



# Detecting Glandular lesions by Cervical Cytology

---

Dr Wendy McBurnie

2022

# Glandular abnormalities reported in NZ in 2016

## Cytology:

Atypical Glandular Cells/AIS = 403 reports (0.10%)  
Adenocarcinoma (all types) = 101 reports (0.02%).

## Histology:

Adenocarcinoma in situ (AIS) = 149 women  
Endocervical adenocarcinoma = 19 women

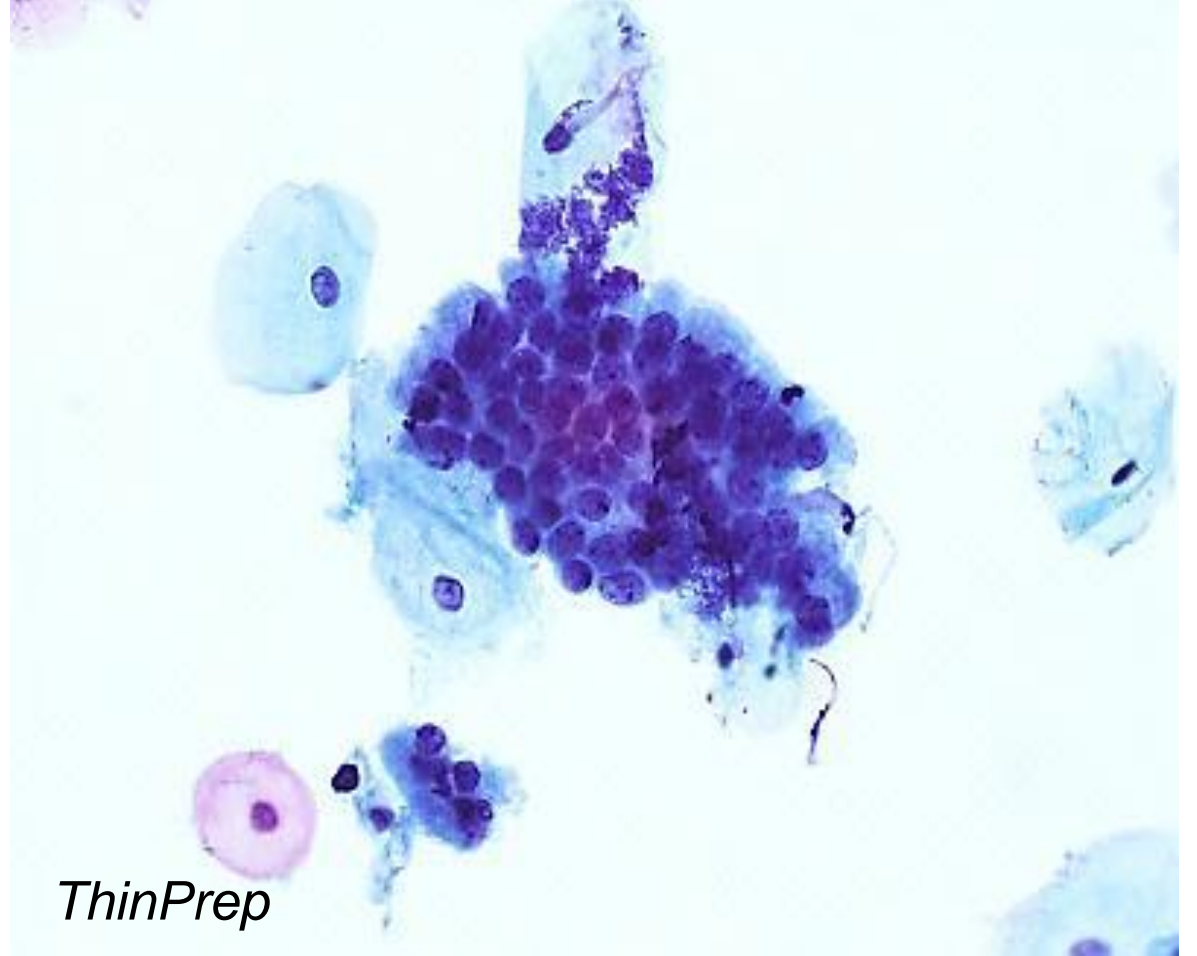
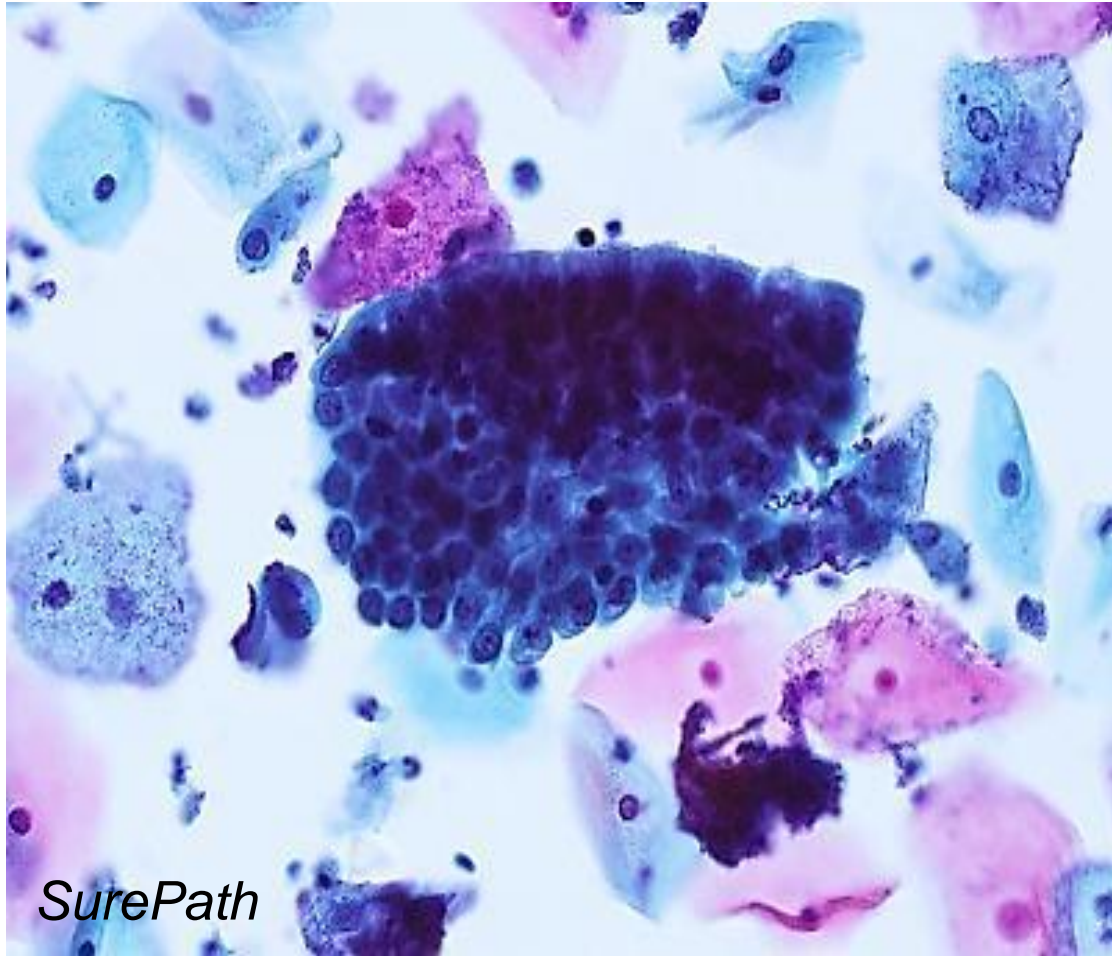
# The NZ Cervical Cancer Audit 2000 - 2002

- 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”

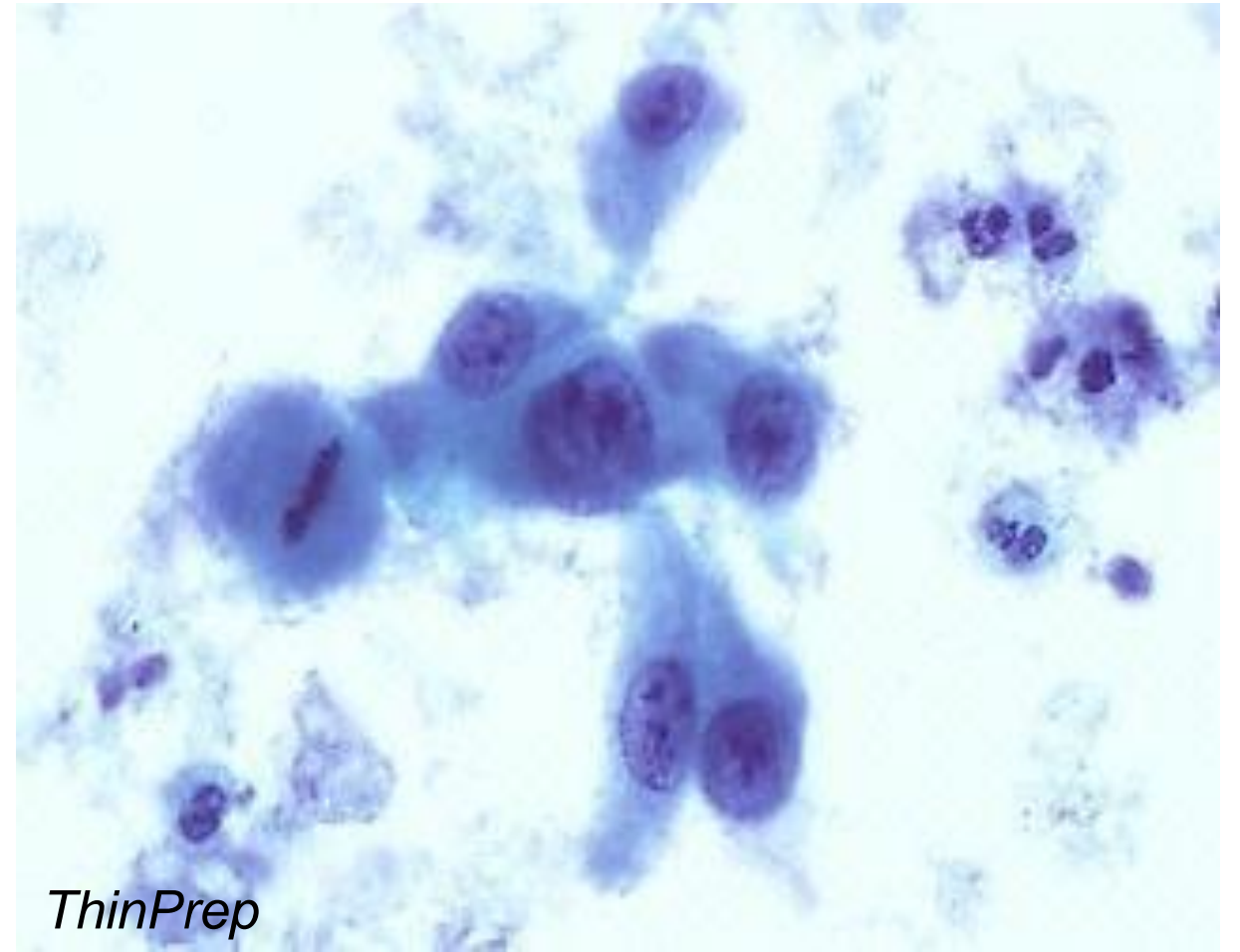
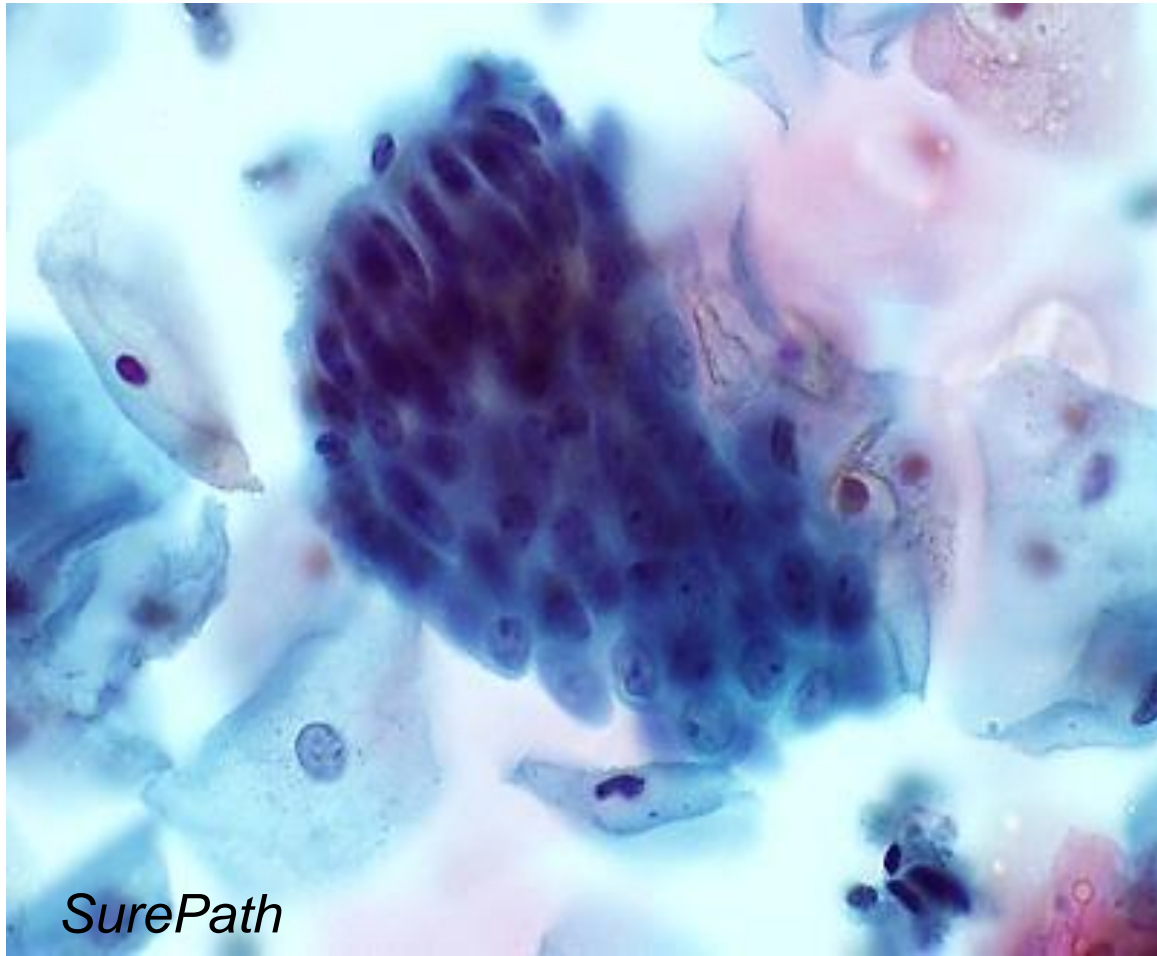


