

Interesting Case Conference

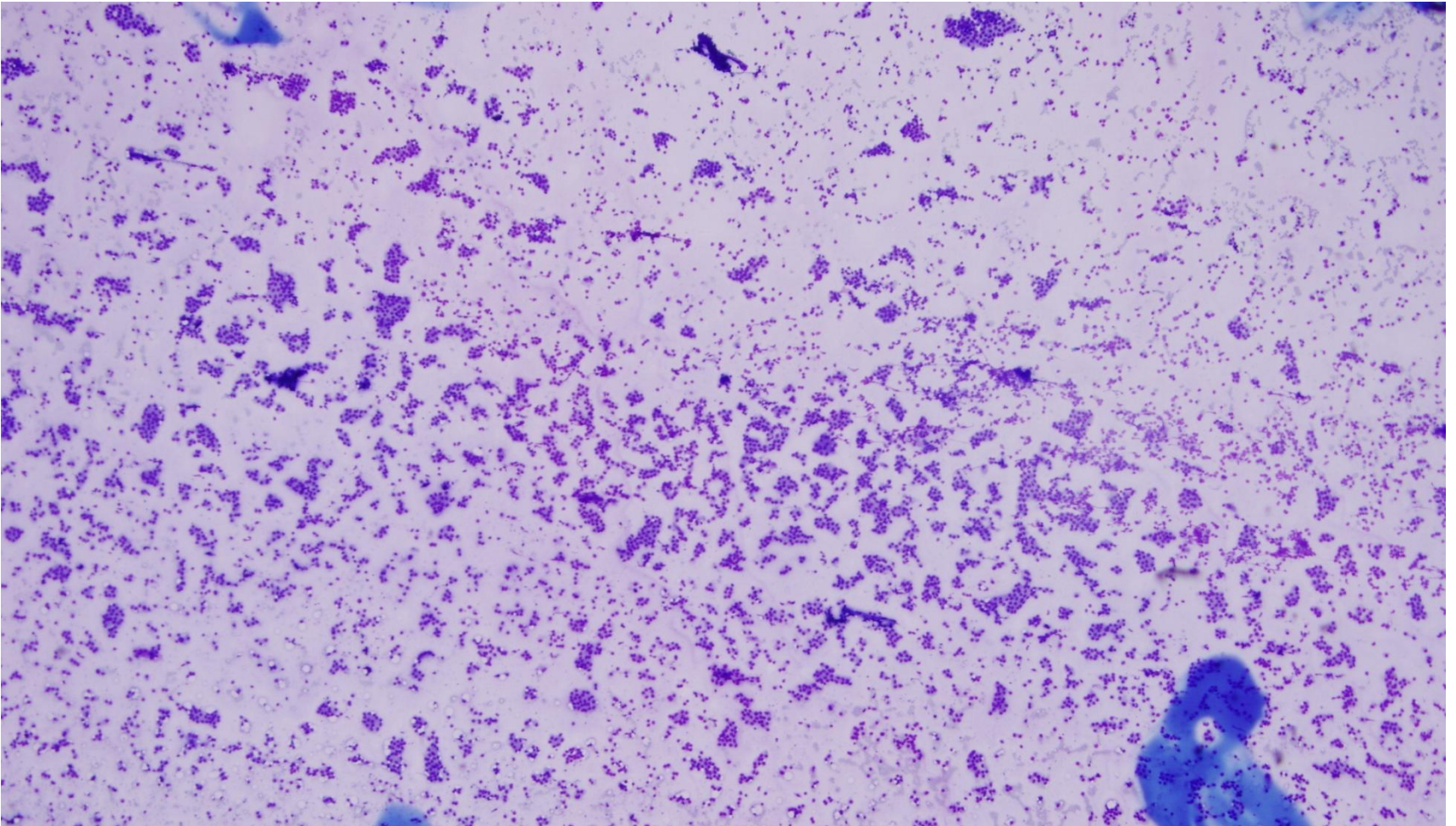
10/29/2012

HISTORY

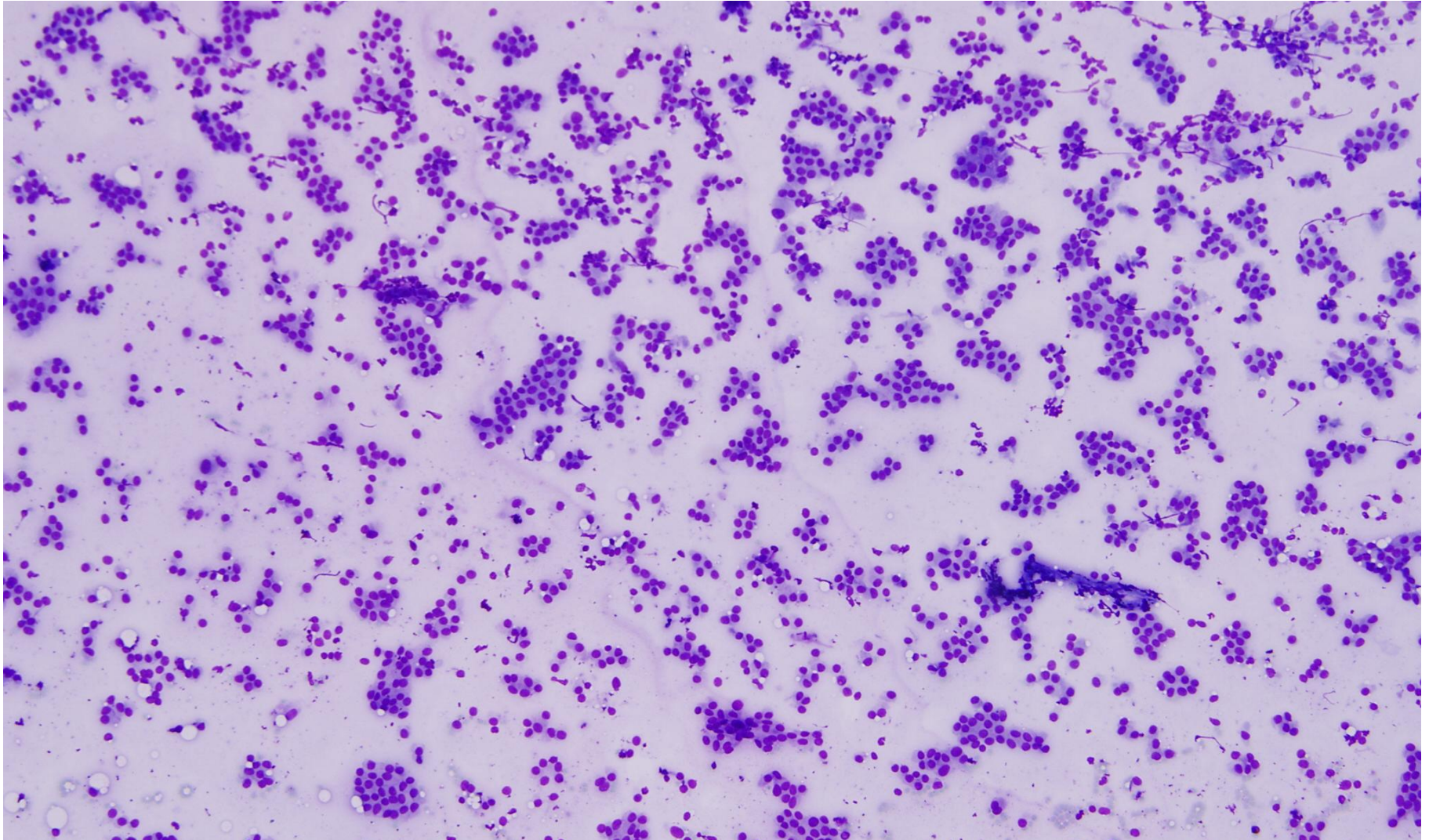
- 31 year old female with hyperparathyroidism
- Thyroid ultrasound
 - Peripherally calcified nodule 1.1 x 0.9 x 1.1 cm in the right lobe.
 - Enlarged parathyroids: 2.3 x 1.1 x 4.8 cm and 0.9 x 0.4 x 1.3 cm
 - US-guided thyroid FNA: 3 passes

