Going Digital

Using Sectra images through the RCPA website for cytology education

The NCPTS Training Team

NCPTS National Training Day
August 2021

Cytology Digital images on the RCPA website

- The Royal College of Pathologists of Australasia (RCPA) provides digital eCases in both cytology and histology for education purposes for pathology registrars and pathologists
- The NCPTS is assisting in creating 500 cervical cytology eCases for the RCPA website: 250 ThinPrep and 250 SurePath cases.

Access for cytoscreeners

- Cytoscientists and cytotechnicians can access the cervical cytology e-cases at https://www.rcpa.edu.au/Library/eCases using the following:

User ID: 33229

Password: 33229rcpa

- The NZIMLS has confirmed that they will approve this teaching resource for CPD points for scientists.

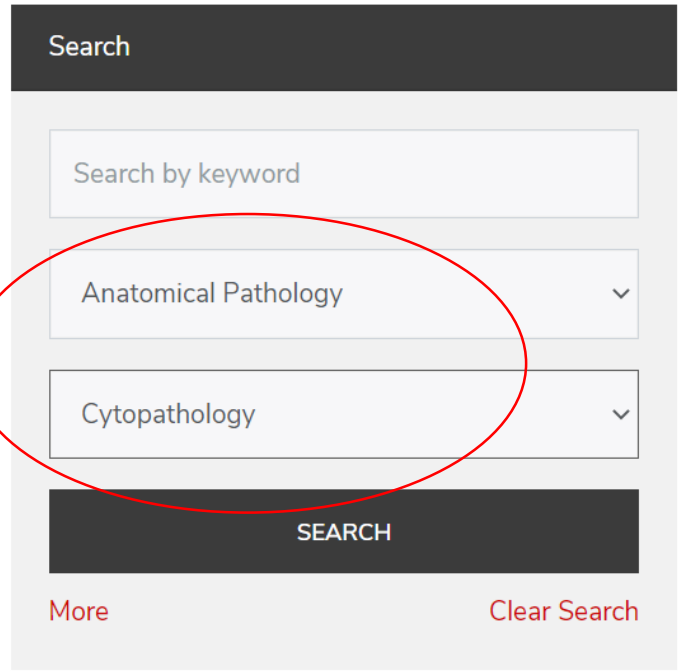
What is on the RCPA website now?

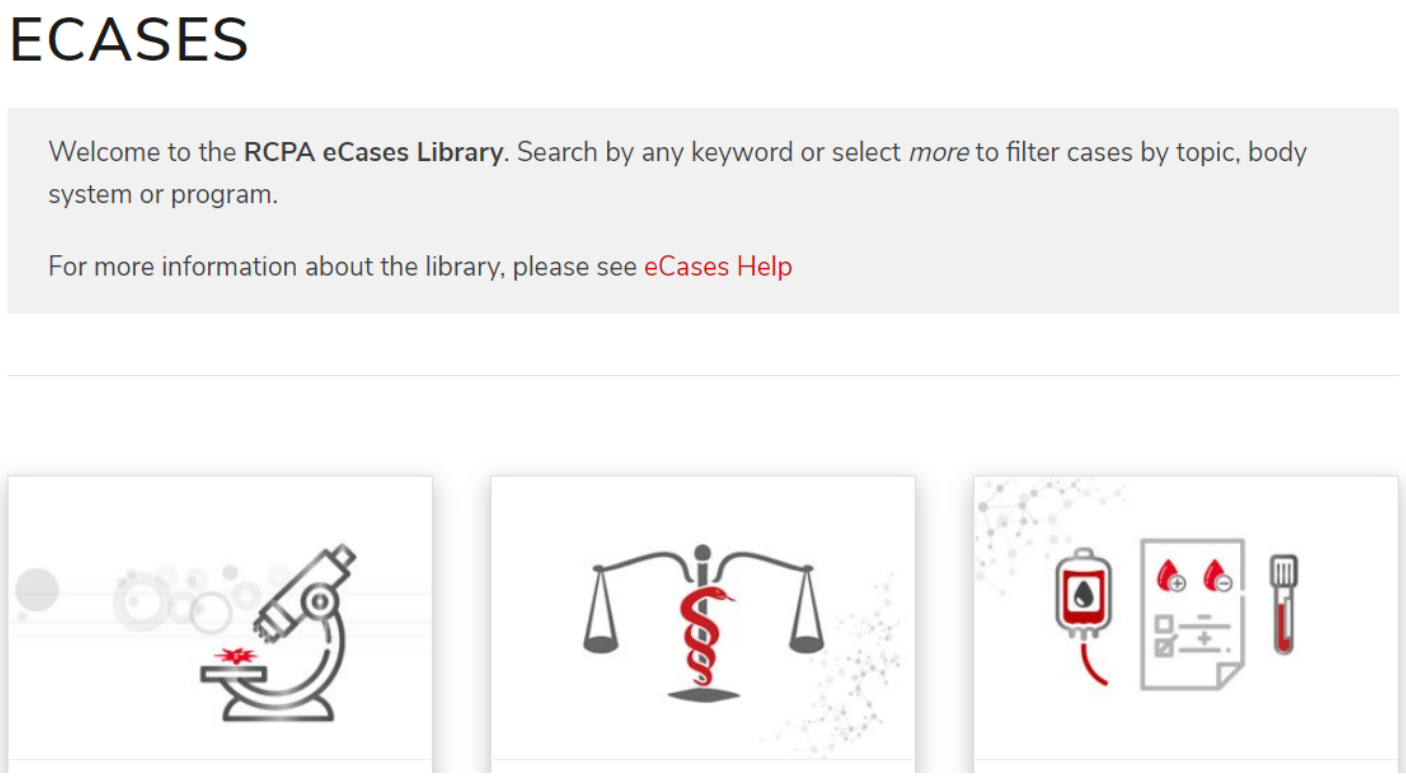
157 ThinPrep cases: series is “19TP…” i.e. 19TP001 - 19TP250

130 SurePath cases: series is “19SP…” i.e. 19SP001 - 19SP250

More slides will be released over the next 6 months

What do the screens look like?





Search

19SP

Anatomical Pathology

Cytopathology

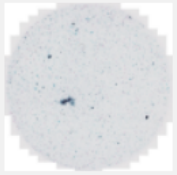
SEARCH

More Clear Search

ECASES SEARCH

SHOWING RESULTS: 19SP, ANATOMICAL

Newest



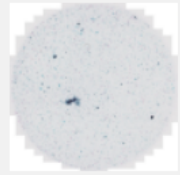
19SP002

Gender: Female **Age:** 63

Clinical Information:

A cytology sample taken ...

VIEW ECASE



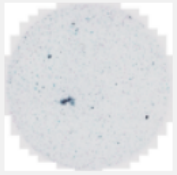
19SP008

Gender: Female **Age:** 50

Clinical Information:

Normal cervical screenin...

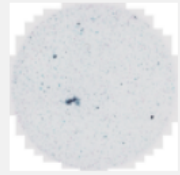
VIEW ECASE



19SP009

Gender: Female **Age:** 55

Clinical Information:



19SP010

Gender: Female **Age:** 25

Clinical Information:

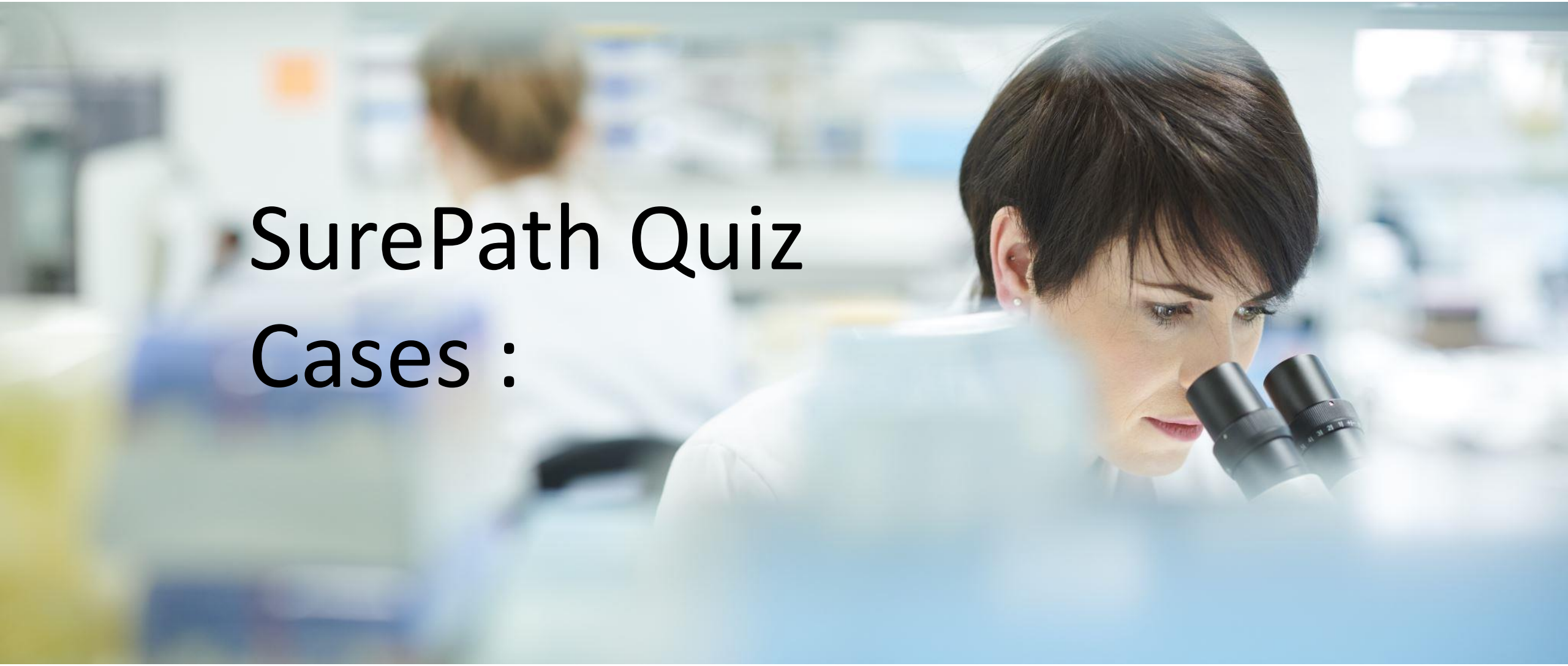
Case Presentations

SUREPATH: Ashika Bissoon

- Lead Cytoscientist at Pathlab Tauranga
- NCPTS SurePath cytoscientist

THINPREP: Christl Kirstein

- Cytoscientist, APS Auckland
- NCPTS ThinPrep cytoscientist

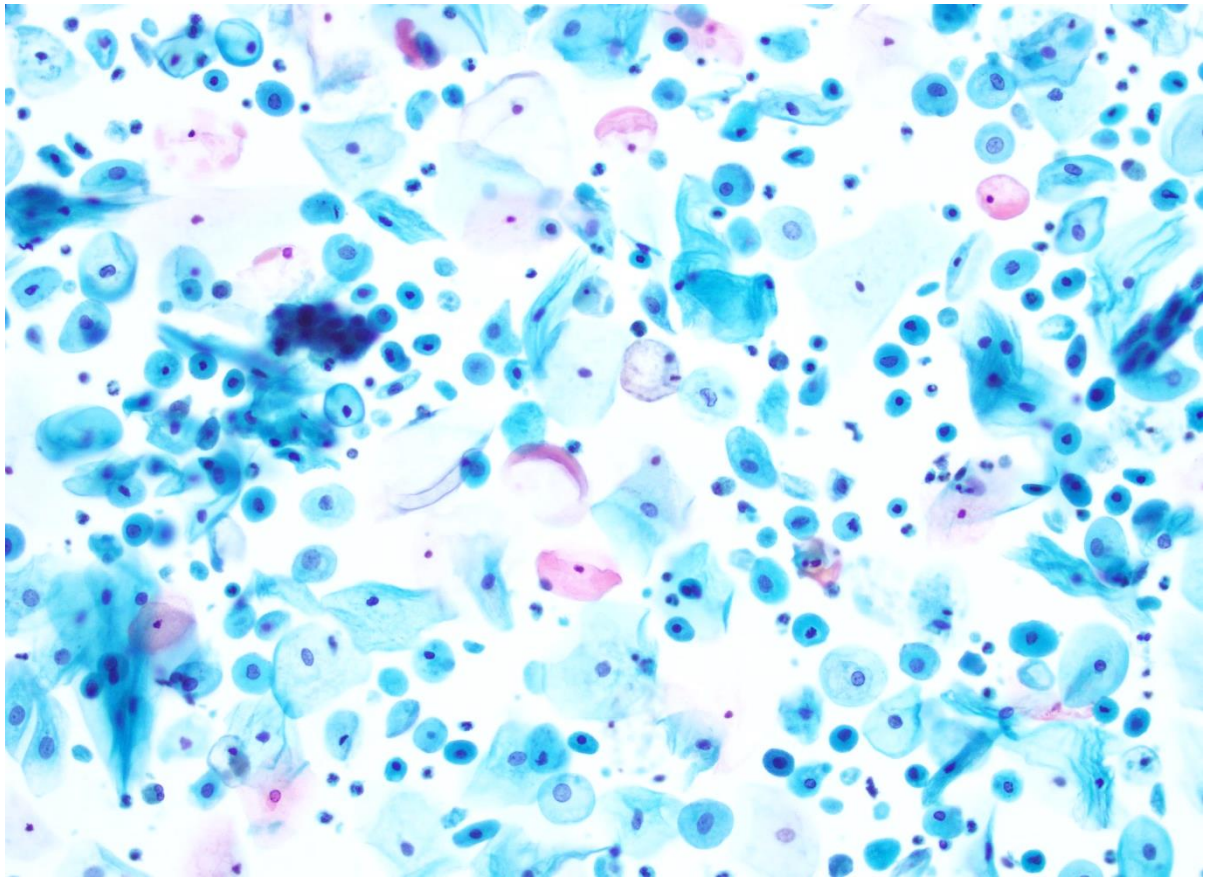


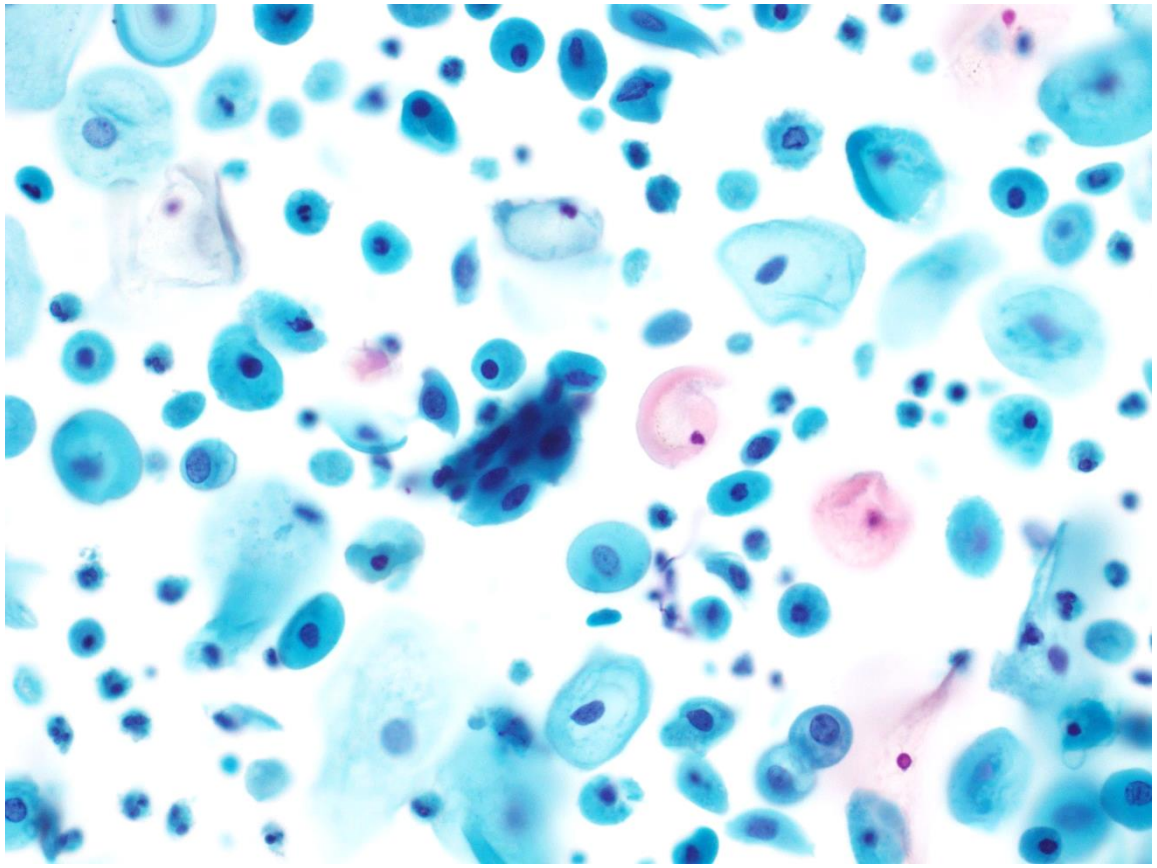
SurePath Quiz Cases :

