# Colposcopy
# When Why and How

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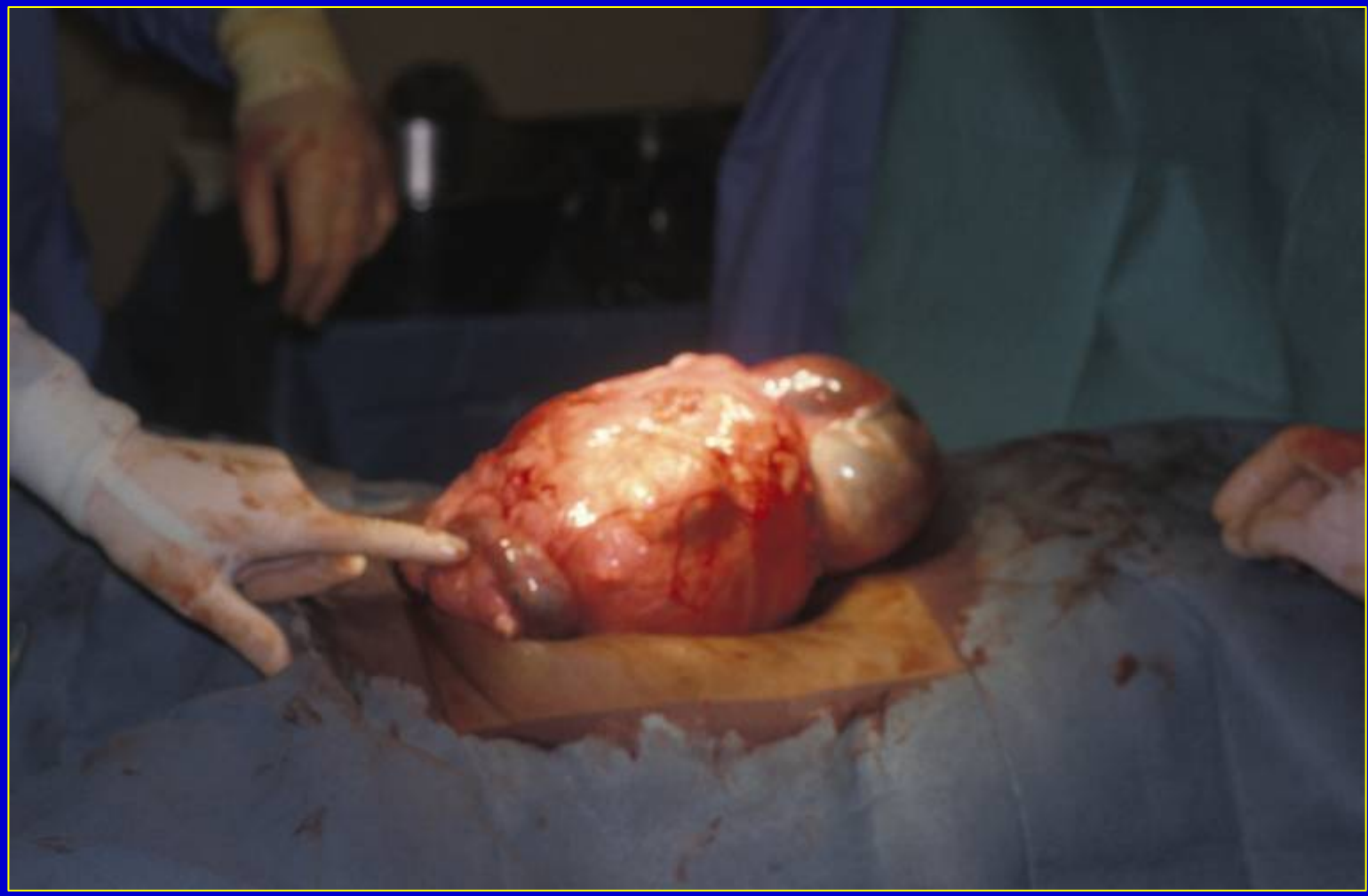
*Geneva University Hospital*

