The British Association of Gynaecological Pathologists

Lecturer – Dr Asma Faruqi

Co-author of the RCPath Dataset for reporting Vulval carcinomas

The British Association of Gynaecological Pathologists

Vulvo-Vaginal Update Course

- RCPath Vulval Dataset Update
- Dr Asma Z Faruqi
- 29 November 2024

The British Association of Gynaecological Pathologists

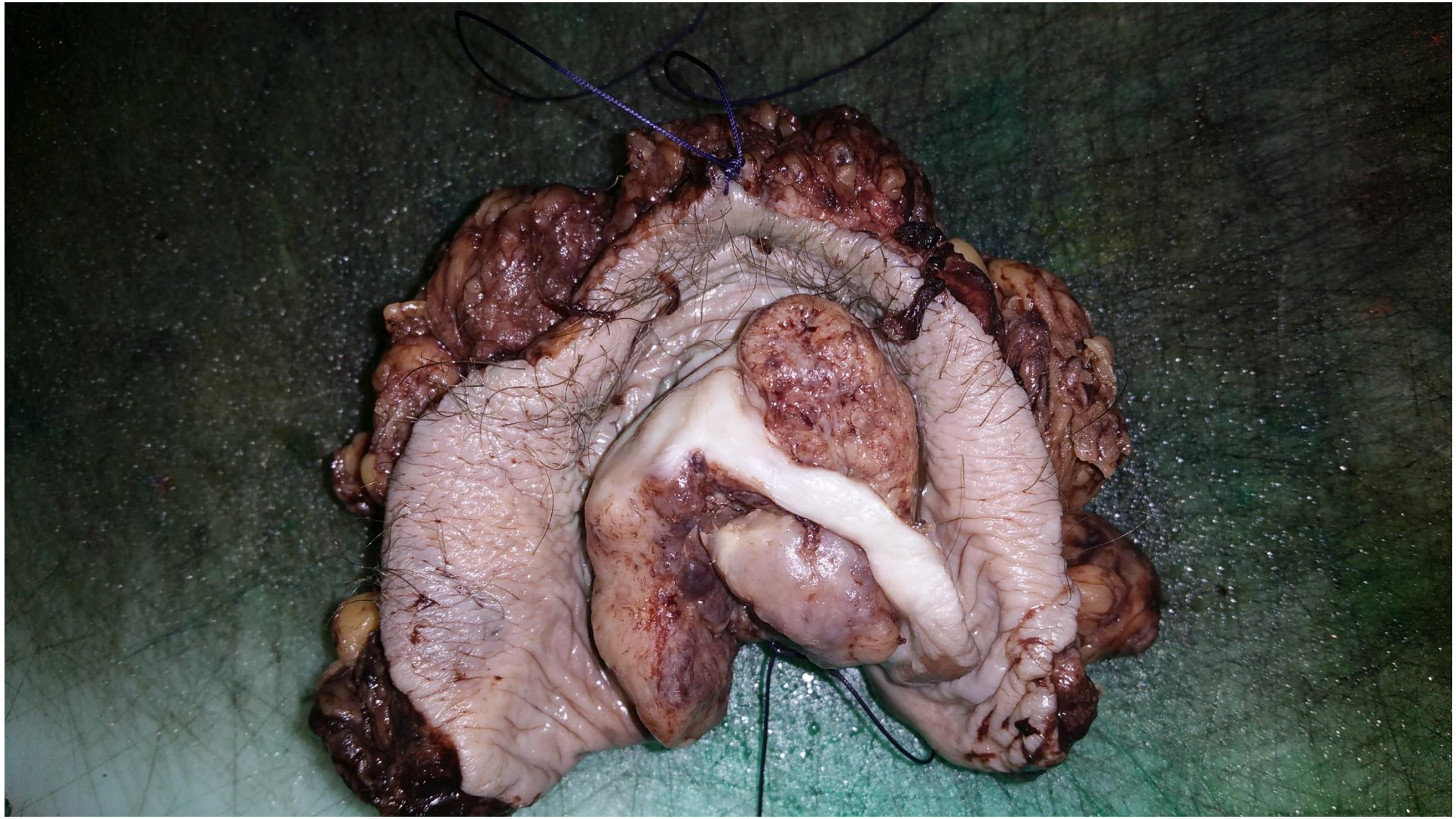
Speaker disclosures

I have no financial conflicts of interest to disclose

What's new

- One set of tumour measurements in the final report
- Tumour differentiation
- Guidance on measurement of depth of invasion (FIGO 2021)
- If more than one tumour is present, each should be should be separately staged with separate datasets filled in
- Further details on precursor lesions
- Interpretation of ancillary tests.
- Updated recommendations for handling and reporting sentinel lymph nodes (SLN)
- Updated recommendations on margin measurement
- Updated SNOMED-CT coding

