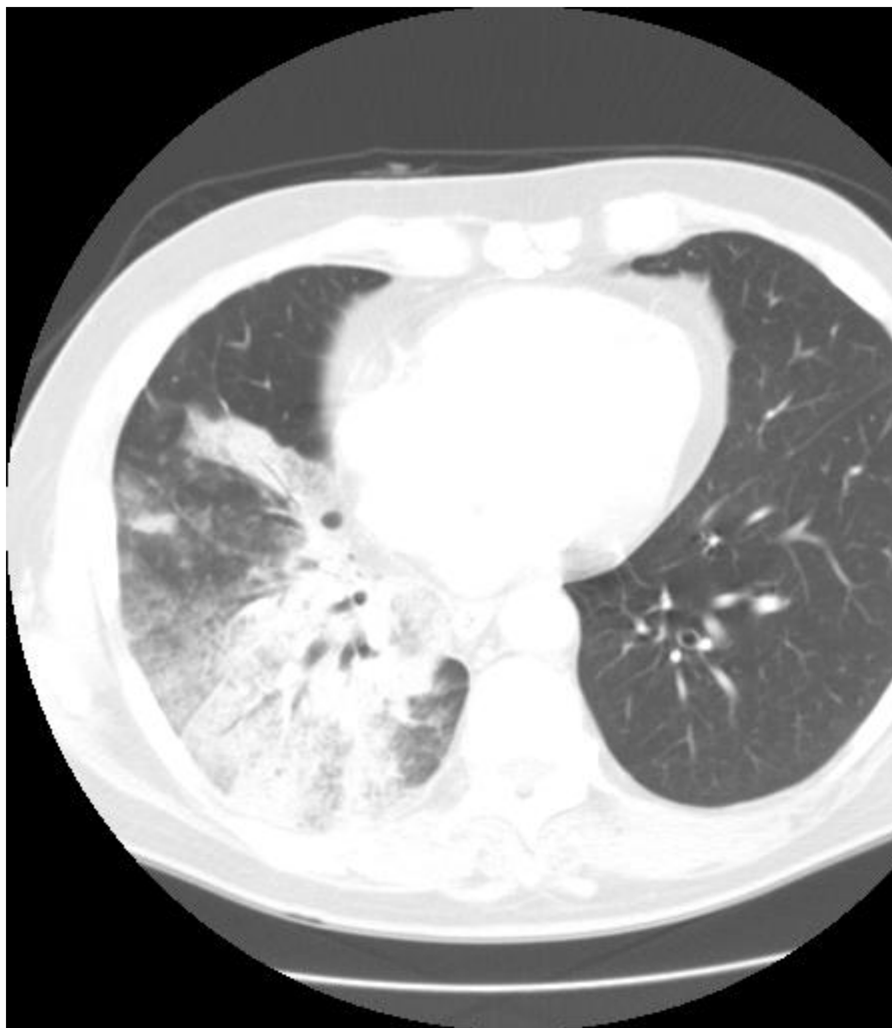
7/29/13

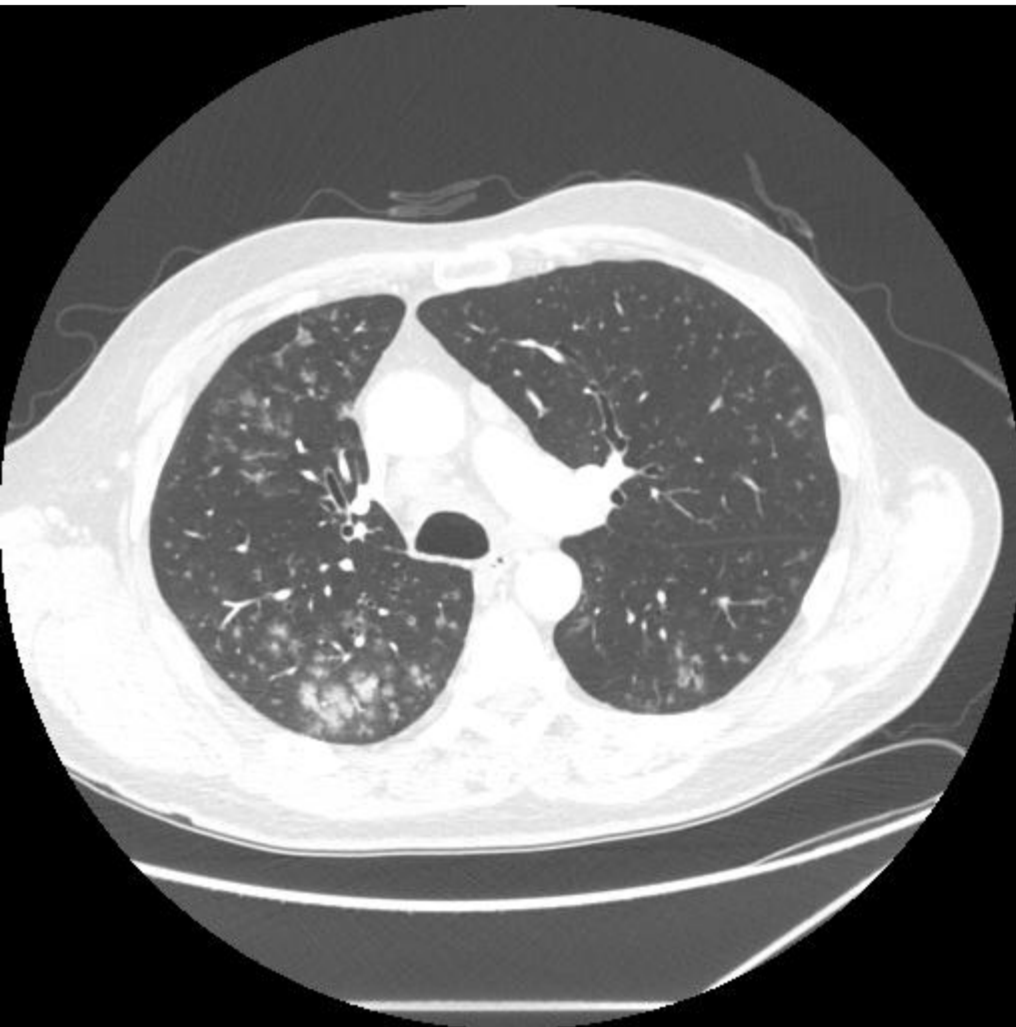
Hx

- 77M remote 17 pack-year smoking history, quit in 1973
- Presented June 2012 w/ palpitations
- CT chest – consolidative mass-like process right middle lobe of lung
- CT-guided biopsy planned but cancelled after radiologic resolution
- Ensuing year, persistent pneumonia of R lung
  - Cough but no fever, chills, or dyspnea