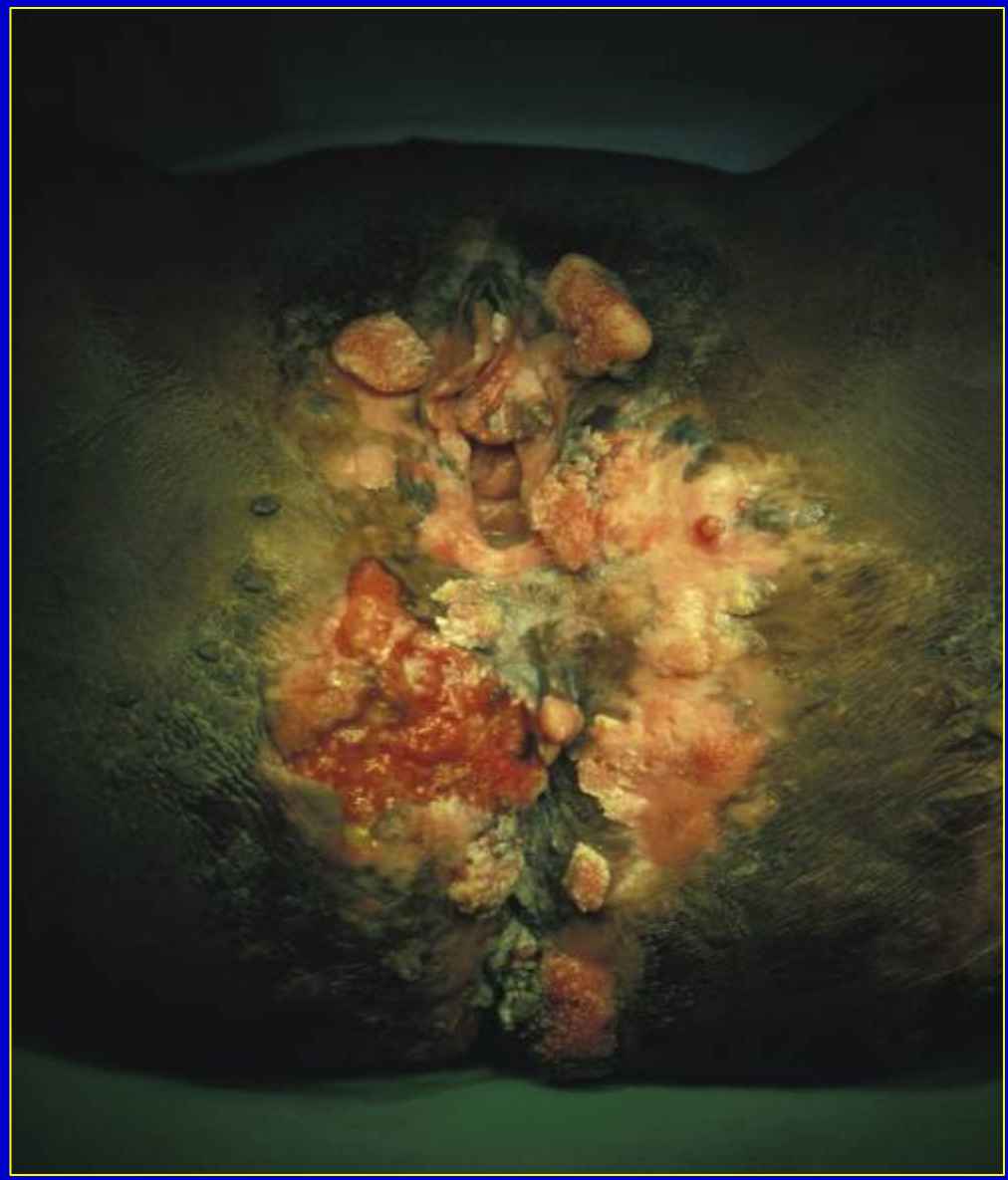
*Dept Ob-Gyn*

Invasive Ovarian Carcinoma stage IIIc

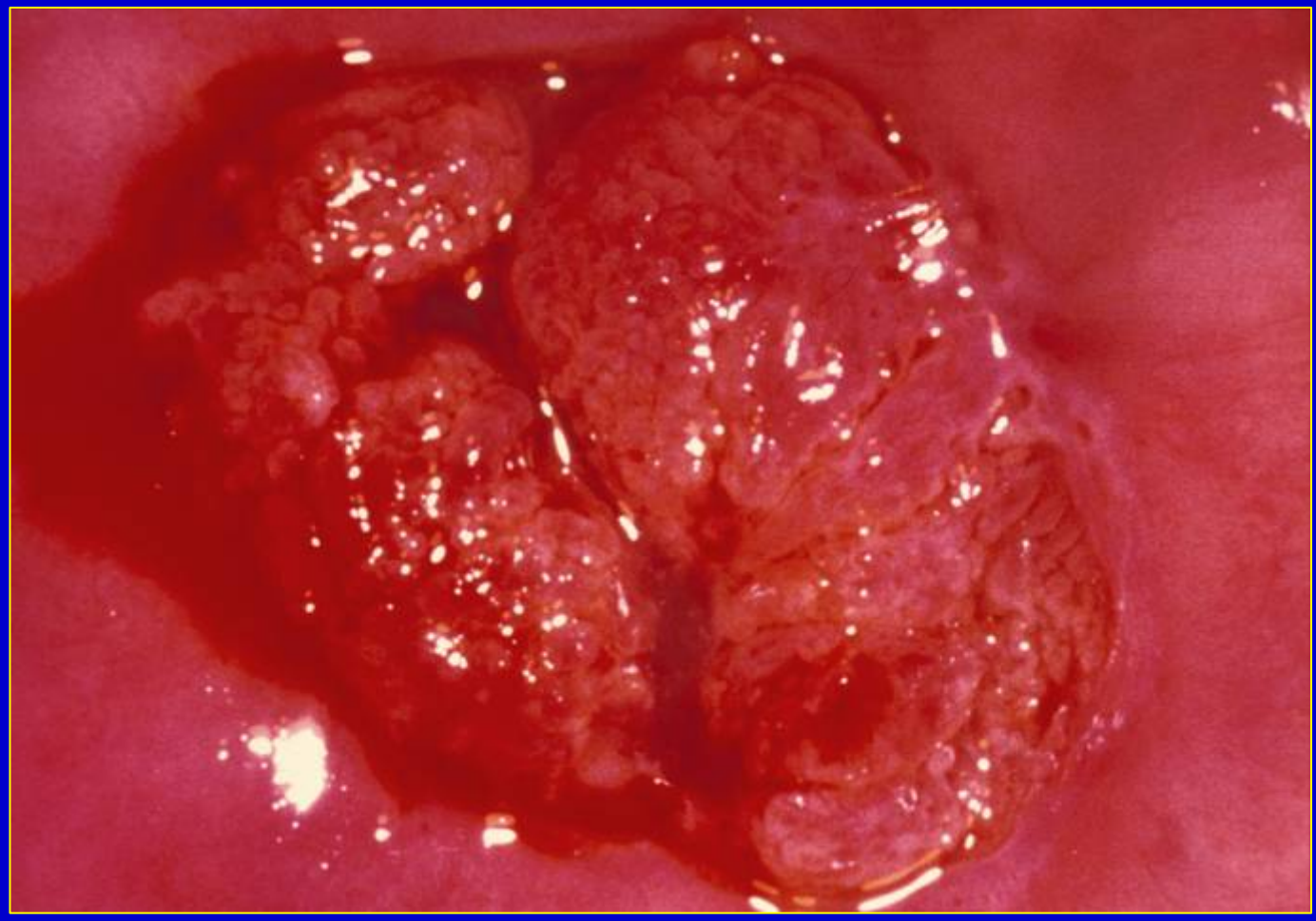


Invasive Ovarian Carcinoma stage IIIc

