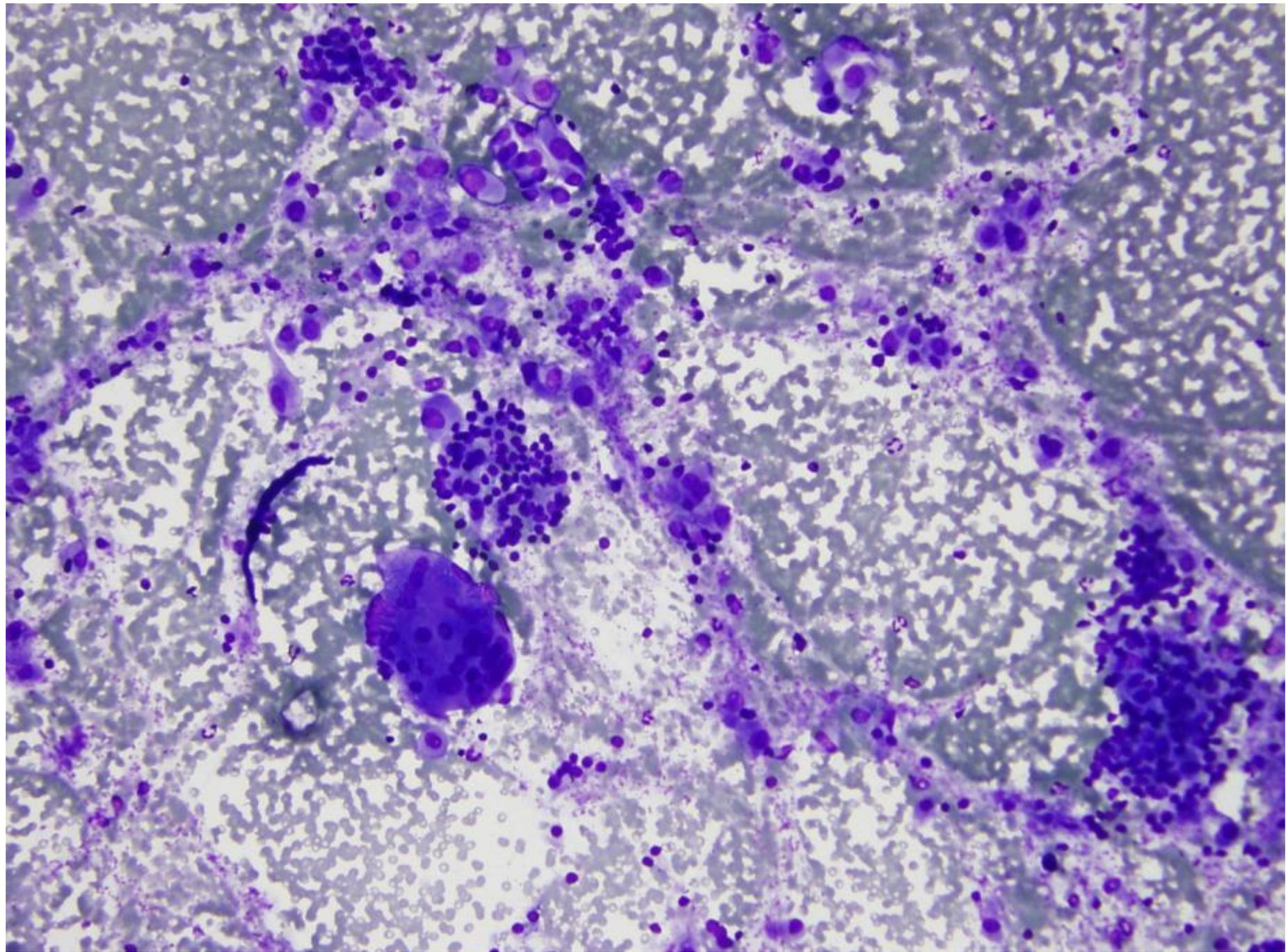