Tumour measurements



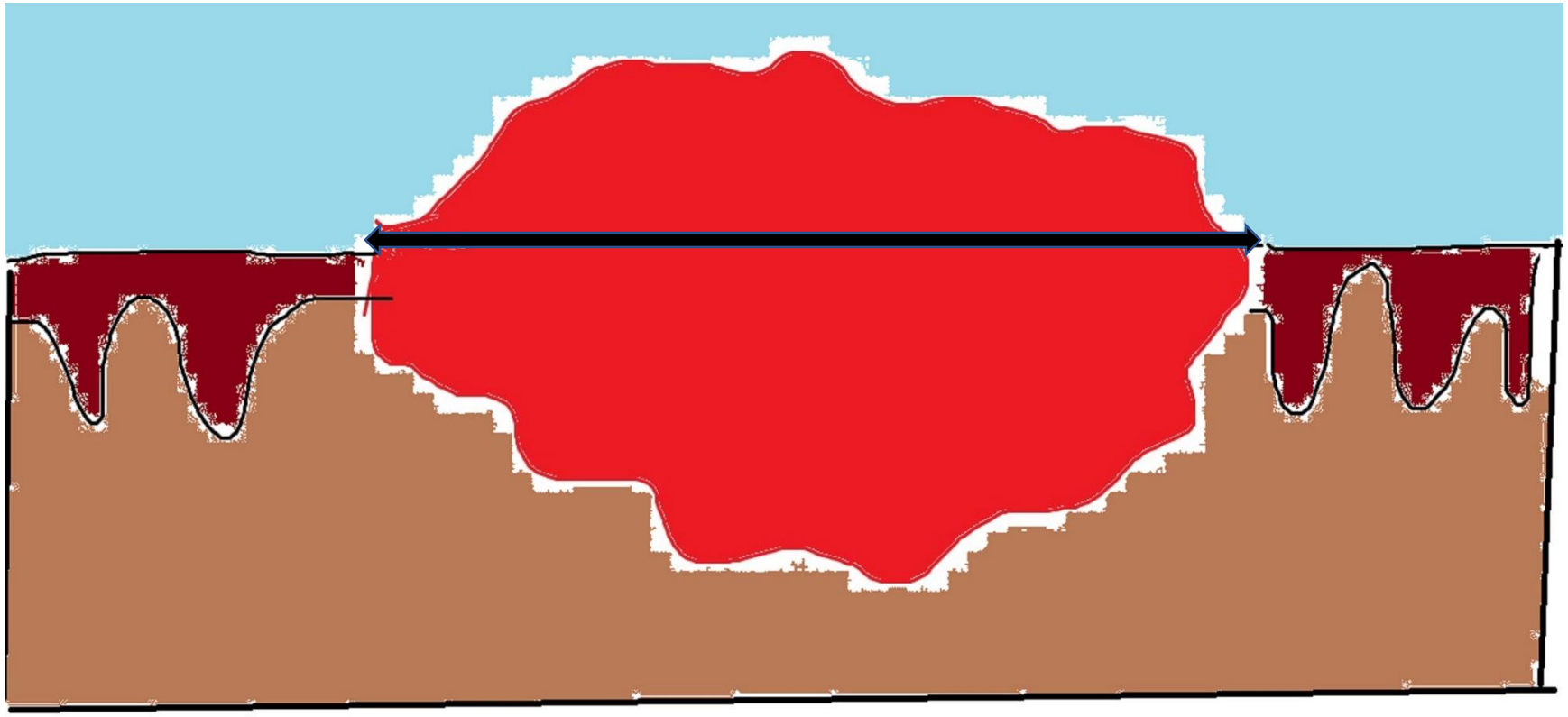
Tumour measurements

To prevent confusion the final report should have only one set of measurements

Large tumours – macroscopic measurement might be more accurate

Maximum horizontal dimension

Parallel to the skin surface



Terminology

Terminology

Previously: ~~Warty, basaloid, keratinising, non-keratinising~~

HPV-associated

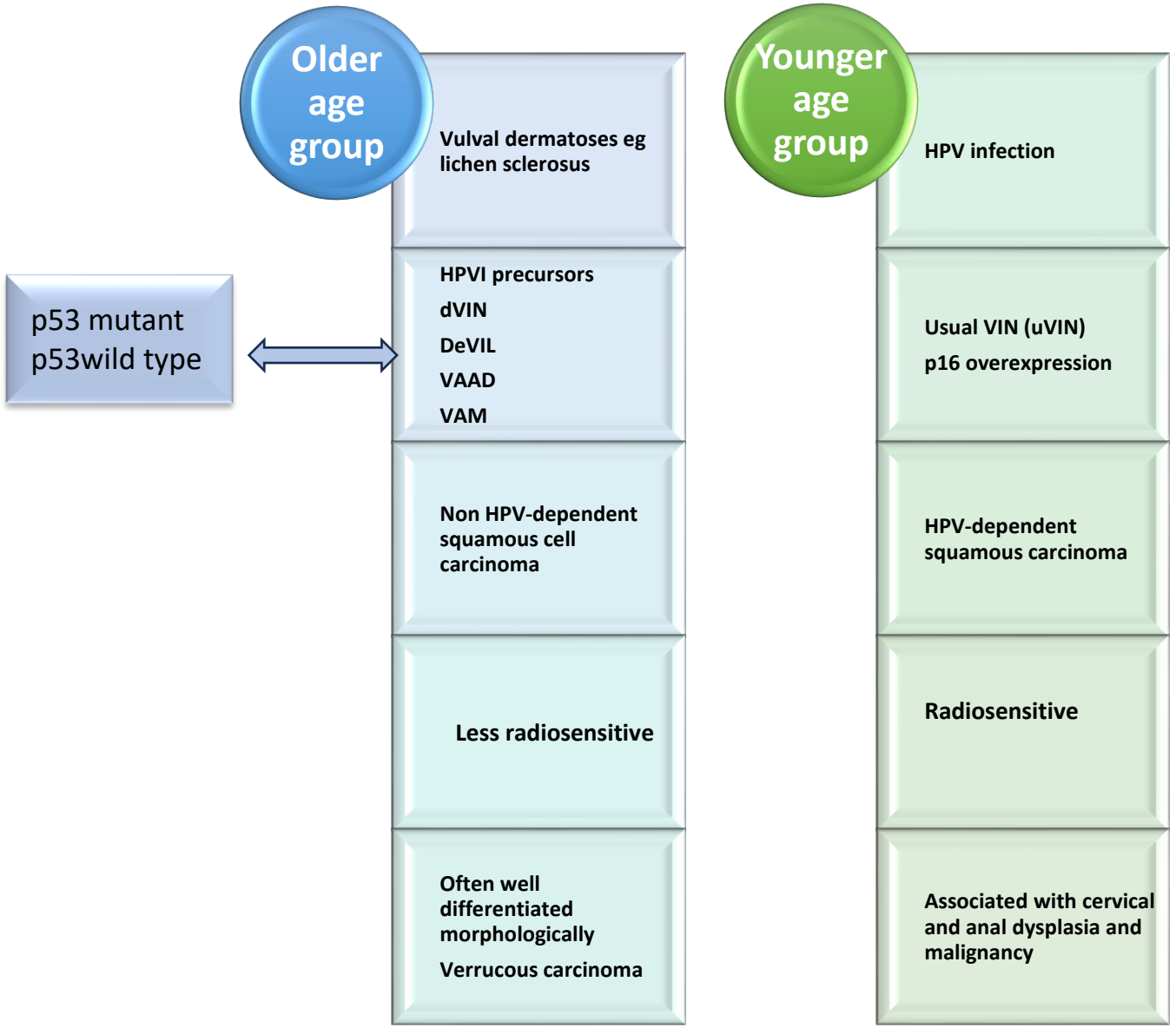
HPV-independent

Differentiation/grading:

Can mislead (HPV-I tumours, well differentiated but poorer prognosis and HPV-associated can look poorly differentiated)

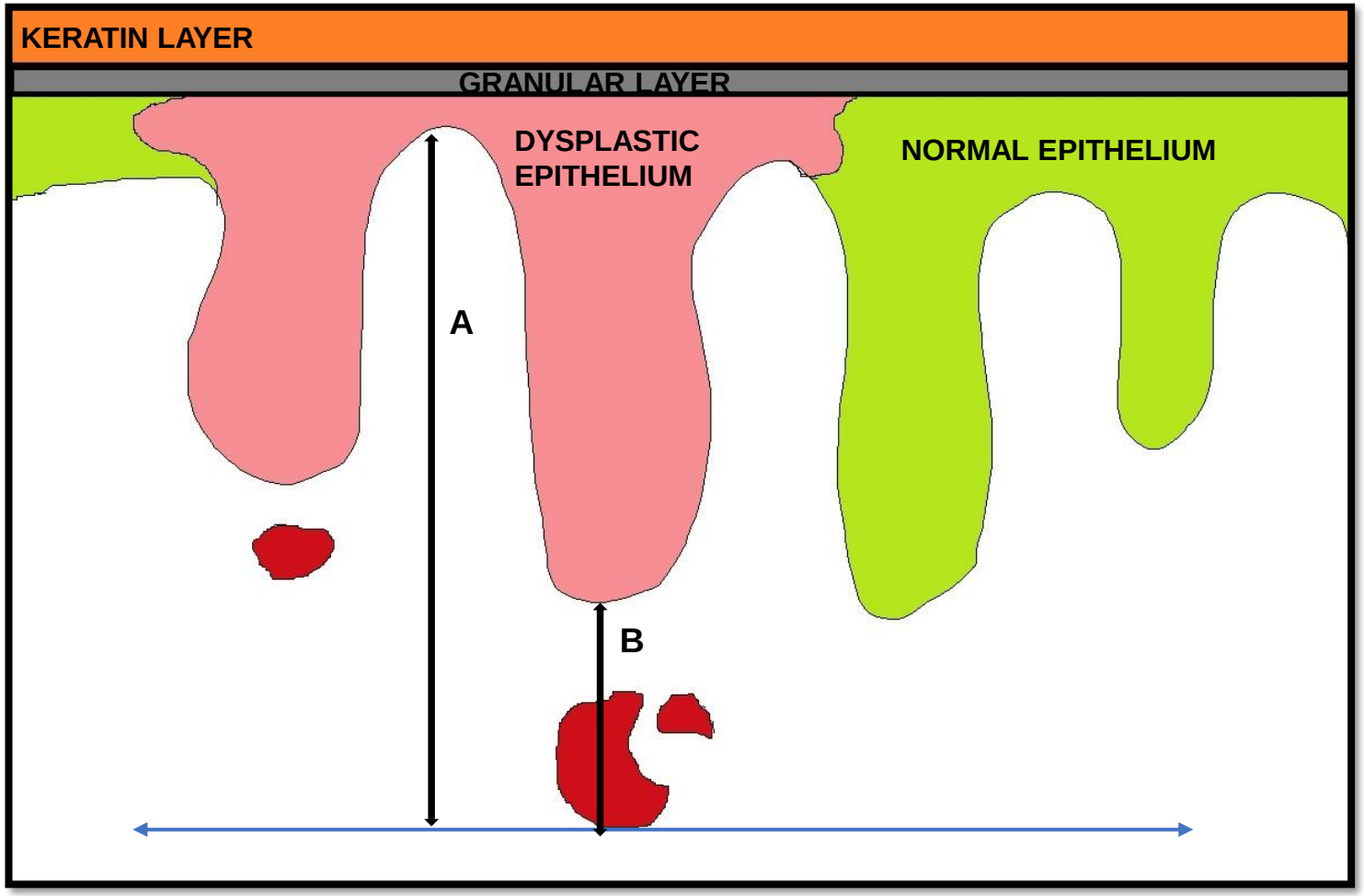
Vulval cancer classification- WHO 2020

SCC: HPV-independent and HPV-associated



Depth of invasion

Figure 1 Measurement of depth of invasion in vulval carcinoma



A. Conventional method: from the adjacent most superficial dermal papilla to deepest point of invasion

B. Recommended method (FIGO 2021): From the basement membrane of the deepest adjacent dysplastic rete peg to the deepest point of invasion