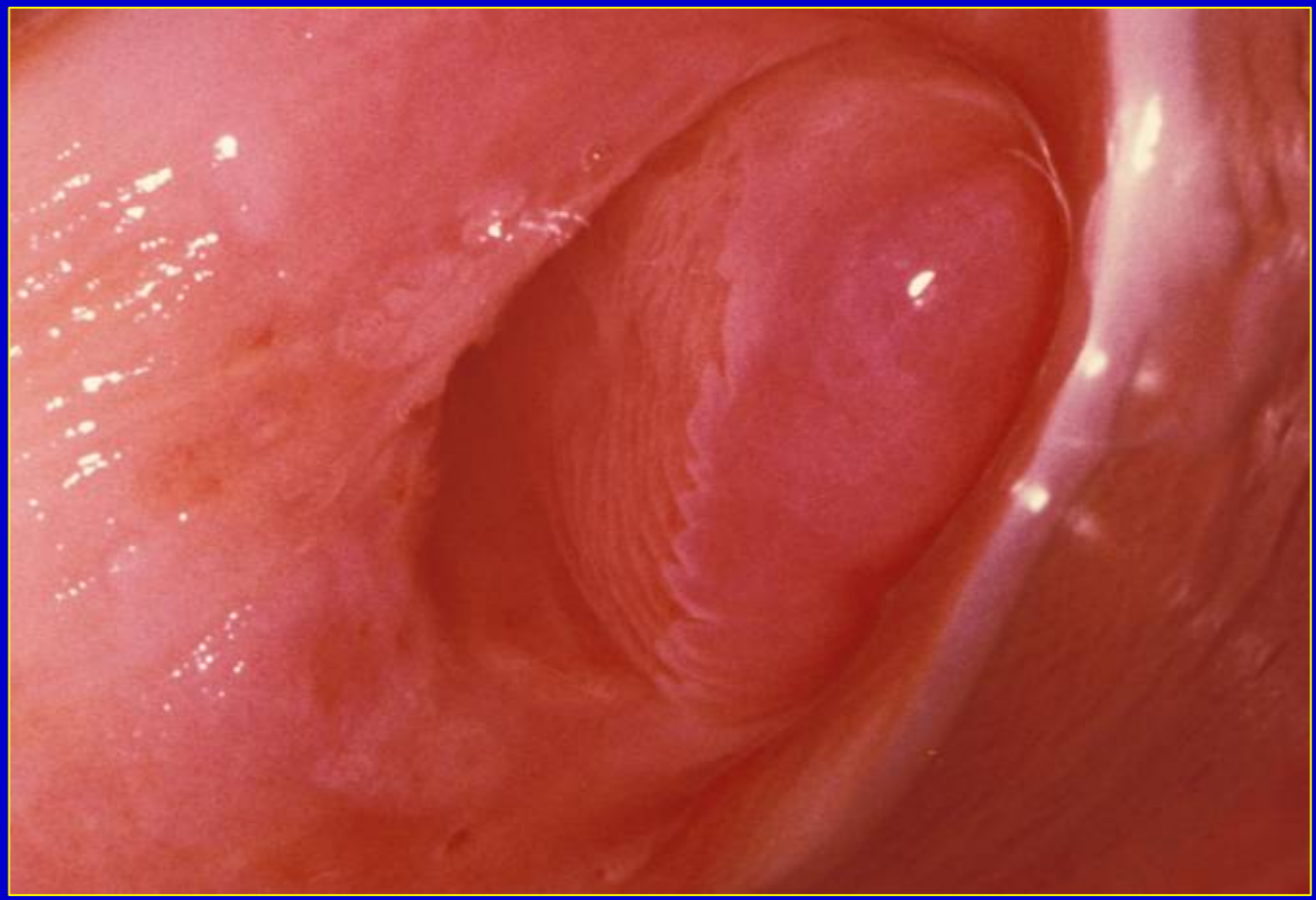
Invasive Vulvar Carcinoma stage III N1



Invasive Vulvar Carcinoma stage IV

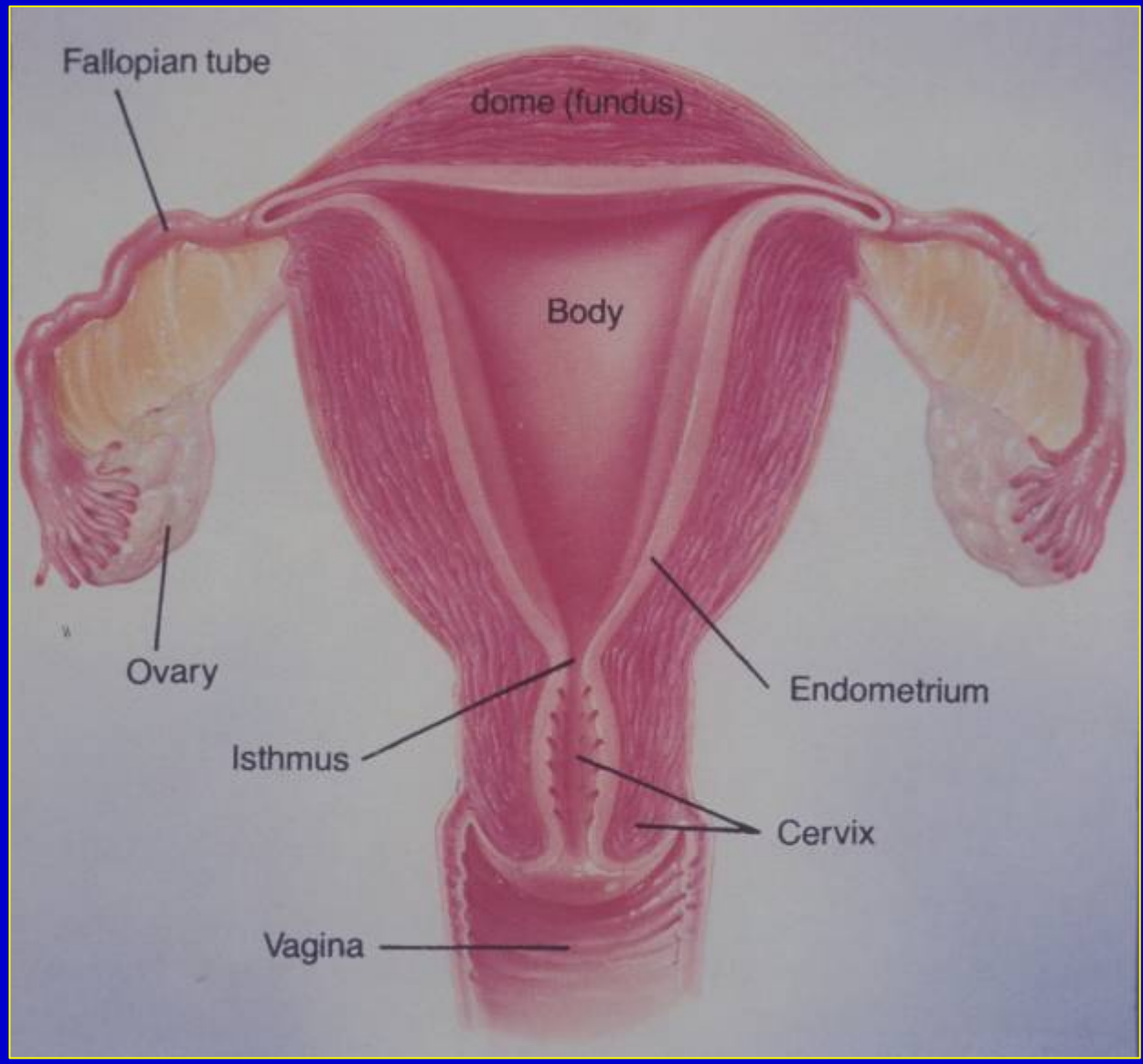


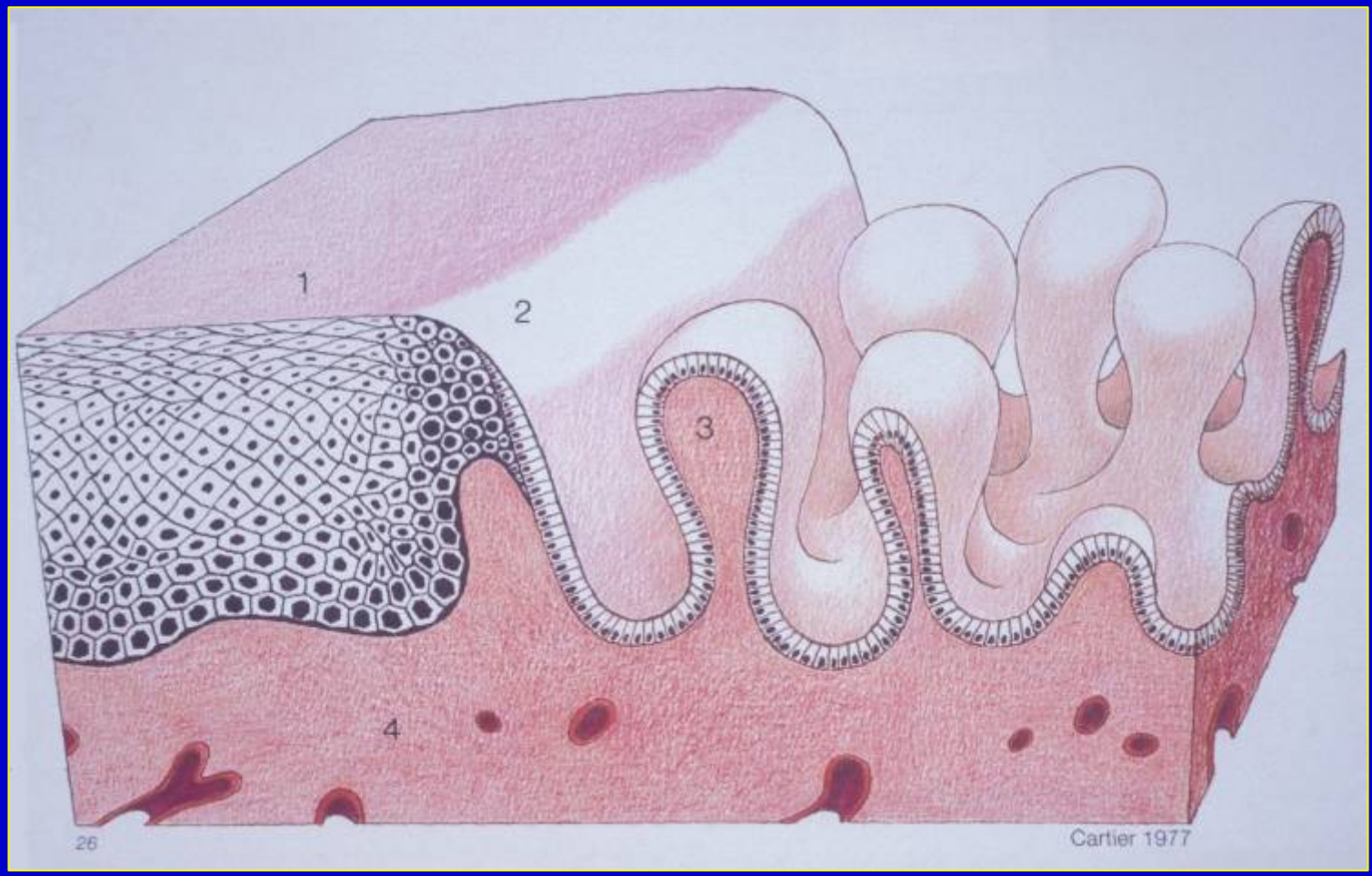
