

# Pulmonary Non-Hodgkin Lymphoma

- Pulmonary involvement by NHL: Hematogenous, contiguous invasion, primary pulmonary lymphoma.
- Consider pulmonary lymphoma in patients with chronic multifocal nodules, masses, or consolidations not responsive to antimicrobials

# Definitions

- NHL accounts for 85-90% of all lymphomas
- 40-45% of patients present with intrathoracic disease
- NHL can involve lungs in 3 ways
  - Hematogenous dissemination of NHL
  - Contiguous invasion from hilar or mediastinal lymph nodes
  - Primary pulmonary NHL
    - 0.4% of all lymphomas
    - Clonal lymphoid proliferation affecting 1 or both lungs in patient with no detectable extrapulmonary involvement at diagnosis or during subsequent 3 months

# Etiology

- **Bronchial MALT lymphoma:** Chronic antigenic stimulation in autoimmune disorders
  - Sjögren syndrome
  - Systemic lupus erythematosus
  - Multiple sclerosis
- High-grade B-cell primary pulmonary NHL
  - Solid organ transplantation with immunosuppression
  - Human immunodeficiency virus (HIV) infection
  - Sjögren syndrome
  - Epstein-Barr virus (EBV) infection

# CT

- Solitary or multiple **pulmonary nodules/masses**
  - Well-defined or ill-defined margins
  - $\pm$  cavitation
  - $\pm$  air bronchograms
- **Airspace opacity**
  - **Consolidation with air bronchograms**
  - Ground-glass opacities  $\pm$  interlobular septal thickening
  - Ill-defined opacities along bronchovascular bundles and interlobular septa
  - Atelectasis or postobstructive pneumonia from airway obstruction/compression by adjacent lymphadenopathy
- Endobronchial tumor (rarely)
  - Lobar atelectasis
- Lymphadenopathy or mediastinal mass
- Pleural effusion



STATdX

Axial CECT of the same patient confirms middle and right lower lobe consolidations with intrinsic air bronchograms. Surgical biopsy revealed MALT lymphoma, which was treated with combination chemotherapy. The patient remained disease free 8 years later. Airway dilatation within lymphoma lesions on CT is considered a good prognostic sign for MALT lymphoma.

# Non-Hodgkin lymphoma (subcutaneous spread)



# Primary pulmonary lymphoma