# Overview

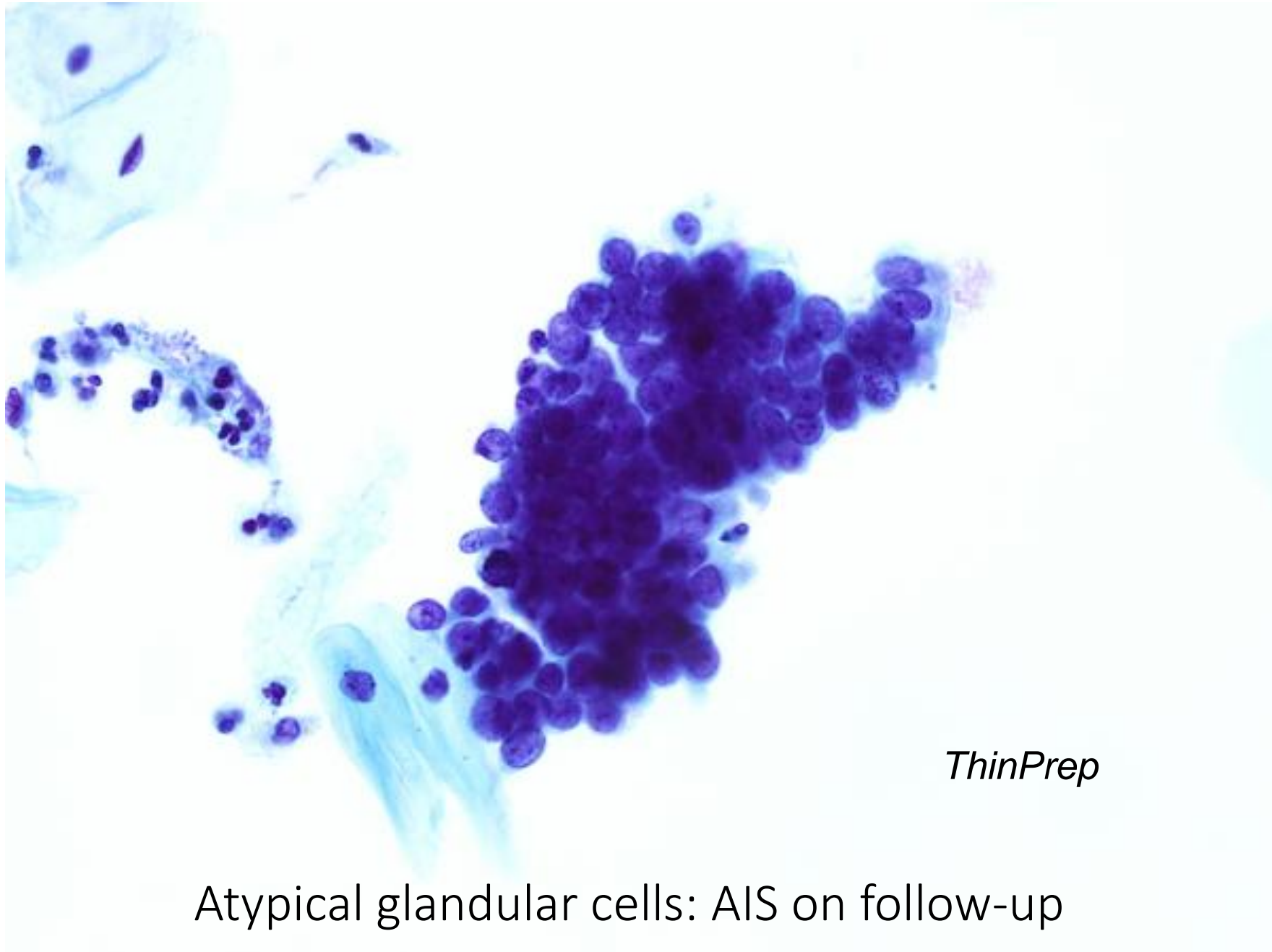
- Endocervical cells
  - Normal/reactive endocervical cells
  - Atypical endocervical cells
  - Adenocarcinoma in situ (AIS)
  - Invasive endocervical adenocarcinoma
- Endometrial cells
  - Normal endometrial cells
  - Atypical endometrial cells
  - Endometrial adenocarcinoma
- Other abnormal glandular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



Normal endocervical cells



Reactive endocervical cells



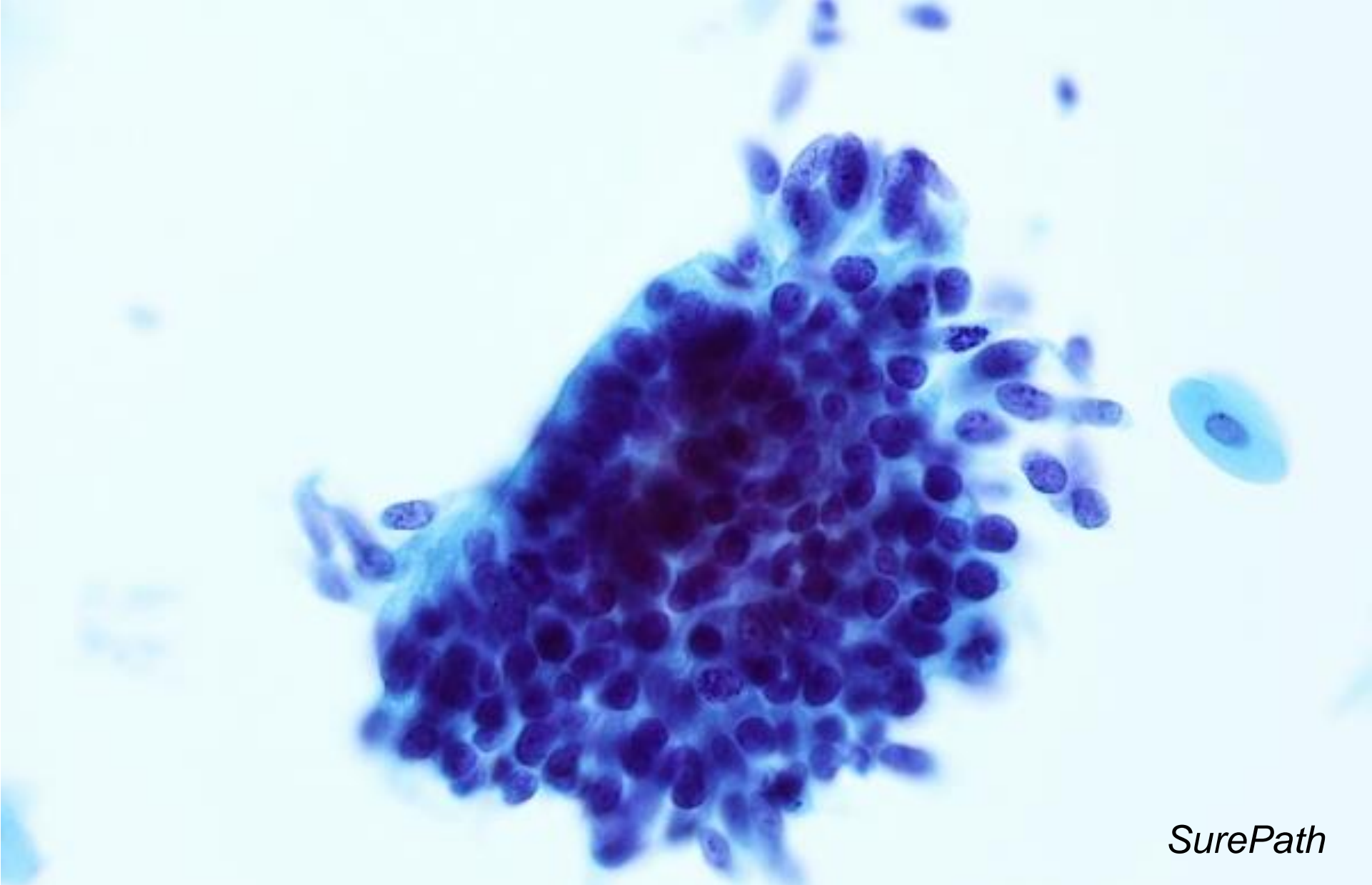
*ThinPrep*

Atypical glandular cells: AIS on follow-up

# Adenocarcinoma in situ (AIS)

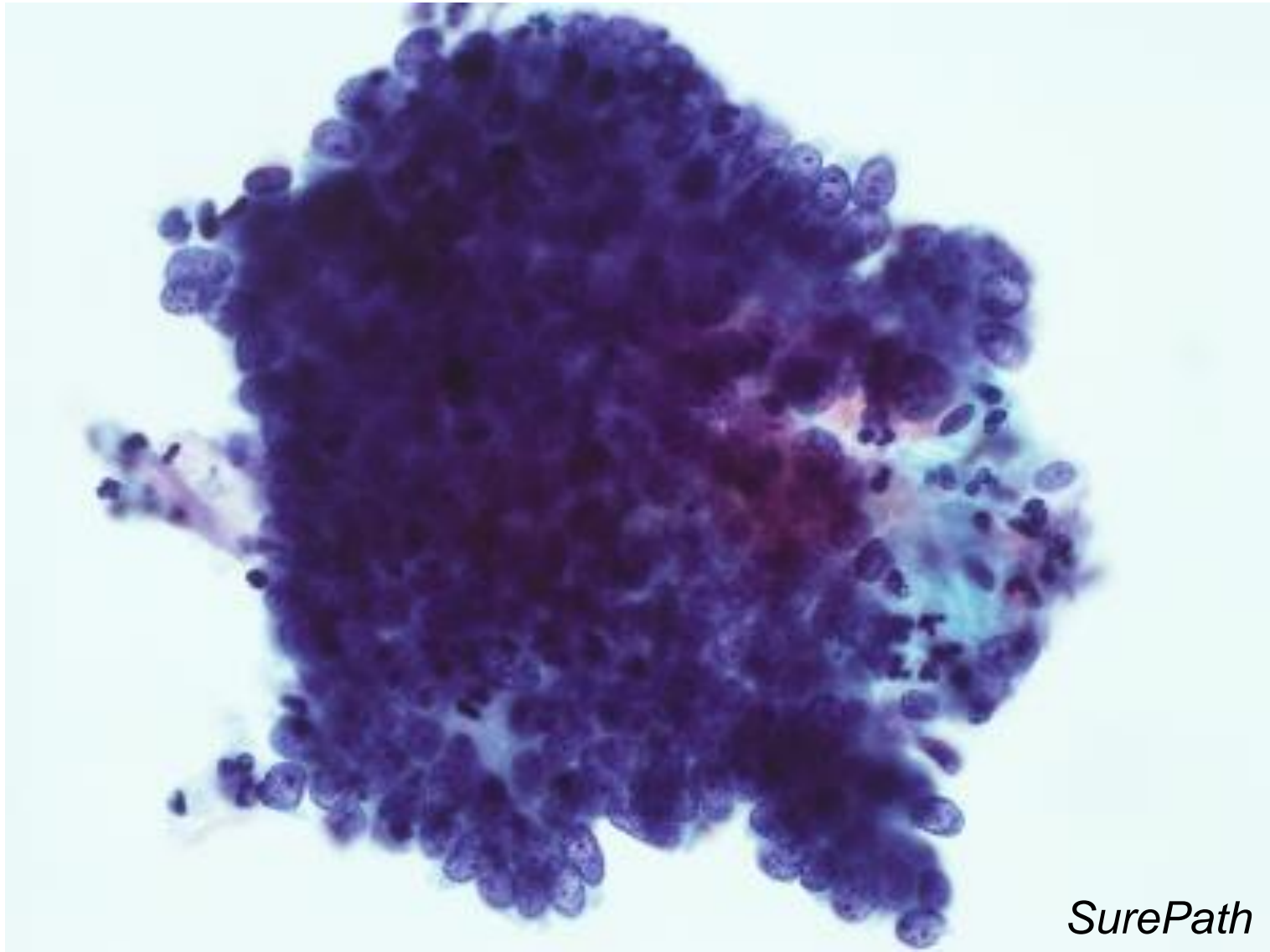
- Cell aggregates: **ARCHITECTURE** matters most
  - large irregularly shaped sheets
  - tightly crowded cells with nuclear overlapping
  - sheet edges: palisaded nuclei, common border, feathering
  - strips and rosettes with pseudostratification
  - gland openings
  - papillary groups
- Cell morphology: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





