Interesting case conference

8/13/12

44 year old man

-presented for right neck nodule; started as a small mass that progressively enlarged to approximately 1.5 cm in diameter

-presented to primary care physician who treated it with antibiotics with no improvement of symptoms

-Eventually referred to an ENT at an outside hospital; evaluation consisted of CT and PET scans, direct laryngoscopy, and FNA

Clinical work-up:

- neck CT demonstrated a 1.4 cm nodule in the subcutaneous tissue on the right side of his neck
- PET scan showed a 1.3 cm soft tissue nodule adjacent to the mandible demonstrating hypermetabolic activity
- direct laryngoscopy demonstrated no abnormalities per the patient's mother
- FNA of the right neck was interpreted as a poorly differentiated squamous cell carcinoma

ASSESSMENT: Patient is a 44M with a history of right neck nodule with **pathology positive for SCC.** It remains unclear whether this is a primary or secondary lesion. There was no definitive source for this lesion identified.

PLAN:

- Schedule for wide local excision with primary closure
- **F/u review of slides by pathology**
- F/u review of imaging by radiology

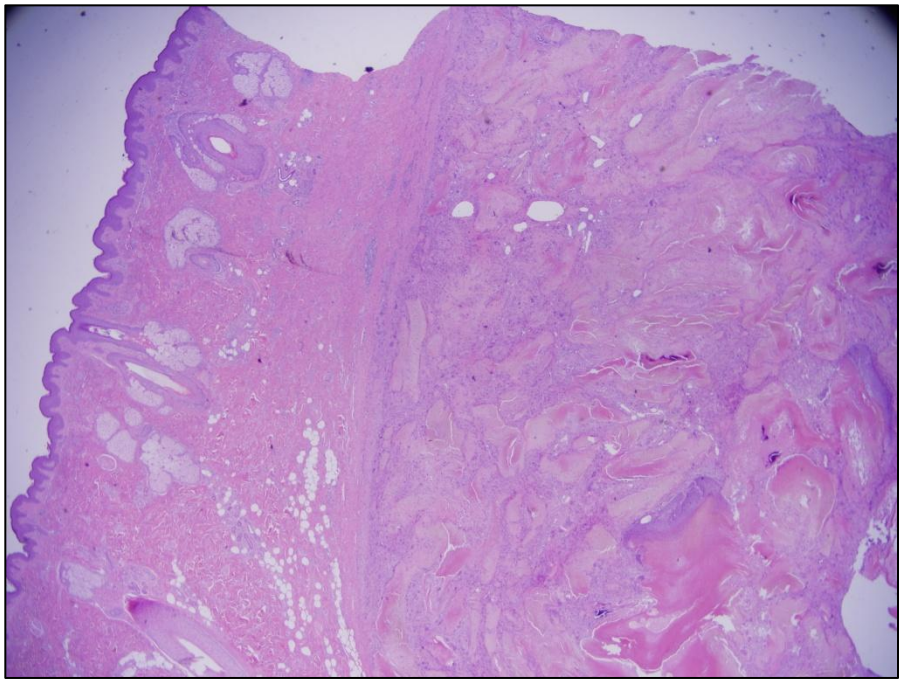
MICROSCOPIC DIAGNOSIS (rendered here):

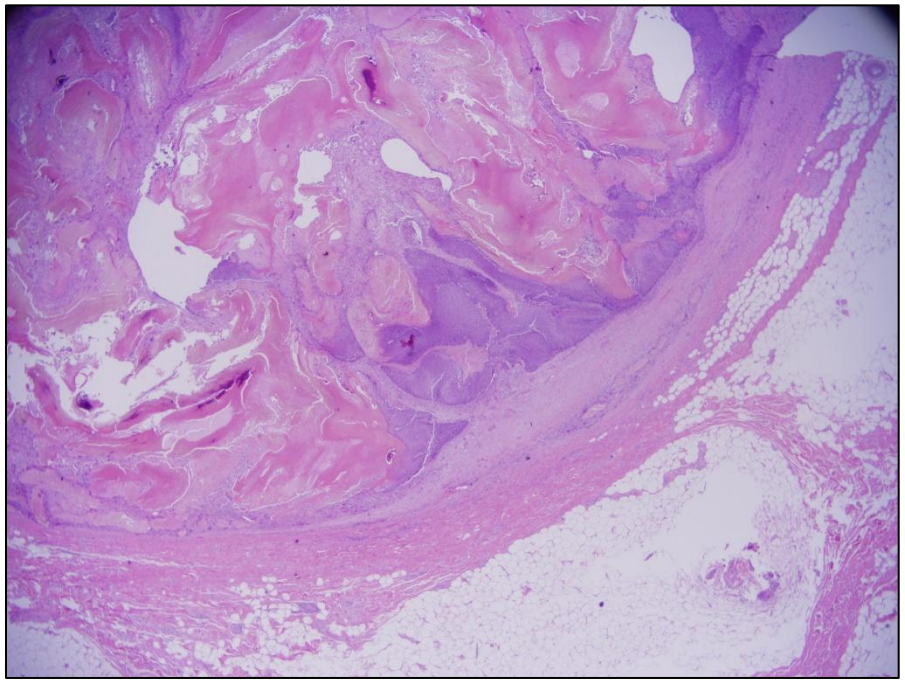
1. Right neck, fine needle aspiration: Positive for carcinoma. Favor poorly-differentiated squamous cell carcinoma. Please see COMMENT.

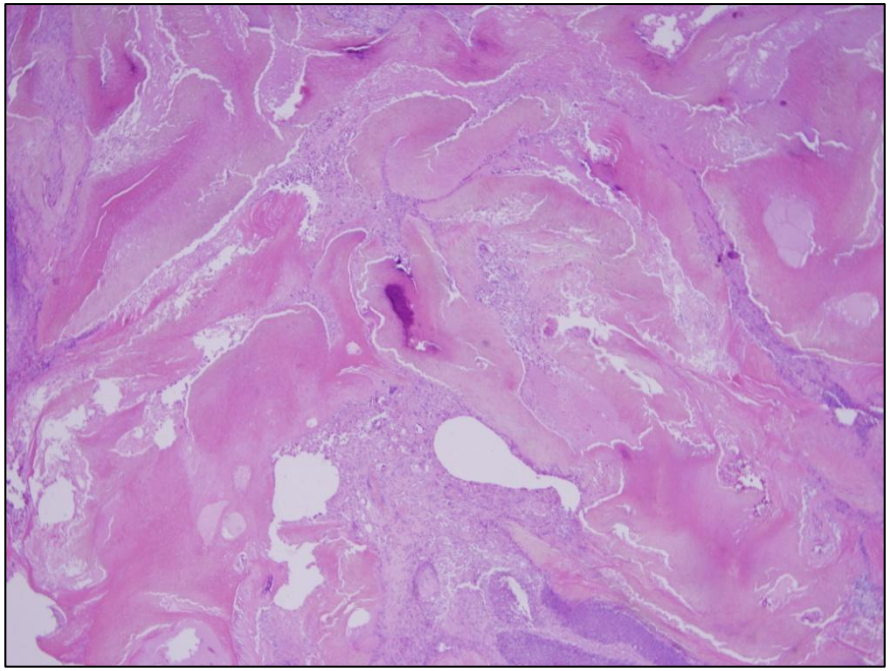
COMMENT:

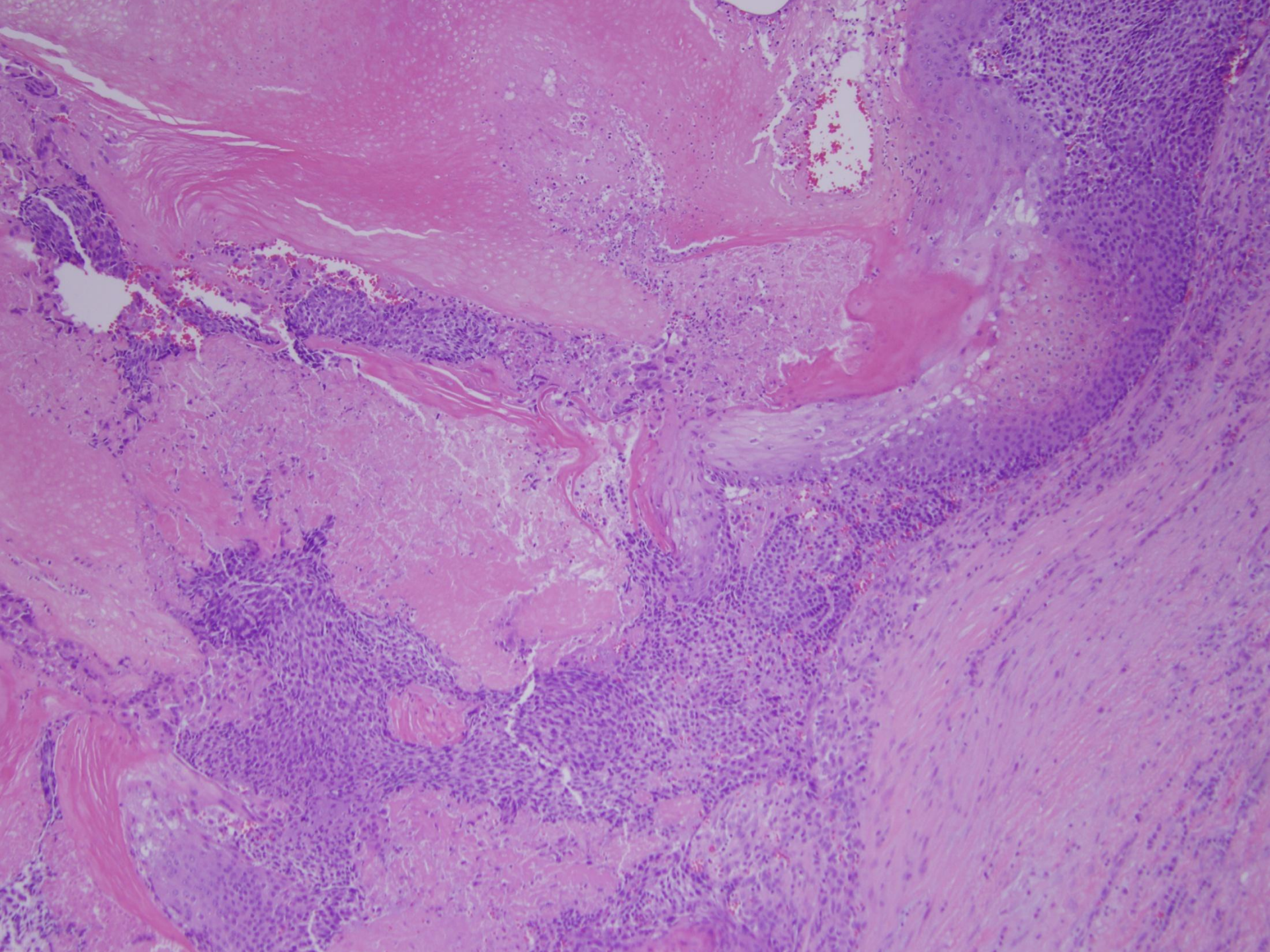
Immunohistochemical stain of CK5/6 on the cell block performed at outside hospital was reviewed here and shows the tumor cell to be **positive for CK5/6**. Per outside report, the tumor cells are also **positive for p63** and tumor cells are negative for chromogranin, TTF1, CK7 and CK20. The immunostaining profile is consistent with the above diagnosis.