Diff-Quik: Low Power

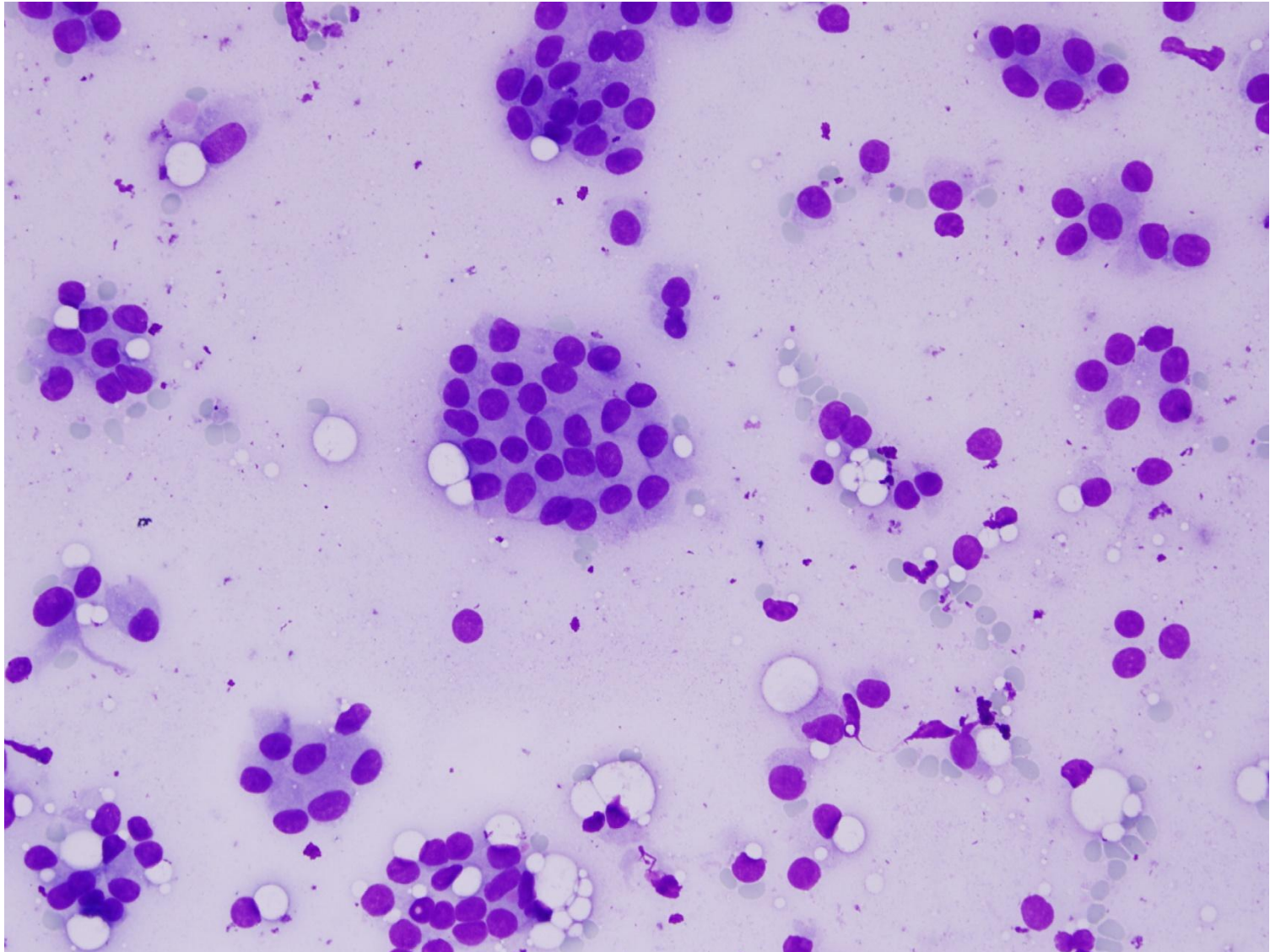
Very cellular



Diff-Quik: Low Power Flat sheets



Diff-Quik: Cells don't look that bad



DIFFERENTIAL DIAGNOSIS

I see a cellular specimen but also ...