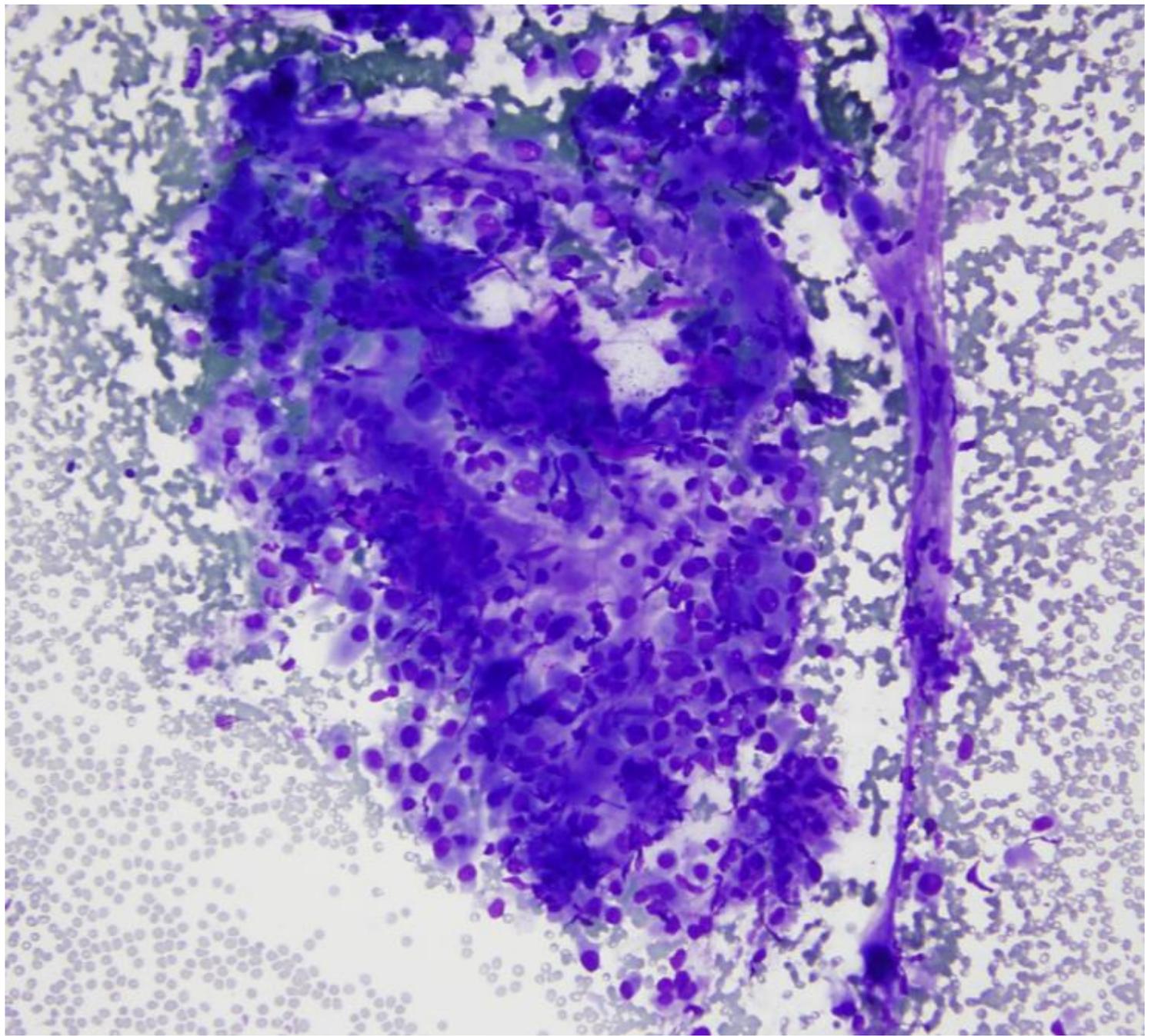