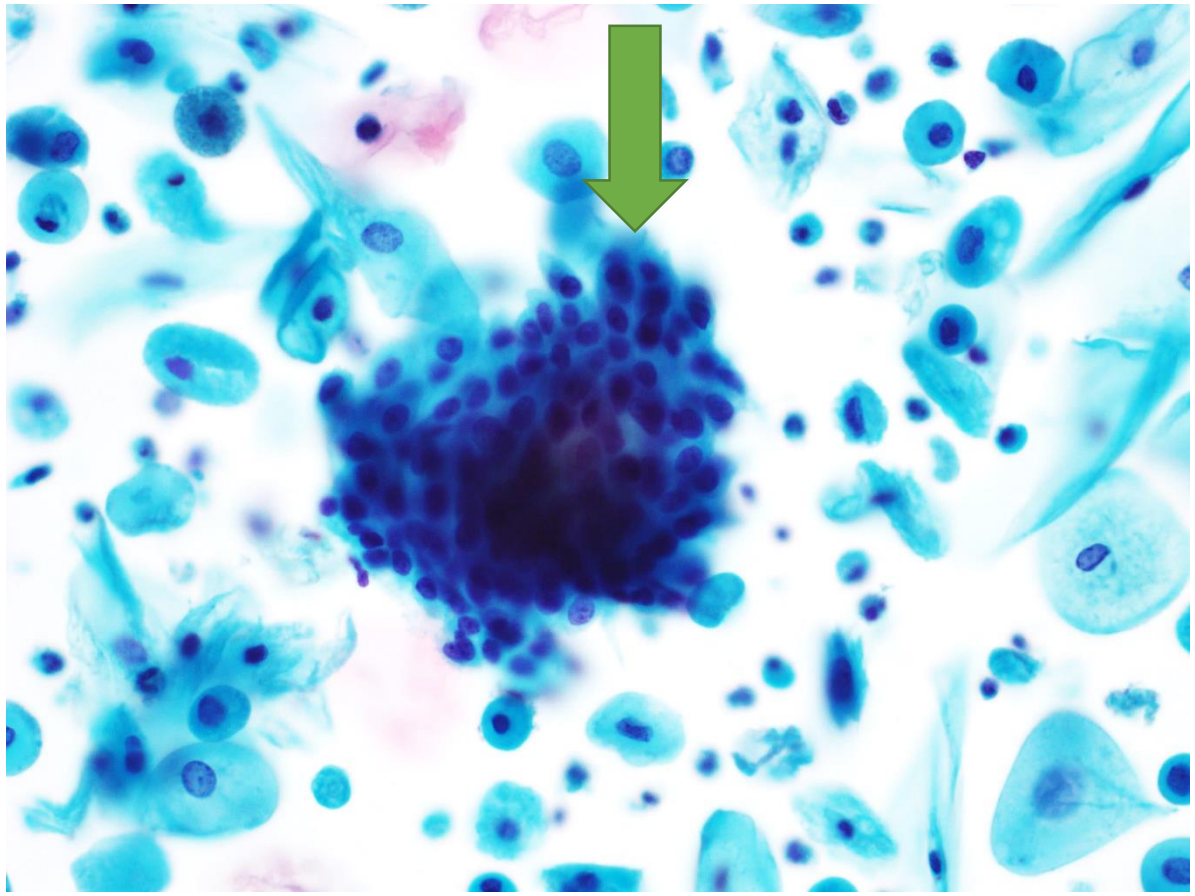
Case 1: Clinical Details

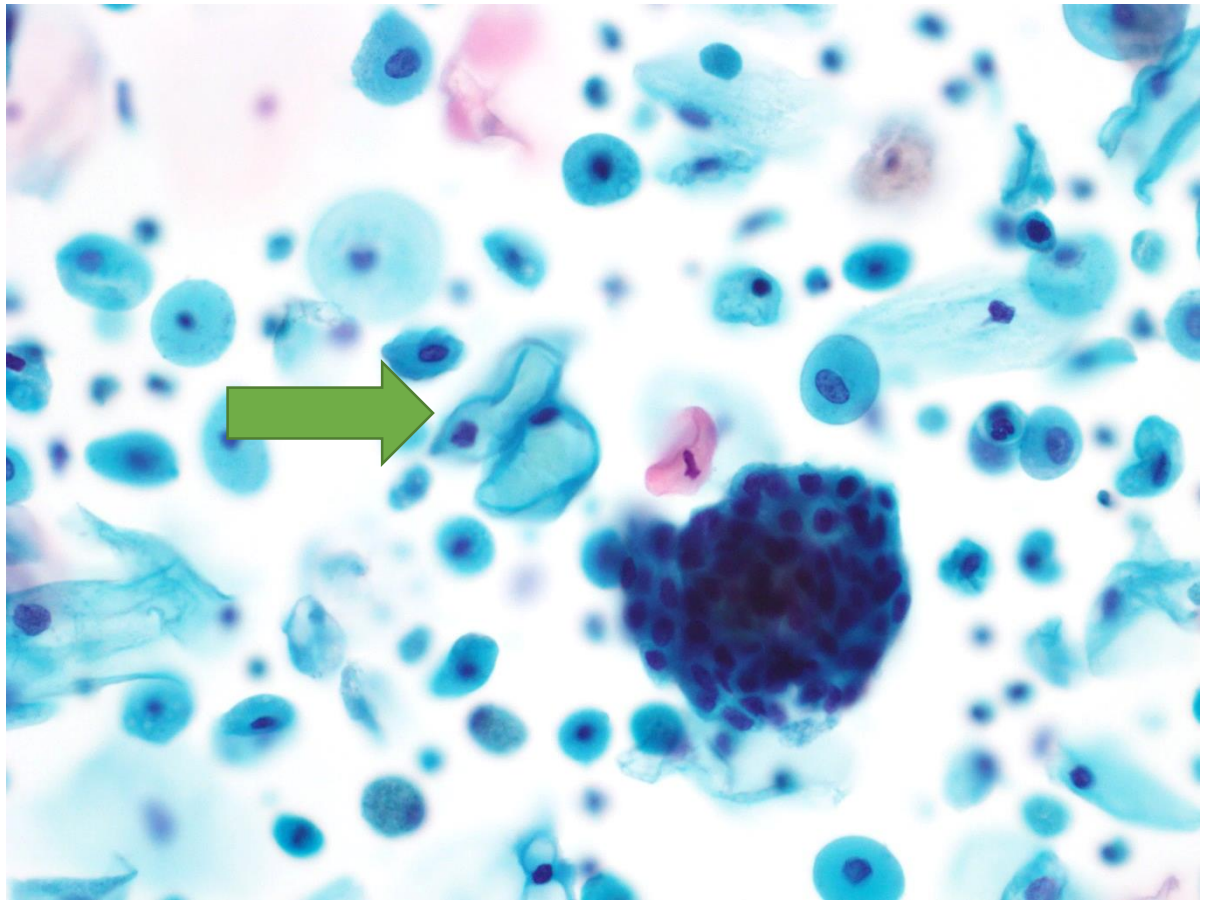
Age: 30 years

- One LSIL cytology sample reported 14 years previously with six subsequent normal cervical cytology samples
- Now postpartum









Answer:

NEGATIVE FOR INTRAEPITHELIAL LESION OR MALIGNANCY

POST-PARTUM ATROPHY

MORPHOLOGICAL DESCRIPTION

This is a normal postpartum sample showing increased numbers of parabasal cells with high amounts of cytoplasmic glycogen. Numerous cells show angular shapes which can be common in postpartum samples. Inflammatory material and degenerate cells are also common so karyopyknosis is seen. A mix of cyanophilia and eosinophilia is present. Postpartum samples may contain groups of small dark-staining cells (arrow) due to atrophy. Appreciate the fine, uniform chromatin granularity to ensure these groups are not overcalled as ASC-H or worse.