DOI

- FIGO 2021 method is recommended by RCPath and ICCR

Controversy

- Based on a small number of studies
- ?Downstaging of tumour
- ESGO (2023) record both 2009 and 2021 measurements but treatment based on 2009 method

Problematic cases: ?include both

Margin assessment

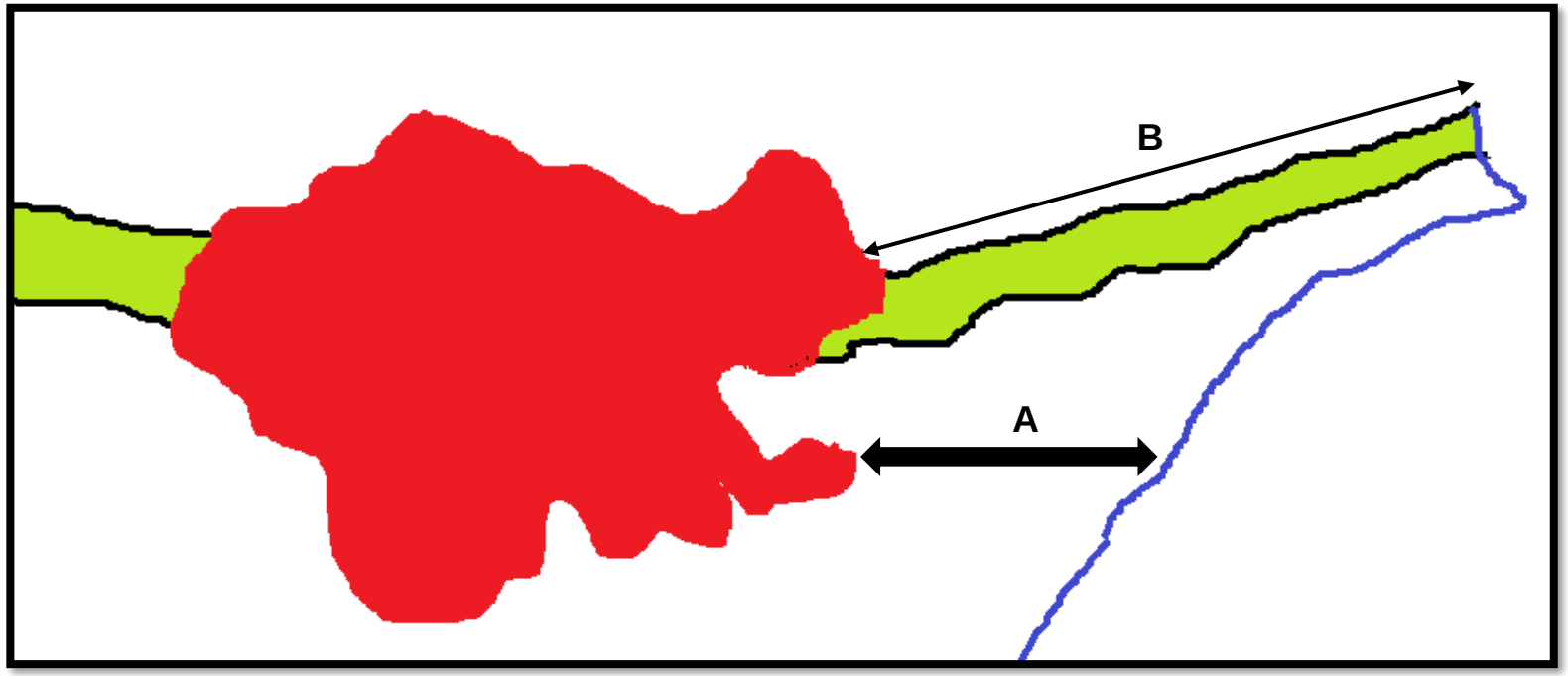
Margin assessment – minimal peripheral margin

Peripheral margin

- Minimal distance of invasive carcinoma to an inked edge
- Perpendicular to skin or mucosal surface (tumour to epithelial edge or tumour to stroma)
- Straight continuous line
- Might need to be angular in some cases
- Measure in a curved line? Not generally unless the skin is folded over