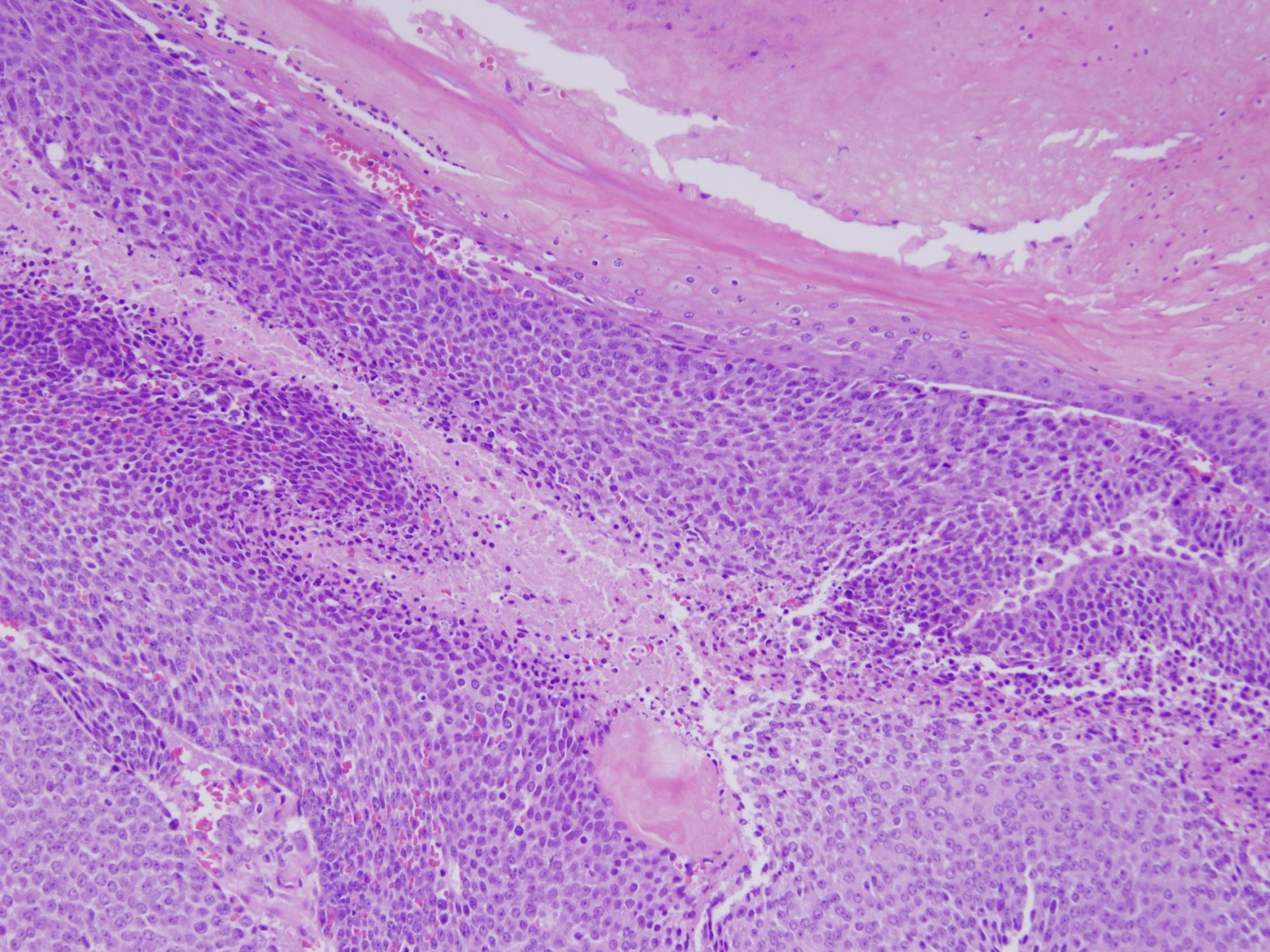
Tumor board recommendation is to undergo wide-local excision of right neck subcutaneous tissue.