Invasive cervical Carcinoma stage IIb



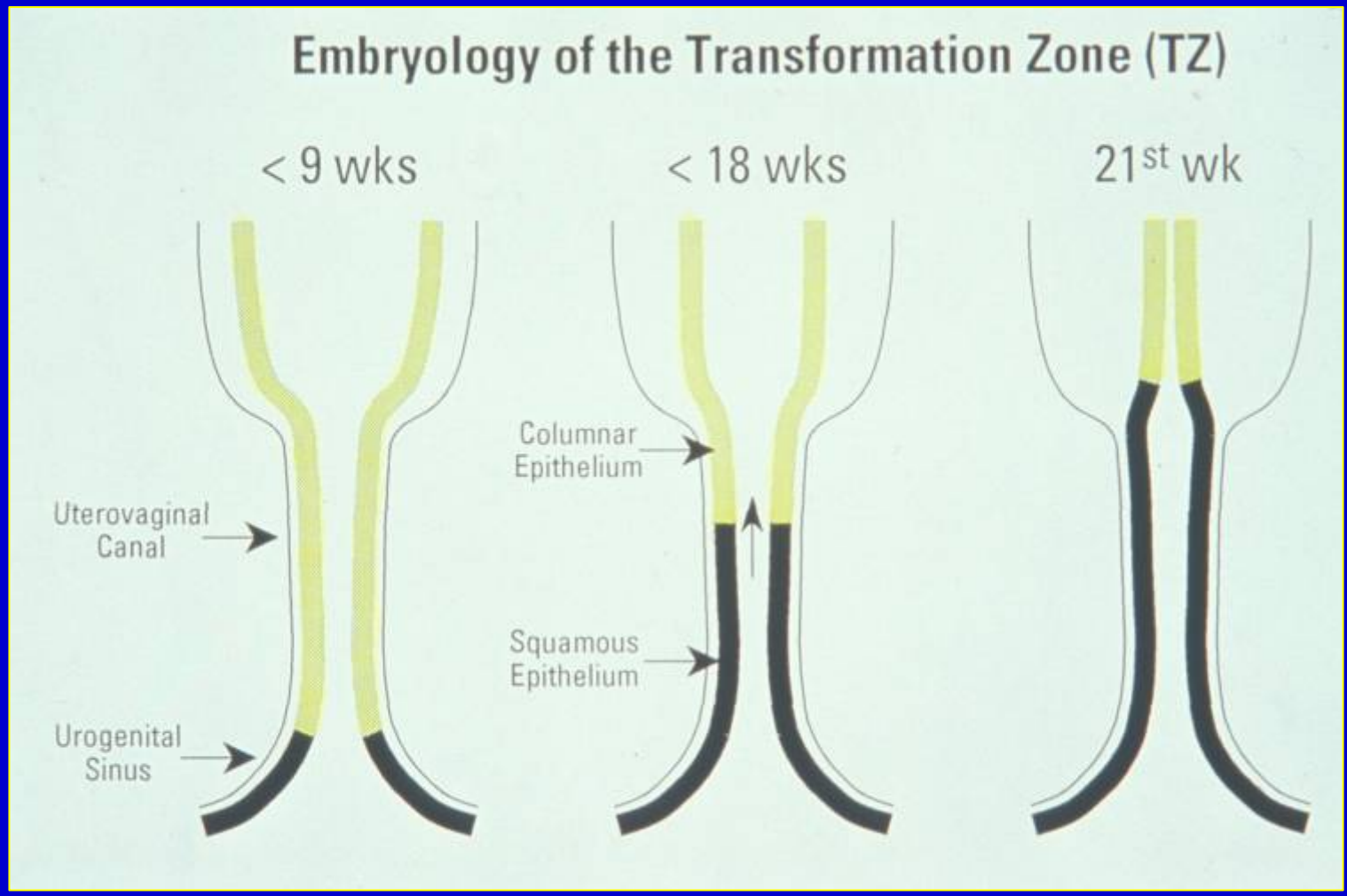
Normal cervix

Normal cervix


Fallopian tube
dome (fundus)
Body
Ovary
Endometrium
Isthmus
Cervix
Vagina