Deep margin

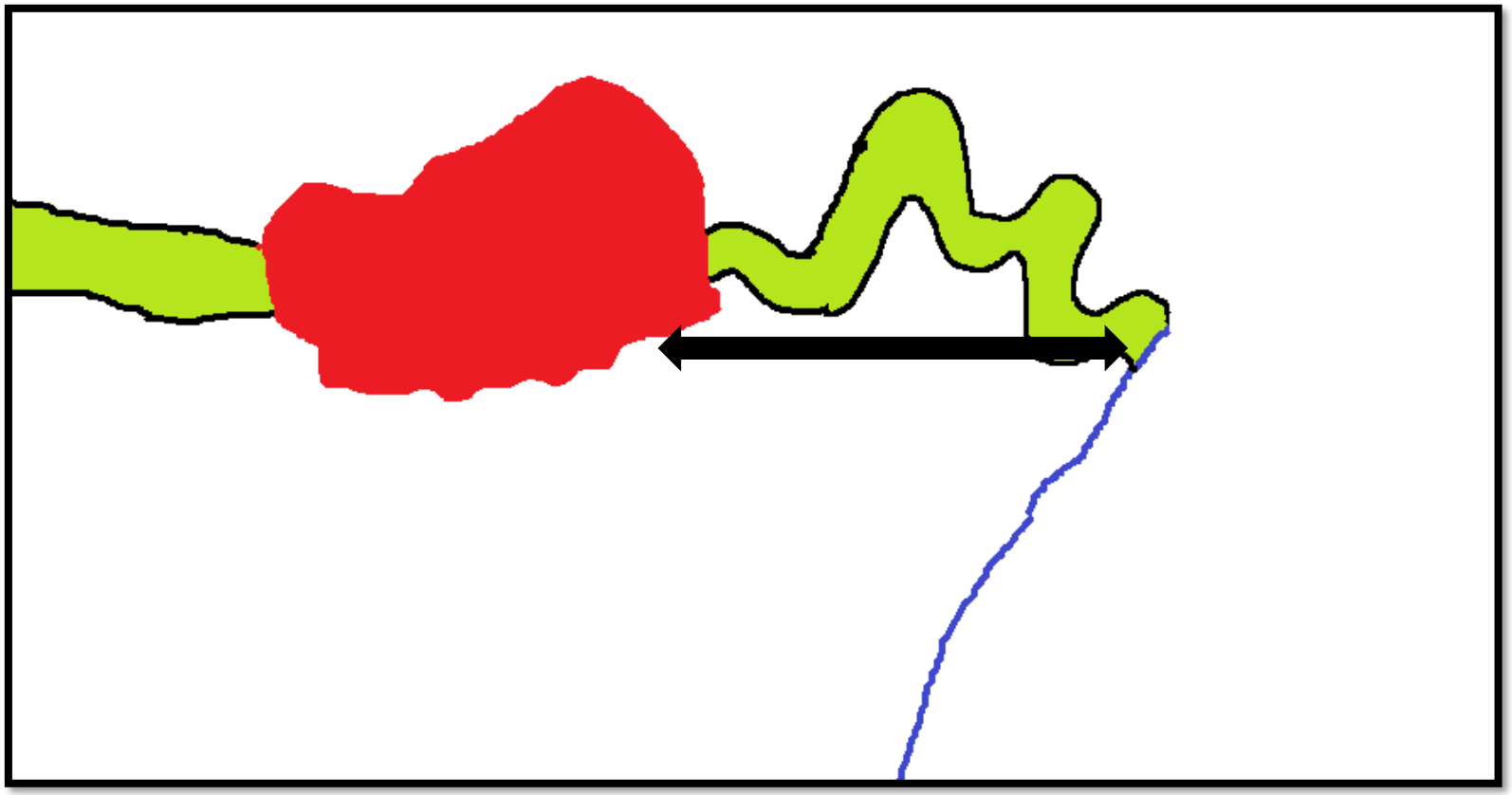
Measure to the nearest margin



Margin measurement

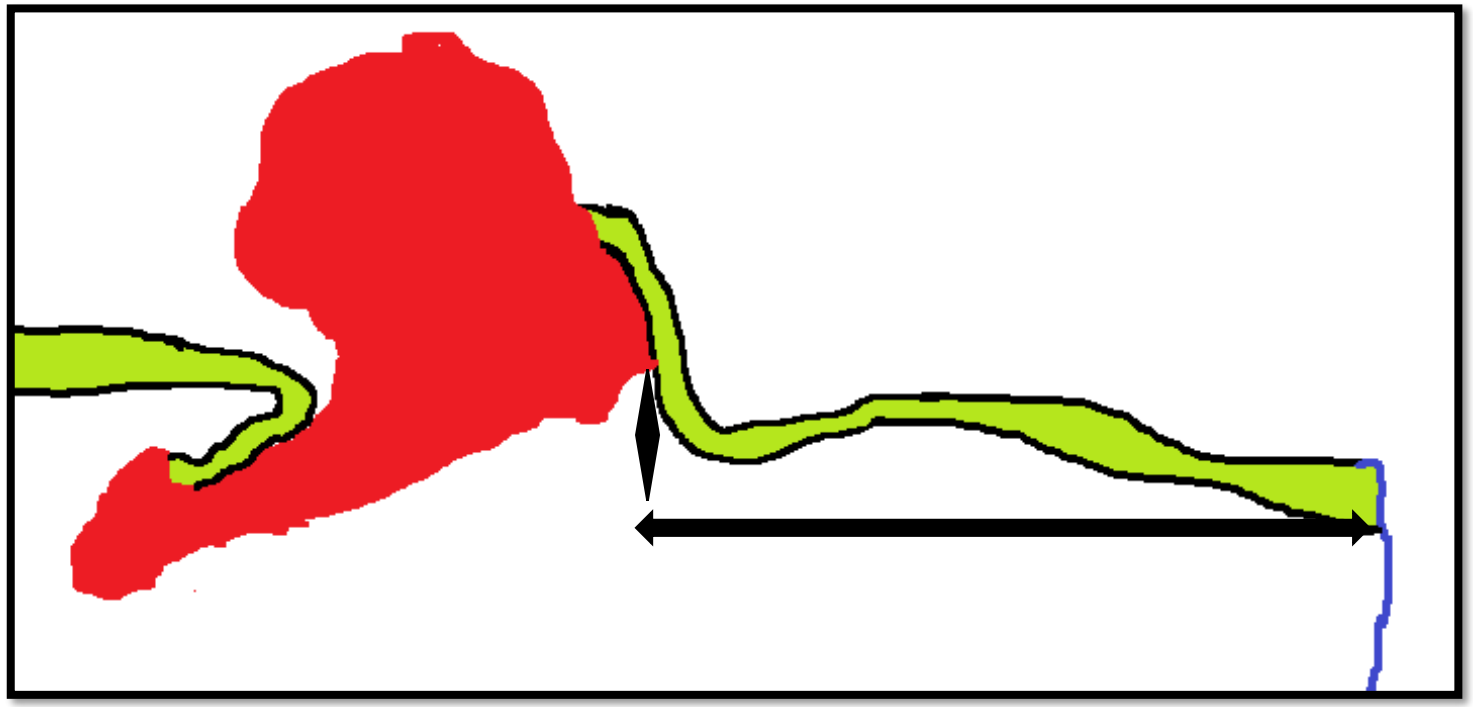
A. Shortest distance to the epithelial-stromal interface
OR
the peripheral stromal edge - most clinically relevant

B. This distance is what is visible at the time of surgical resection so can be included for audit purposes



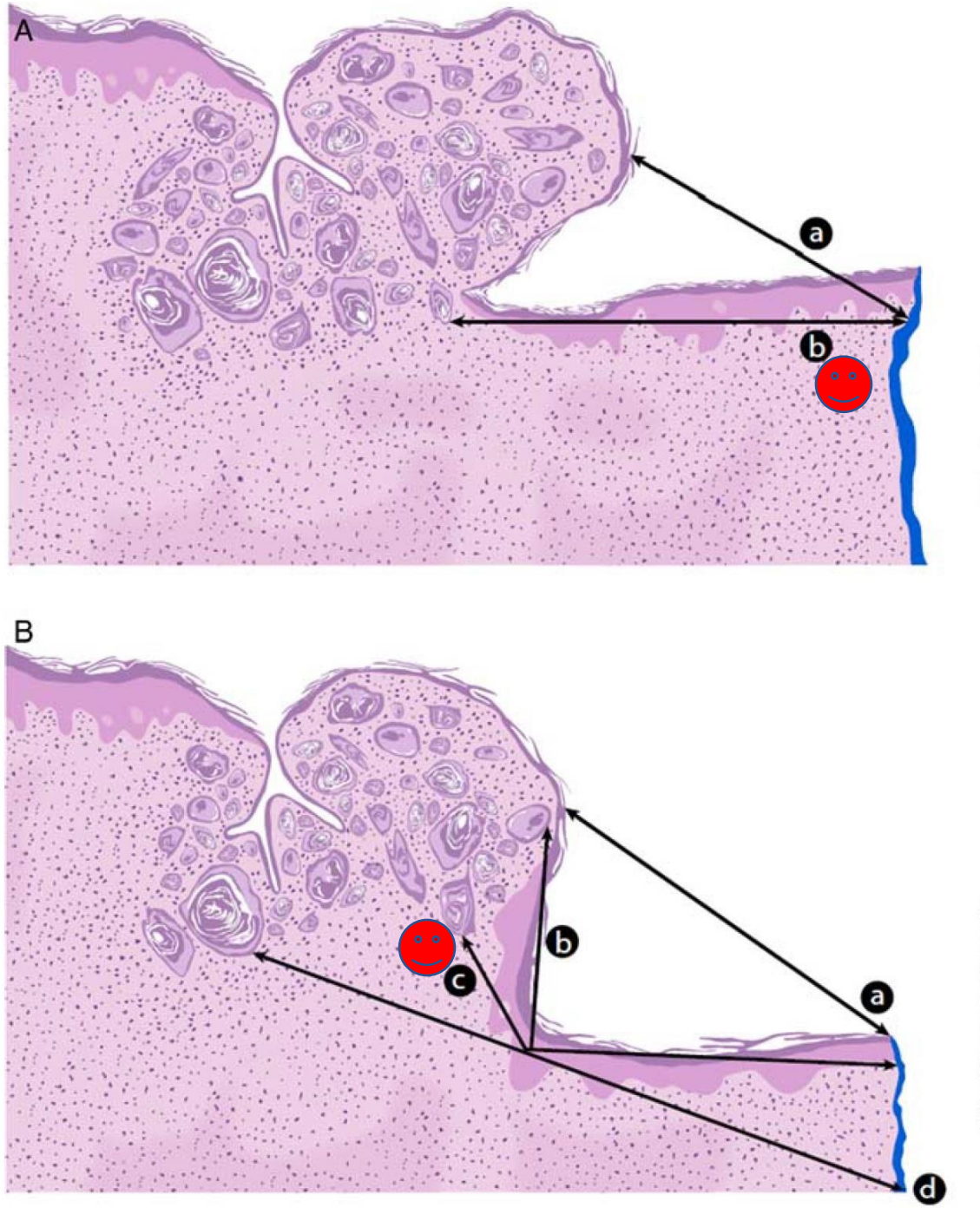
Margin measurement

Measurement should be in straight line through the tissue even when the surface epithelium is undulating or curved