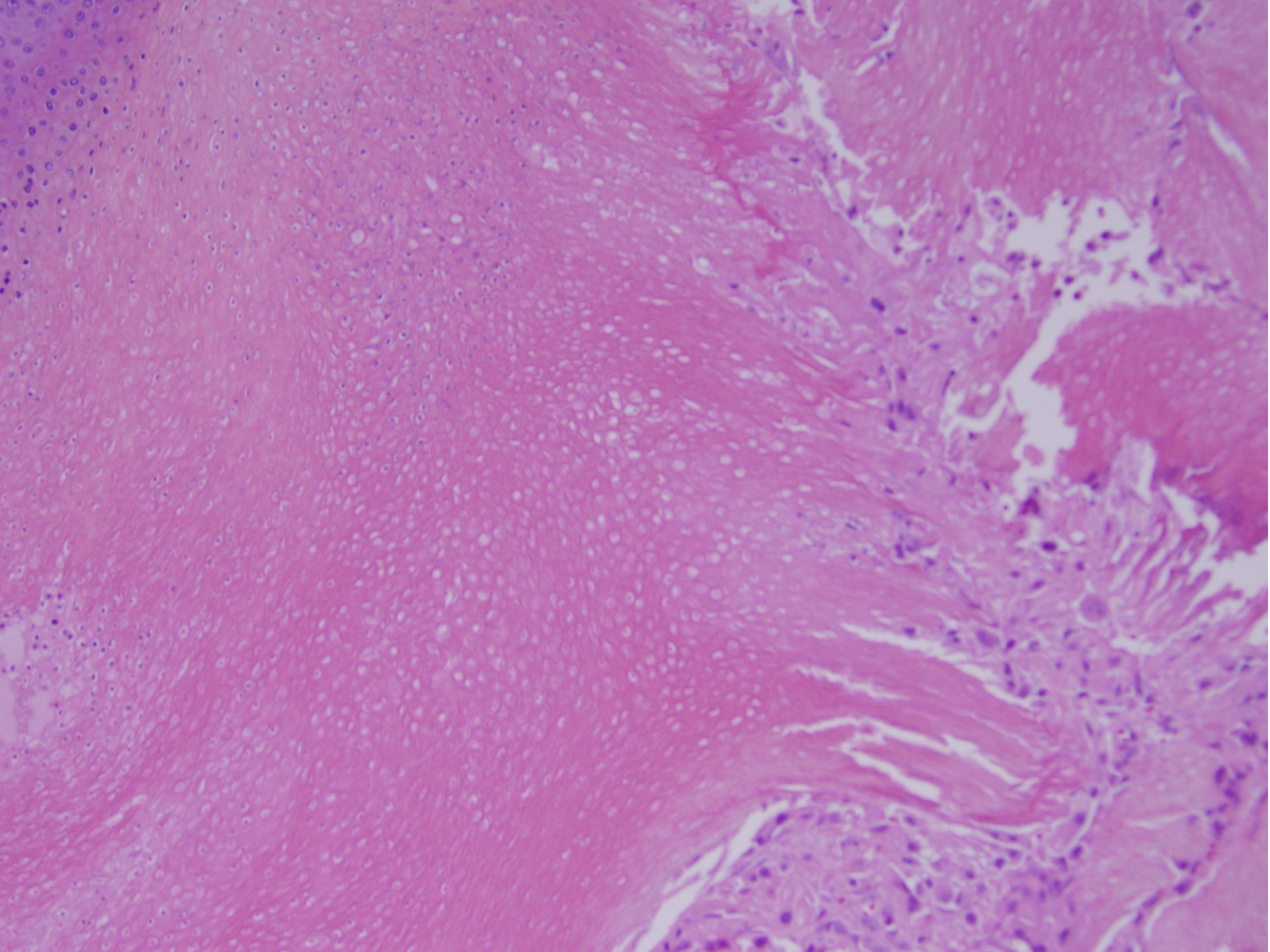


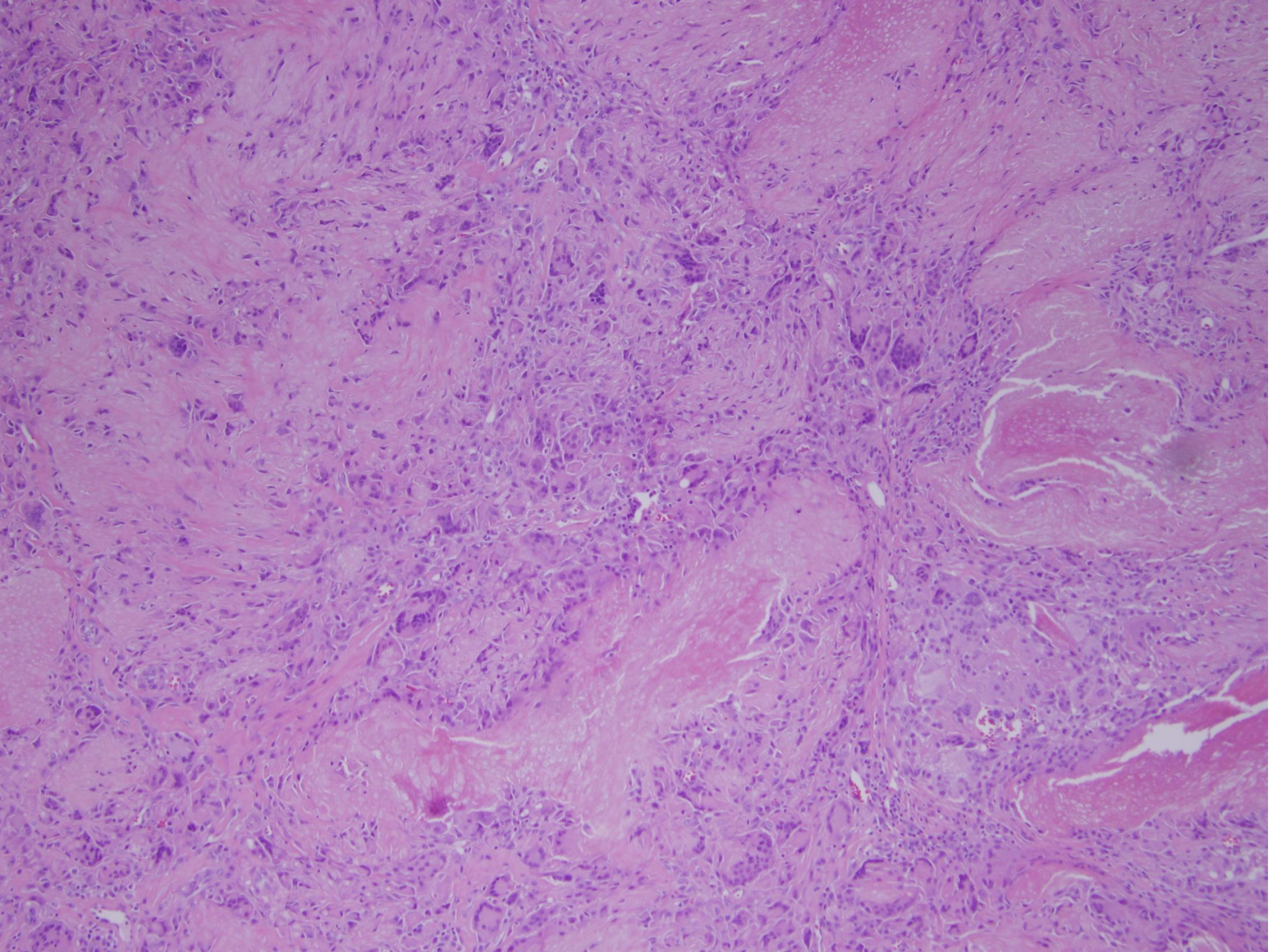












FINAL MICROSCOPIC DIAGNOSIS:

1 and 3. Skin and soft tissue of right neck, excisions: Pilomatrixoma (1.5 cm). Margins free. Three lymph nodes, negative for neoplasm (0/3).

Case also reviewed by dermatopathology, who agrees with the above diagnosis.

Pilomatrixoma

-Benign adnexal tumor with differentiation towards matrix of hair follicle

-Dermis and subcutis predominantly within head and neck and upper extremities. Mean age 24yrs

-Preoperative diagnosis is difficult, even by experienced clinicians

Pilomatrixoma

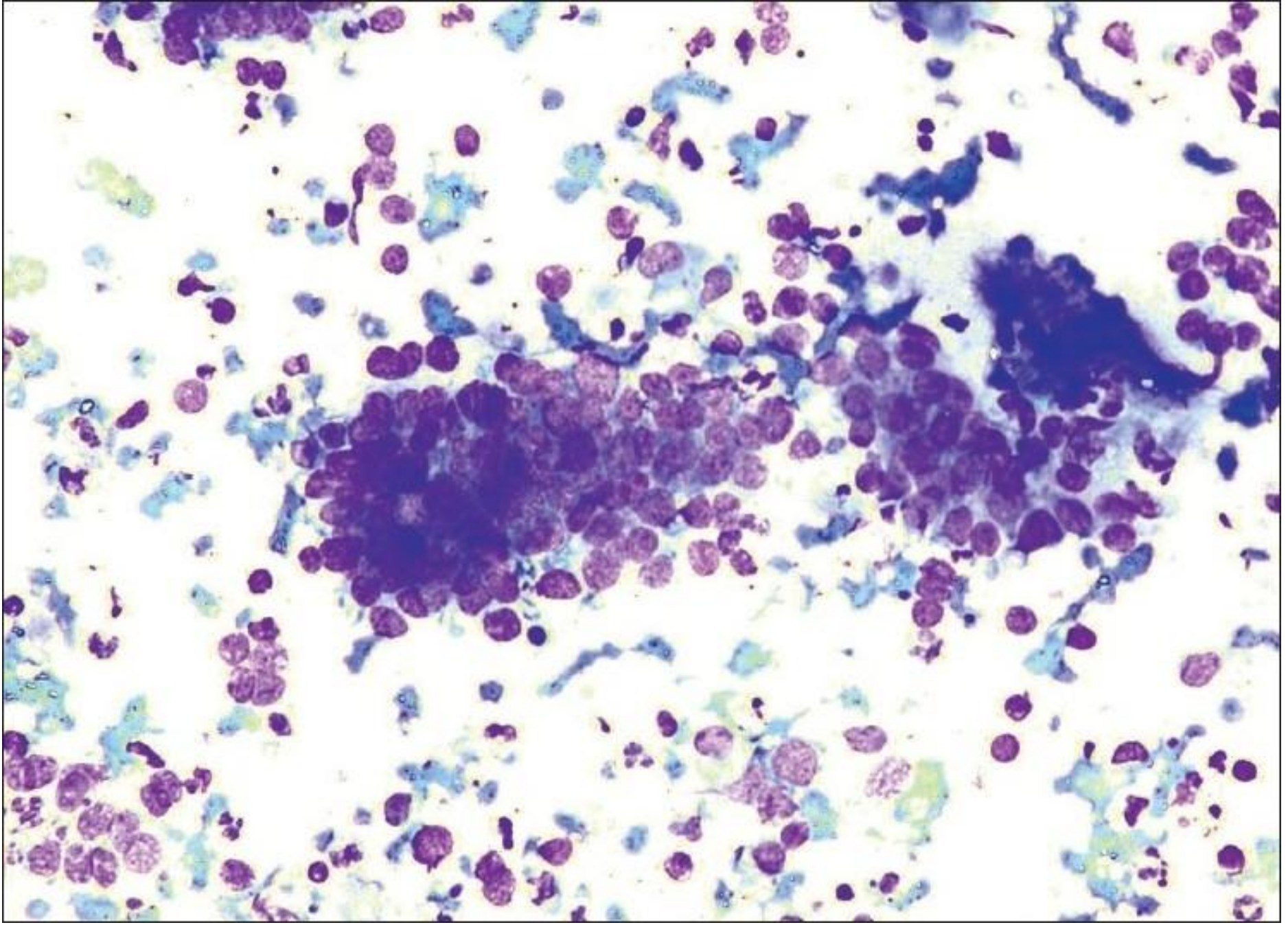
-FNA slides returned to the outside hospital quite some time ago; hence, they were not available for retrospective review.

