



# Detecting Glandular lesions by Cervical Cytology

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# GLANDULAR ABNORMALITIES REPORTED IN NZ IN 2018

## Cytology:

Atypical Glandular Cells/AIS = 485 reports (0.11%)  
Adenocarcinoma (all types) = 74 reports (0.02%).

*HSIL = 3419 reports (0.8%)*

*ASCH = 2062 (0.5%)*

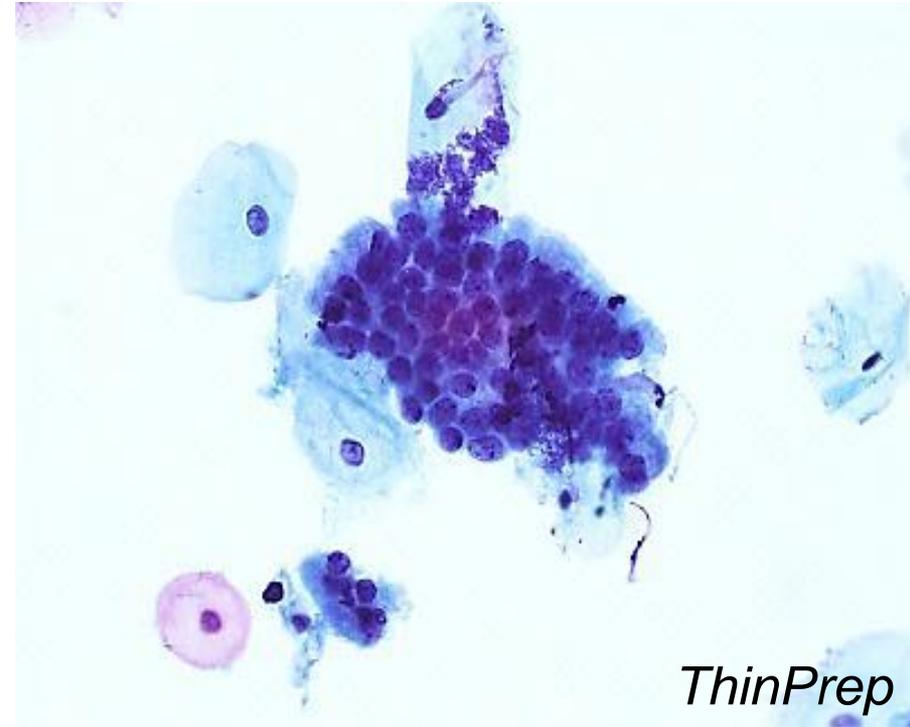
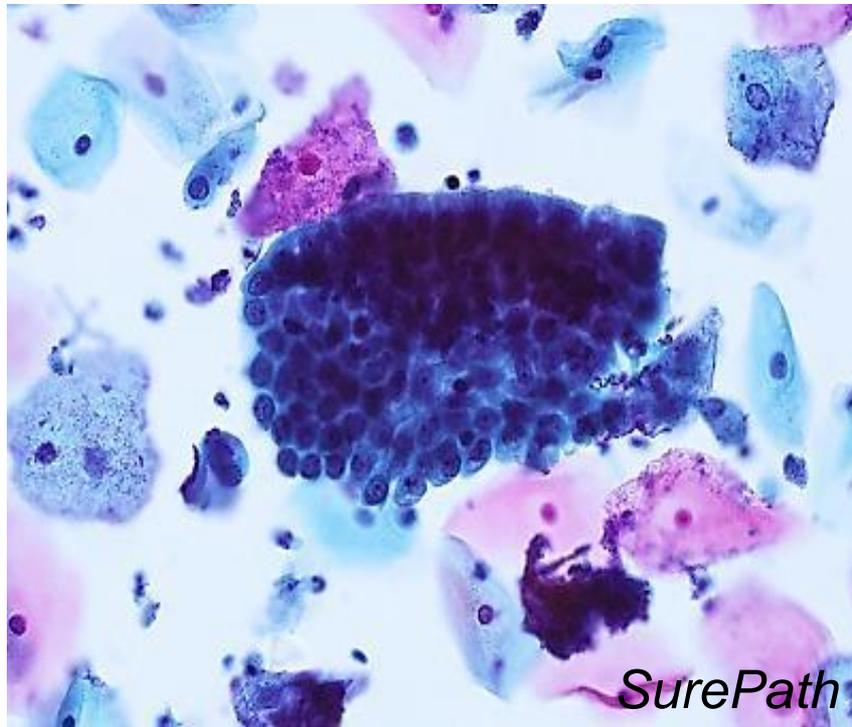
*SCC = 35 reports (0.01%)*

# The NZ Cervical Cancer Audit 2000 - 2002

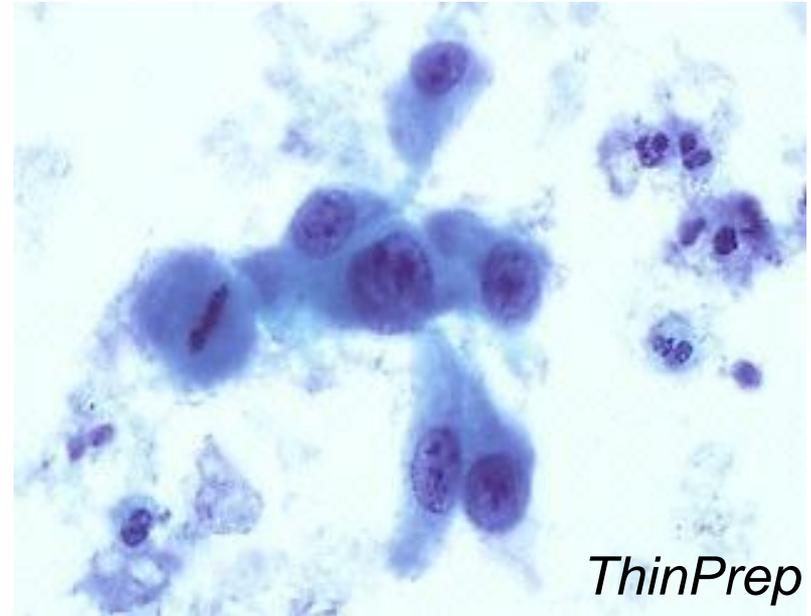
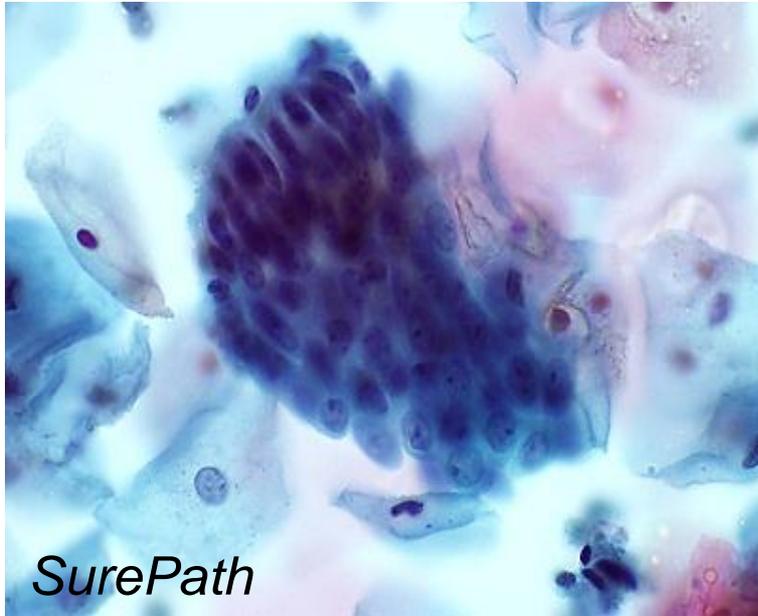
- 336 smears from 178 women taken within 4 years prior to a histological diagnosis of invasive cervical cancer were rescreened.
- 18% of 160 negative smears prior to invasive SCC were upgraded to “high-grade”
- 22% of 65 negative smears prior to invasive (endocervical) adenocarcinoma were upgraded to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

# Glandular spectrum

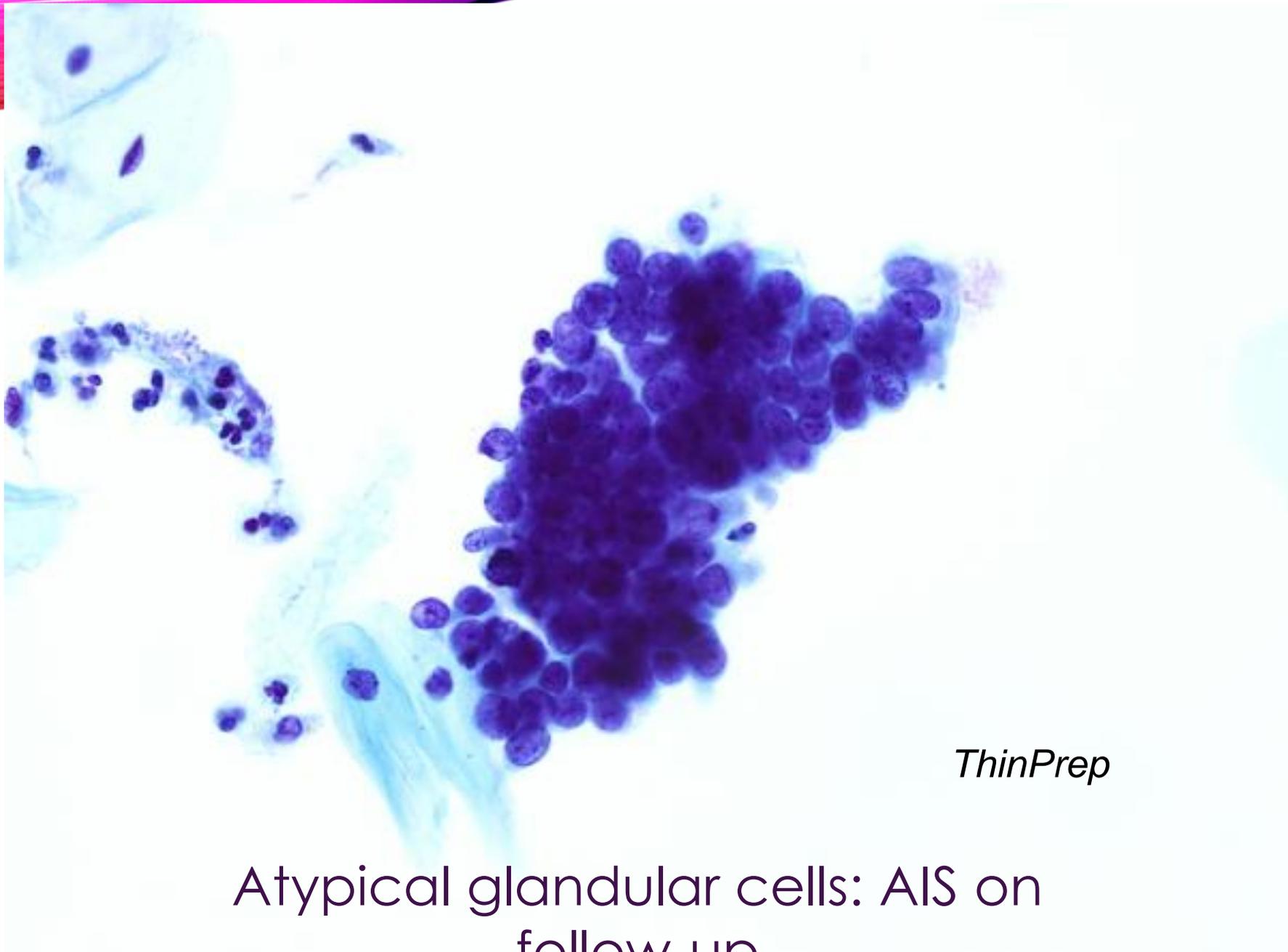
- Endocervical cells
  1. Normal/reactive endocervical cells
  2. Atypical endocervical cells
  3. Adenocarcinoma in situ (AIS)
  4. Invasive endocervical adenocarcinoma
- Endometrial cells
  1. Normal endometrial cells
  2. Atypical endometrial cells
  3. Endometrial adenocarcinoma
- Other abnormal glandular cells