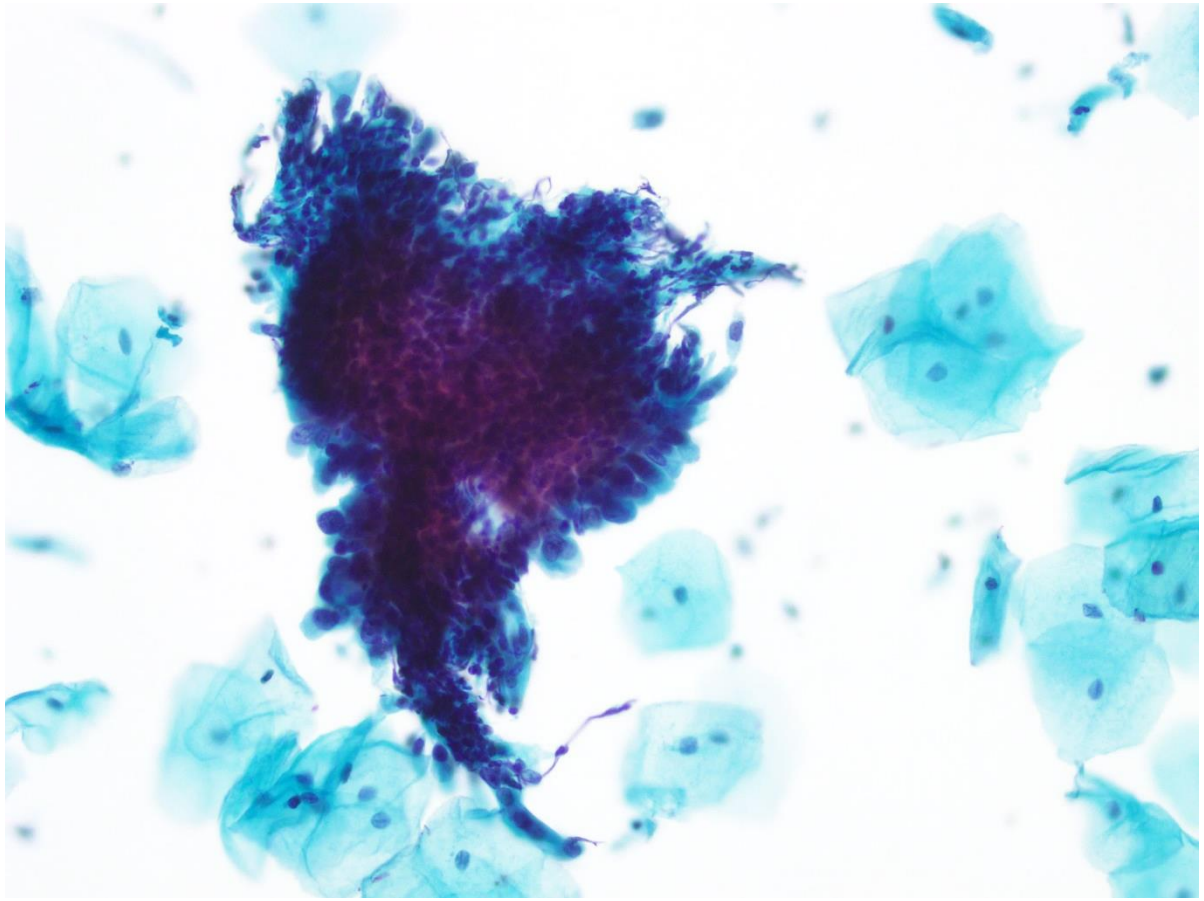
DIAGNOSIS

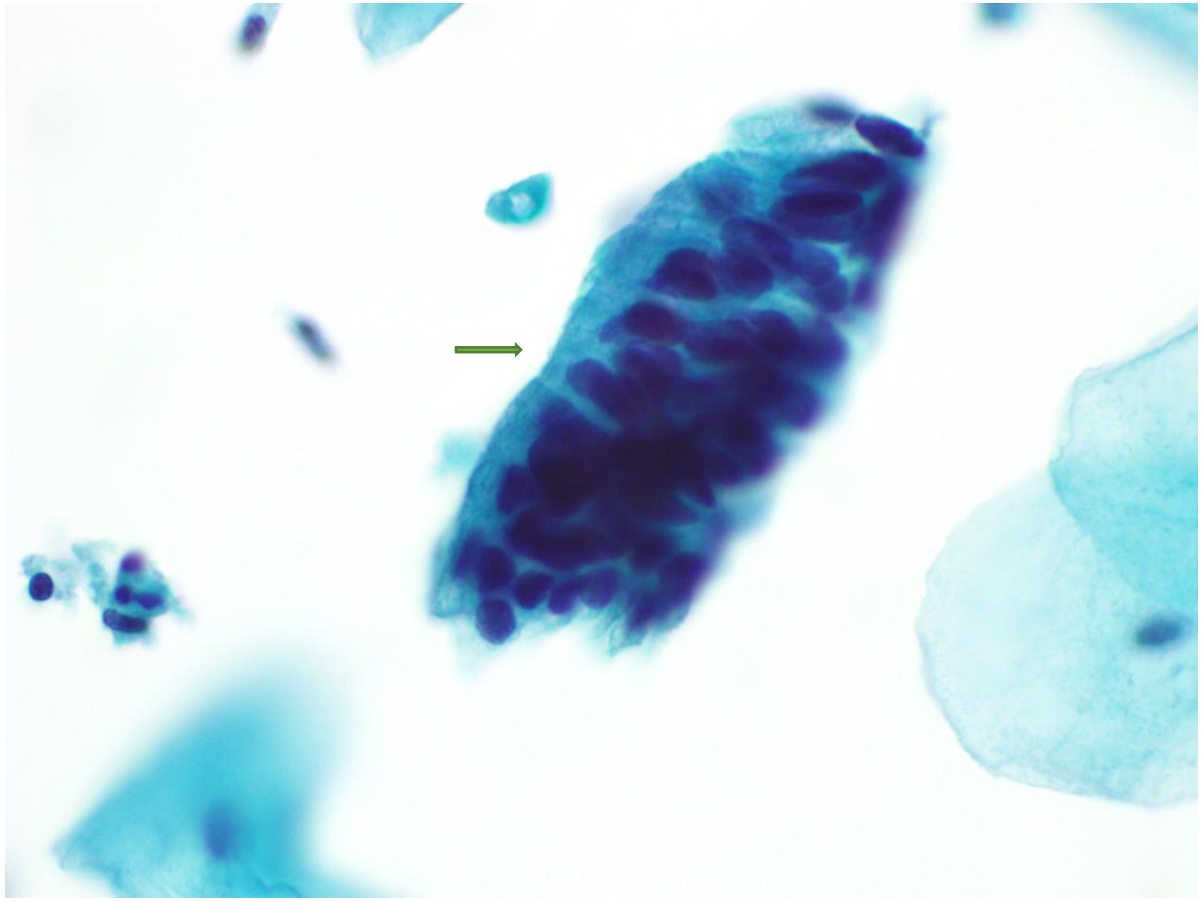
NEGATIVE FOR INTRAEPITHELIAL LESION OR MALIGNANCY

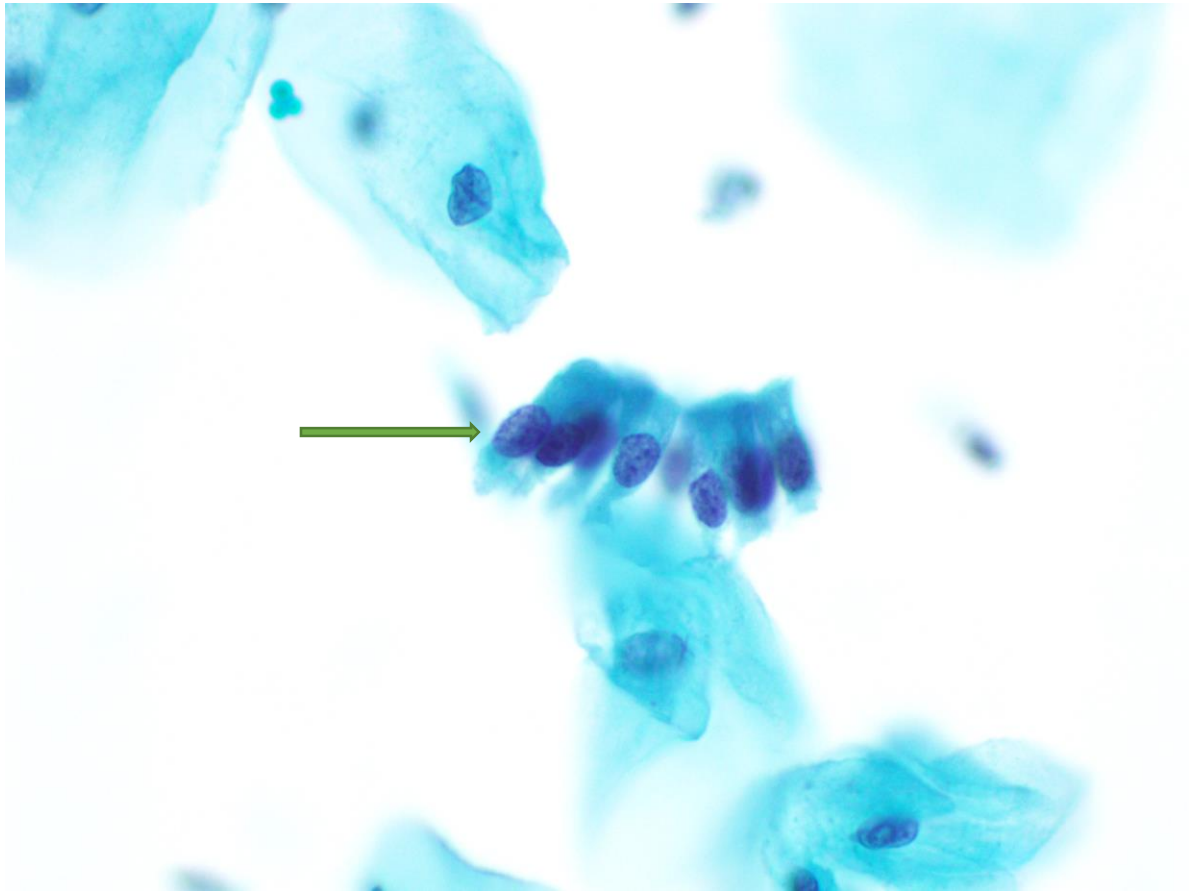
Case 2: Clinical Details

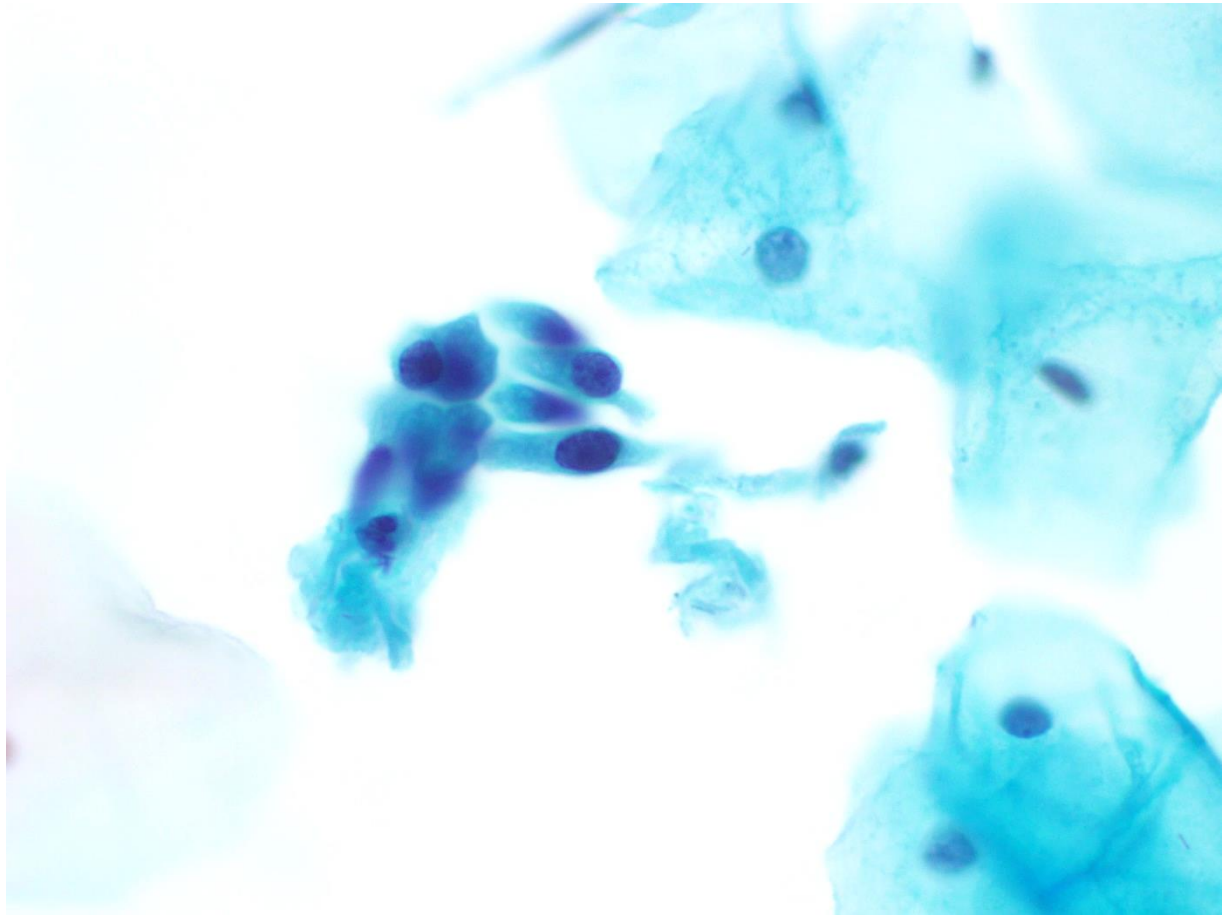
Age: 38 years

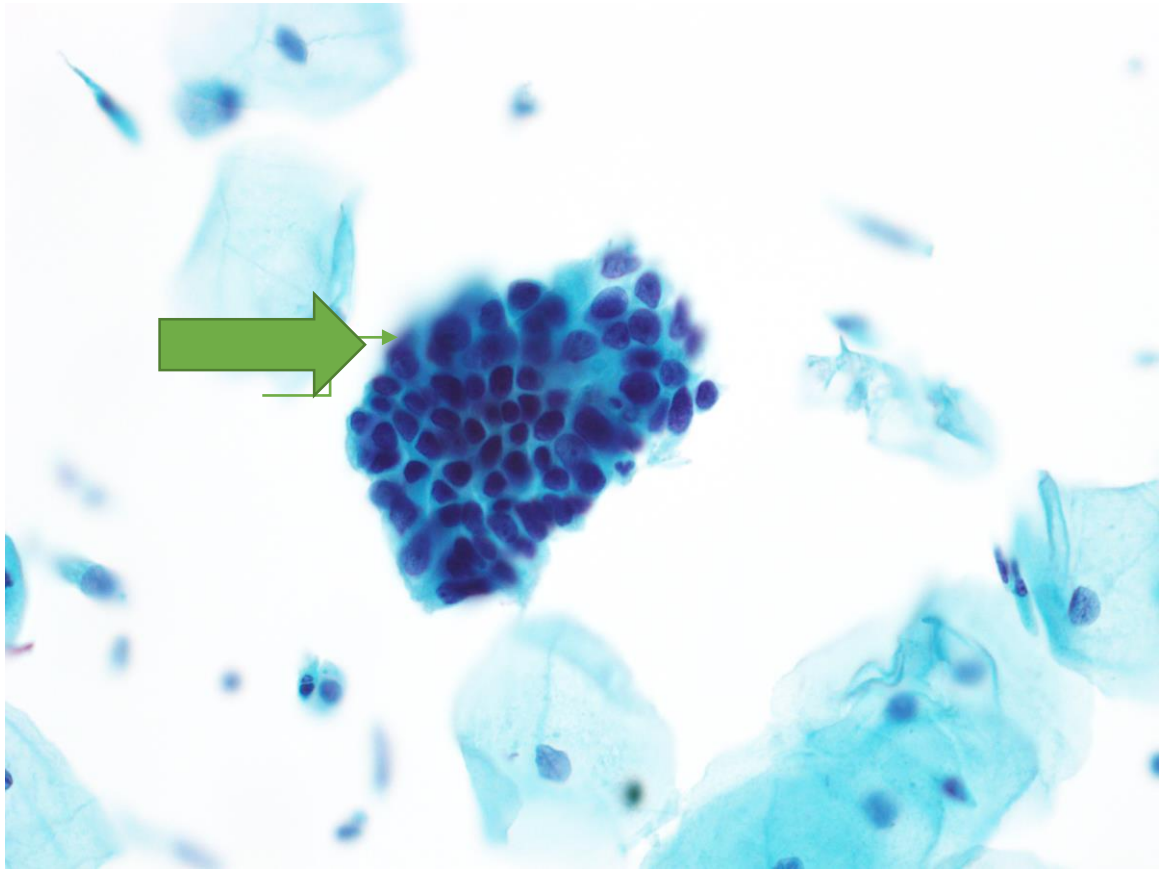
- First cervical cytology sample in New Zealand

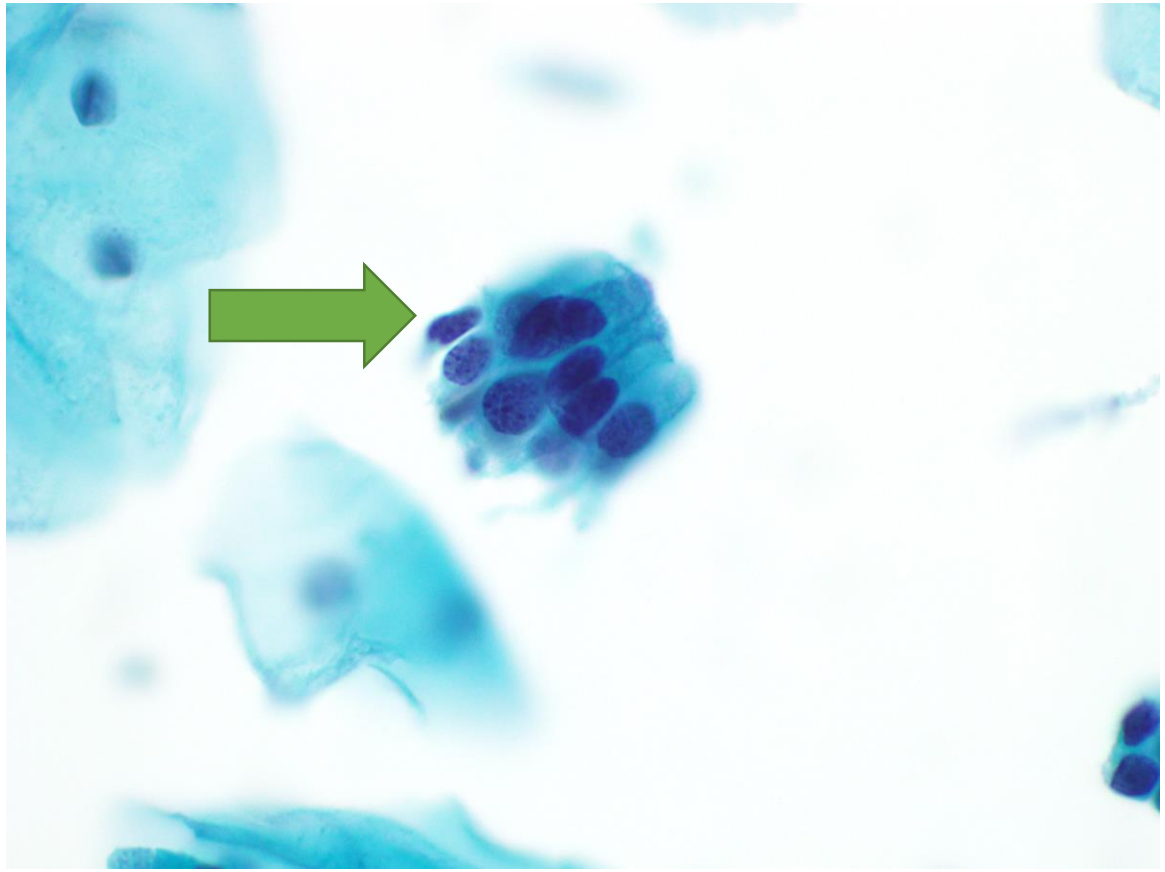


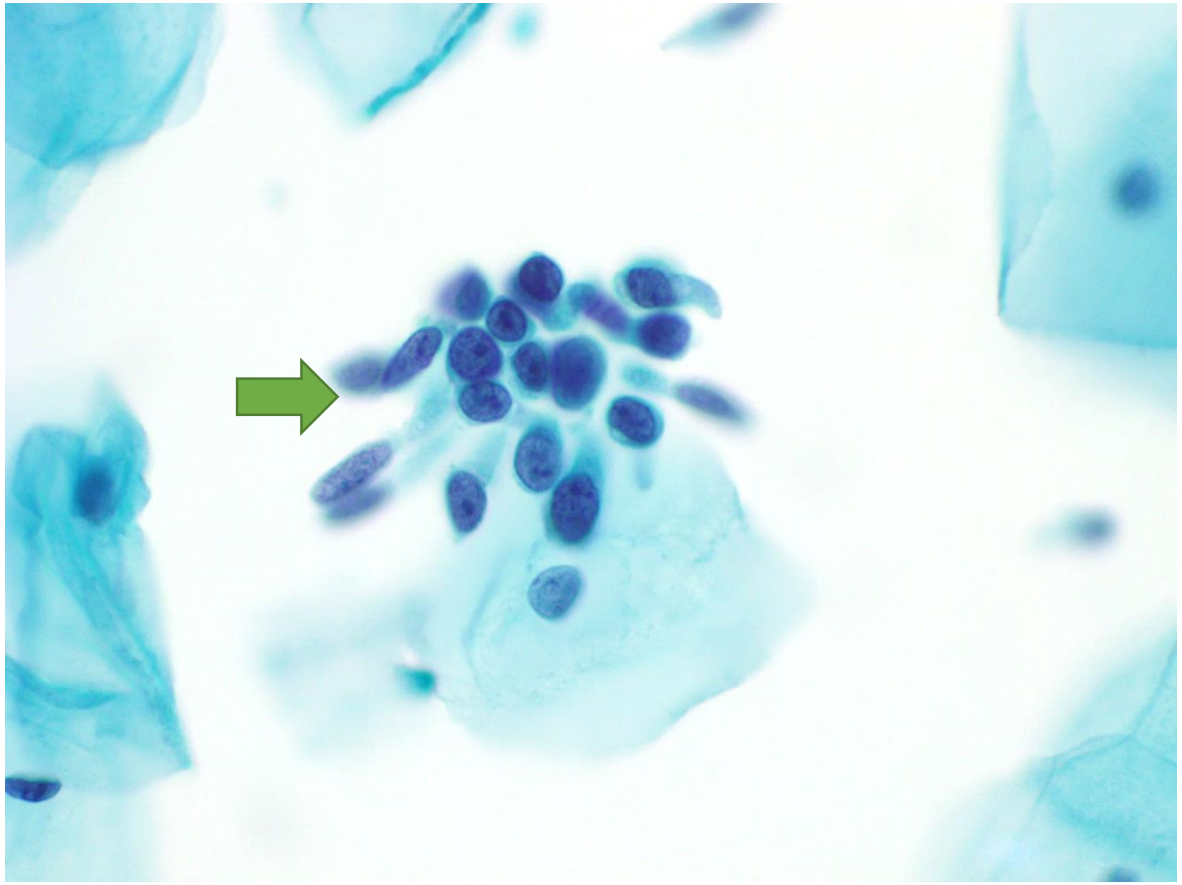


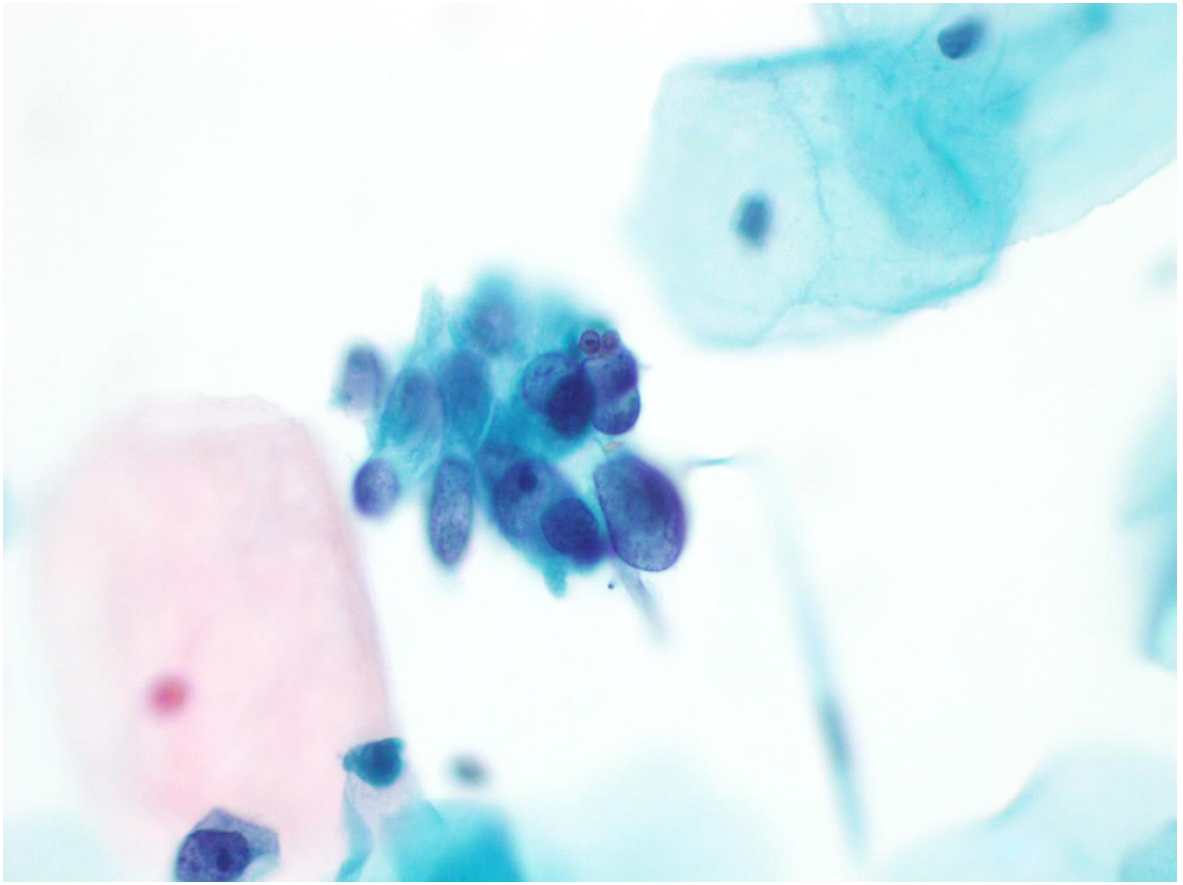












Answer:

ADENOCARCINOMA IN SITU (AIS)

MORPHOLOGICAL DESCRIPTION

At screening magnification the endocervical cells have distinctly hyperchromatic nuclei. The endocervical nuclei range from small (smaller than an intermediate nucleus) to mildly enlarged. The endocervical groups have typical abnormal architecture seen in AIS, including: strips with a communal edge and palisaded nuclei; flat sheets; feathering – pulling out of nuclei and cytoplasmic tags from the edges of sheets; and bird-tail or wedged groups of atypical columnar cells. There is an occasional strip of ciliated glandular cells but this does not detract from a diagnosis of AIS when typical cytologic features of AIS are present in other groups, as tubal metaplasia can co-exist with AIS.

DIAGNOSIS

ADENOCARCINOMA IN SITU (AIS)