Margin measurement

In exophytic tumours or if a collarette of epithelium is present the distance to margin can be measured as two straight lines joined at an angle



International Journal of Gynecological Pathology
39:420–427, Lippincott Williams & Wilkins, Baltimore

Practical Guidance for Measuring and Reporting Surgical Margins in Vulvar Cancer

Precursor lesions

Mention if present at the margin

If margins clear mention nearest margin?

Precursor lesions

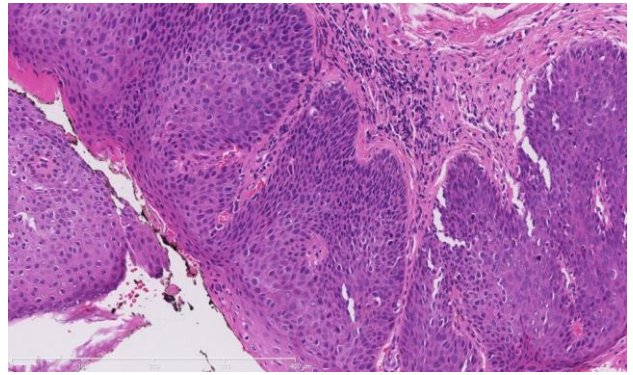
Precursor lesions

- HPV associated – VIN 1,2,3 (LSIL, HSIL)
- HPV-independent precursors – dVIN, VAAD, DeVIL

Precursor lesions- WHO 2020

HPV-associated (uVIN)

- VIN1/koilocytosis (LSIL)
- VIN2/3 (HSIL)

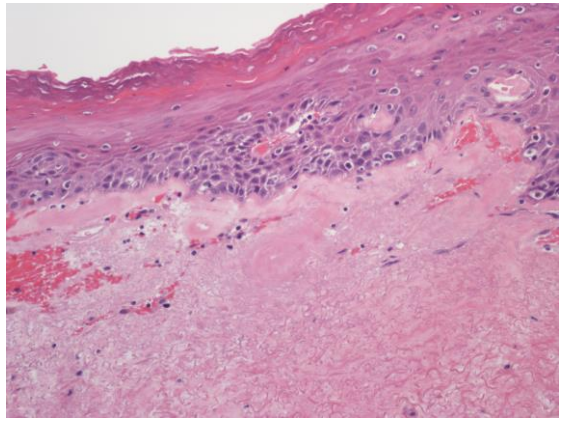


HPV-independent

Differentiated VIN (dVIN)

Subtypes

- deVIL (differentiated exophytic intraepithelial lesion
- VAAD (vulval acanthosis with altered differentiation)



Ancillary tests

Poll 1

When reporting vulval cancer biopsies do you:

A. Always do immunohistochemistry for p16 and p53
B. Do p16 only
C. Do p53 only
D. Sometimes do p16
E. Sometimes do p53
F. Neither, immunohistochemistry is a waste of time and money

Ancillary tests

Reporting of vulval SCC

Mandatory: immunohistochemistry for p16 and p53

Others

- D2-40, CD31, CD34, S100
- PD-L1
- GATA3, SOX2 and CK17

Ancillary studies

HPV status

p16 immunohistochemistry - pattern

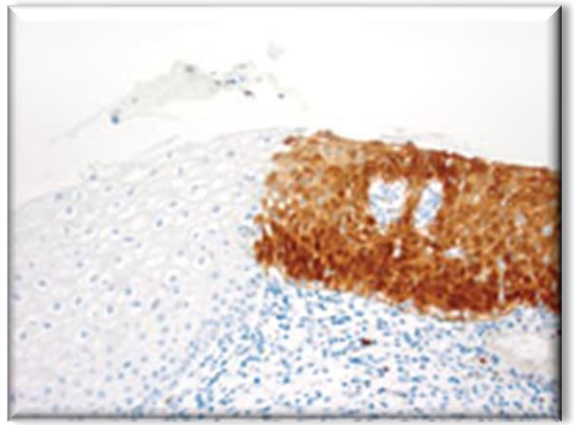
PCR (HPV DNA amplification)

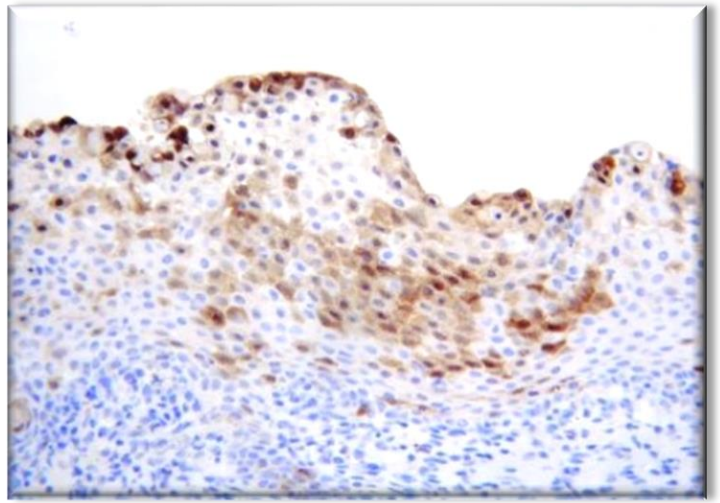
DNA ISH

RNA ISH

p16

- Continuous
- Linear
- Nuclear and cytoplasmic
- At least 6 cells across basal and parabasal





Abnormal p53 patterns

Can be difficult to interpret

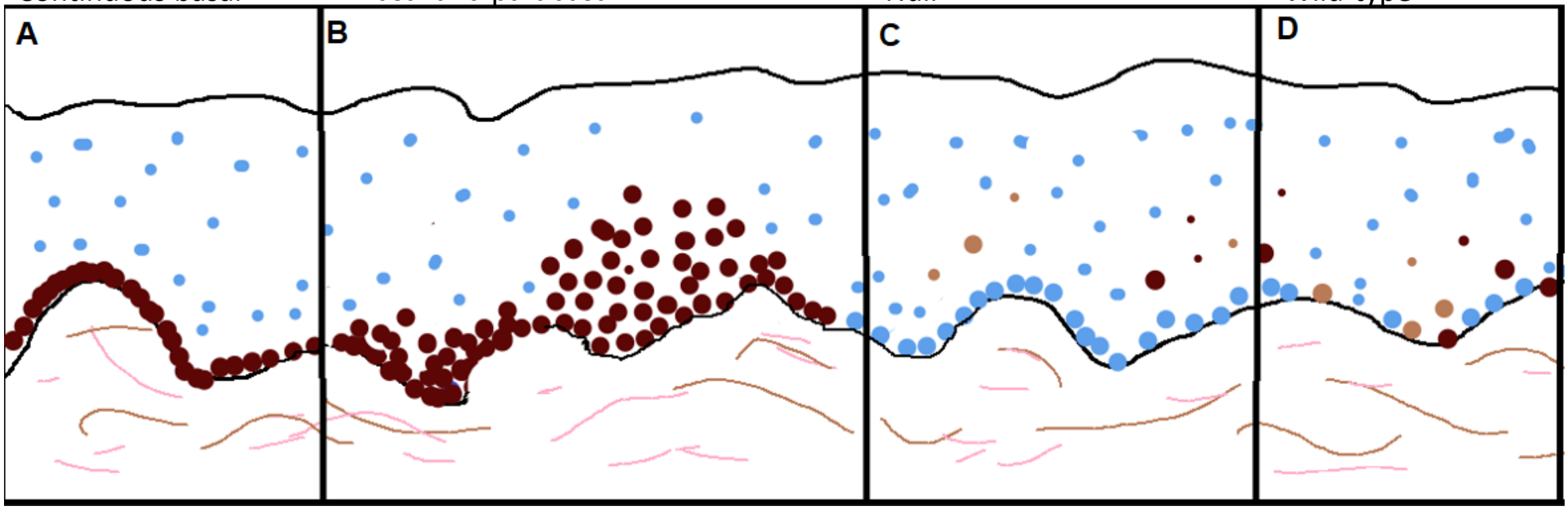
1. Basal
2. Basal and parabasal
3. Null
4. Cytoplasmic only