-Subsequent photomicrographs were obtained from *J. Cytol.* 2011 *Jan-Mar; 28(1):1-6.*

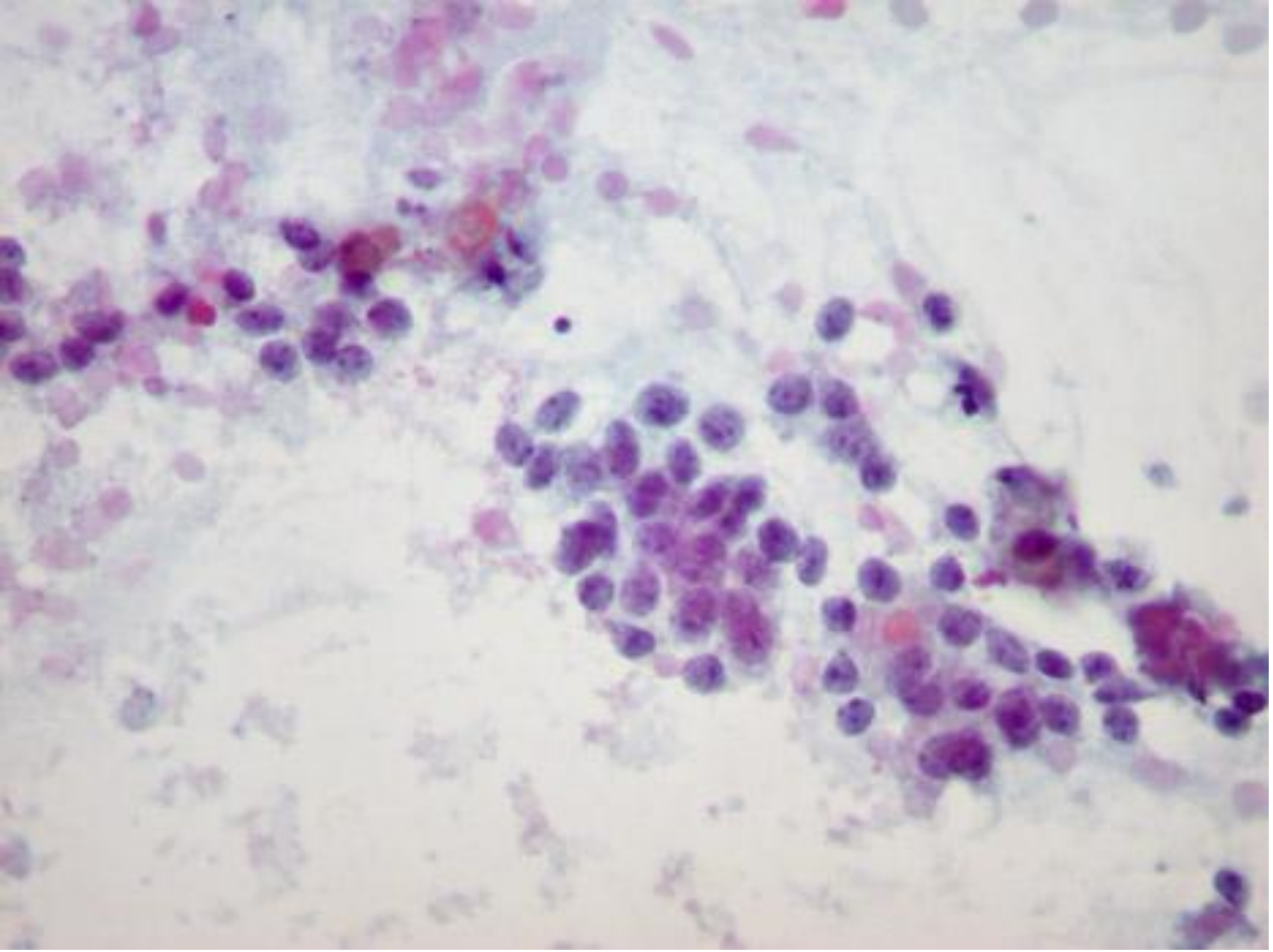
Cytologic features:

- cellular and non-cellular components
- combination of :
  - shadow cells
  - basaloid cells (high N/C ratio, dispersed chromatin; not markedly atypical/malignant appearing)
  - foreign body giant cells
- calcification
- predominance of basaloid cells if aspirated at periphery
- aspirates from older lesions may show only ghost cells