April 2013

June 2013

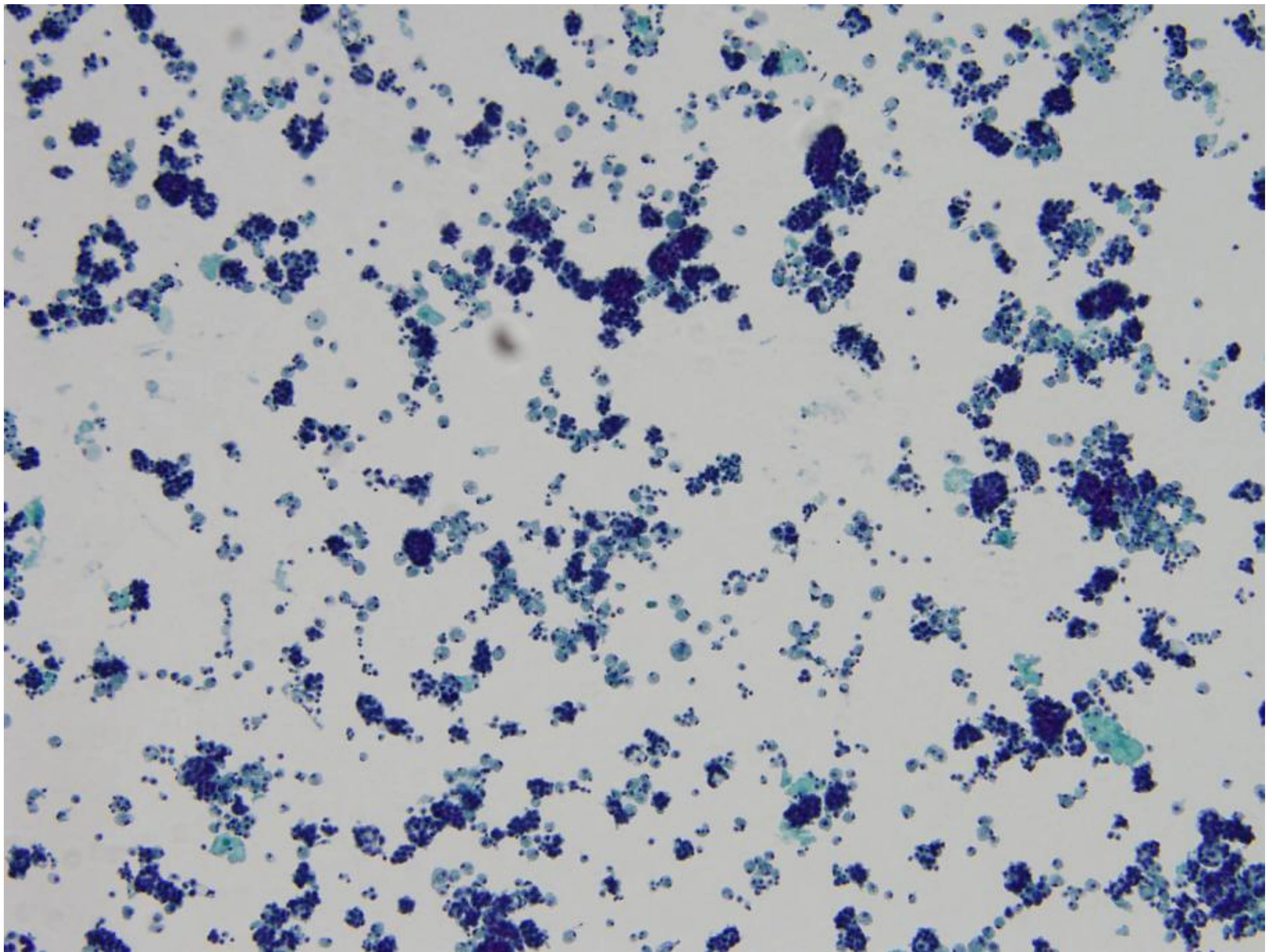


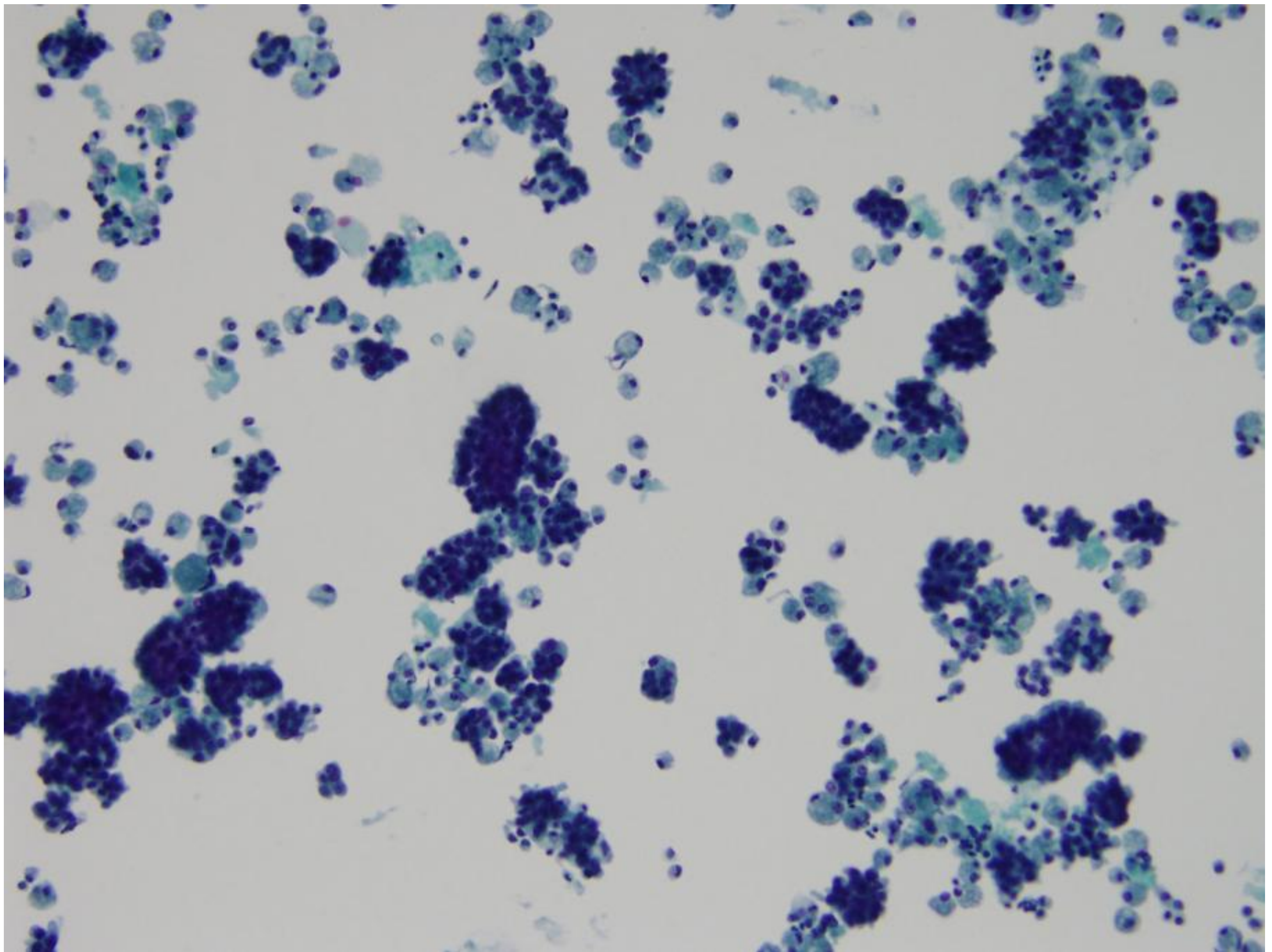


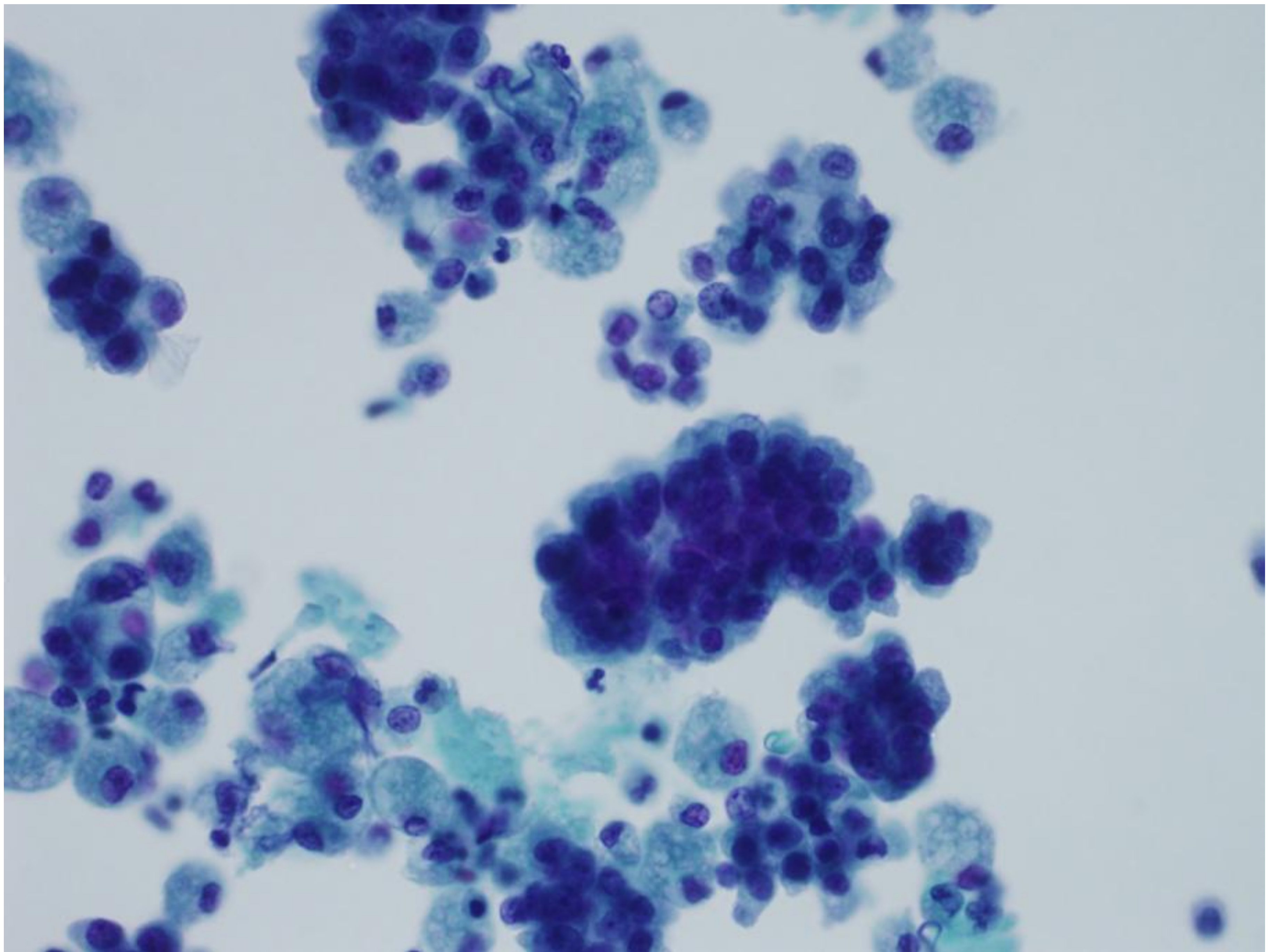
- Tree in bud nodularity predominantly within the posterior segment of the RUL, lingula and superior segment of the left lower lobe.
- spread of infection or multifocal carcinoma