Normal endocervical cells



Reactive endocervical cells



*ThinPrep*

Atypical glandular cells: AIS on  
follow-up

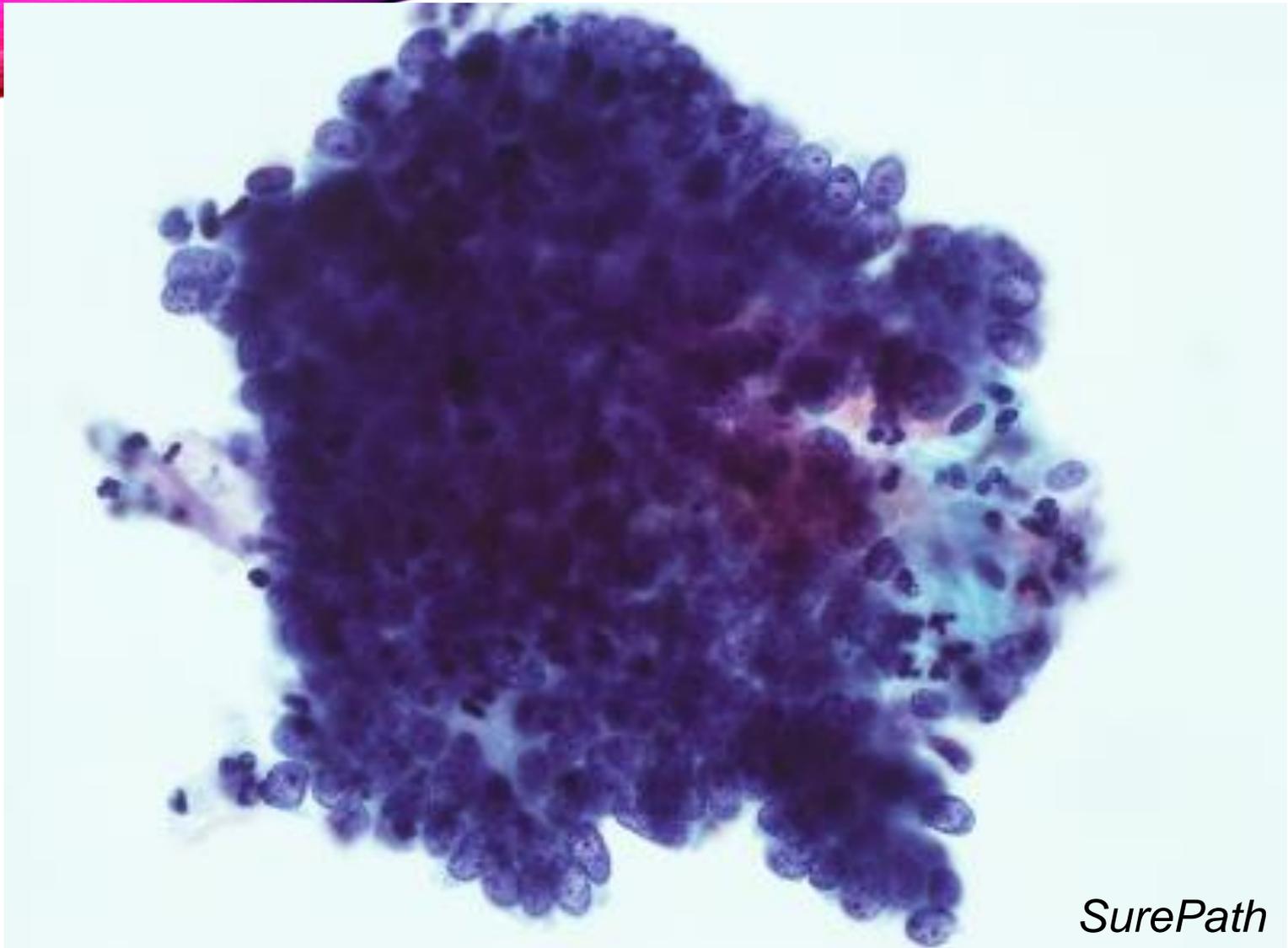
# Adenocarcinoma in situ (AIS)

Cell aggregates: ARCHITECTURE matters most

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

Cell morphology:

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

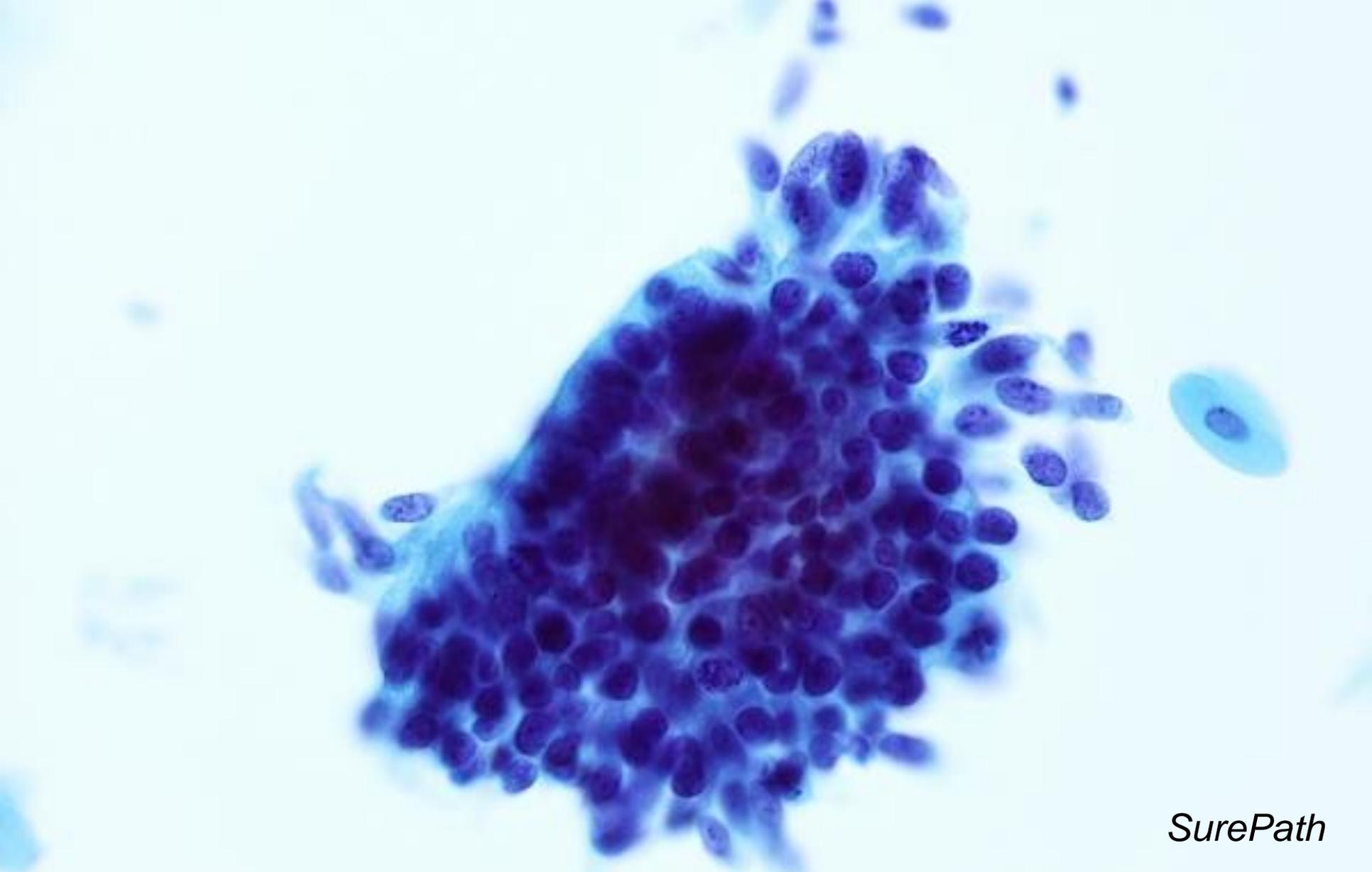


AIS: Irregular crowded groups



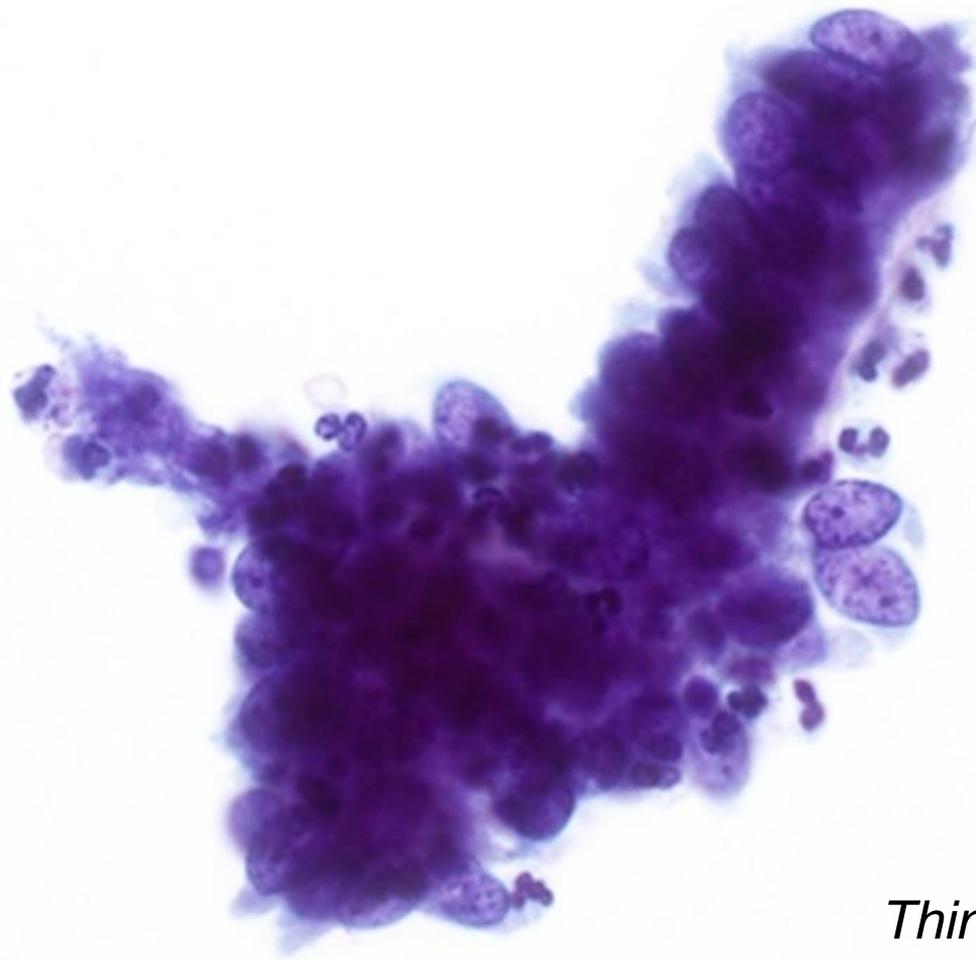
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AIS: Cell crowding and nuclear overlapping



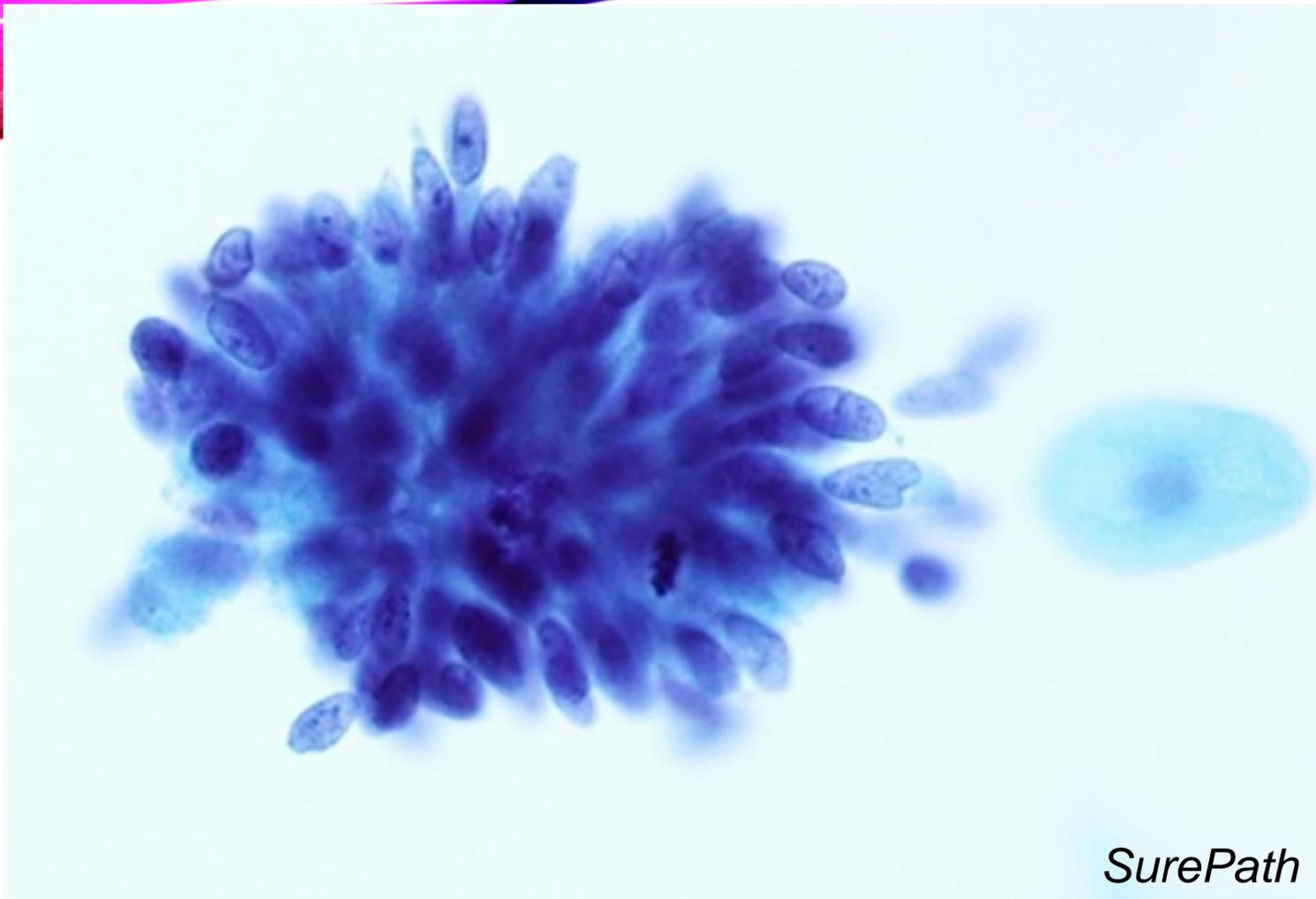
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AIS: Common sheet edge



