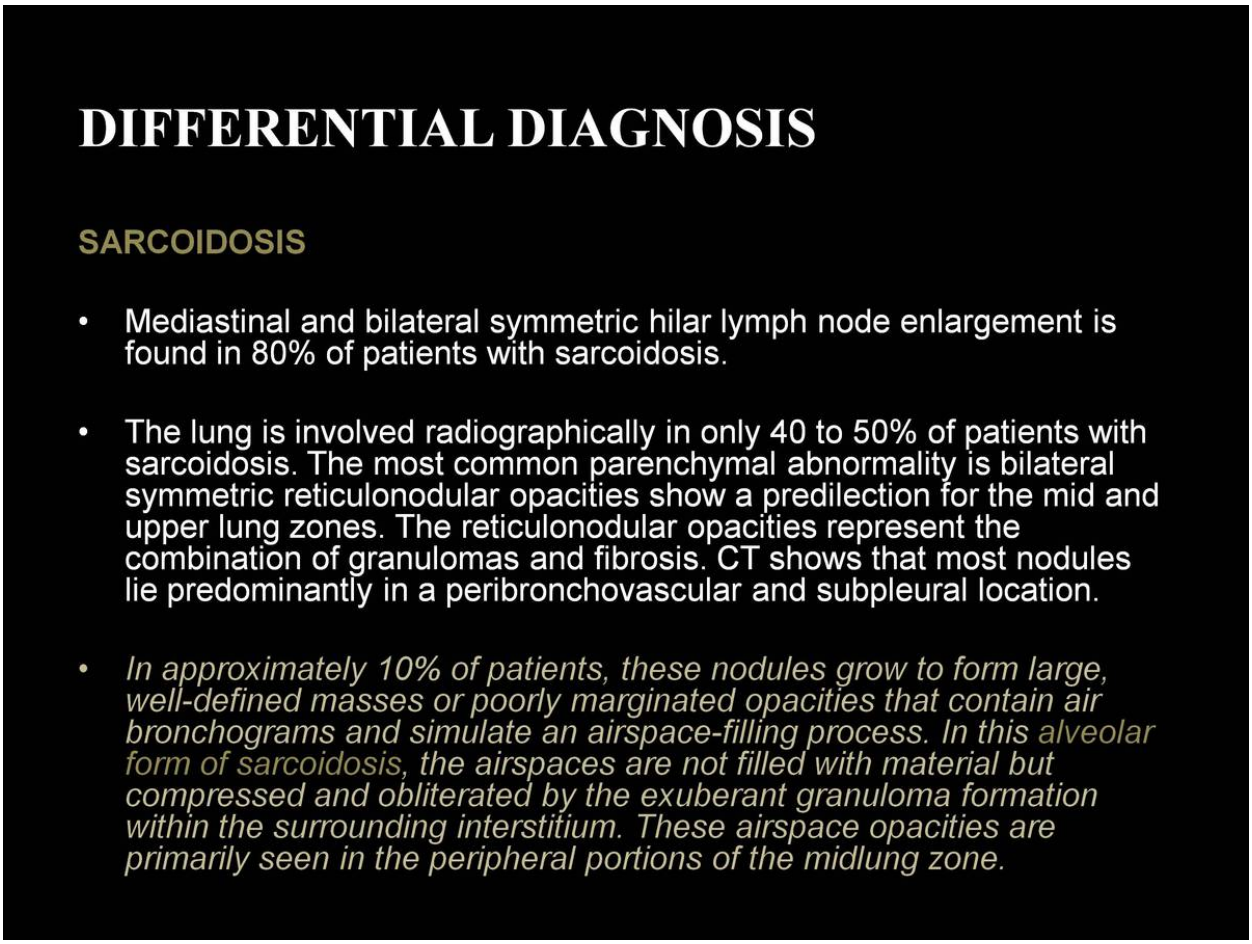

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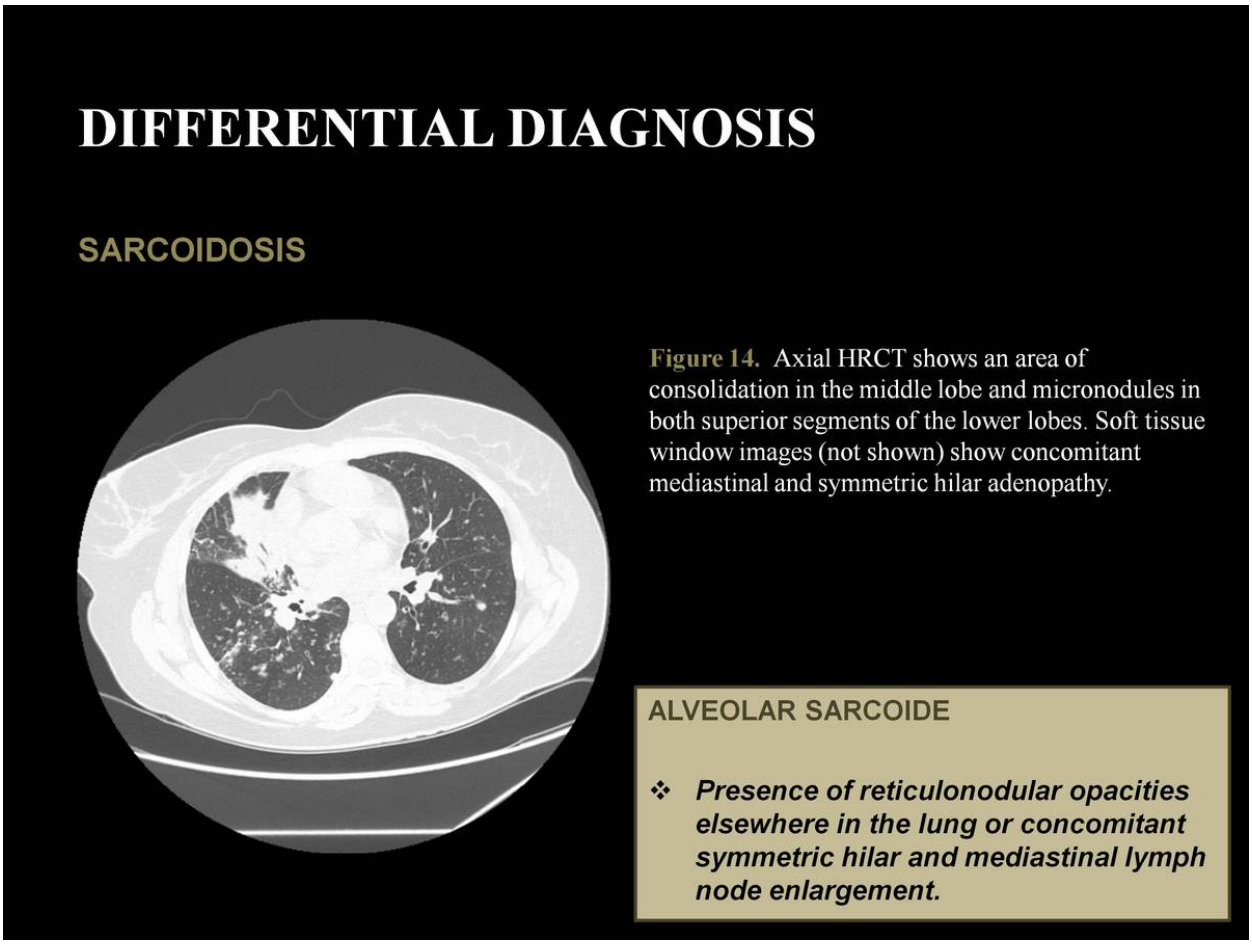

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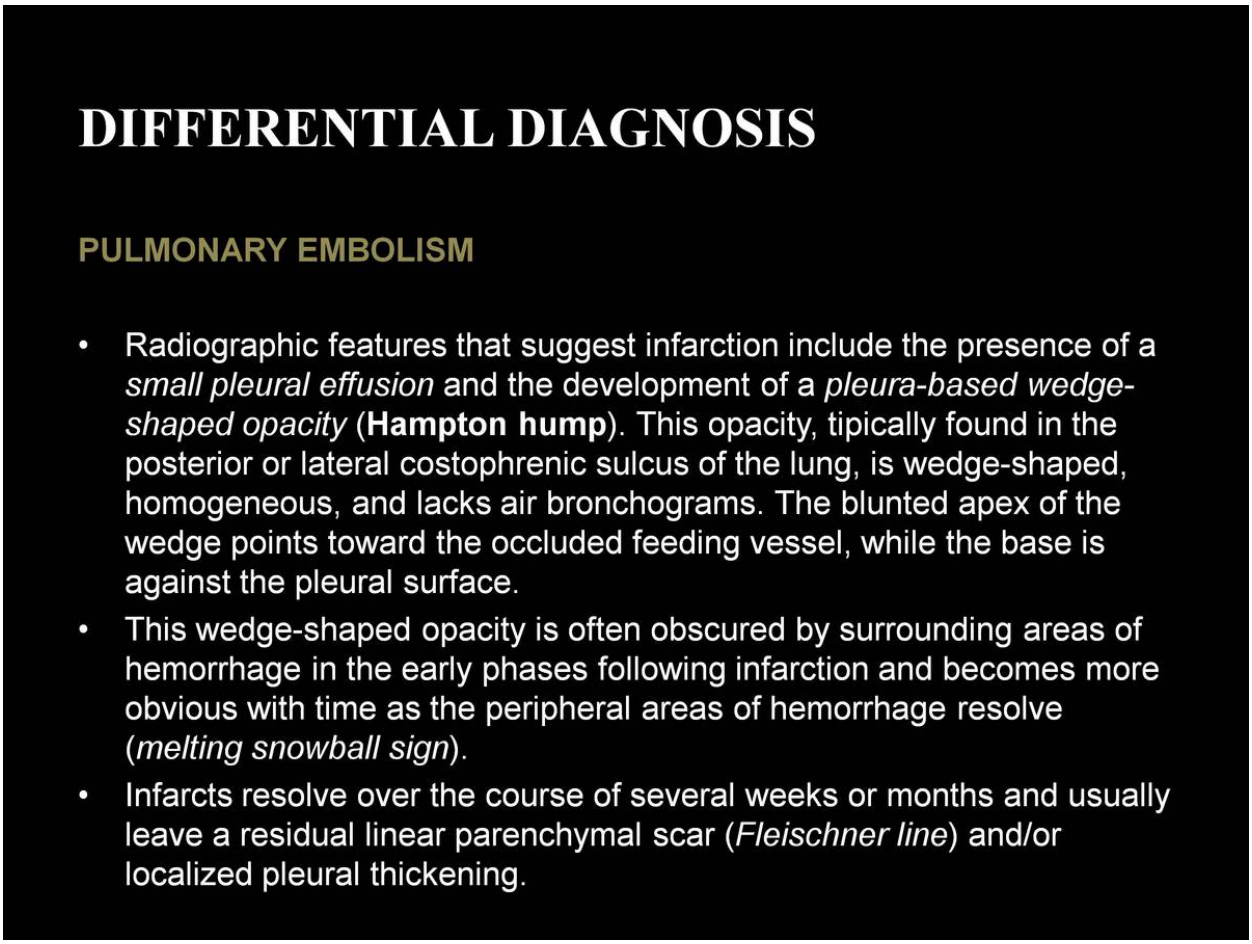
DIFFERENTIAL DIAGNOSIS

PULMONARY EMBOLISM

- Less than 10% of all embolic episodes result in *lung infarction*. Collateral bronchial arterial and retrograde pulmonary venous flow prevent infarction in most patients. Infarction from embolism occurs with greater frequency in patients with underlying heart failure because of their limited collateral bronchial arterial flow to the ischemic region.