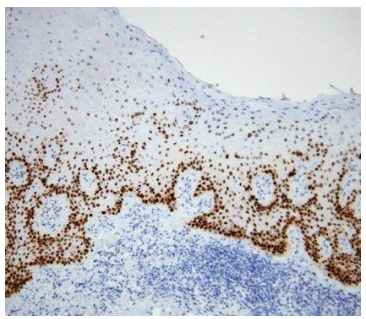
Continuous basal

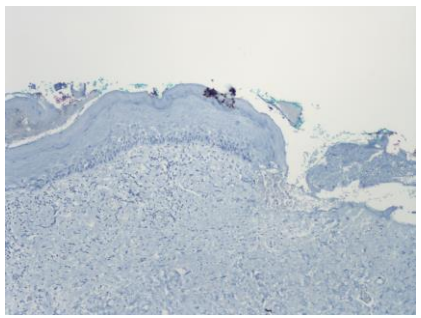
Basal and parabasal

Null

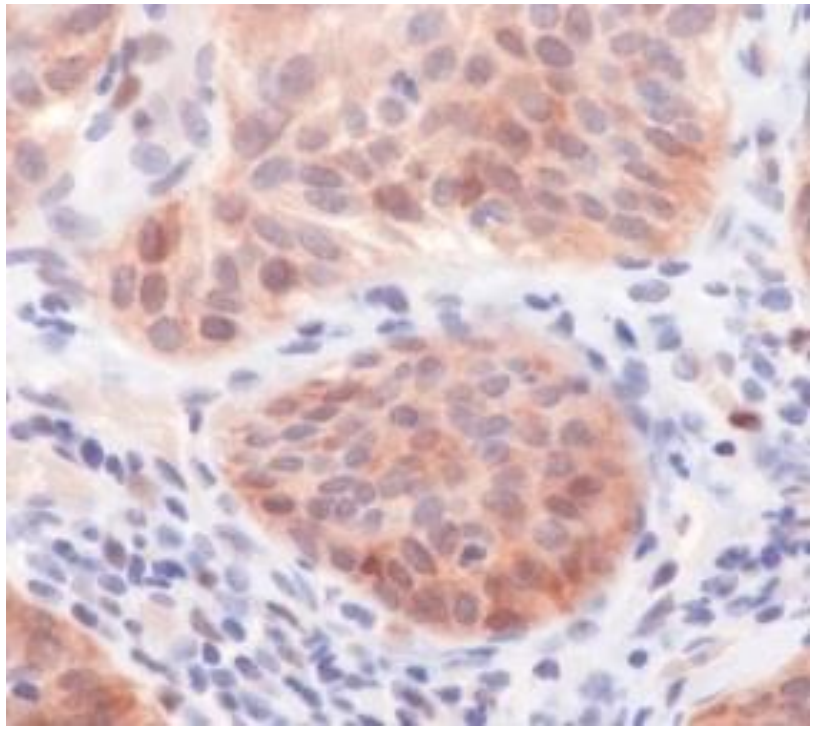
Wild-type







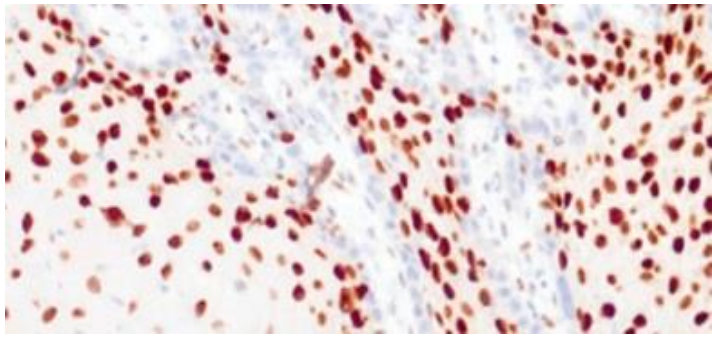
Mutation type cytoplasmic staining

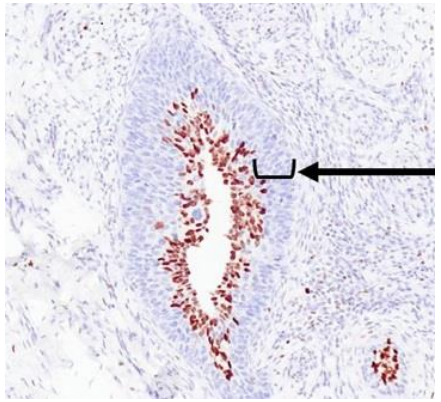


Tessier-Cloutier, B., Kortekaas, K.E., Thompson, E. *et al.* Major p53 immunohistochemical patterns in in situ and invasive squamous cell carcinomas of the vulva and correlation with *TP53* mutation status. *Mod Pathol* **33**, 1595–1605 (2020). https://doi.org/10.1038/s41379-020-0524-1

HPVA SCC may show apparent p53 over expression

Mid epithelial with basal sparing





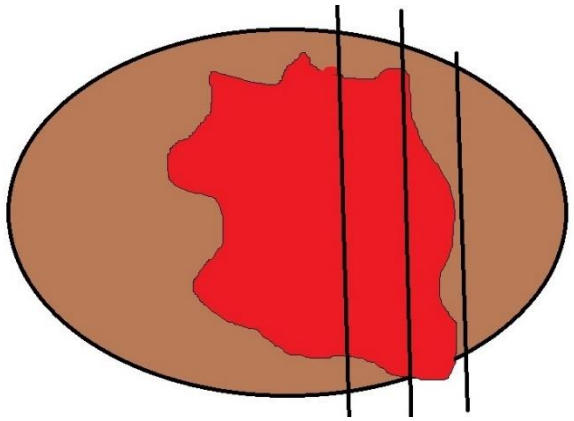
Thompson, E.F., Chen, J., Huvila, J. *et al.* p53 Immunohistochemical patterns in HPV-related neoplasms of the female lower genital tract can be mistaken for *TP53* null or missense mutational patterns. *Mod Pathol* **33**, 1649–1659 (2020). https://doi.org/10.1038/s41379-020-0527-y

Lymph nodes

Lymph node sampling

Sample all the nodes				
Careful palpation	Process rest of adipose tissue	If excessive up to 5 further cassettes	No nodes retrieved? Sample all	Examine full face