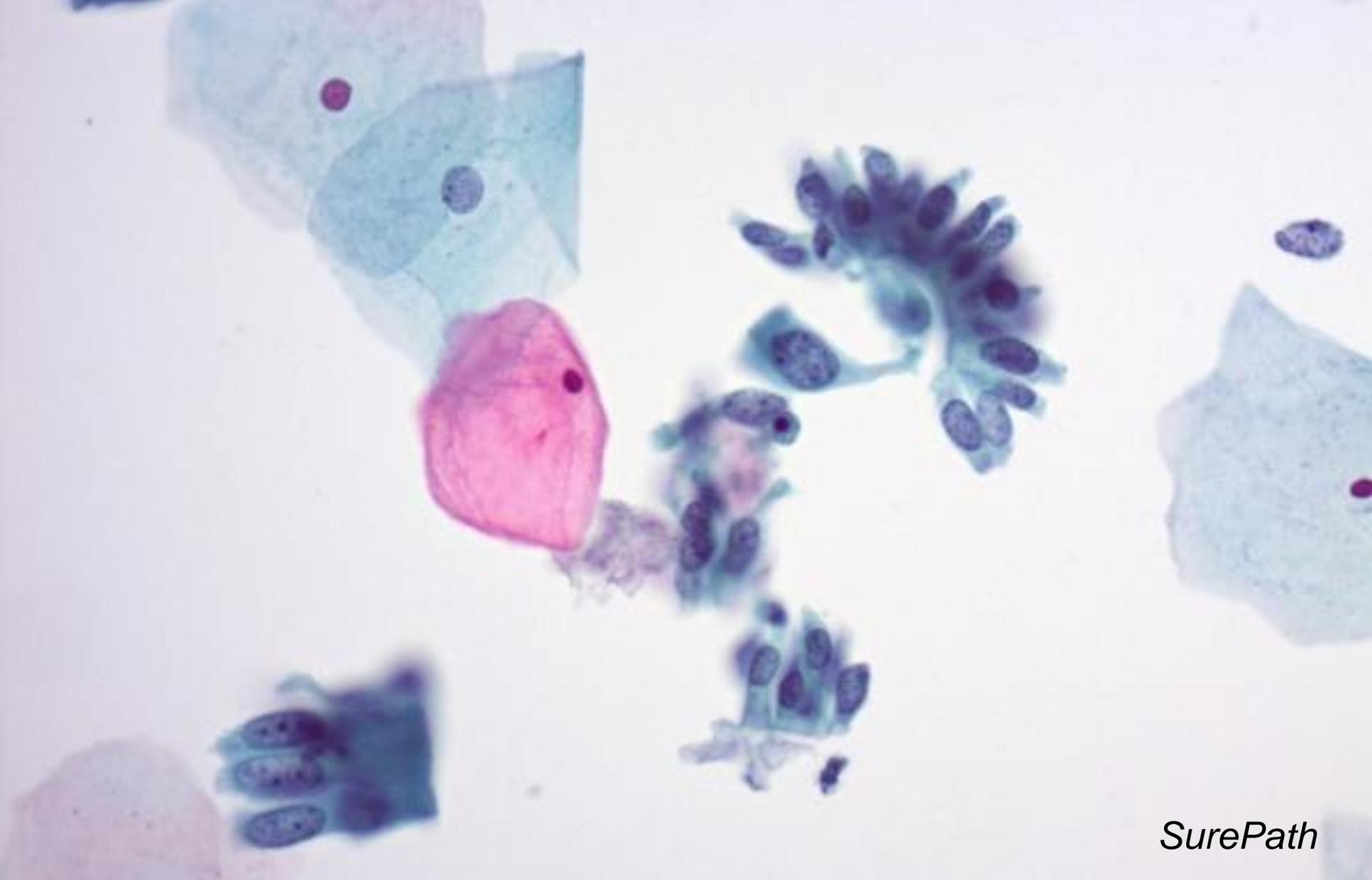
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AIS: Strip of a sheet edge



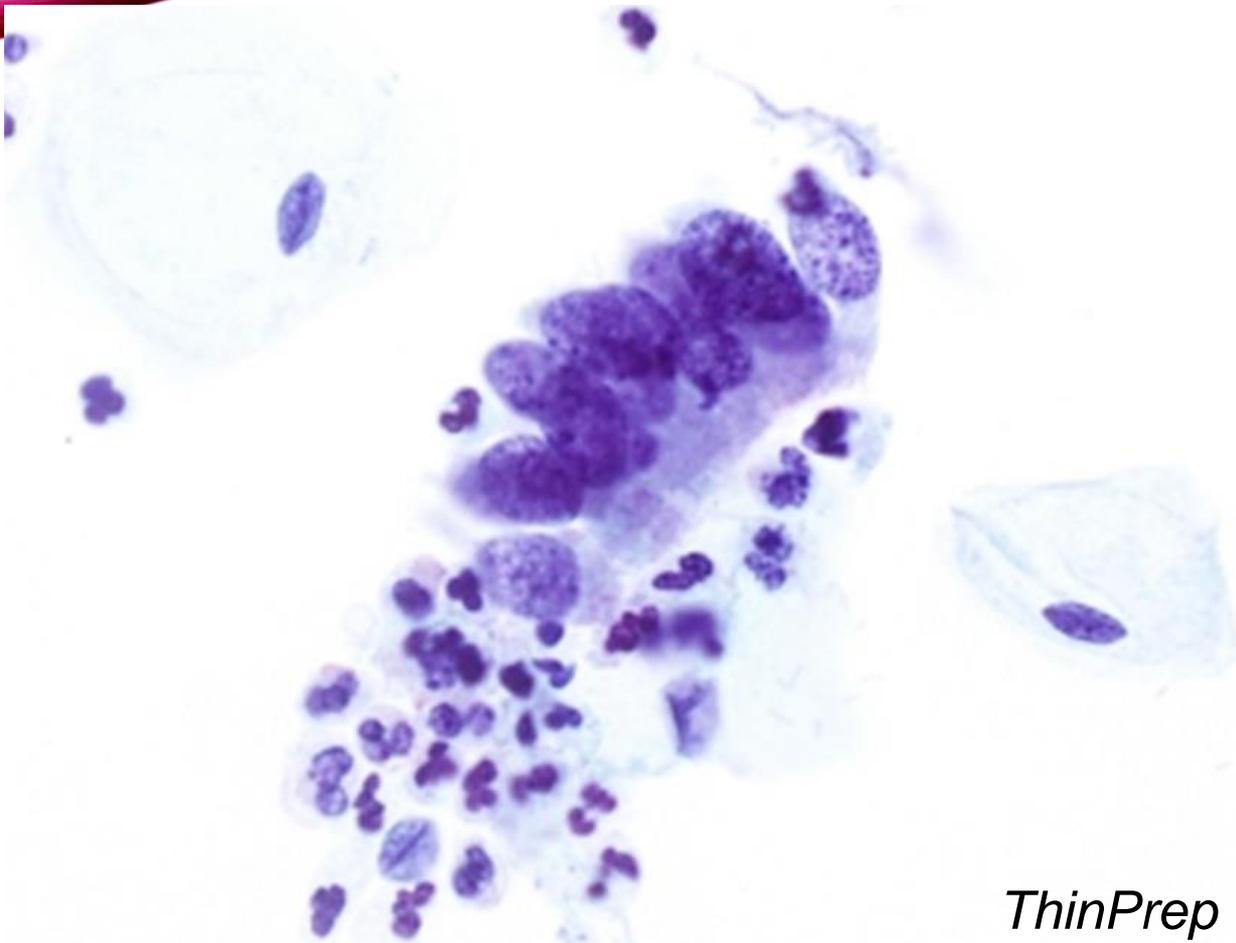
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AIS: Rosette, mitoses, feathering



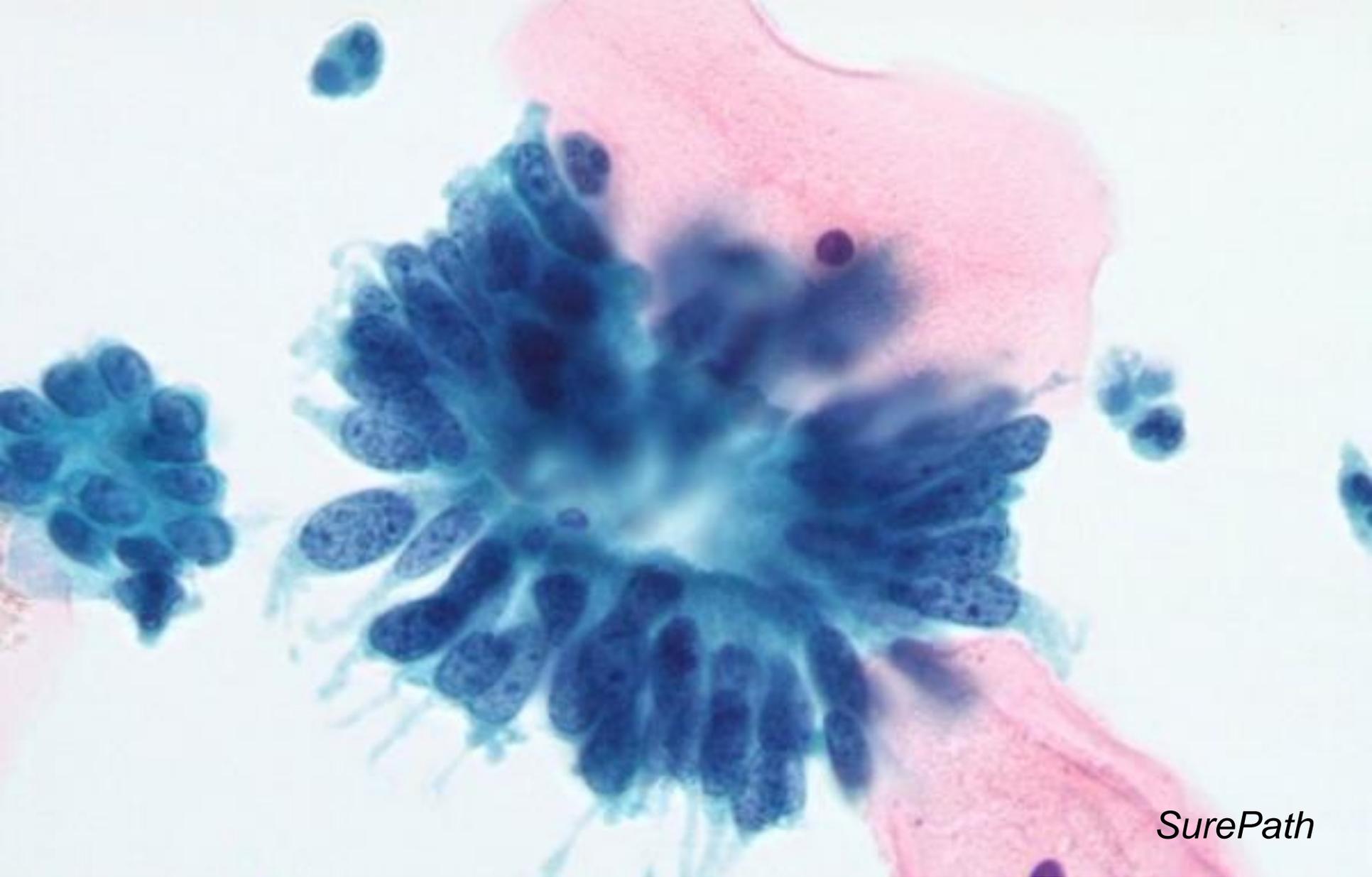
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AIS: Abnormal Strips