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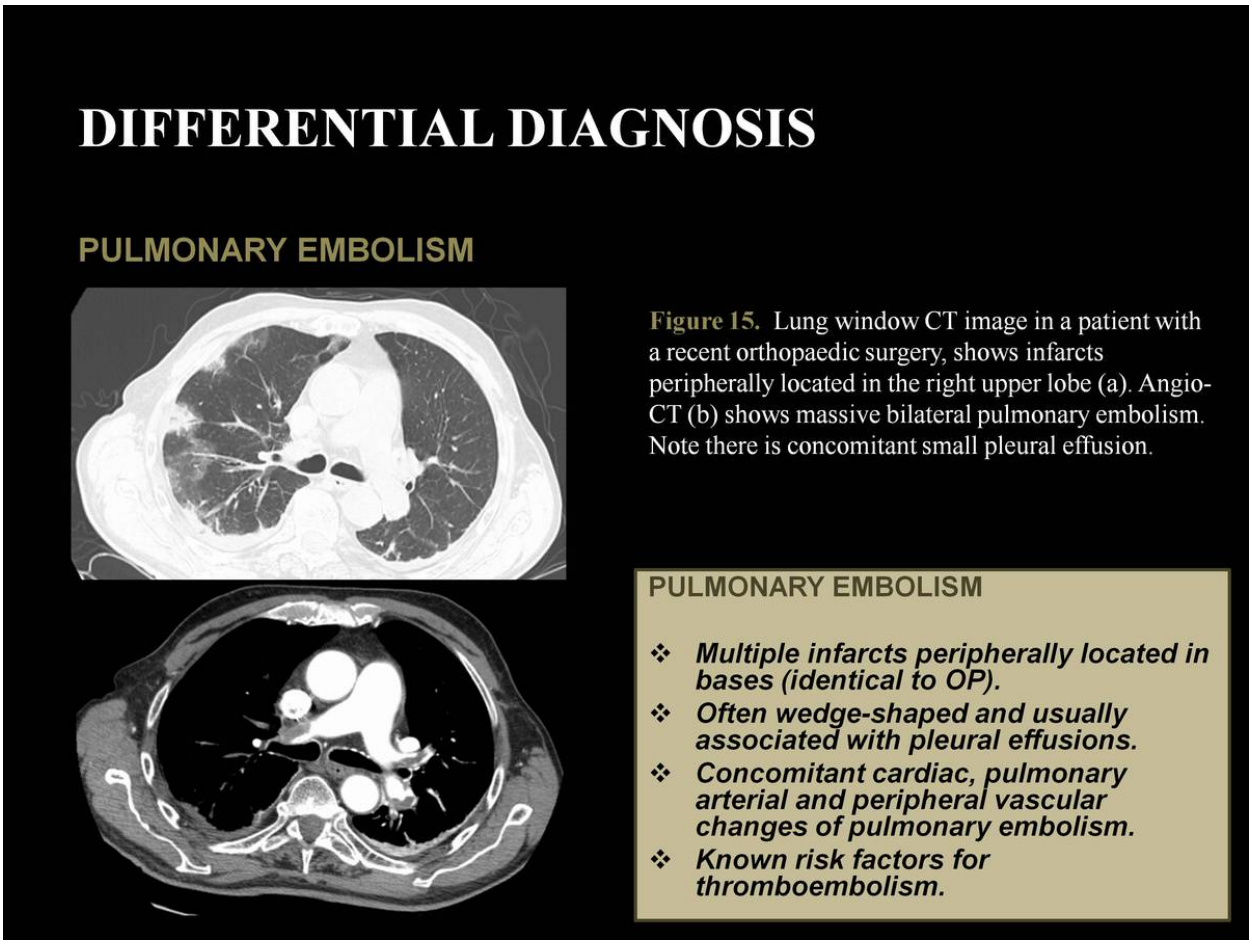

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