*SurePath*

AIS: Common sheet edge

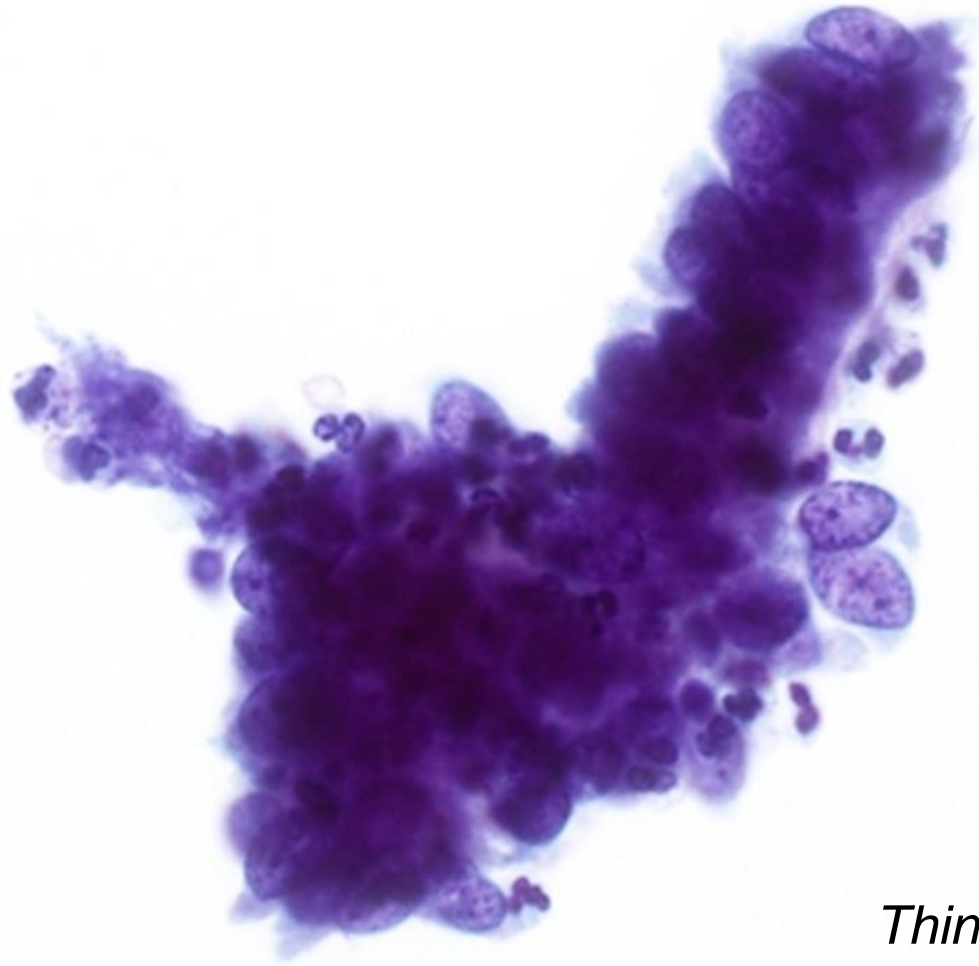


AIS: Irregular crowded groups



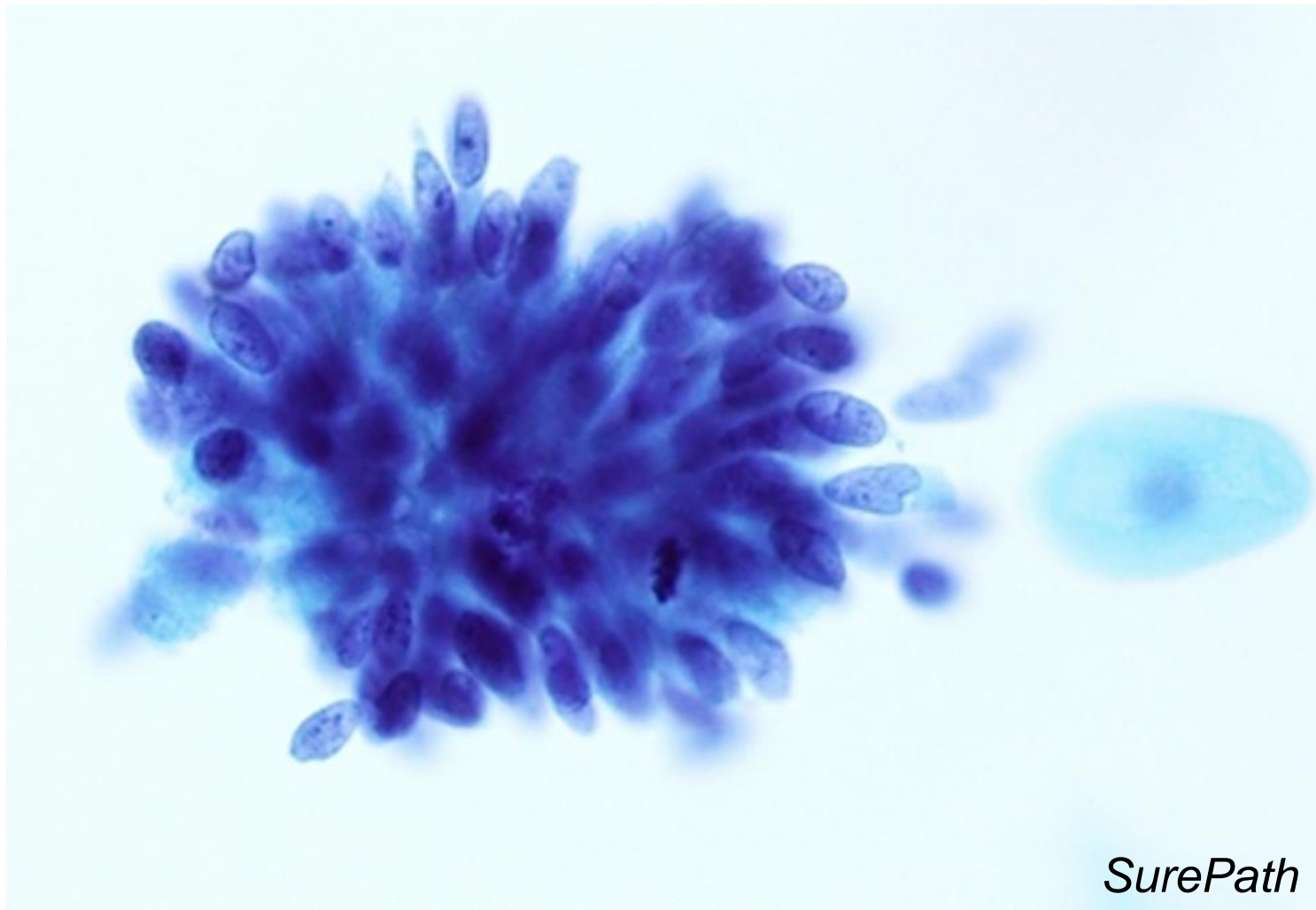
*ThinPrep*

AIS: Cell crowding and nuclear overlapping



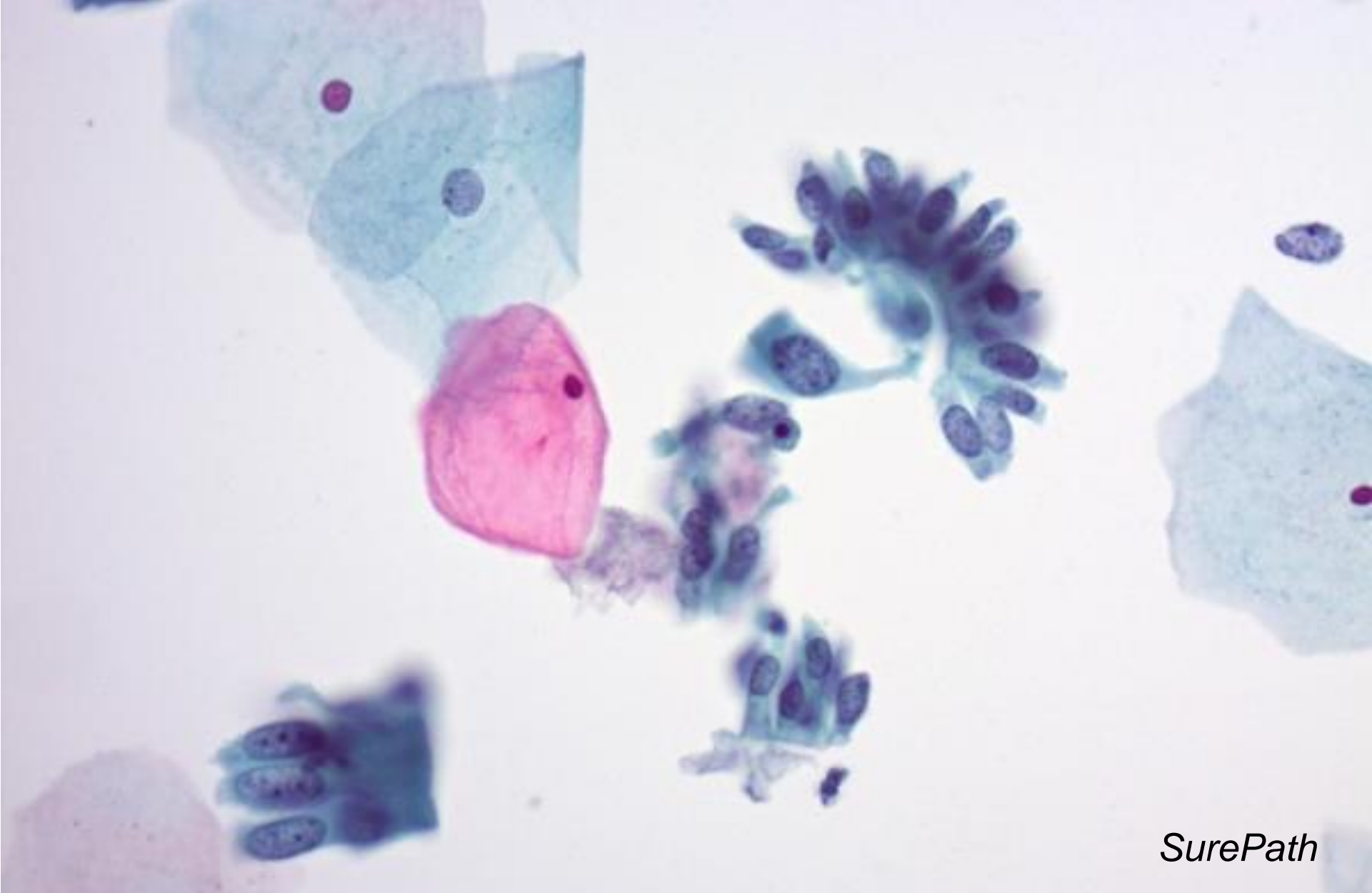
*ThinPrep*

AIS: Strip off a sheet edge



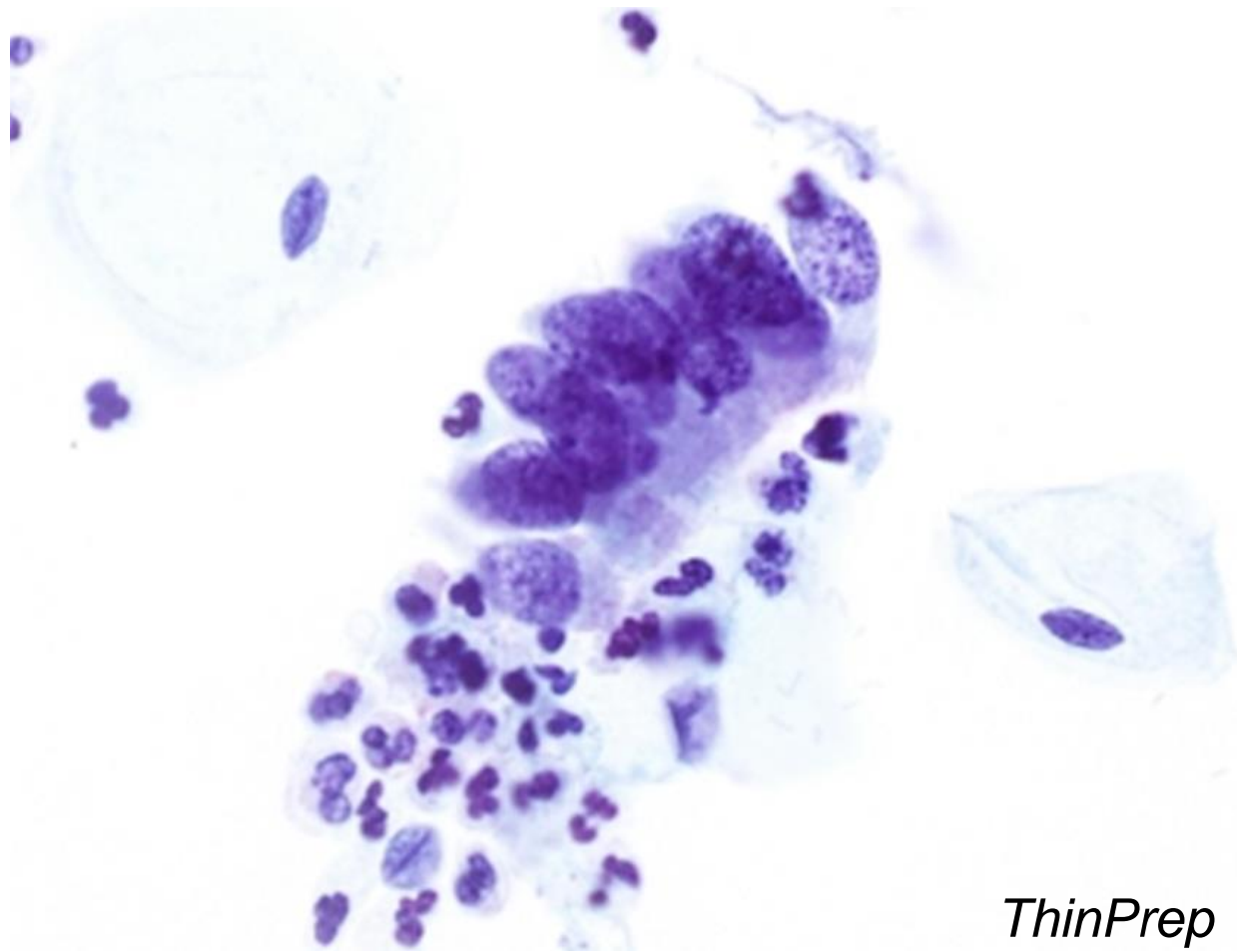
*SurePath*

AIS: Rosette, mitoses, feathering



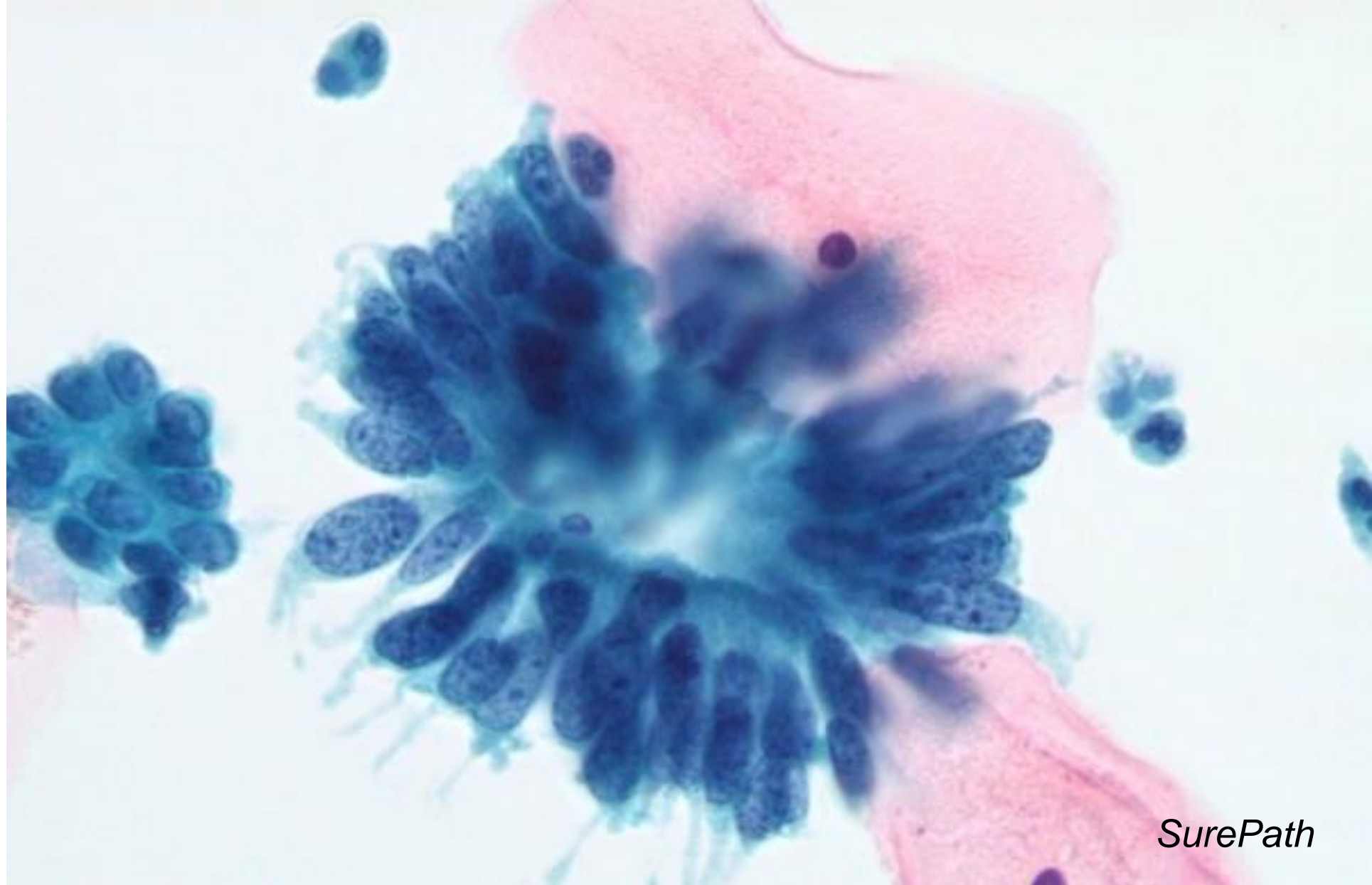
*SurePath*

AIS: Abnormal Strips



