Use of Borderline Changes in Endocervical cells reporting category within some of the UK cervical screening programmes

BAC Webinar 15.5.2025

Helen Burrell

CTC Director, CBMS & CSPL

North Bristol NHS Trust

Borderline changes in endocervical cells

- Separate reporting category
- Urgent referral to colposcopy
- CIN2+ outcome not uncommon (CIN2/3/CGIN/SMILE/Cancer)

Benign entities that could cause BEC report

- Cervicitis
- Polyp
- MGH
- LUS
- TEM
- Endometriosis
- Other

- Most cases of tuboendometrioid metaplasia (TEM) and lower uterine segment sampling (LUS) should be confidently recognised and reported as negative

- BEC should not be over-used

www.gov.uk/government/publications/cervical-screening-laboratory-hpv-testing-and-cytology-services/cervical-screening-guidance-for-laboratories-providing-hpv-testing-and-cytology-services-in-the-nhs-cervical-screening-programme#reporting-and-classification-of-cervical-cytology

Borderline in Endocervical cells

www.gov.uk/government/publications/cervical-screening-laboratory-hpv-testing-and-cytology-services/cervical-screening-guidance-for-laboratories-providing-hpv-testing-and-cytology-services-in-the-nhs-cervical-screening-programme#reporting-and-classification-of-cervical-cytology

Rare diagnosis

Apply objective criteria

Consensus reporting to maintain specificity & avoid overuse

BEC

- **Do UK labs have a standardised approach to reporting BEC?**
- **Are outcomes similar between labs?**

- **Questionnaire sent to labs**

Questionnaire

- Borderline in Endocervical Cells
- Total workload
- Total slides
- Number of cases reported
- Outcomes
- Double reporting
- Discussion at MDT
- 2 years' worth of data

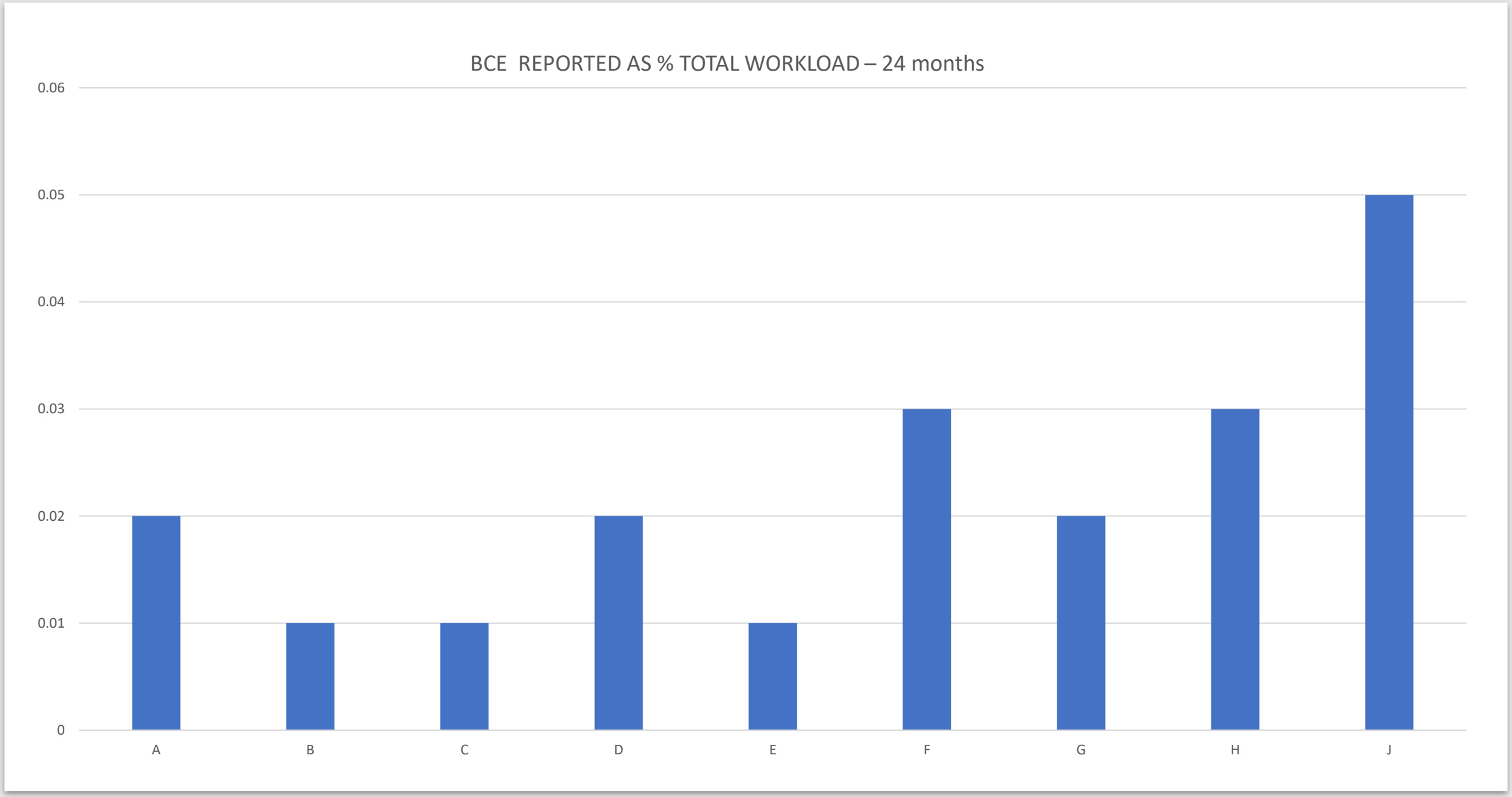
Completed questionnaires received from 9 UK laboratories ☺

2 years data, not consecutive – why?

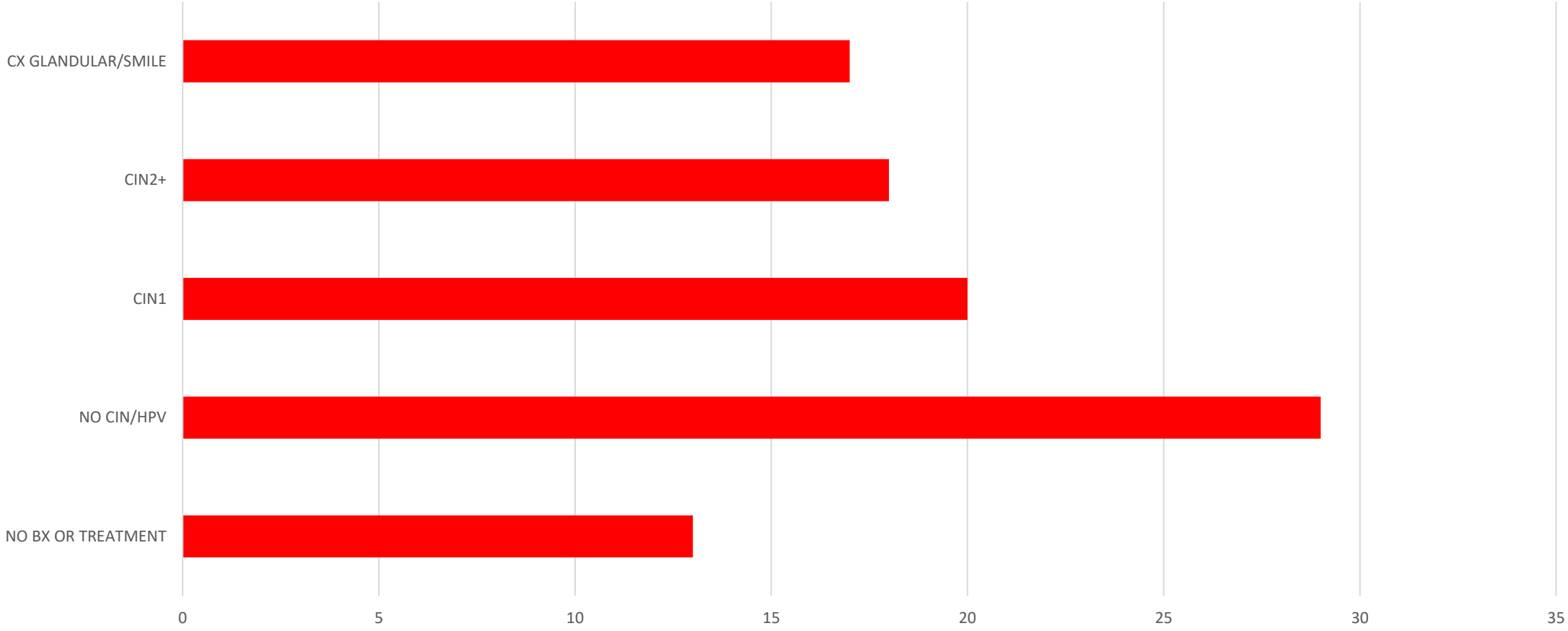
- Looking at reporting trends
- 1 lab significantly reduced number of cases reported as BEC ?why
- Most labs no major differences

- Combined 2 years data for analysis to increase number size

Lab	Samples reported as BEC (24 months total)
A	101
B	78
C	68
D	237
E	64
F	204
G	216
H	268
J	131


BCE REPORTED AS % TOTAL WORKLOAD – 24 months
0.06
0.05
0.04
0.03
0.02
0.01
0
A
B
C
D
E
F
G
H
J

BEC Outcomes (2020-21 data)



Outcomes

Requested outcomes

- No biopsy/treatment
- NAD
- HPV
- CIN1
- CIN2+ (squamous only)
- CIN & CGIN/Adeno/SMILE
- Other
- Unknown follow up

Issues with data requested in questionnaire

Several labs unable to break down data if dual pathology

Some patients counted more than once?

Some labs counted CIN3/SCC as other

Some labs could not split NAD and HPV for histo

Adenosquamous?