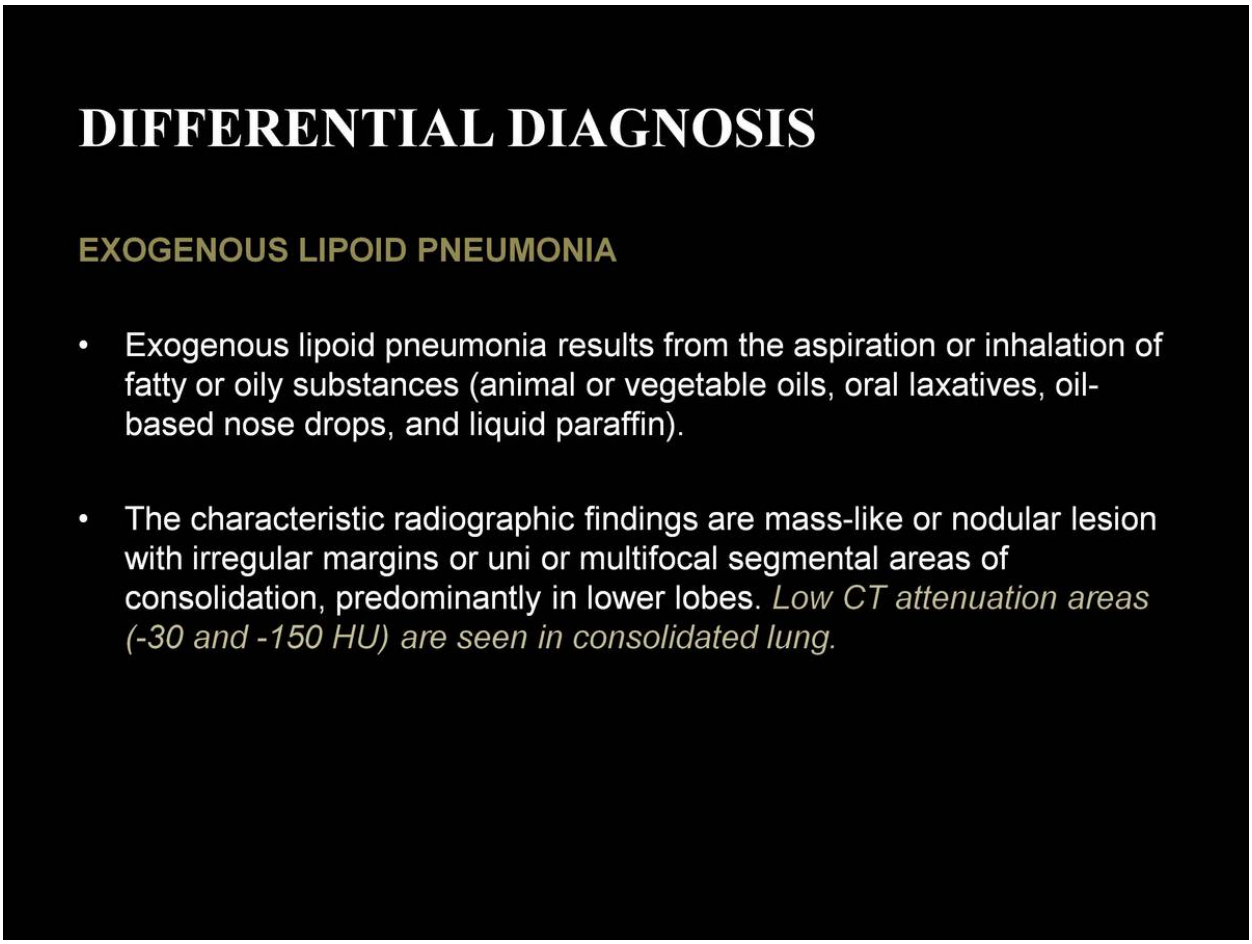

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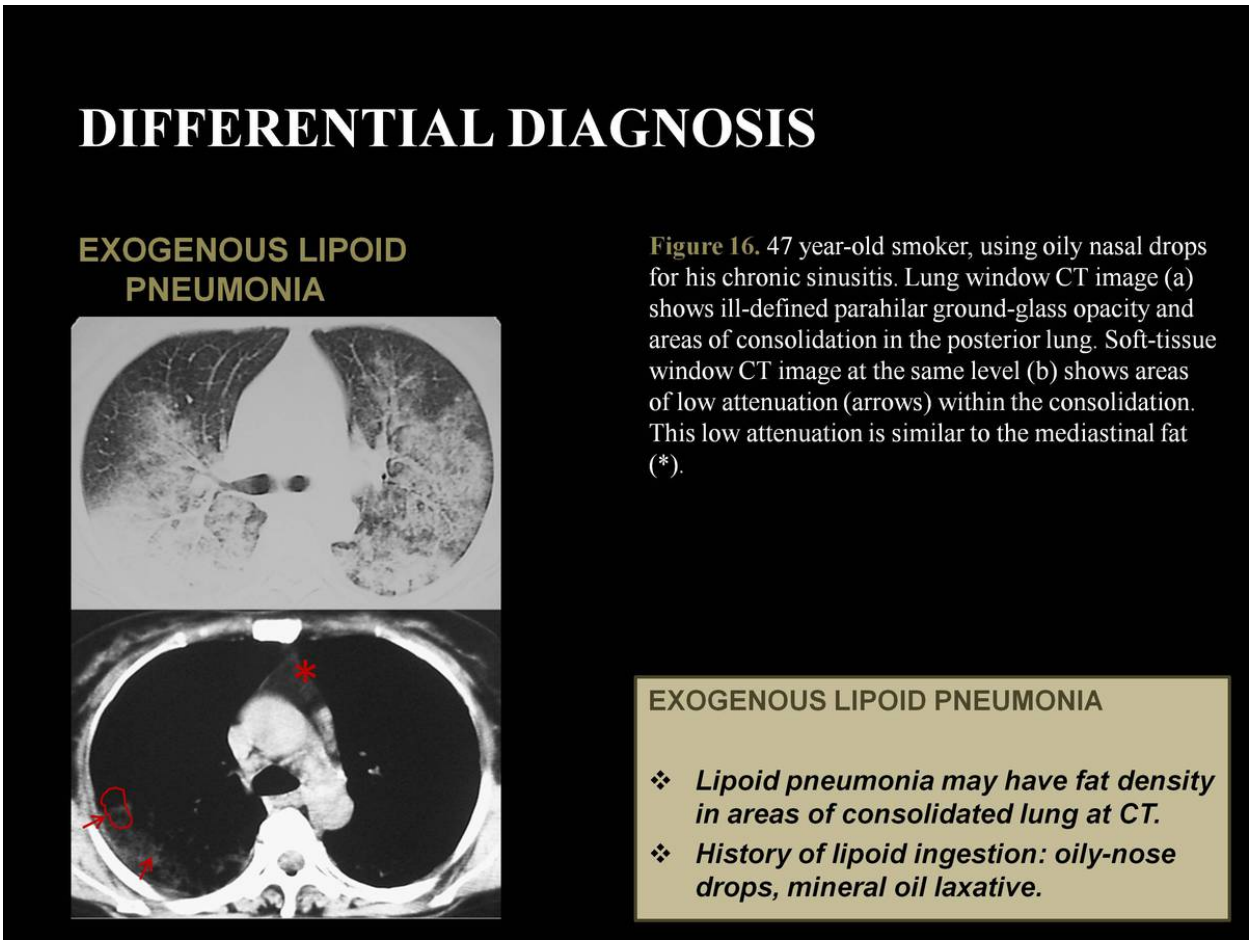