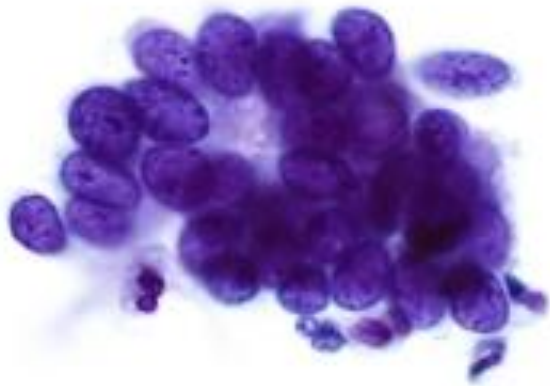
*ThinPrep*

AIS: Abnormal strip



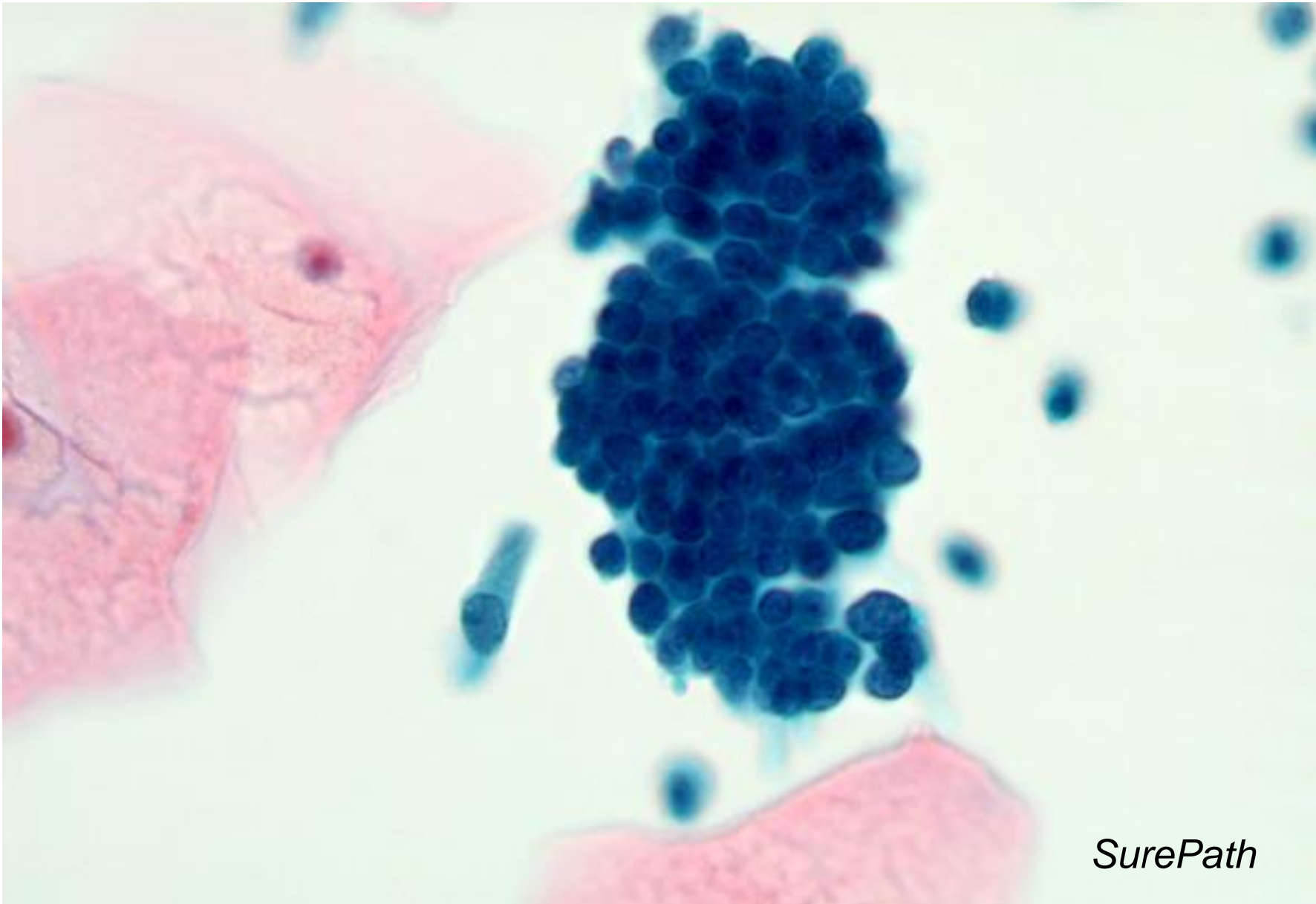
AIS: More abnormal strips





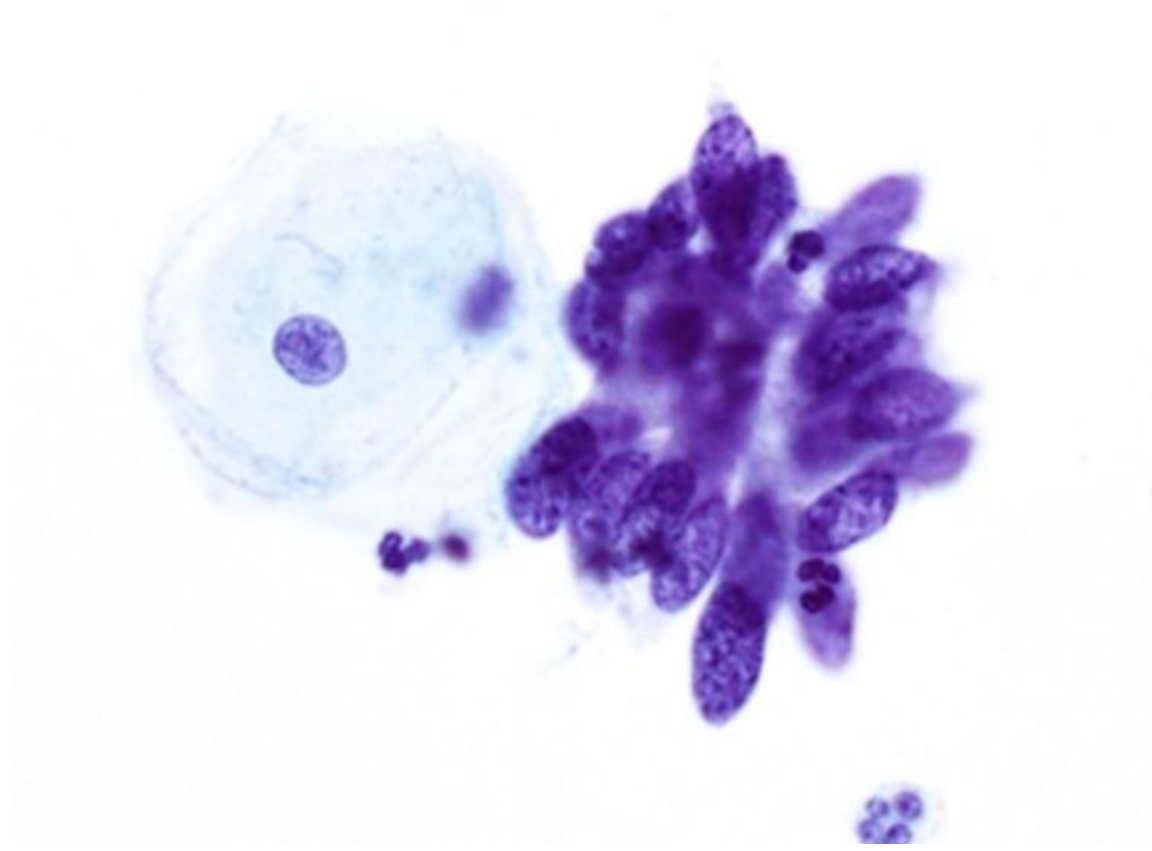
*ThinPrep*

AIS: possible rosette



*SurePath*

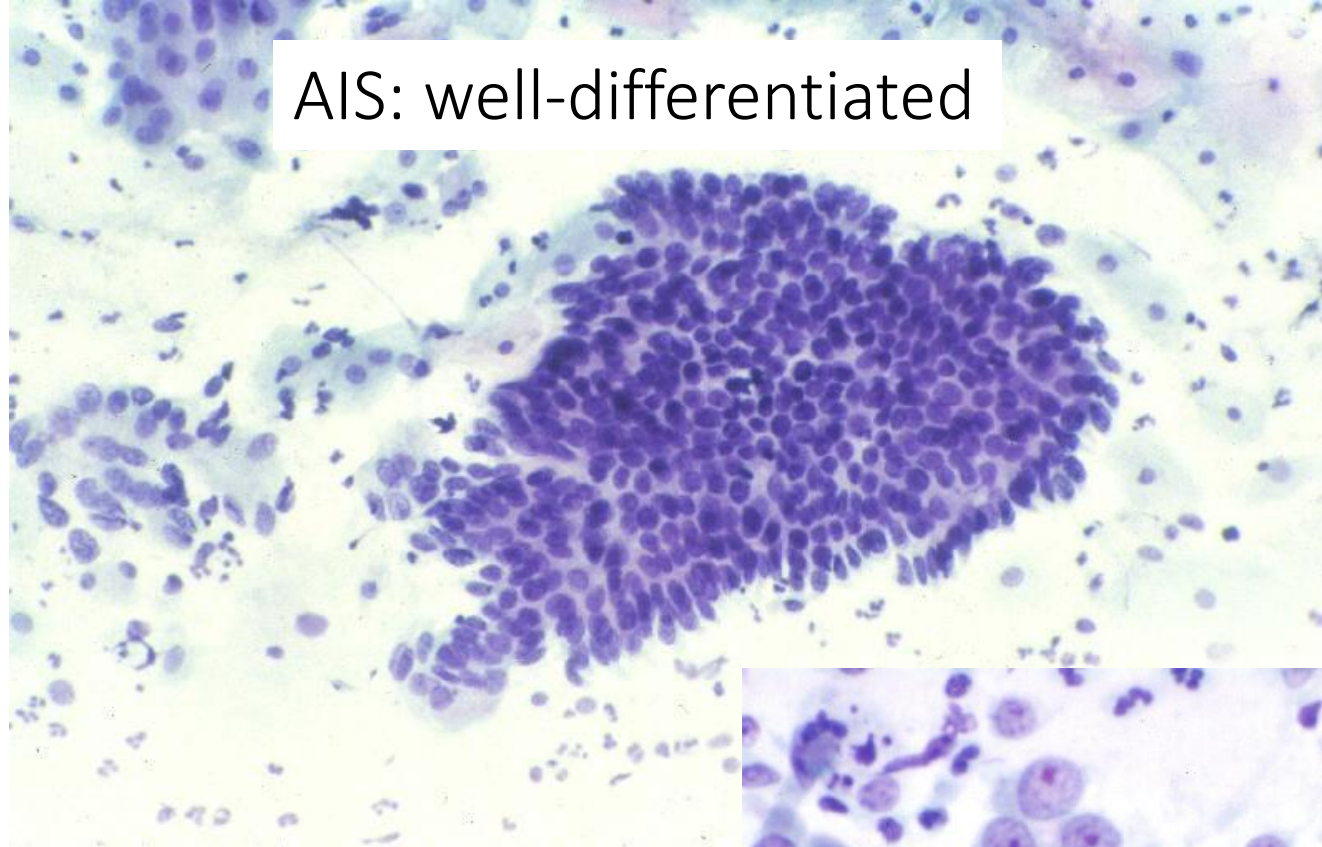
AIS: Cell morphology



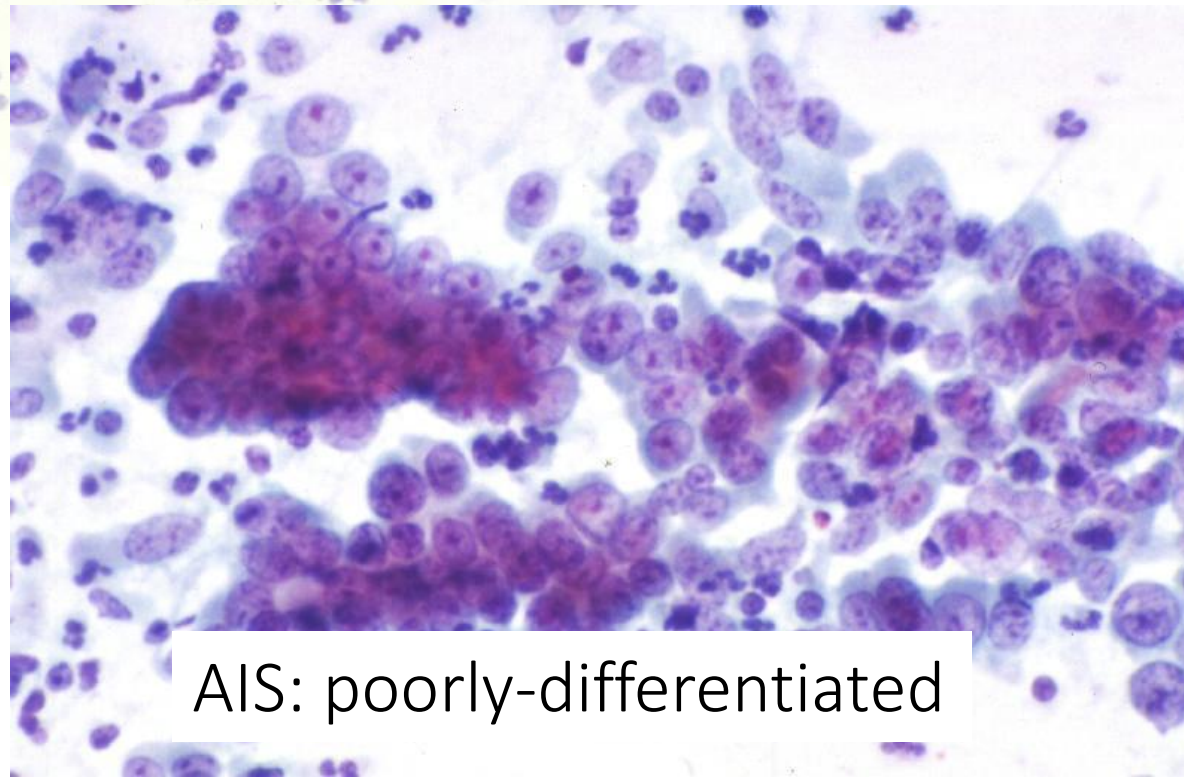
*ThinPrep*

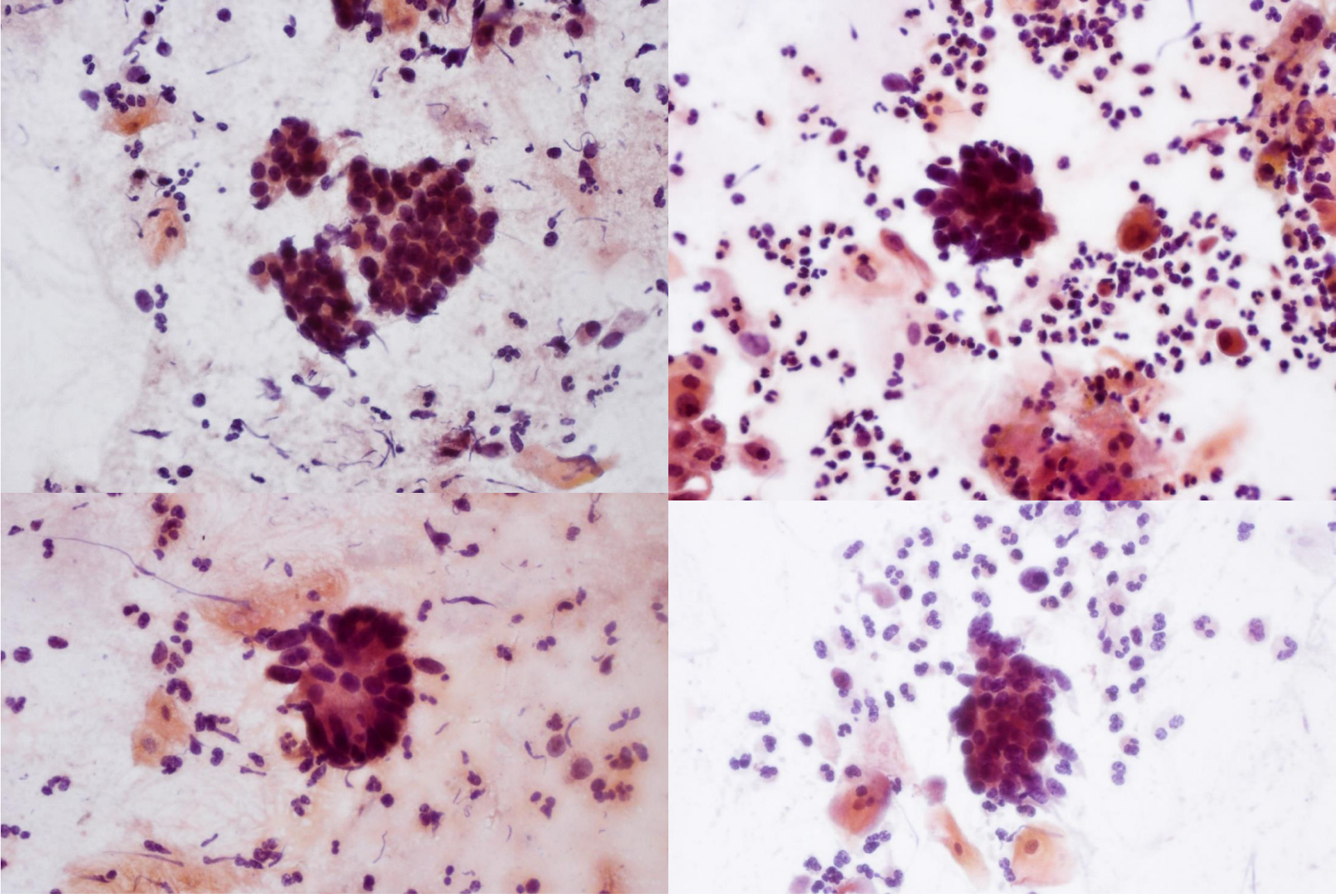
AIS: Hyperchromasia

AIS: well-differentiated

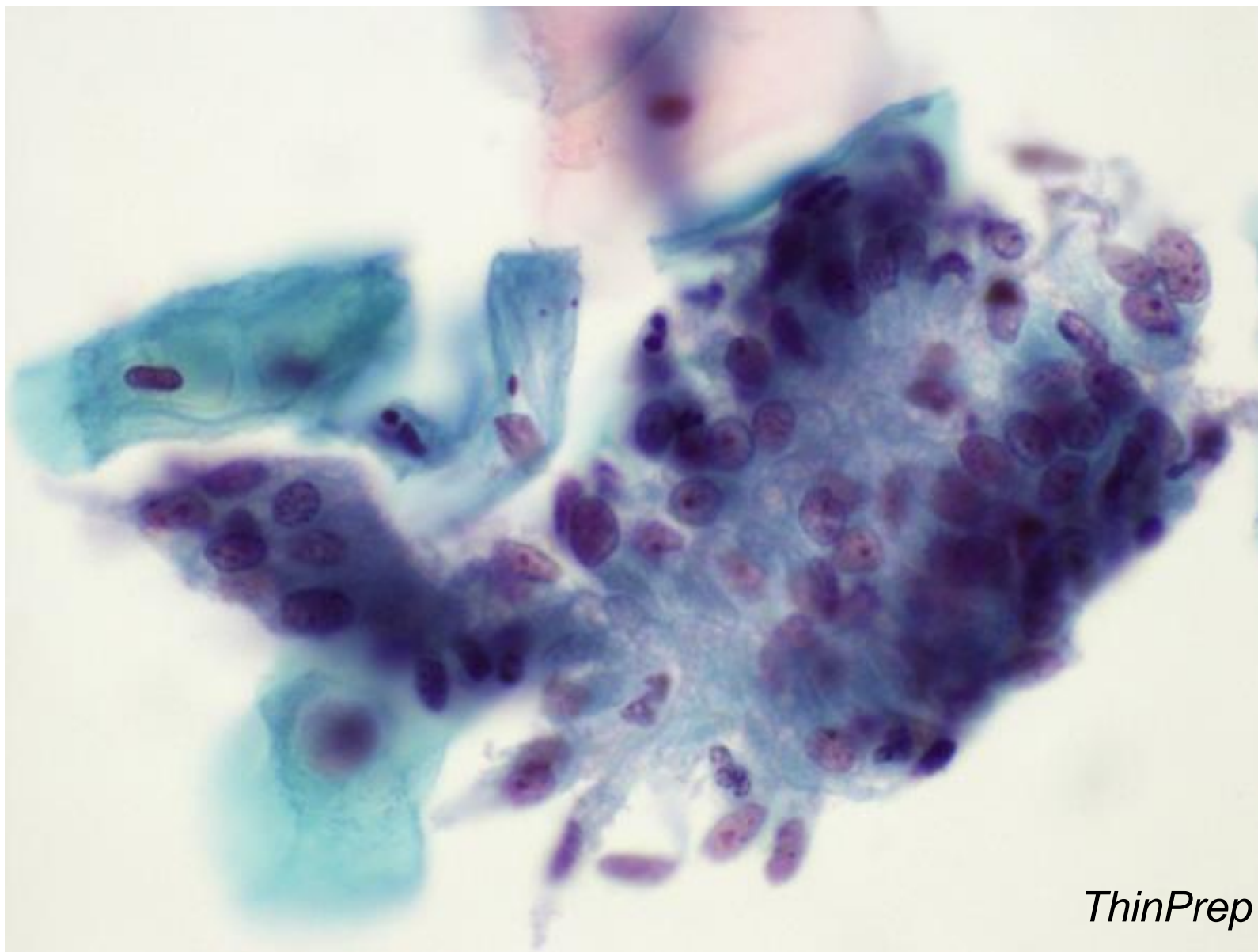