Abnormal Outcomes

Outcomes

- CIN1
- CIN2 + (all cases)
- CIN2+ (squamous)
- CIN2+ (glandular abn)

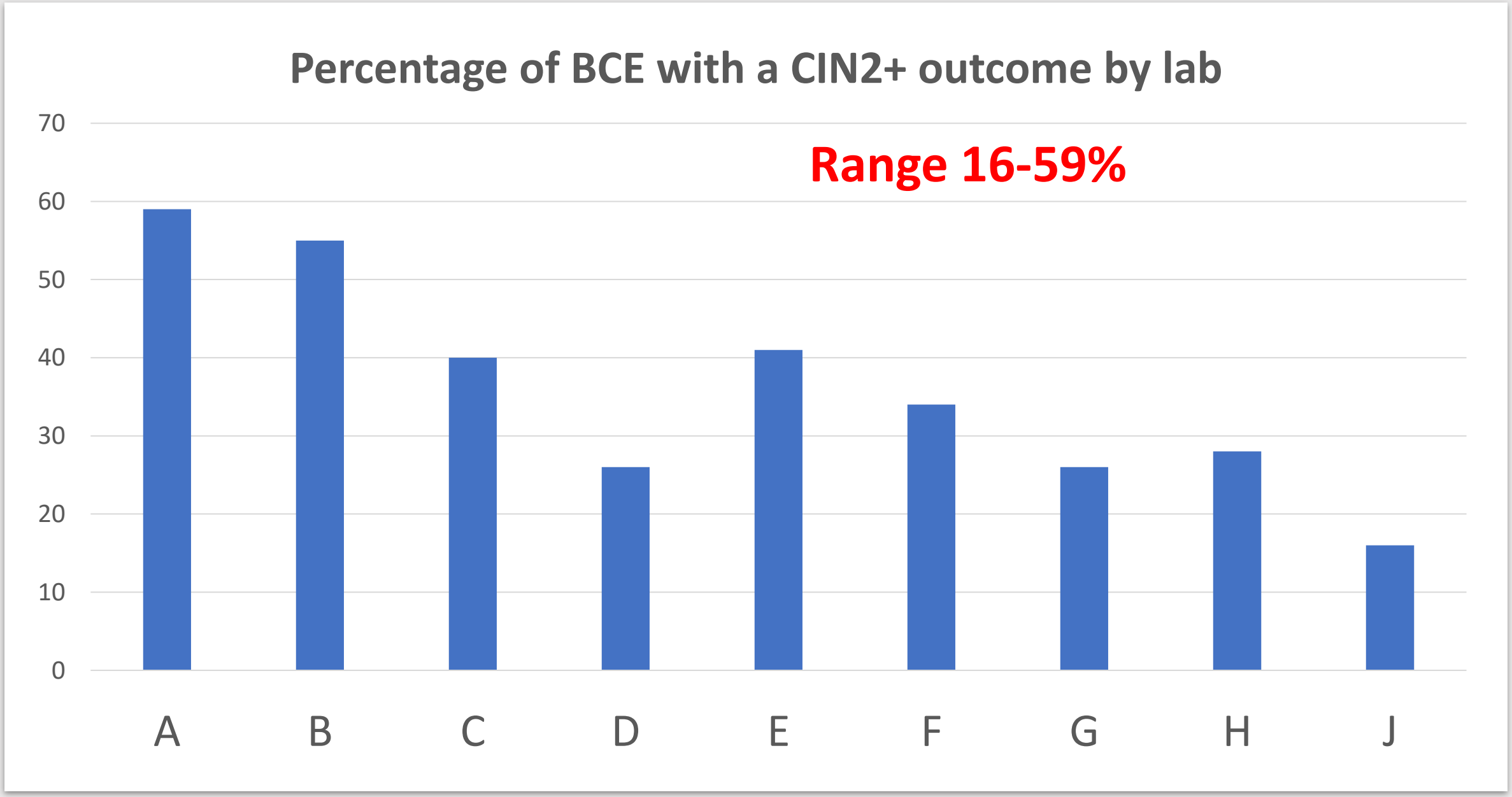
Accuracy of data

- Rounded up numbers for presentation
- CIN1 data accurate
- Combined CIN2 (all) outcomes likely most accurate

CIN2+ outcomes for all cases of BEC (24 months)

	BEC cases	CIN2+ outcome
TOTAL	1367	449
Average CIN2+ outcome = 33%		

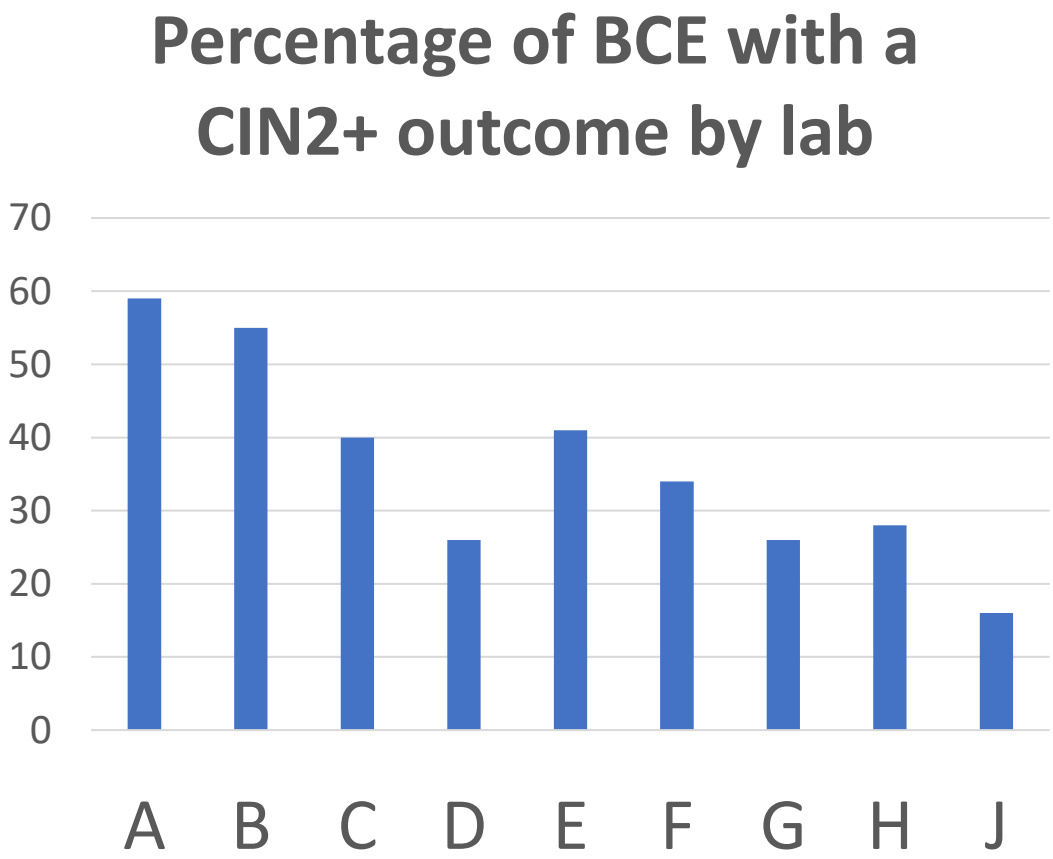
Was there much variation for CIN2+ outcomes of BEC cases between UK labs?


Percentage of BCE with a CIN2+ outcome by lab
Range 16-59%
70
60
50
40
30
20
10
0
A
B
C
D
E
F
G
H
J

CIN2+ outcomes

- Range of PPV for BEC 16-59%
- Low CIN2+ outcome for some labs
- Unnecessary LLETZ samples possible in some areas?
- Colp/Histo/MDT reviews?
- Are some CIN2+ outcome rates too high?

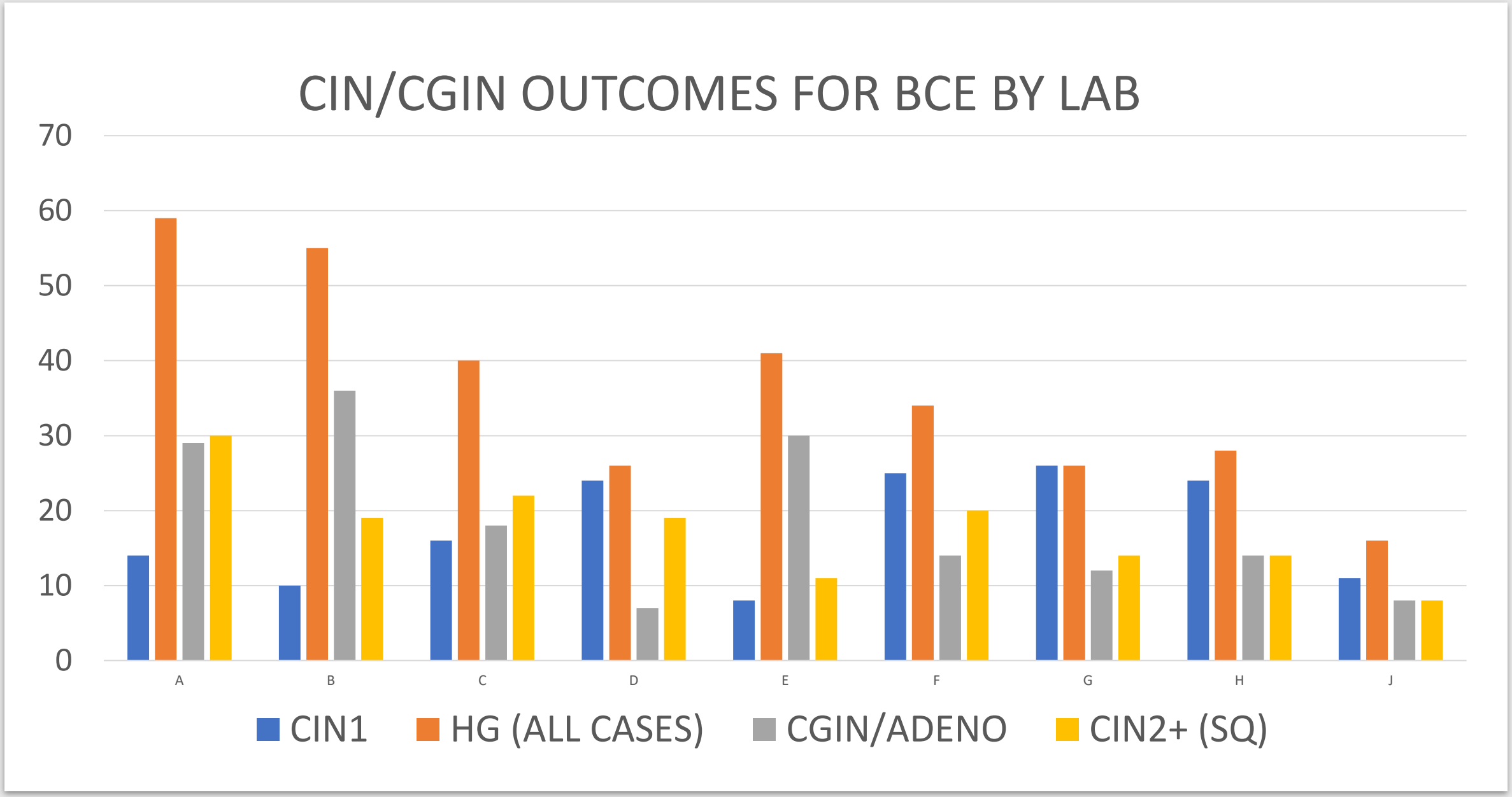
- What is an acceptable range for BEC CIN2+ outcomes to prevent over-use?