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AIS: Abnormal strip

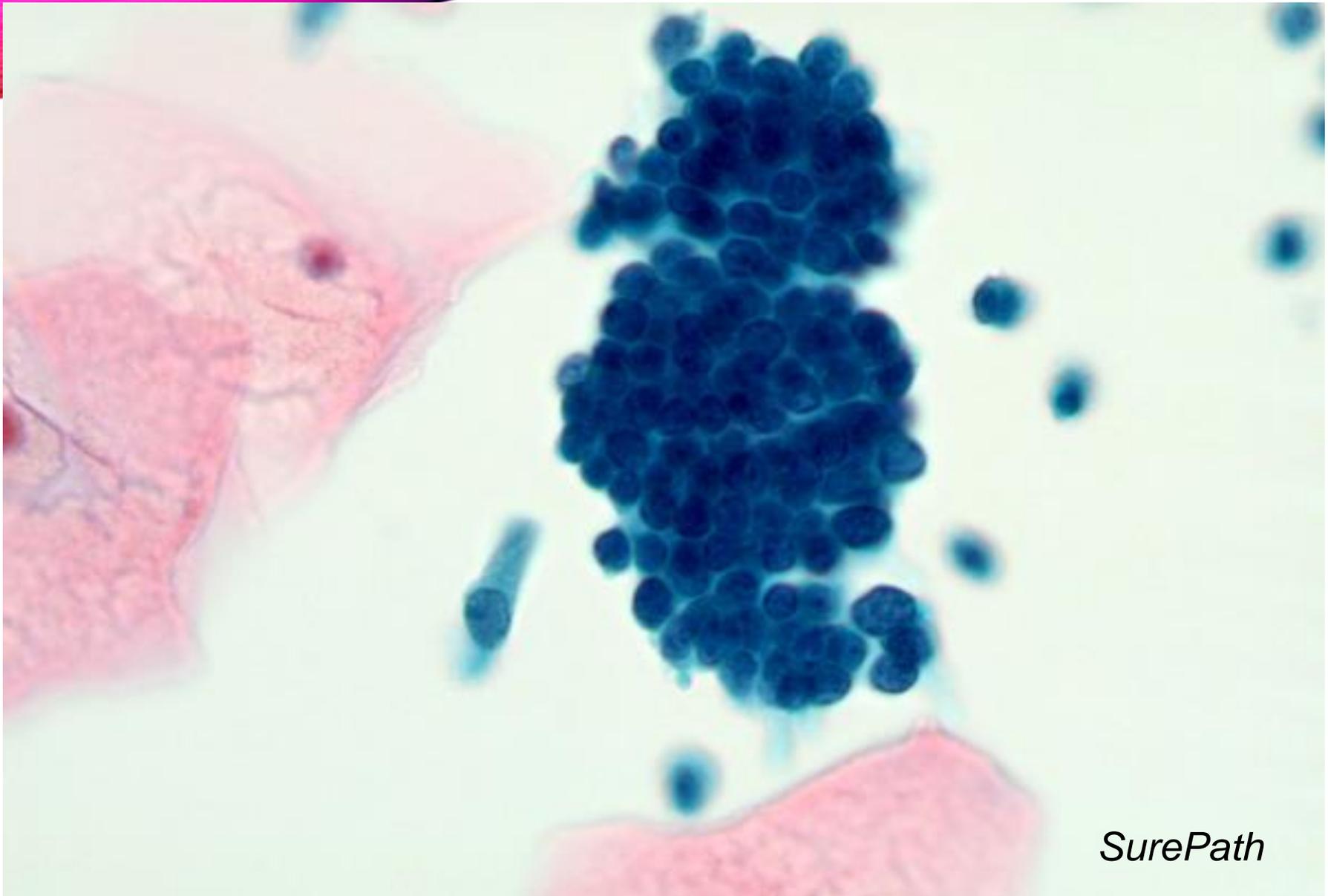


AIS: More abnormal strips



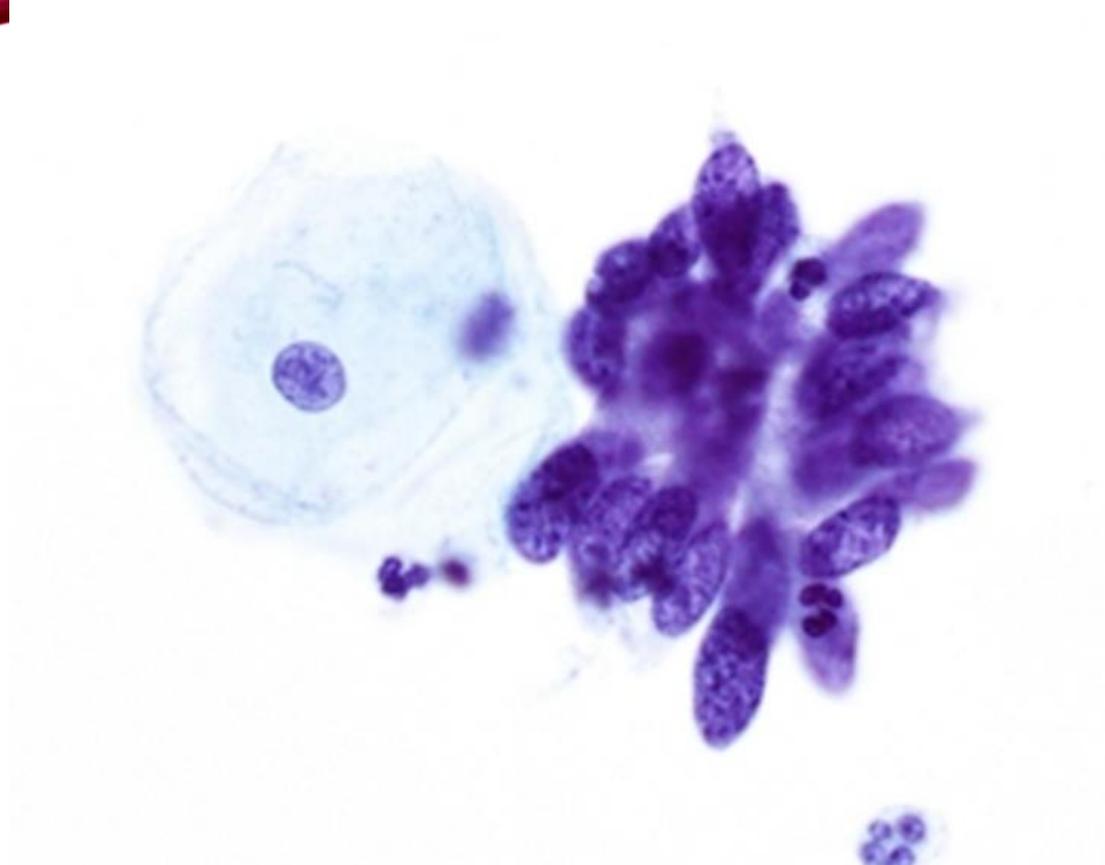
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ALS: possible rosette



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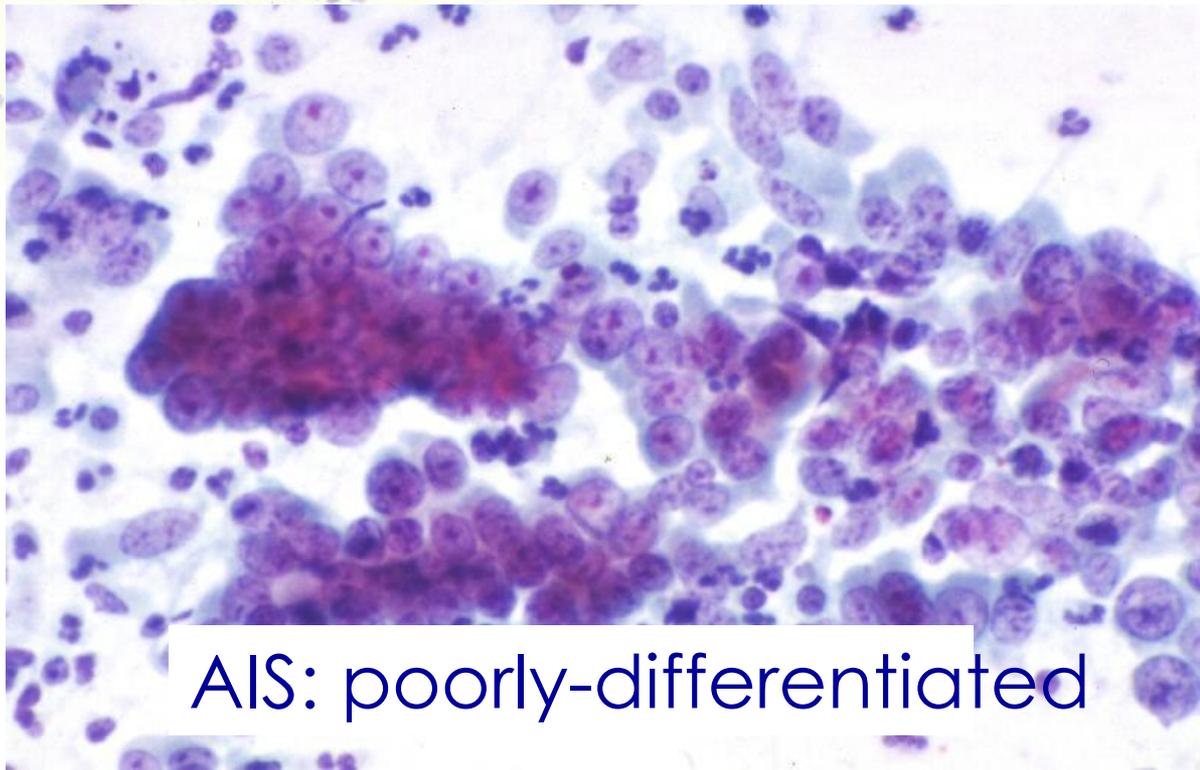
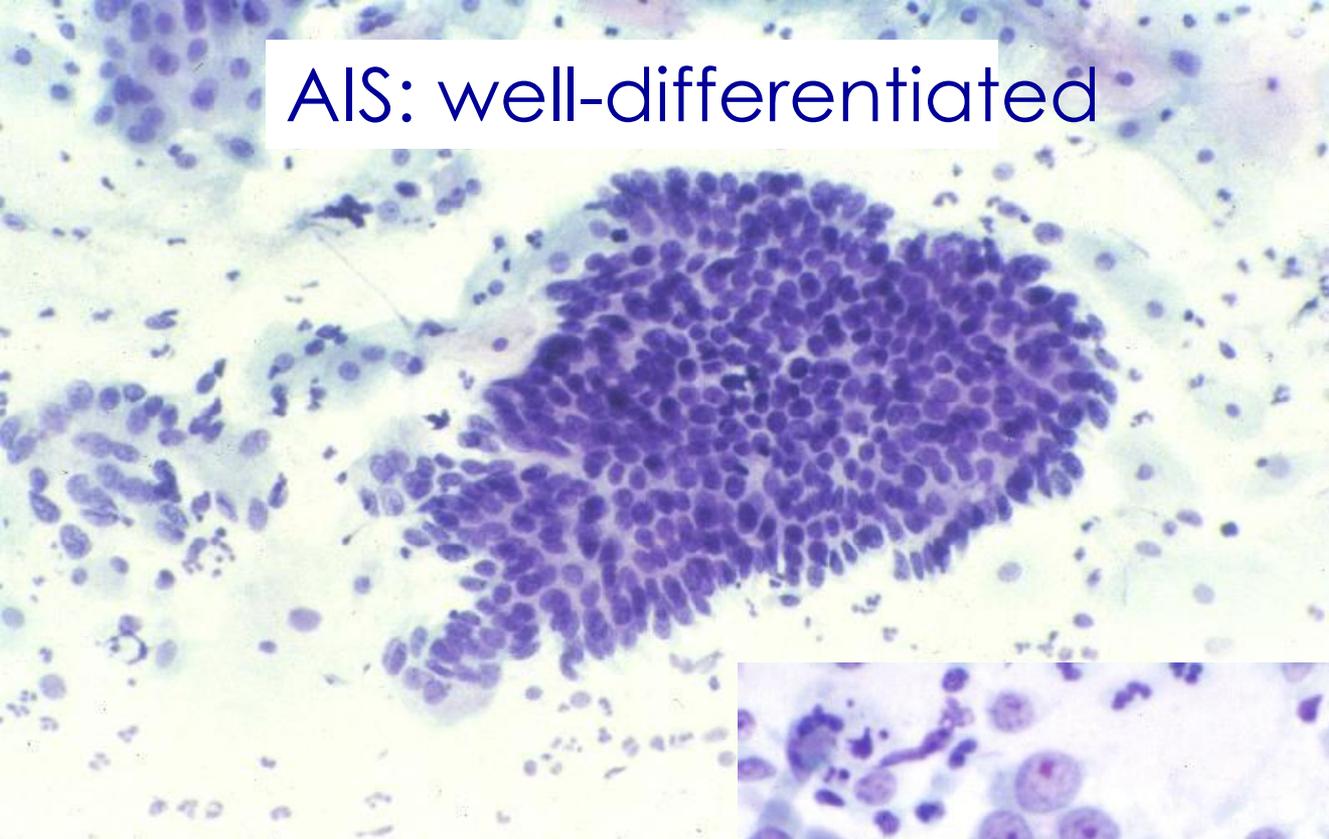
AIS: Cell morphology