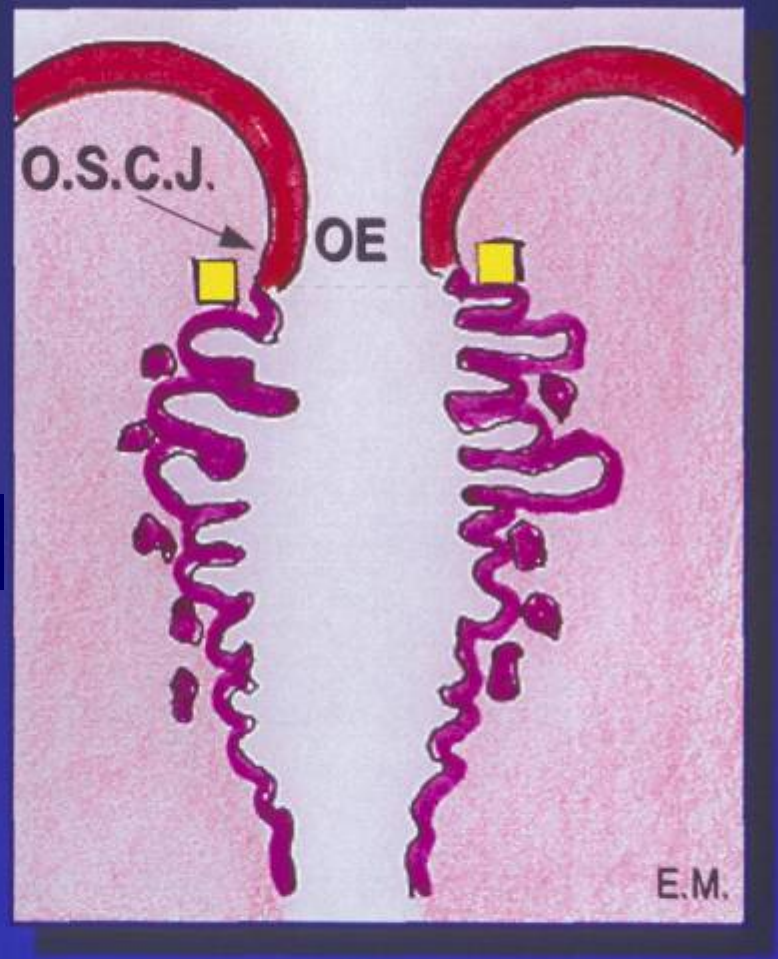



Squamo-columnar junction


Embryology of the Transformation Zone (TZ)
< 9 wks
< 18 wks
21st wk
Uterovaginal Canal
Urogenital Sinus
Columnar Epithelium
Squamous Epithelium