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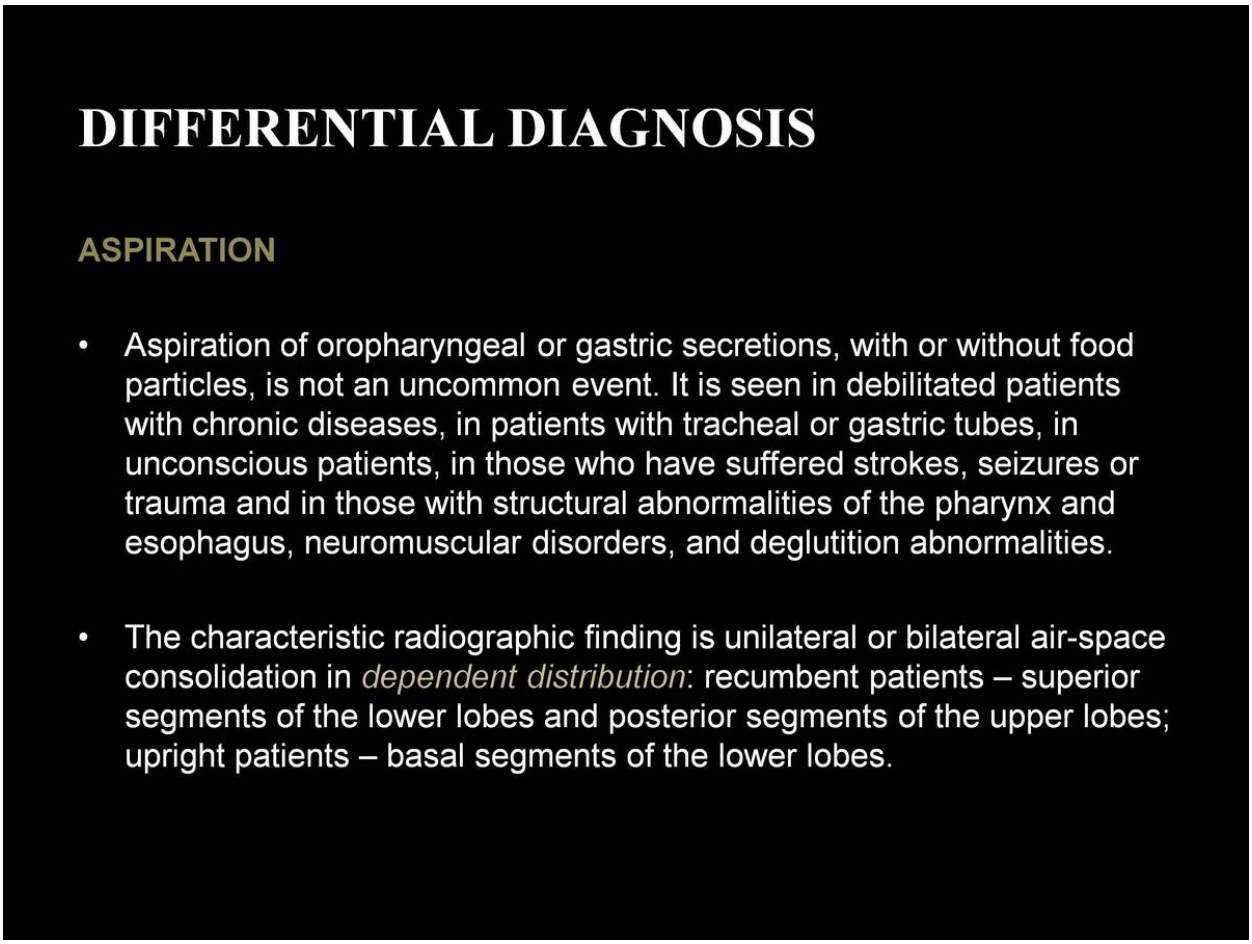

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