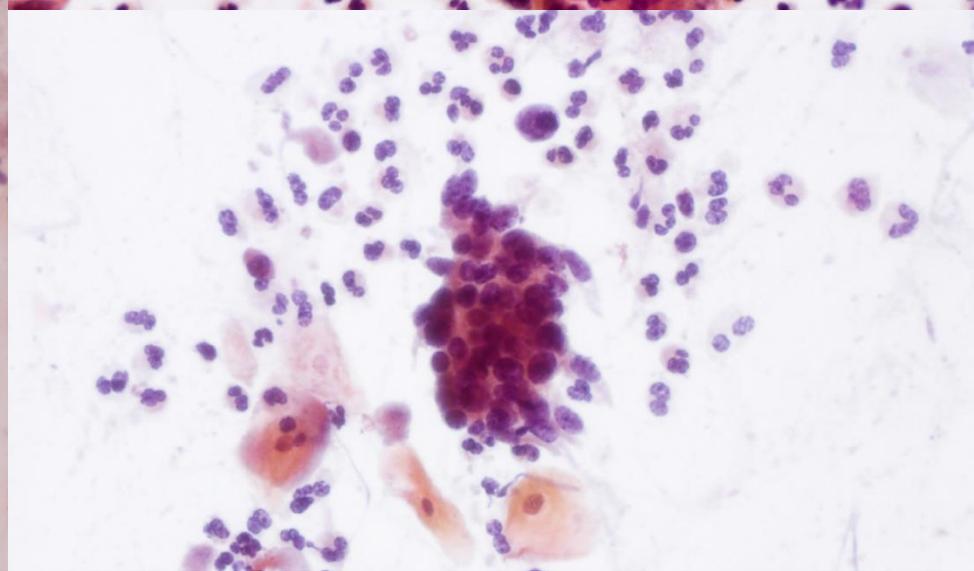
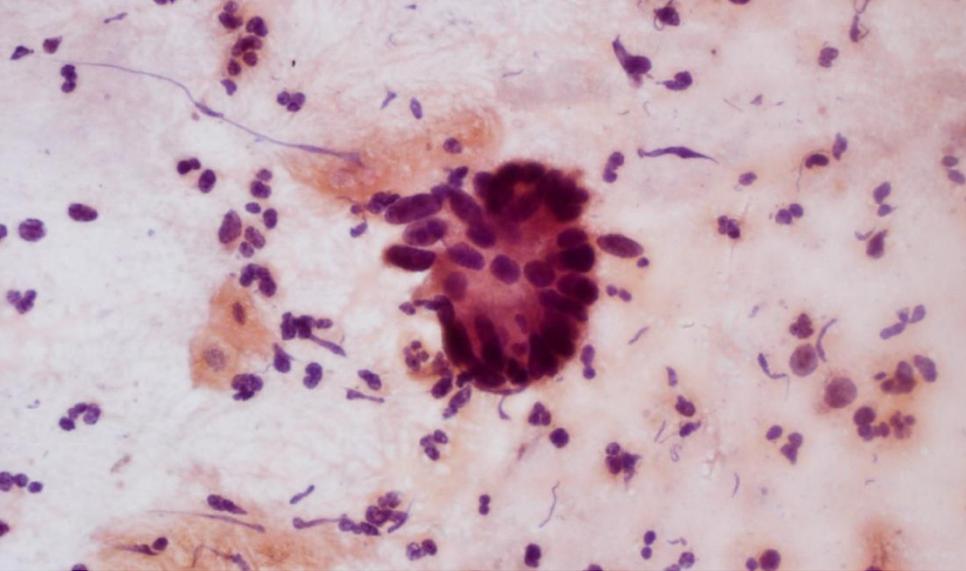
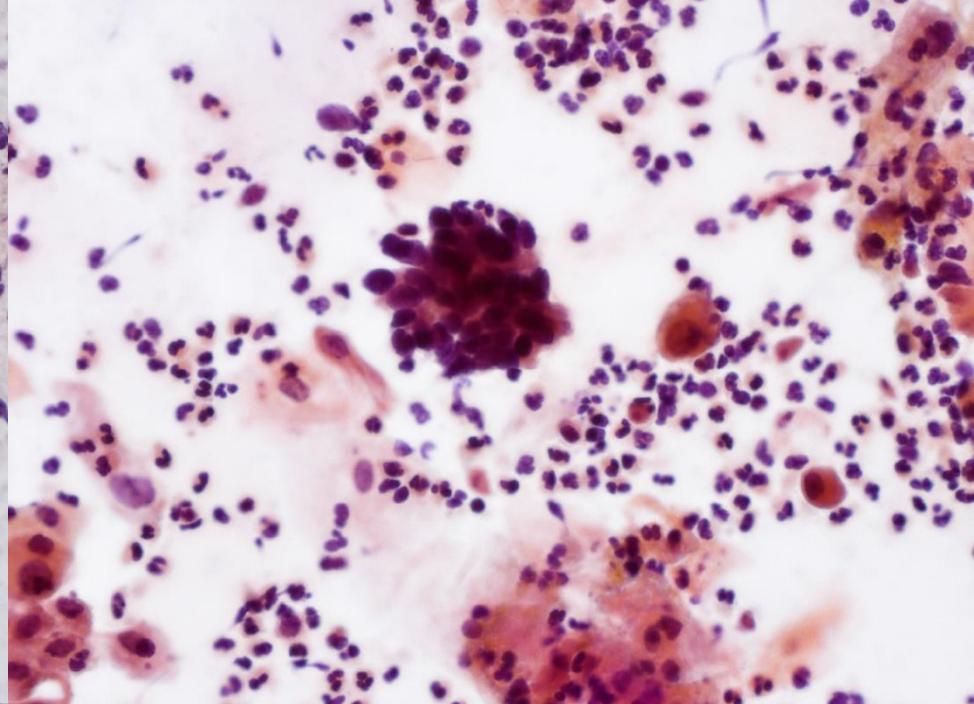
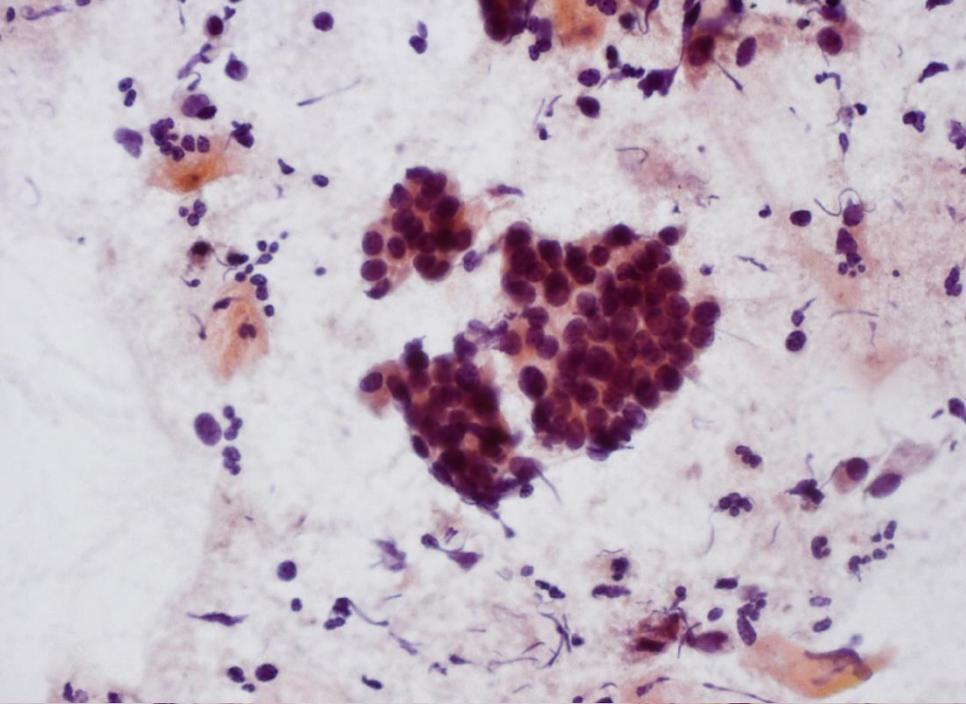
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AIS: Hyperchromasia