AIS: poorly-differentiated





AIS

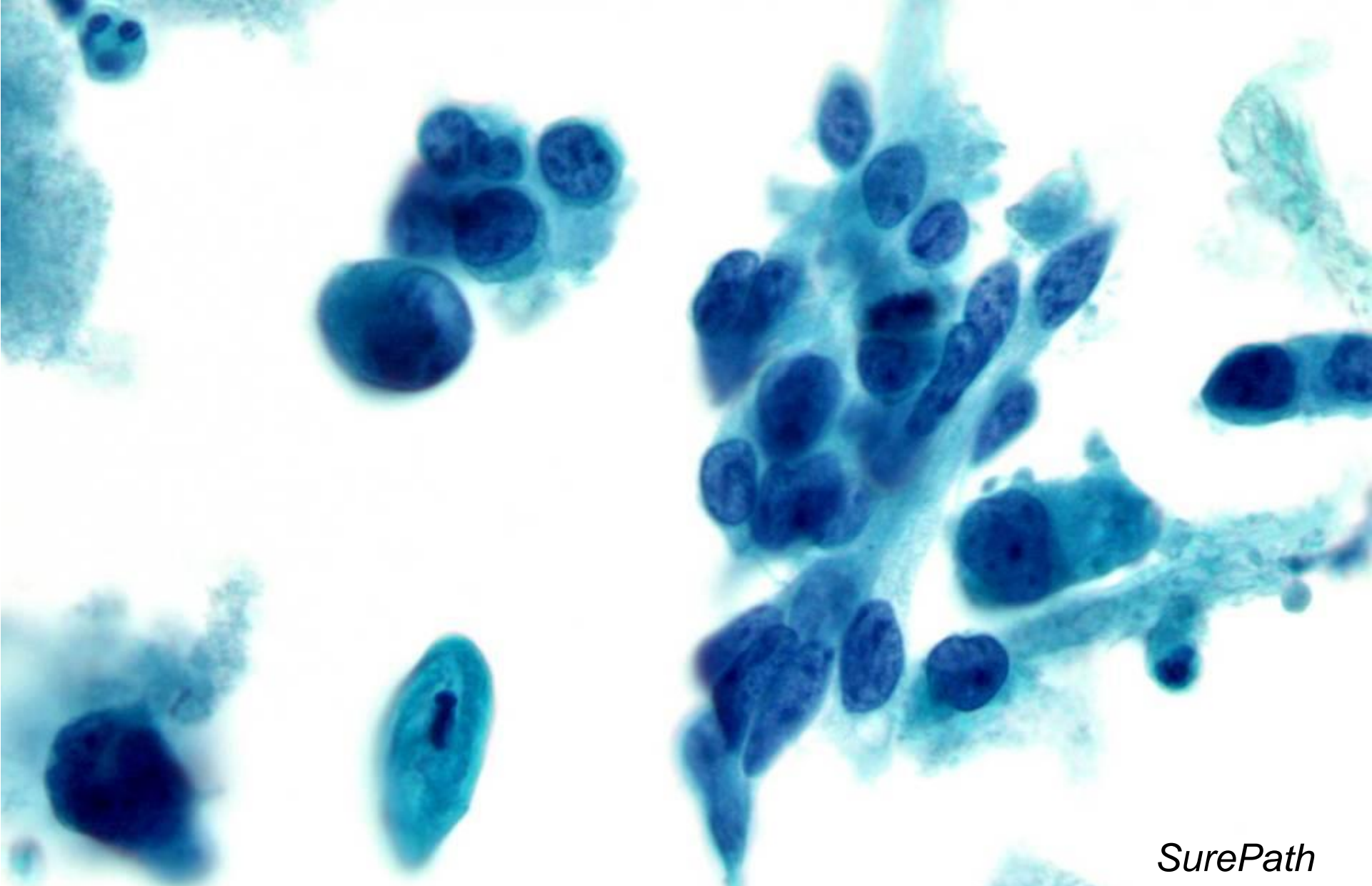


*ThinPrep*

Reported as Atypical Glandular Cells  
Follow-up was AIS

# Endocervical adenocarcinoma

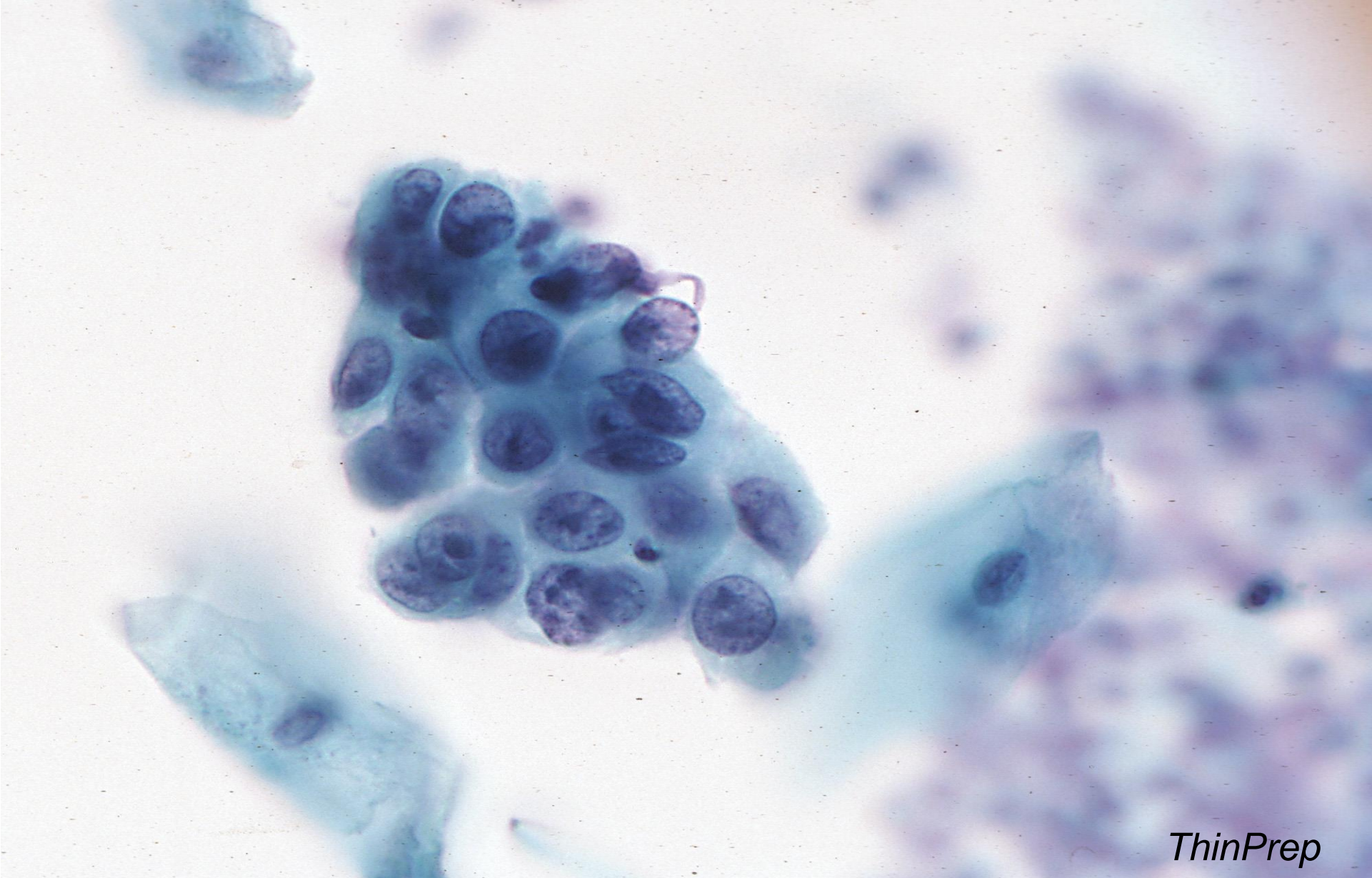
- Features of AIS
- Features suggestive of invasion
  - tumour diathesis
  - single cells
  - marked pleomorphism
  - nuclei: chromatin clearing, conspicuous nucleoli
  - fewer strips and rosettes
  - supercrowding with loss of polarity