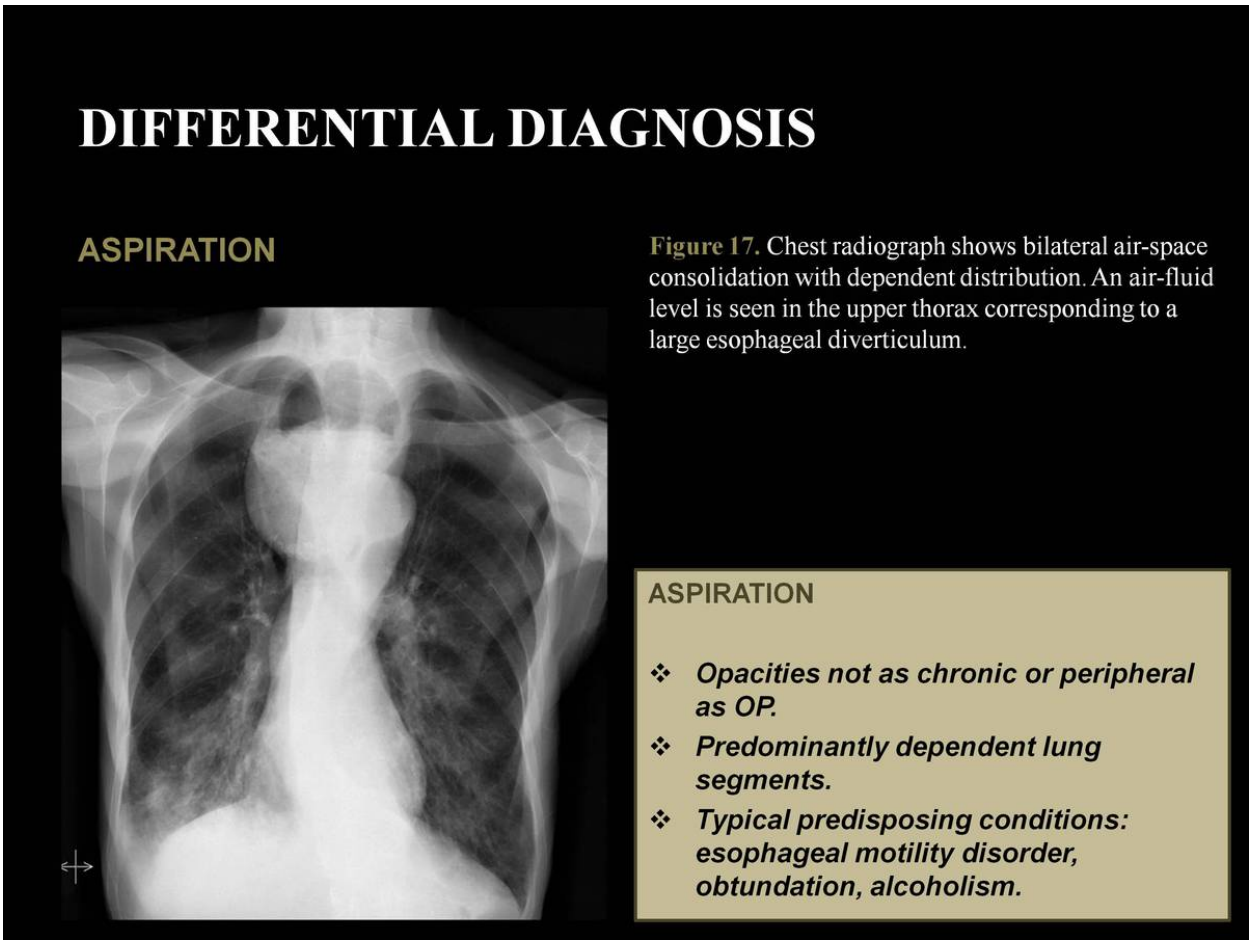

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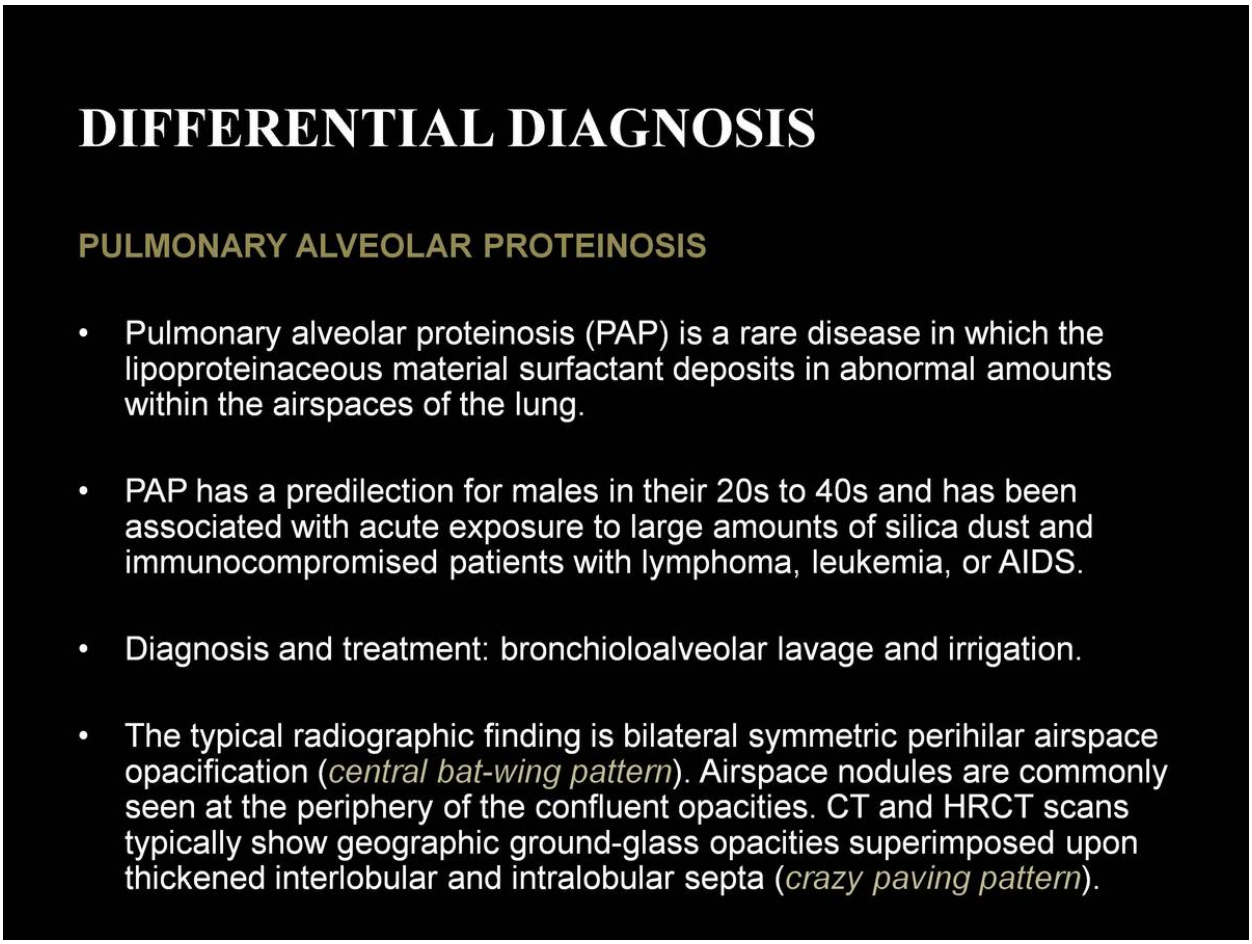