# Cervical Epithelium

- Squamous epithelium
- Columnar epithelium
- Last stromal gland

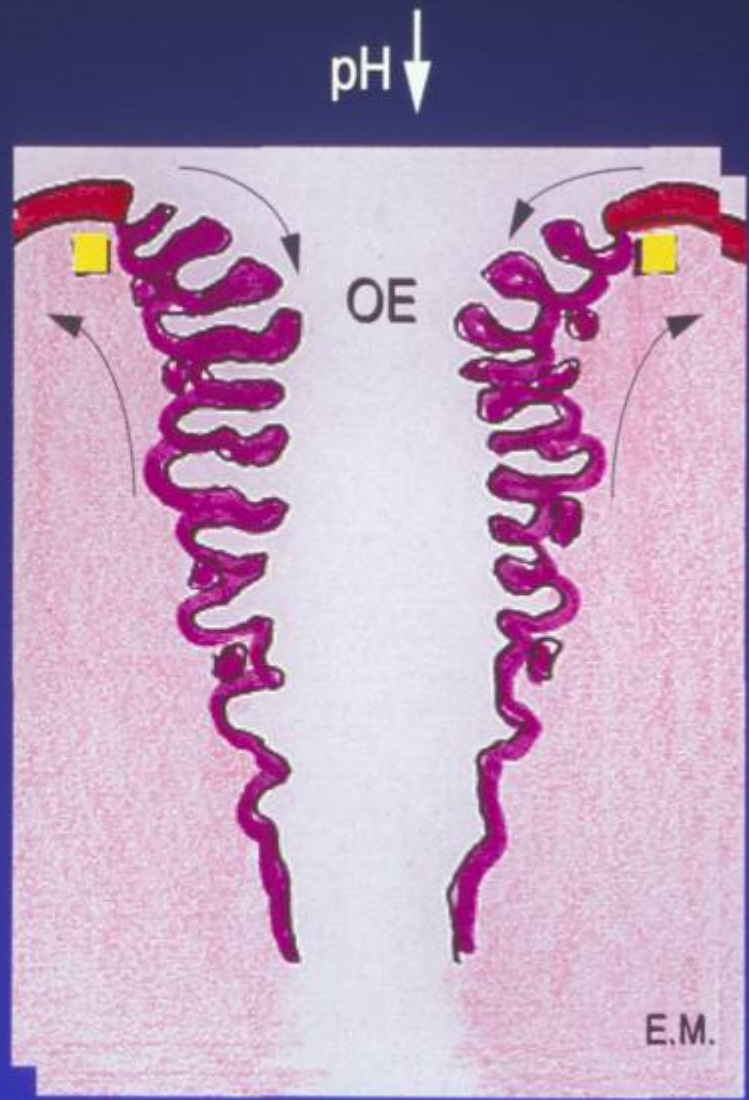



Situation at birth

# Squamous Metaplasia

Estrogenous Exposure

- Intra-uterine
- Puberty
- Pregnancy

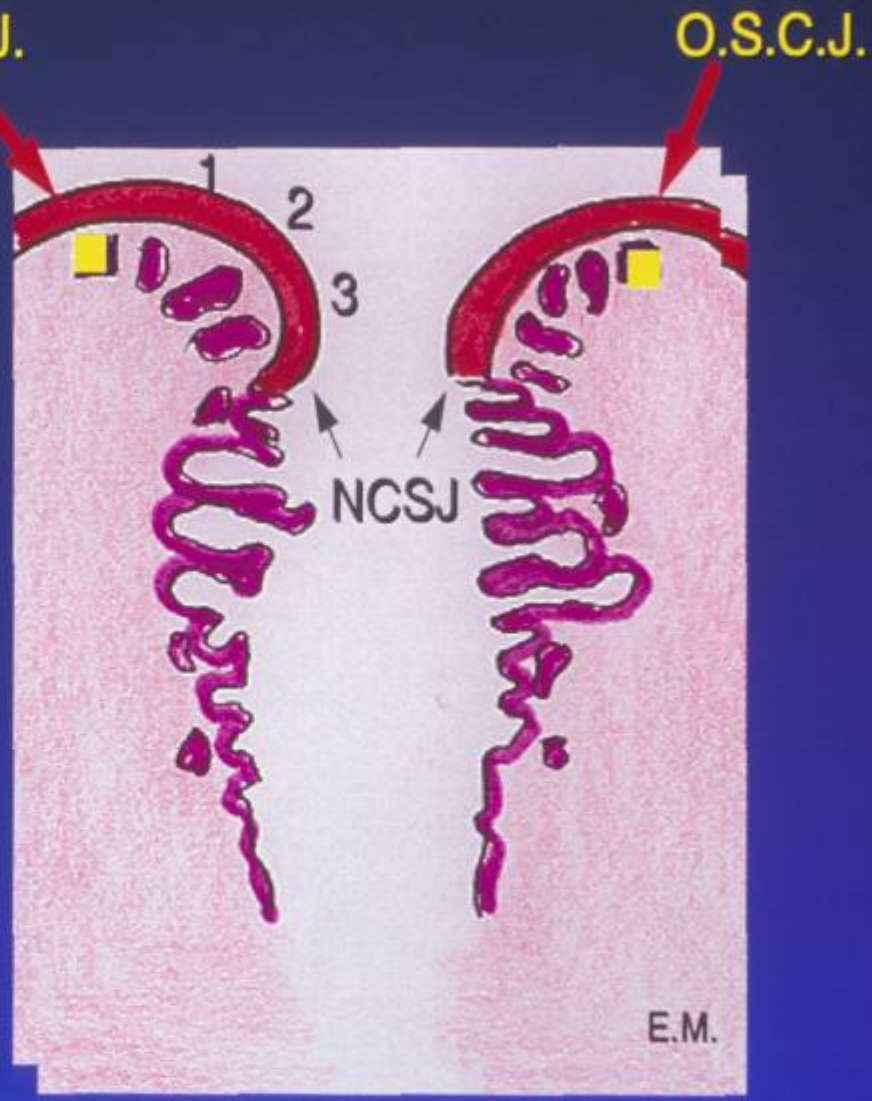



Ectropion