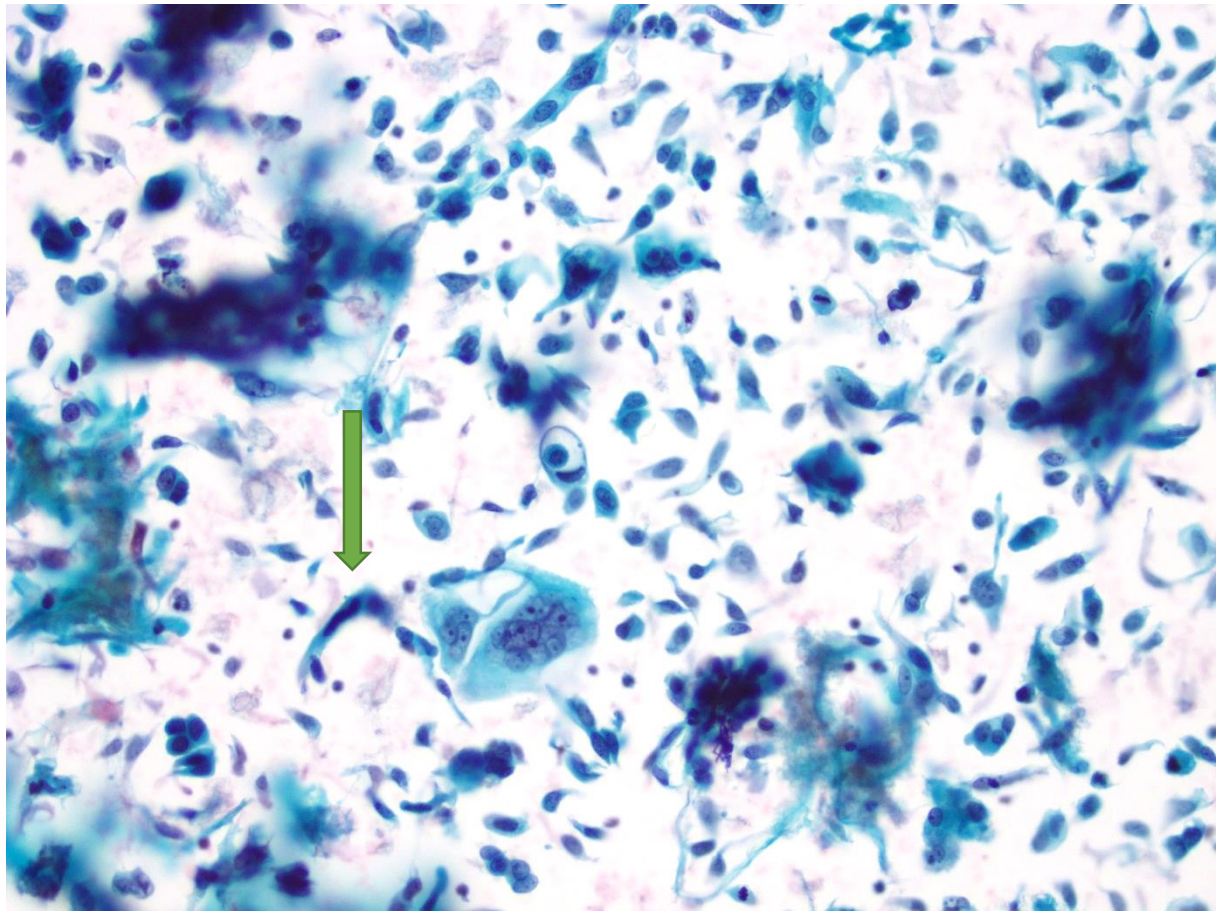
COMMENT

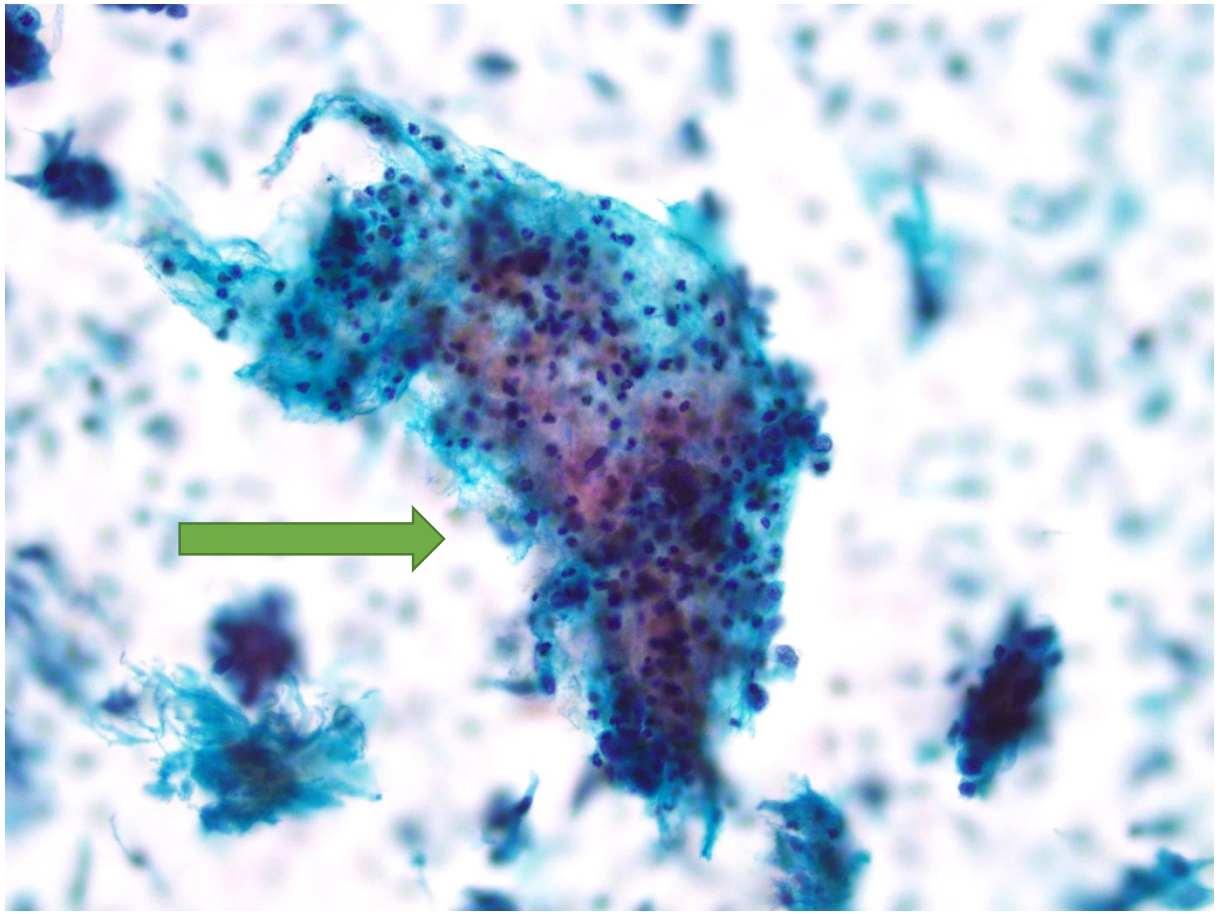
Cervical biopsy: CIN 1. Cone biopsy 3 months later: Adenocarcinoma in situ, completely excised.

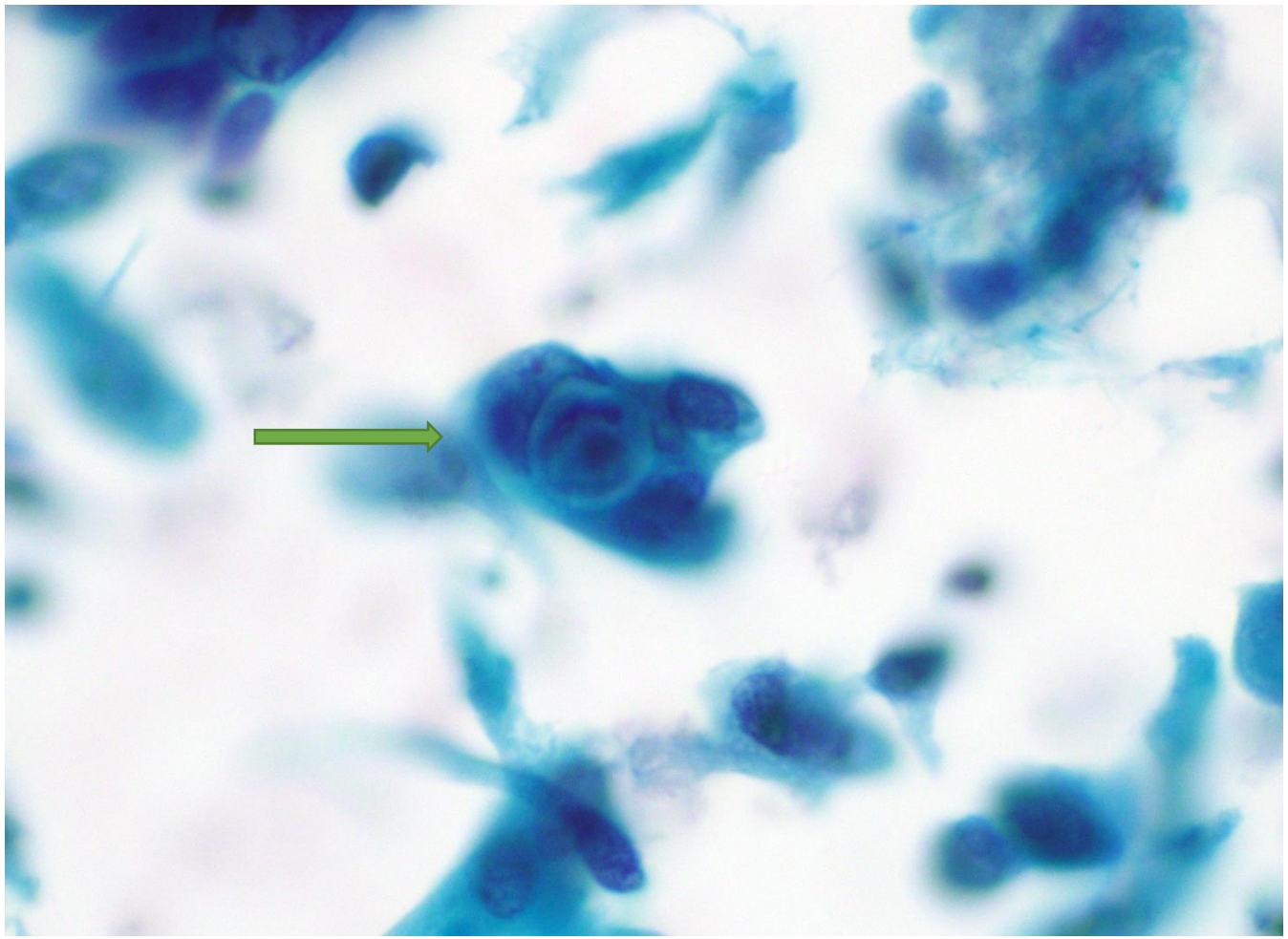
Case 3: Clinical Details

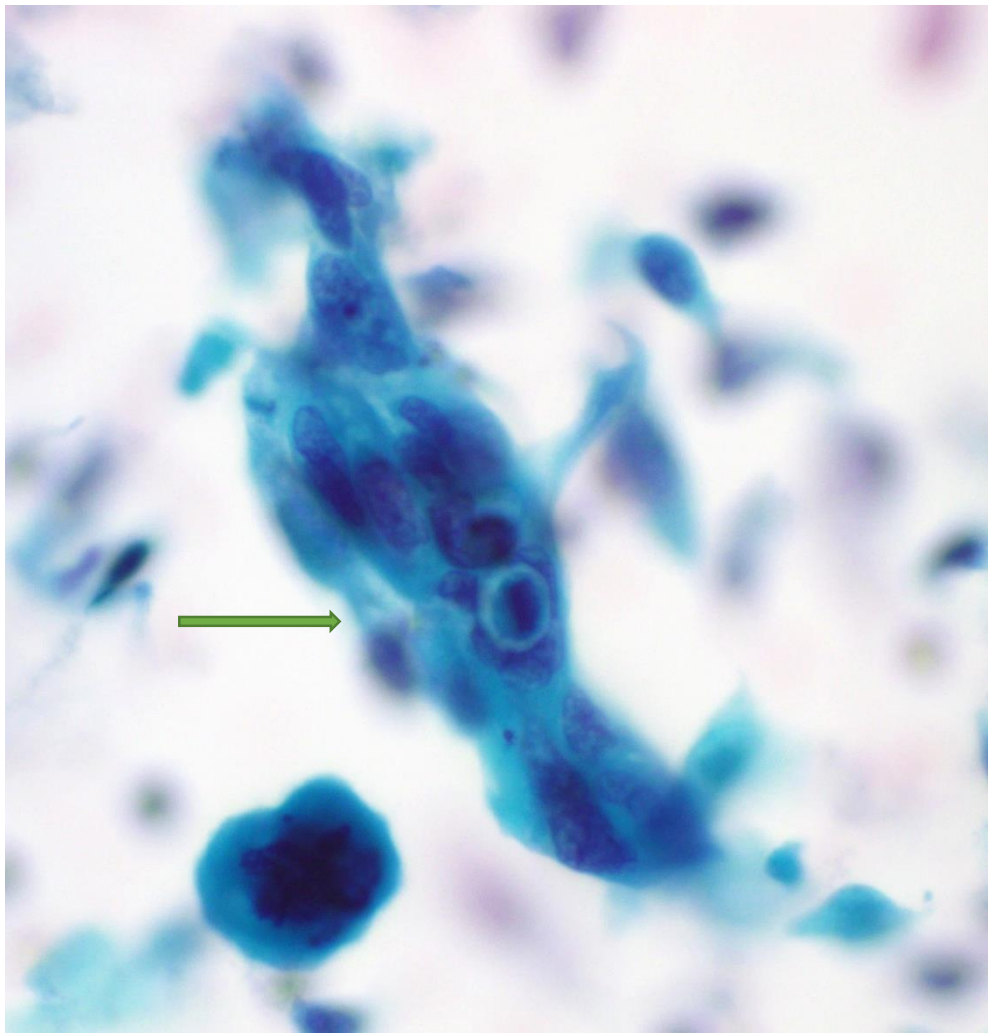
Age: 88 years

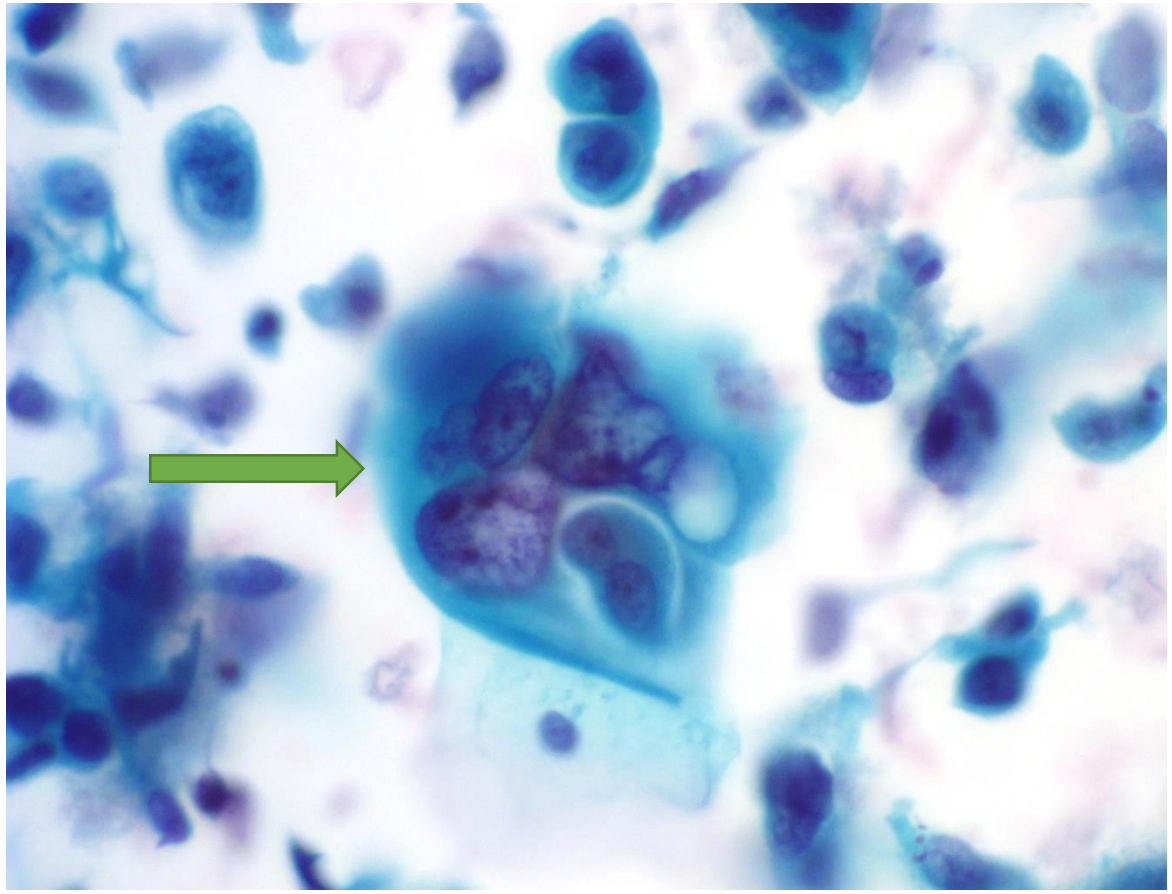
- PV bleeding
- First cervical cytology sample

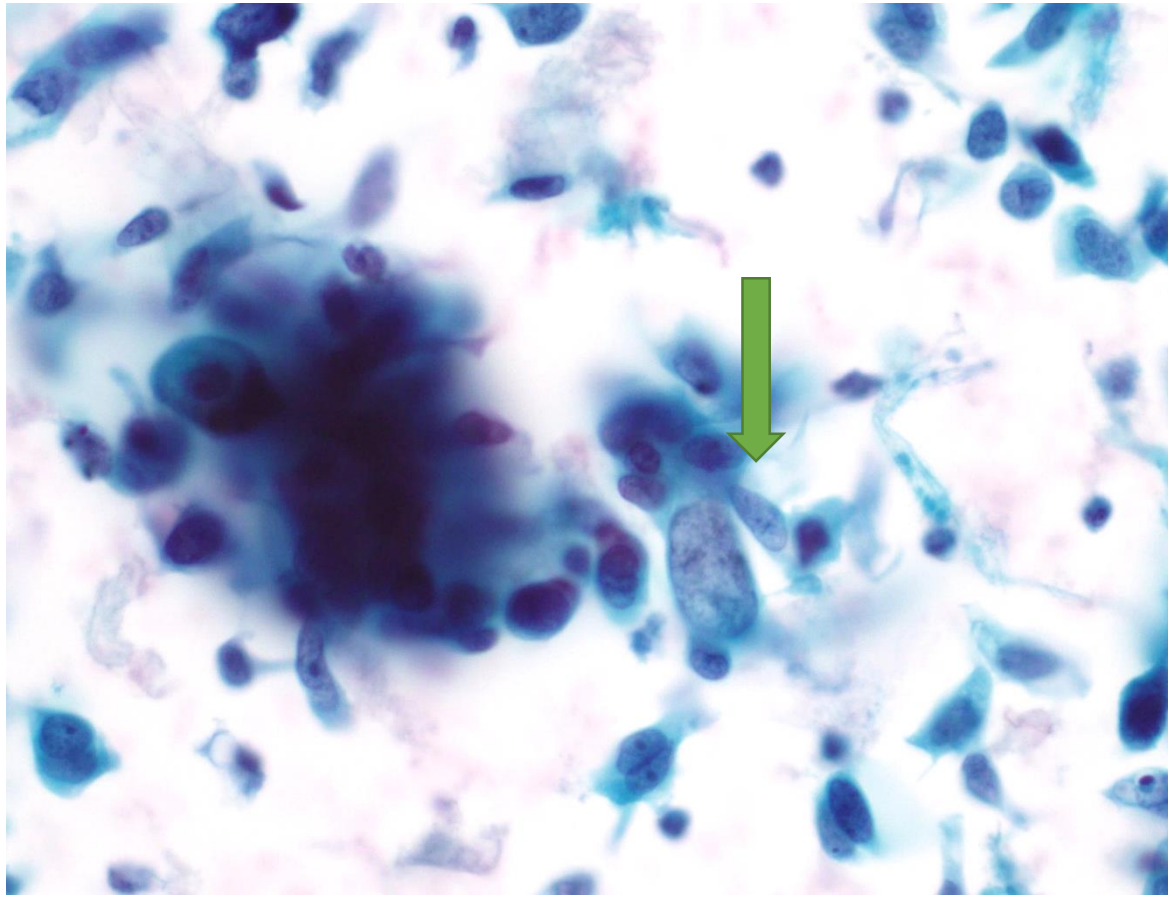












Answer:

SQUAMOUS CELL CARCINOMA

MORPHOLOGICAL DESCRIPTION

There are highly abnormal squamous cells throughout the sample. Pleomorphic cells and many spindled cells are present. Some nuclei show clumping and clearing of chromatin and nucleoli are variable and sometimes multiple. Note the cell-in-cell engulfment. Degenerate blood is present in the background and there is clumped diathesis debris.