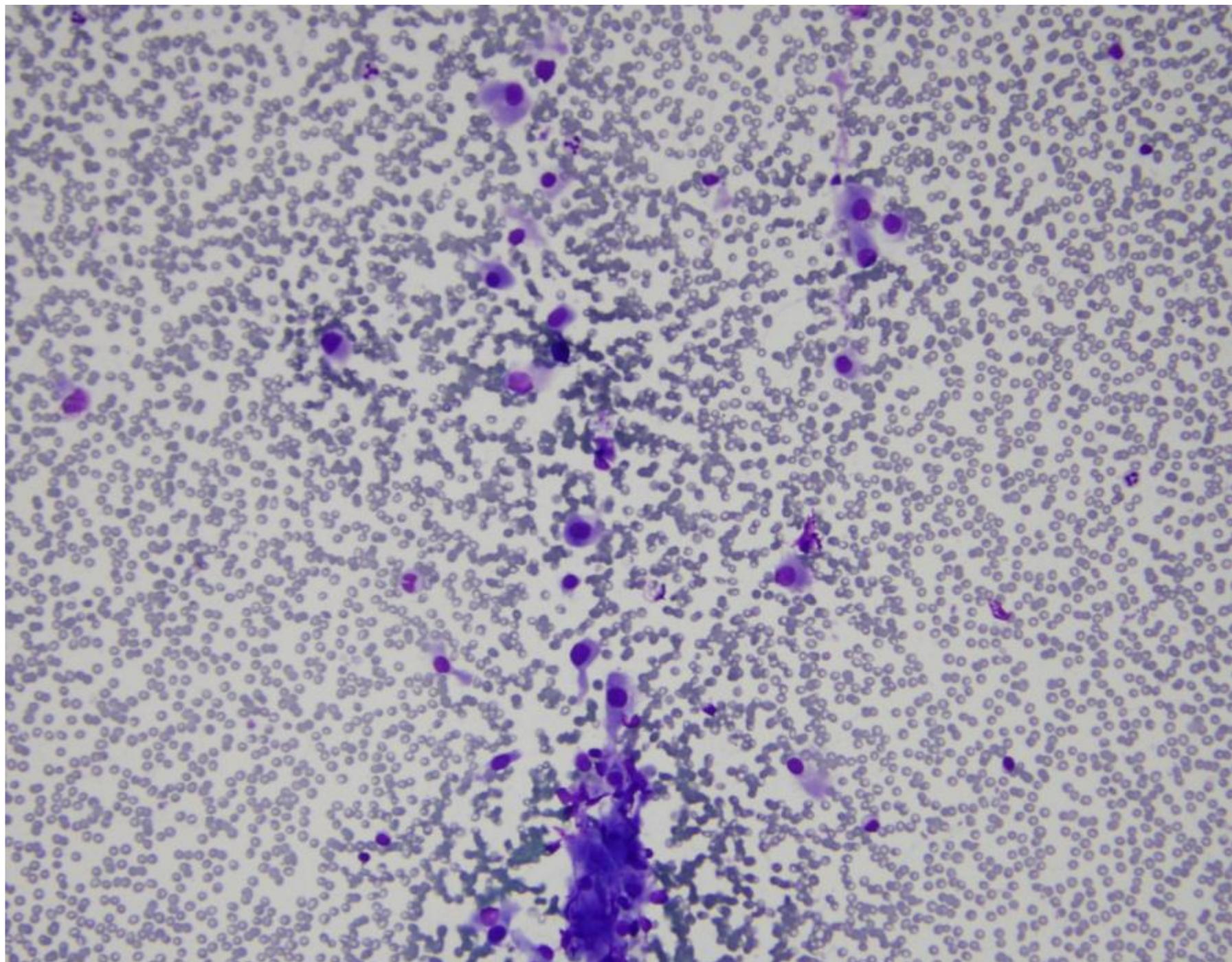
Interesting Case Conference

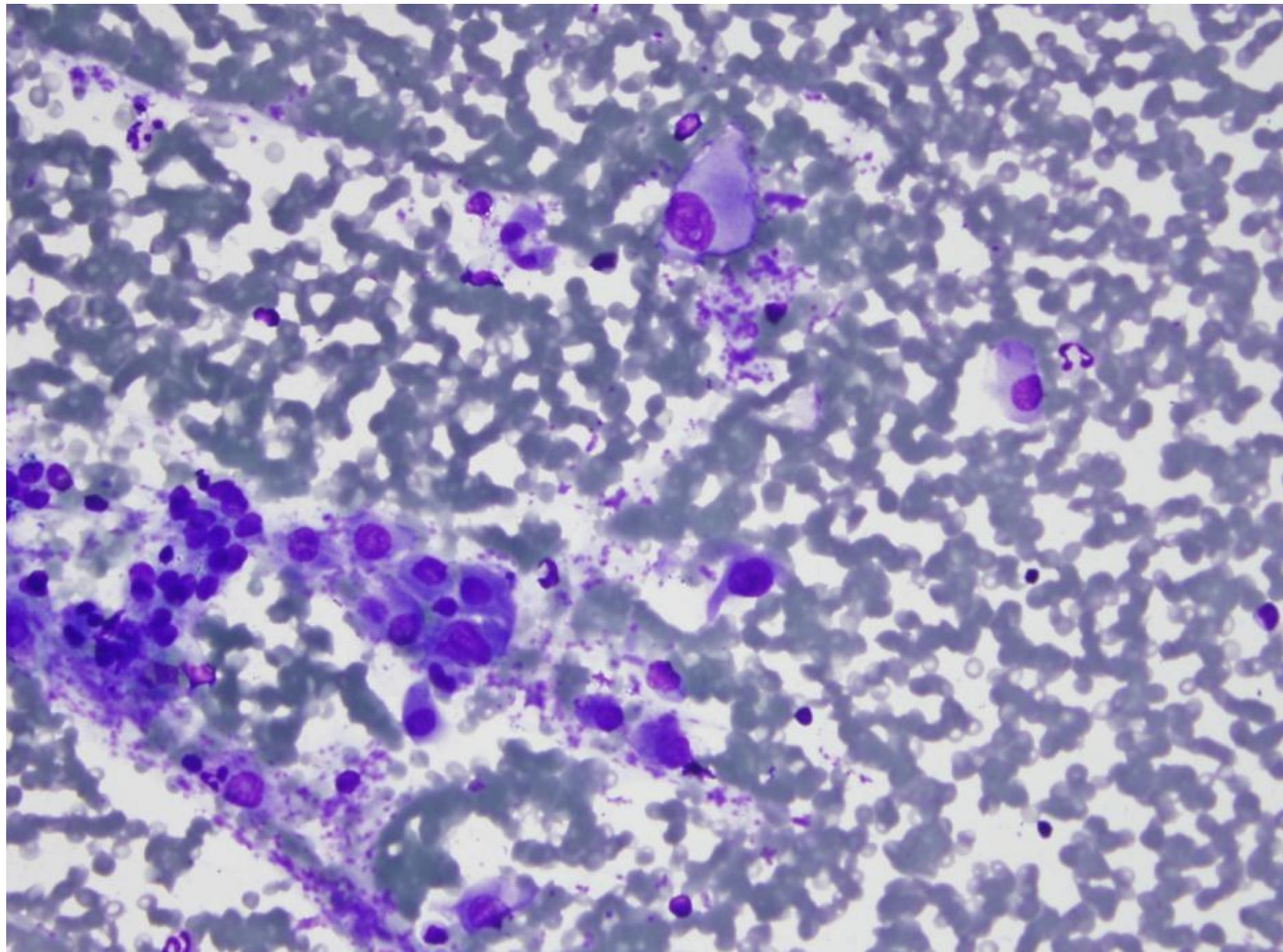
Hx

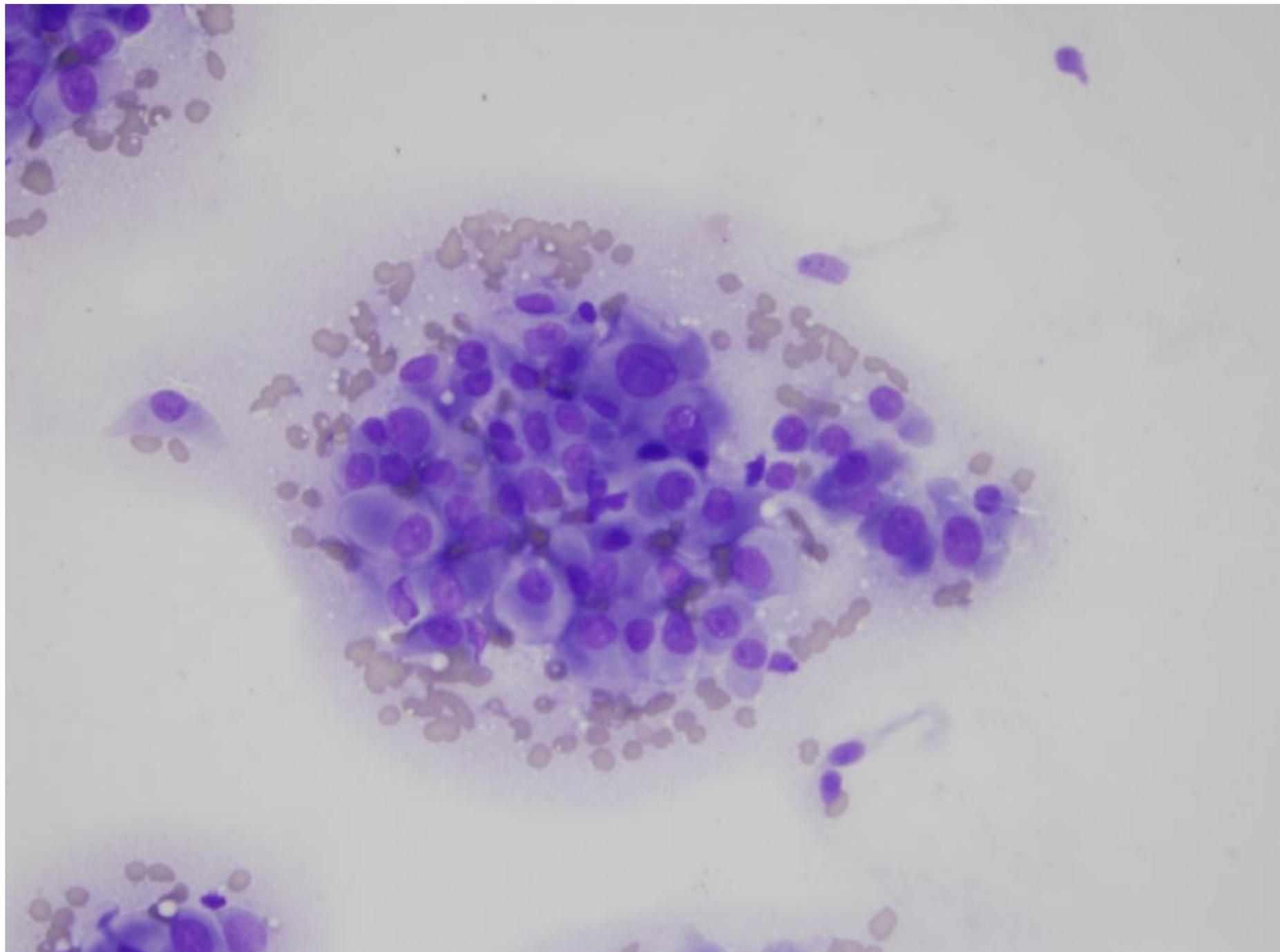
- 56 yo M with acute onset peripheral neuropathy
 - Bilateral lower extremity neuropathy predominantly in the soles of his feet
 - Neoplastic panel positive for ACh ganglionic neuronal antibody titer
- Focal FDG uptake in the inferior left thyroid gland corresponding to a thyroid nodule.
- Thyroid ultrasound findings:
 - diffusely inhomogeneous echotexture
 - single heterogeneous hypoechoic nodule measuring 0.8 x 1.1 x 1.3 cm.