BEC – are the changes always in glandular cells?

- How often were squamous abnormalities reported as BCE?
- How often a HG outcome squamous?
- How often was the outcome glandular?

- CIN1
- CIN2+
- Glandular abnormality


CIN/CGIN OUTCOMES FOR BCE BY LAB
70
60
50
40
30
20
10
0
A
B
C
D
E
F
G
H
J
CIN1
HG (ALL CASES)
CGIN/ADENO
CIN2+ (SQ)

Are all relevant cases of BEC discussed at MDT?

Are all relevant cases of BEC discussed at MDT?

- Most labs did not know
- One lab audits this monthly to ensure all are discussed
- 70.5-97% cases discussed where information provided

- How important is discussion of BEC cases at MDT?

Management of BEC at colposcopy

4. Colposcopic diagnosis, treatment and follow up - GOV.UK

- Individuals referred with borderline changes in endocervical cells with a negative colposcopic examination should not be given a 36 month recall but considered at MDT.

- Follow up at 6 months with screening or in the colposcopy clinic.

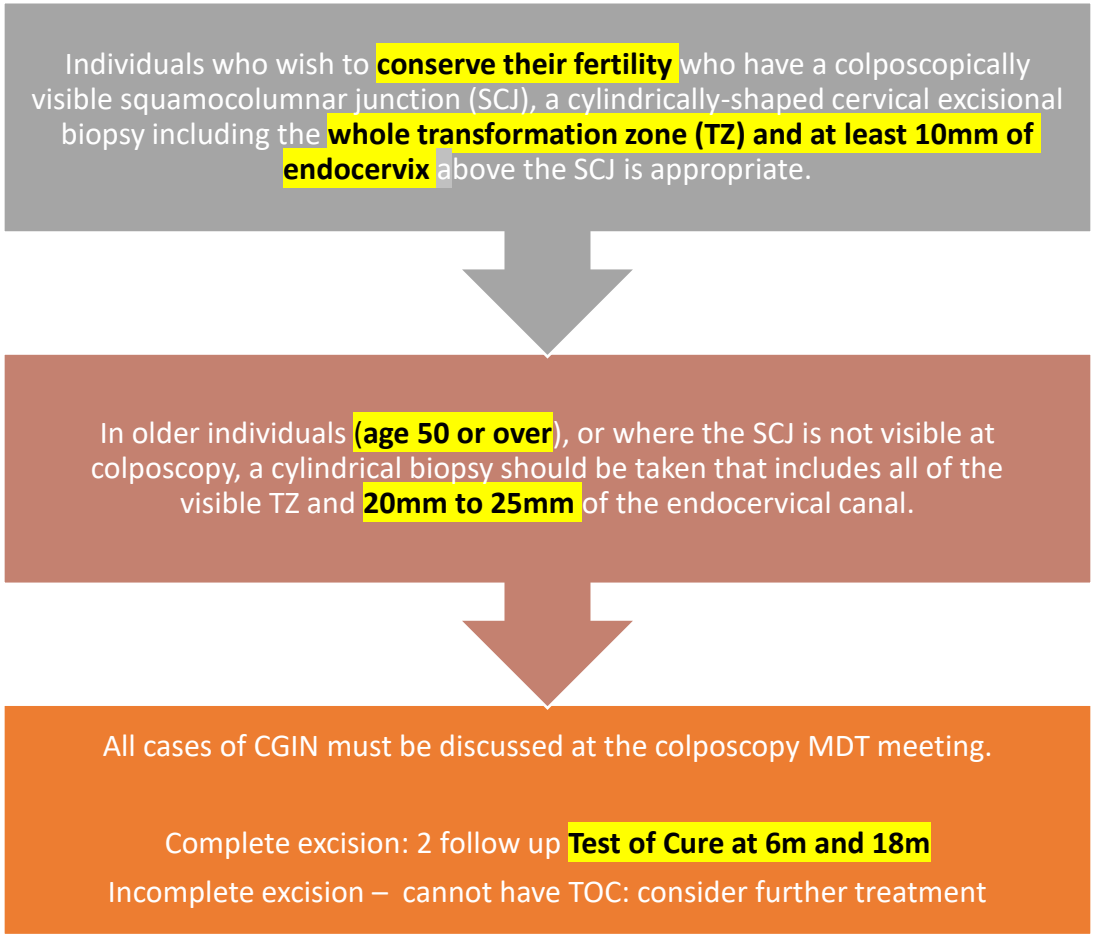
BCE - MDT discussion:

Review BCE

- Pbx/LLETZ/NAD?
- How concerned are you about the BEC?
- Is histo representative?
- Could CIN account for the BEC on review? (CIN/CGIN often co-exist)
- Is LLETZ adequate to exclude CGIN if cytology review of concern? Deeper LLETZ needed??
- Monitor 6 mths

- Can discharge to R36 recall if the cytology is downgraded to negative at MDT

CGIN Management at colp

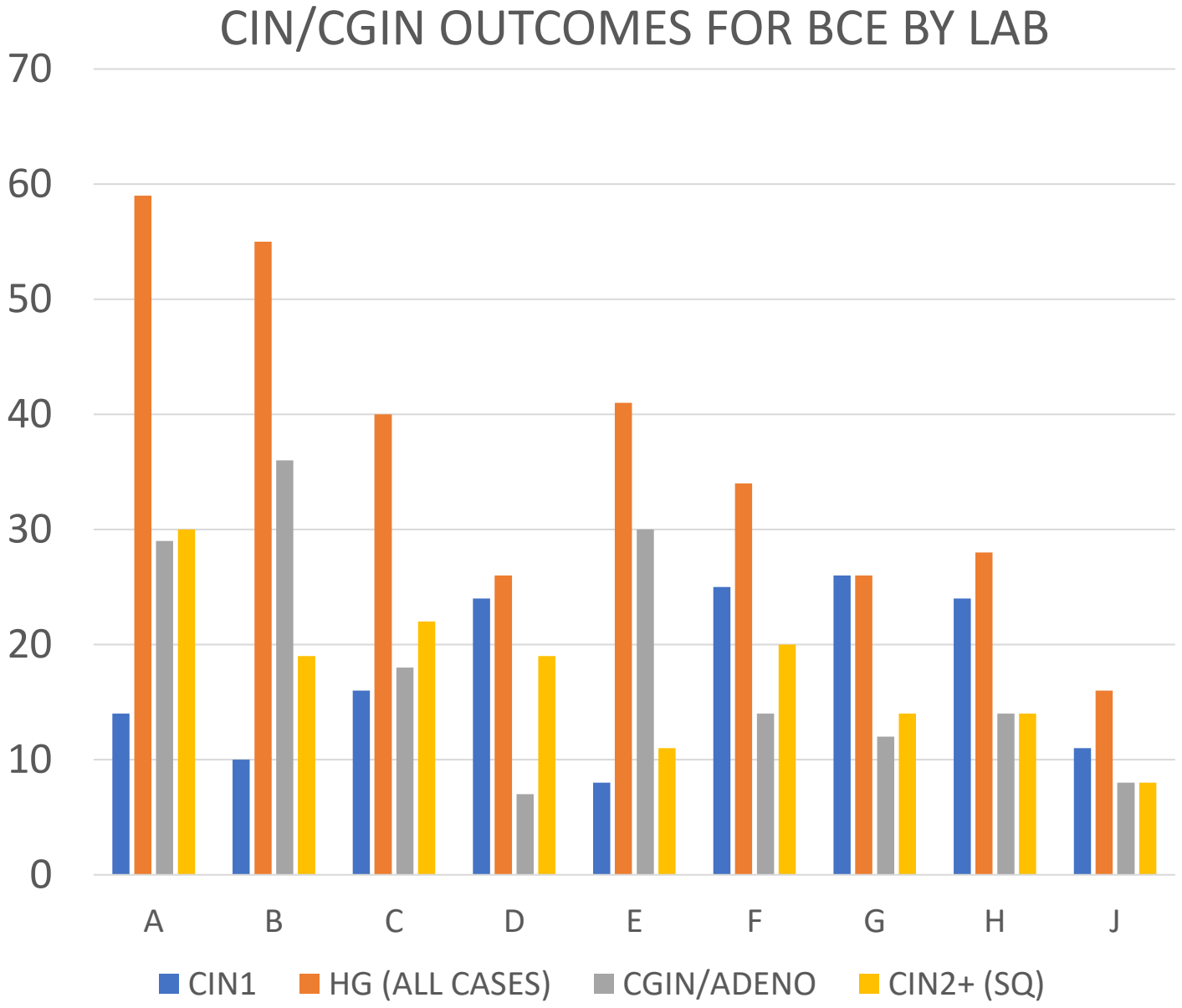


Do you use consensus reporting for all cases of BEC?