*SurePath*

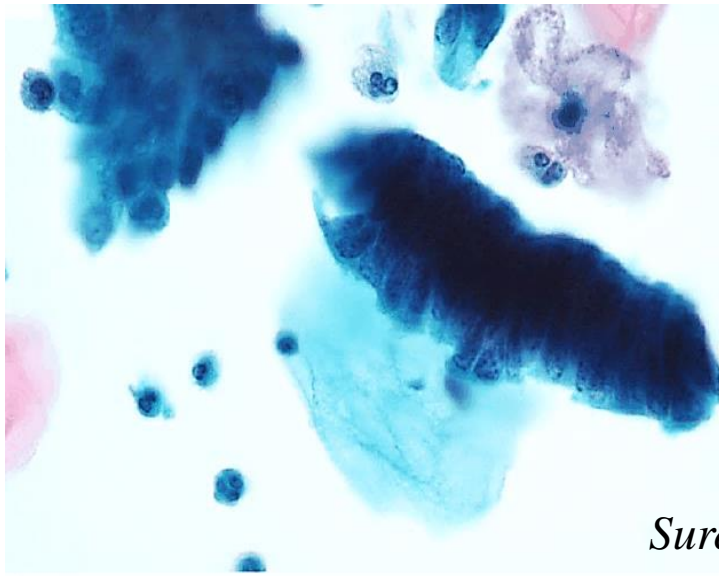
Endocervical adenocarcinoma



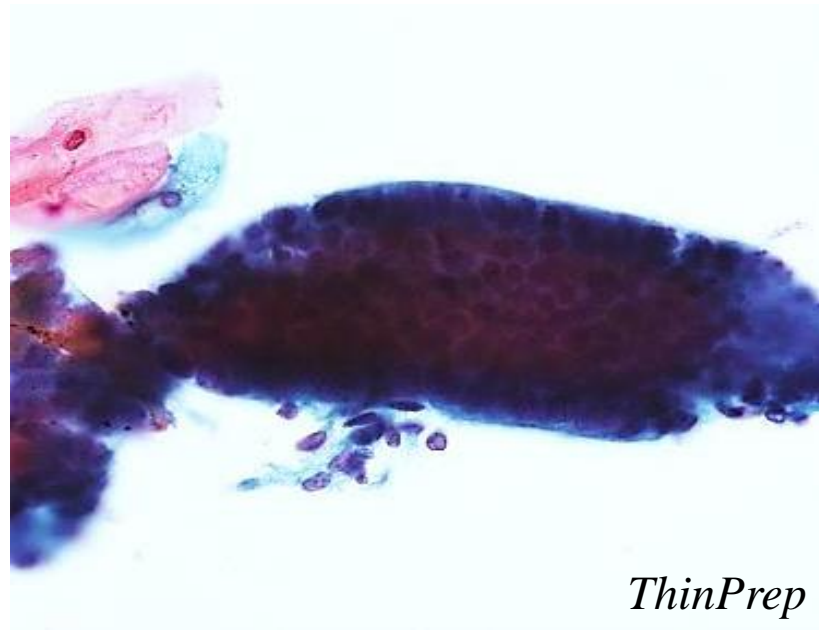


*ThinPrep*

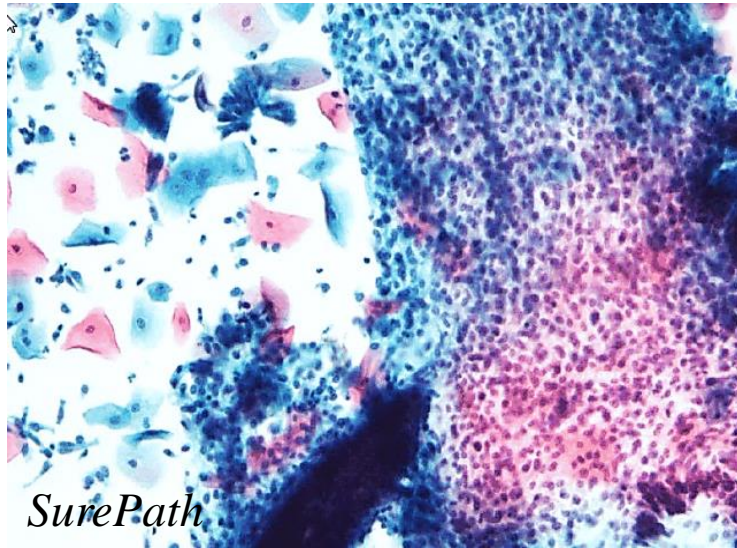
Endocervical adenocarcinoma



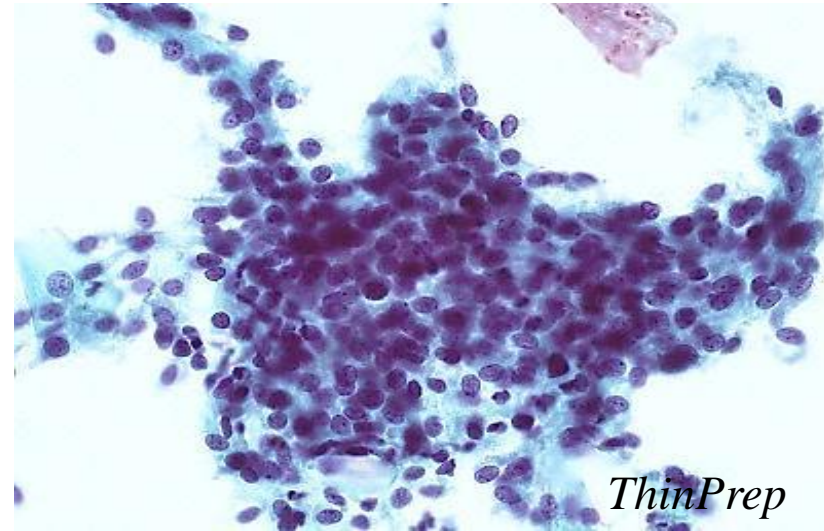
*SurePath*



*ThinPrep*

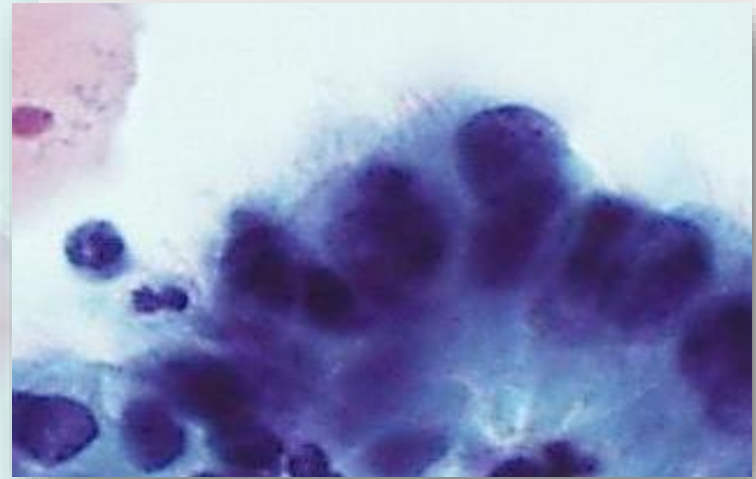
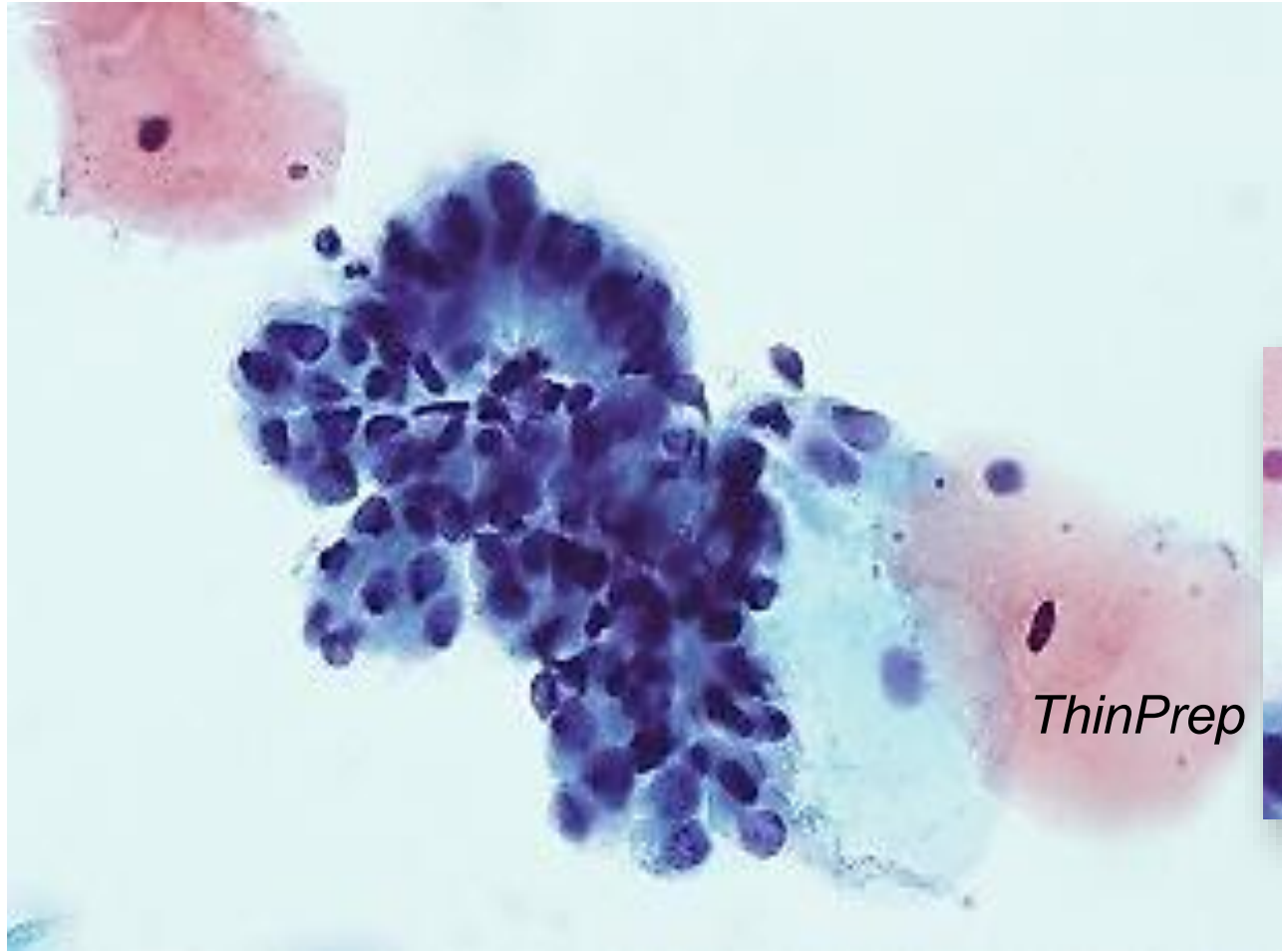