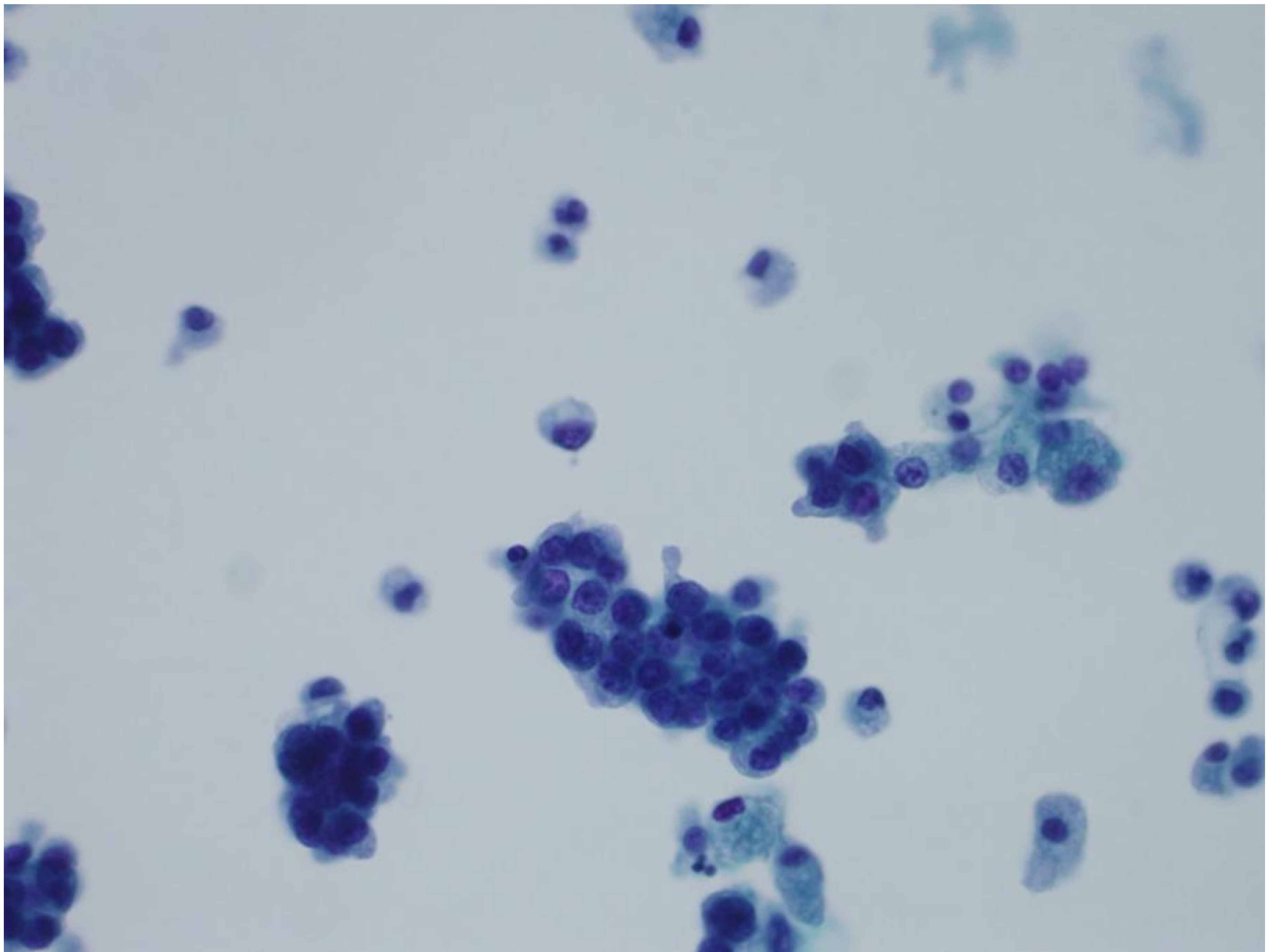
If disease is in RUL or LLL, pt. is not a surgical candidate

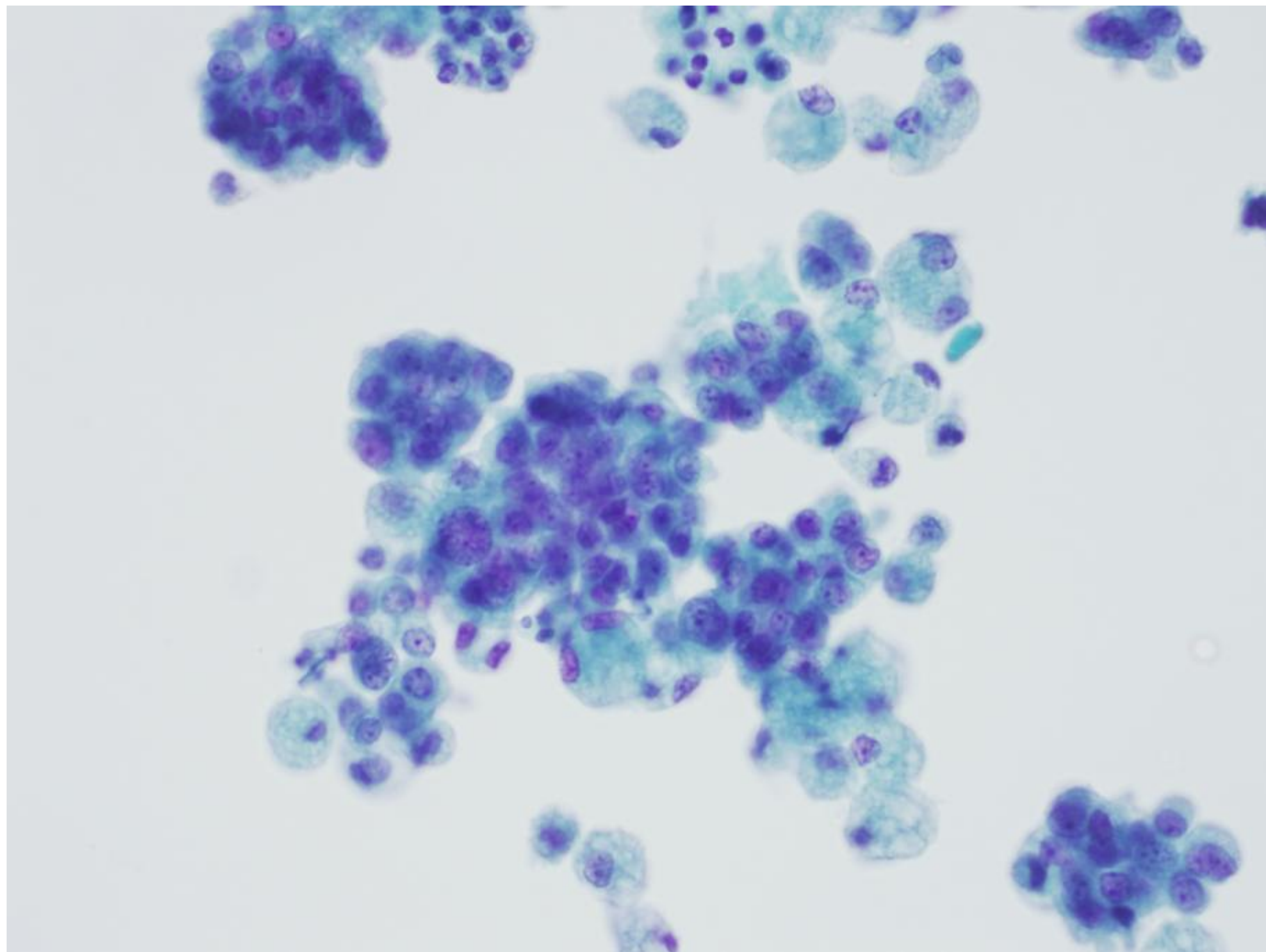
Right upper lobe bronchioloalveolar lavage (BAL)