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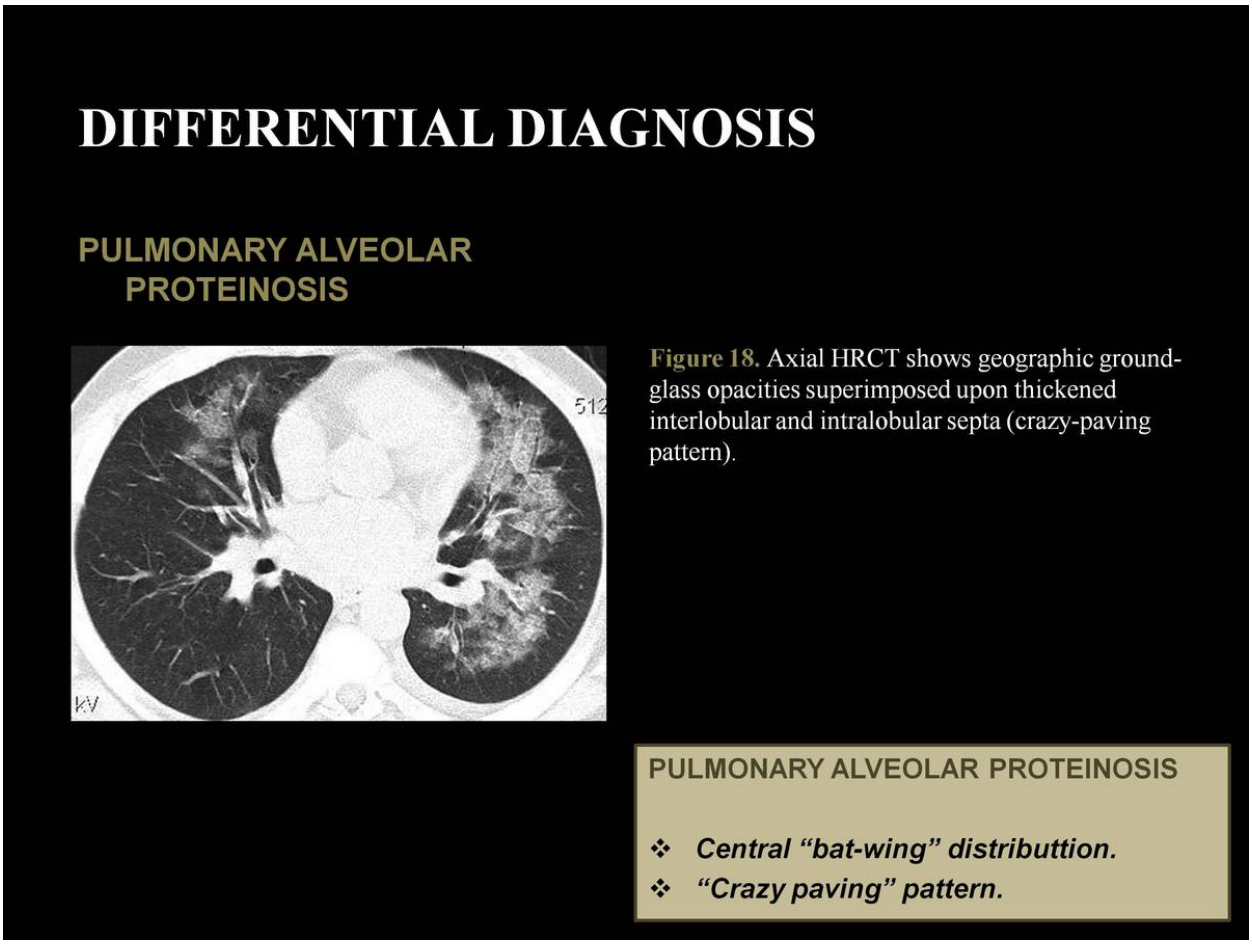