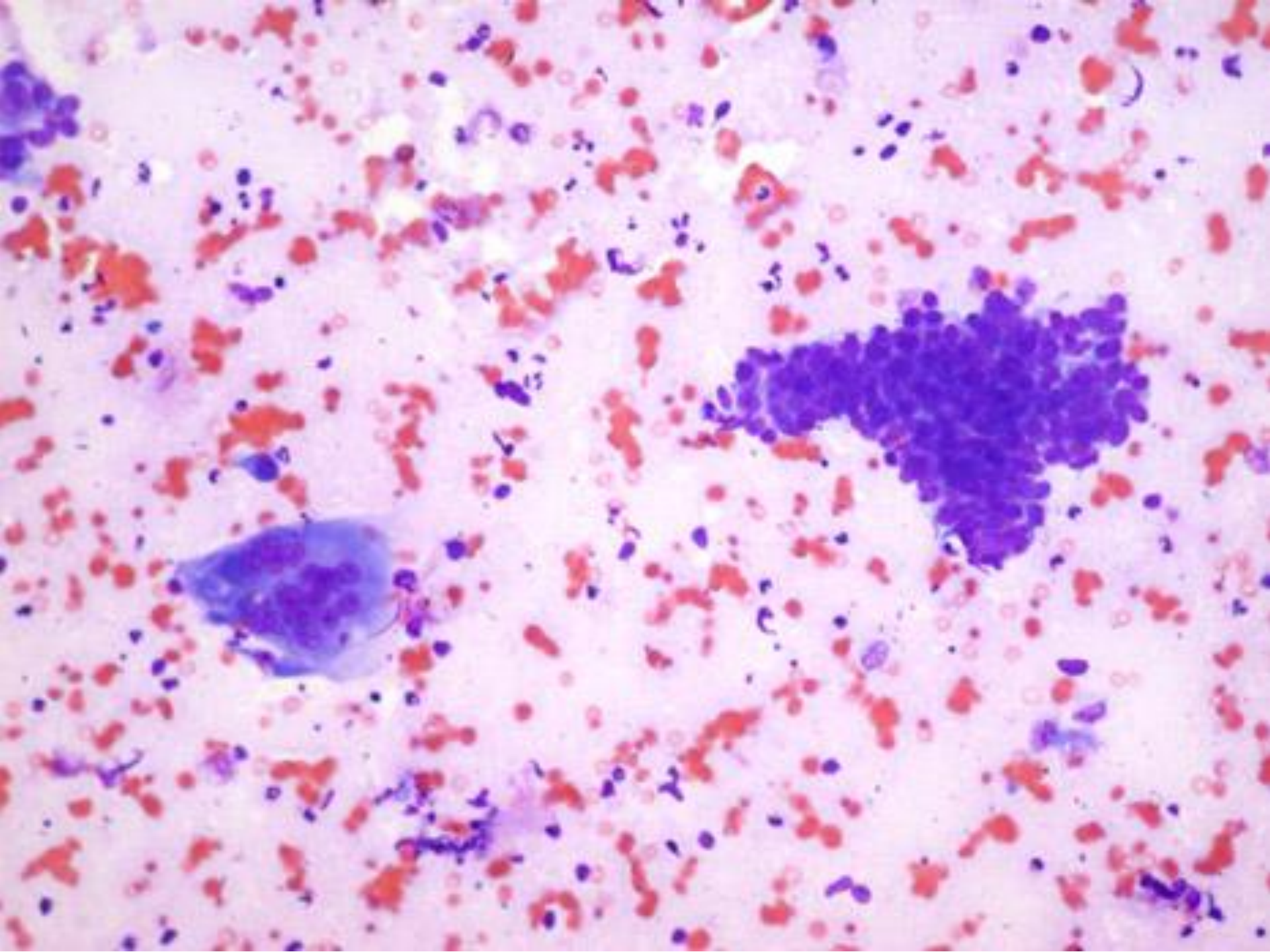
DDx: Trichilemmal cyst, epidermal inclusion cyst, squamous cell carcinoma, basal cell carcinoma, and other basaloid salivary gland neoplasms.