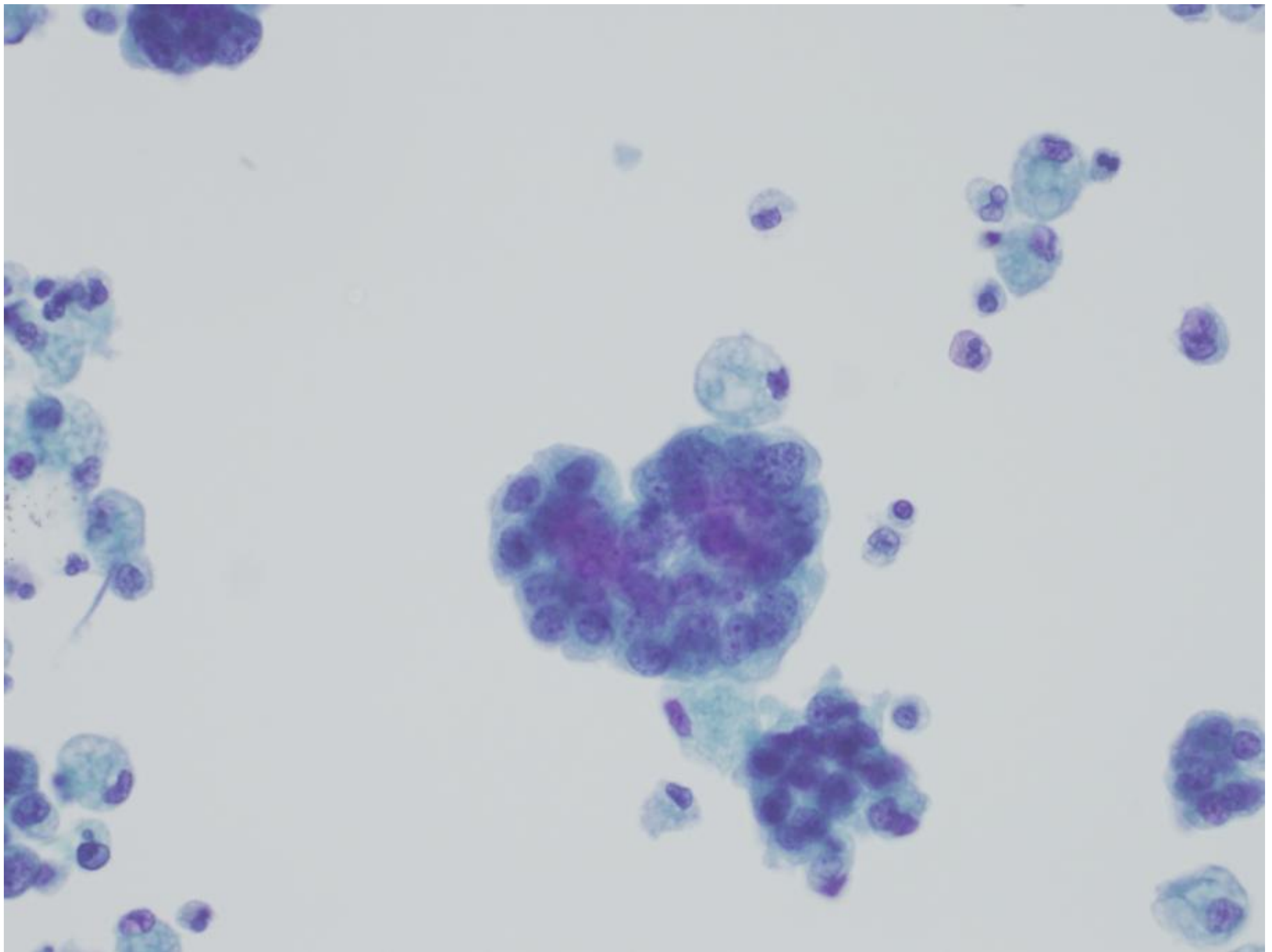


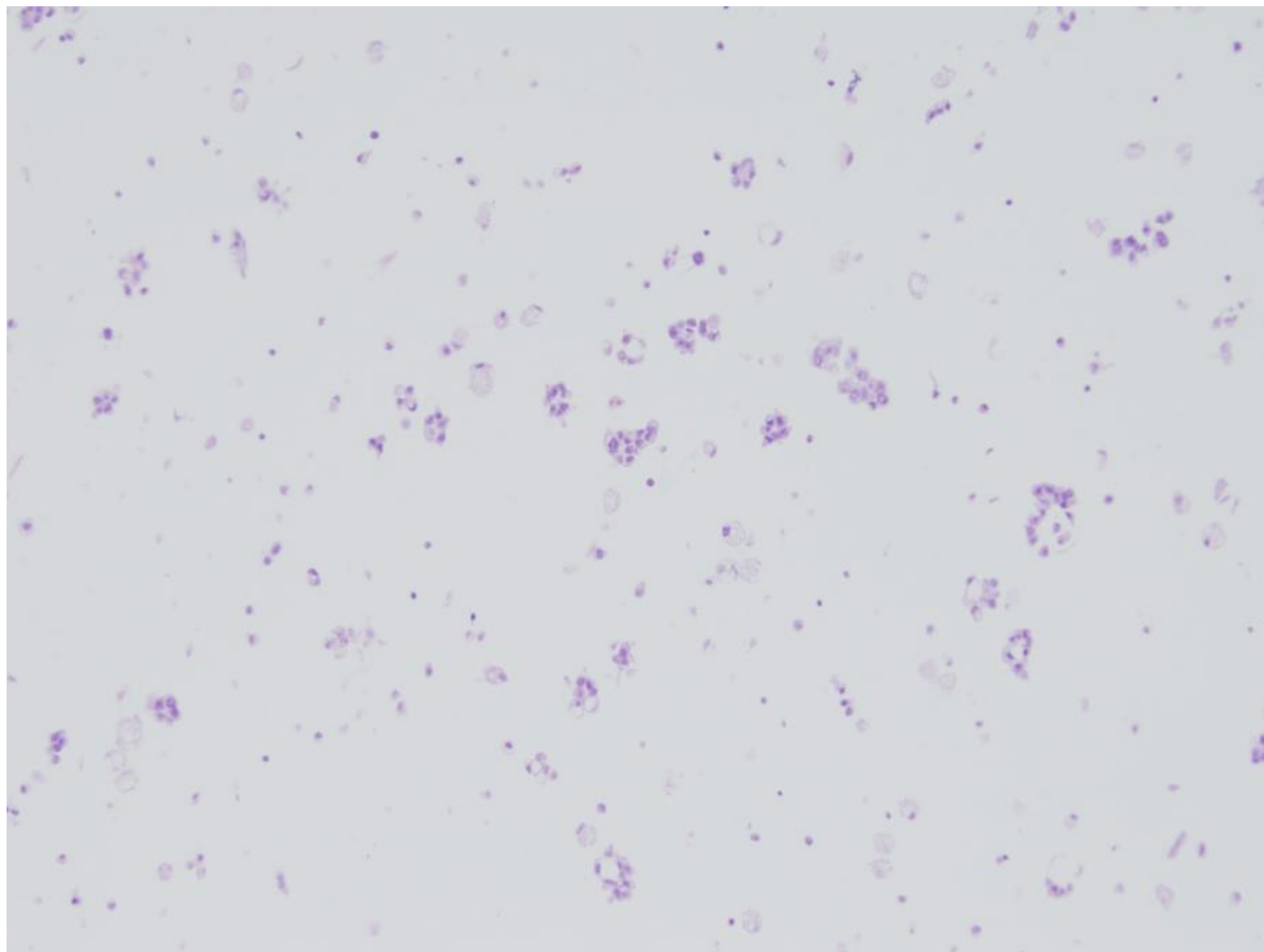


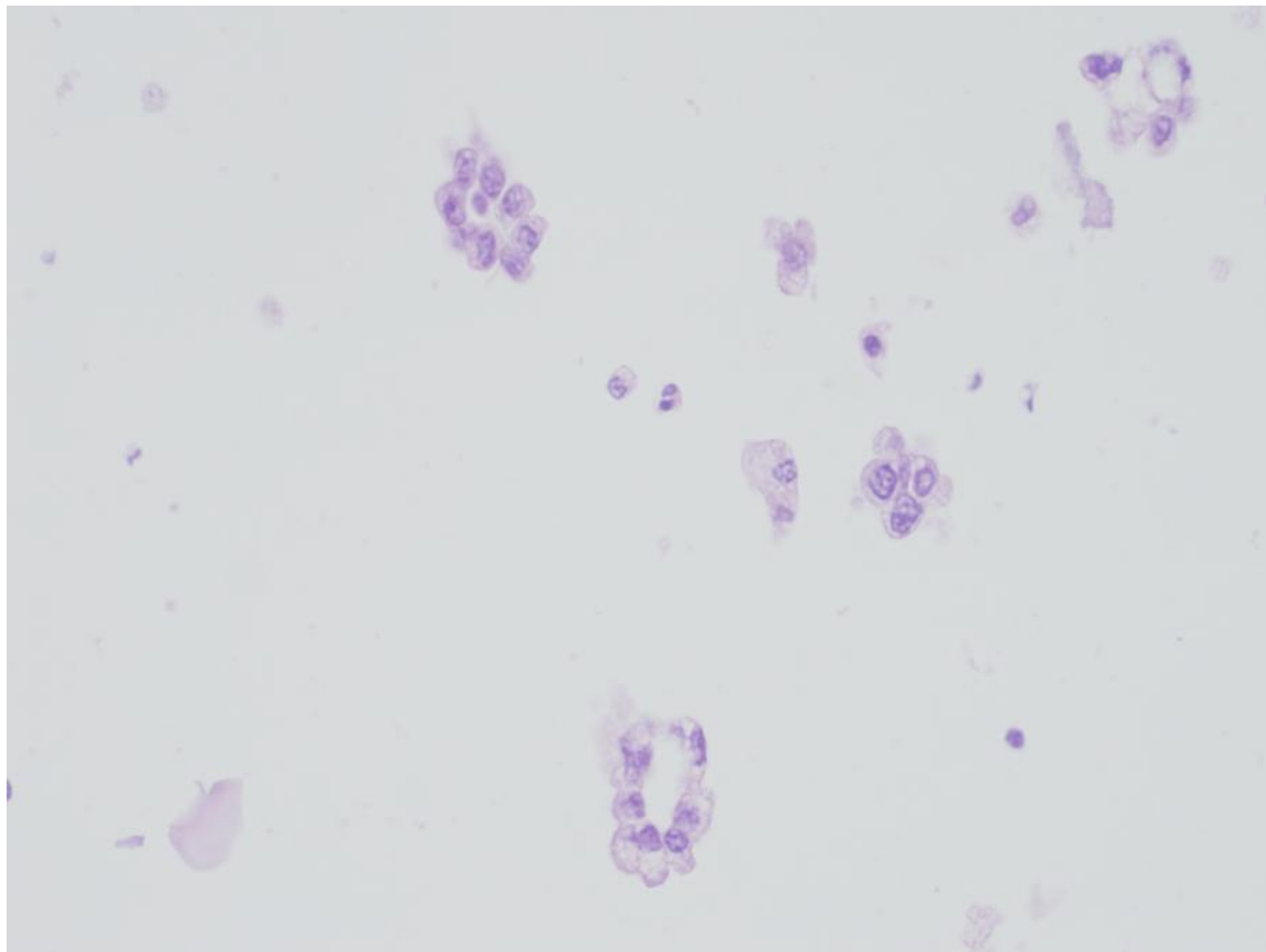


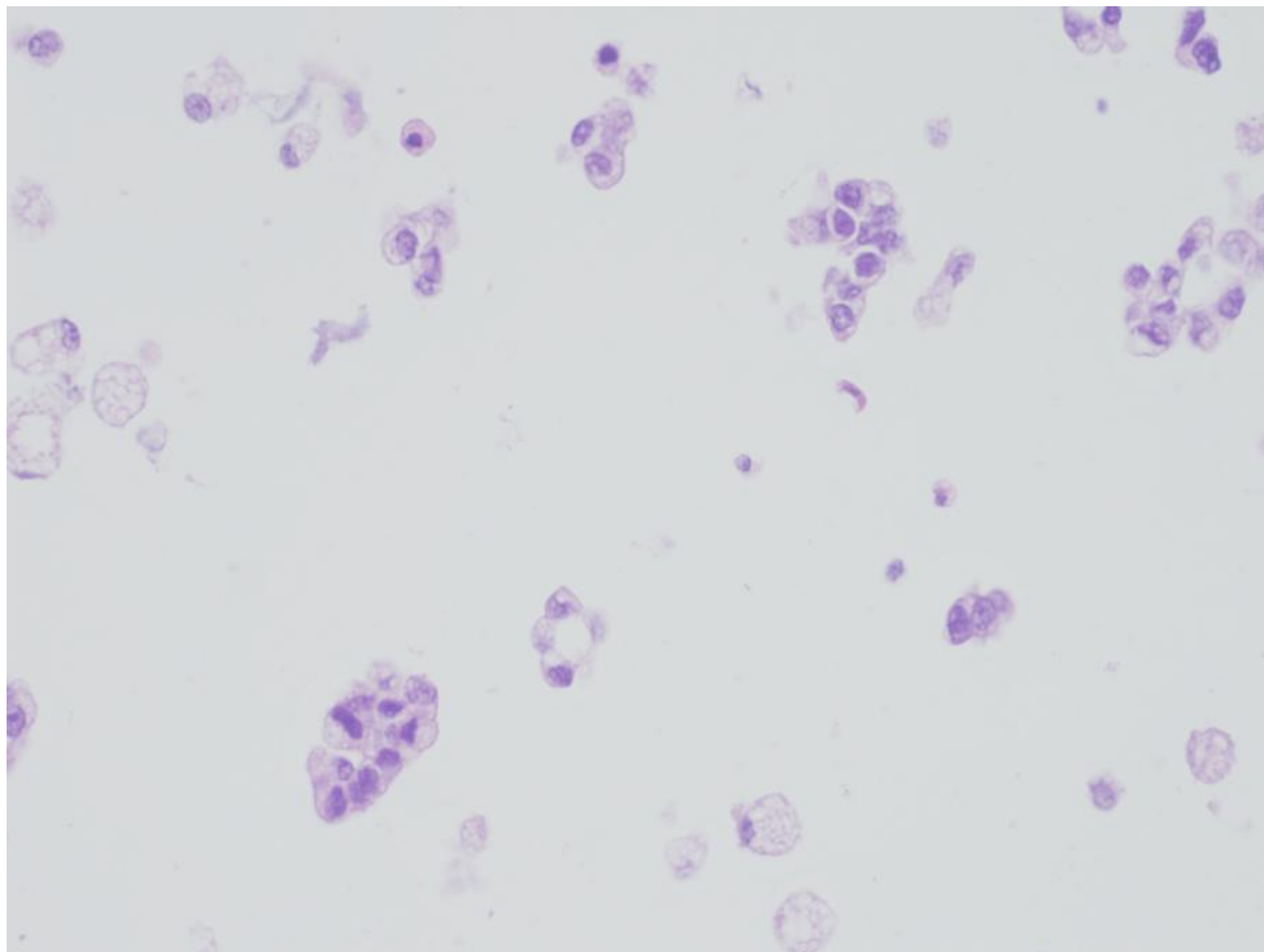


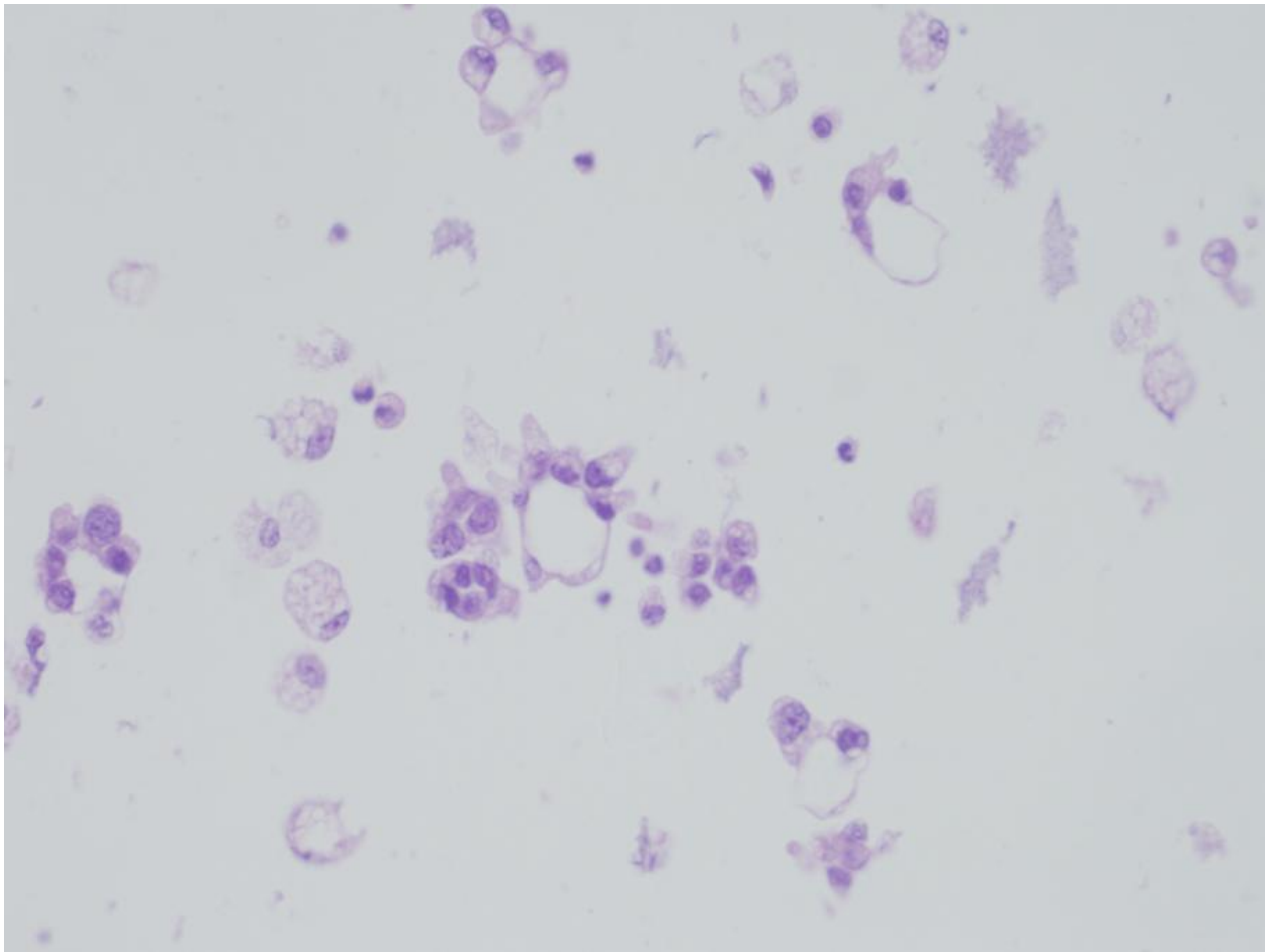




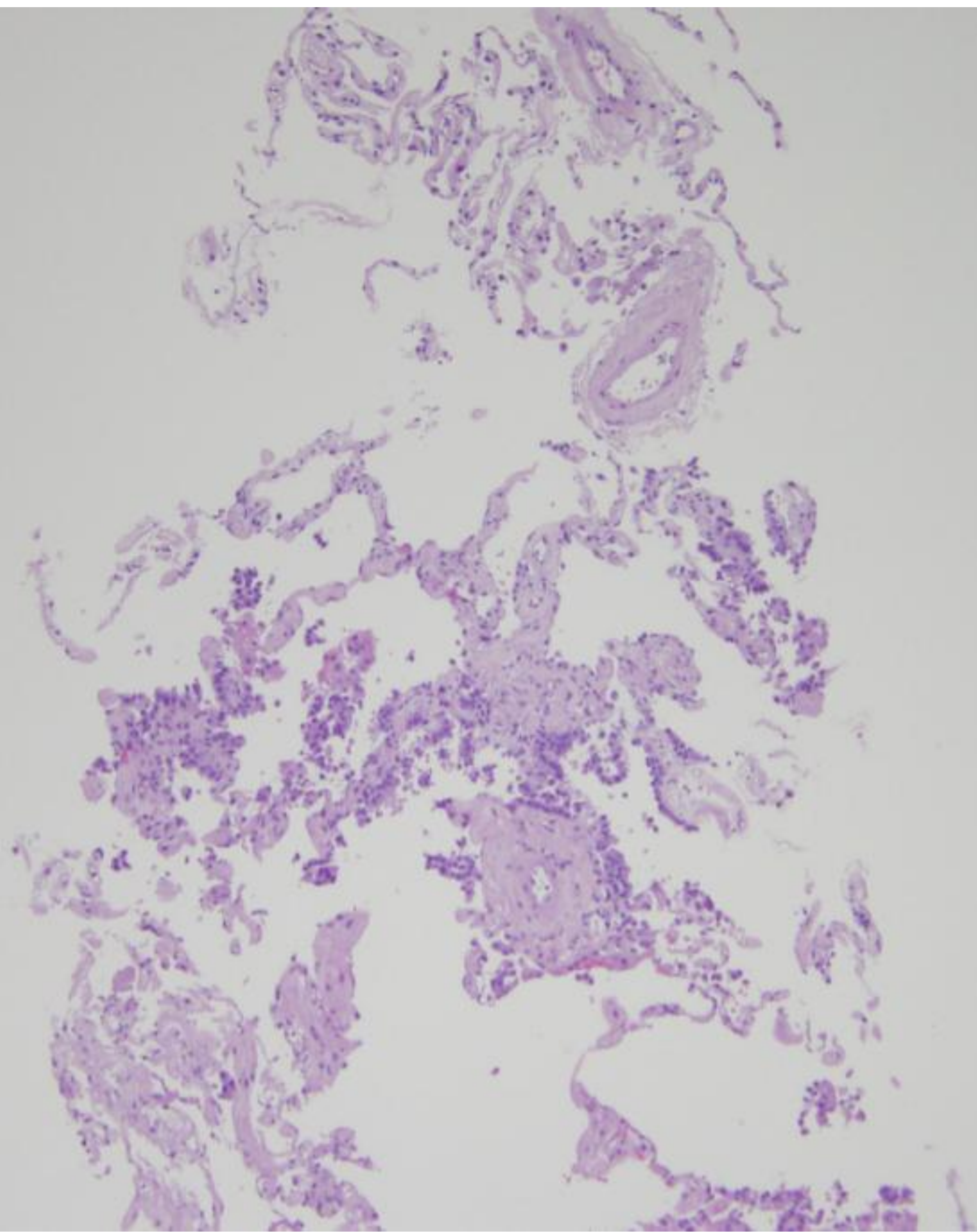


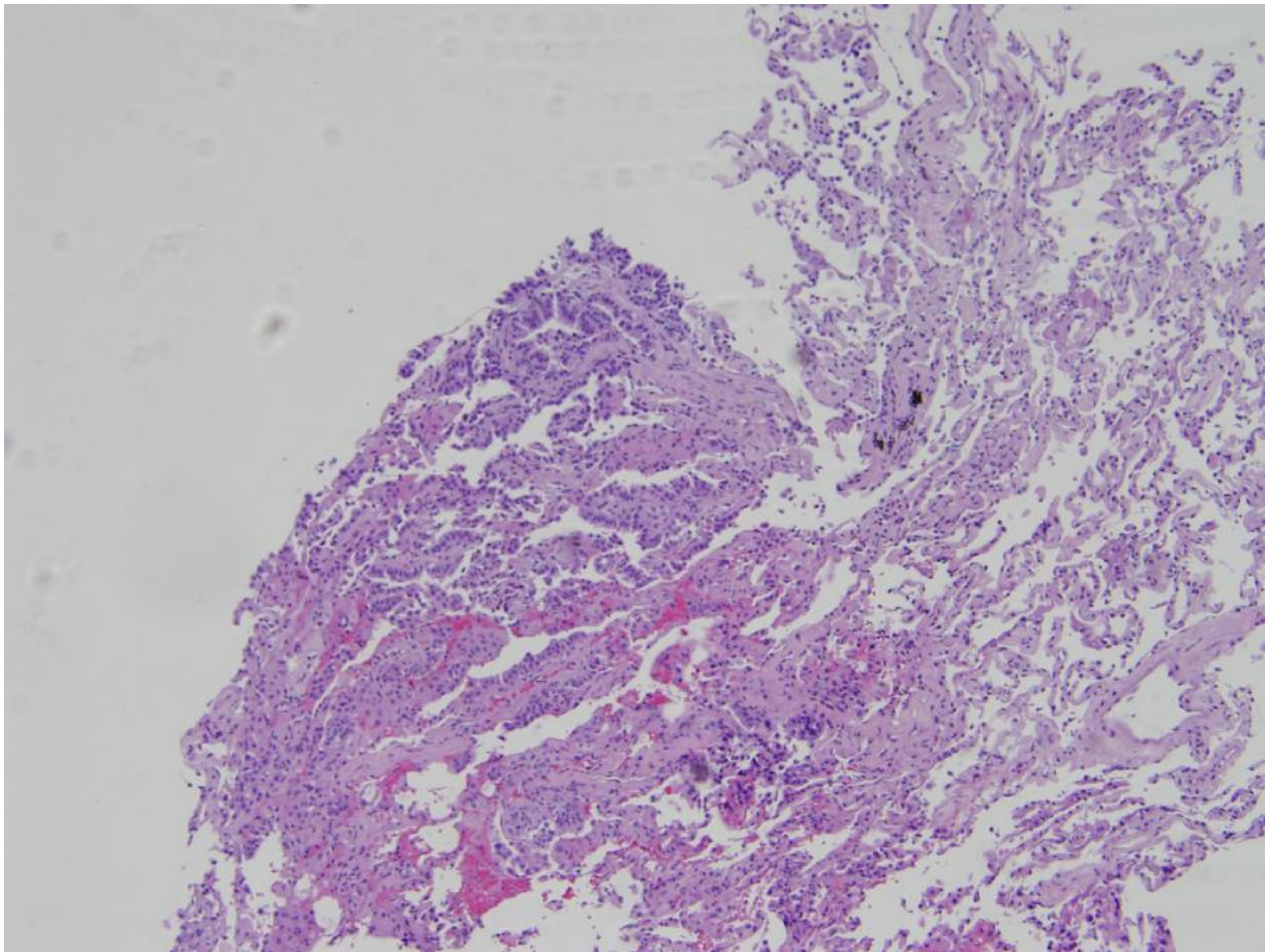


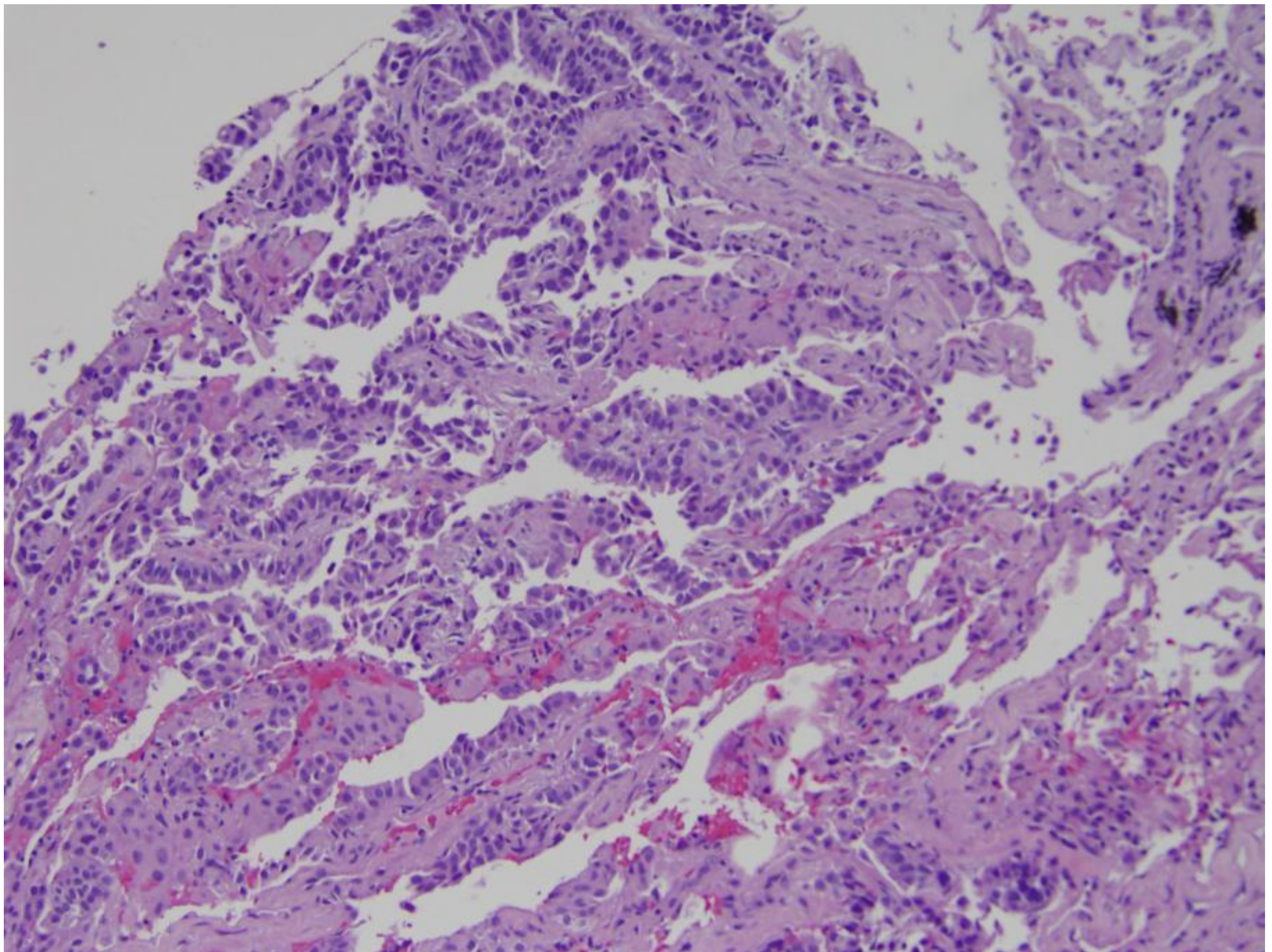


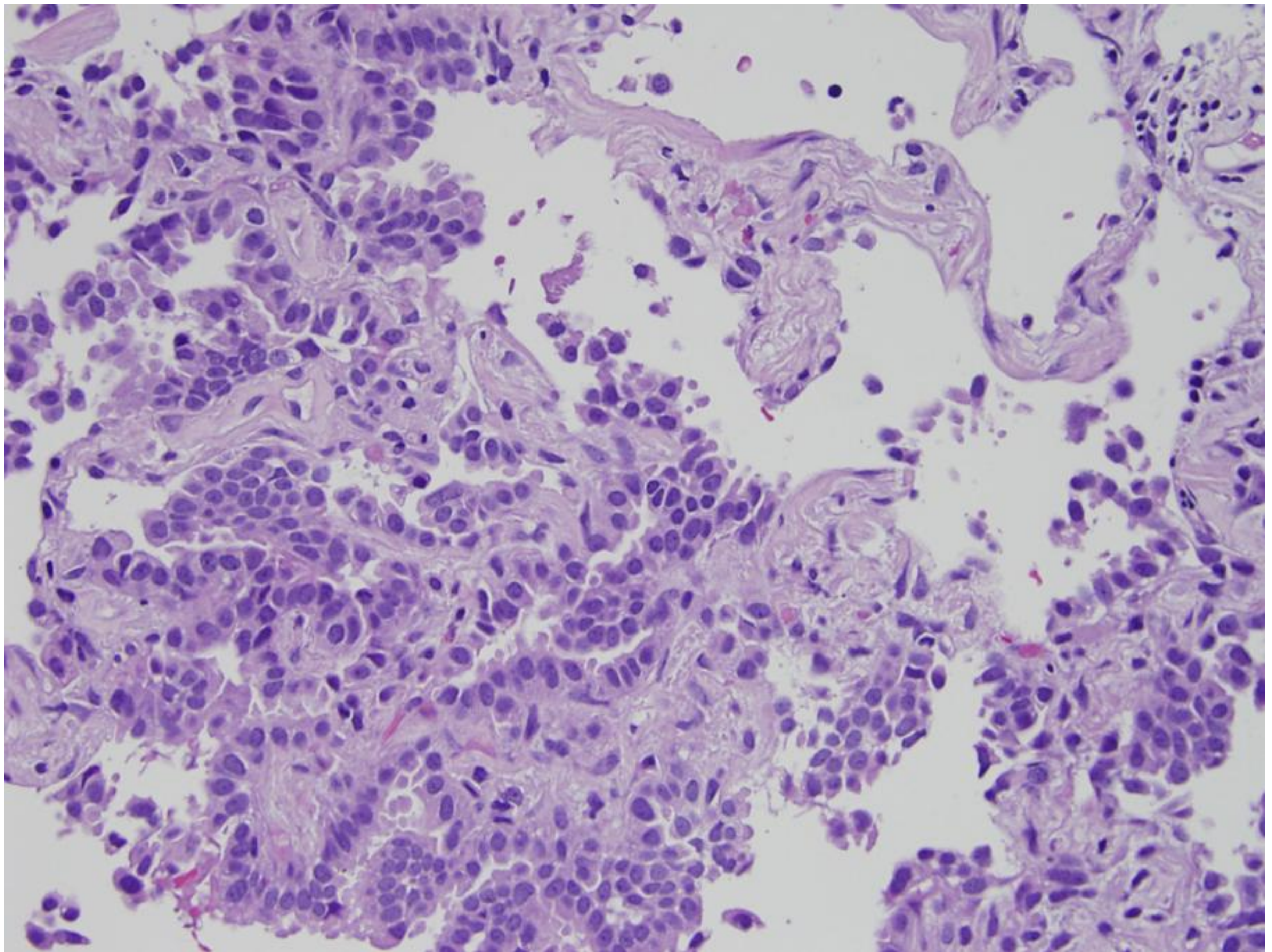


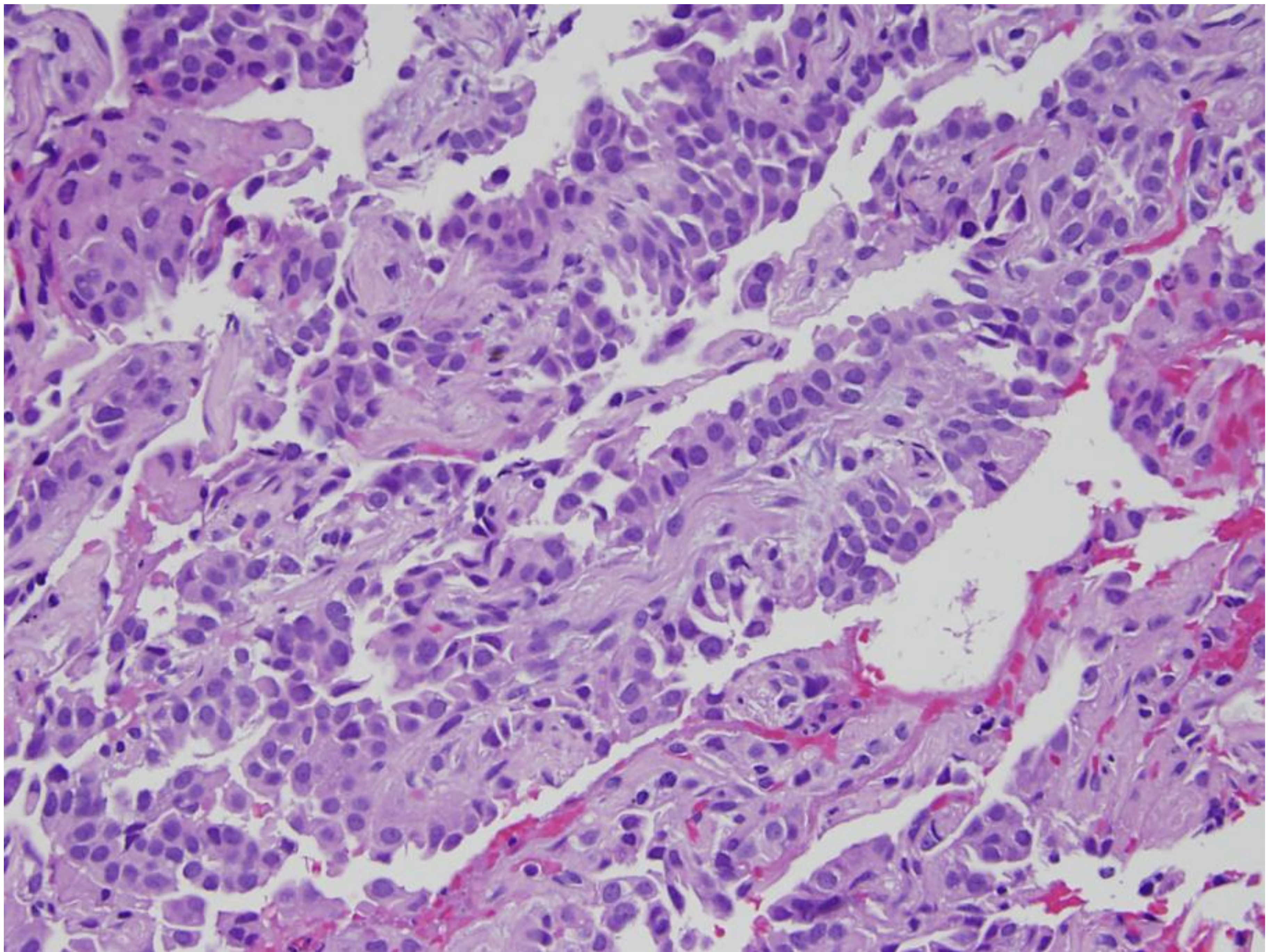
Right upper lobe transbronchial biopsy











Dx

- Cytology: Positive for adenocarcinoma