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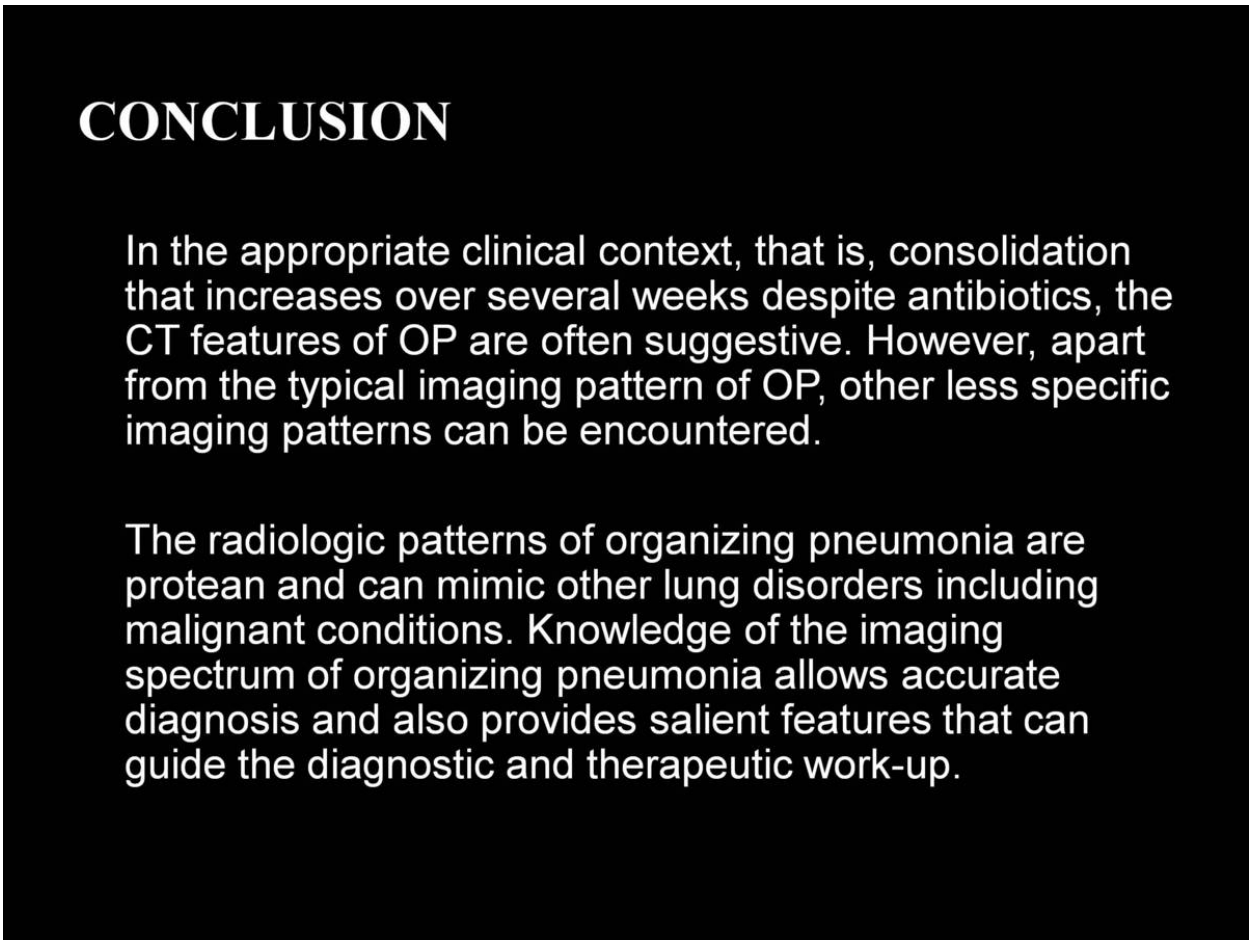
Conclusion



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