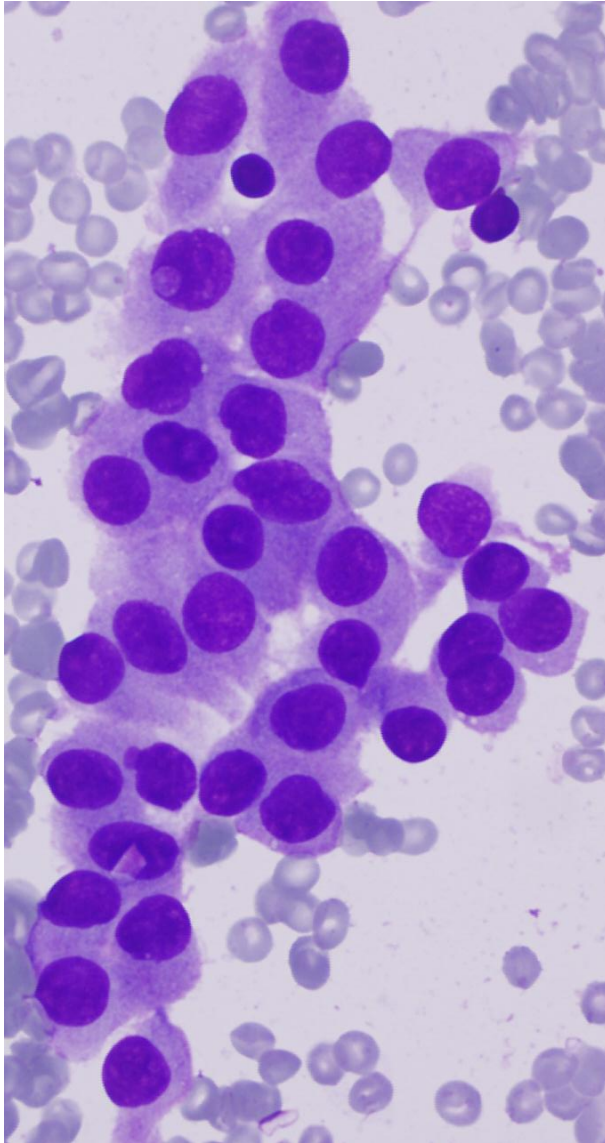
- Flat sheets
- Not much overlapping
- Nuclei don't look bad – not that irregular

Preliminary diagnosis: Nodular hyperplasia?

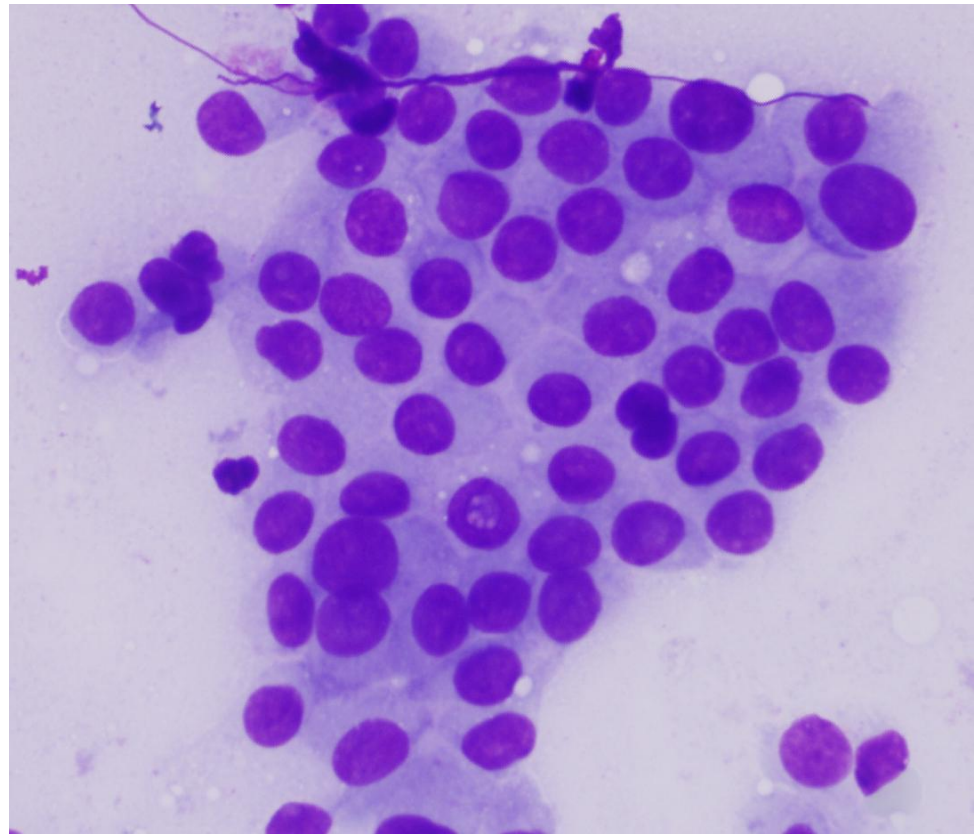
Attending says: Papillary thyroid carcinoma (PTC)?