- Biopsy: Adenocarcinoma with bronchioloalveolar features

Bronchioloalveolar carcinoma (BAC)

- In multinodular or diffuse forms, 90% shed cells
  - More likely in BAL or sputum than bronchial brush

BAC typical features

- Abundant cellularity
- 3D clusters, irregular sheets
- Large but bland, uniform, glandular cells – minimal atypia, scant pale cytoplasm, nuclear grooves, intranuclear pseudoinclusions, fine chromatin,
- Non-mucinous BAC indistinguishable from a well-differentiated invasive ADC on cytology,
- Thus, BAC is only a presumptive diagnosis.

BAC

- Clusters can resemble benign reactive clusters
- BAC clusters are larger and more numerous
- Flower-like outlines
- Tenacious intercytoplasmic connections
- Mucinous BAC resemble goblet cells, abundant background mucin
- Nonmucinous cell can resemble mesothelial cells and reactive pneumocytes.

BAC DDx

- Reactive pneumocytes in the context of pulmonary infarction, bronchitis, bronchiolitis, bronchiectasis, pneumonia, asthma, diffuse alveolar damage, interstitial lung disease.
- Watch out for history of pneumonia, fever, other conditions known to cause reactive atypia
- Tumor diathesis favors malignancy.

TABLE 1. IASLC/ATS/ERS Classification of Lung Adenocarcinoma in Resection Specimens

- Preinvasive lesions
  - Atypical adenomatous hyperplasia
  - Adenocarcinoma in situ (≤3 cm formerly BAC)
    - Nonmucinous
    - Mucinous
    - Mixed mucinous/nonmucinous
- Minimally invasive adenocarcinoma (≤3 cm lepidic predominant tumor with ≤5 mm invasion)
  - Nonmucinous
  - Mucinous
  - Mixed mucinous/nonmucinous
- Invasive adenocarcinoma
  - Lepidic predominant (formerly nonmucinous BAC pattern, with >5 mm invasion)
  - Acinar predominant
  - Papillary predominant
  - Micropapillary predominant
  - Solid predominant with mucin production
- Variants of invasive adenocarcinoma
  - Invasive mucinous adenocarcinoma (formerly mucinous BAC)
  - Colloid
  - Fetal (low and high grade)
  - Enteric

BAC, bronchioloalveolar carcinoma; IASLC, International Association for the Study of Lung Cancer; ATS, American Thoracic Society; ERS, European Respiratory Society.