

Detecting glandular lesions by cervical cytology

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Year 1-2 Registrar Workshops
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Glandular abnormalities reported in NZ in 2018

Cytology:

Atypical Glandular Cells/AIS = 403 reports (0.10%)

Adenocarcinoma (all types) = 101 reports (0.02%).

HSIL = 4347 reports (1.1%)

SCC = 35 reports (0.01%)

Histology:

Adenocarcinoma in situ (AIS) = 149 women

Endocervical adenocarcinoma = 19 women

HSIL = 4945 women

SCC = 140 women

The NZ Cervical Cancer Audit 2000 - 2002

- 336 smears from 178 women taken within 4 years prior to a histological diagnosis of invasive cervical cancer were rescreened.
- 18% of 160 negative smears prior to invasive SCC were upgraded to “high-grade”
- 22% of 65 negative smears prior to invasive (endocervical) adenocarcinoma were upgraded to “high-grade”

Overview

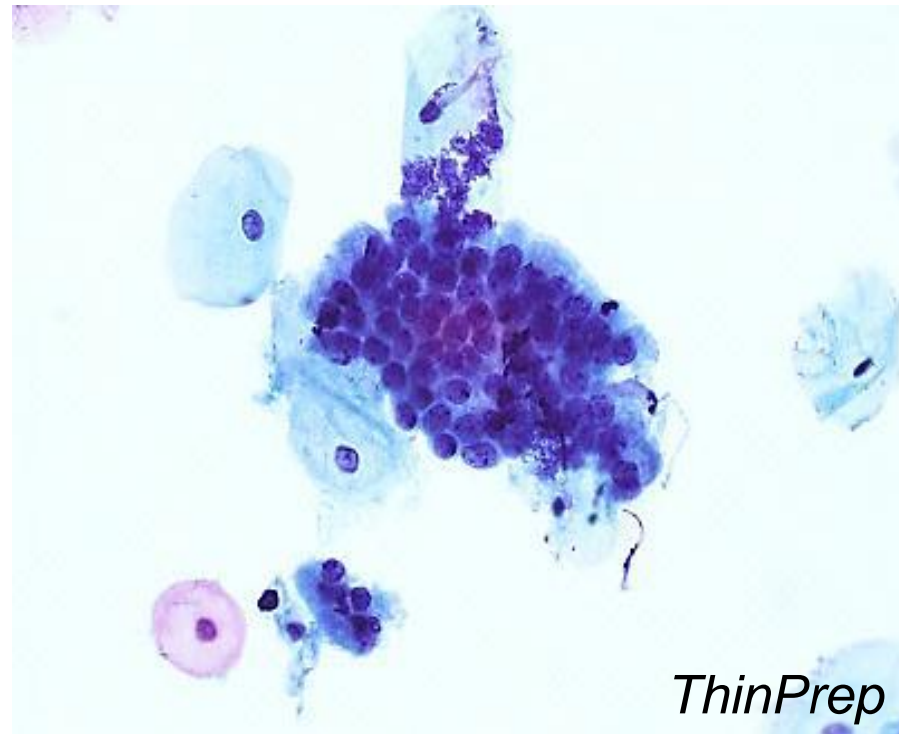
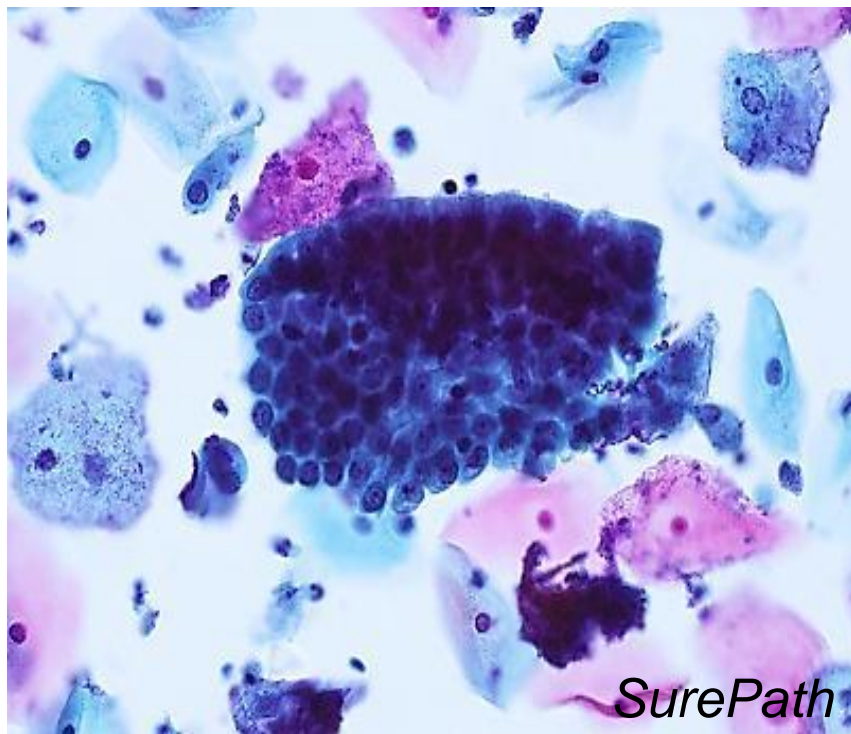
Endocervical cells

1. Normal/reactive endocervical cells
2. Atypical endocervical cells
3. Adenocarcinoma in situ (AIS)
4. Invasive endocervical adenocarcinoma

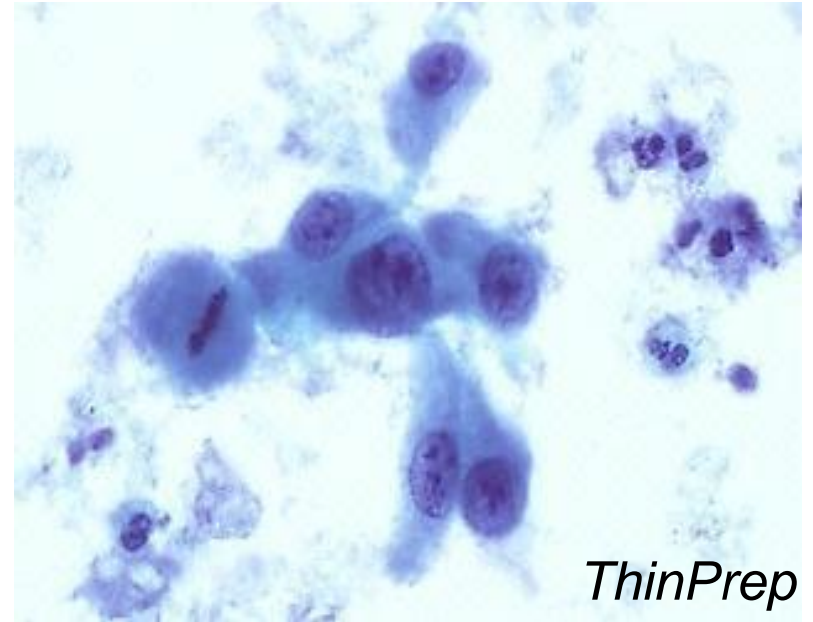
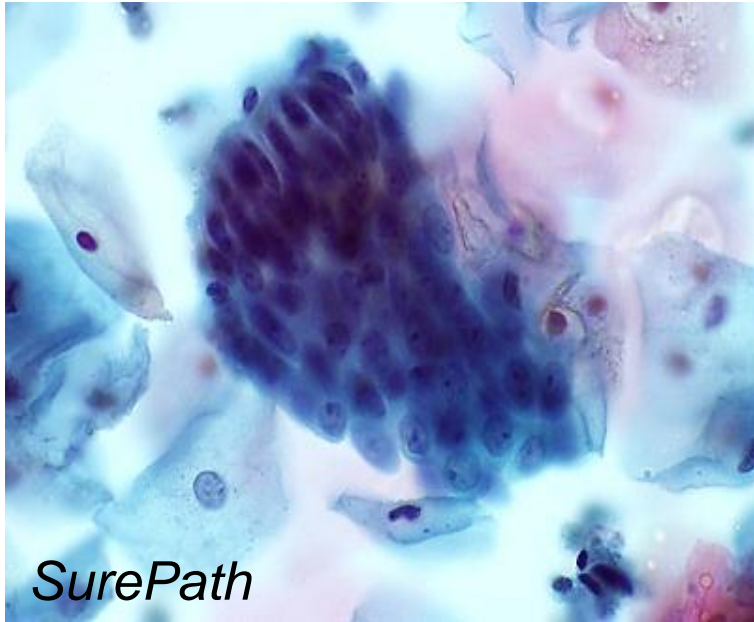
Endometrial cells

1. Normal endometrial cells
2. Atypical endometrial cells
3. Endometrial adenocarcinoma

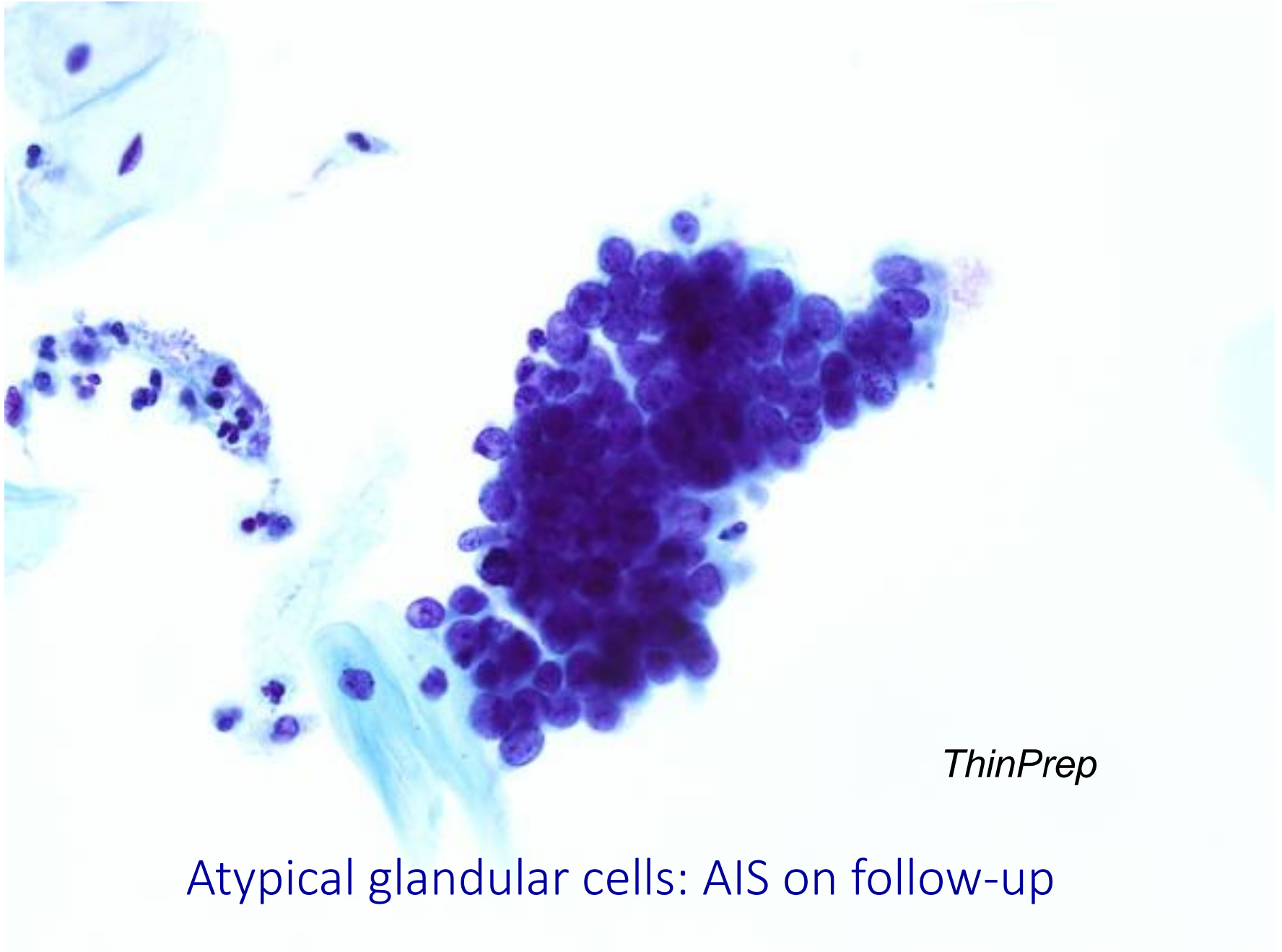
Other abnormal glandular cells



Normal endocervical cells



Reactive endocervical cells



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Atypical glandular cells: AIS on follow-up

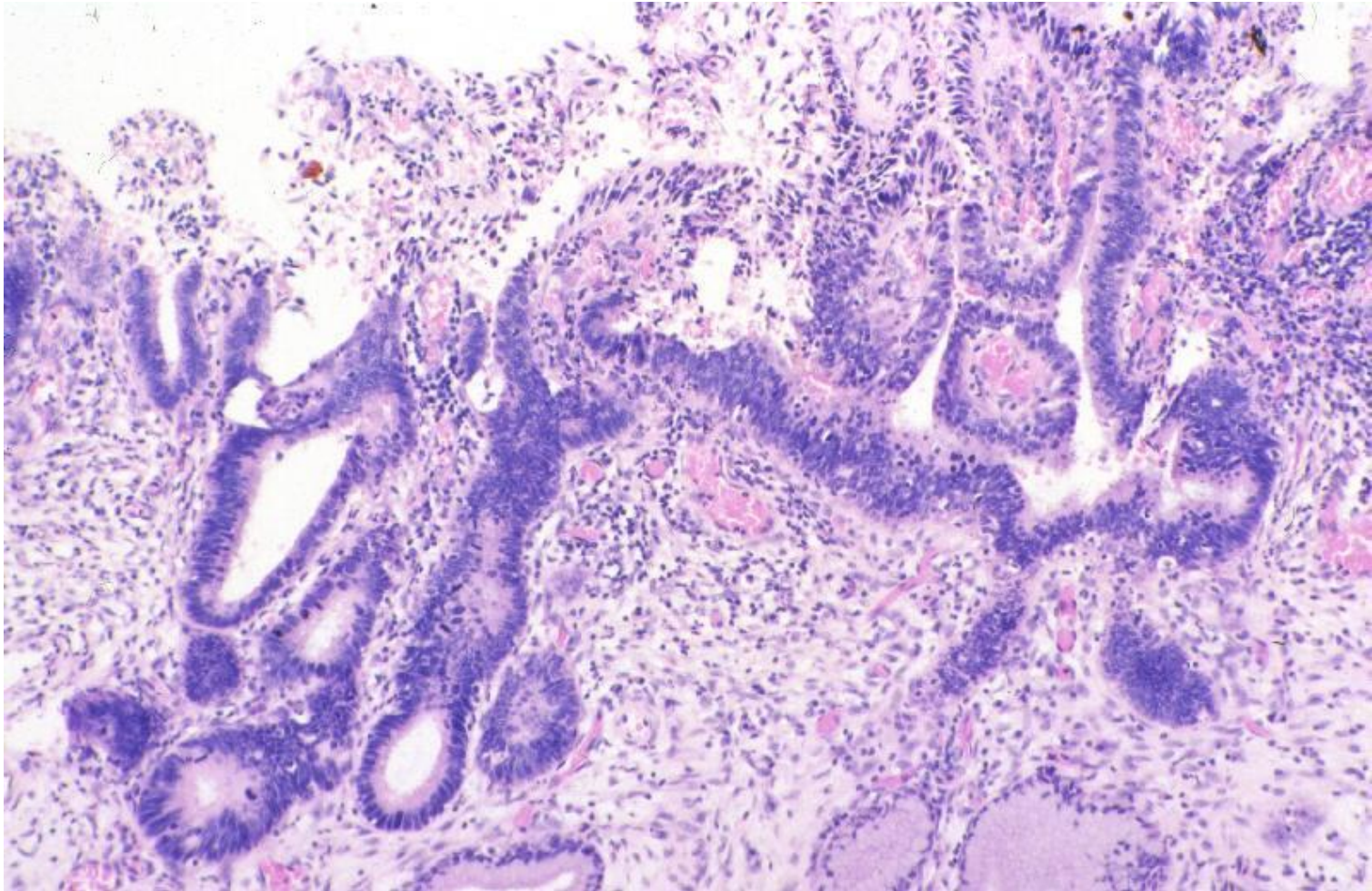
Adenocarcinoma in situ (AIS)