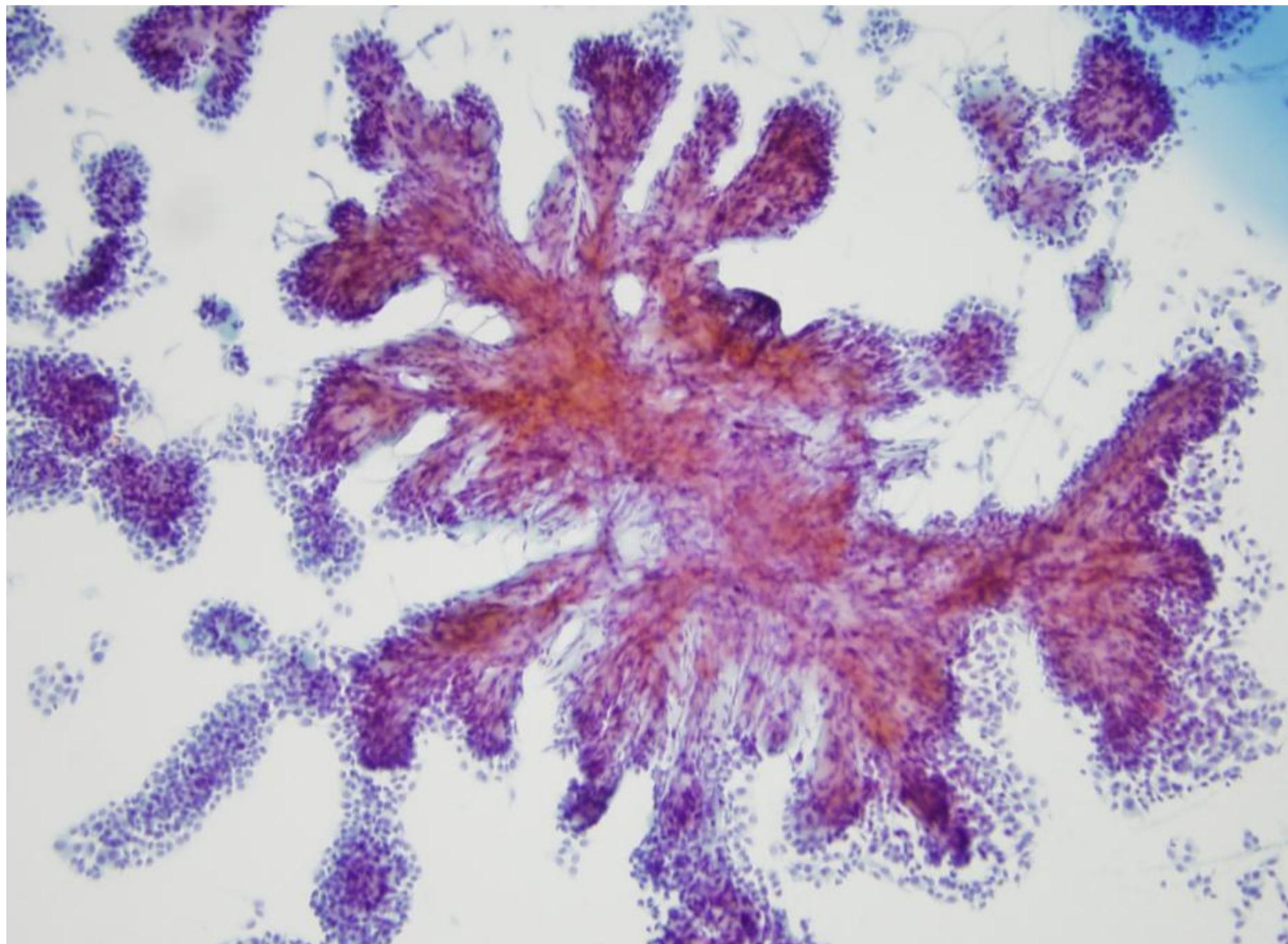


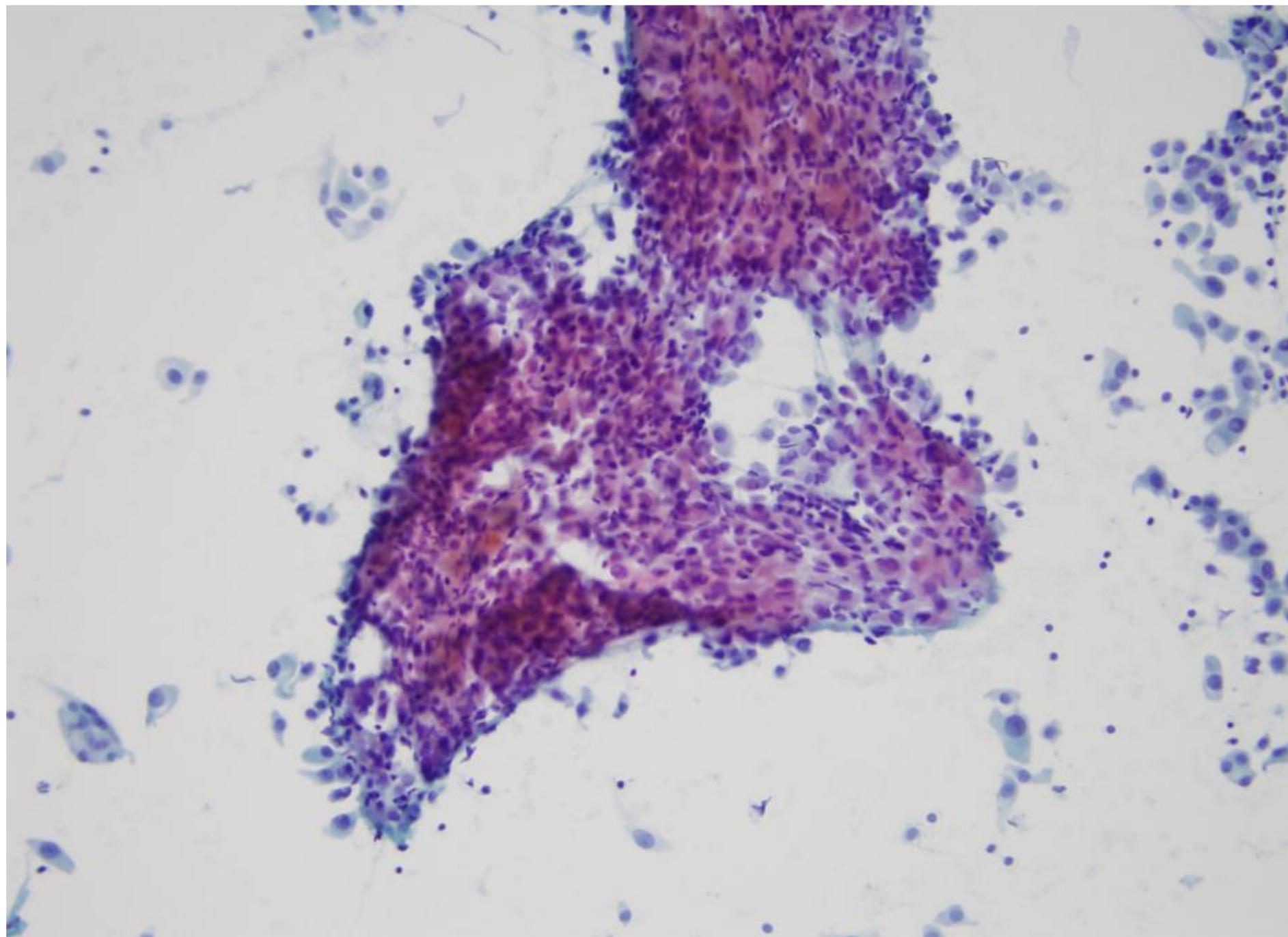


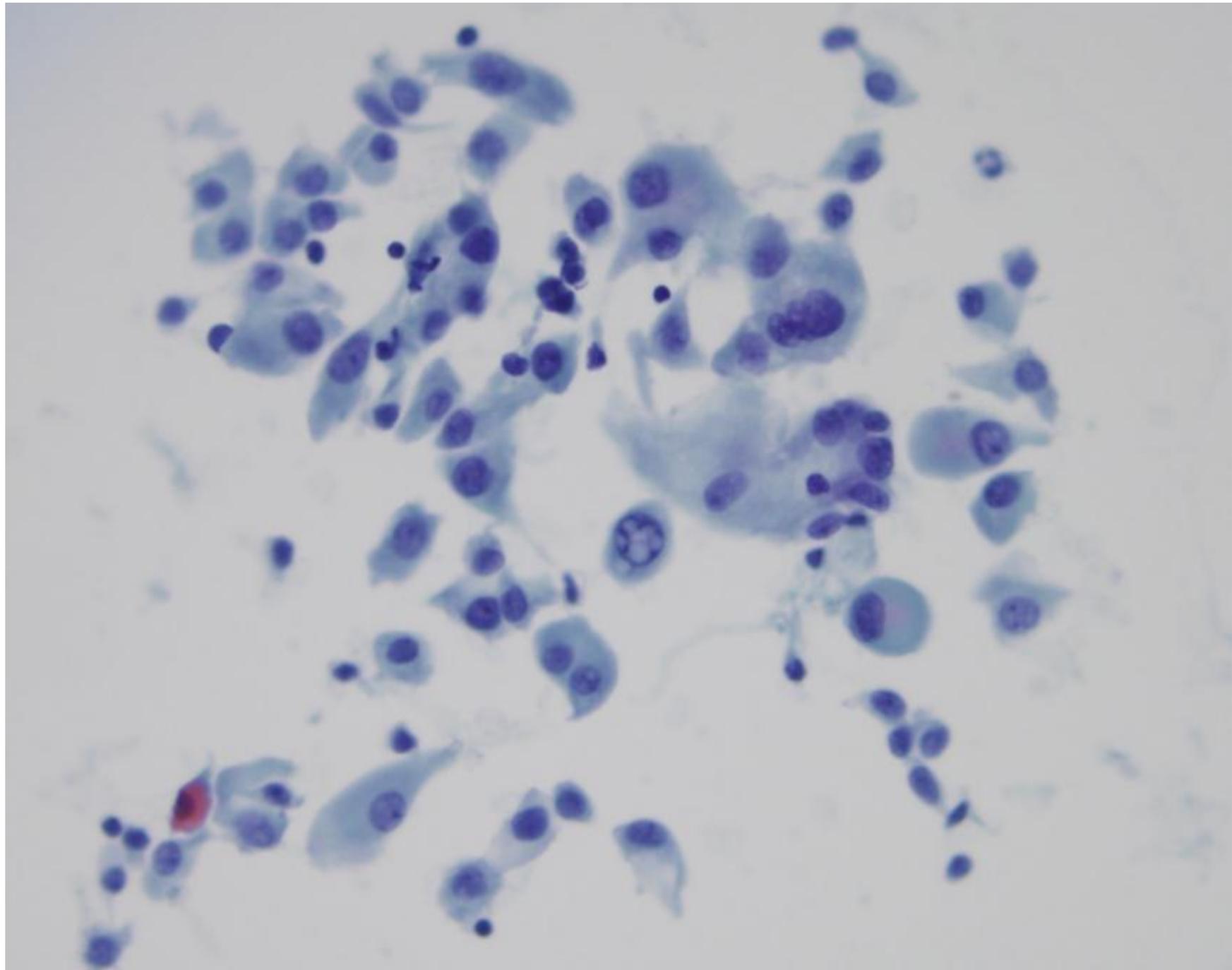


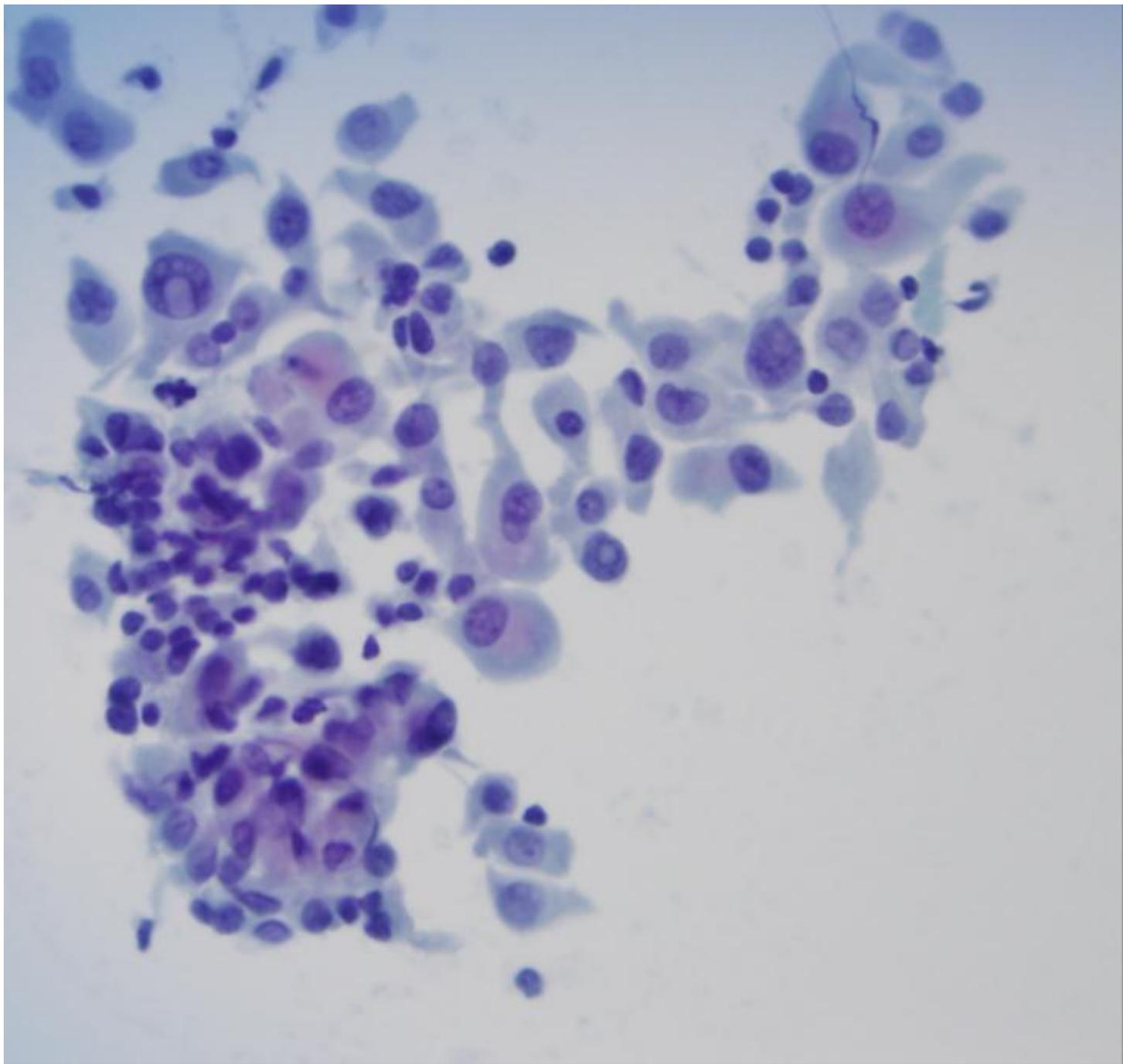


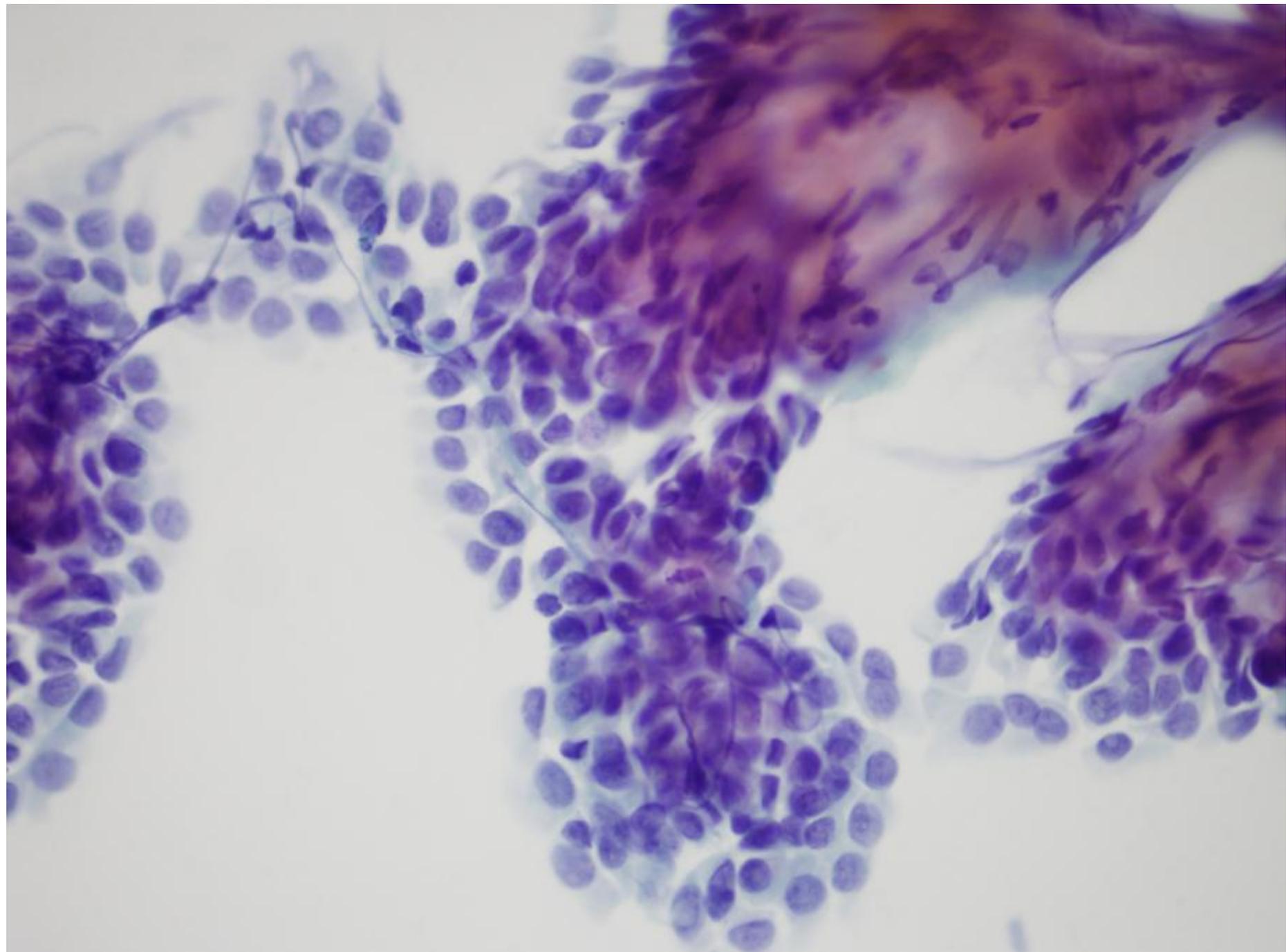












DDX:

- Hurthle cell / oncocytic variant of PTC
- Warthin-like variant of PTC
- Medullary carcinoma

Ancillary studies

- Serum calcitonin: <2 pg/ml
 - Normal <18

Diagnosis

- Papillary carcinoma with oncocytic features

Ganglionic Acetylcholine Receptor Autoantibody: Oncological, Neurological, and Serological Accompaniments

Dr. Andrew McKeon, MB,MRCPI, Dr. Vanda A. Lennon, MD,PhD, Dr. Daniel H. Lachance, MD, Dr. Robert D. Fealey, MD, and Dr. Sean J. Pittock, MD

Mayo Clinic, Rochester, Minnesota

Objective—To describe the clinical utility of the nicotinic ganglionic acetylcholine receptor ($\alpha 3$ - AChR) autoantibody as a marker of neurological autoimmunity and cancer.

Patients—A total of **15 000 patients** seen at Mayo Clinic (2005–2007) and evaluated on a service basis for paraneoplastic neurological autoimmunity for whom clinical information was obtained retrospectively by medical record review as well as 457 neurologically asymptomatic patients or control subjects of whom 173 were healthy, 245 had lung cancer, and 39 had systemic lupus erythematosus or Sjogren syndrome.