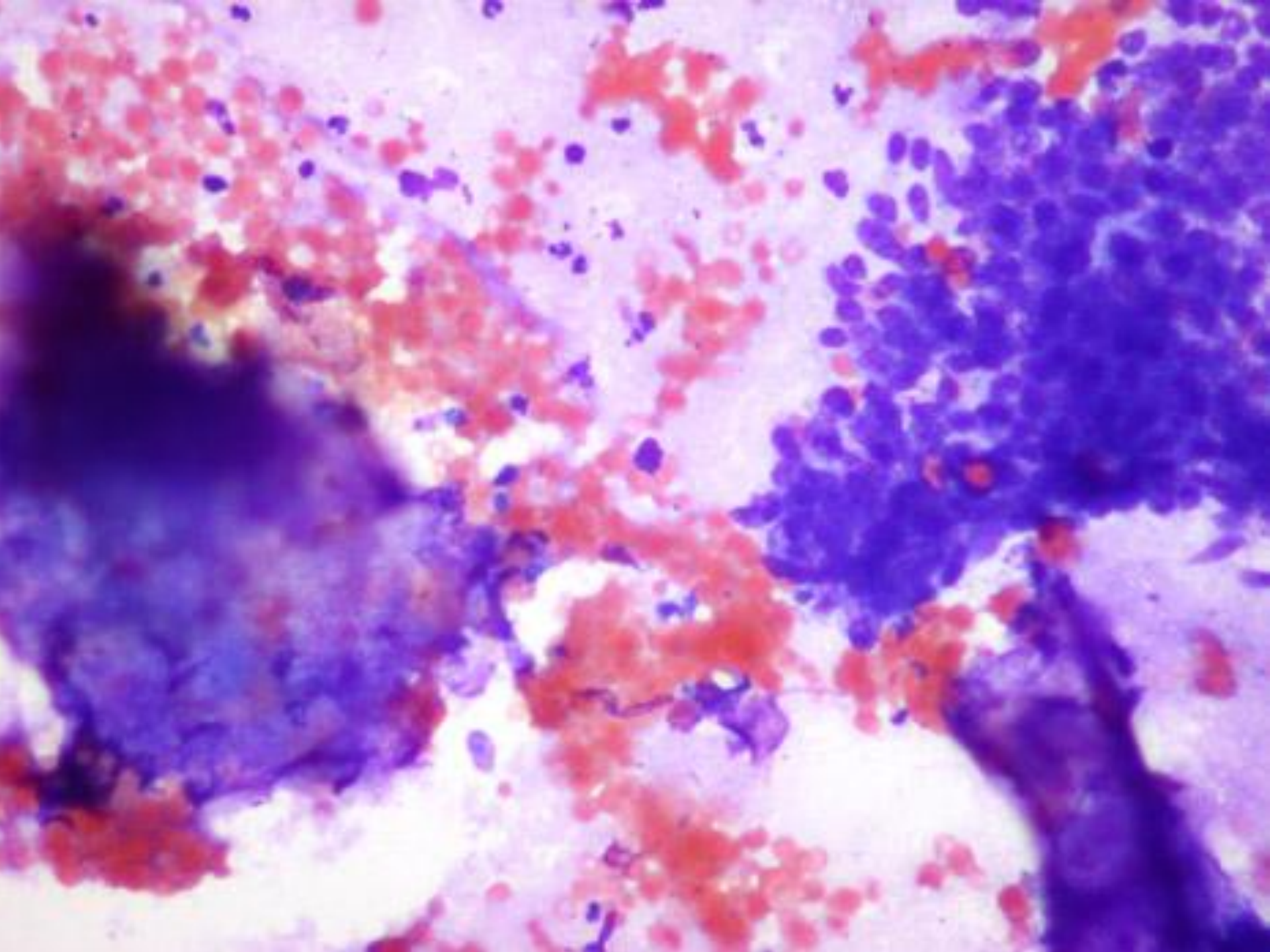


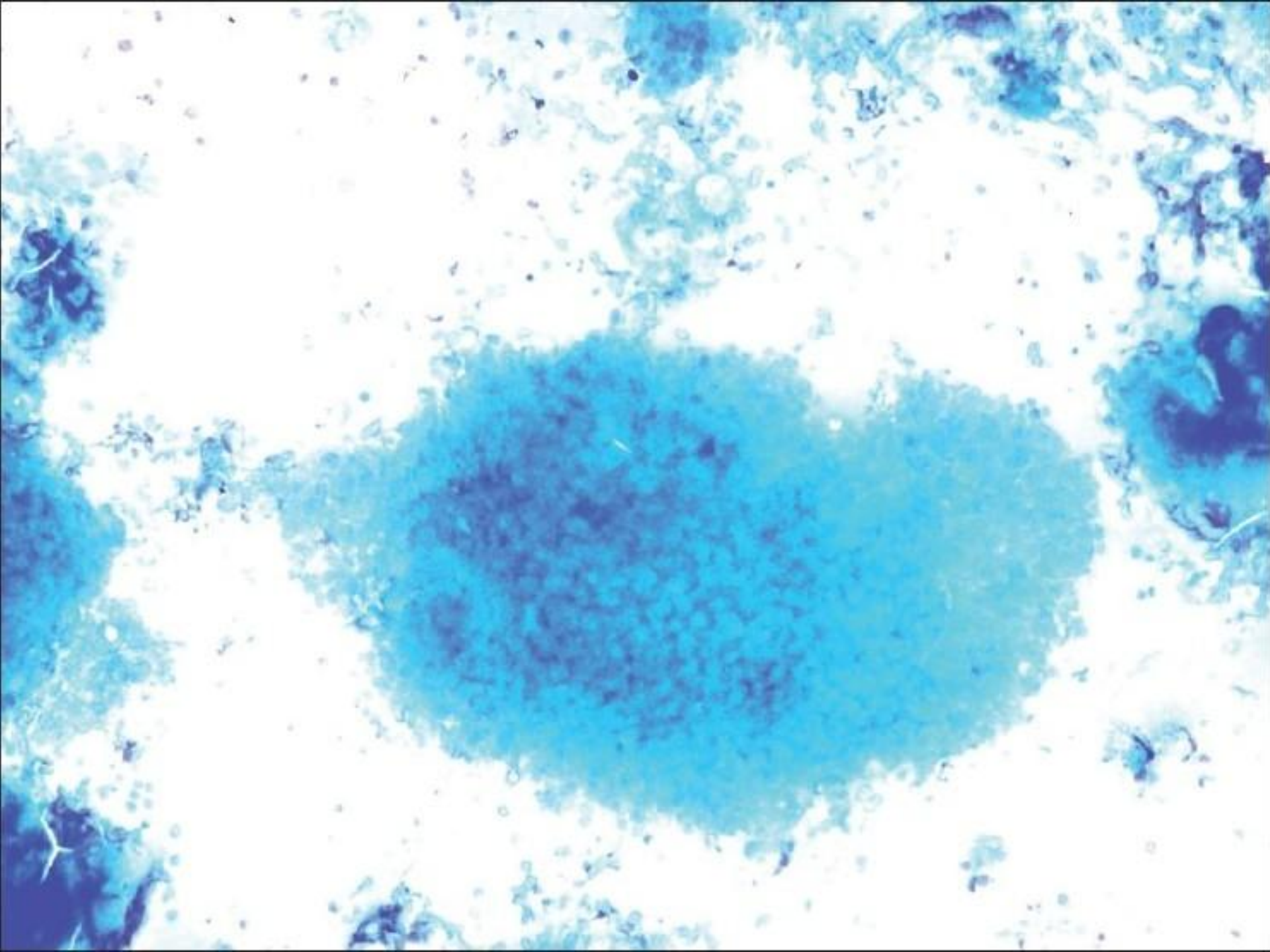
Source: J Cytol. 2011 Jan-Mar; 28(1): 1–6.