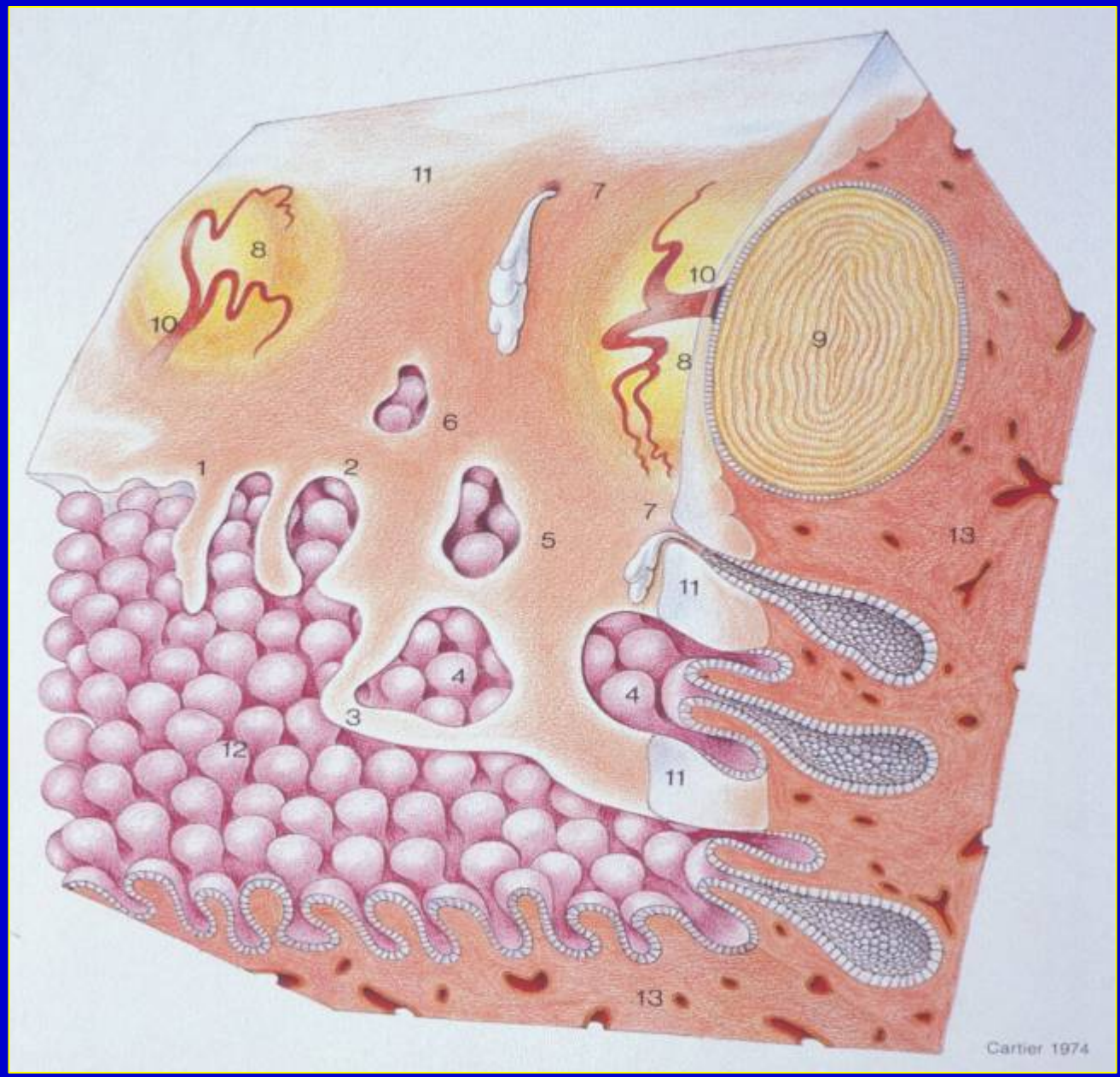
# Squamous Metaplasia

Estrogenous Exposure

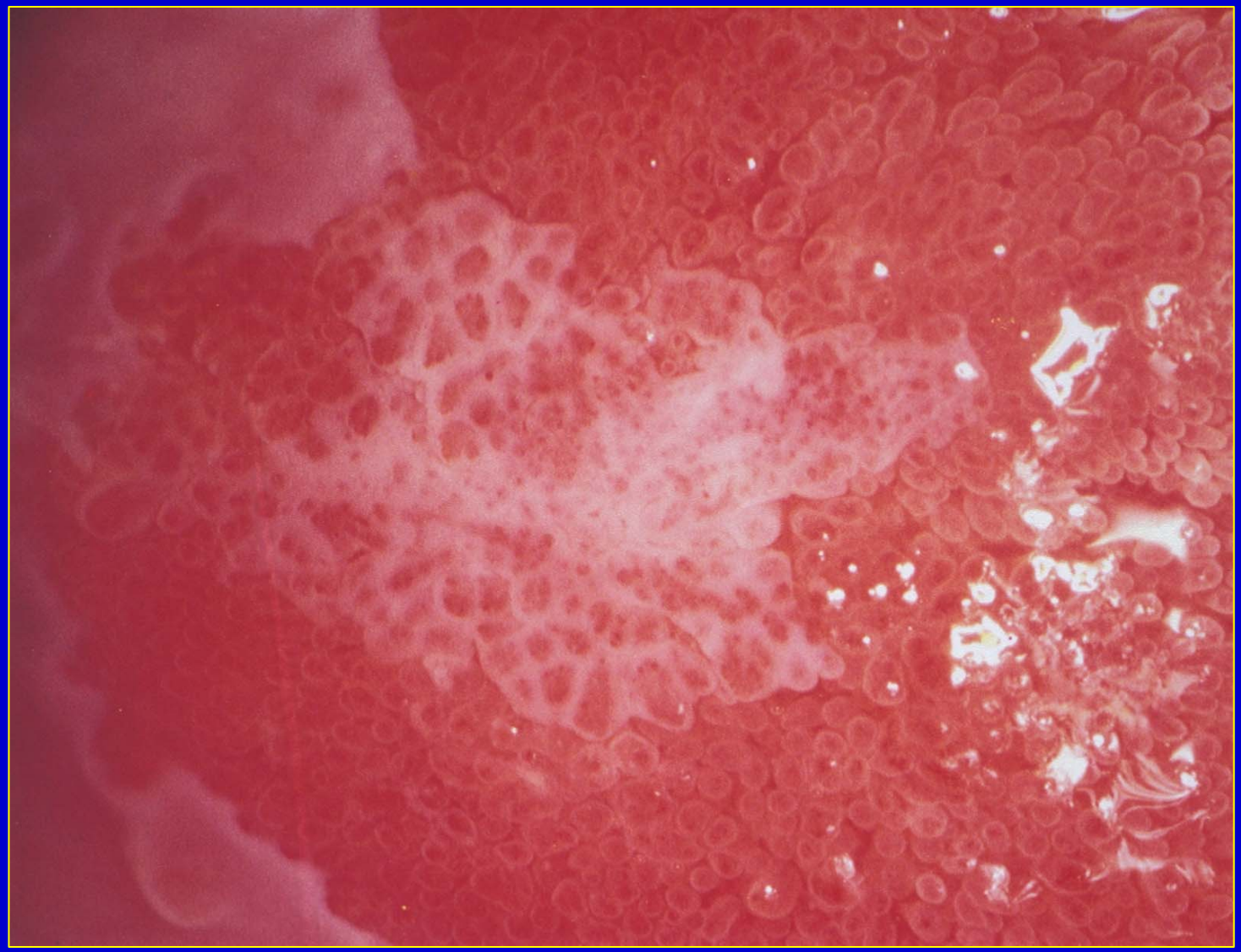
- Intra-uterine
- Puberty
- Pregnancy



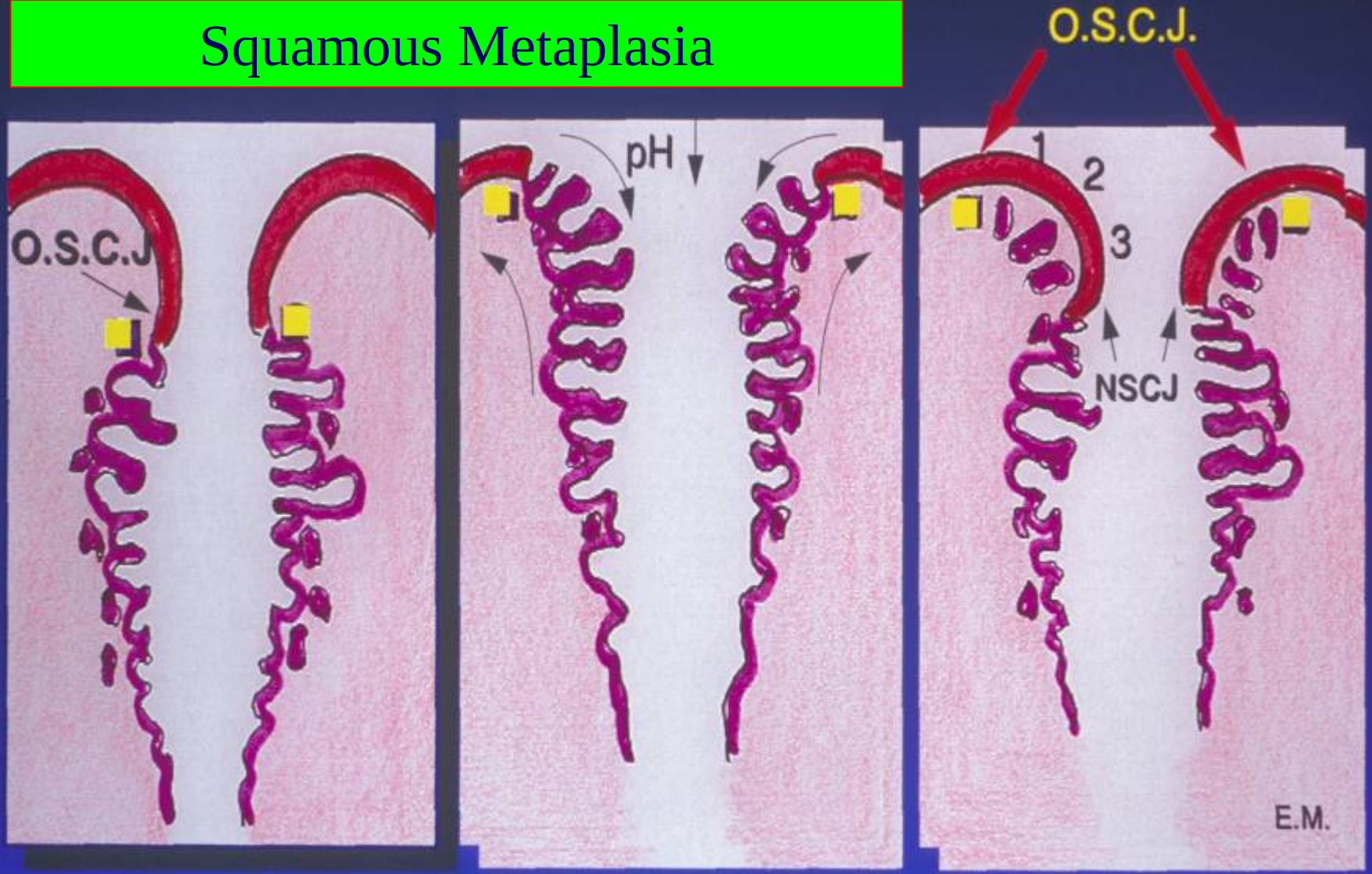

Metaplasia


11
7
8
10
10
9
8
6
1
2
7
5
13
11
4
4
3
12
11
13
Cartier 1974