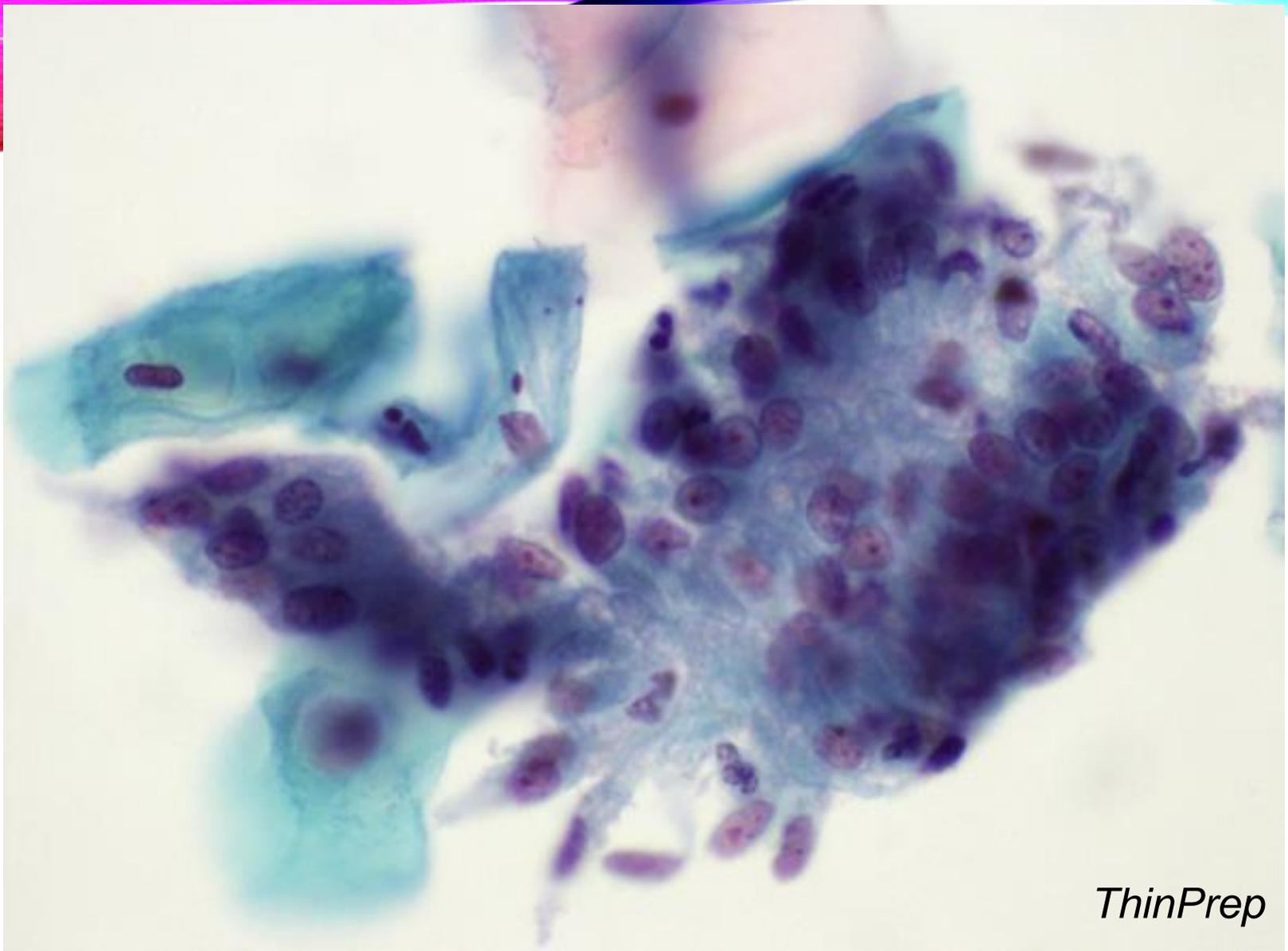
AIS: well-differentiated



AIS: poorly-differentiated



AIS



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

# INVASIVE ADENOCARCINOMA CYTOLOGIC PREDICTION

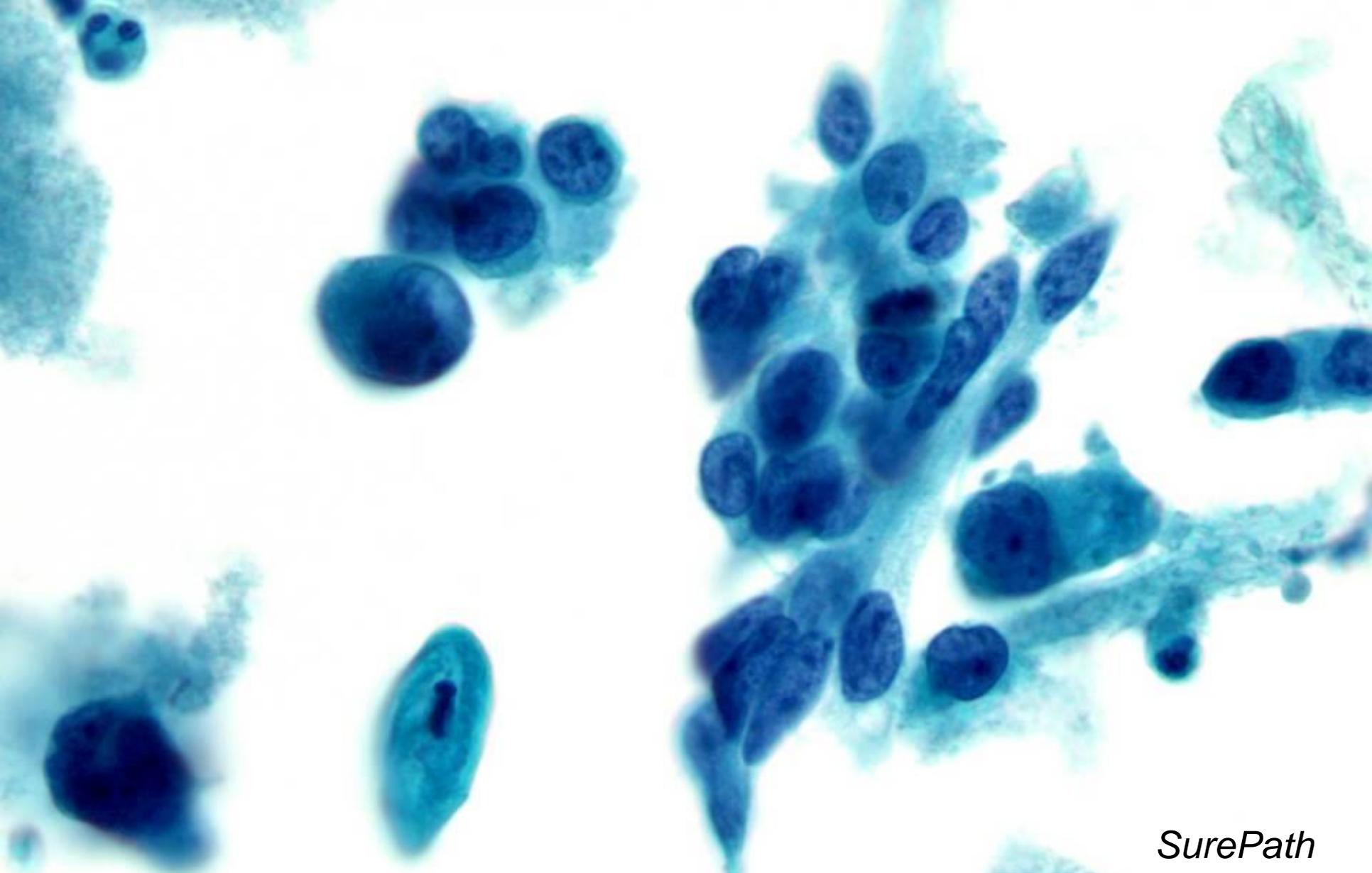
Cytology	Proportion invasive outcome
Possible AIS	13.5%
AIS	12.1%
AIS ?invasion	21.4%
Adenocarcinoma	79%

# Endocervical adenocarcinoma

## 1. Features of AIS

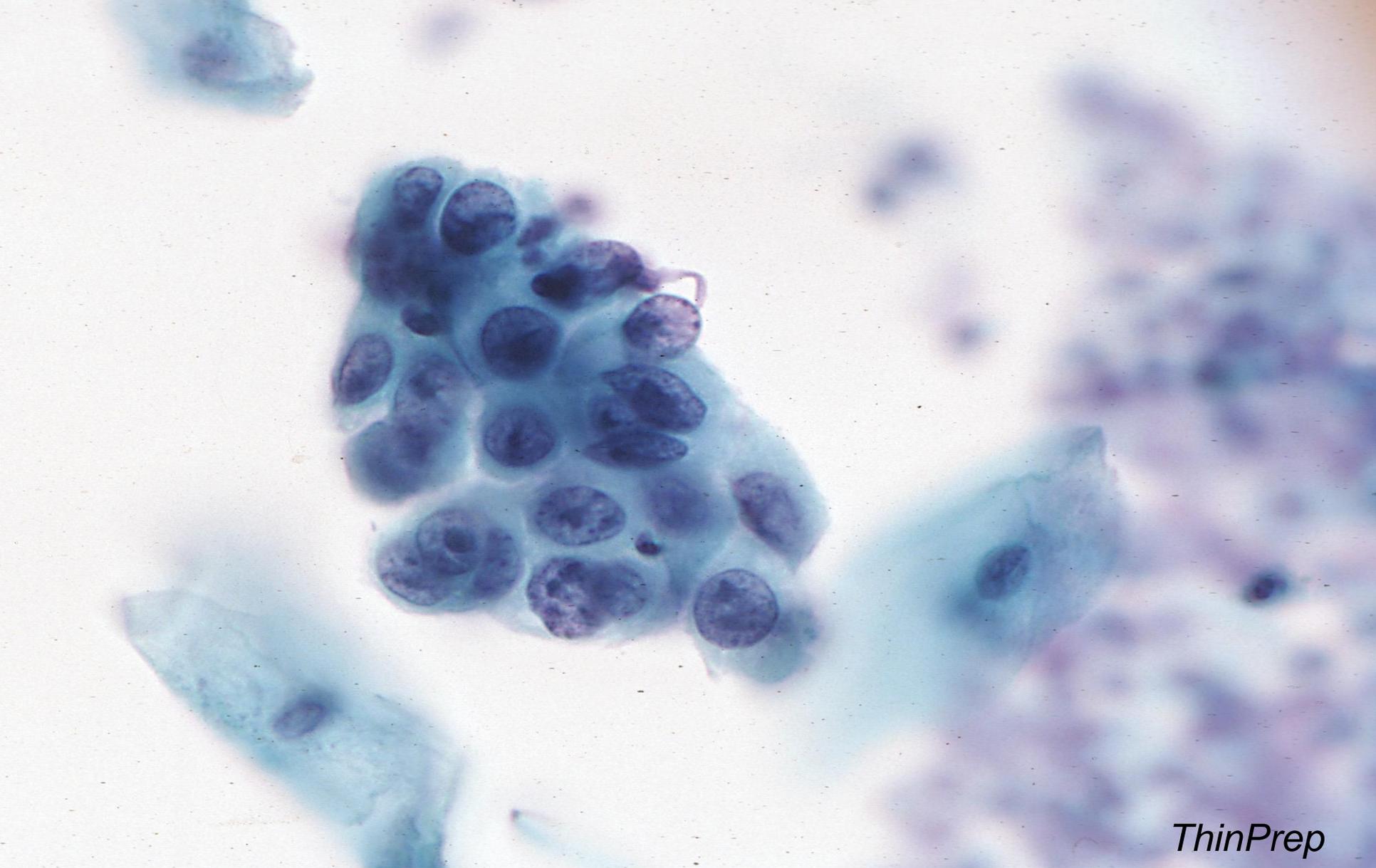
## 2. Features suggestive of invasion

- 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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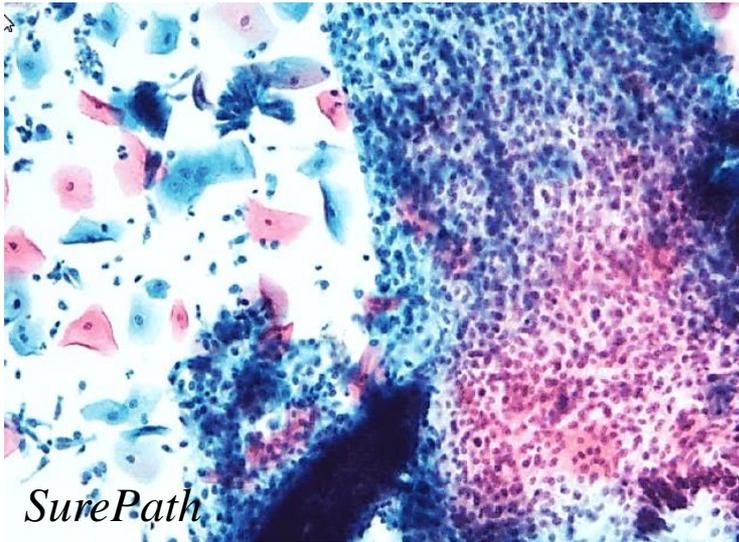
Endocervical adenocarcinoma



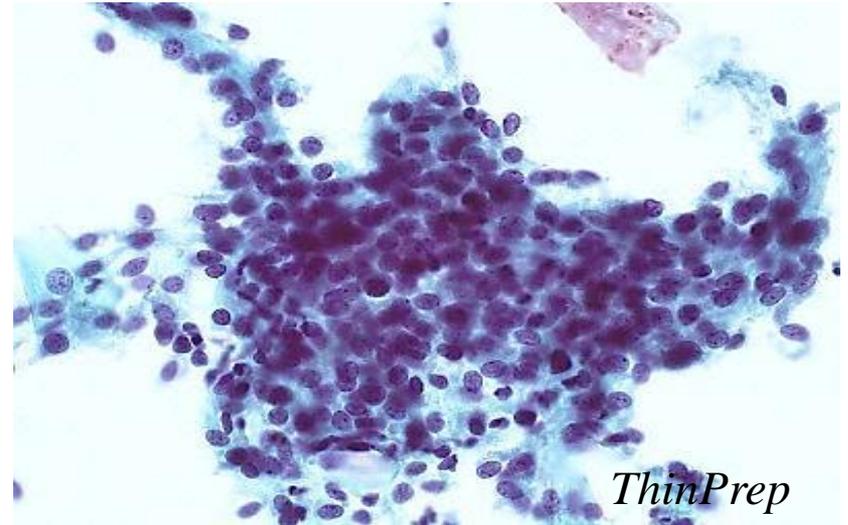
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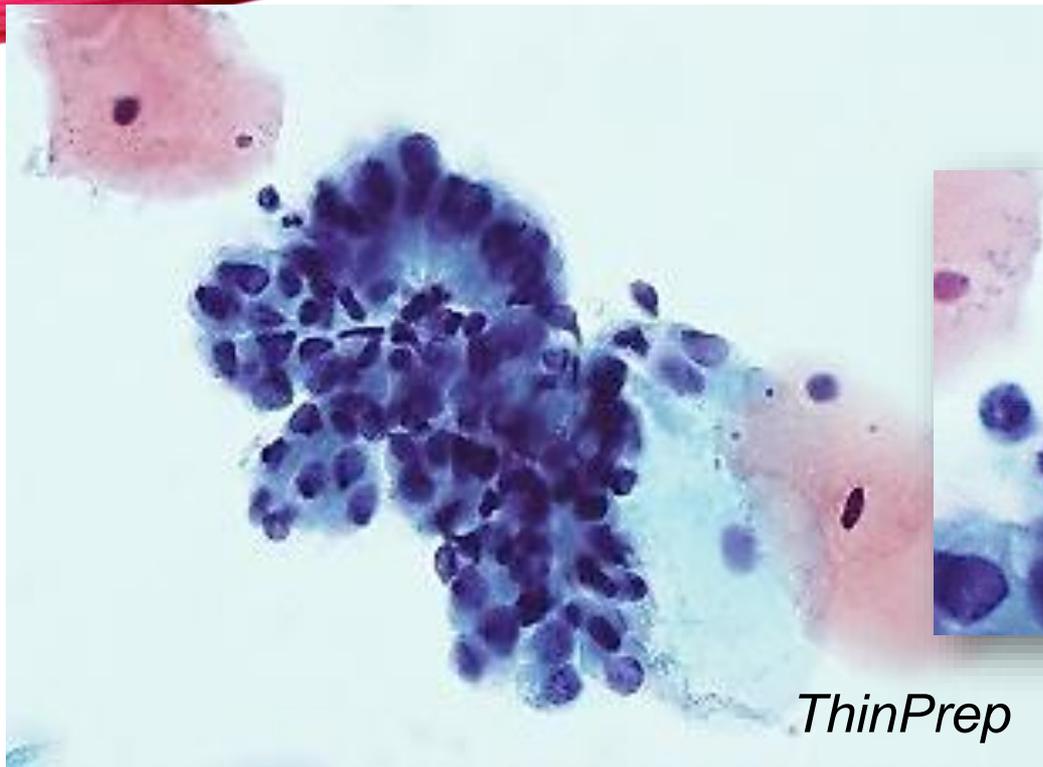