Cell aggregates: **ARCHITECTURE matters most**

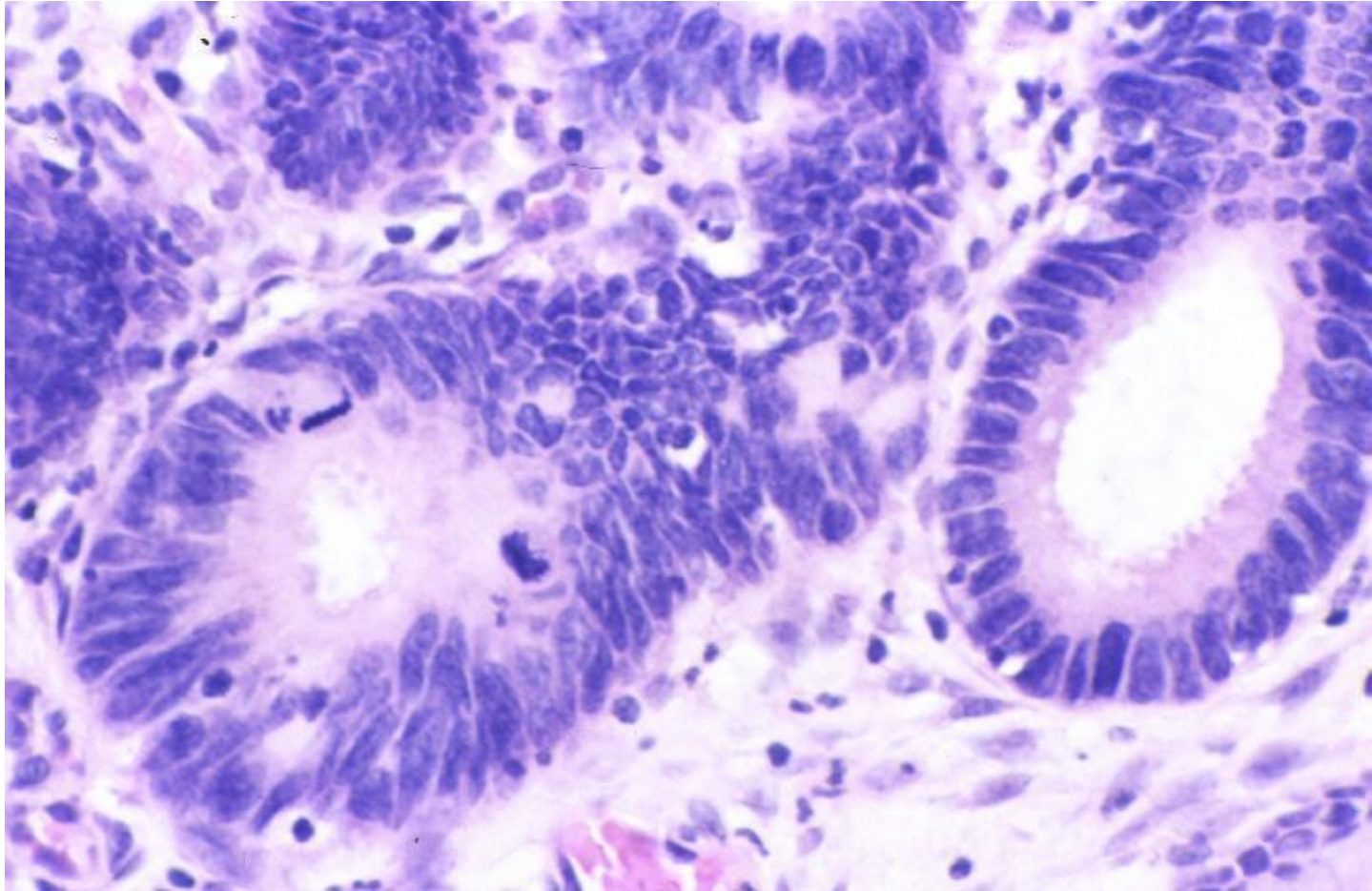
- large irregularly shaped sheets
- tightly crowded cells with nuclear overlapping
- sheet edges: palisaded nuclei, common borders, feathering
- strips and rosettes with pseudostratification
- gland openings within cell groups
- papillary groups

Cell morphology:

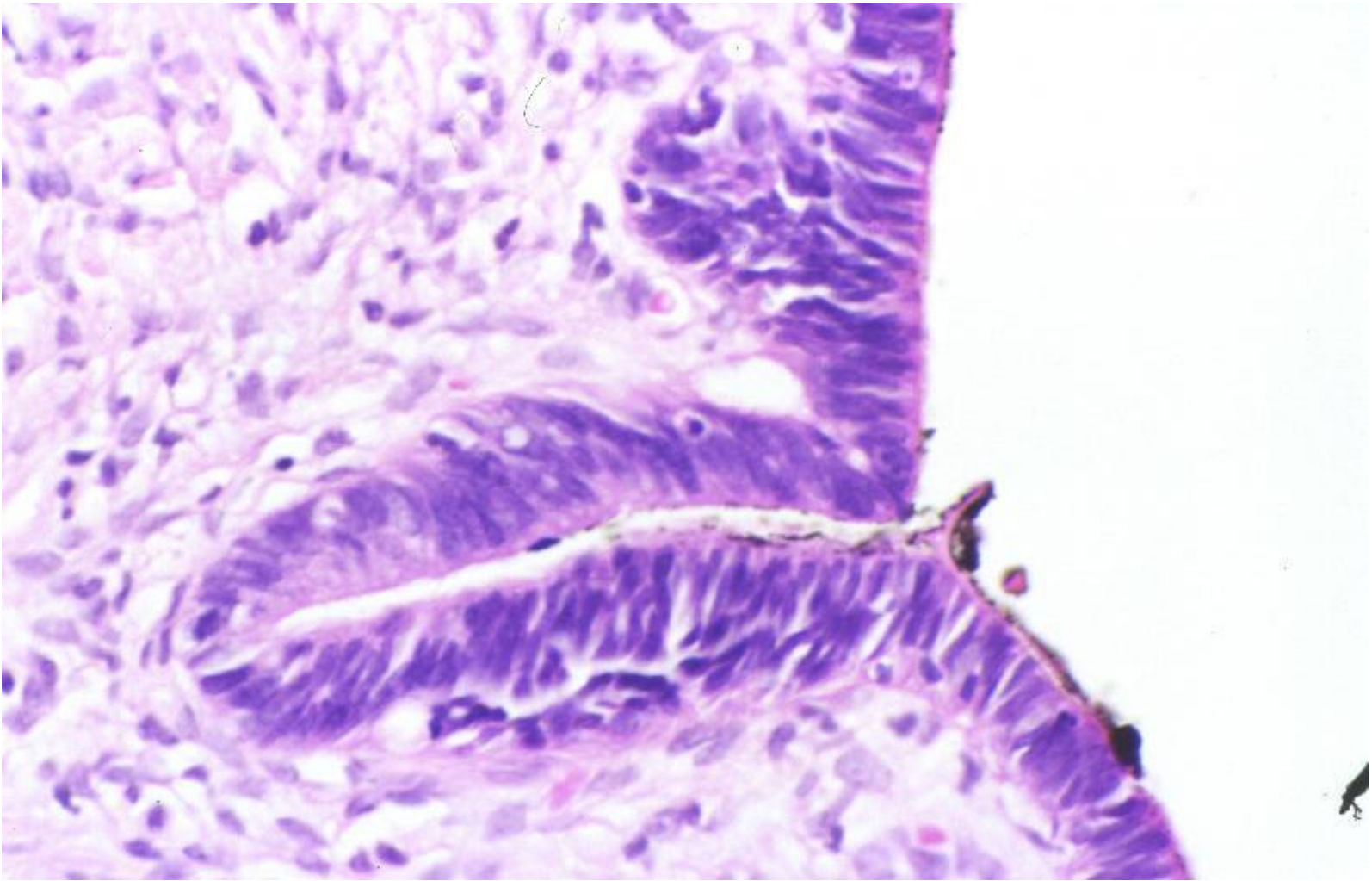
- few single cells, but more are seen in LBC samples
- hyperchromatic; mild increase in nuclear size
- chromatin uniform but stippled or granular
- mitoses, may be abnormal
- apoptotic debris