DIAGNOSIS

SQUAMOUS CELL CARCINOMA

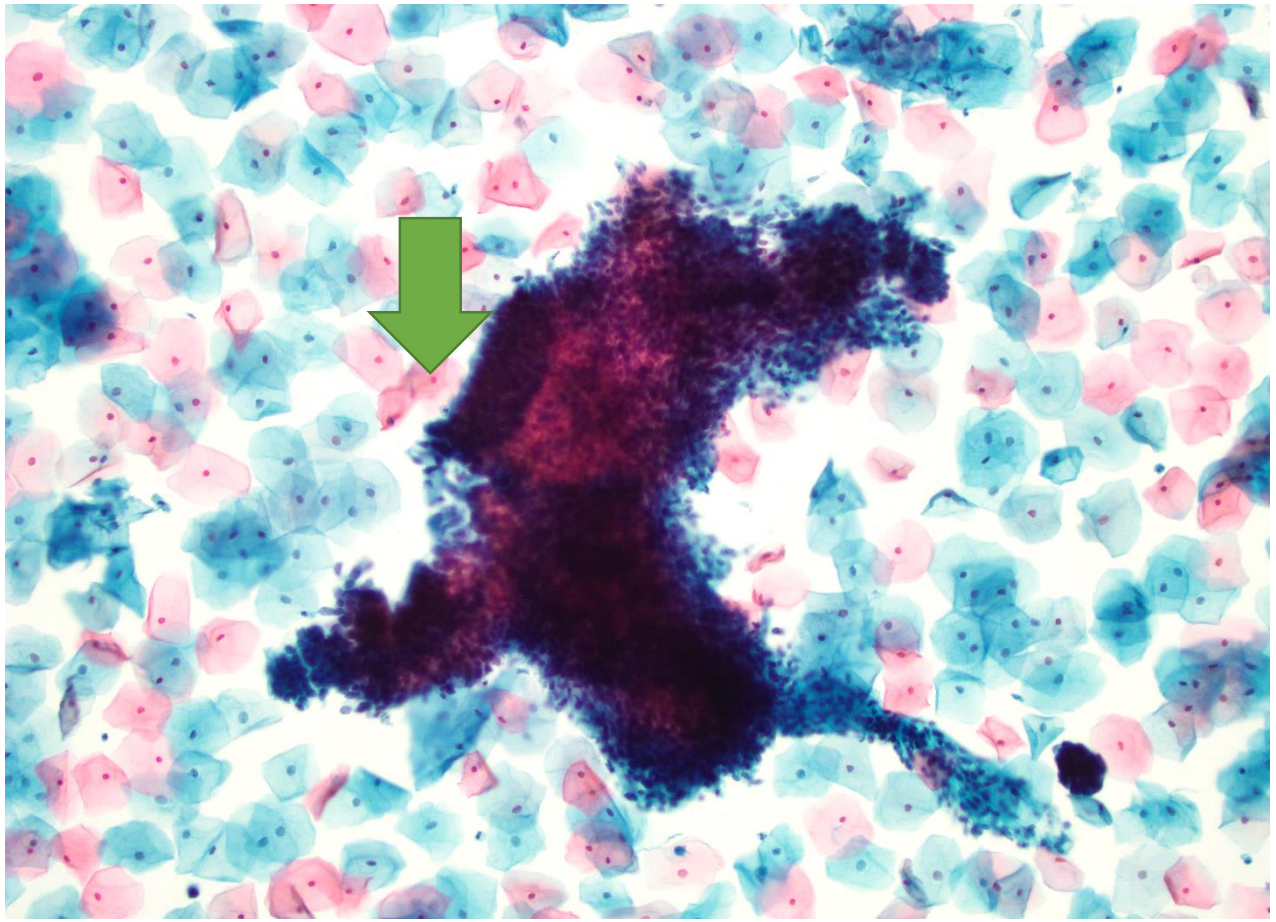
COMMENT

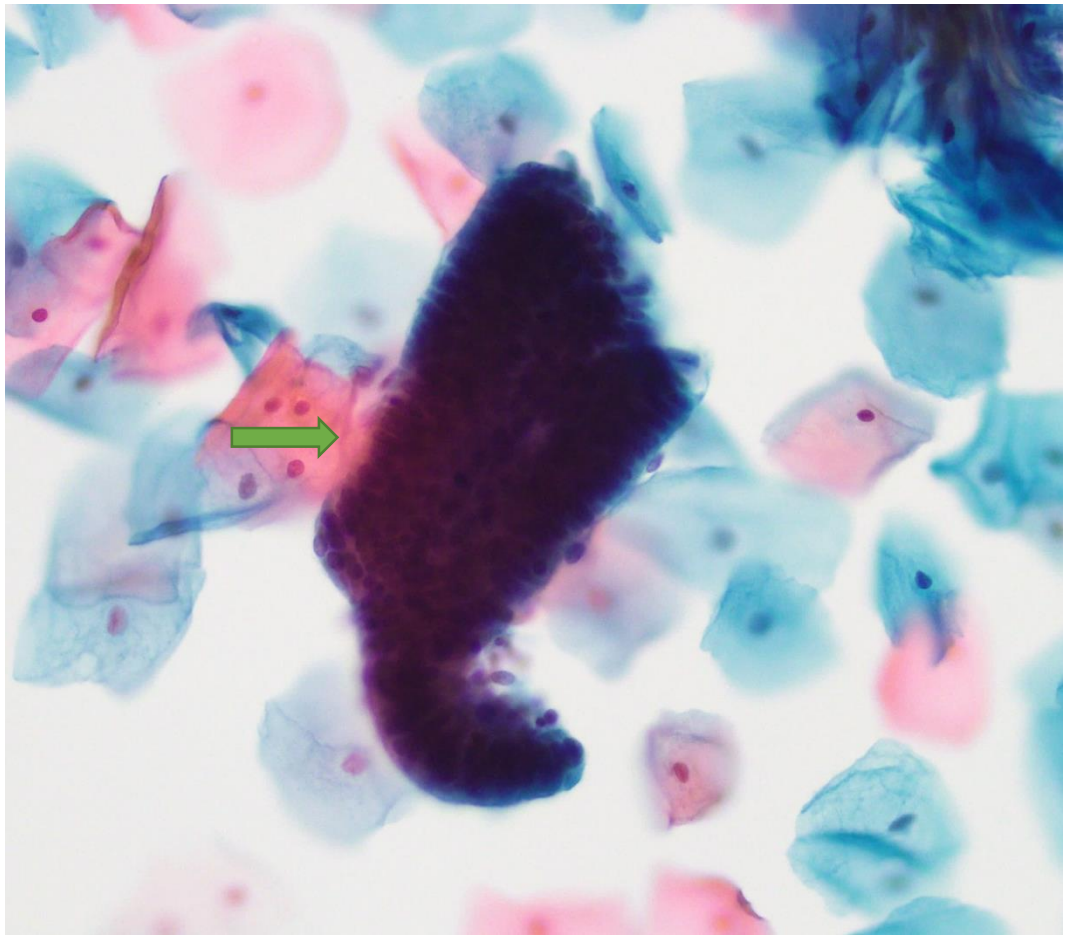
A cervical biopsy 10 days later confirmed invasive squamous cell carcinoma.

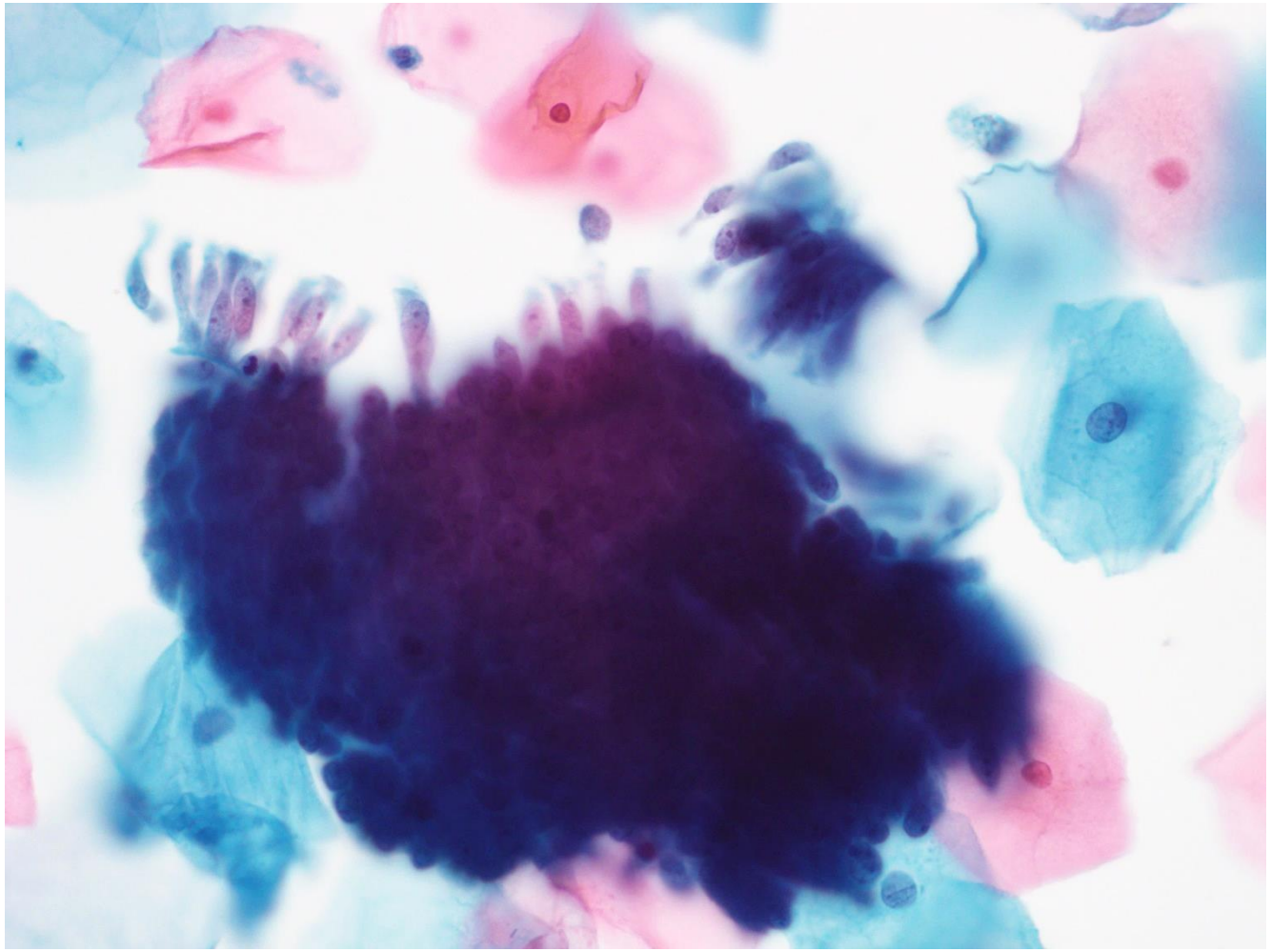
Case 4: Clinical Details

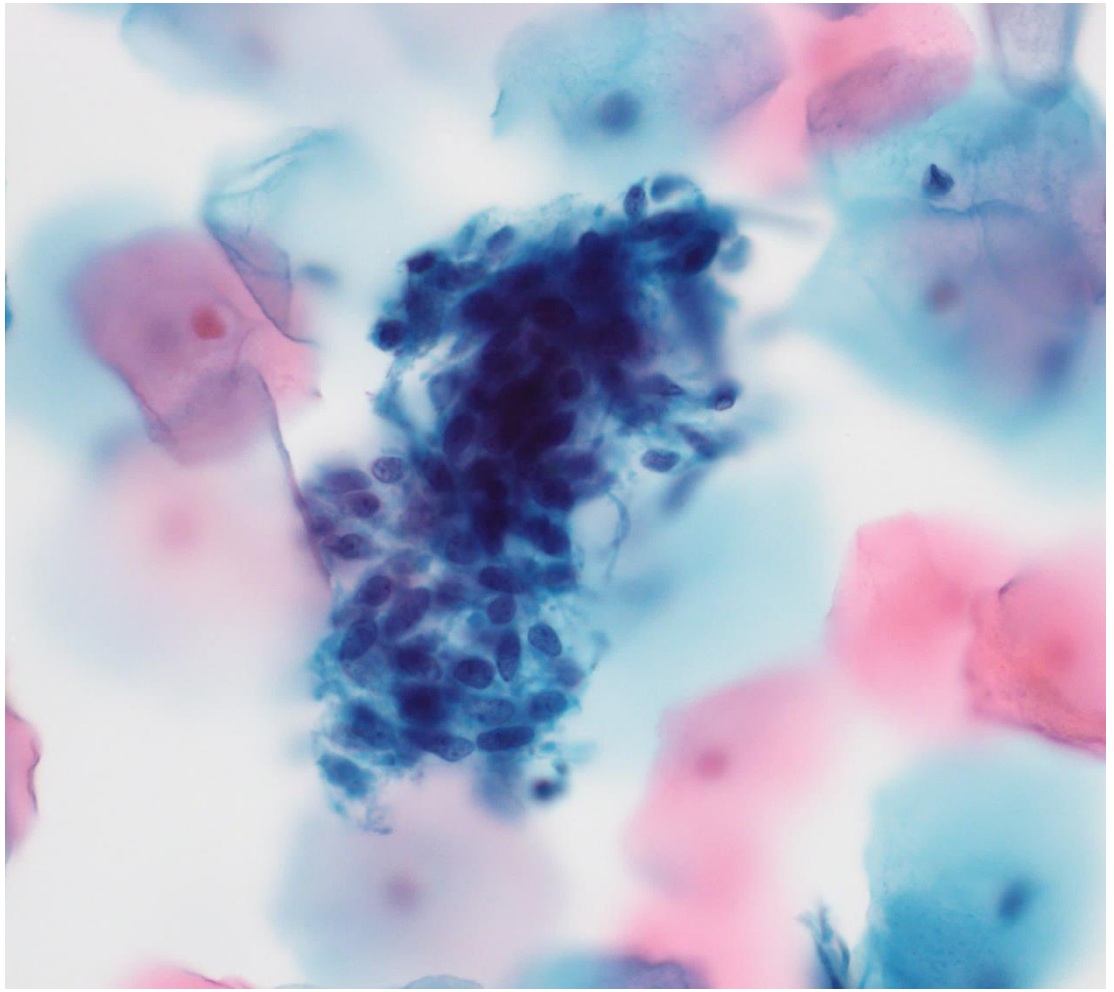
Age: 39 years

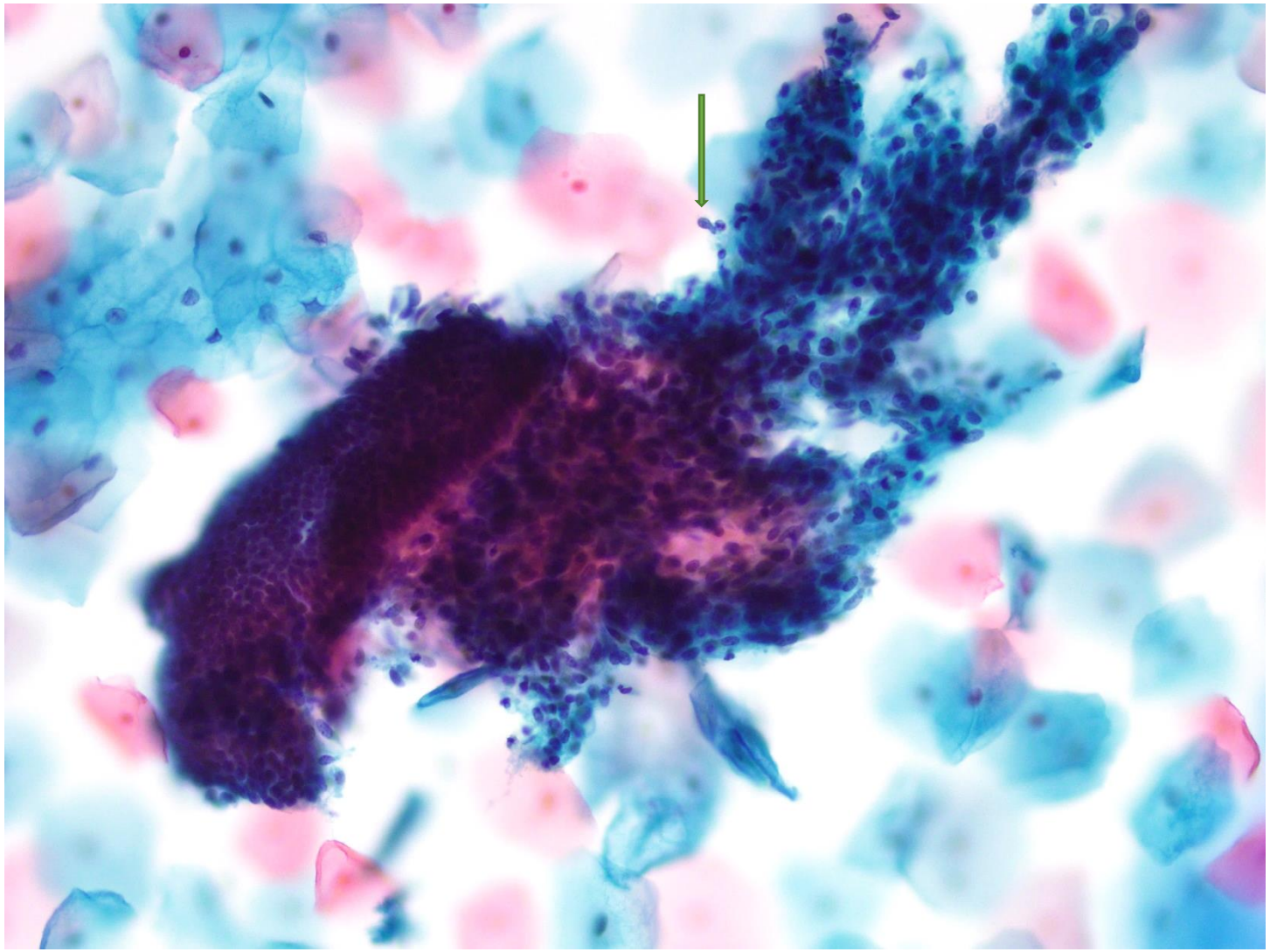
- cone biopsy 10 years previously for CIN 3
- seven normal cervical cytology samples since treatment
- hrHPV testing with last sample was negative
- now having the second test of cure co-test

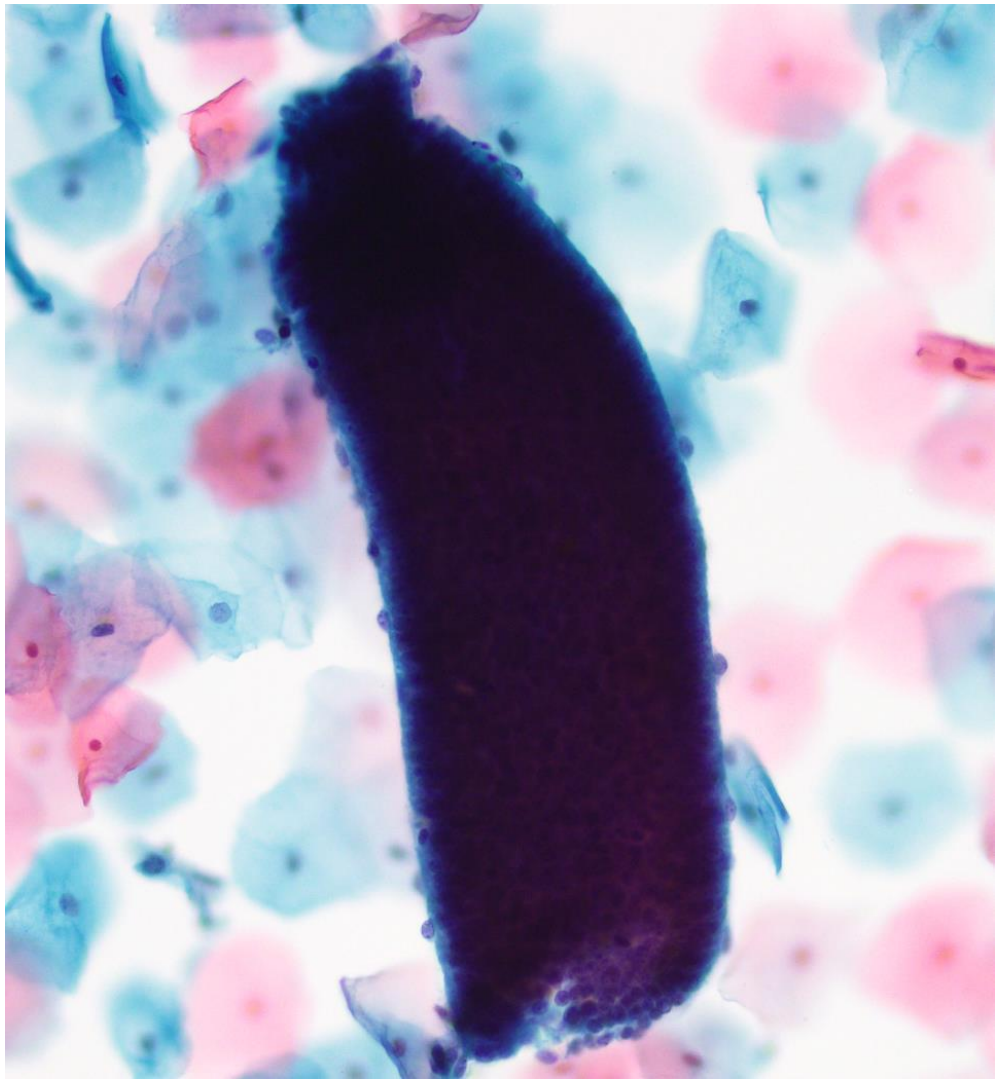












Answer:

NEGATIVE FOR INTRAEPITHELIAL LESION OR MALIGNANCY

LOWER UTERINE SEGMENT CELLS (LUSC) PRESENT

MORPHOLOGICAL DESCRIPTION

There are crowded cell groups throughout the sample forming sheets and tubules of small, tightly packed, orderly glandular cells. Sheets have smooth common edges. Nuclei are small, predictable, rounded or molded and some have nucleoli. Stromal fragments are present (arrow) forming disordered sheets with ragged edges, composed of small cells with coarse, predictable nuclei and scant pale cytoplasm. This is endometrial material sampled from the lower uterine segment.