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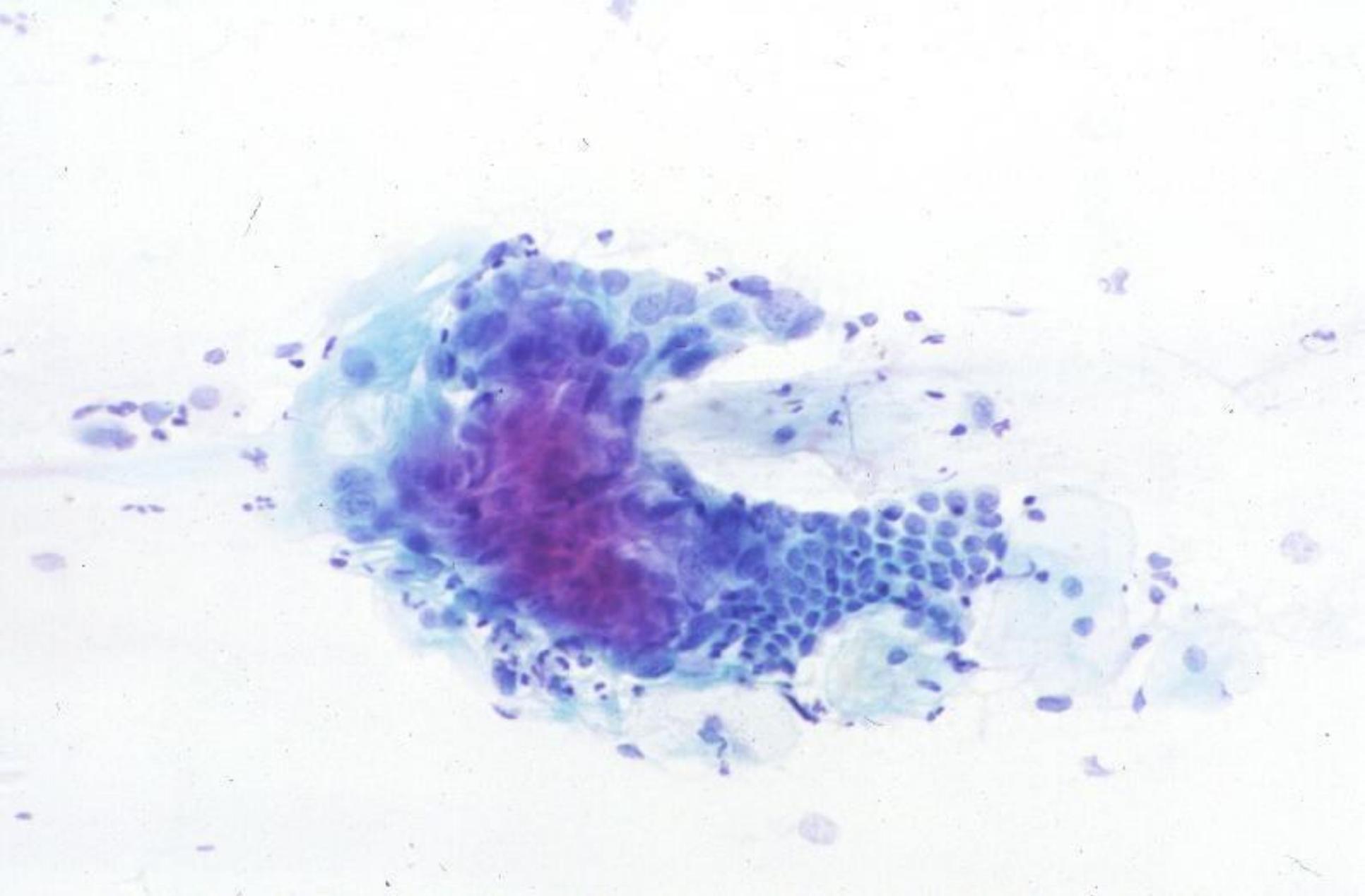


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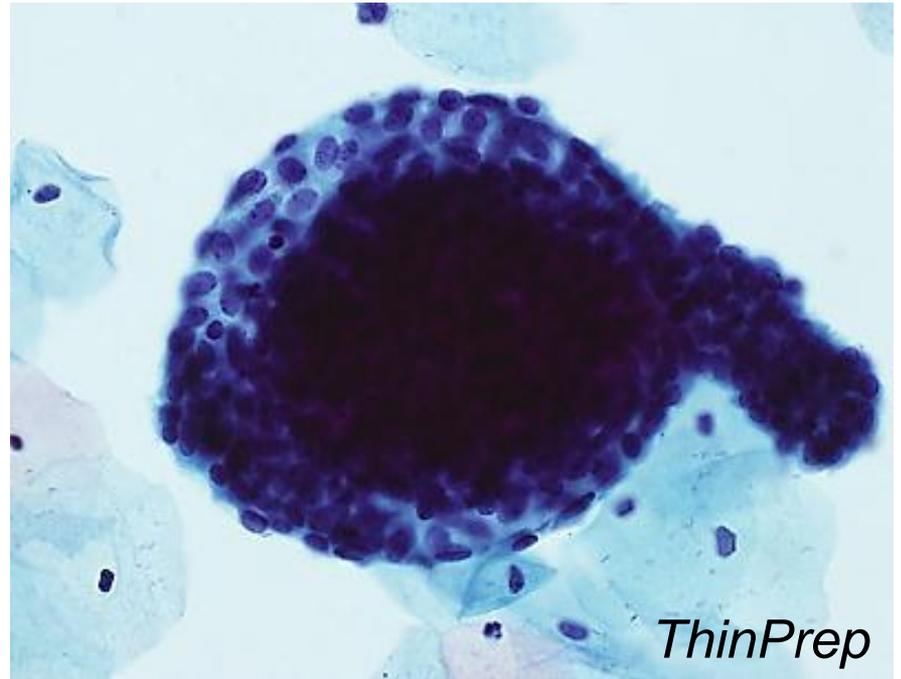
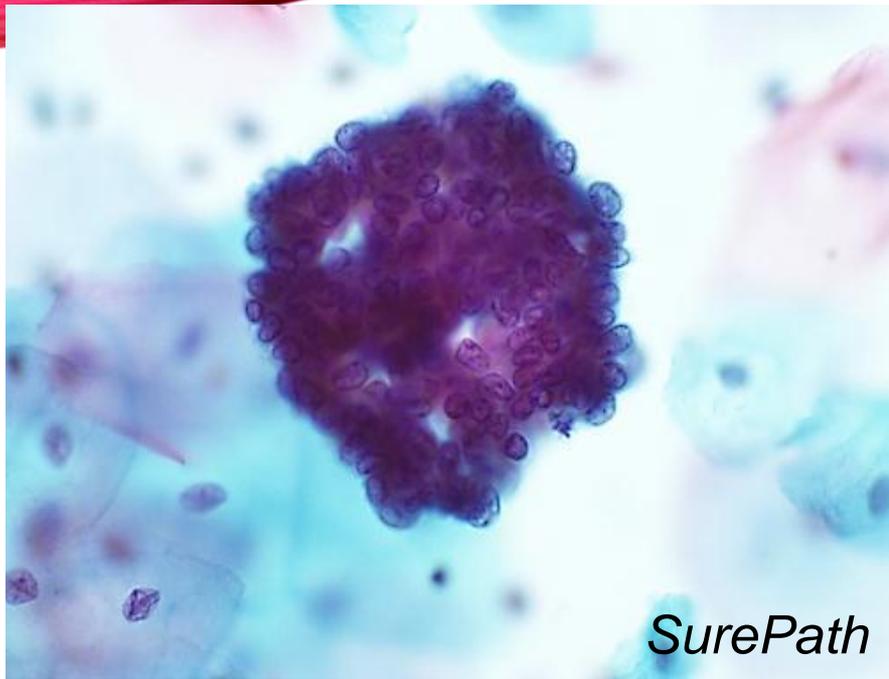
Differential Diagnoses: High sampling