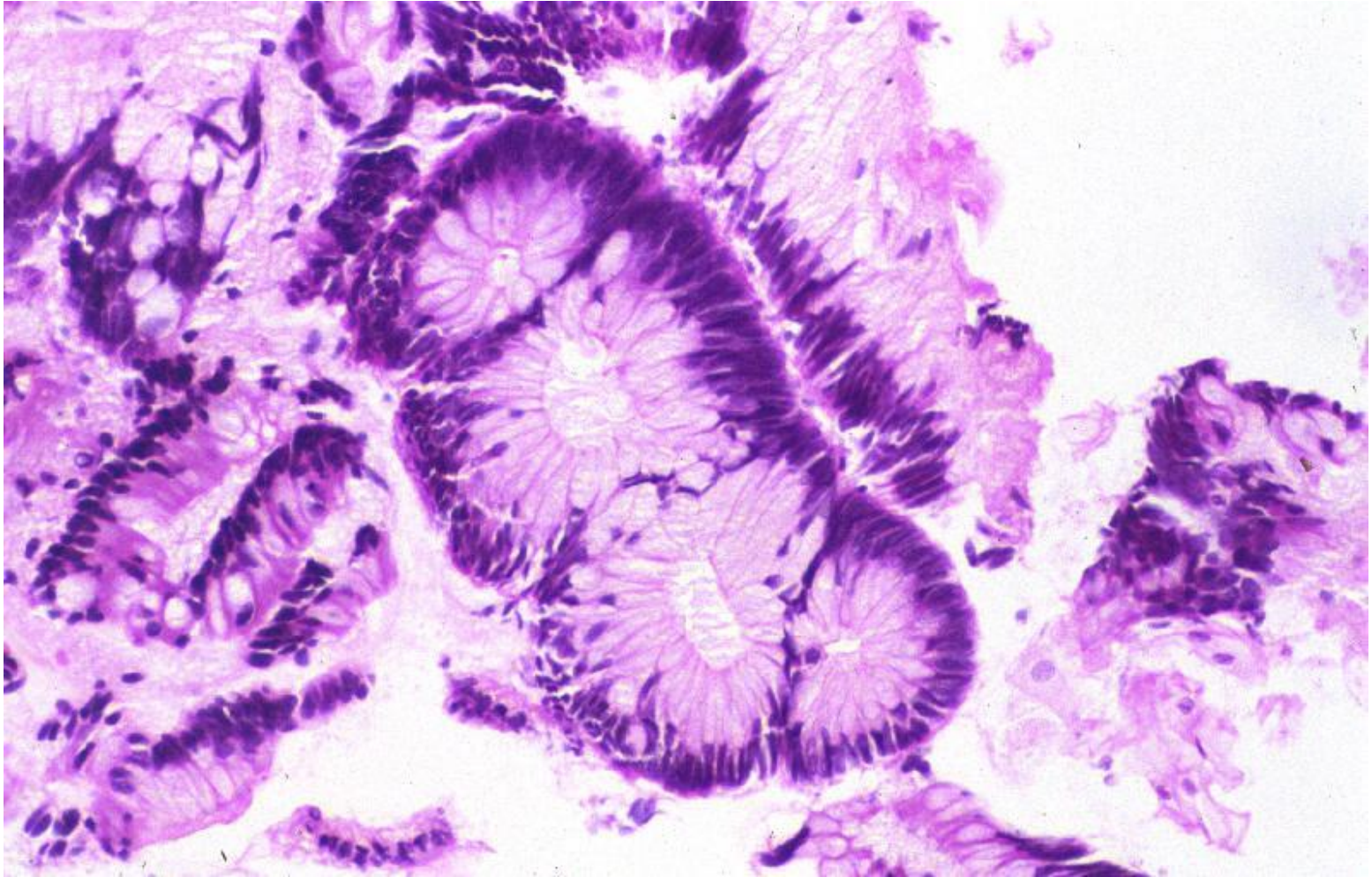
Adenocarcinoma in situ (AIS): Histology



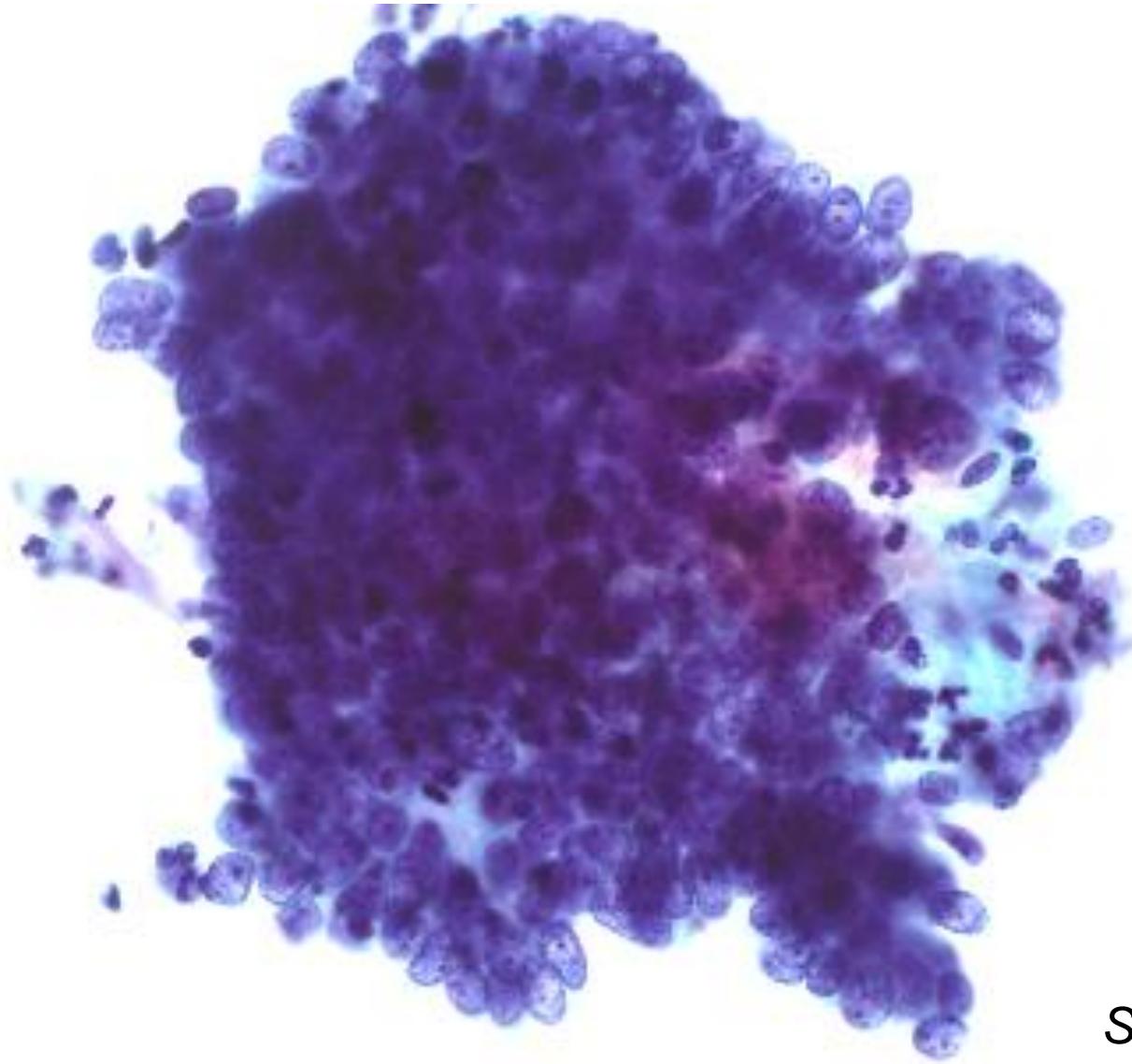
AIS Histology: Endocervical type



AIS Histology: Endometrioid type



AIS Histology: Intestinal type



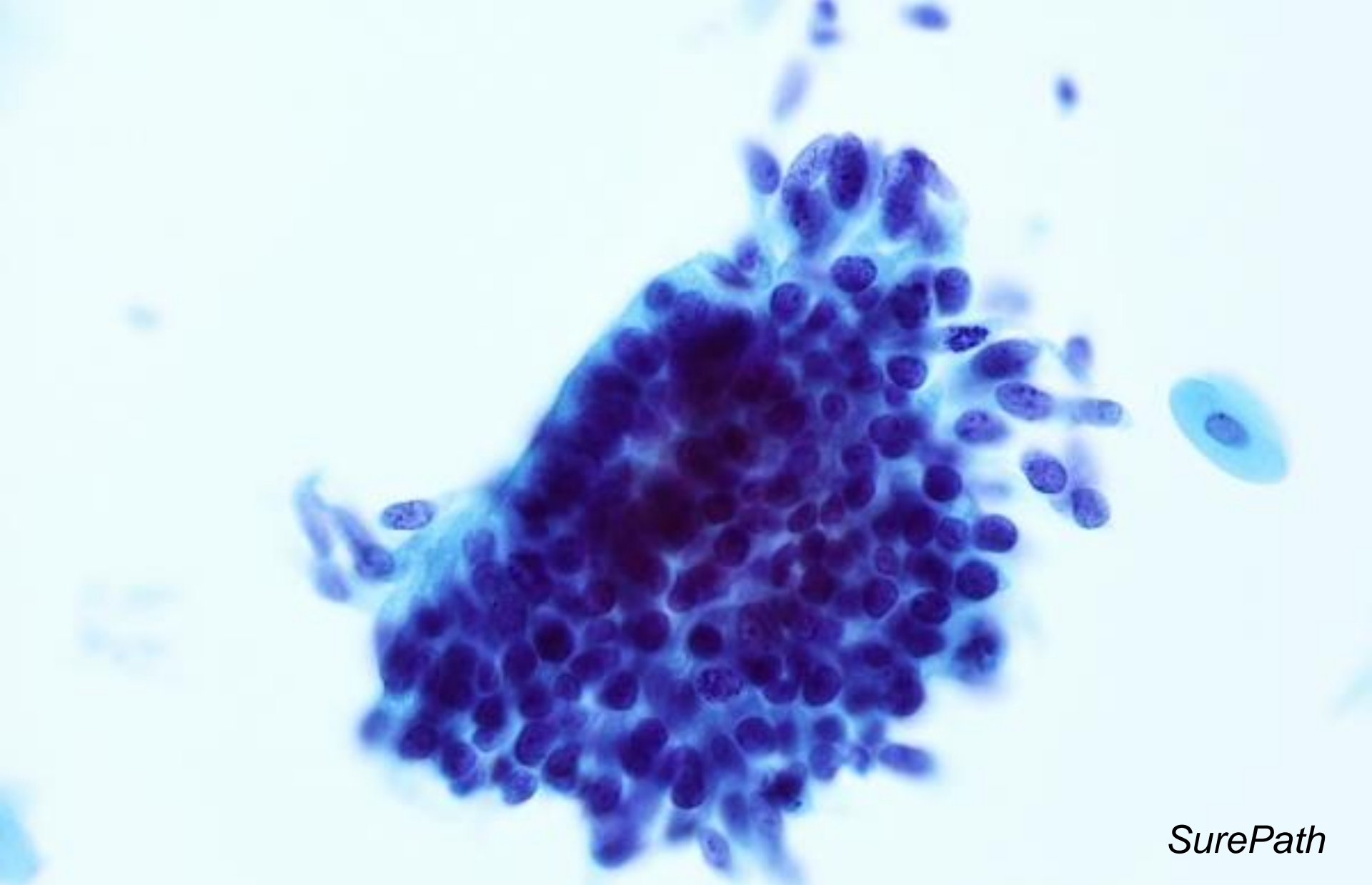
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AIS: Irregular crowded groups



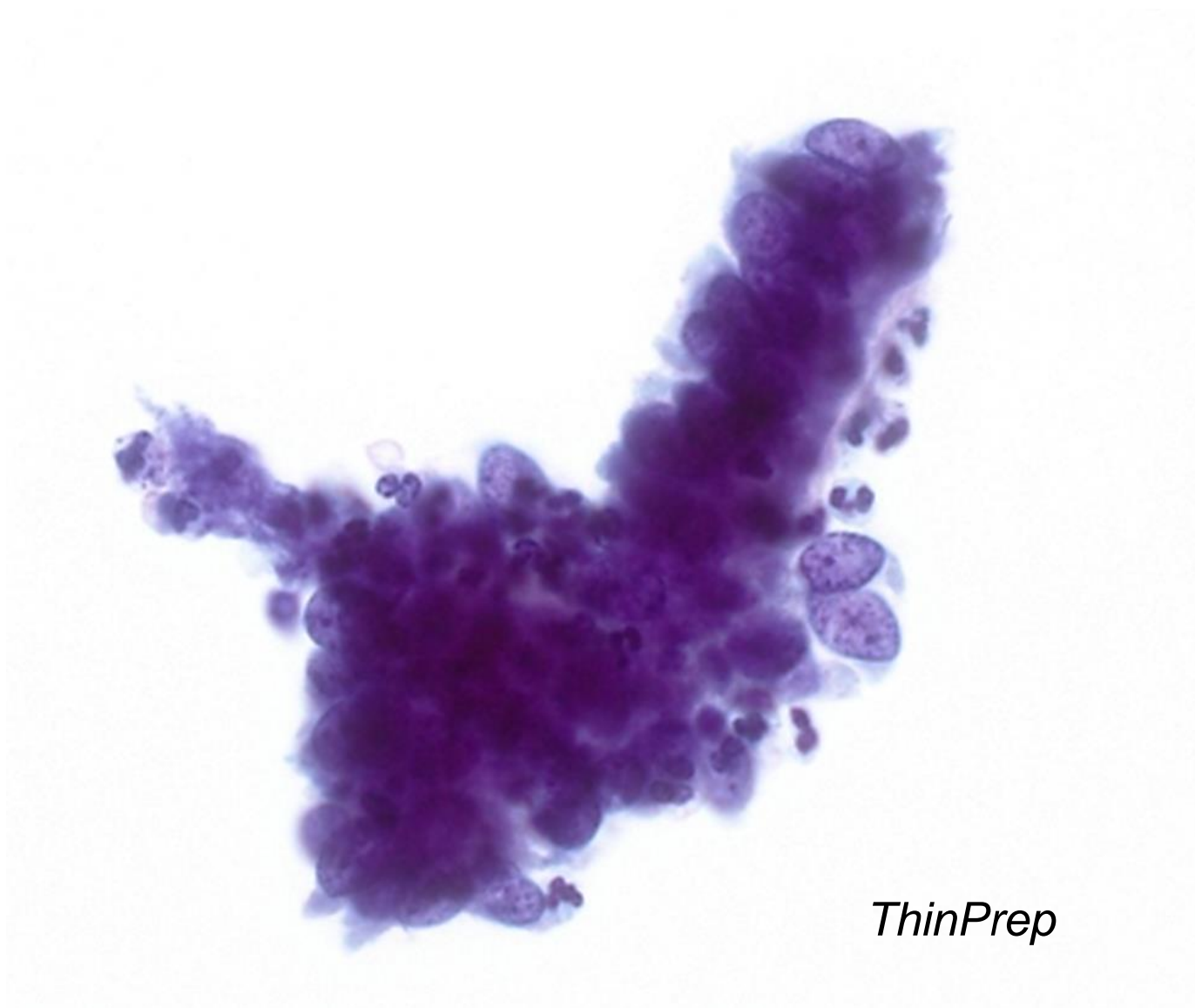
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AIS: Cell crowding and nuclear overlapping



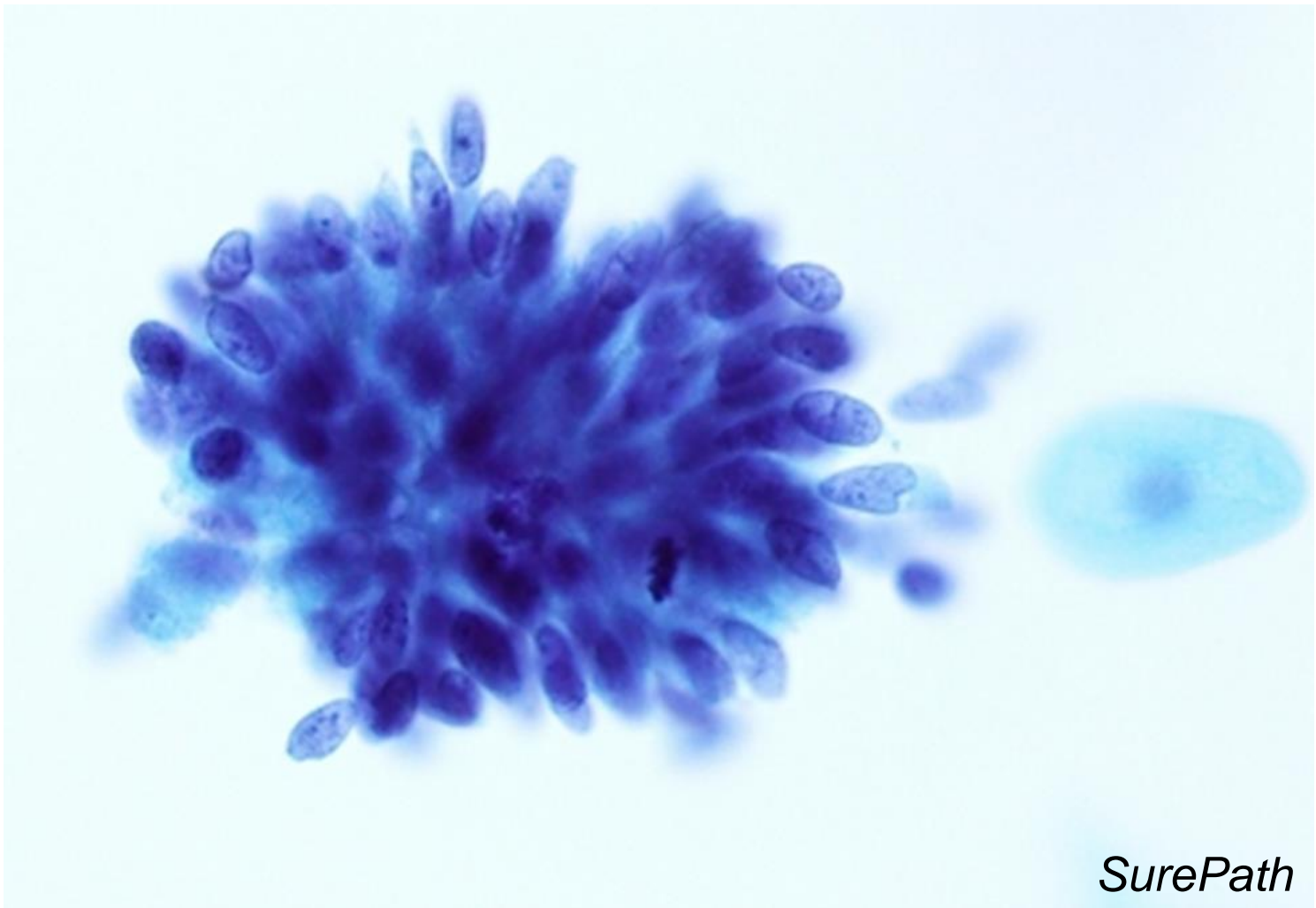
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AIS: Common sheet edge



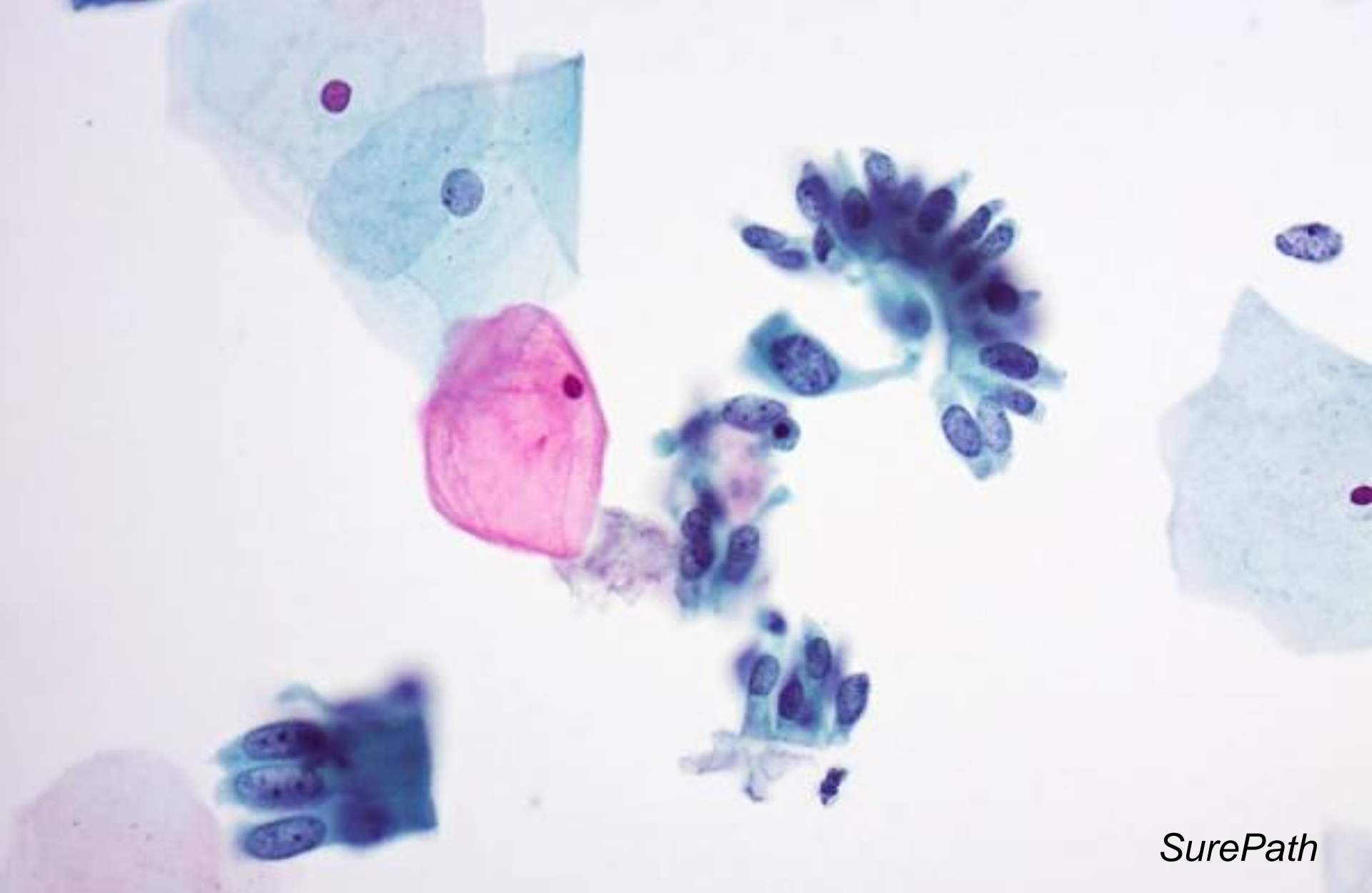
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AIS: Strip of a sheet edge