DIAGNOSIS

NEGATIVE FOR INTRAEPITHELIAL LESION OR MALIGNANCY. HIGH SAMPLING PRESENT.

COMMENT

The hrHPV test performed concurrently (as part of the second pair of samples for a test of cure) was negative, so she was returned to regular 3-yearly screening (NZ Management Guidelines). Endometrial cells may be directly sampled because of vigorous use of an endocervical brush, or when the cervical canal has been shortened by a previous LLETZ or cone biopsy, as in this case.

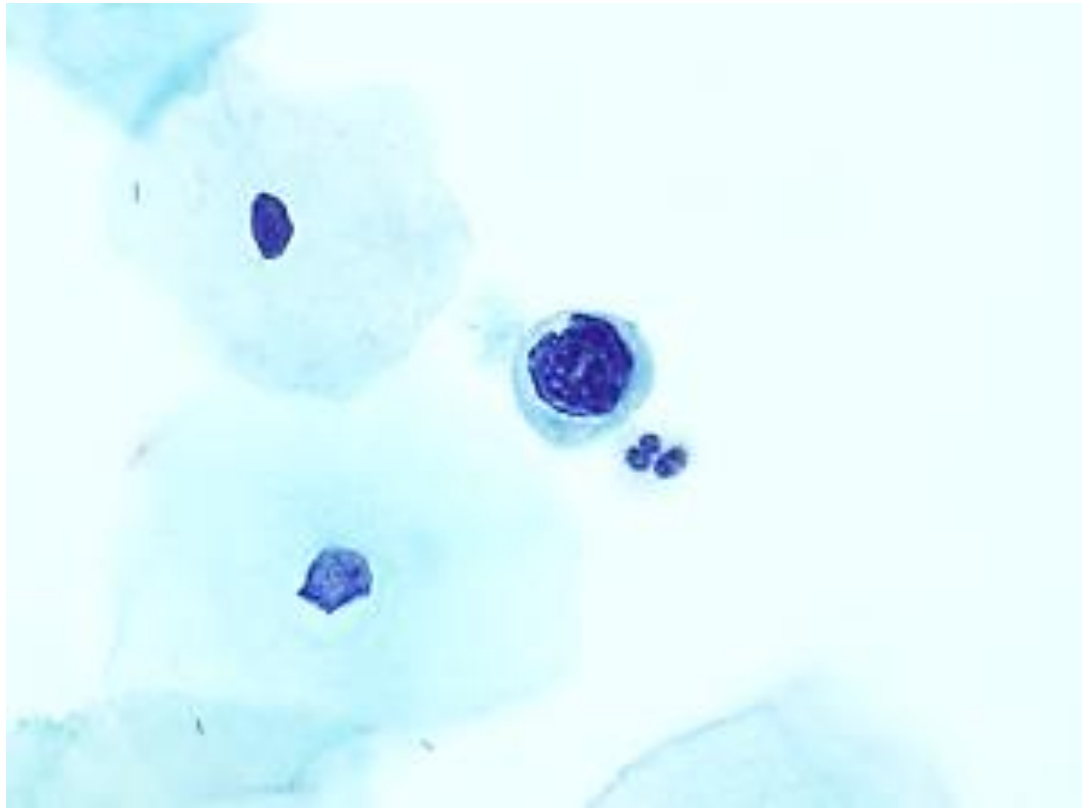
NCPTS
THIN PREP QUIZ

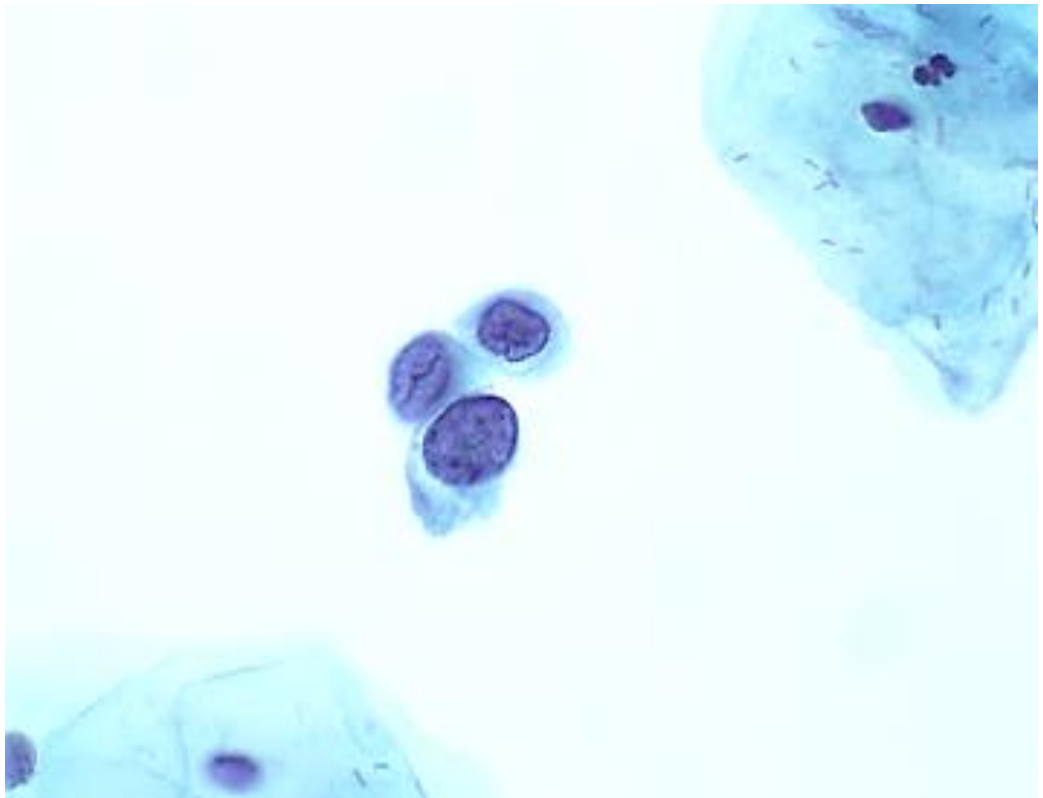
CHRISTL KIRSTEIN

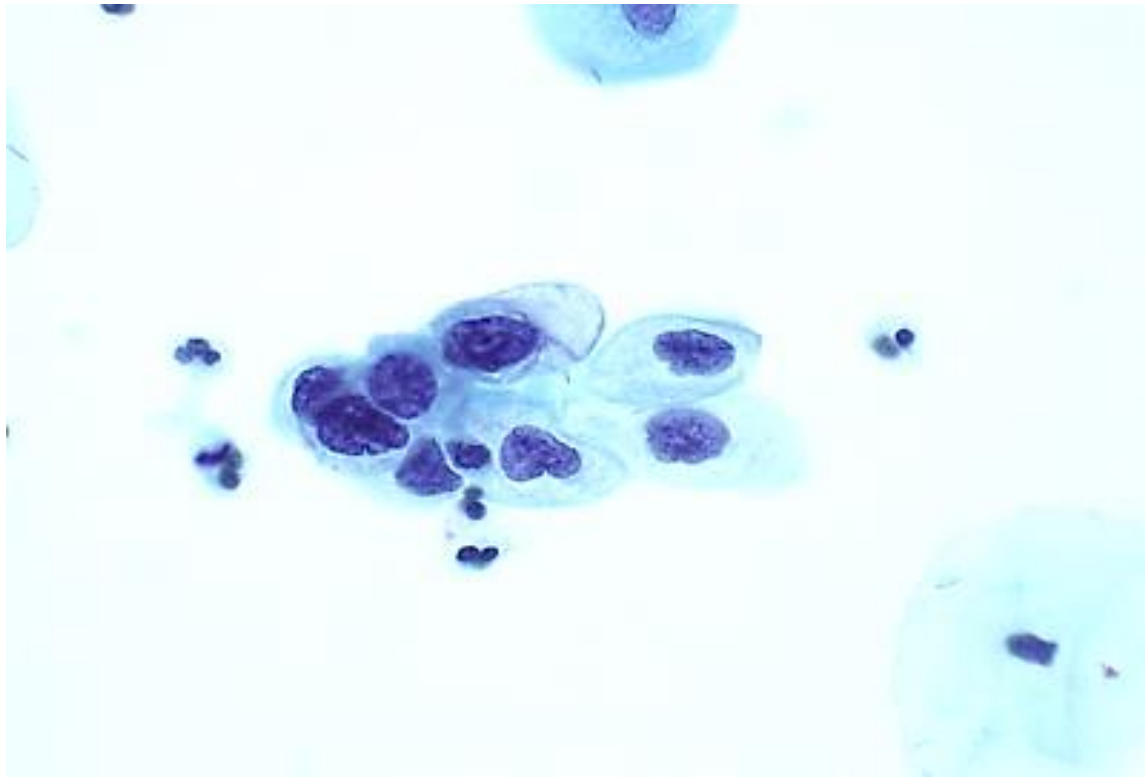
Case 1: Clinical Details

Age: 30 years

- One cervical cytology sample taken 2.5 years previously showed ASC-US







Answer:

HIGH-GRADE SQUAMOUS INTRAEPITHELIAL LESION (HSIL)

MORPHOLOGICAL DESCRIPTION

There are high N:C ratio hyperchromatic squamous cells showing nuclear variability and marked nuclear membrane irregularity. The cells are present as single cells and small cell clusters. The chromatin is granular but evenly distributed within the nucleus.

DIAGNOSIS

HIGH-GRADE SQUAMOUS INTRAEPITHELIAL LESION (HSIL)

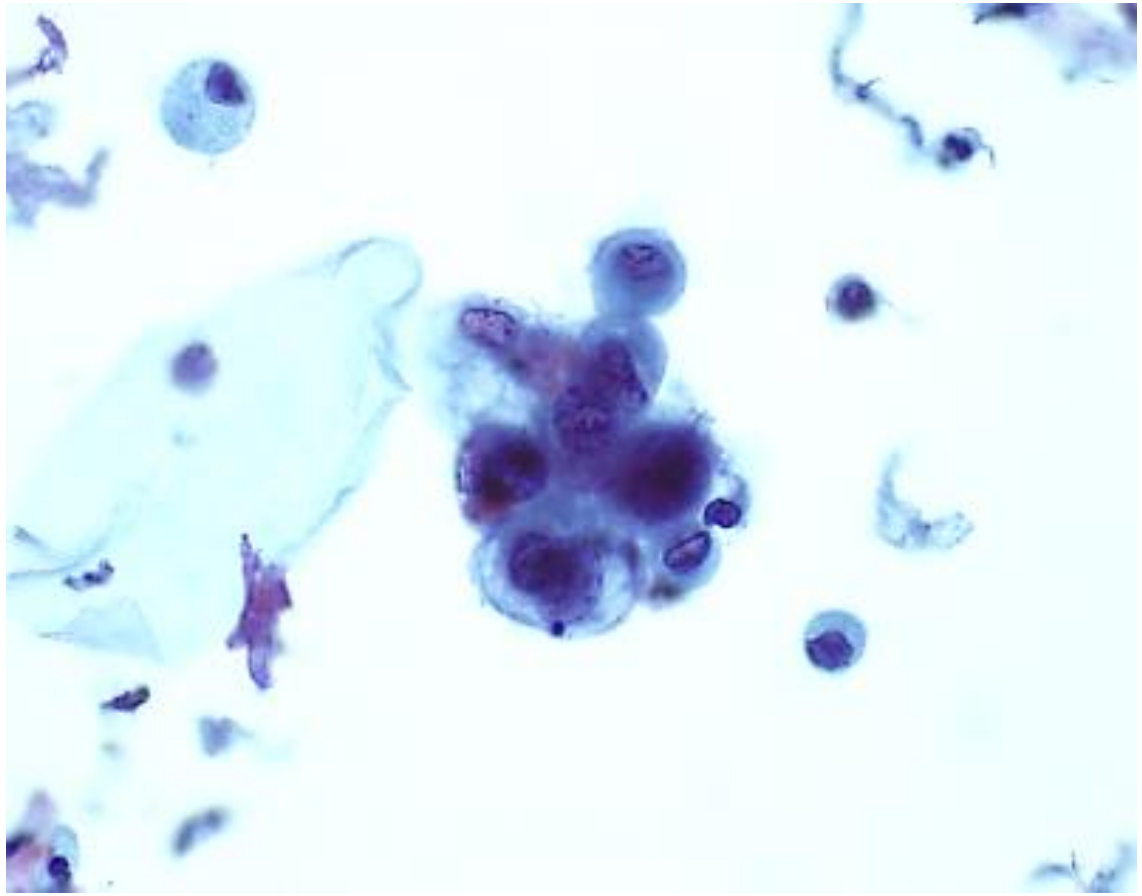
COMMENT

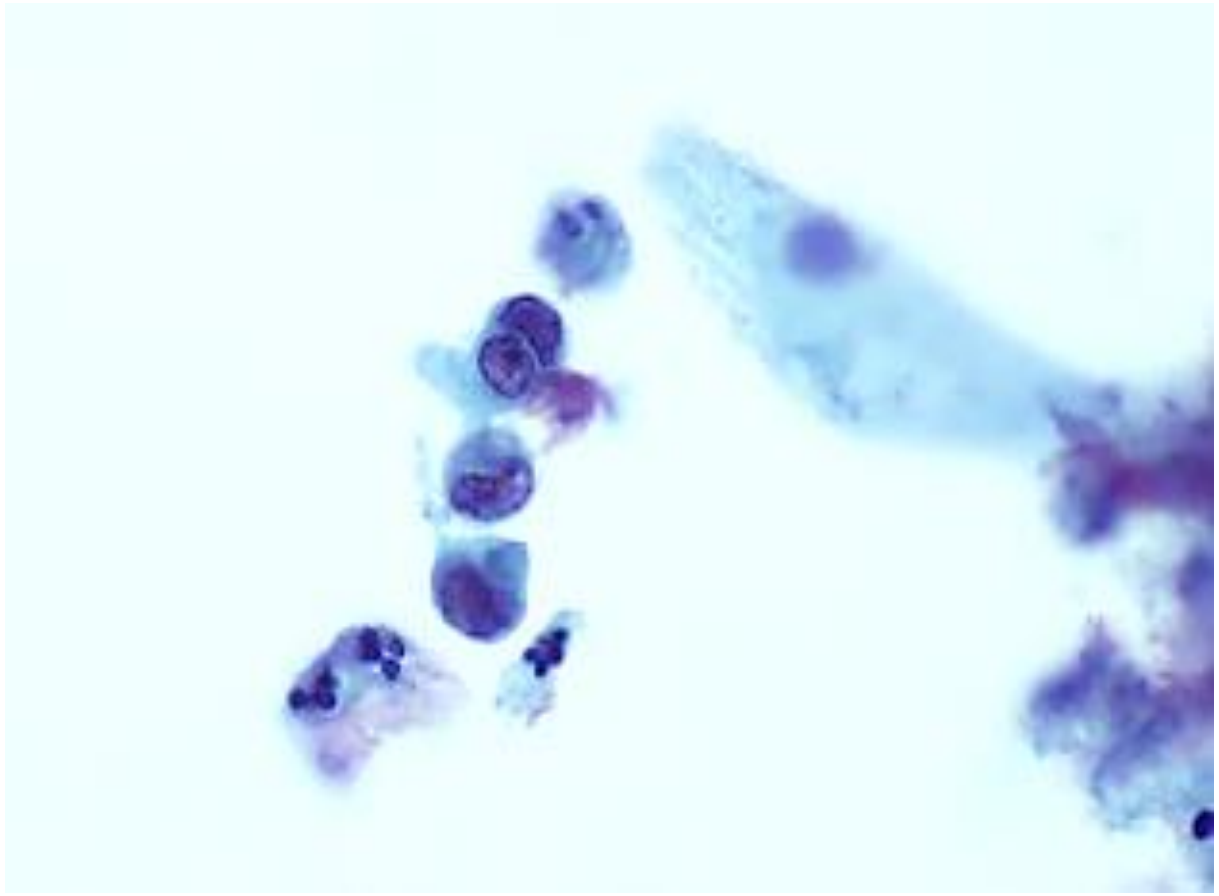
Follow-up: Colposcopic biopsies taken one month later and a subsequent LLETZ biopsy both showed CIN 3.