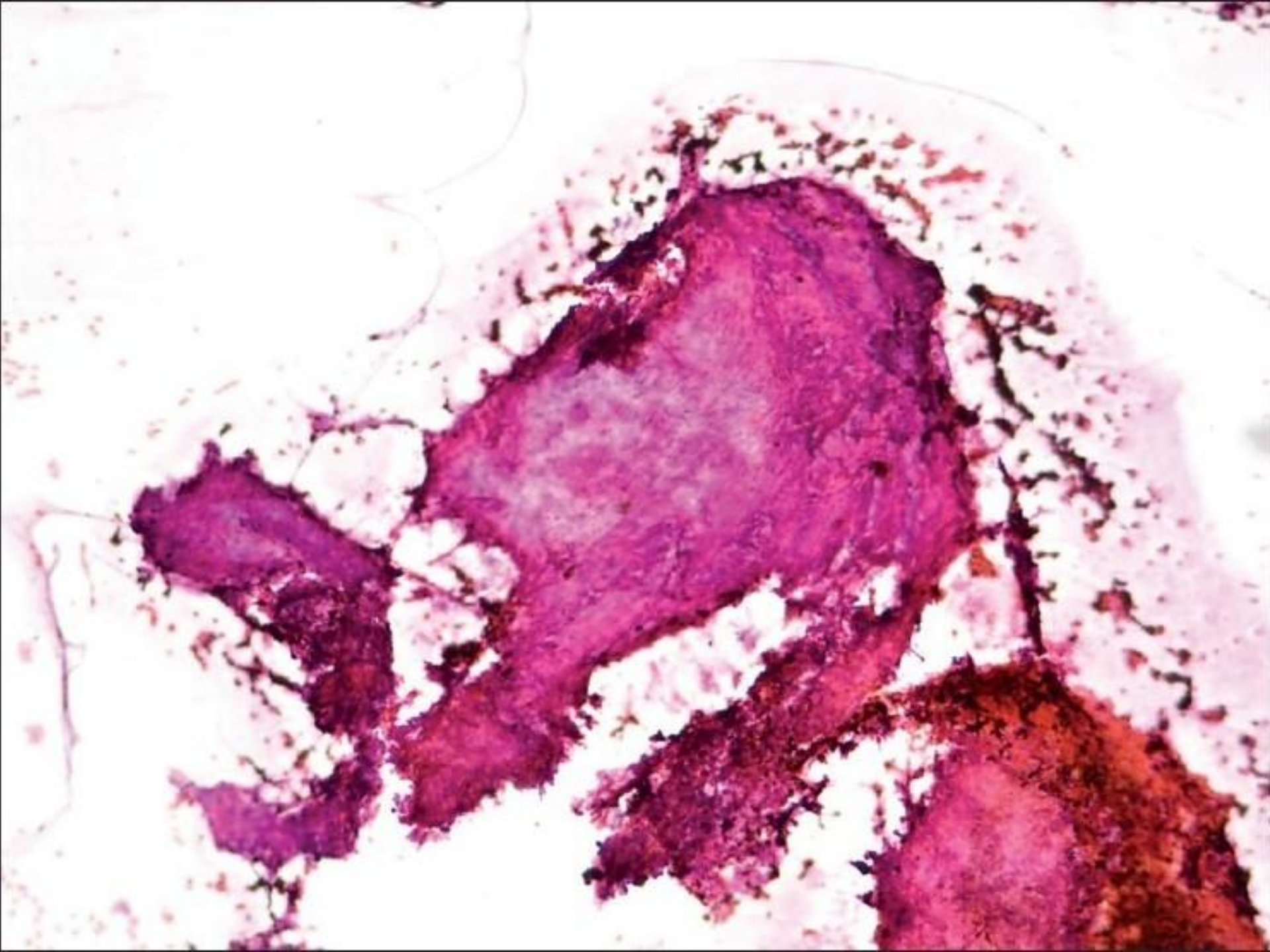


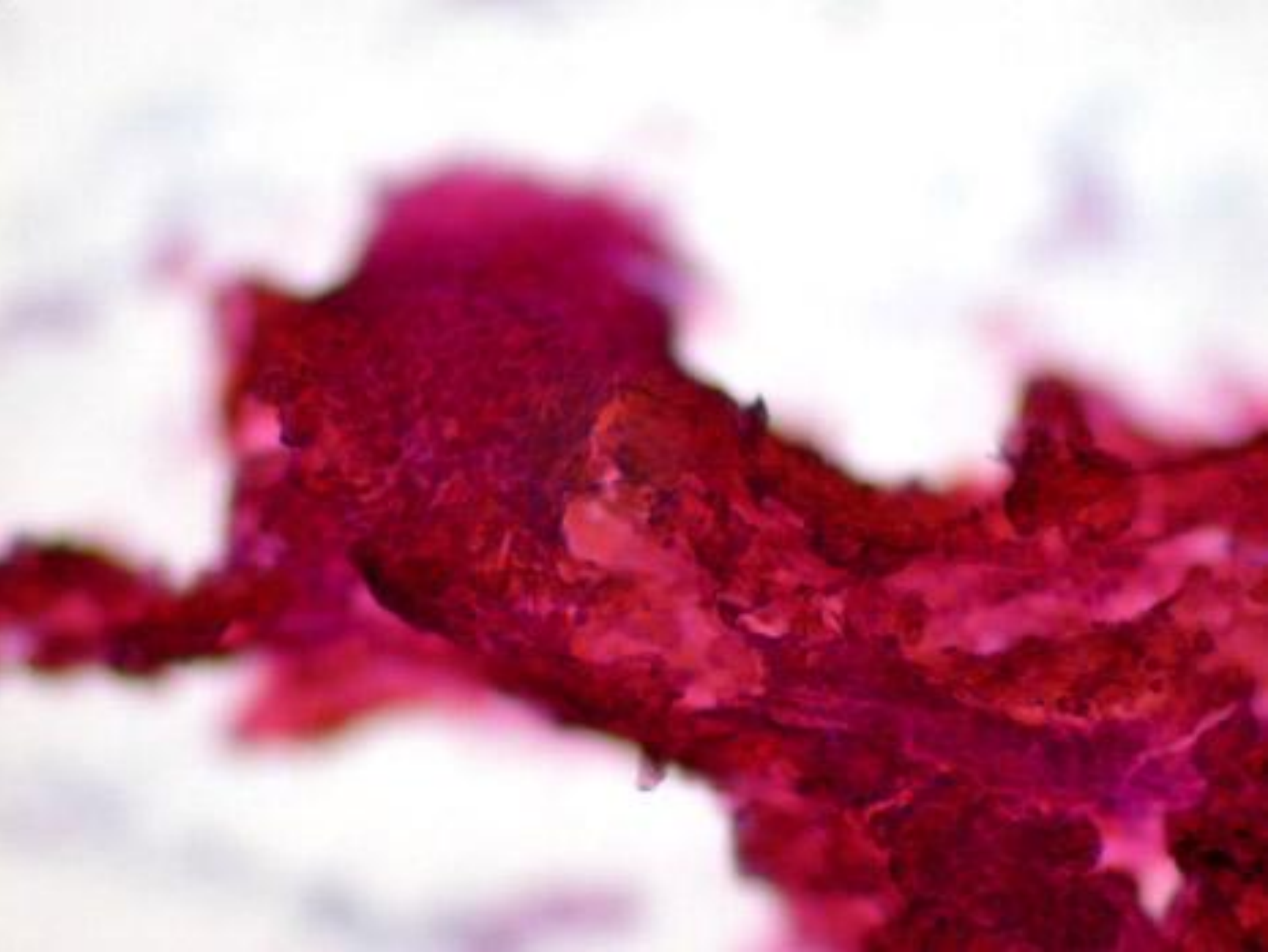
Source: http://www.bccancer.bc.ca











Lessons learned

- Not all neck FNA samples with cohesive basaloid epithelial cells are not necessarily squamous cell carcinomas.

- Be aware of pilomatrixoma as an entity. The diagnosis can be challenging clinically and on cytopathology.