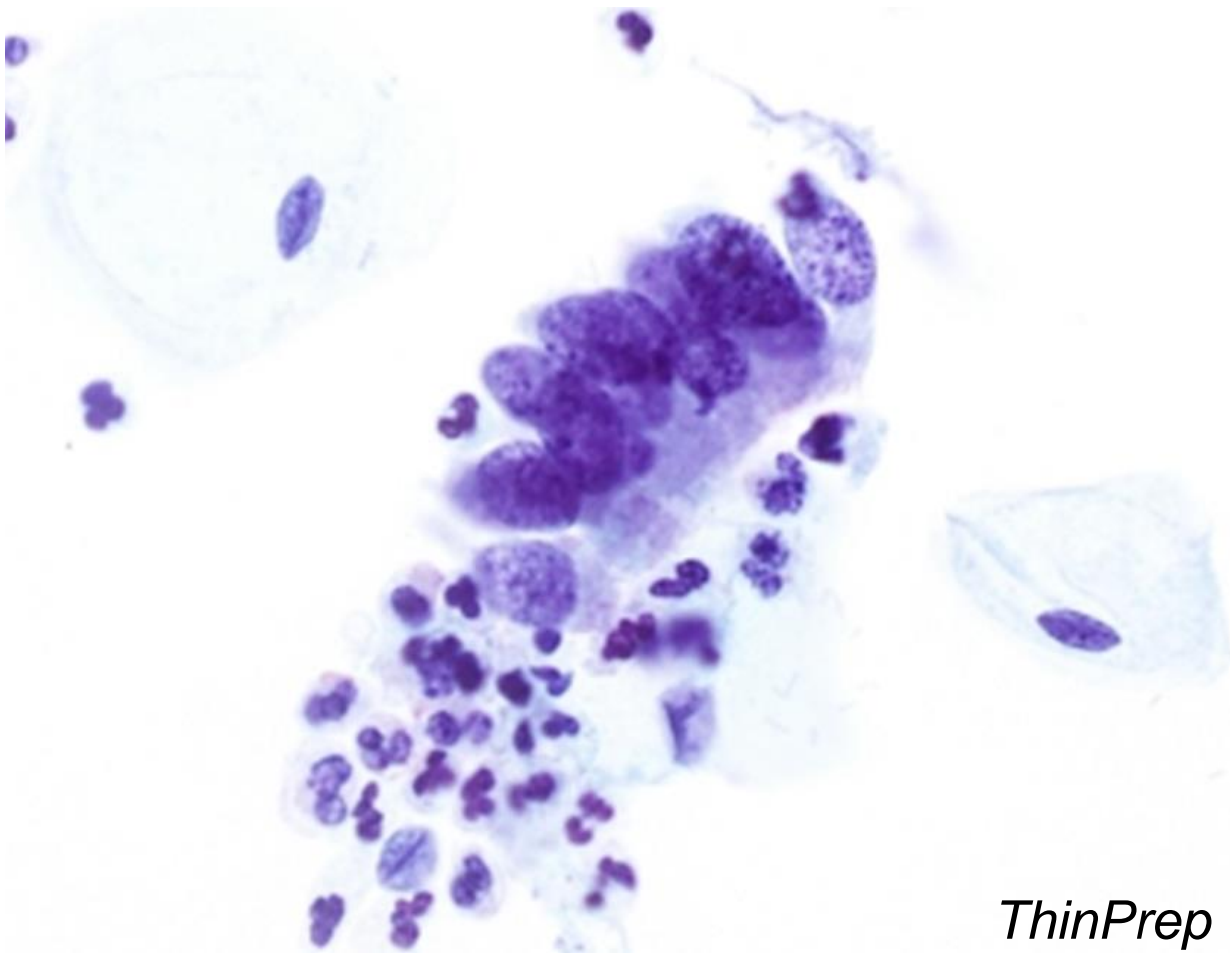
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AIS: Rosette, mitoses, feathering



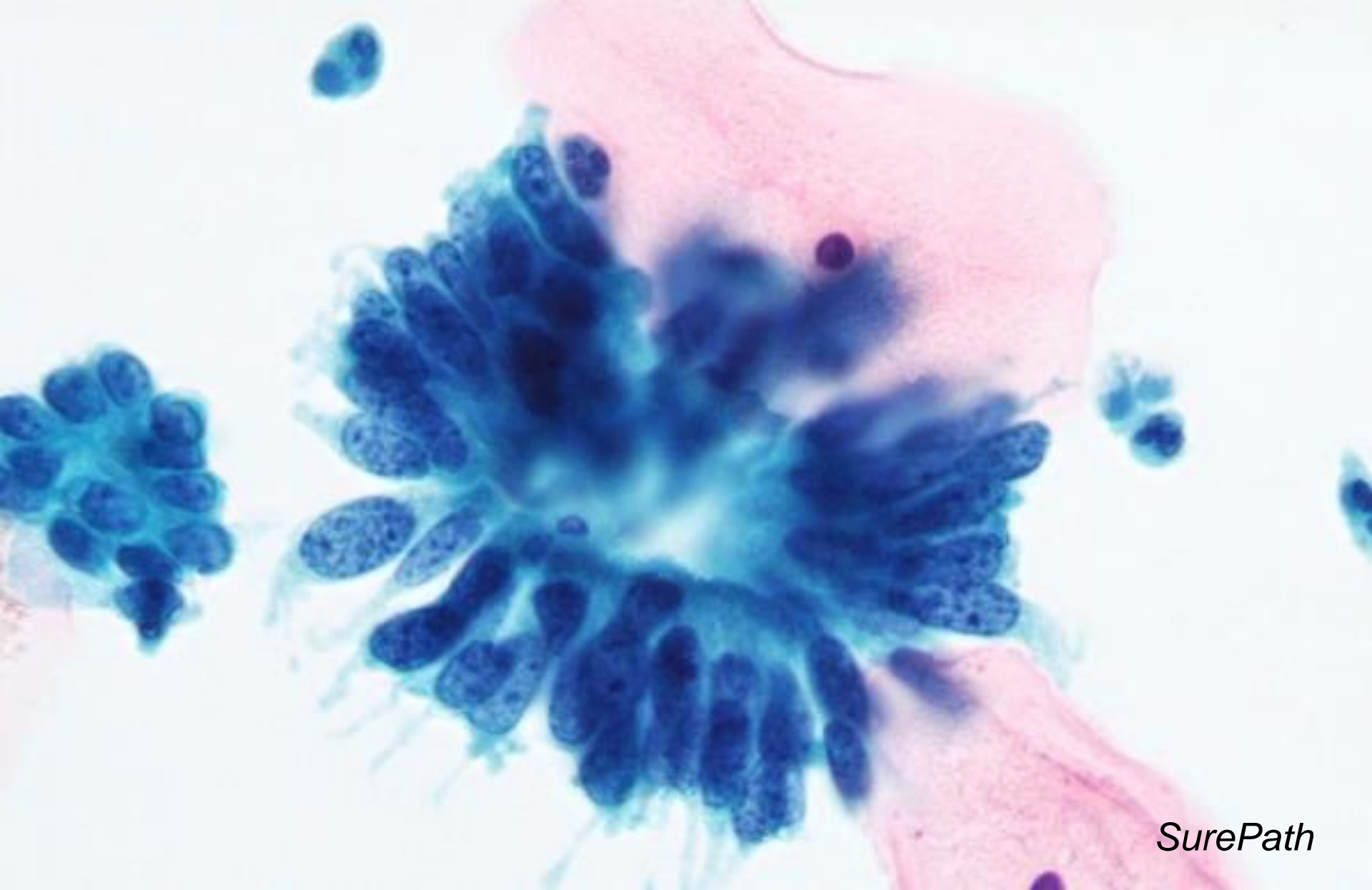
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AIS: Abnormal Strips



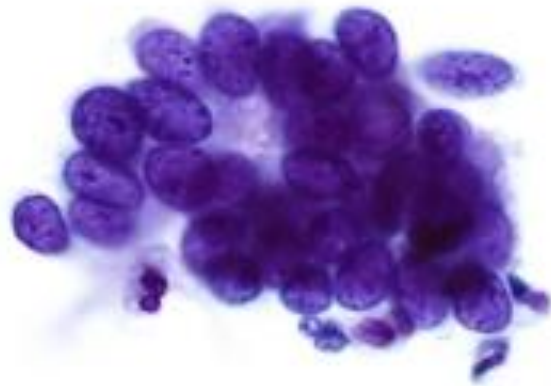
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AIS: Abnormal strip



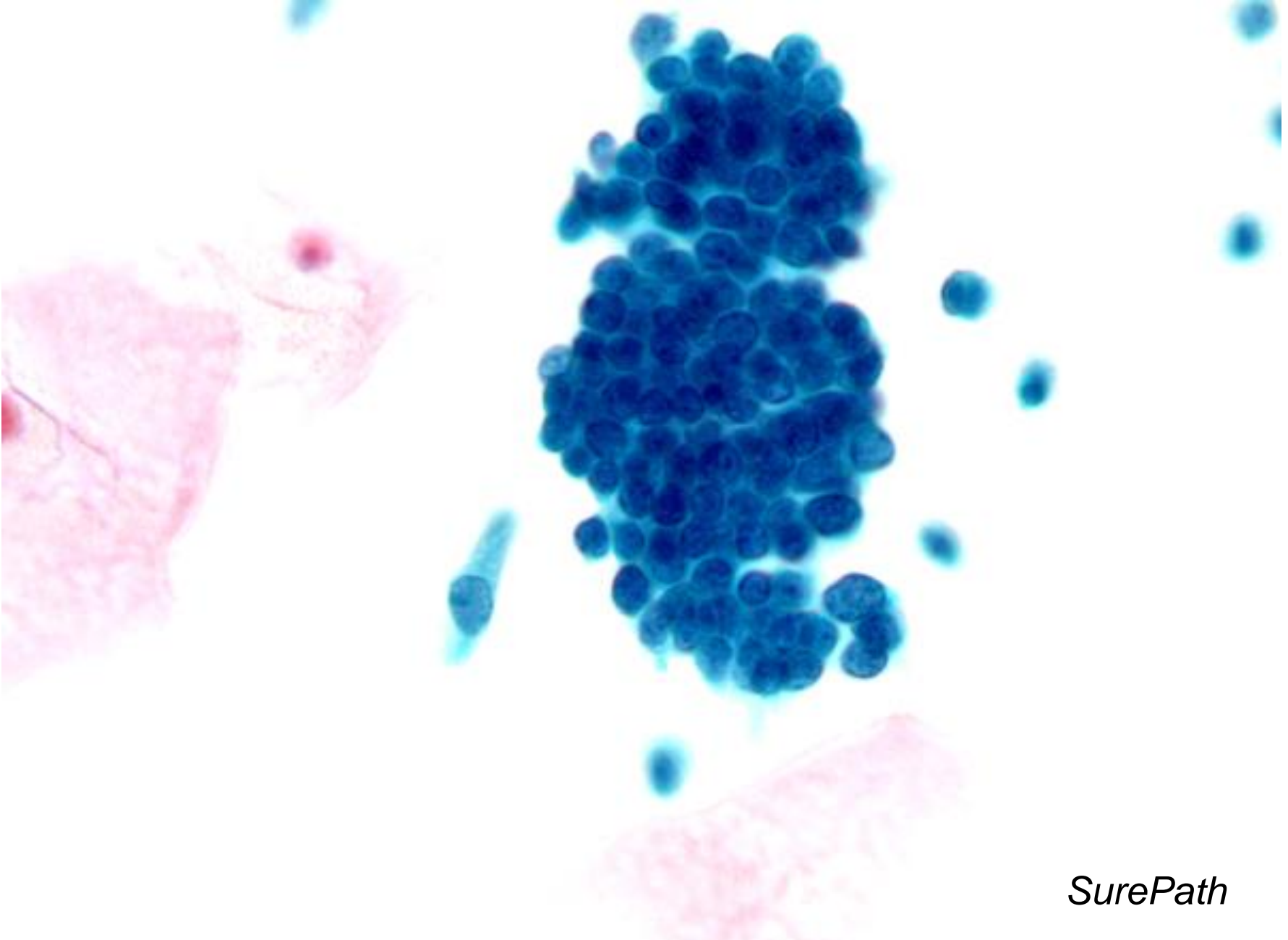
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AIS: More abnormal strips



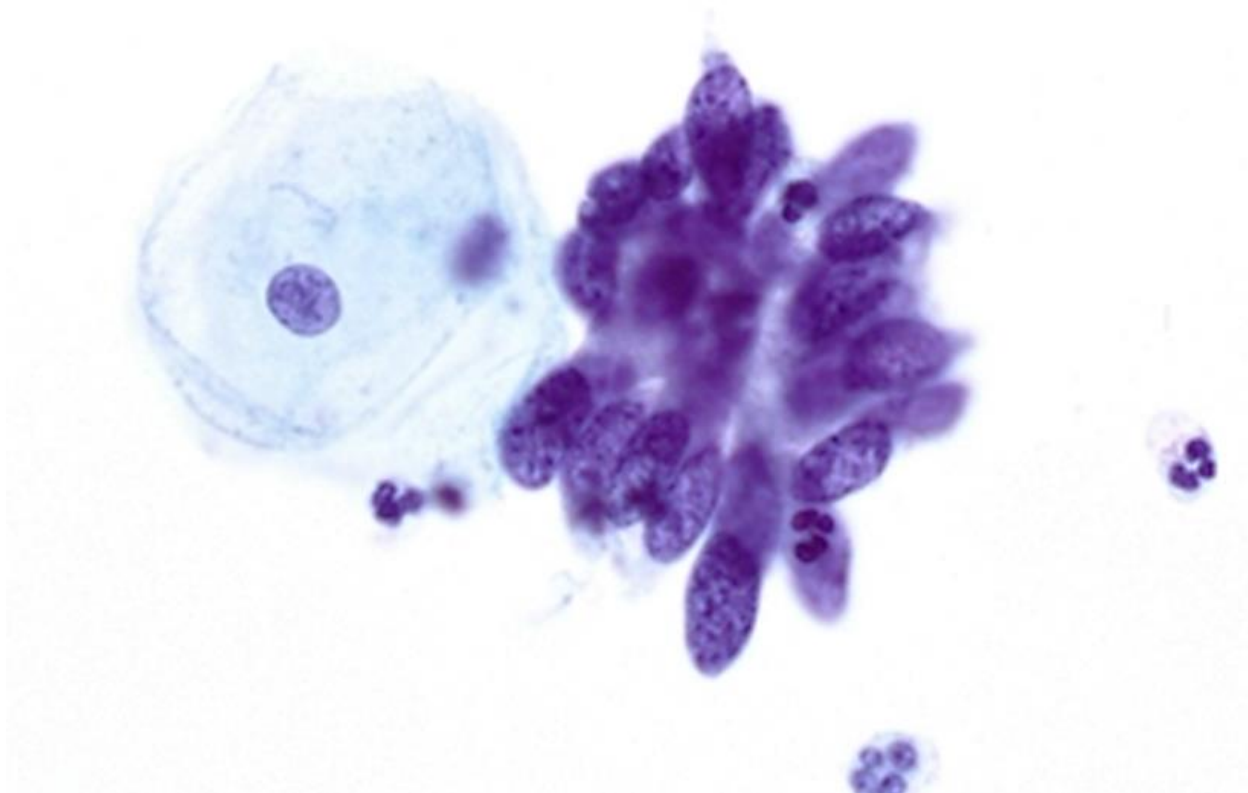
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AIS: possible rosette