Tubal metaplasia

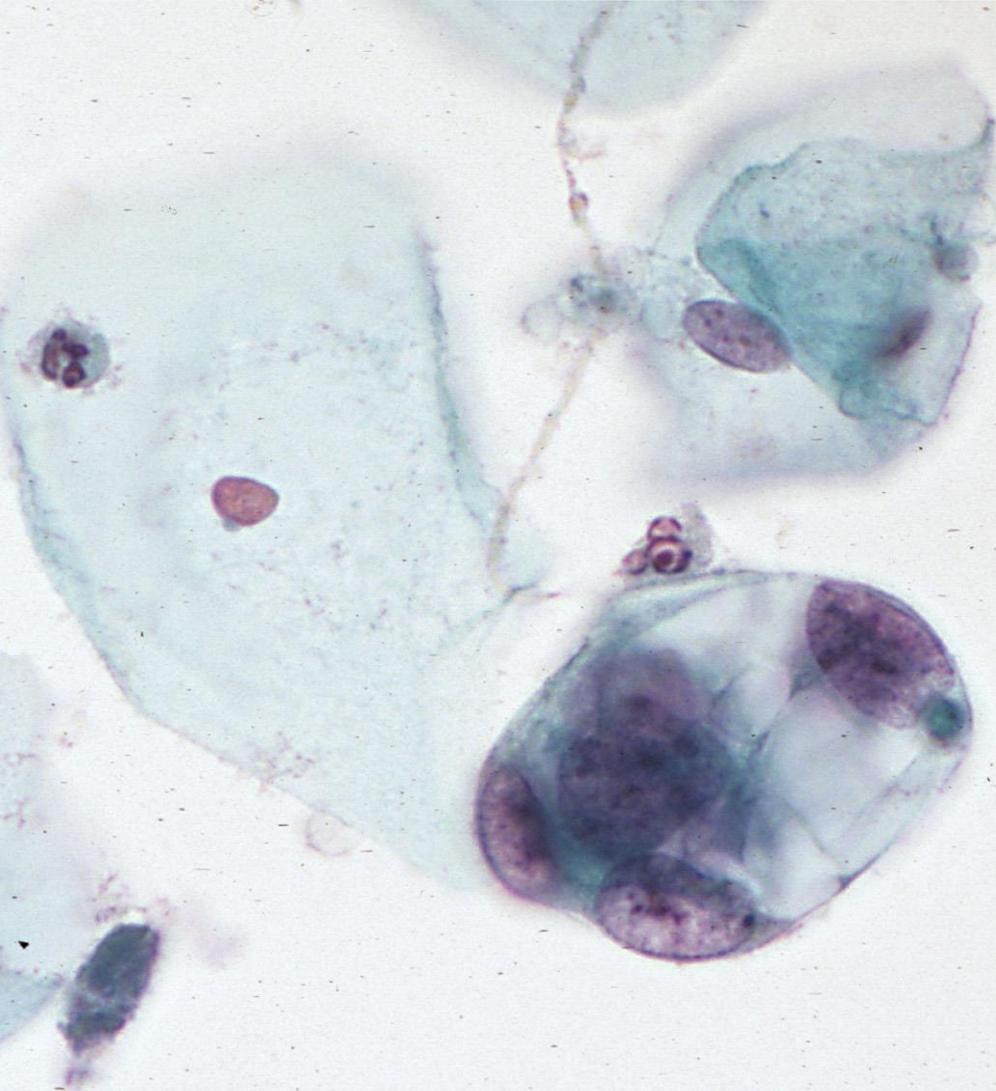


HSIL involving glands

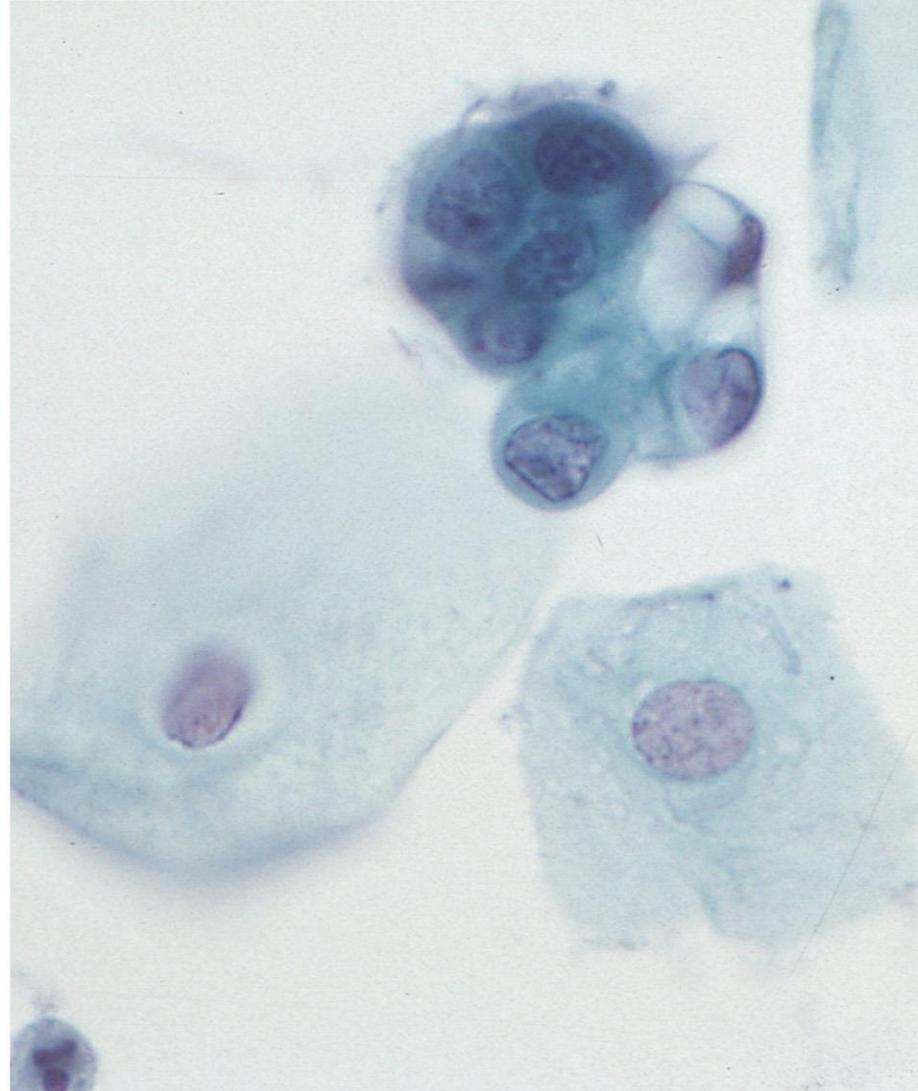


Normal endometrial cells

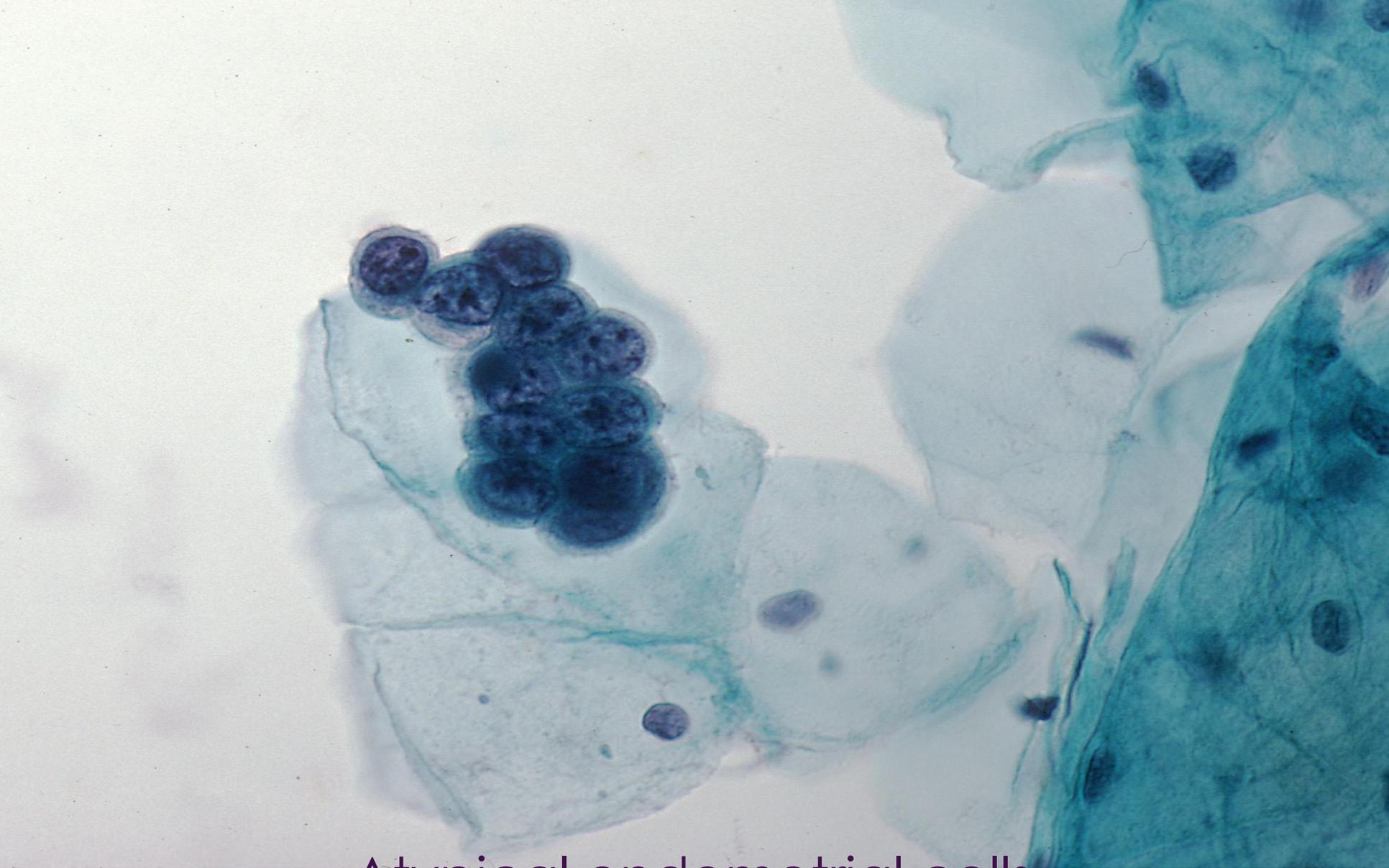
Atypical endometrial cells



Endometrial Adenocarcinoma



Endometrial hyperplasia

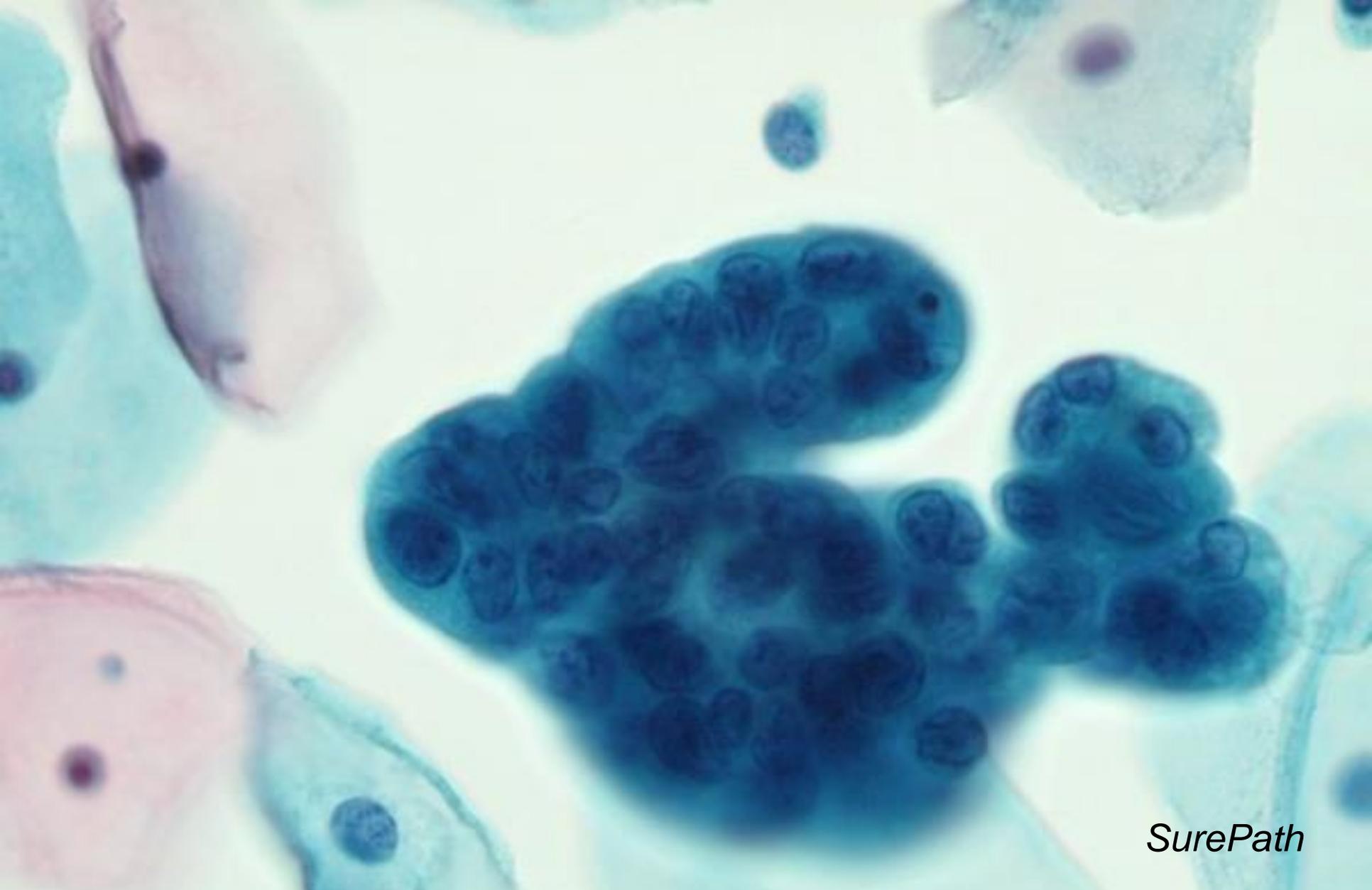


Atypical endometrial cells  
F/U: Well-differentiated endometrial  
adenocarcinoma



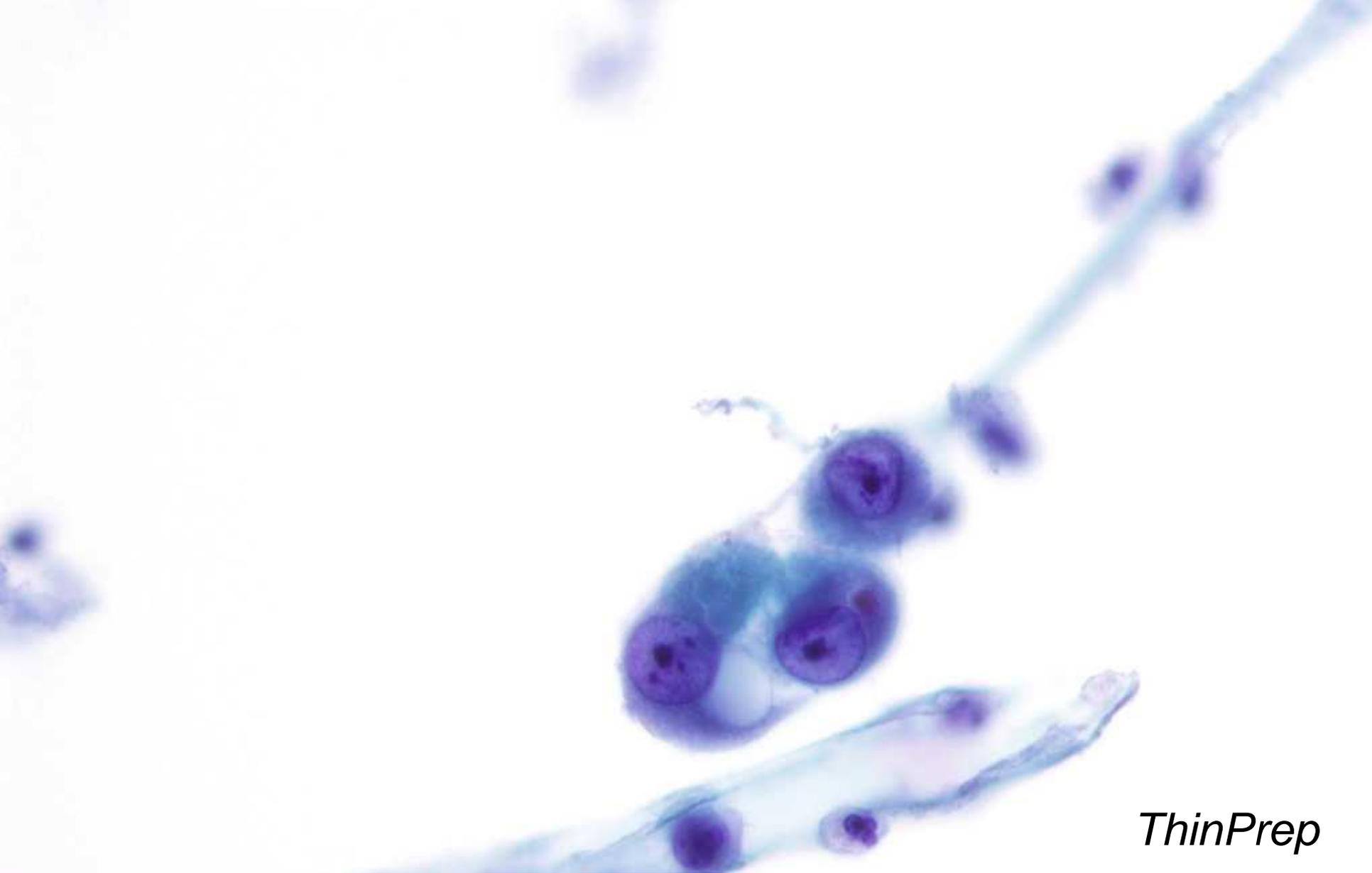
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Endometrial Adenocarcinoma



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Endometrial Adenocarcinoma



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Endometrial Adenocarcinoma