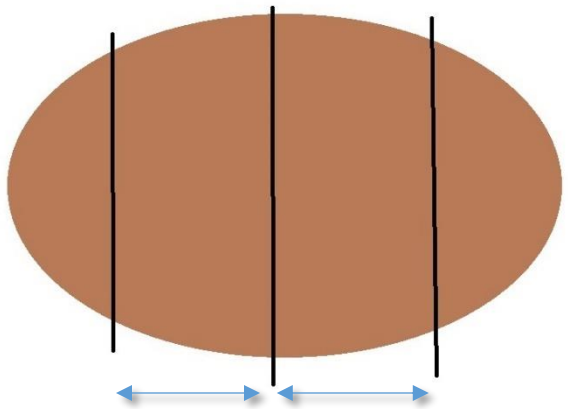
Visible tumour in LN



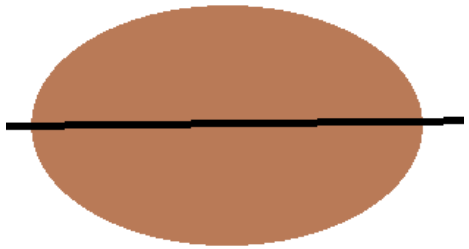
- No need to sample all
- Include capsule
- Measure the size of the metastasis
- Sample areas suspicious of extracapsular spread
- If in doubt embed whole

No visible tumour

≥ 4mm
slice at 2-3mm intervals



< 4mm
embed whole OR bisect



Size of metastatic deposits

- Isolated tumour cells (ITC): less than 0.2mm (regarded as pN0 but mention in report)
- Micrometastasis: 0.2 - 2mm
- Macrometastasis: Greater than 2mm

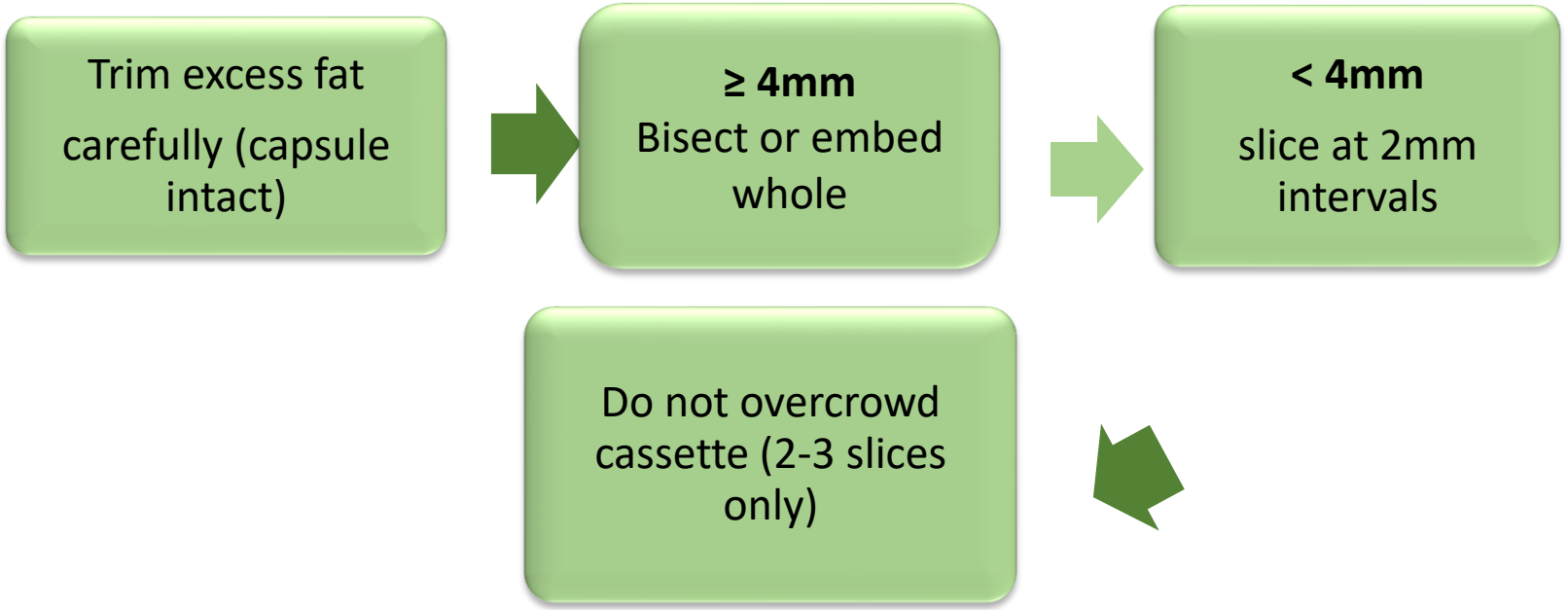
Sentinel Lymph Node (SLN) examination

- Rationale: first draining nodes – if negative, full inguinofemoral lymphadenectomy may not be necessary in selected cases
- Reduces length of hospital stay (cost implication)
- Reduces morbidity (lymphoedema, cellulitis, wound infection)
- Fewer LN to examine

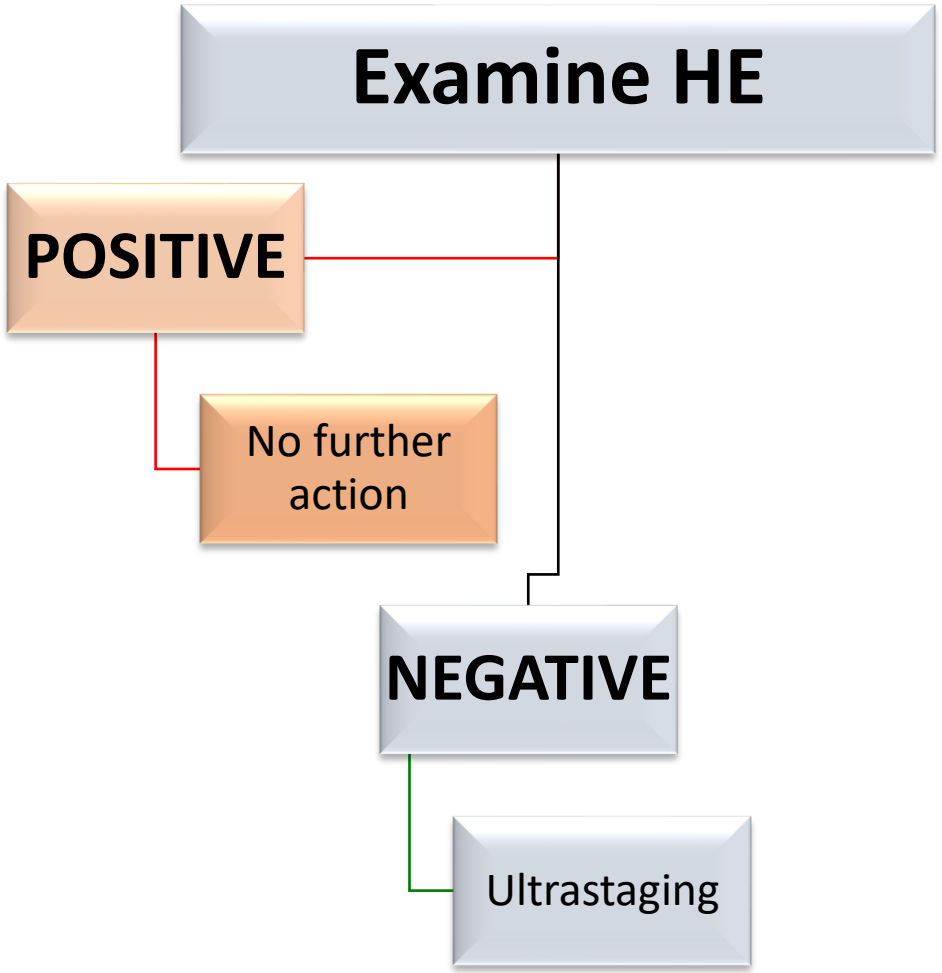
SLN: selection criteria

- Primary squamous vulval cancers
- Cancers measuring less than 4 cm in maximum dimension
- Macroscopic unifocal cancers
- No clinical or radiological evidence to suspect lymph node metastasis
- No known safety issues for the use of Patent Blue dye and/or technetium-99
- Informed patient consent and acceptance of close follow-up (recommended 2-monthly in the first year)
- If a sentinel lymph node cannot be identified following peritumoural injection of technetium-99 and/or Patent Blue dye then the patient should be considered for a complete inguinofemoral lymphadenectomy and (counselled time of consenting)