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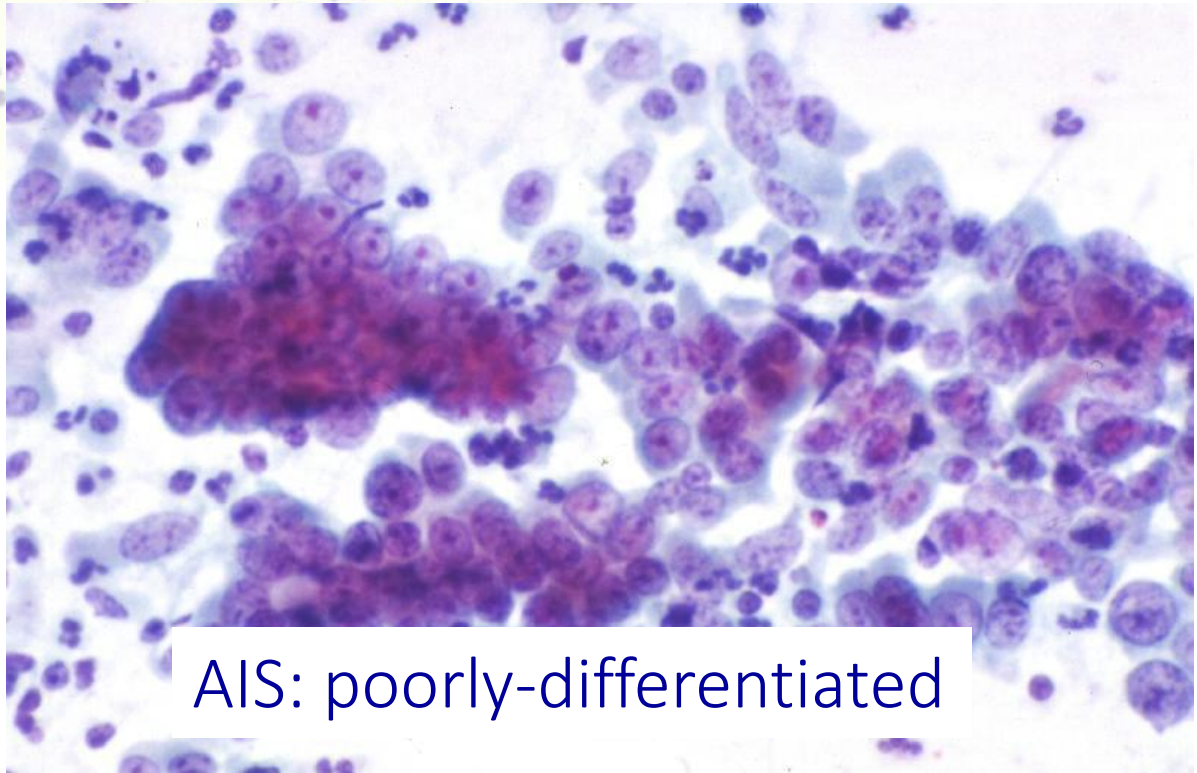
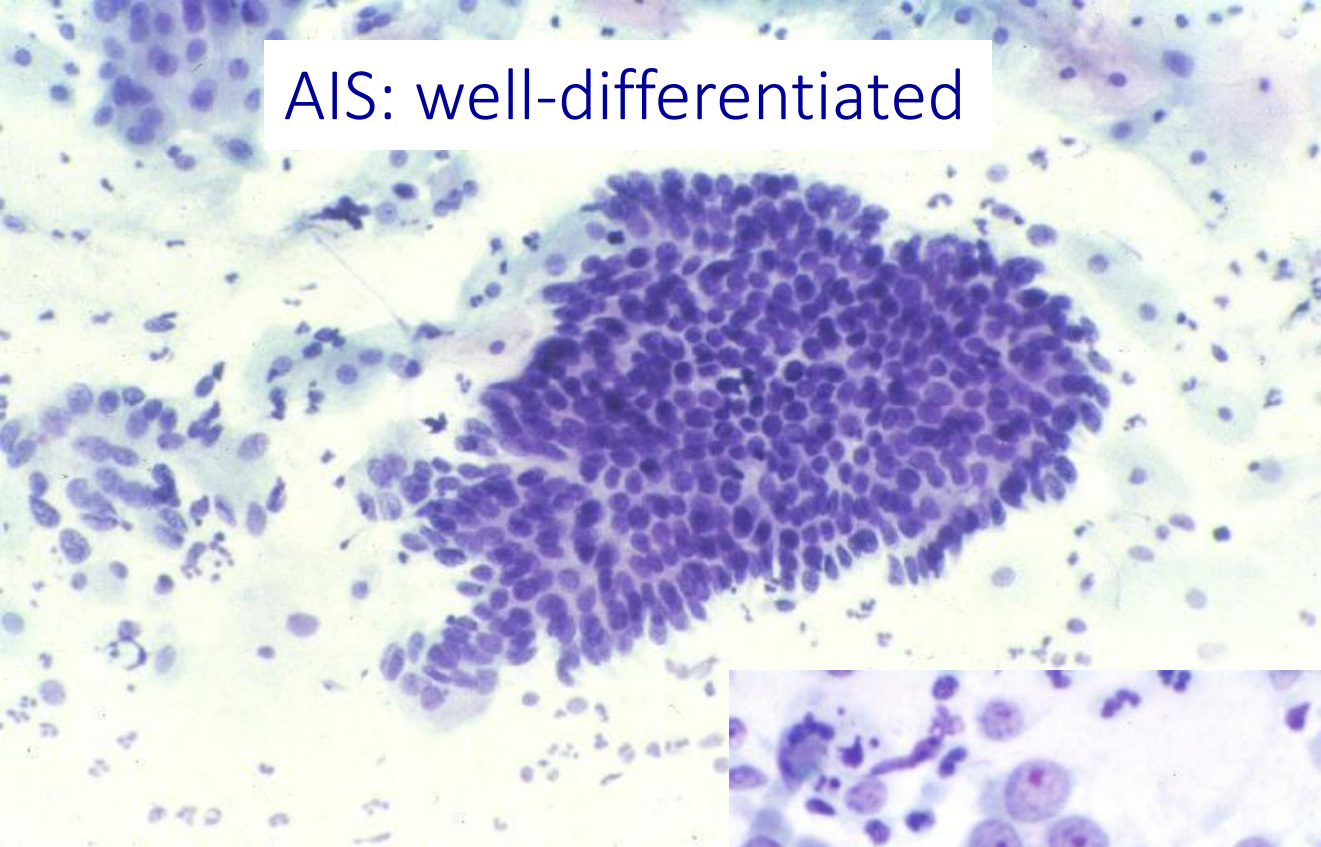
AIS: Cell morphology



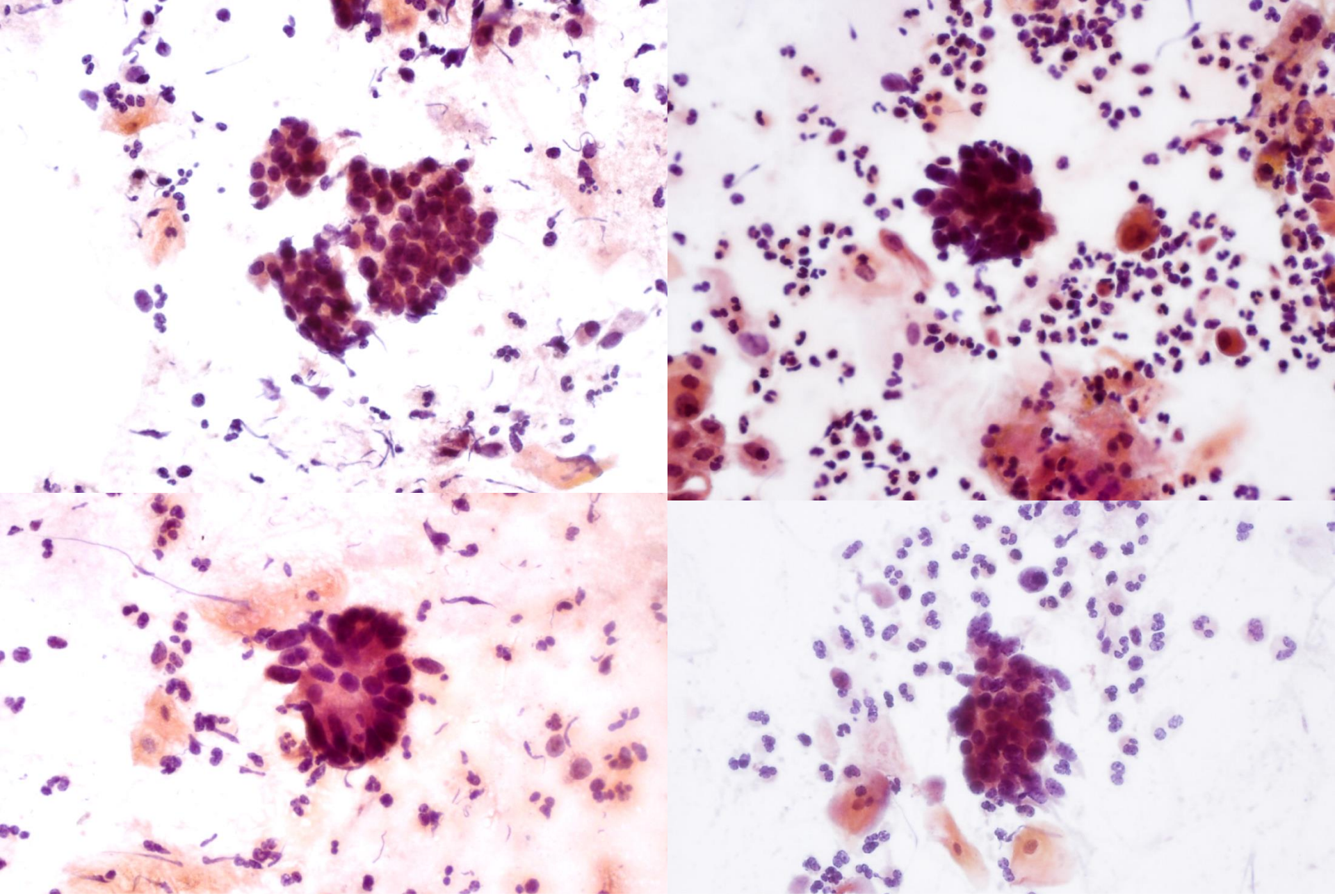
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AIS: Hyperchromasia

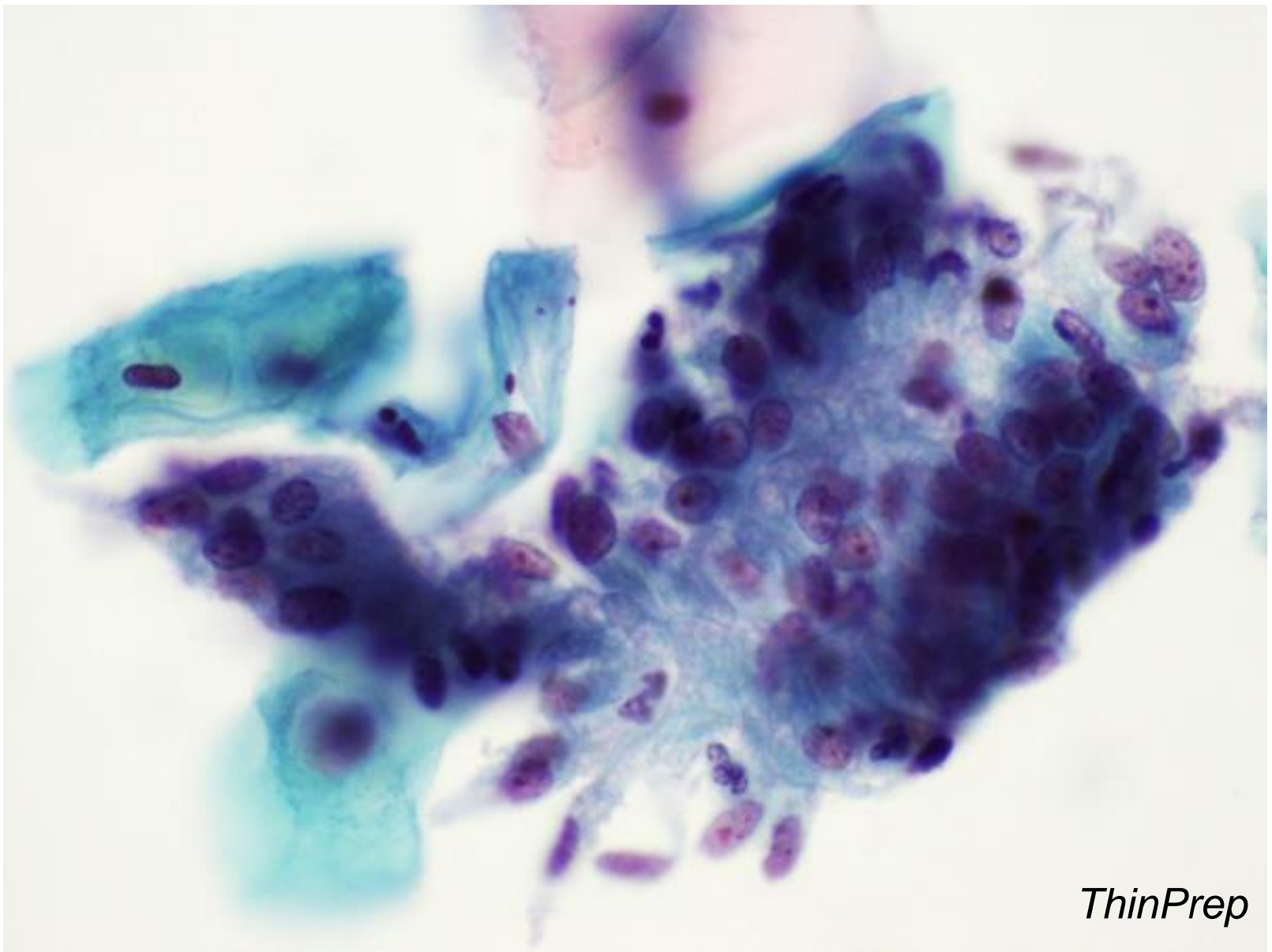
AIS: well-differentiated



AIS: poorly-differentiated



Endometrioid AIS



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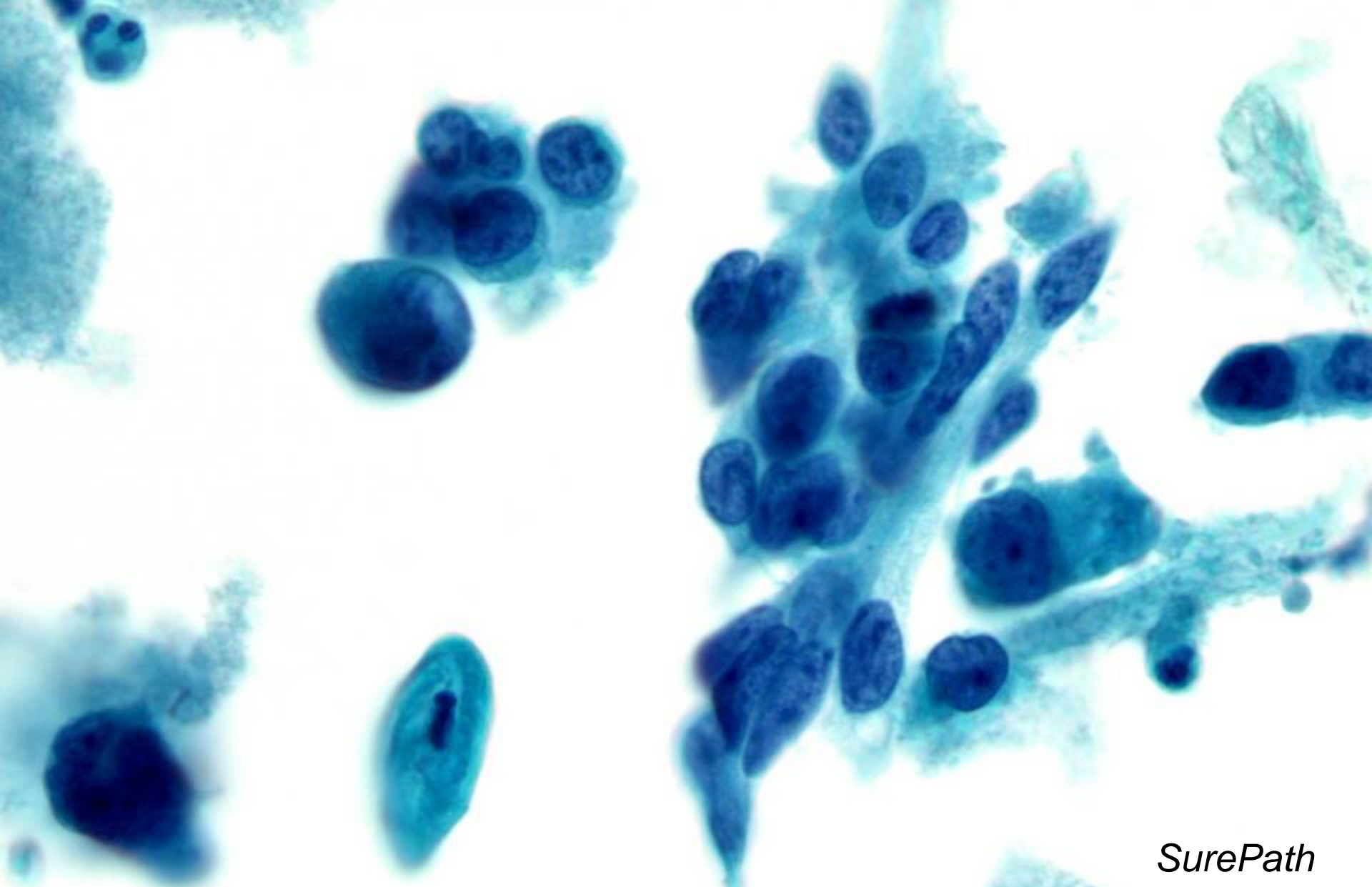
Reported as Atypical Glandular Cells
Follow-up was AIS: intestinal type