Consensus reporting for BEC

- 7 labs use consensus reporting
- Does it avoid overuse?
- Does it improve specificity?

- BCDEGHJ - yes
- AF – no



Questions (I don’t have all the answers!)

- Is category being overused by some labs for inflammatory endos?
- Is category being used inappropriately for metaplastic cell abnormality?
- Is category being inappropriately used for cases where CGIN features present?
- Does use of checkers influence rates/outcomes of BEC?

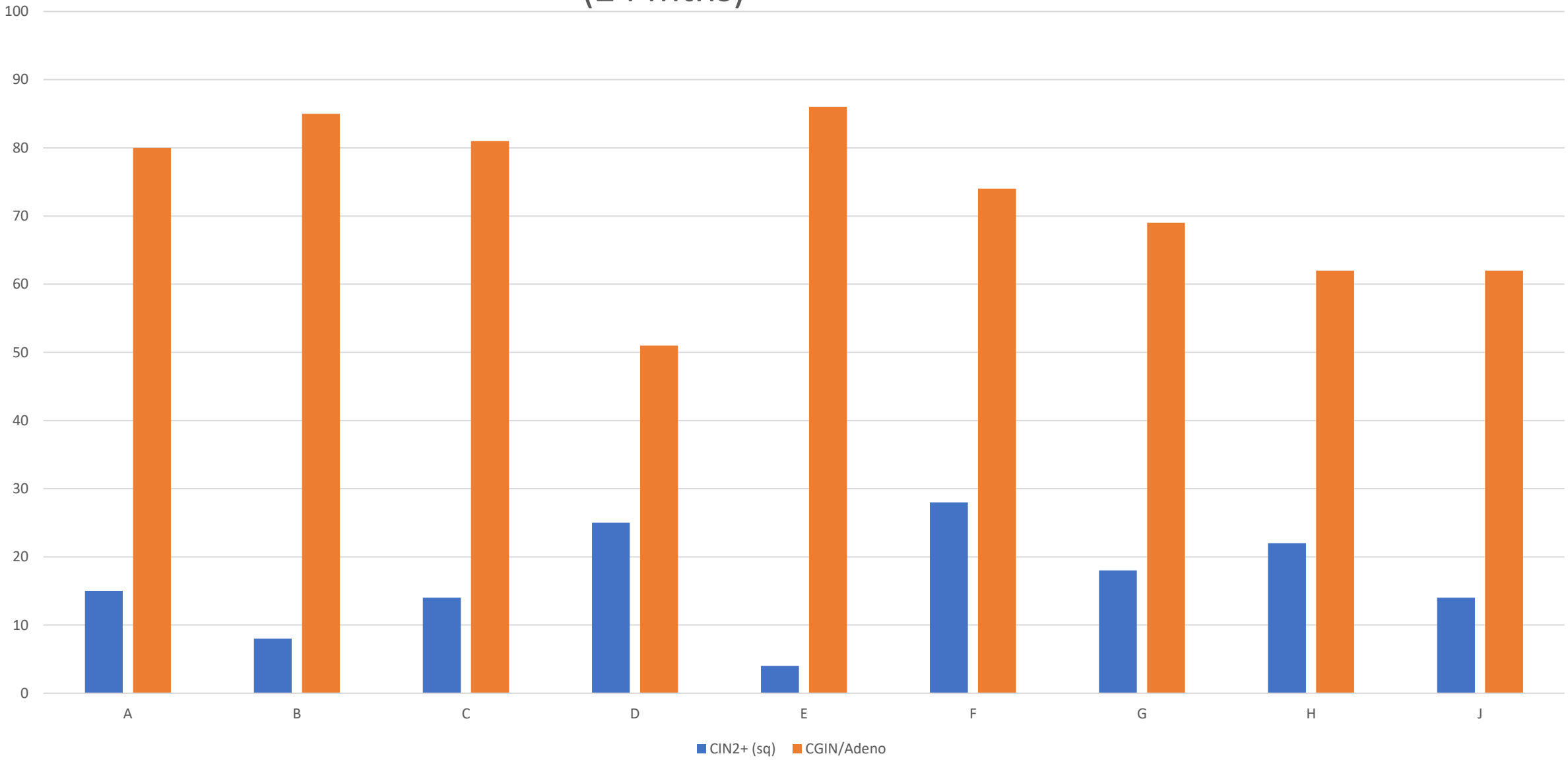
- How do CGIN outcomes vary between labs??
  - Same data requested for CGIN

CGIN reporting

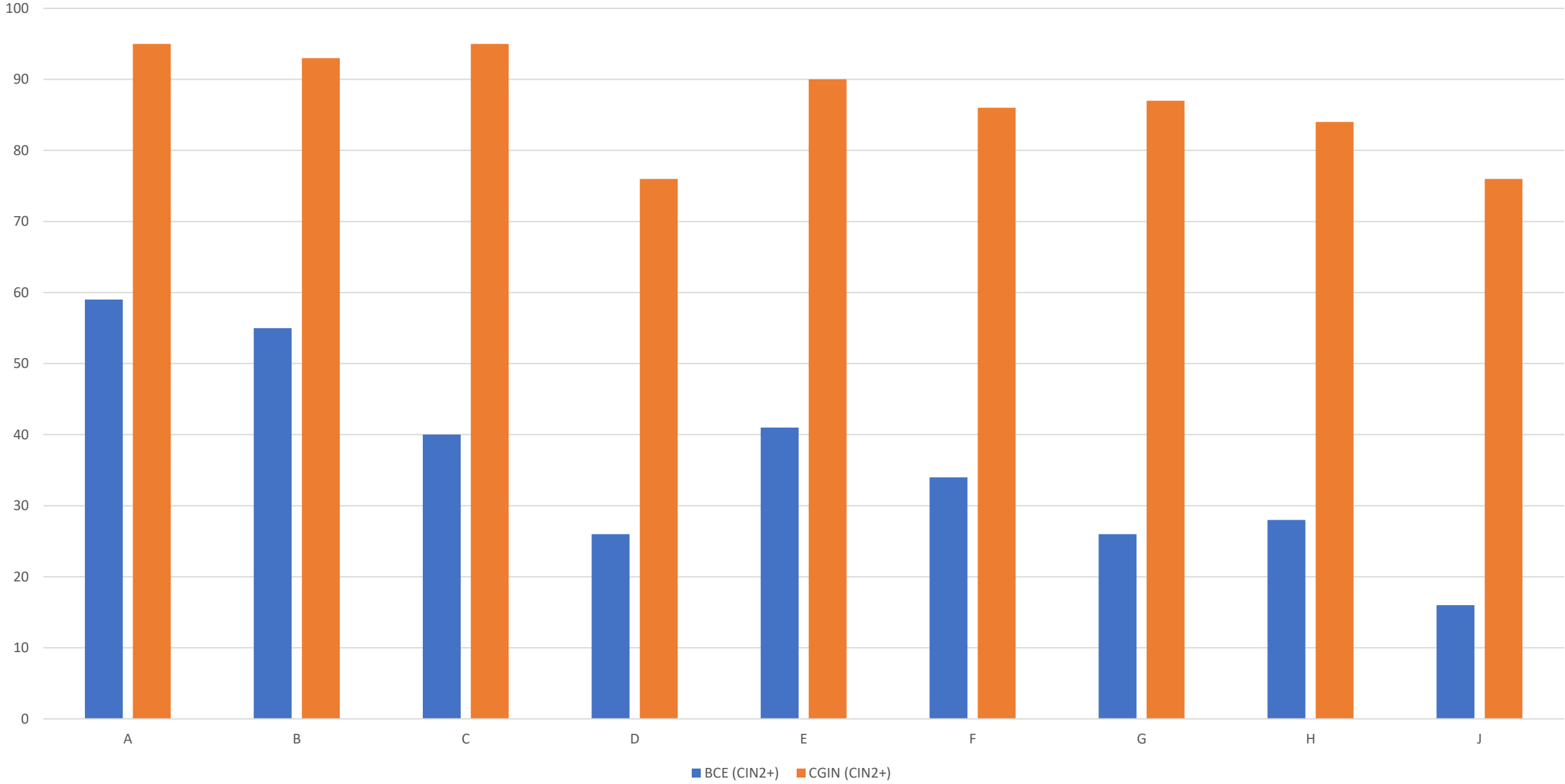
- How do CIN2+ outcomes compare between BCE and CGIN?

- Same data requested for CGIN

CIN2 + outcome for cases reported as CGIN (24 mths)



CIN2+ OUTCOMES FOR BCE AND CGIN BY LAB



BEC outcomes

- Some labs have lower CIN2 outcomes for BEC (and CGIN)
- Do labs with highest CIN2+ outcomes have anything in common?
  - Training school?
  - Workload?
  - Number of consultants/numbers of cases reported?
  - CBMS or pathologists?
  - Do consultants report both cervical cyto and histo?

- Are people worried about cancer audit?
- Is criteria for BEC clear enough?
- What can we do to improve?