*SurePath*



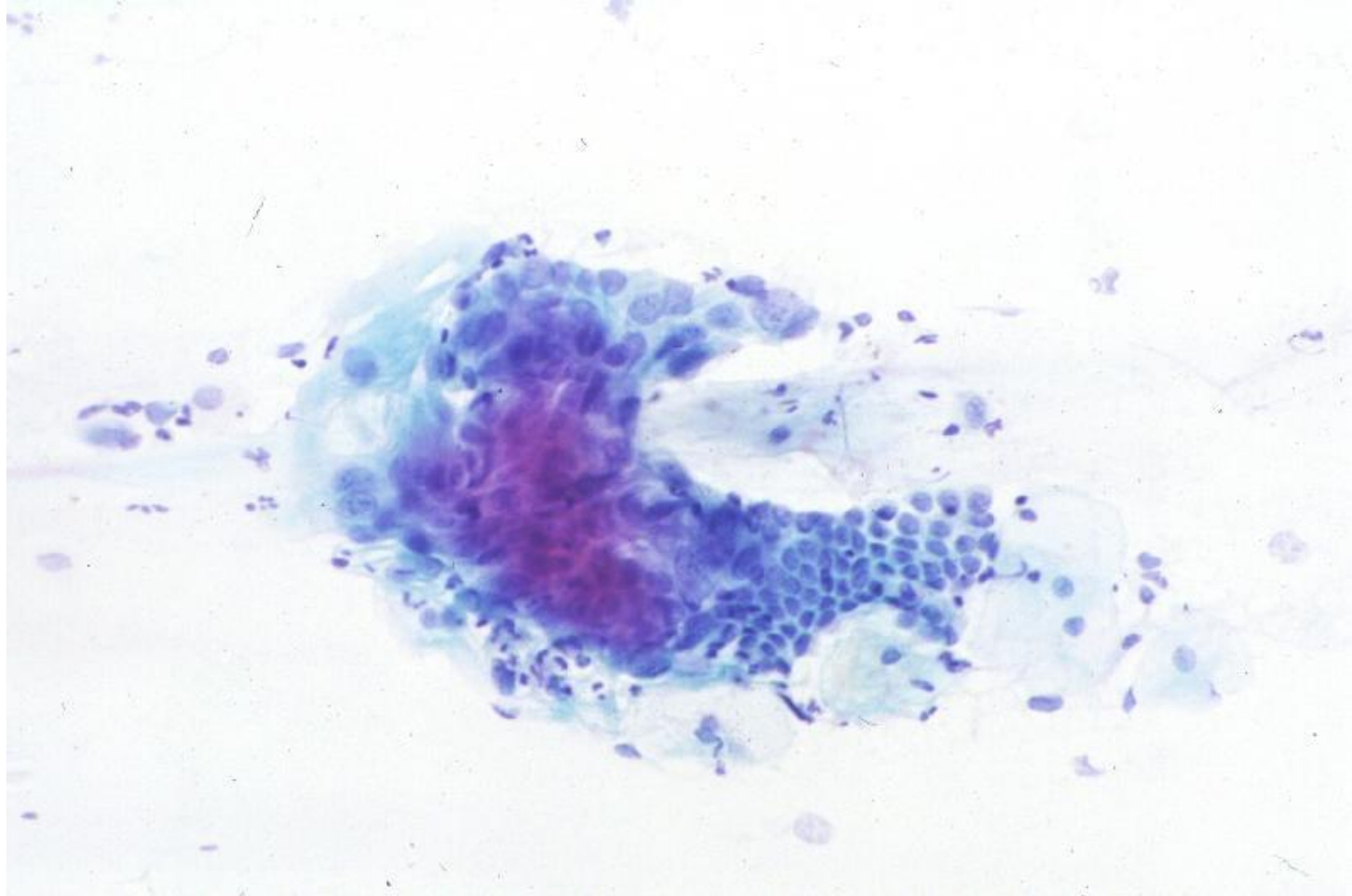
*ThinPrep*

Differential Diagnoses: High sampling

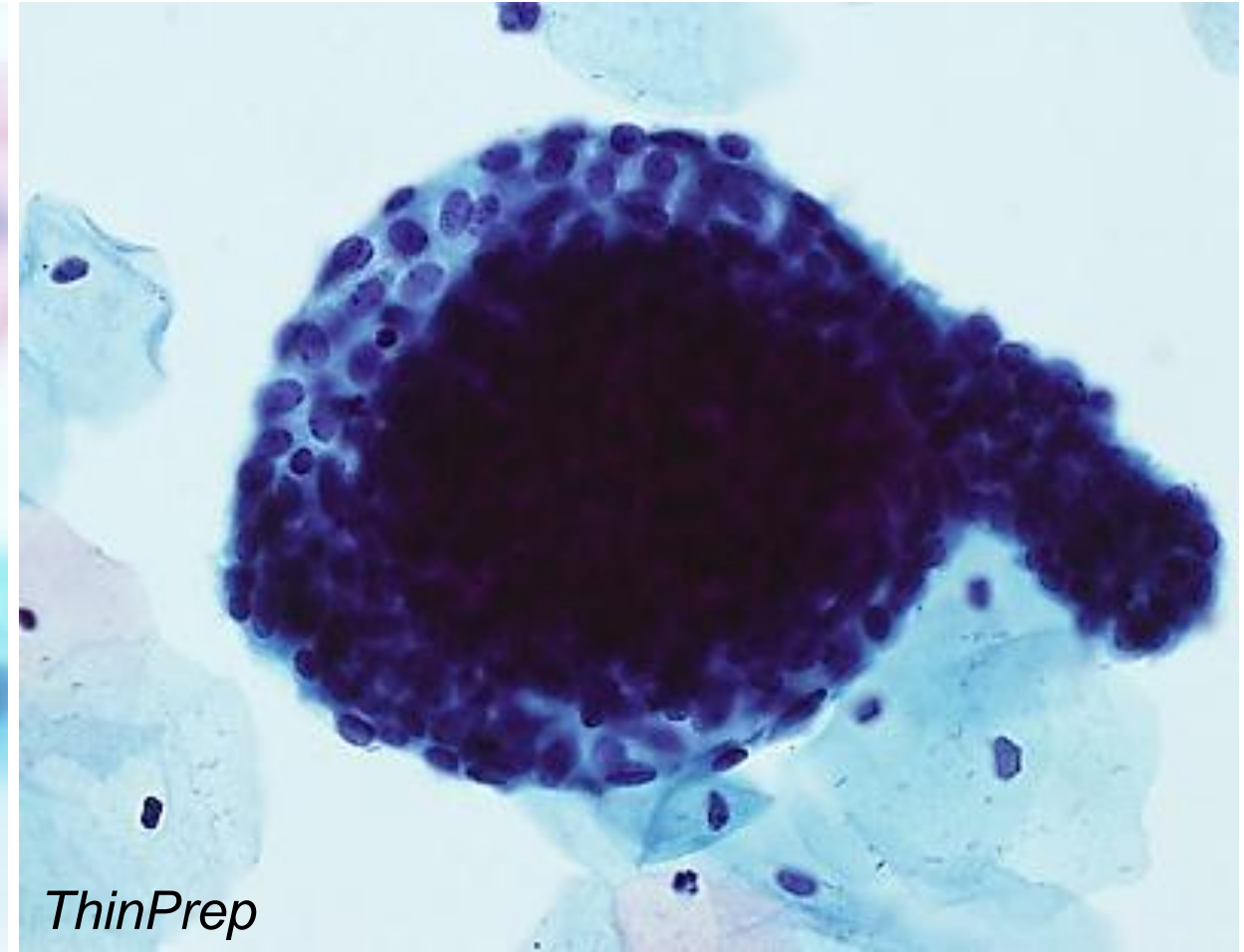
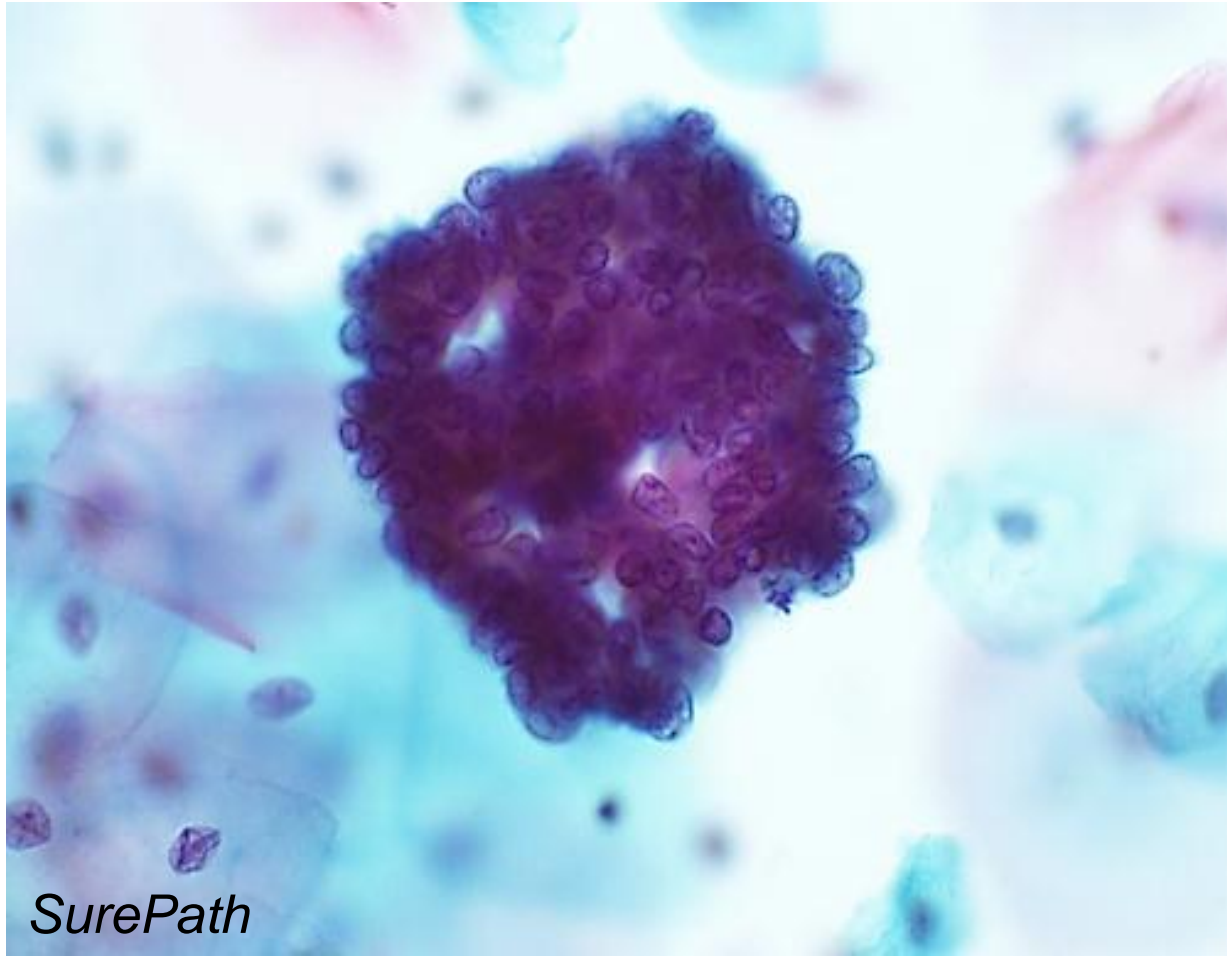