Endocervical adenocarcinoma

1. Features of AIS

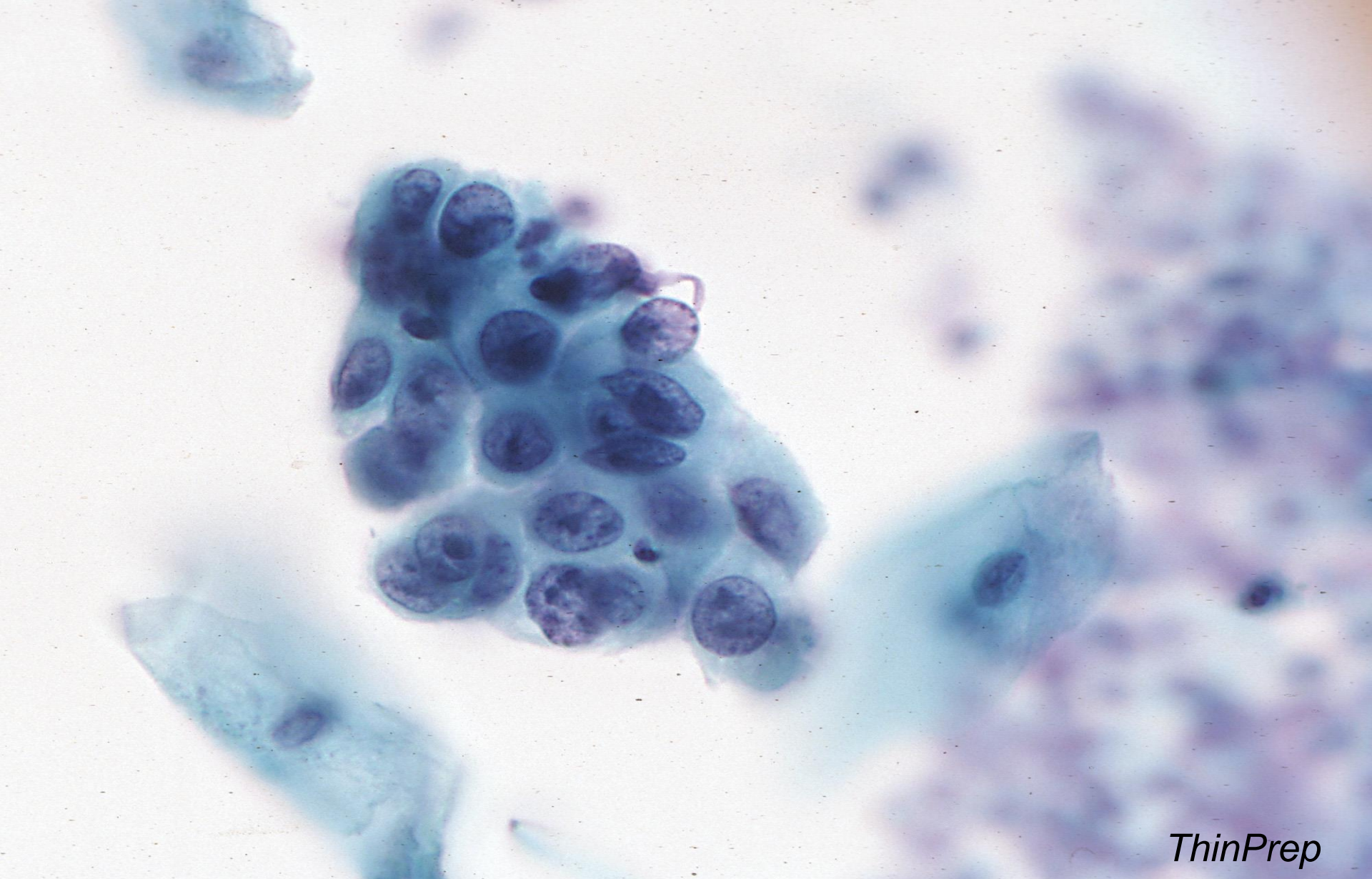
2. Features suggestive of invasion

- tumour diathesis
- single cells
- marked pleomorphism
- nuclei: chromatin clearing, conspicuous nucleoli
- fewer strips and rosettes
- supercrowding with loss of polarity



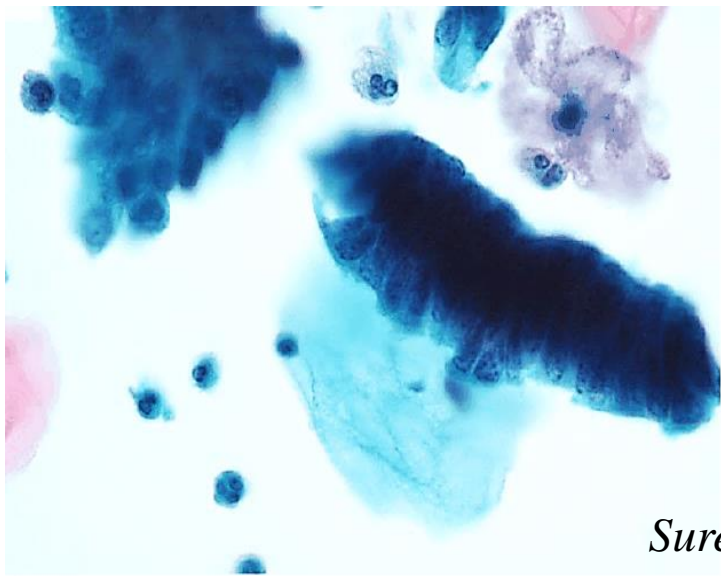
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Endocervical adenocarcinoma

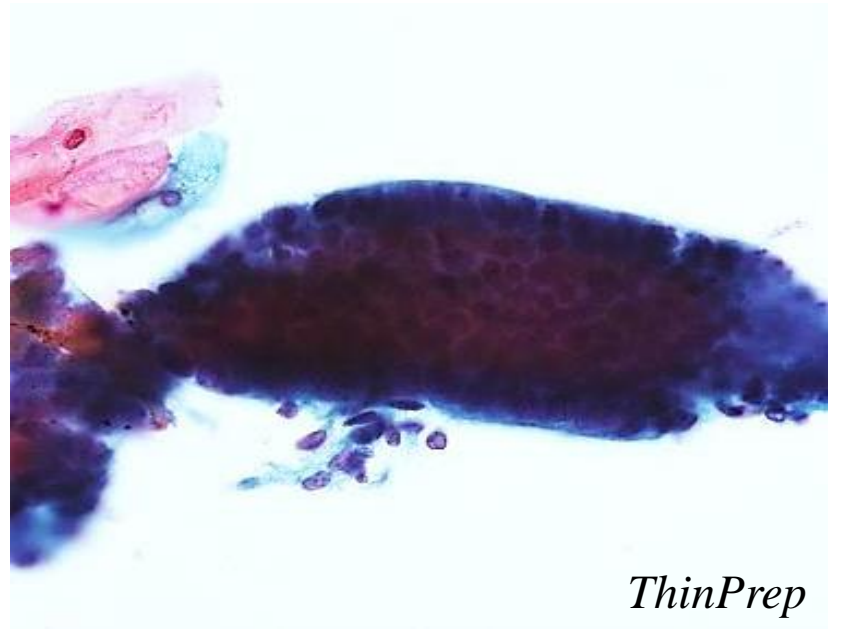


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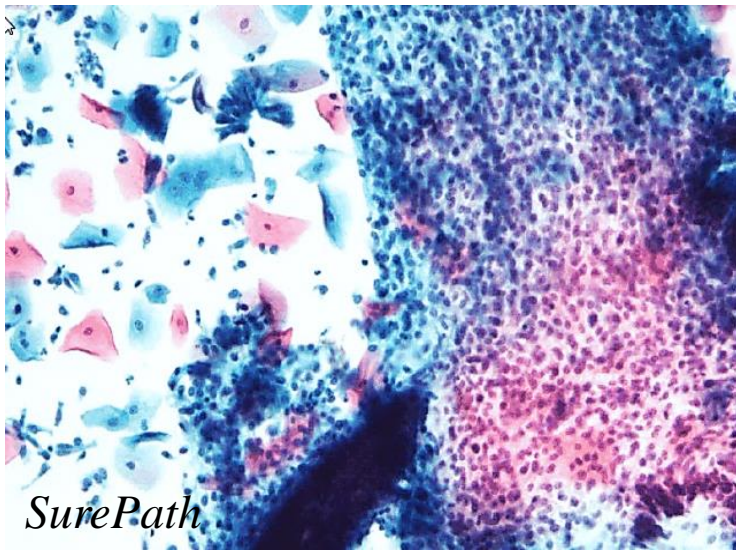
Endocervical adenocarcinoma



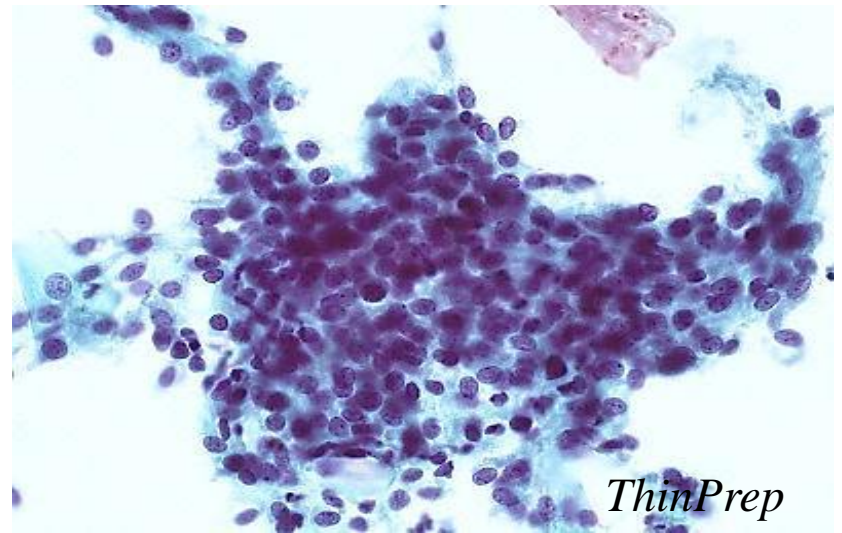
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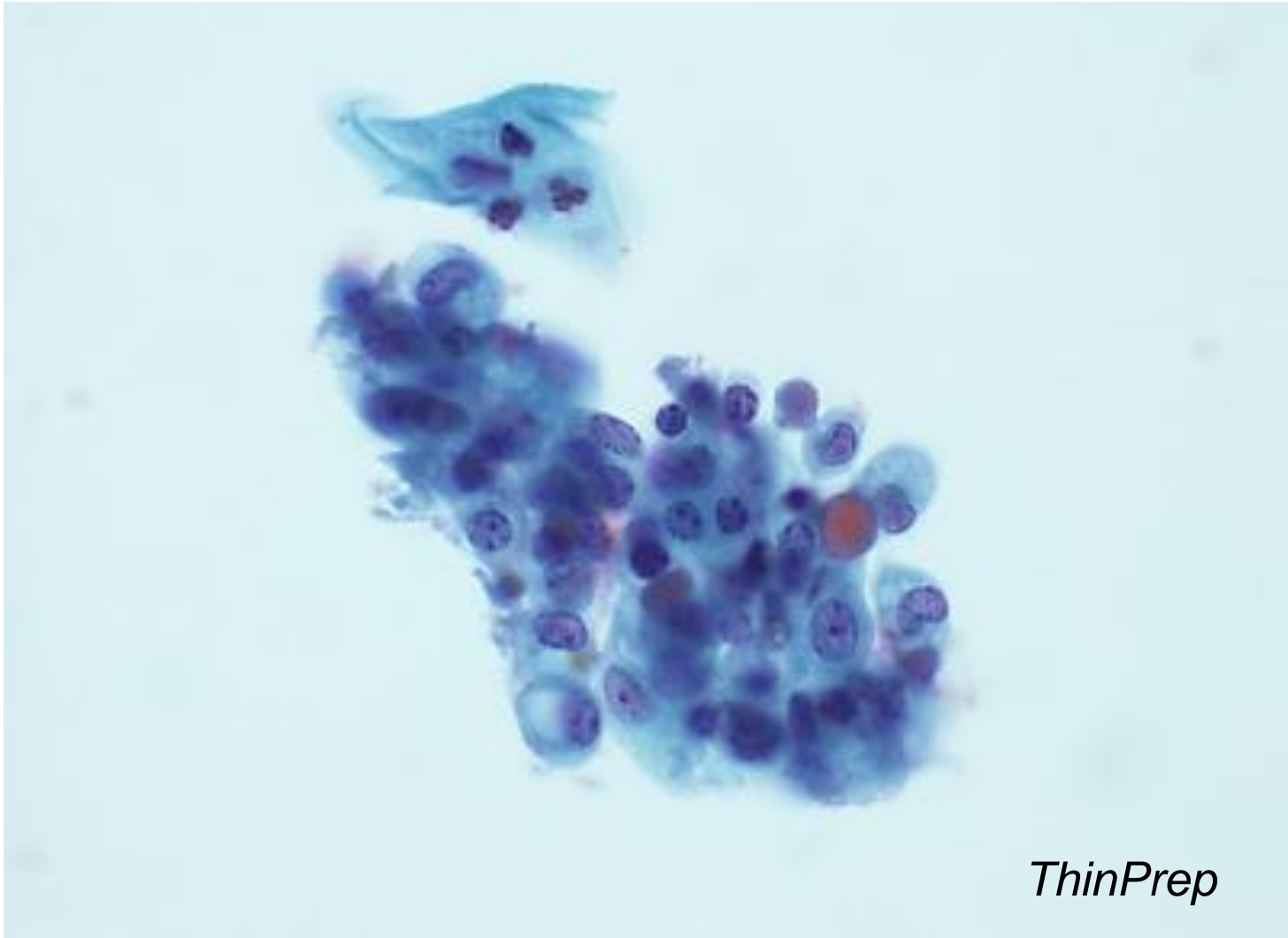


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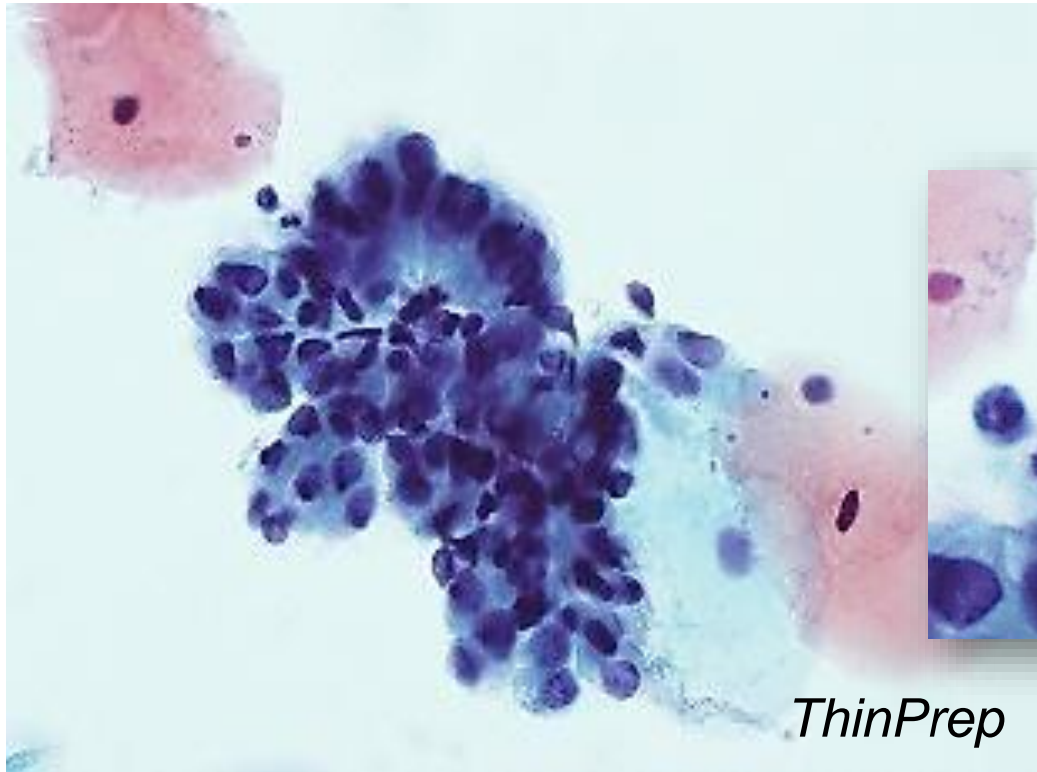