Criteria for reporting BEC

www.gov.uk/government/publications/cervical-screening-laboratory-hpv-testing-and-cytology-services/cervical-screening-guidance-for-laboratories-providing-hpv-testing-and-cytology-services-in-the-nhs-cervical-screening-programme#reporting-and-classification-of-cervical-cytology

CGIN

- Groups show architectural and nuclear features of CGIN

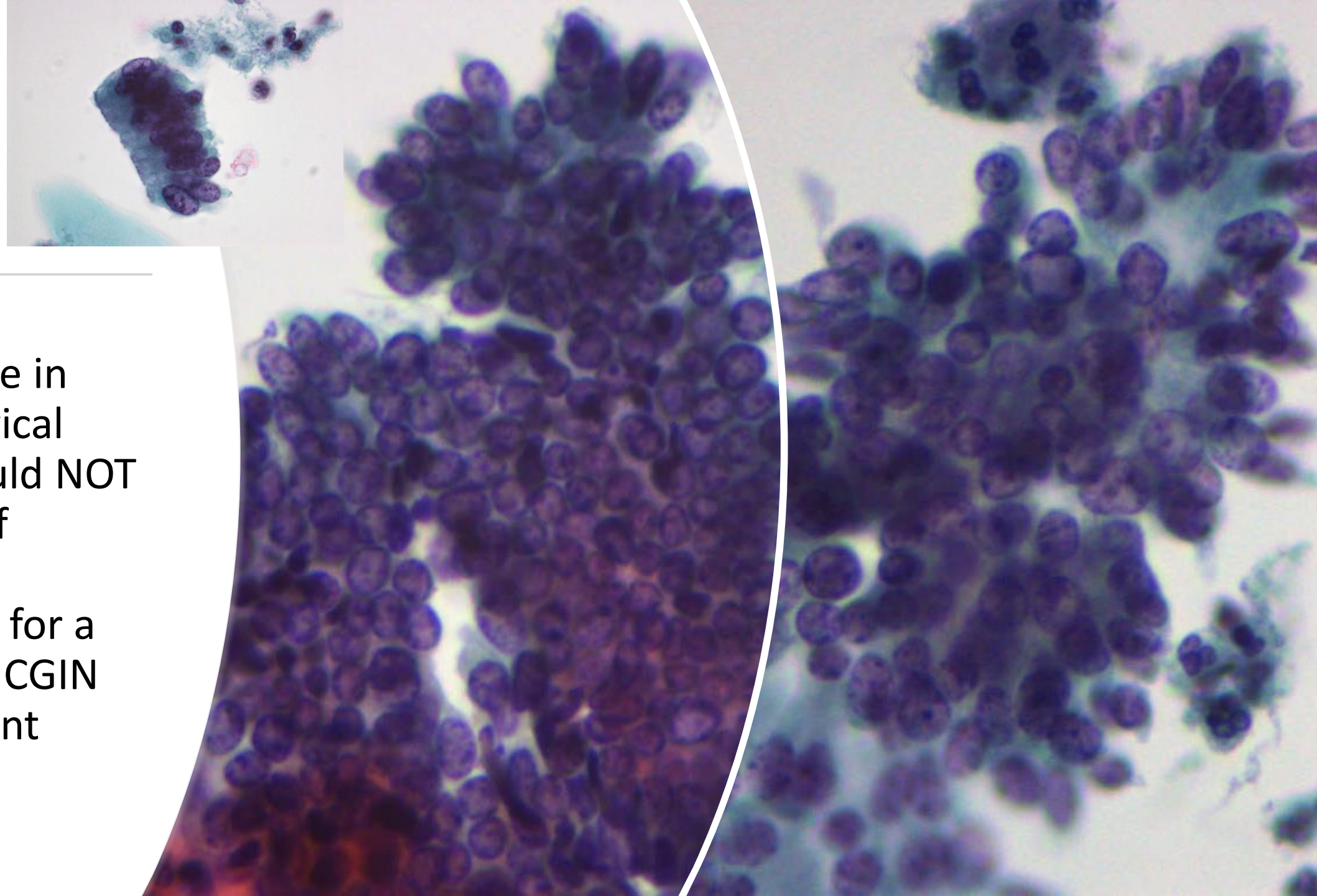
Borderline Endocervicals

- Groups show either architectural or nuclear features of CGIN

- Do we consider other features??

CGIN

- Borderline in endocervical cells should NOT be used if features sufficient for a report of CGIN are present



Borderline changes in endocervical cells

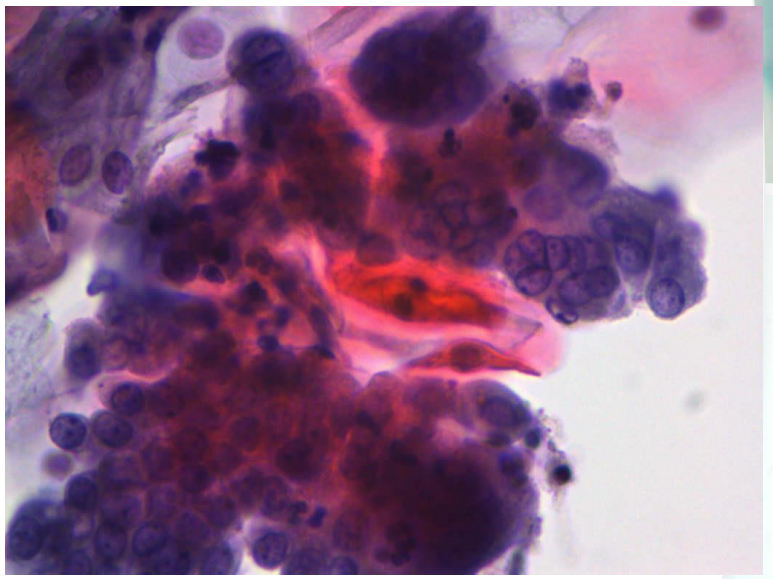
Typically, cell groups show either architectural or nuclear features suggesting CGIN. For example, there may be crowded cells with pseudostratification but little nuclear abnormality, or coarsely clumped chromatin with entirely normal architecture.

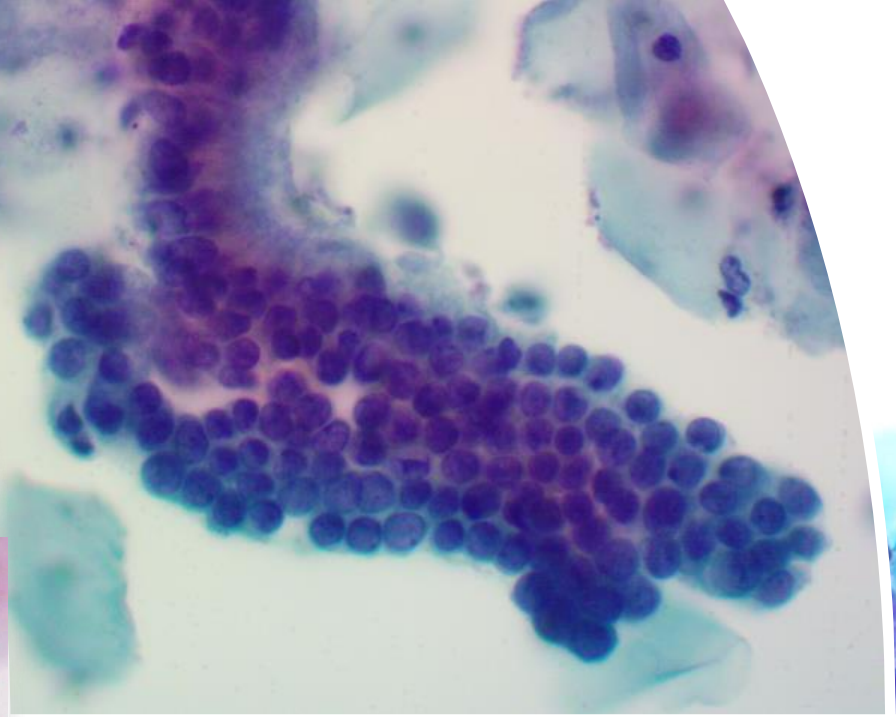
Borderline change in endocervical cells should be a rare diagnosis.

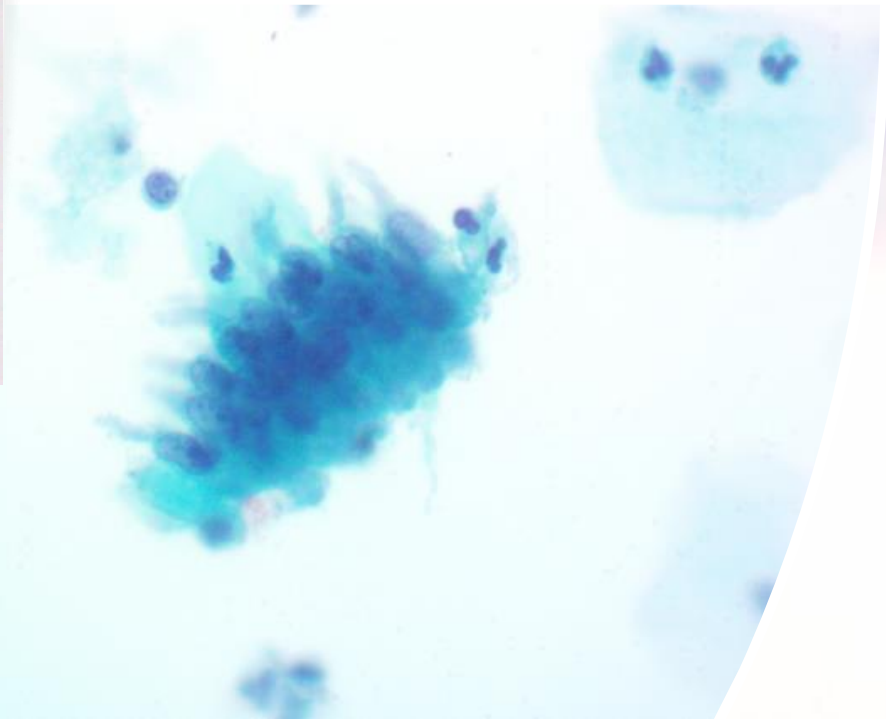
We recommend the application of objective criteria and consensus reporting to maintain the specificity of the category and avoid unnecessary colposcopy.