Fellow then says: Uh oh.

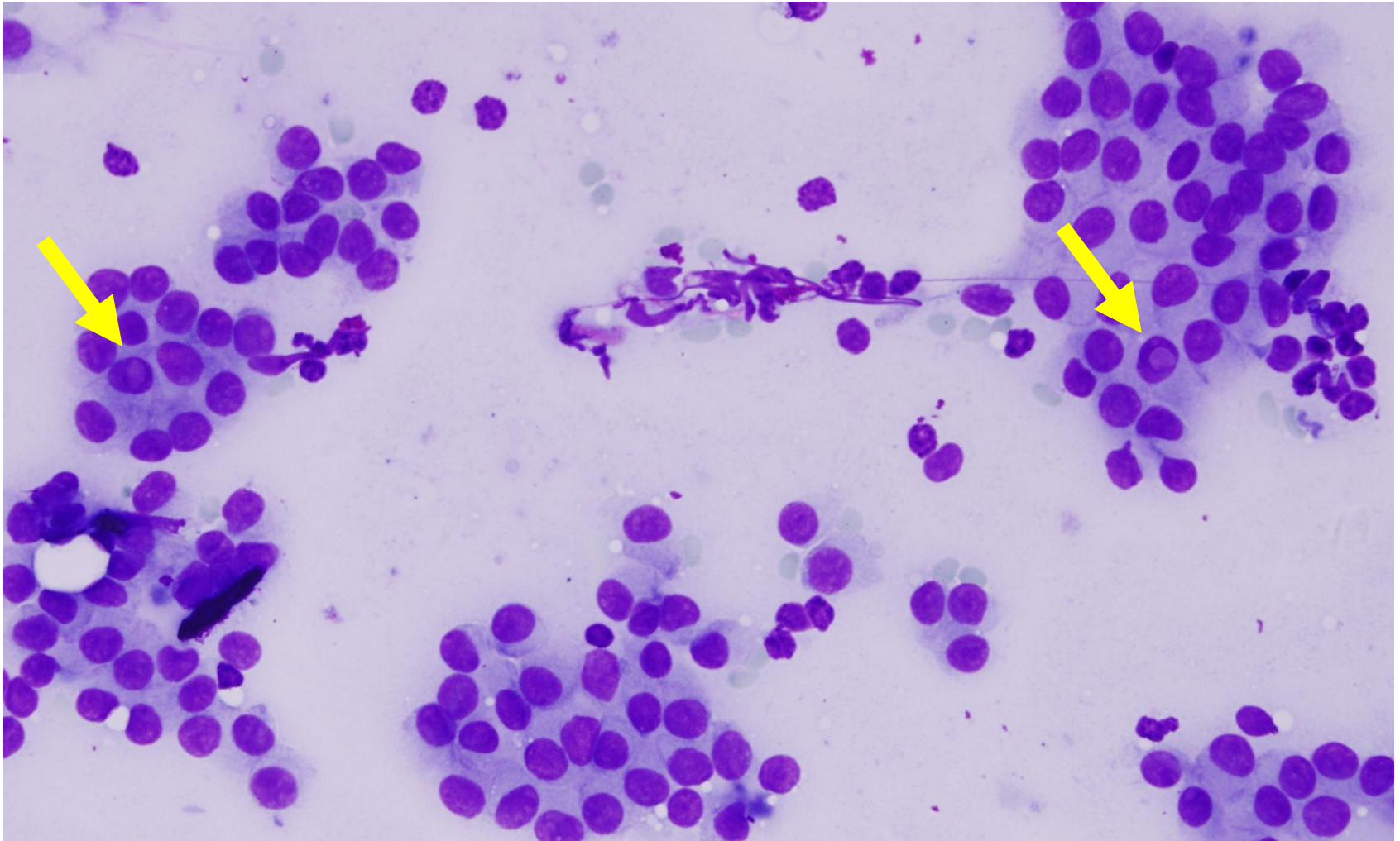
Let's look at the Diff-Quik again



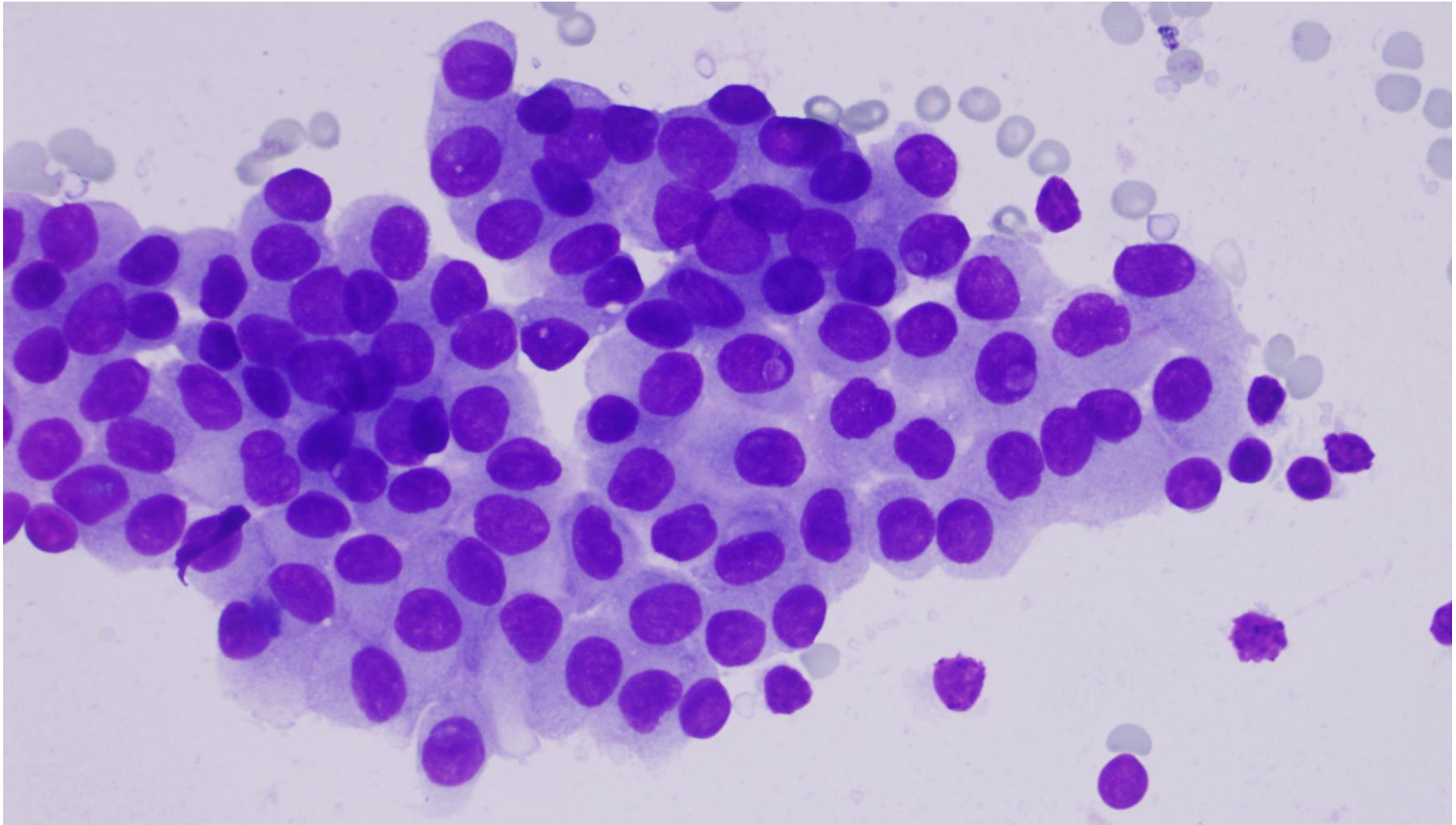
- The follicular cells are HUGE compared to the size of the lymphocytes & red blood cells.
- Pseudoinclusions.