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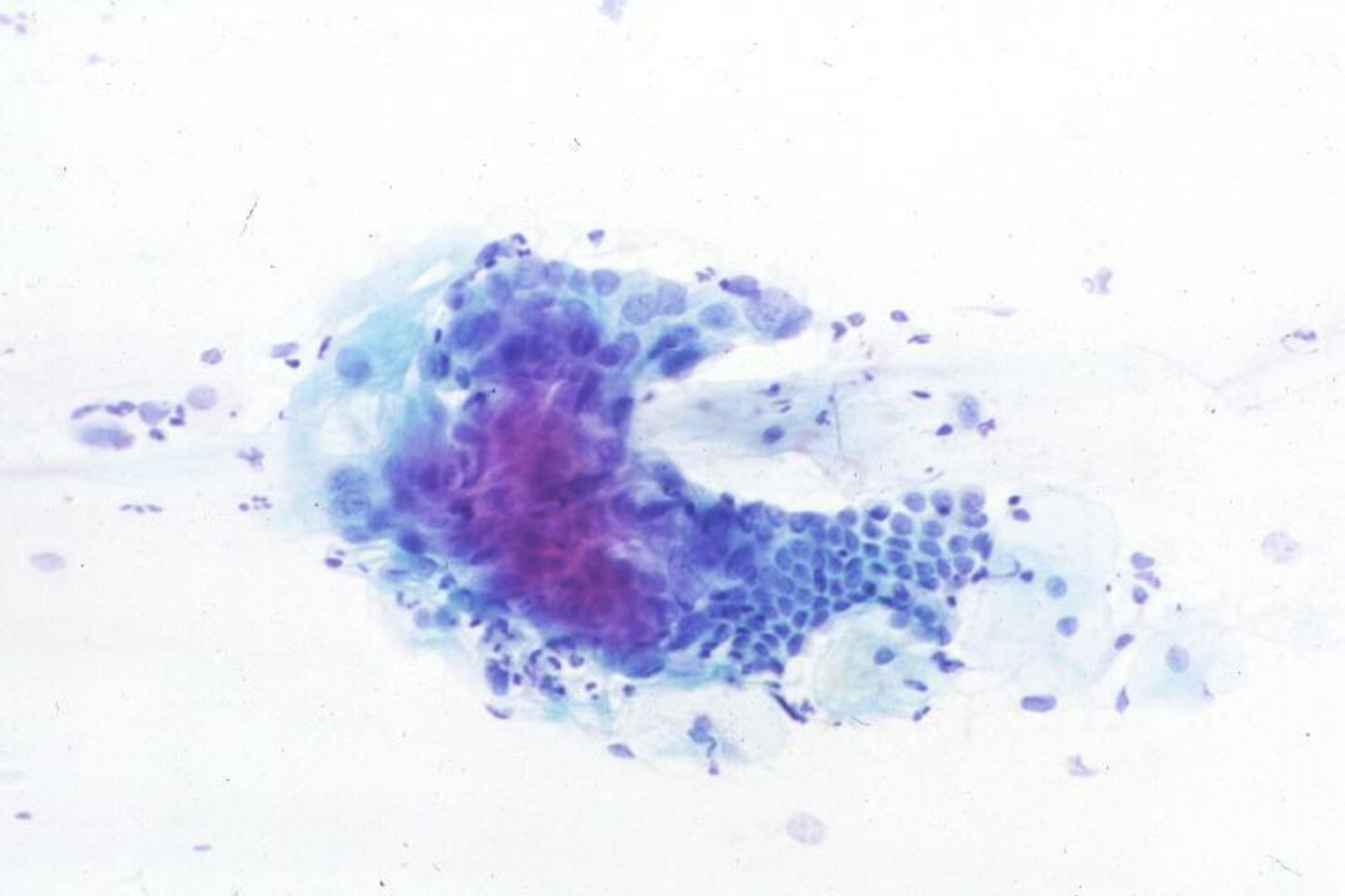
Differential Diagnoses: High sampling



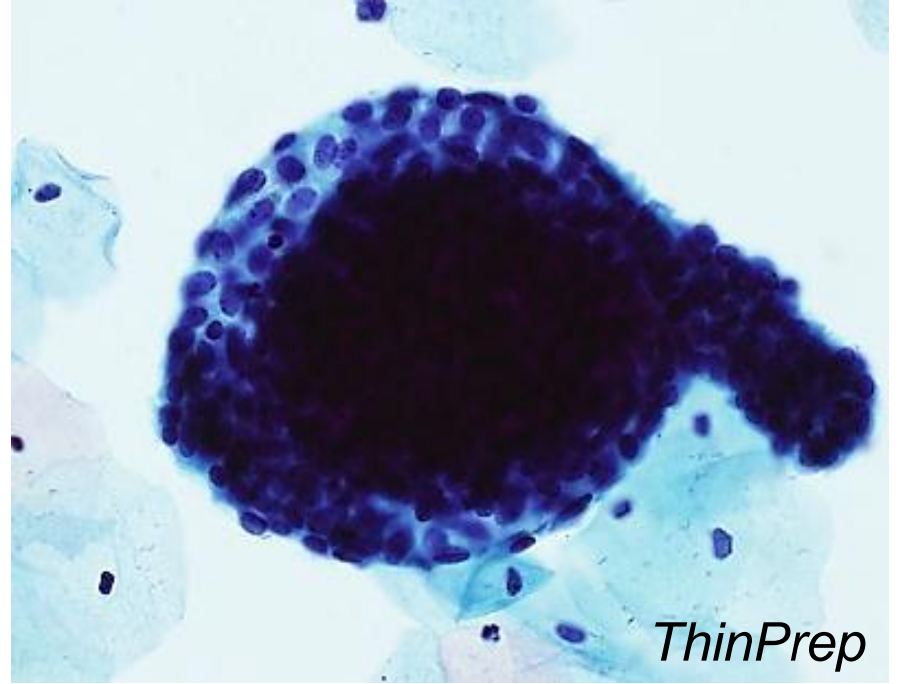
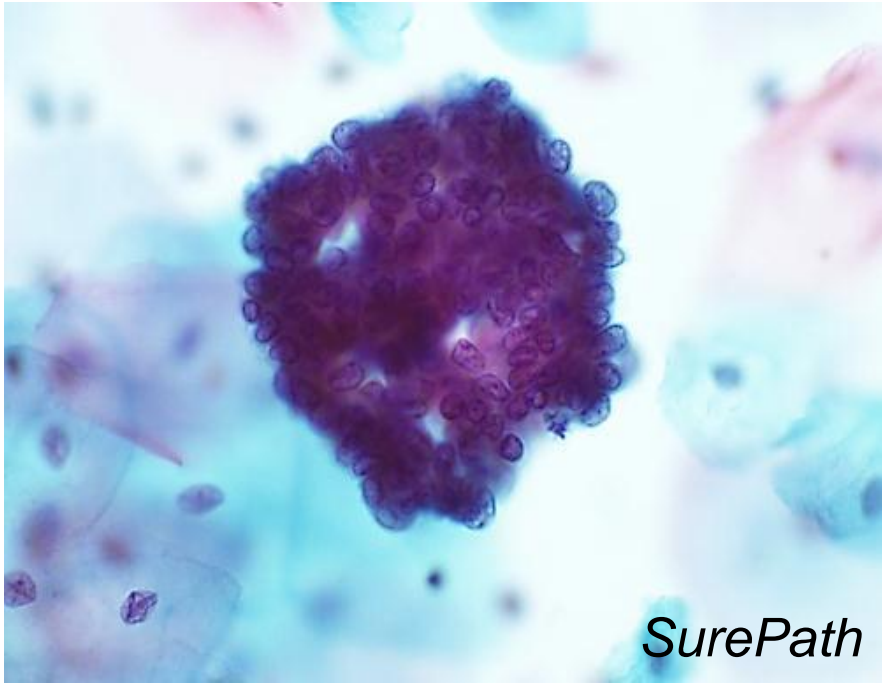
Cervical Endometriosis