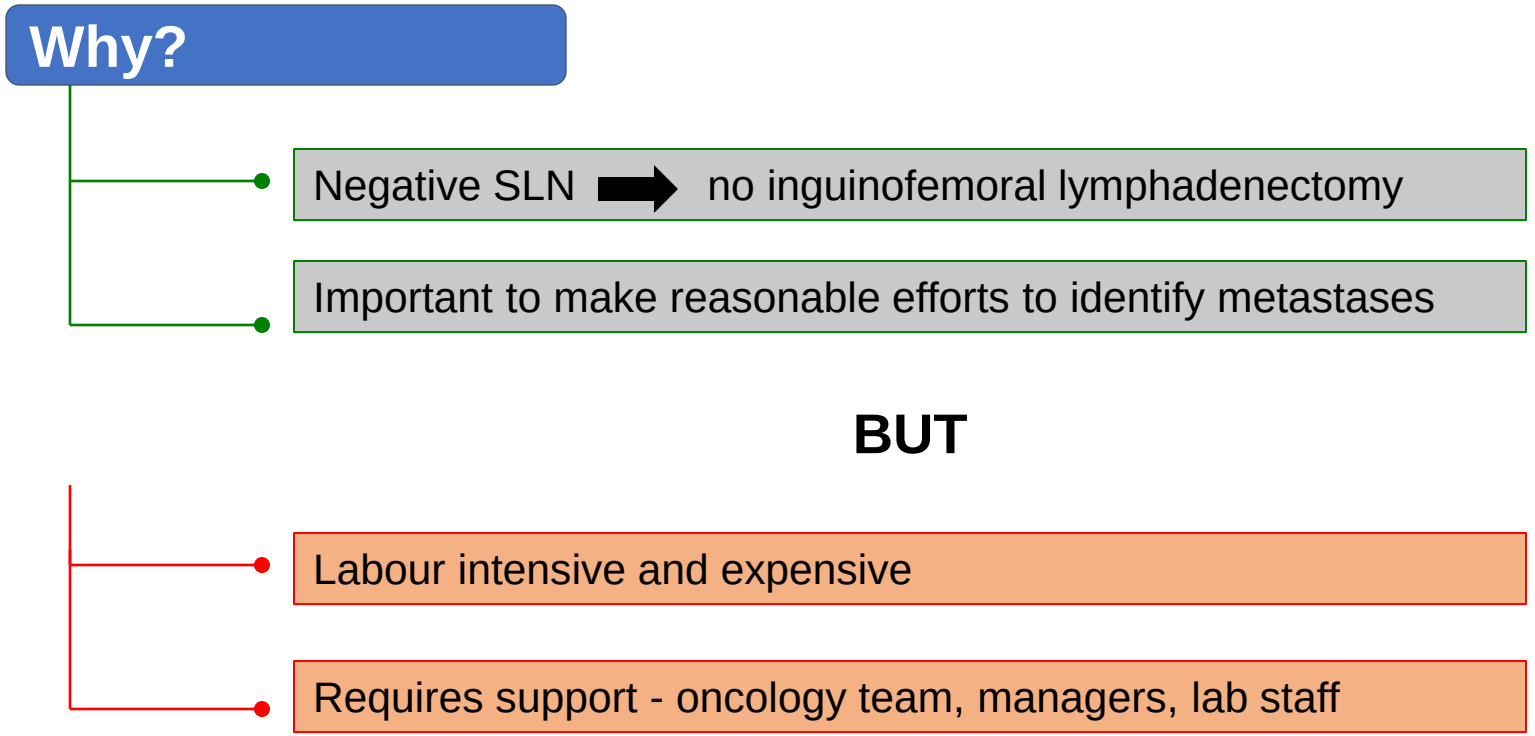
SLN method


Trim excess fat
carefully (capsule intact)
≥ 4mm
Bisect or embed whole
< 4mm
slice at 2mm intervals
Do not overcrowd cassette (2-3 slices only)

SLN method

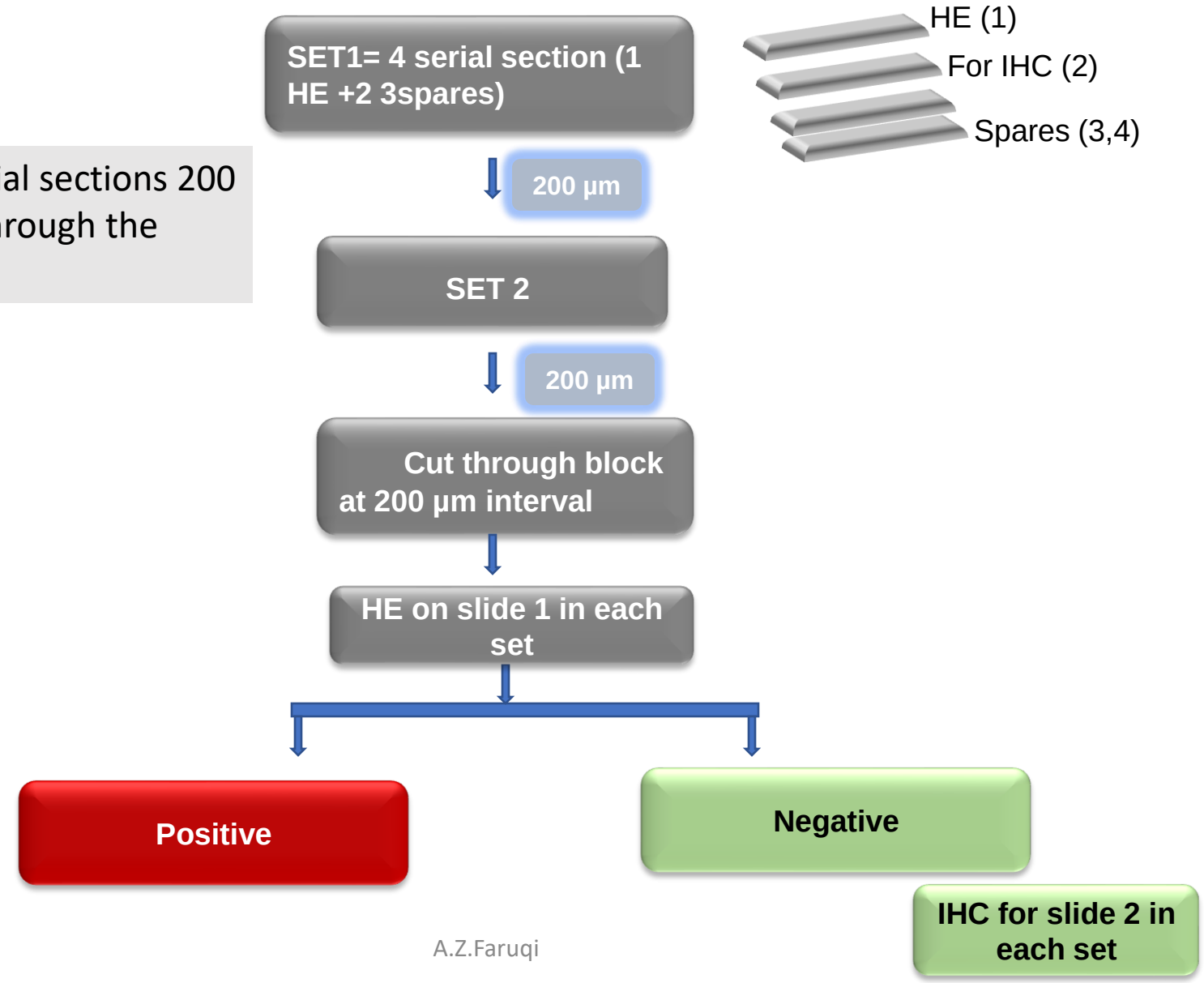

Examine HE
POSITIVE
No further action
NEGATIVE
Ultrastaging

Ultrastaging



Ultrastaging

Sets of 4 serial sections 200 µm apart, through the block.



Thank you

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