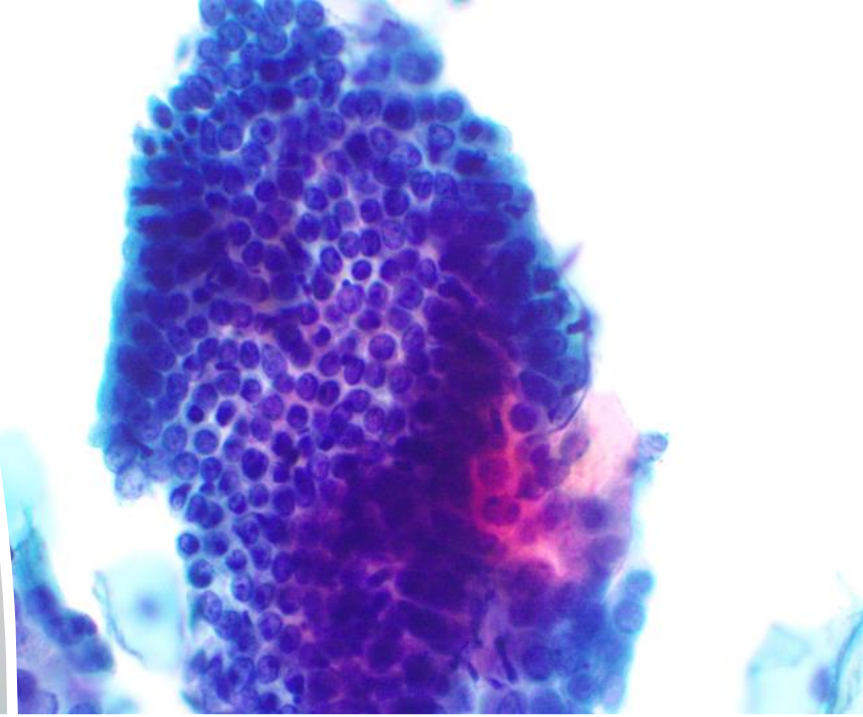
Cervicitis and polyps can produce reactive changes in endocervical cells, and these may mimic glandular neoplasia. Inspection of both the architecture and the nuclear features of the groups should exclude neoplasia in most cases, allowing a confident negative diagnosis

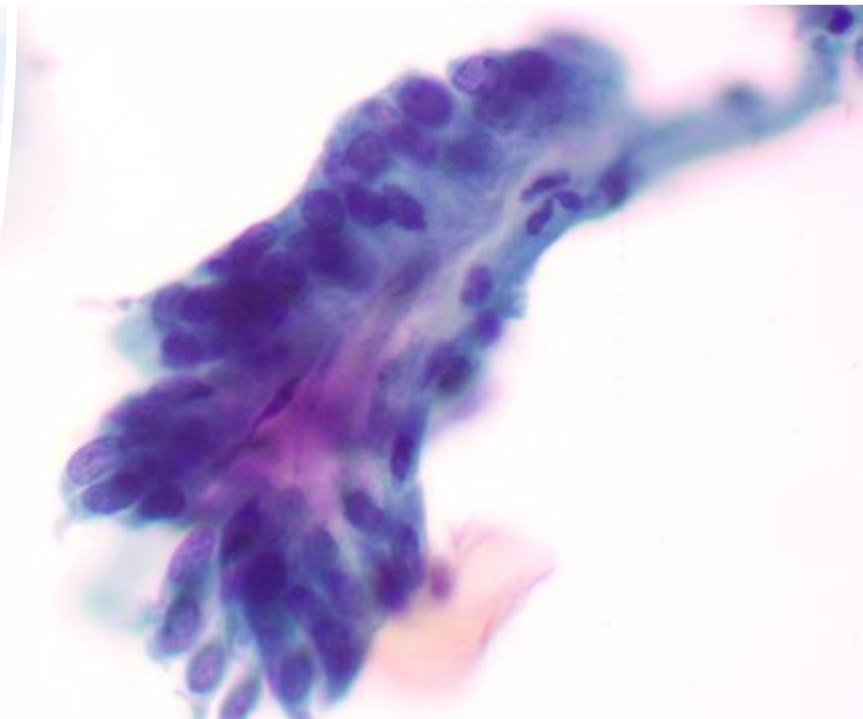
Endocervical cells within normal limits – not BEC



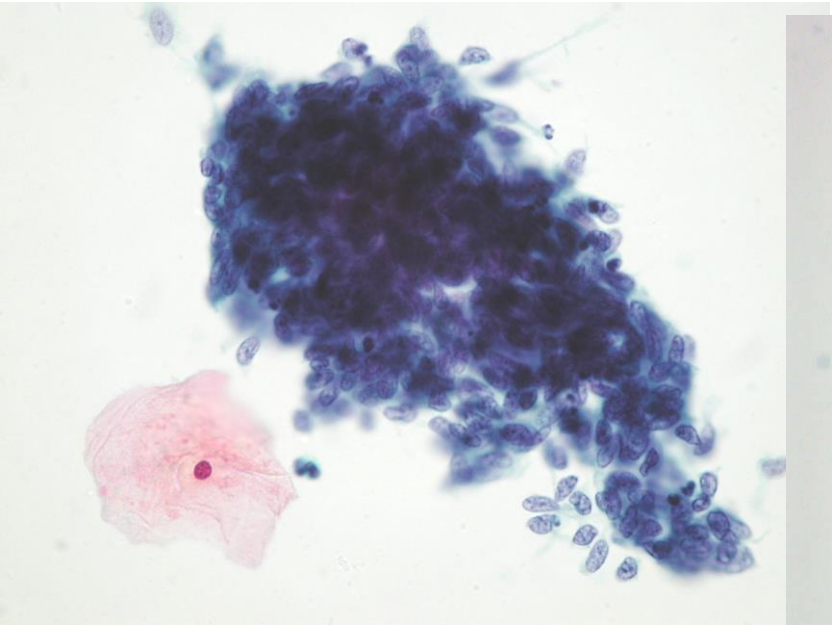


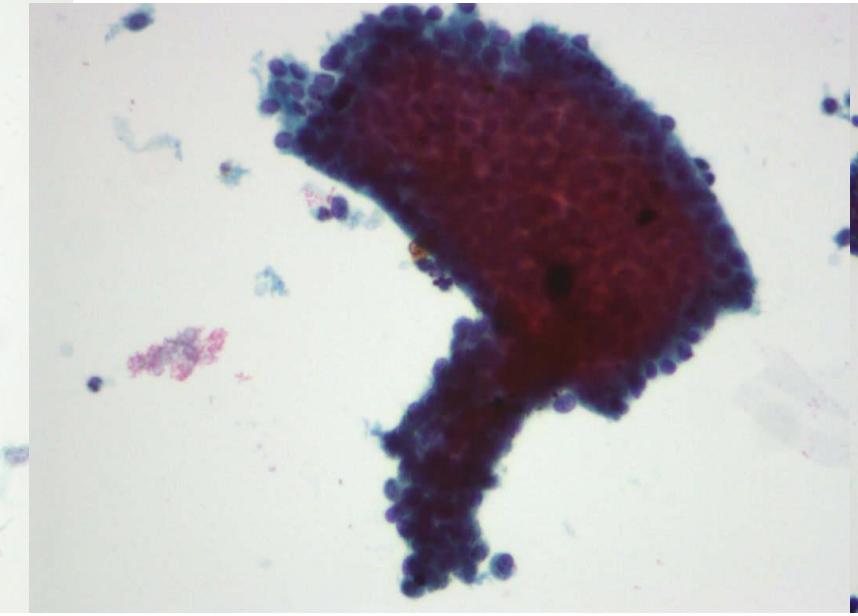


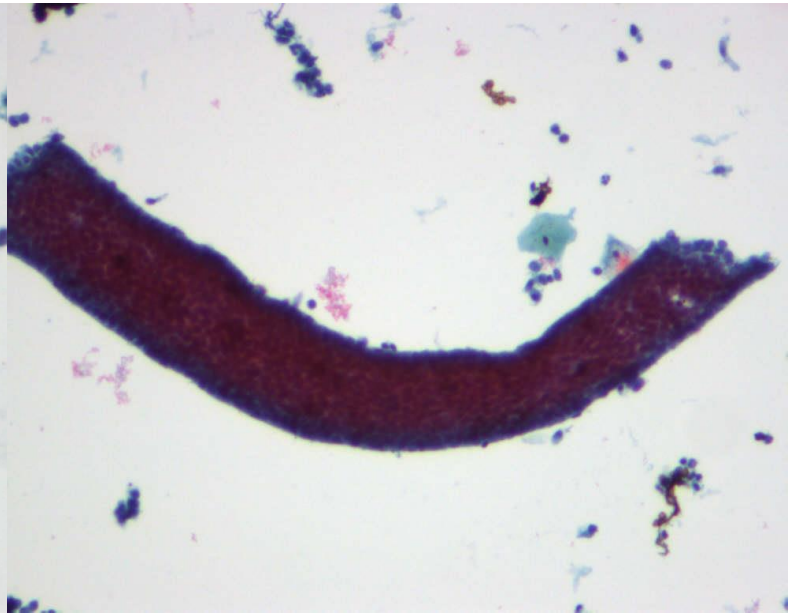




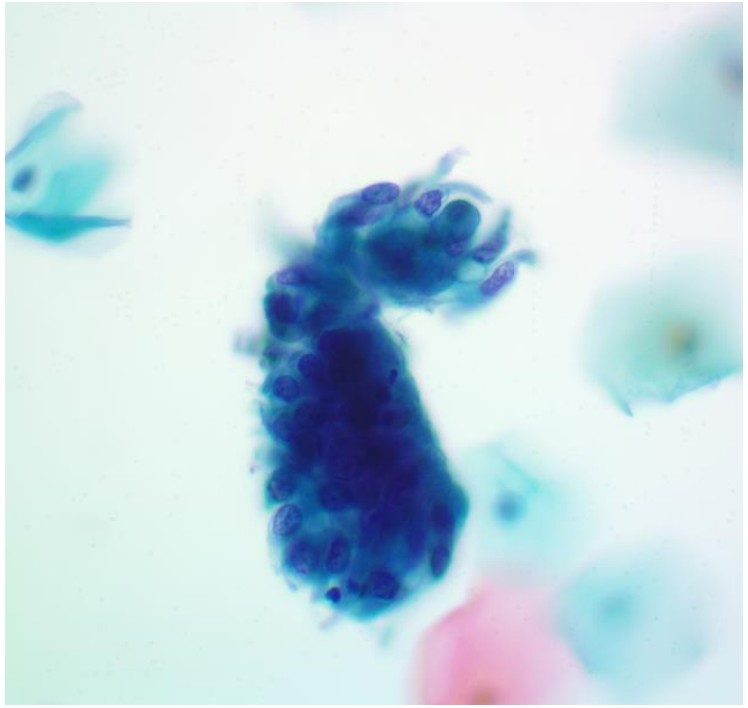
Not BEC – endometrial stromal cells & LUS