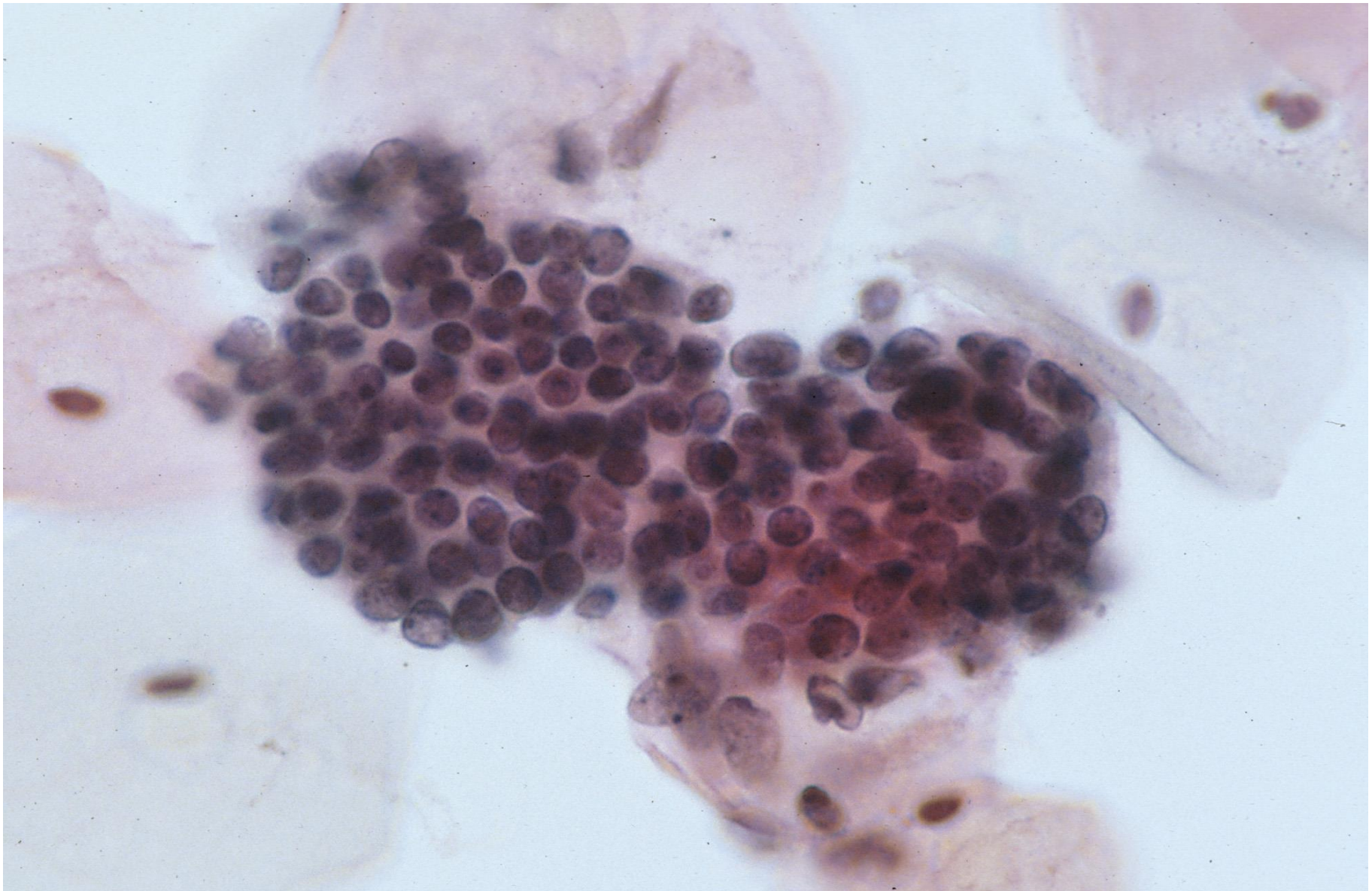
Tubal metaplasia



HSIL involving glands

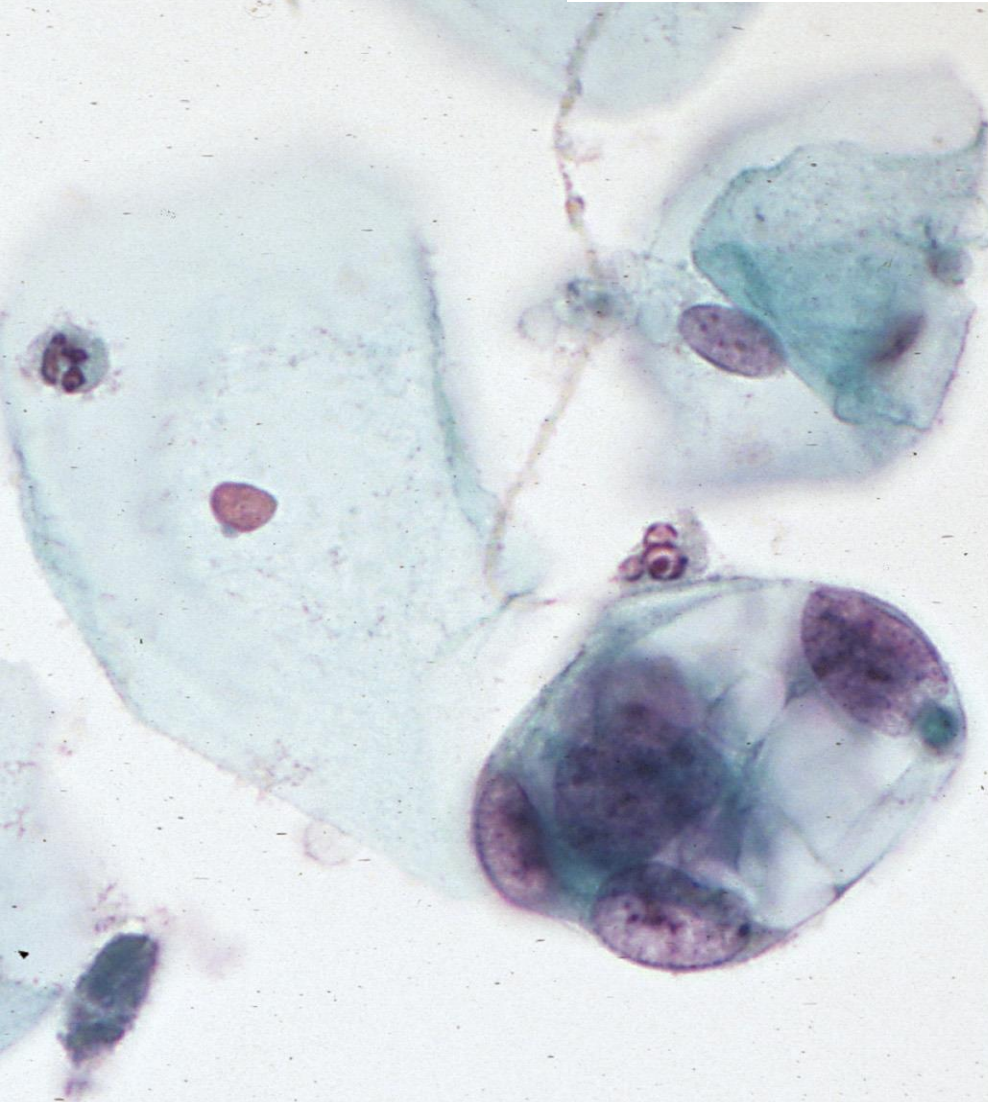


Normal endometrial cells

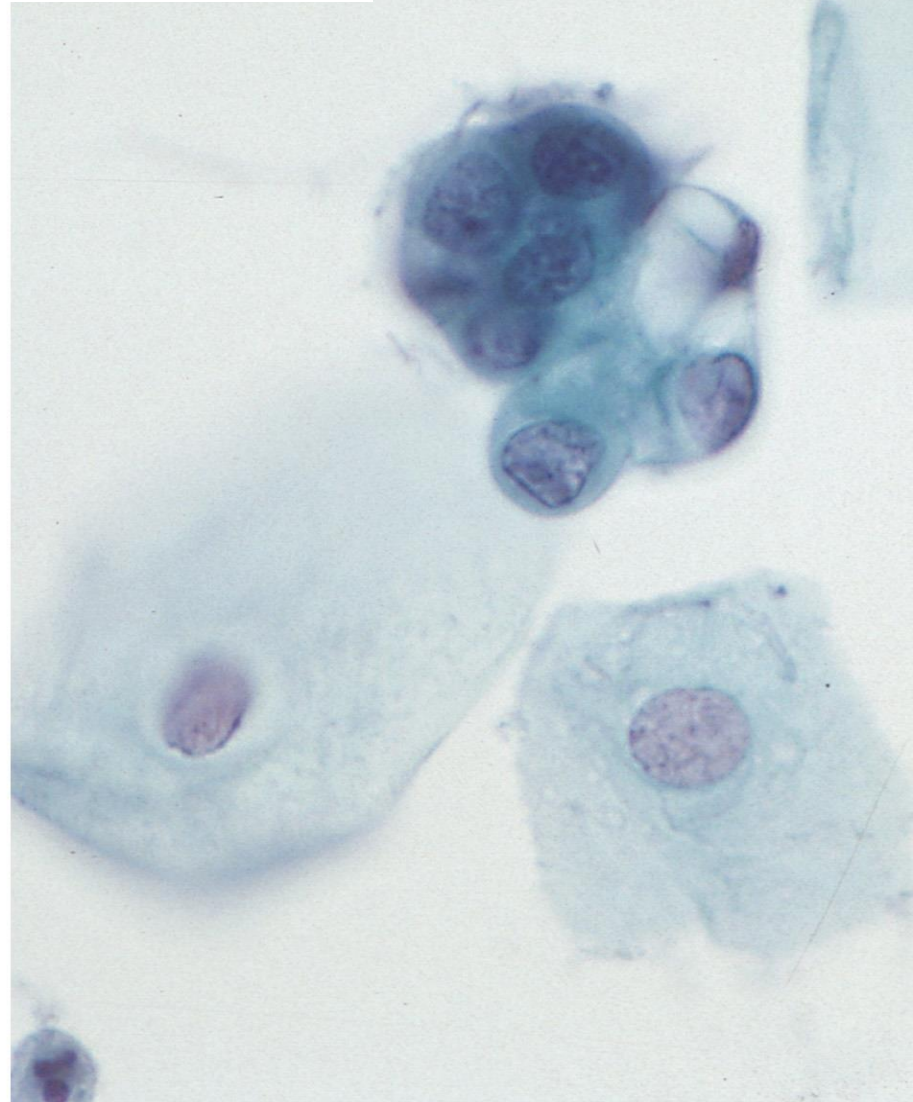


Atypical endometrial cells (LBC)
Follow-up: Endometrial hyperplasia

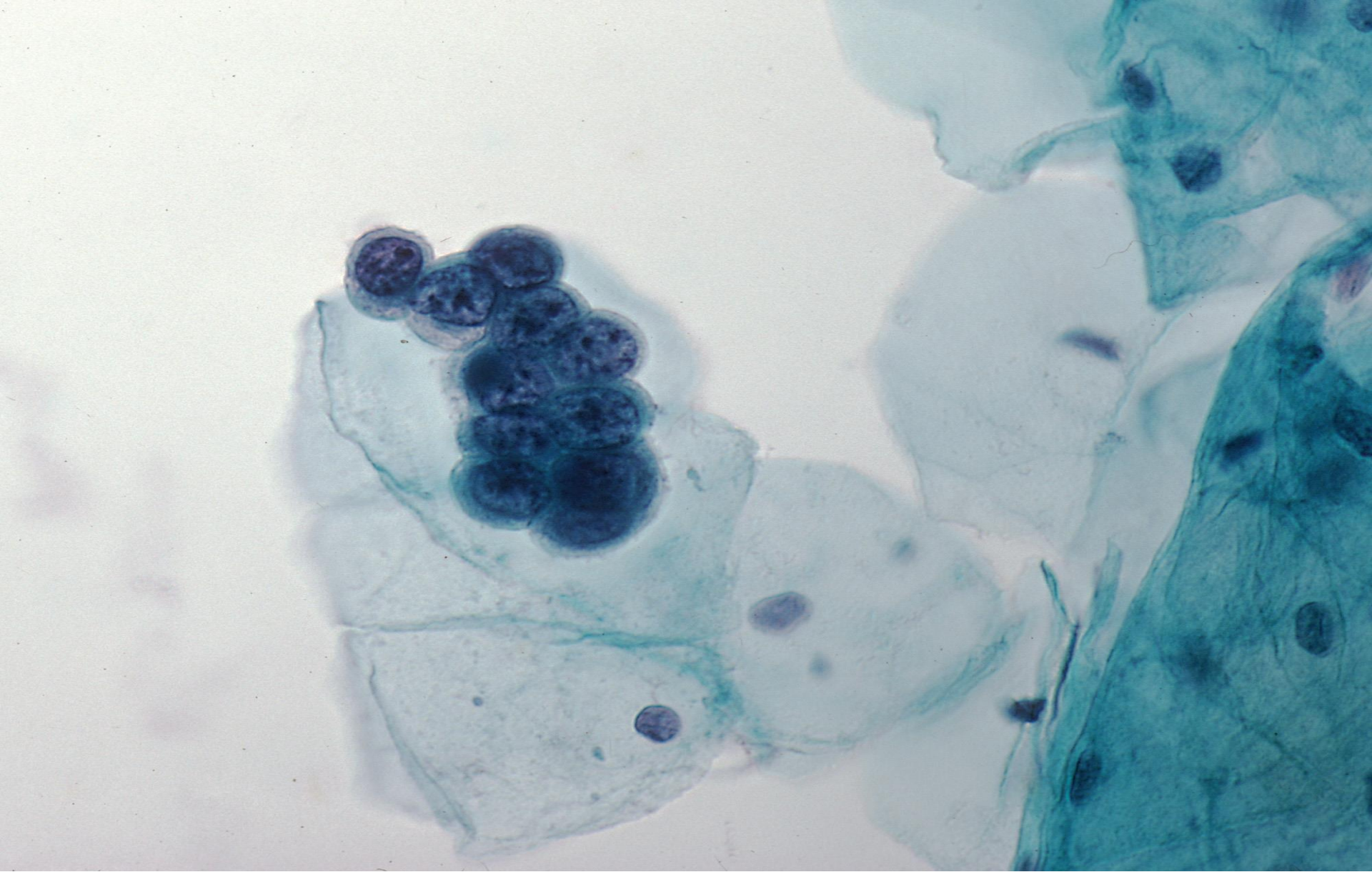
Atypical endometrial cells



Endometrial Adenocarcinoma

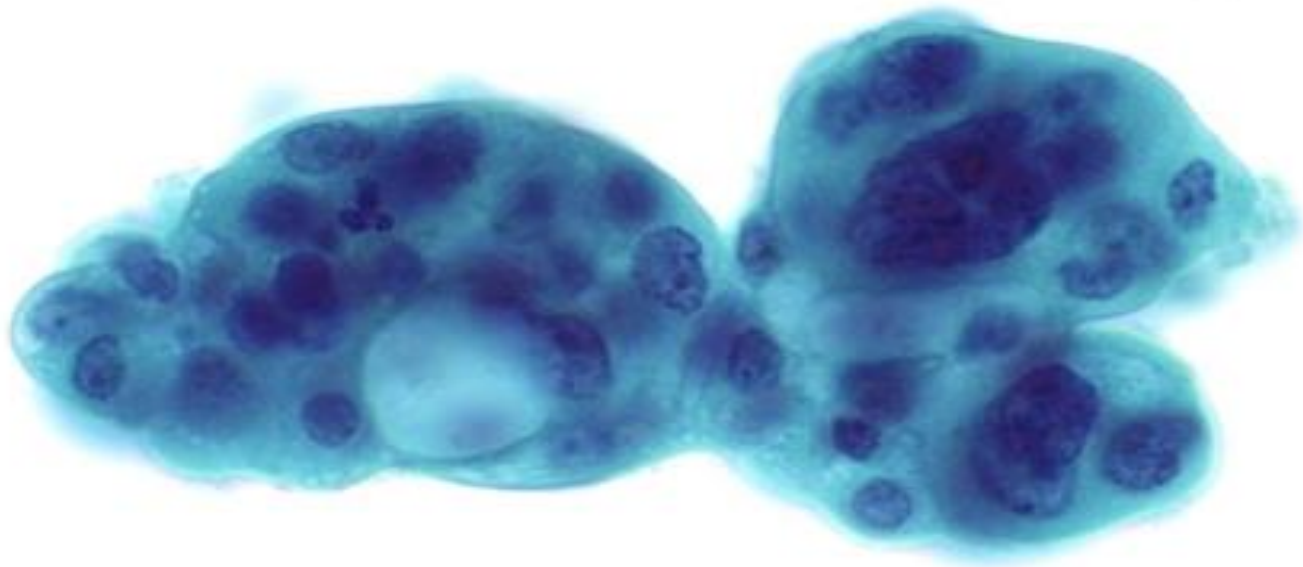


Endometrial hyperplasia



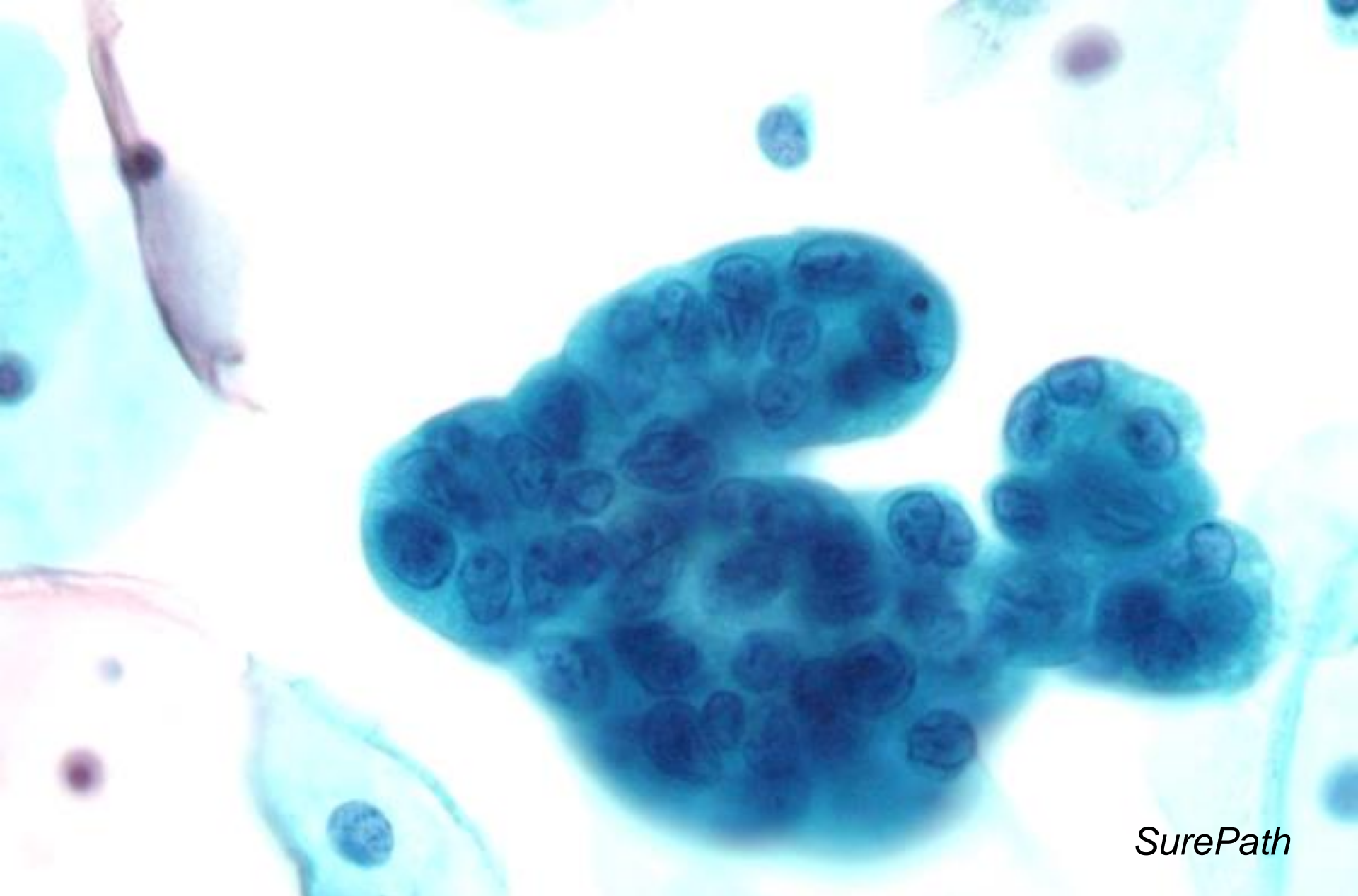
Atypical endometrial cells

F/U: Well-differentiated endometrial adenocarcinoma



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Endometrial Adenocarcinoma



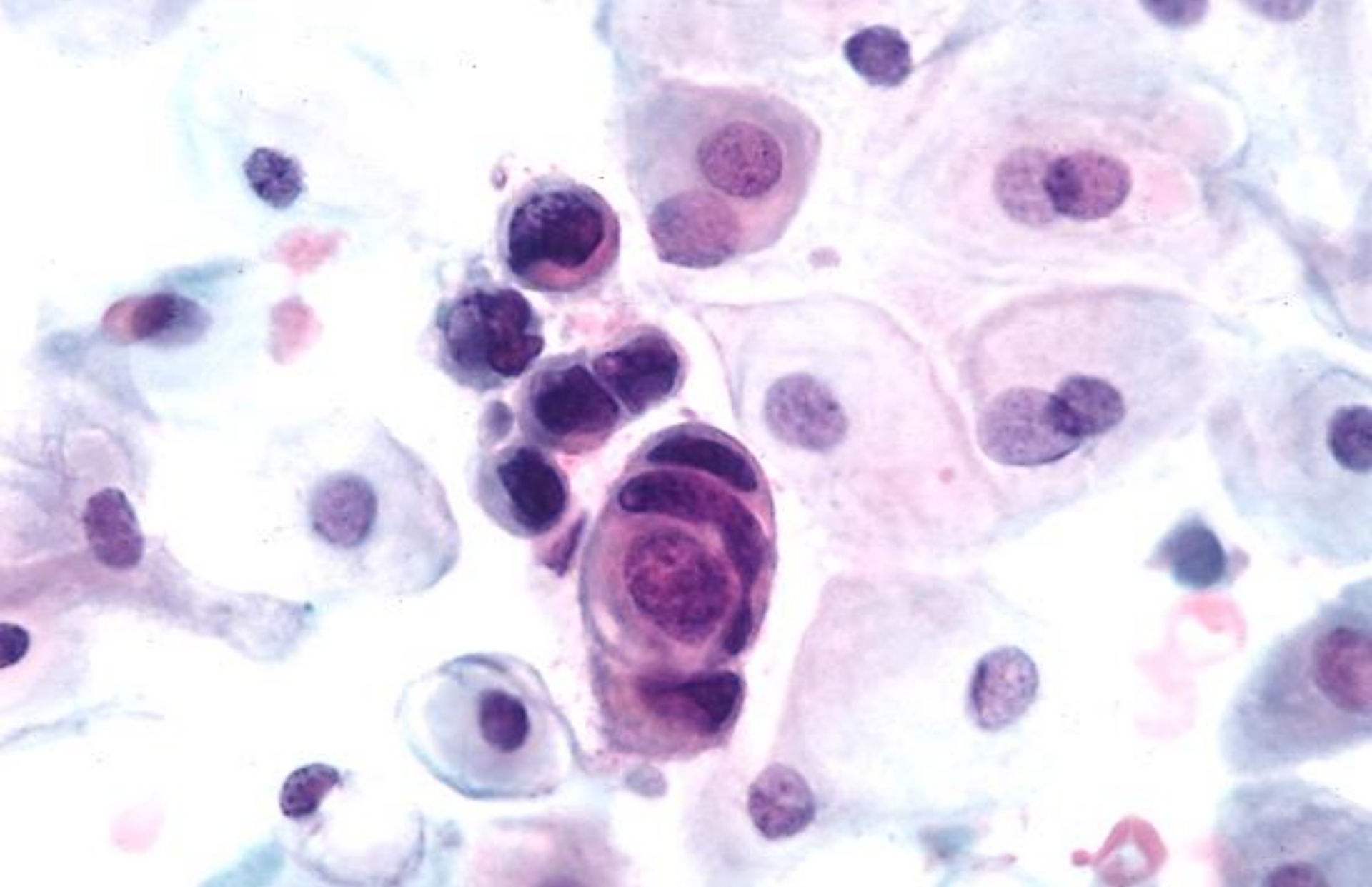
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Endometrial Adenocarcinoma



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Endometrial Adenocarcinoma



Metastatic Gastric adenocarcinoma (LBC)