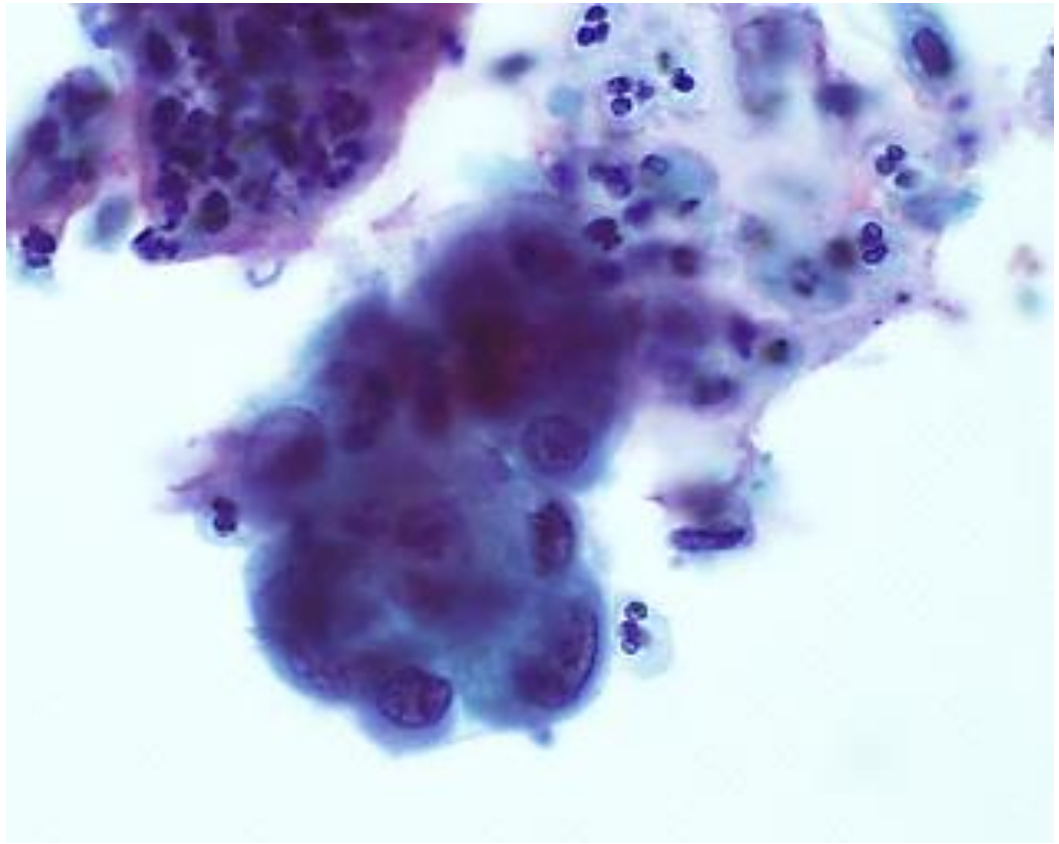
Case 2: Clinical Details

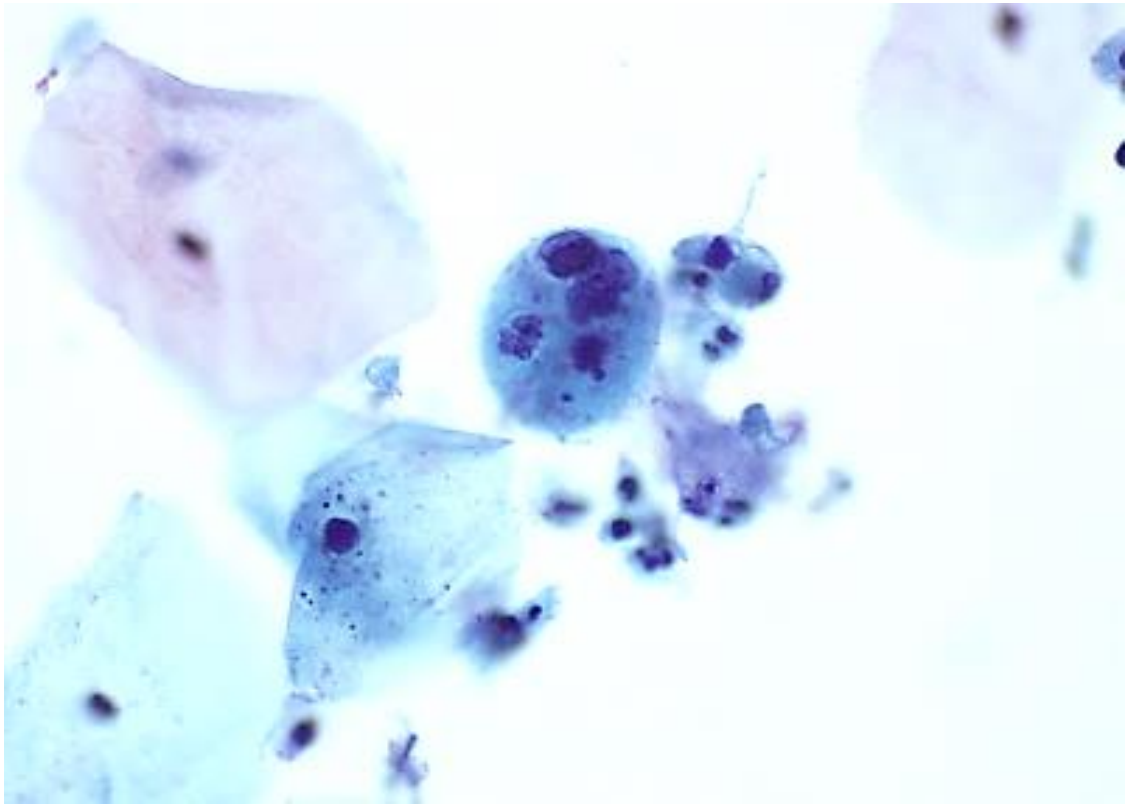
52 years

- Postmenopausal bleeding









Answer:

ENDOMETRIAL ADENOCARCINOMA

MORPHOLOGICAL DESCRIPTION

Comment: There are abnormal glandular cells showing nuclear enlargement and pleomorphism in keeping with adenocarcinoma of endometrial origin. Exfoliated cell groups and debris are present. Abnormal nuclei are displaced and indented by cytoplasmic vacuoles.

DIAGNOSIS

ENDOMETRIAL ADENOCARCINOMA

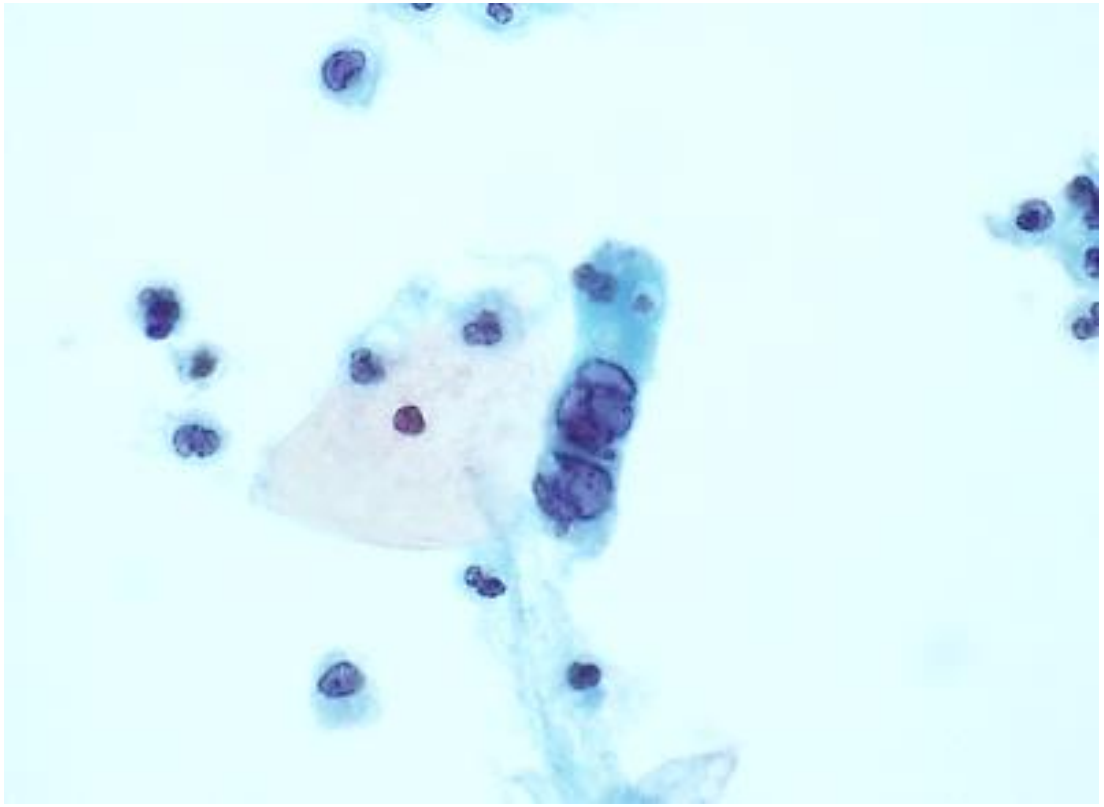
COMMENT

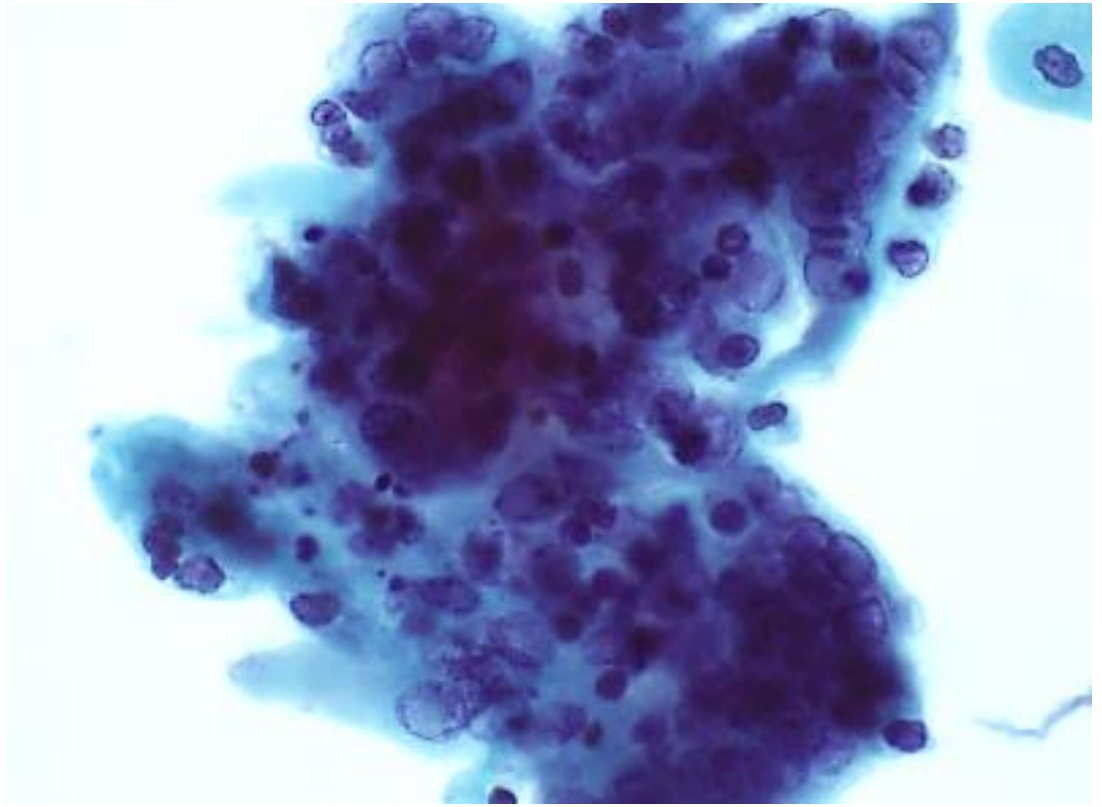
Follow-up: Endometrial adenocarcinoma was confirmed on pipelle endometrial biopsy.

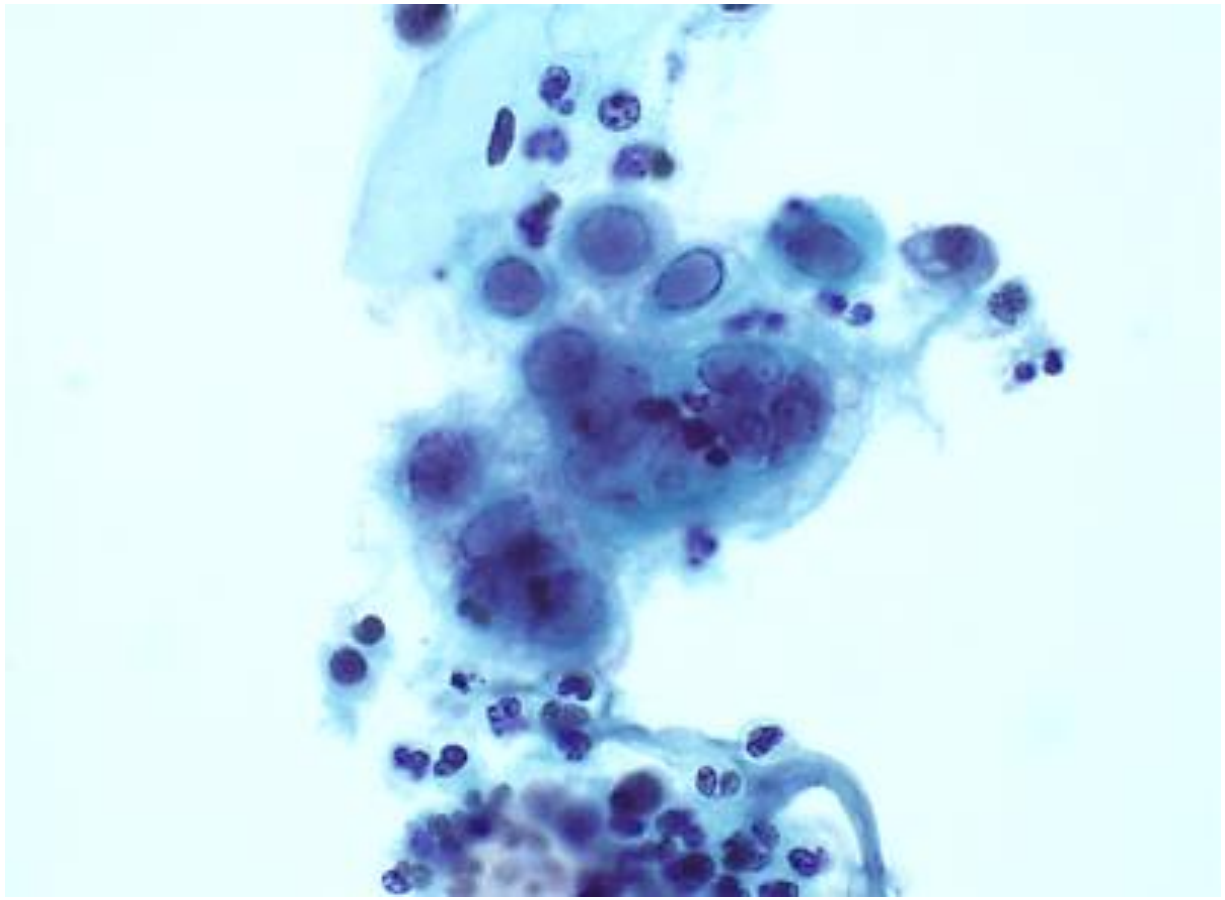
Case 3: Clinical Details

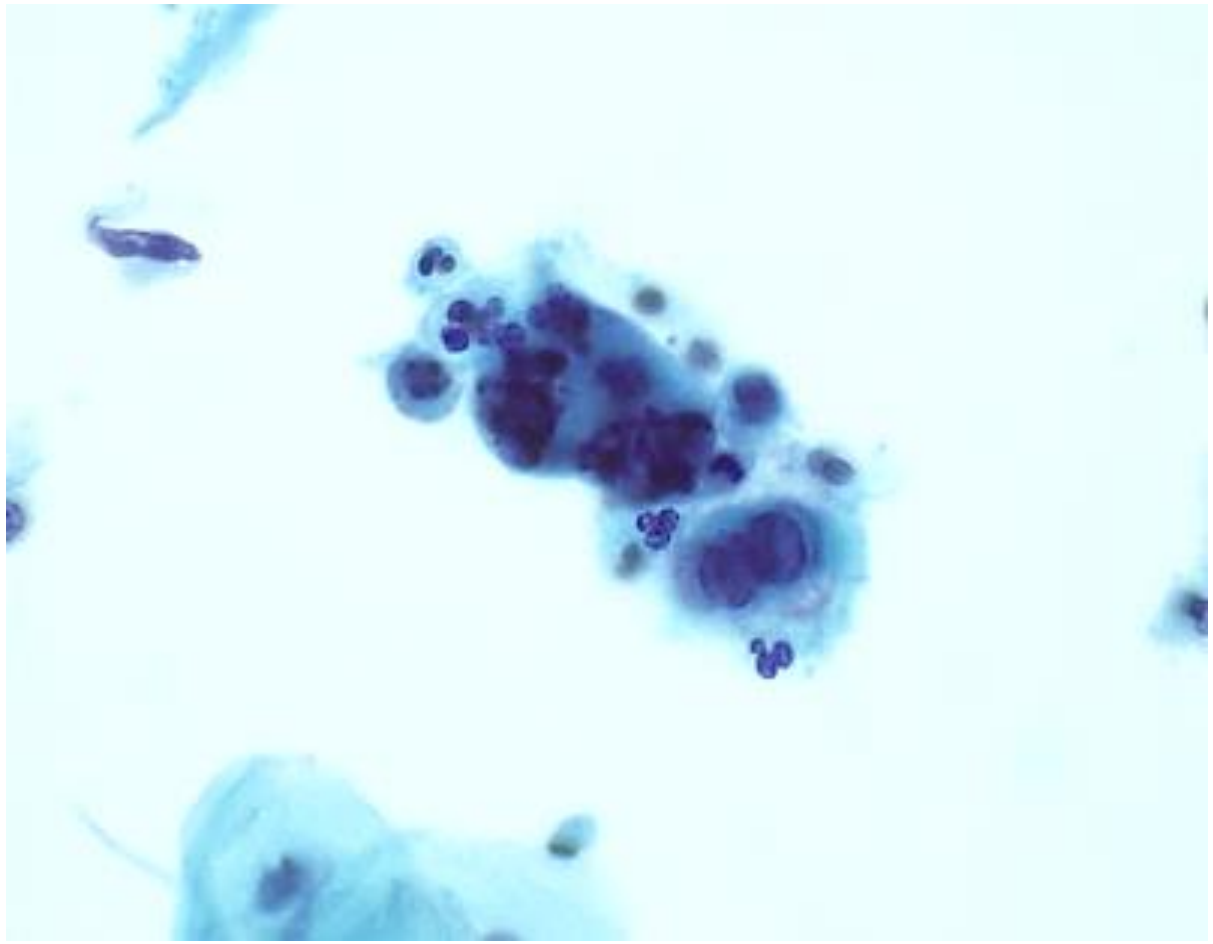
Age: 40 years

- Normal cervical screening history
- Ten previous normal cytology samples









Answer:

NEGATIVE FOR INTRAEPITHELIAL LESION OR MALIGNANCY

CELL CHANGES OF HERPES SIMPLEX VIRUS

MORPHOLOGICAL DESCRIPTION

Comment: Squamous cells show multinucleation, nuclear molding and enlarged nuclei with marginated and ground glass chromatin, consistent with herpes simplex infection. Numerous neutrophils are noted.