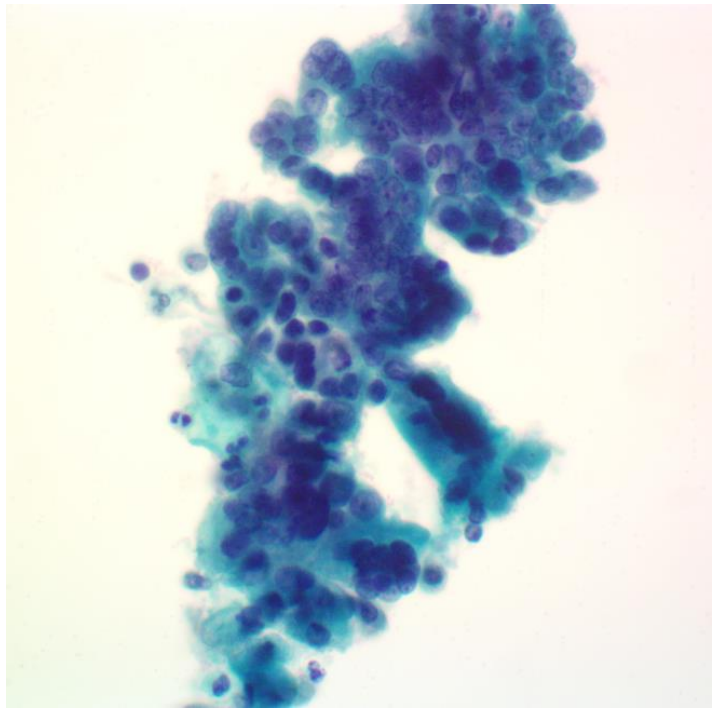


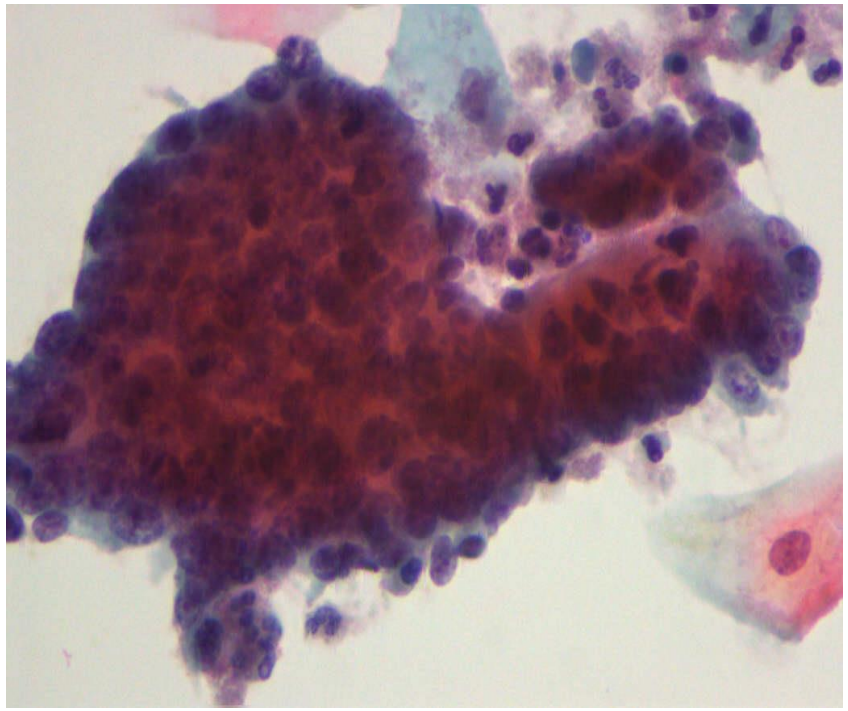




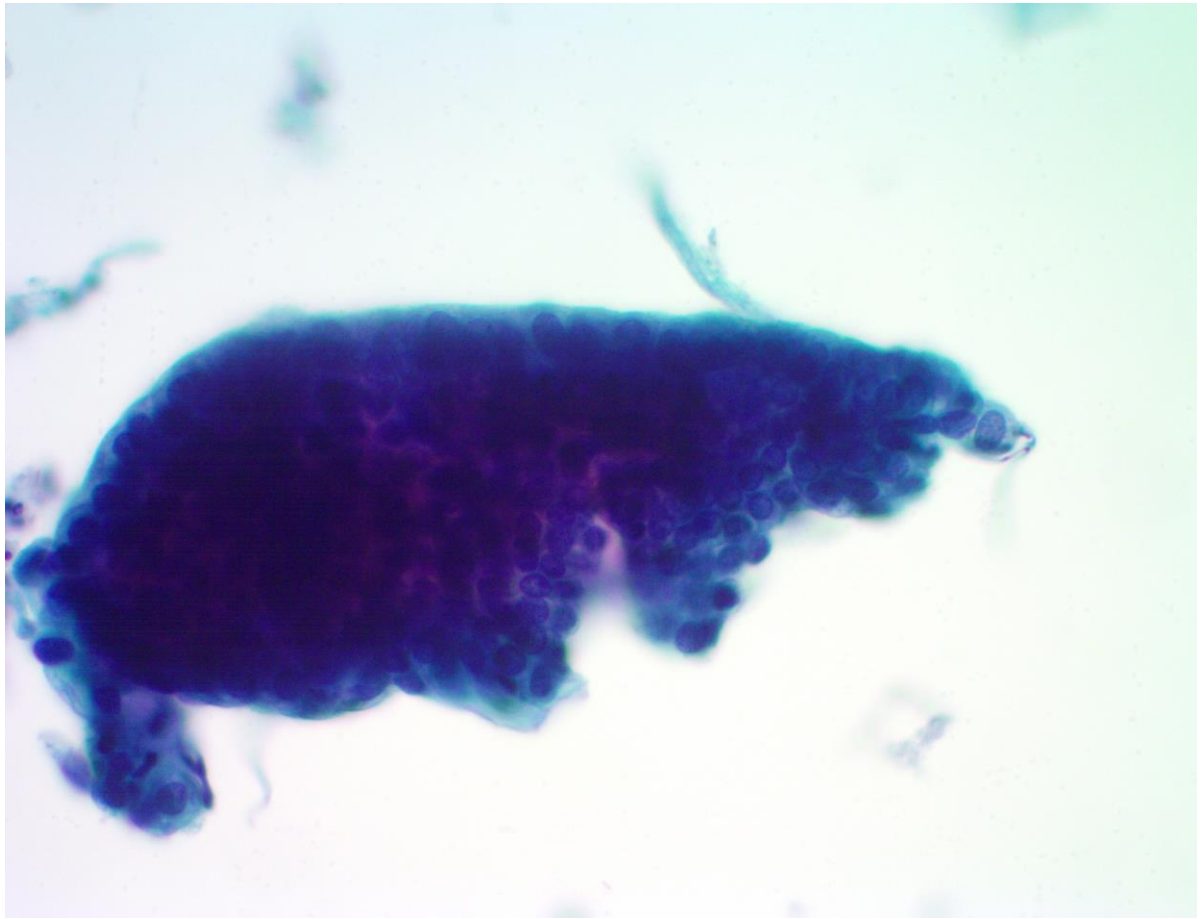
BEC – outcome inflammation no CIN no CGIN