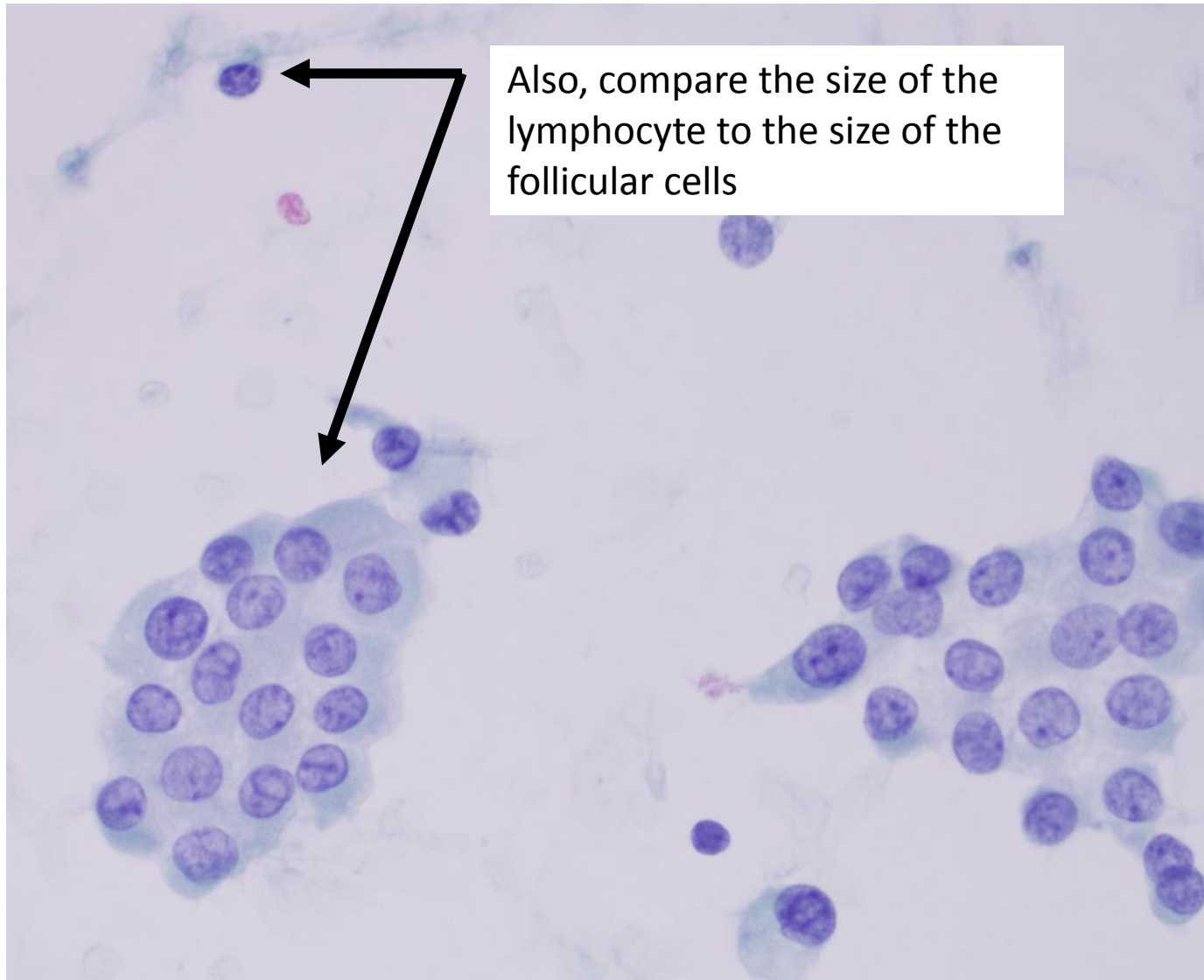
Diff-Quik: Pseudoinclusions galore



Diff-Quik: More pseudoinclusions

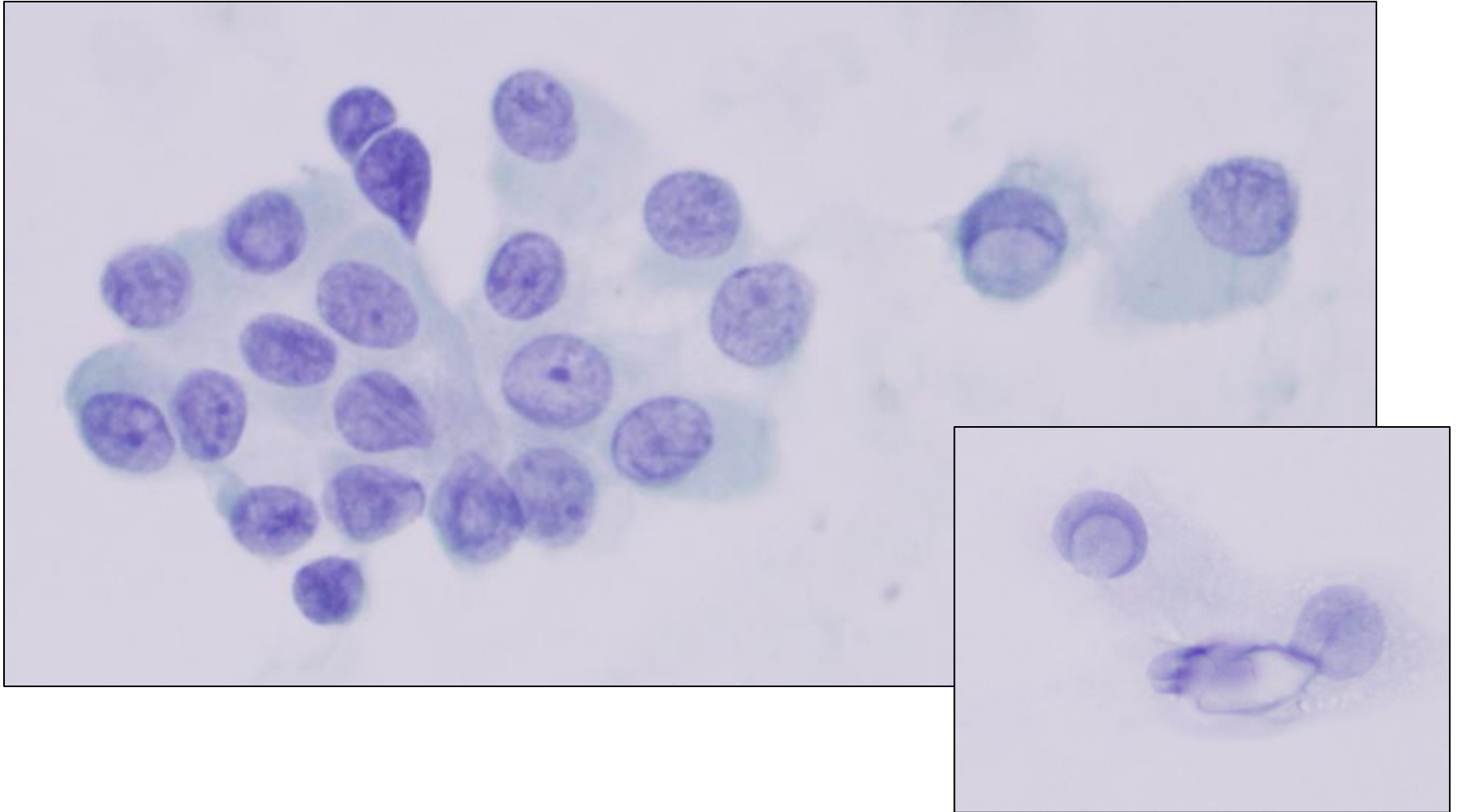


Pap stain: Grooves, powdery chromatin, & marginally placed micronucleoli



Pap stain:

Grooves, powdery chromatin, & pseudoinclusions



FINAL DIAGNOSIS

- Right thyroid, nodule, FNA:
 - Positive for papillary thyroid carcinoma.

LESSONS

- When you see a very cellular thyroid aspirate, look for pseudoinclusions.
- With PTC, you may not see the papillary fragments.
- With PTC, you can have flat sheets.
 - It mimics those of macrofollicle fragments seen in benign follicular nodules.
 - When see monolayered sheets, check the cell arrangement and nuclear features.
- Not seeing much colloid should have also raised a red flag.
- The nuclear enlargement and pleomorphism should have raised a red flag.