DIAGNOSIS

NEGATIVE FOR INTRAEPITHELIAL LESION OR MALIGNANCY. CELL CHANGES CONSISTENT WITH HERPES SIMPLEX VIRUS

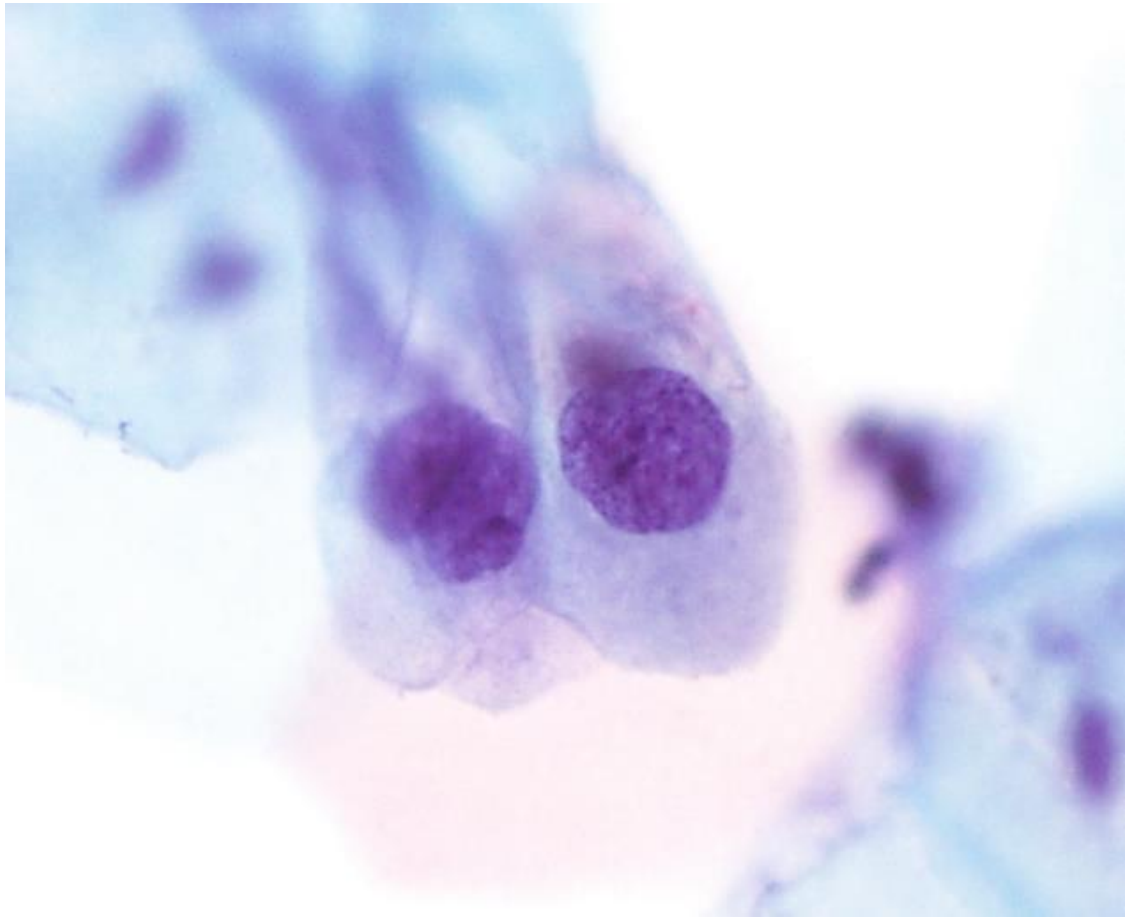
COMMENT

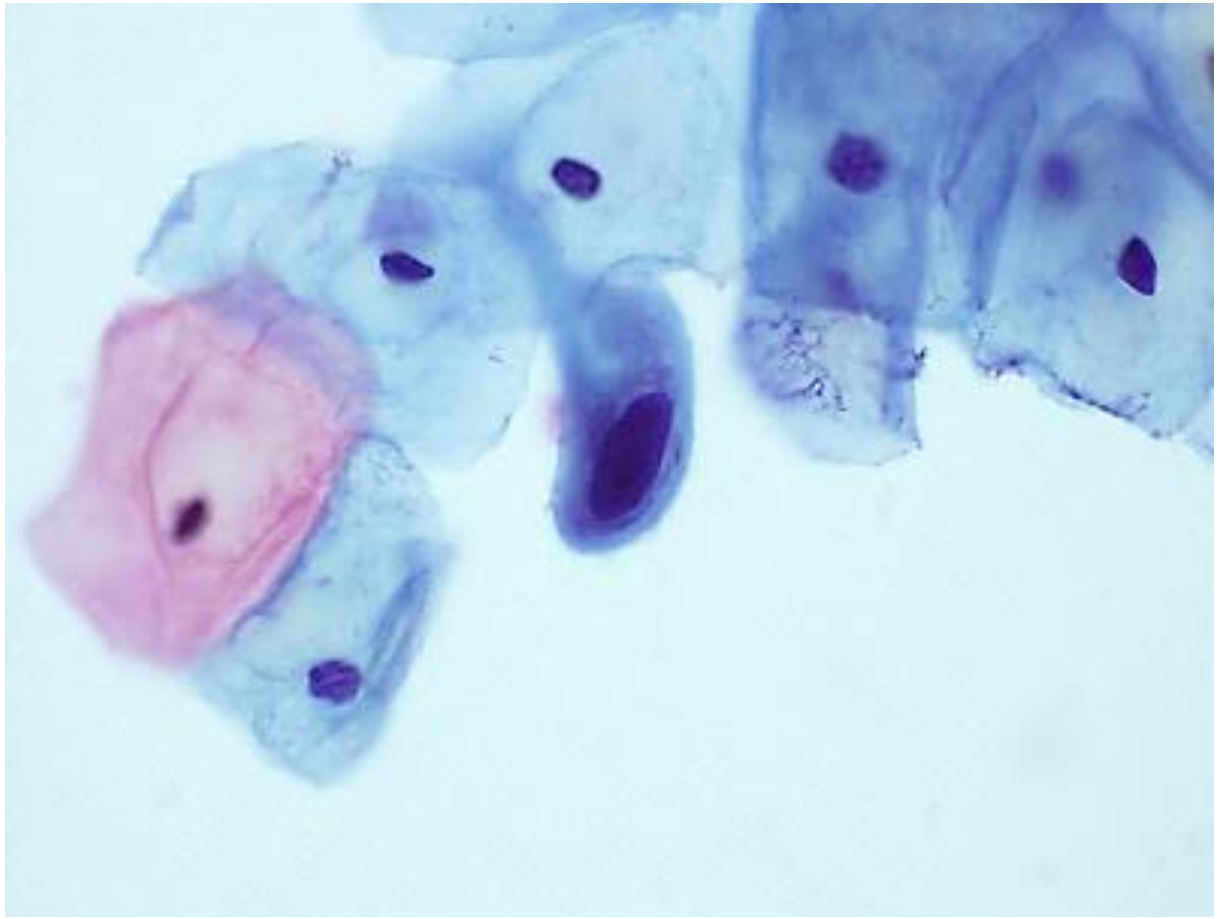
Follow-up: Two normal cervical cytology samples have been reported subsequently.

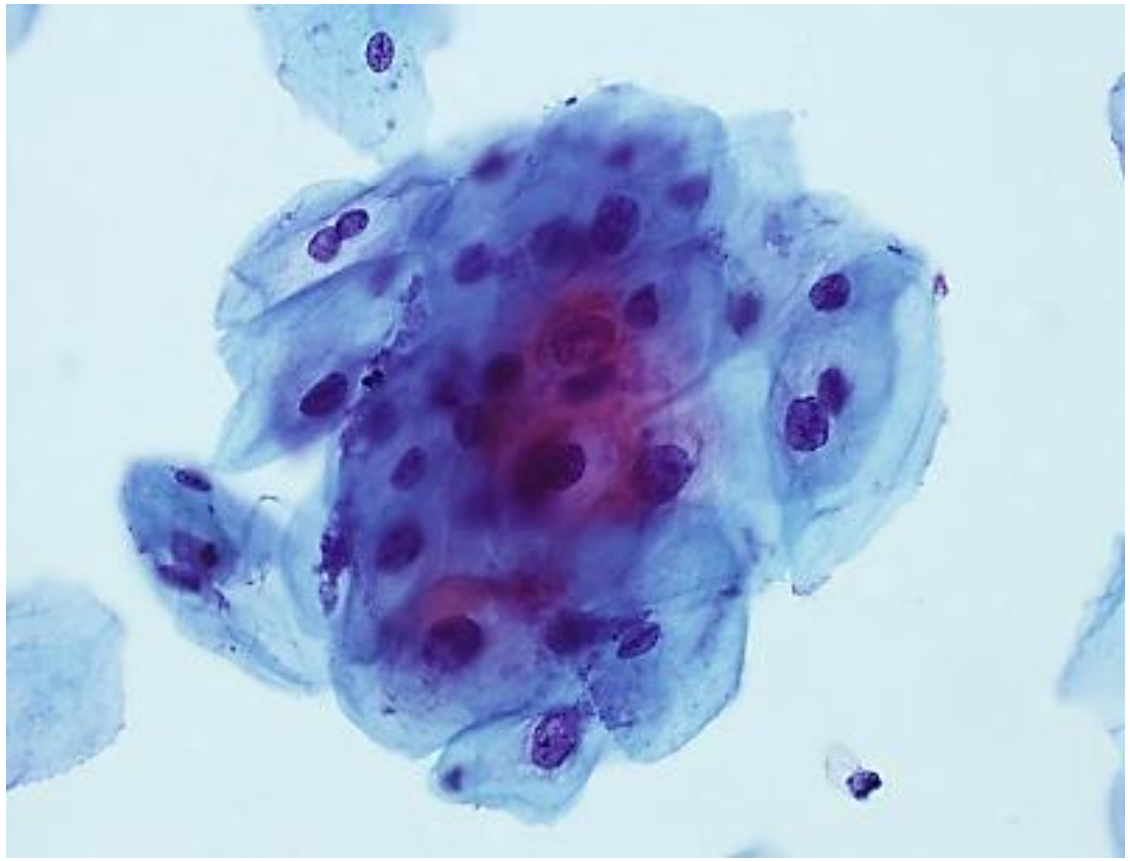
Case 4: Clinical details

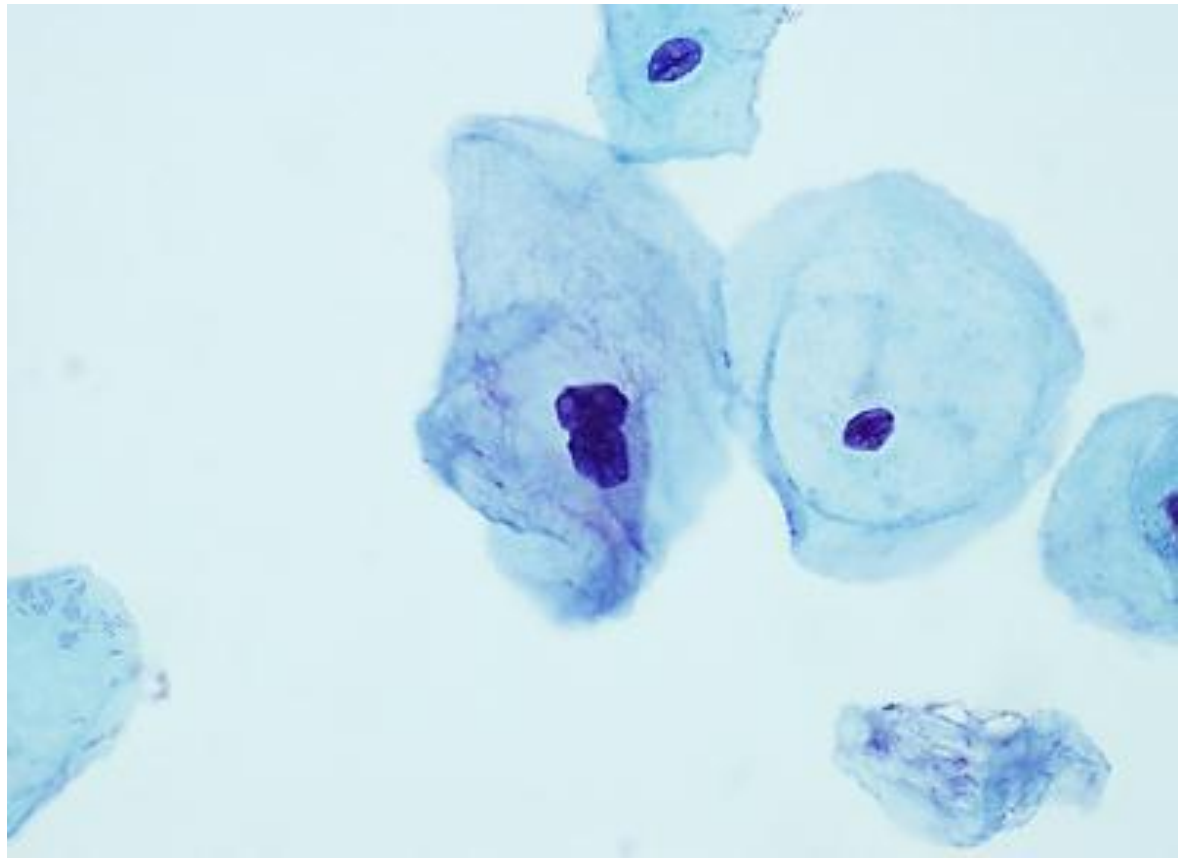
Age: 36 years

- Cervical cytology sample taken 6 months previously showed ASC-US, with a positive concurrent hrHPV test
- Sample taken at colposcopy









Answer:

LOW-GRADE SQUAMOUS INTRAEPITHELIAL LESION (LSIL)

MORPHOLOGICAL DESCRIPTION

Comment: There are abnormal squamous cells with abnormal enlarged hyperchromatic nuclei with nuclear membrane irregularity. N:C ratios are low. Abnormal squamous cells have enlarged nuclei that are hyperchromatic with granular or dense chromatin. There are no koilocytes and little nuclear margin irregularity but the degree of nuclear enlargement, variability and chromatin abnormality is sufficient for LSIL.

DIAGNOSIS

LOW-GRADE SQUAMOUS INTRAEPITHELIAL LESION (LSIL)

COMMENT

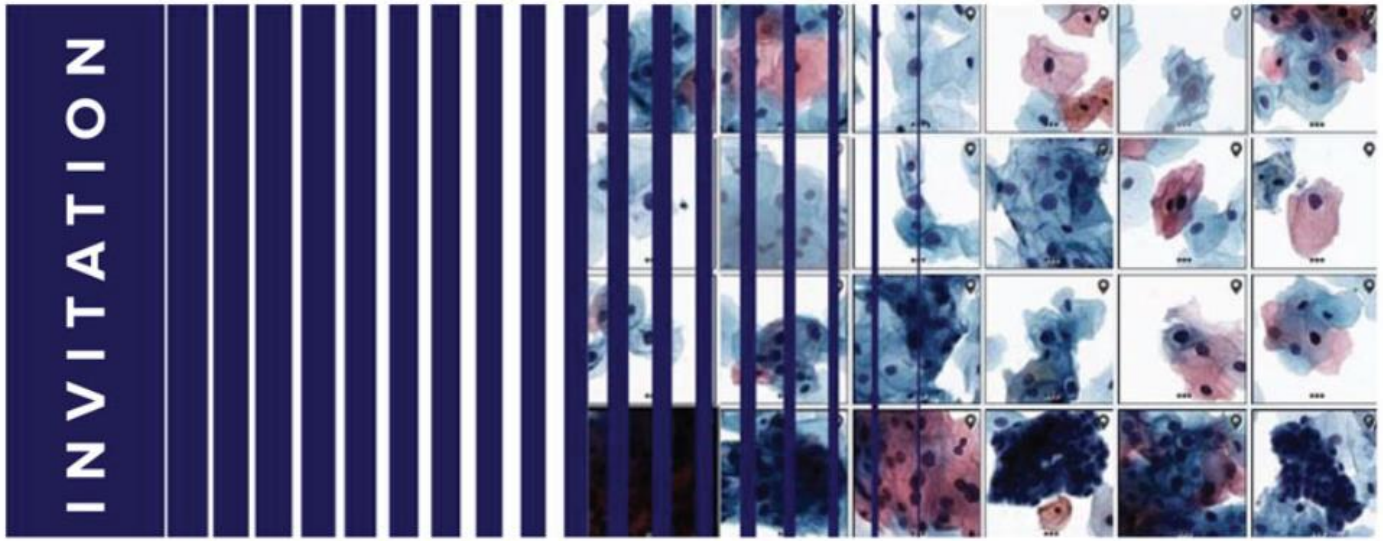
Follow-up: A concurrent cervical biopsy show HPV effect only. Further cervical cytology taken 2 years later again showed LSIL with both CIN 1 and HPV effect on cervical biopsy. Two subsequent cervical cytology samples have been normal.

Feedback please!

- How did you find the morphology on this platform?

- Are the eCases useful to assist your learning?
  - What aspects are particularly helpful?
  - What aspects are not very helpful?

- Would using unknowns like this in a digital quiz with more difficult cases be helpful in future?



HOLOGIC
The Science of Sure

Digital Cytology Workshop

In conjunction with the Australian Society of Cytology 49th Annual Scientific and Business Meeting, Hologic cordially invites you to attend a breakfast Digital Cytology Workshop.

The workshop is an interactive and hands on learning environment which will showcase the features of Hologic's soon to be released Digital Cytology platform.

Diagnostic Solutions | hologic.com | australia@hologic.com

Hologic (Australia and New Zealand) Pty Ltd, Suite 302, Level 3, 2 Lyon Park Road, Macquarie Park NSW 2113. Tel. +61 2 9888 8000. ABN 95 079 821 275.

Saturday, 23 October 2021 | 7.00 - 8.00 AM

Stamford Grand Adelaide
Room: Colley 1
2 Jetty Road, Glenelg SA 5045

Complimentary breakfast served for participants.
A certificate of attendance will be provided.

RSVP:
admin@cytology.com.au
Registrations close by Friday, 8 October 2021

Please advise of any dietary requirements when you RSVP.
Places are strictly limited.