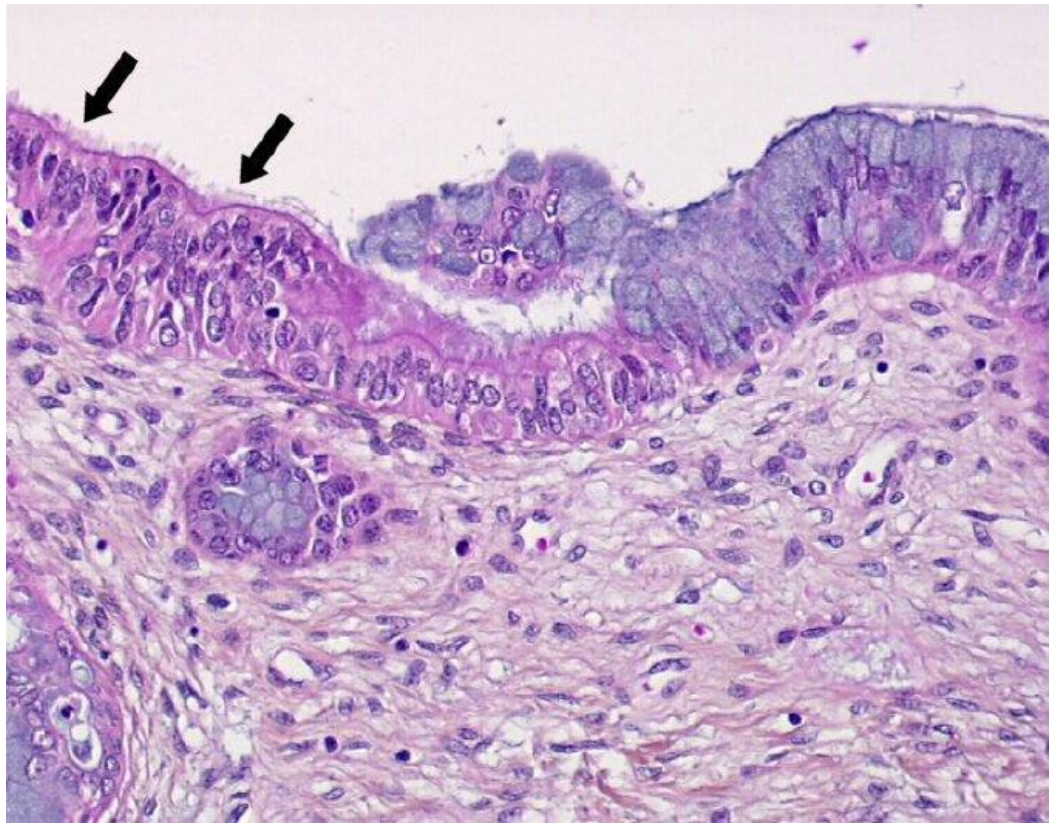




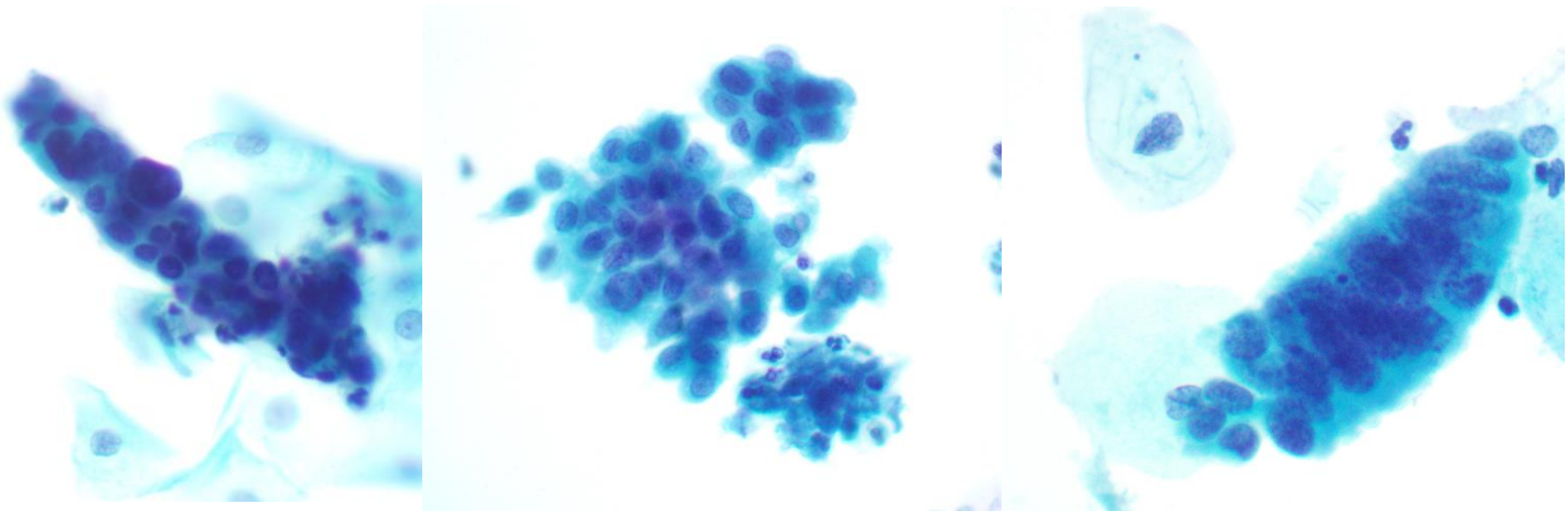


BEC – outcome no CIN/CGIN(Tubal metaplasia present)

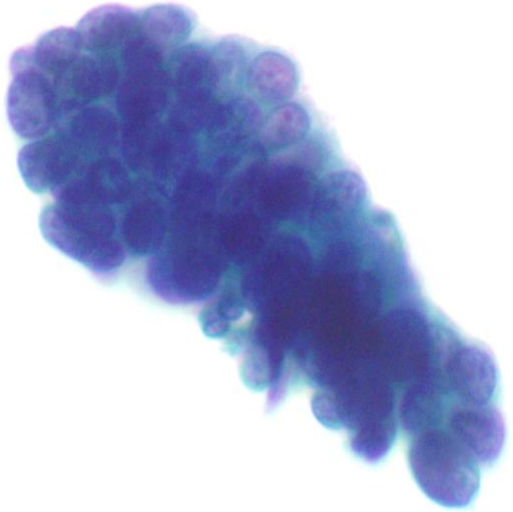


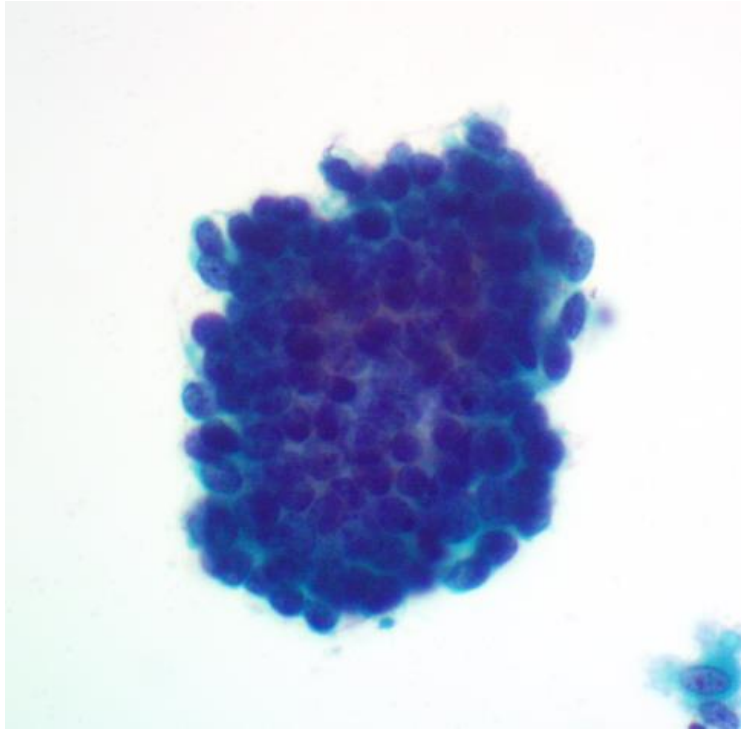


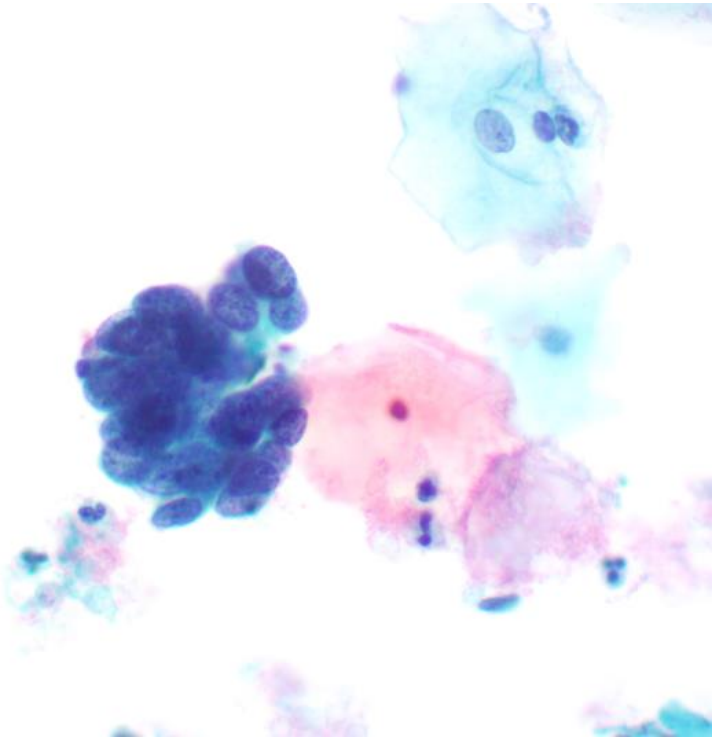
BEC – outcome CIN2, no CGIN



BCE – outcome CGIN







Summary

- BCE
  - Most cases of reactive endos/TEM/LUS should be reported as negative if reassuring features are present
  - BCE should not be used if sufficient features for a report of CGIN
  - Many cases of BEC have an outcome of HG squamous abnormality
  - CIN2+ outcomes for labs range from **16-59%**
  - Potentially being overused in some labs
  - How often are patients with benign outcomes being LLETZ'd?
  - Consensus reporting does not seem to improve CIN2+ outcomes
  - Are criteria for BEC clear enough?

- CGIN data: CIN2+ outcome range *76-95%

  *(*please note that the lower range for CGIN outcomes has been amended from data originally presented on 15.5.25)*

Rare diagnosis

Apply objective criteria

Consensus reporting to maintain specificity & avoid overuse

Can we refine our reporting of BCE to avoid unnecessary use?

- Do we need a BEC document/example cases that all labs contribute to?
- Acceptable range for BEC CIN2+?
- How many BEC patients with benign outcome have a LLETZ?
- Lab multi header sessions for discrepant cases
- Update courses should include lots of benign glandular changes within workshops that should not be reported as BEC
- Topic for a BAC lunchtime slide club session in future?
- Any comments either today or via email very welcome

Any questions?

- Thank you for listening