Outcome Measures—Neurological, oncological, and serological associations of $\alpha 3$ -AChR autoantibody seropositivity.

Results—Of 15 000 patients tested on a service basis, **1% were seropositive** (median, 0.12 nmol/L; range, 0.03–18.8 nmol/L; normal, ≤ 0.02 nmol/L), 55% were male, and the median age was 65 years. **Cancer was found (new or by history) in 24 of 78 patients evaluated for cancer while at Mayo Clinic (30%);** 43 (36%), dysautonomia (20%, usually limited), and encephalopathy (13%). Of 58 patients with low antibody values had adenocarcinoma (more patients had breast cancer than prostate, lung, and gastrointestinal cancers; each of the latter groups had about the same number of patients). Of 12 patients with high antibody values (≥ 1.00 nmol/L), 83% had pandysautonomia. Of 85 patients with medium antibody values (0.10–0.99 nmol/L), neurological presentations were more diverse and included peripheral neuropathy values (0.03–0.09 nmol/L), 54% had a nonautoimmune neurological disorder or no neurological disorder. Of 245 control patients with lung cancer, 7.8% were seropositive.

Fine-Needle Aspirations of Papillary Carcinoma With Oncocytic Features

An Expanded Cytologic and Histologic Profile

Andrew A. Renshaw, MD

BACKGROUND: Although a wide variety of papillary carcinomas of the thyroid can have abundant granular cytoplasm and may be difficult to distinguish from Hürthle cell lesions in fine-needle aspirations (FNAs), the literature on these tumors is limited. The author described 18 cases with a spectrum of cytologic appearances. **METHODS:** A series of 7089 FNAs was correlated with 1331 subsequent resection specimens. Cases in which the original cytologic and histologic diagnoses included the differential diagnosis of papillary carcinoma or Hürthle cell lesions were identified. **RESULTS:** A total of 18 (1.3% of cases with resection) cases were identified. On review, 3 cases had classic features of papillary carcinoma, including nuclear crowding, along with a moderate amount of granular cytoplasm. Four cases had a population of cells that mimicked repair and/or cyst-lining cells with almost no other epithelial cells. In 2 of those 4 cases, the cells were extremely large, and in 2 other cases, they could not be distinguished from typical cyst-lining cells. The remaining 11 cases had cells with overlapping features including pale to granular chromatin, small to medium nucleoli either centrally or eccentrically, occasional grooves, and rare intranuclear inclusions. Typical Hürthle cells also were commonly present. Nuclear crowding was not present, and the cells were in sheets, follicles, or appeared alone. No papillae were identified. On resection, 7 cases were follicular variants of papillary carcinoma, 2 cases occurred in the setting of Hashimoto thyroiditis, and 2 cases had features of the tall-cell variant. **CONCLUSIONS:** The author concluded that a subset of papillary carcinomas of the thyroid were difficult to distinguish from Hürthle cell lesions or repair and/or cyst-lining cells because of the presence of abundant granular cytoplasm and a lack of nuclear crowding. These tumors were often follicular or cystic variants of papillary carcinoma. *Cancer (Cancer Cytopathol)* 2011;119:247-53. © 2011 American Cancer Society.