*ThinPrep*

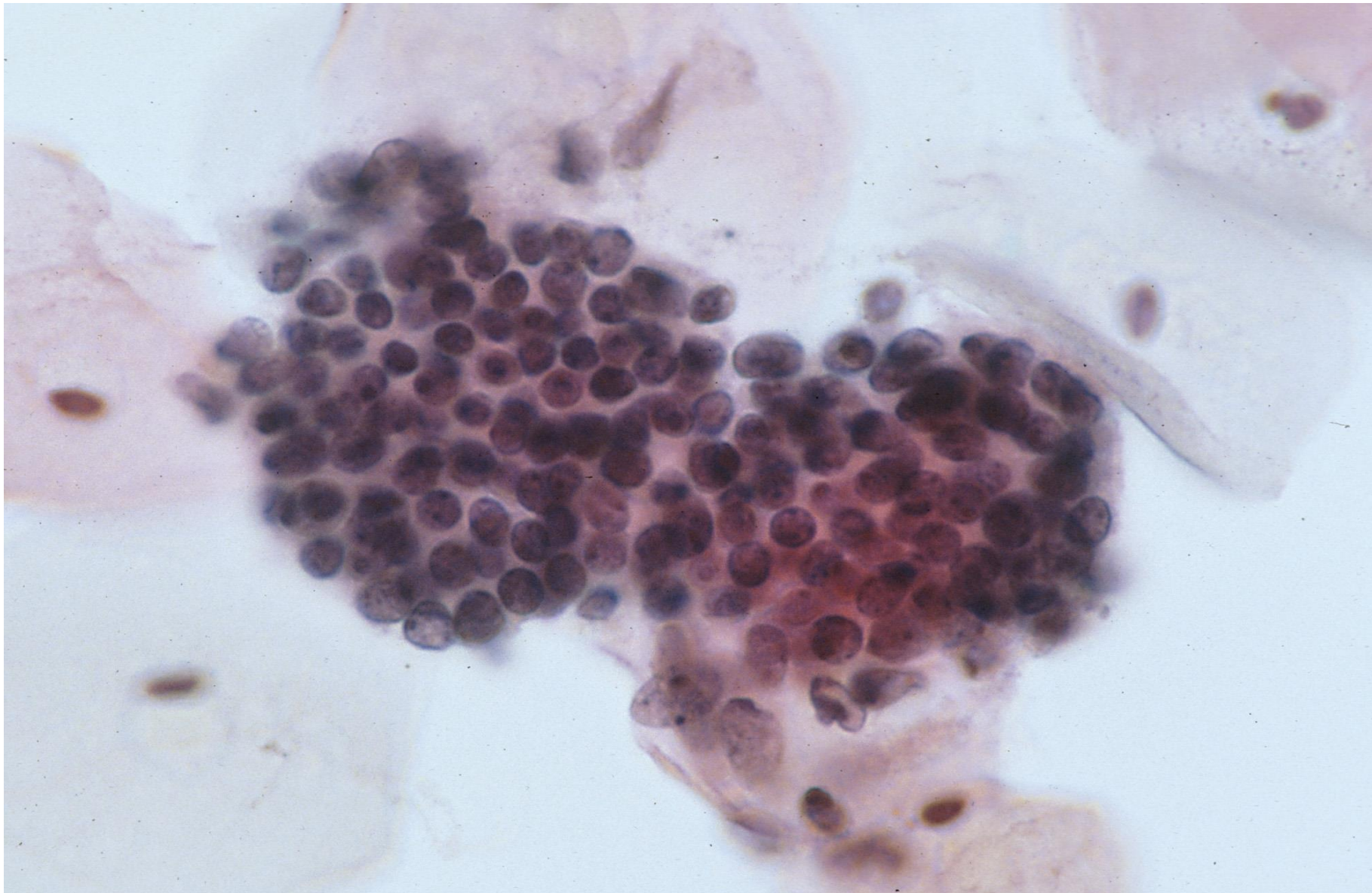
Tubal metaplasia



HSIL involving glands

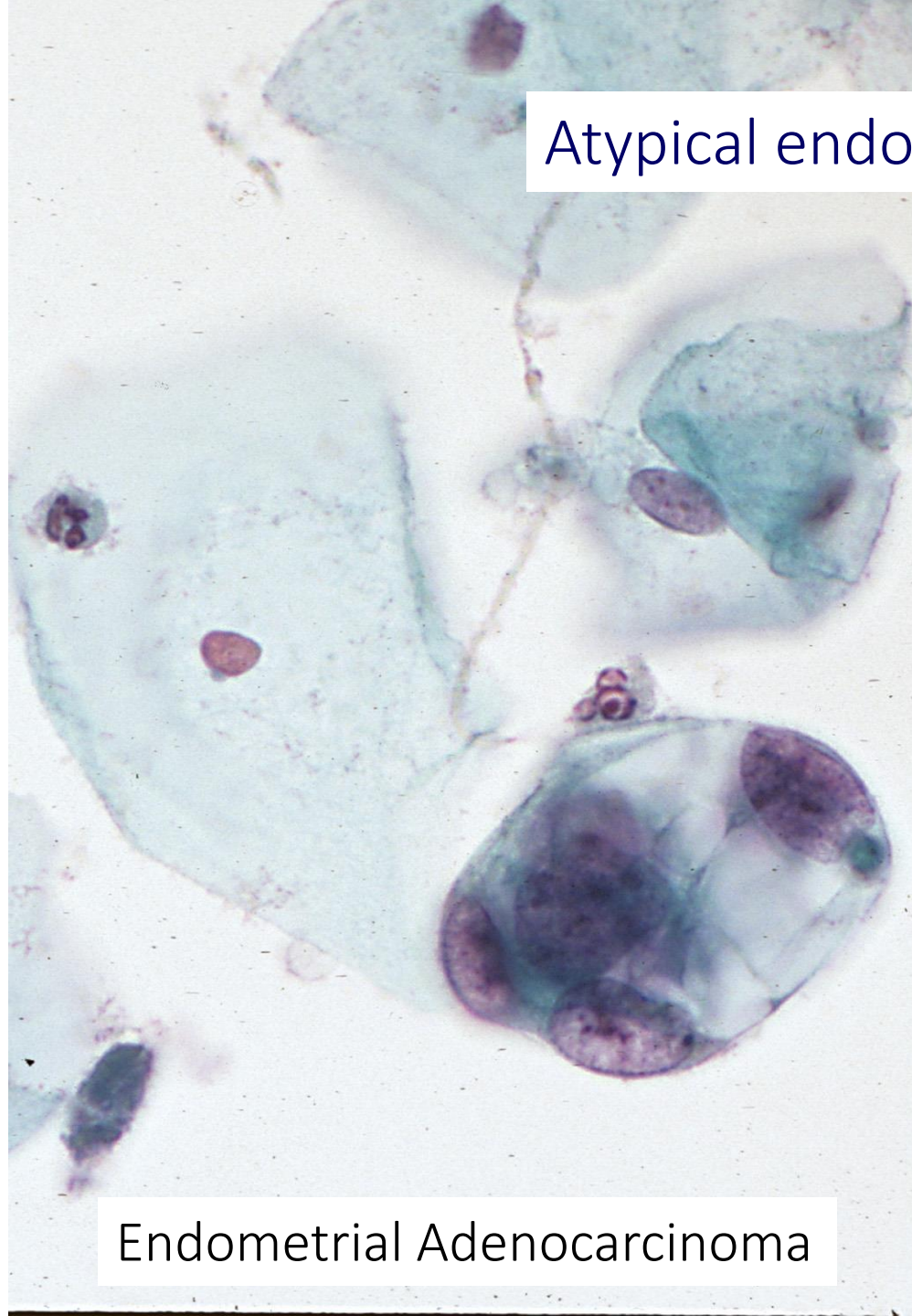


Normal endometrial cells

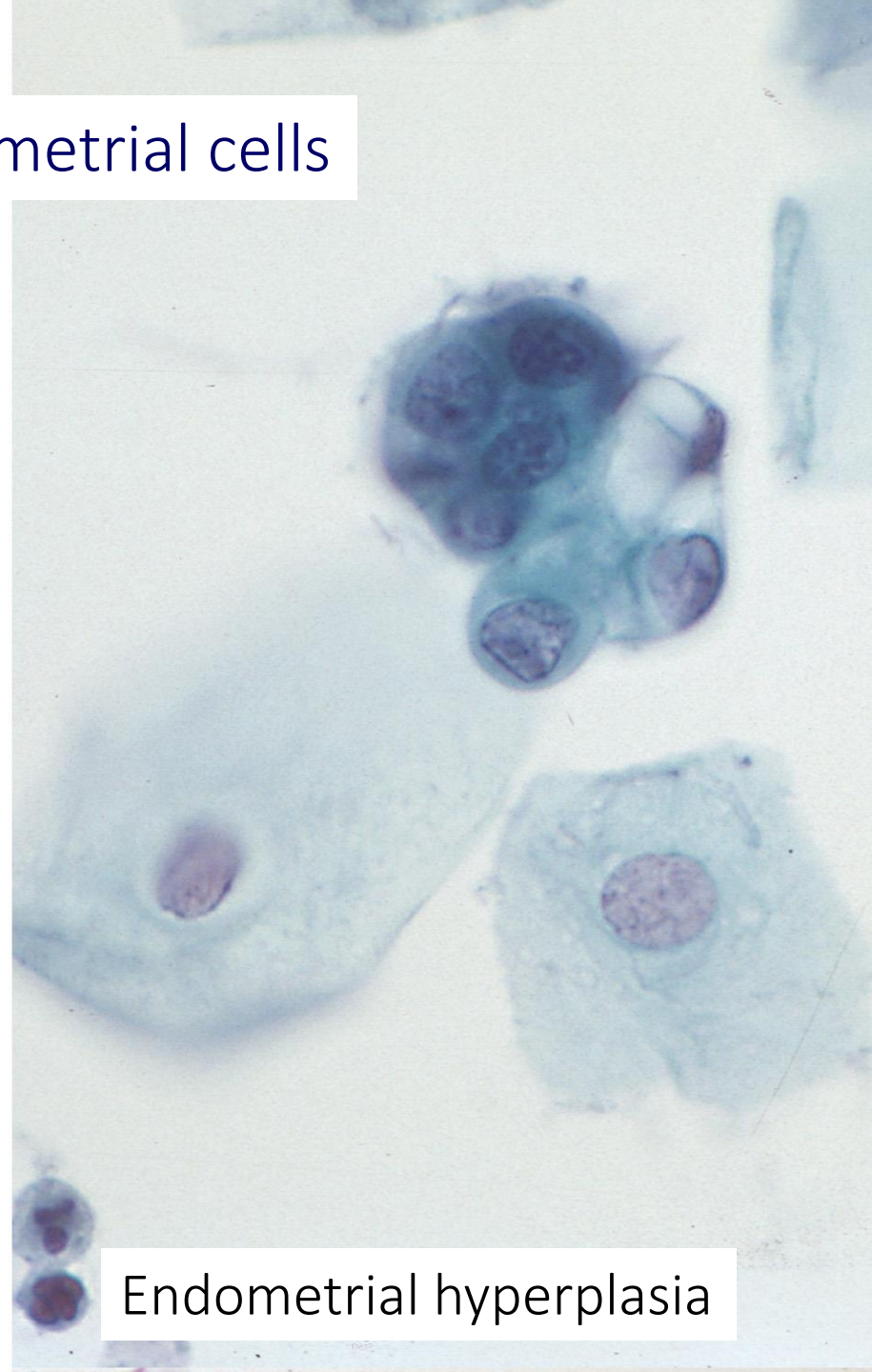


Atypical endometrial cells (LBC)  
Follow-up: Endometrial hyperplasia

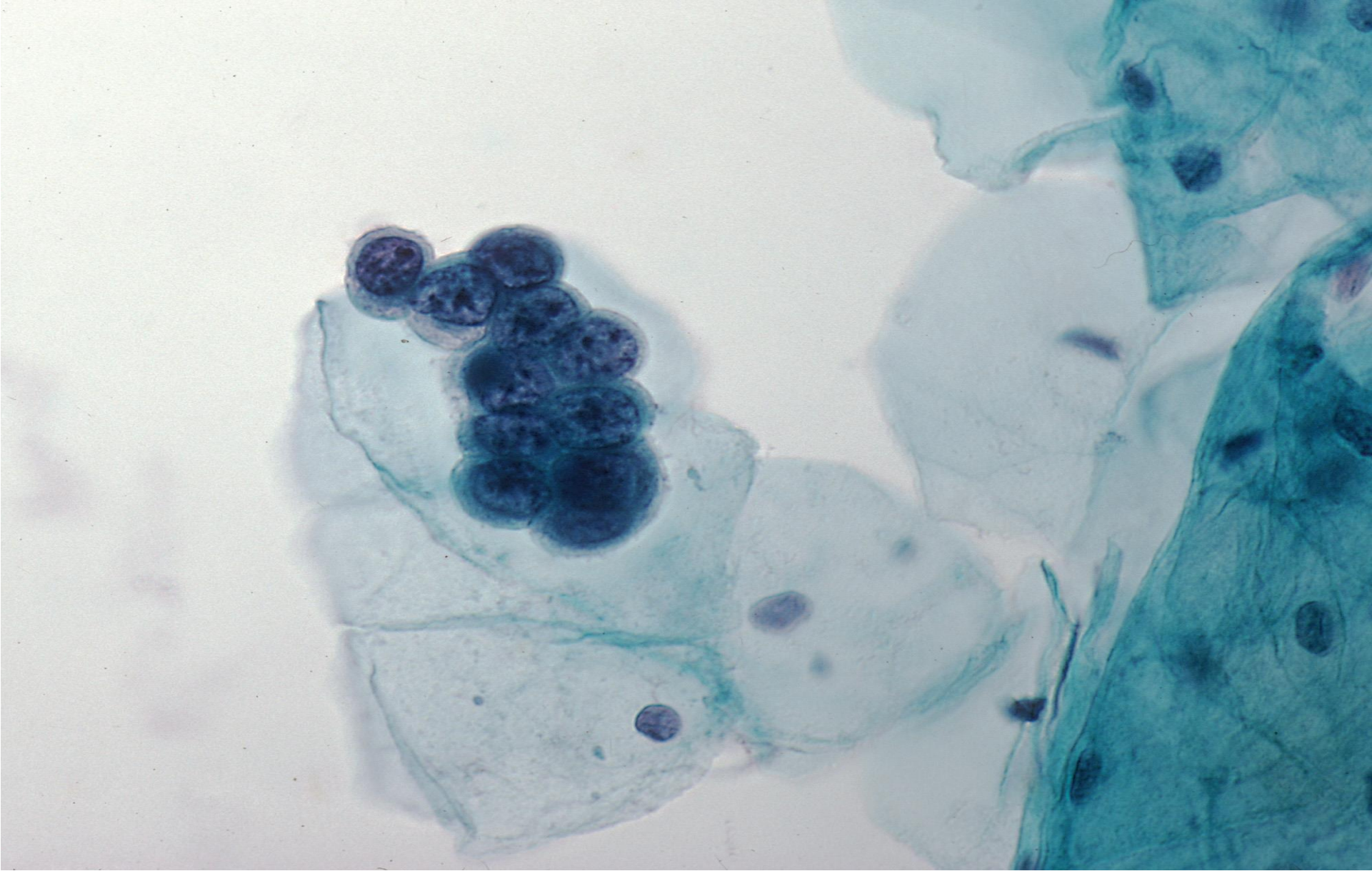
Atypical endometrial cells



Endometrial Adenocarcinoma



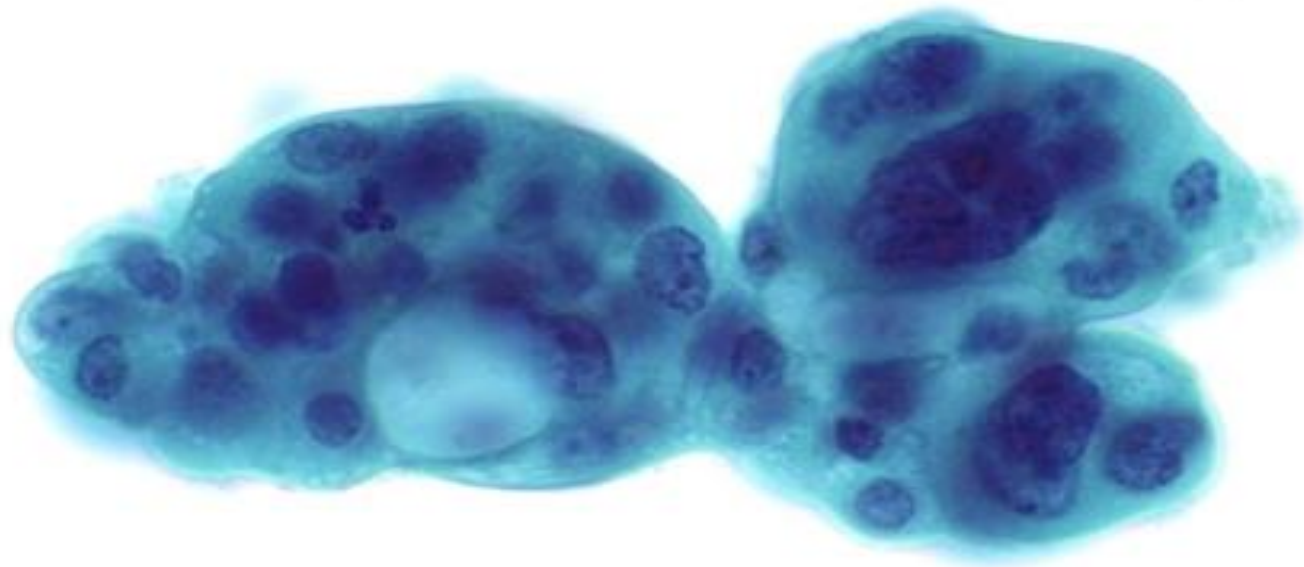
Endometrial hyperplasia



Atypical endometrial cells

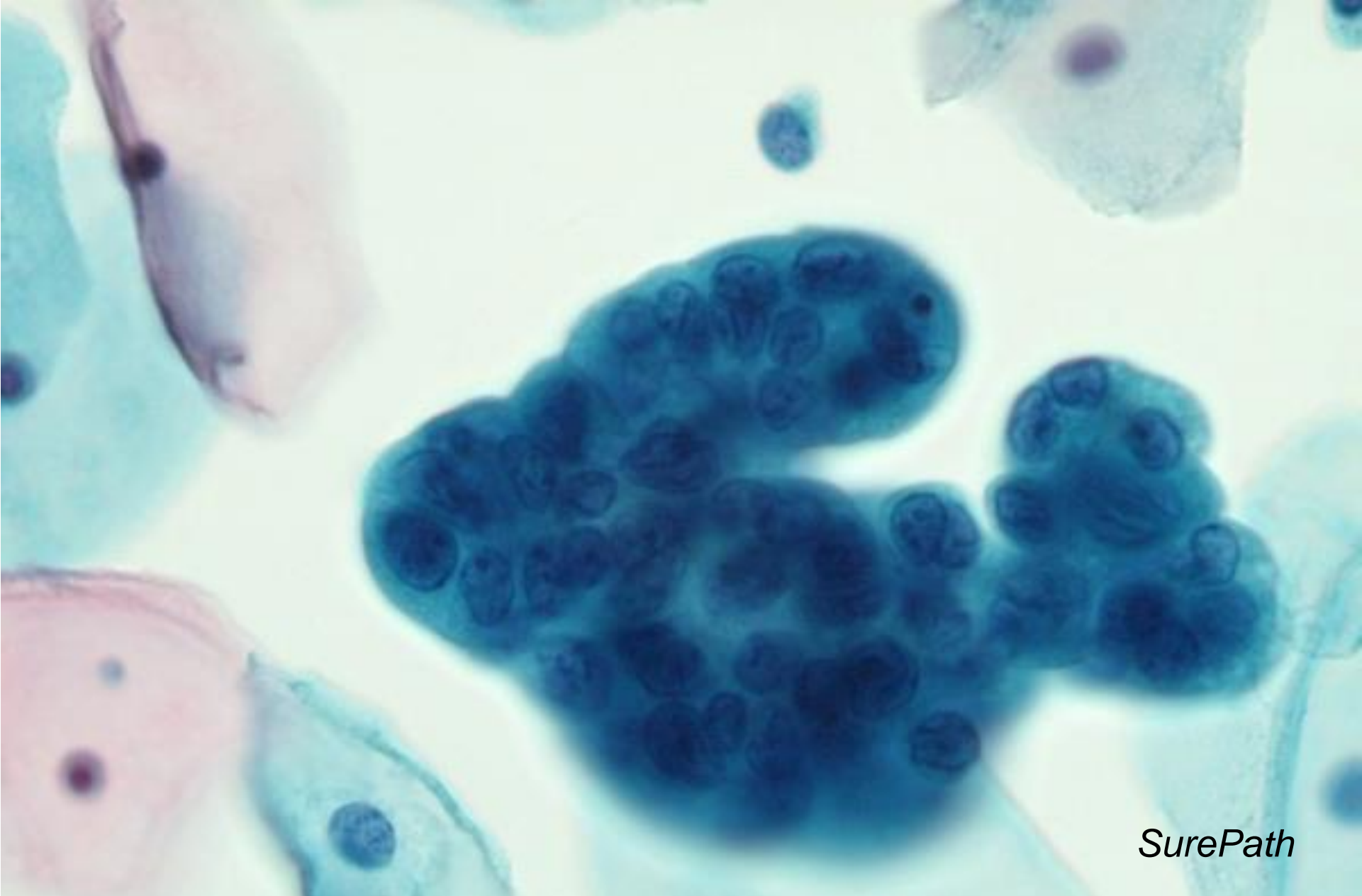
F/U: Well-differentiated endometrial adenocarcinoma





*SurePath*

Endometrial Adenocarcinoma



Endometrial Adenocarcinoma



*ThinPrep*

Endometrial Adenocarcinoma