3
3
2
1
2
1



# Squamous Metaplasia




Intra-uterine

Ectropion

Metaplasia

- Last stromal gland

# The Zur Hausen Model

## Human Papillomavirus

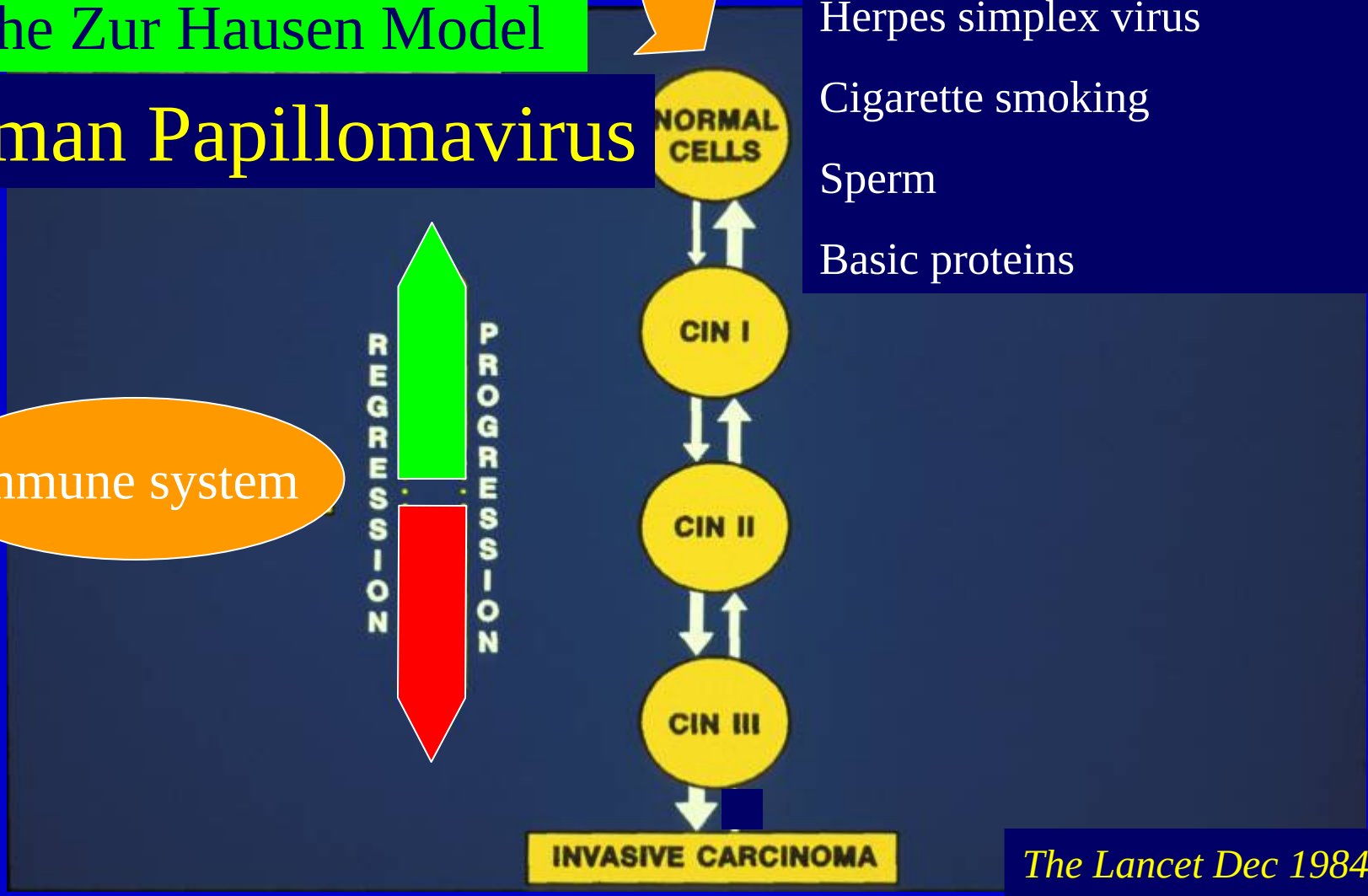
Other initiating co-factors ?

Herpes simplex virus

Cigarette smoking

Sperm

Basic proteins

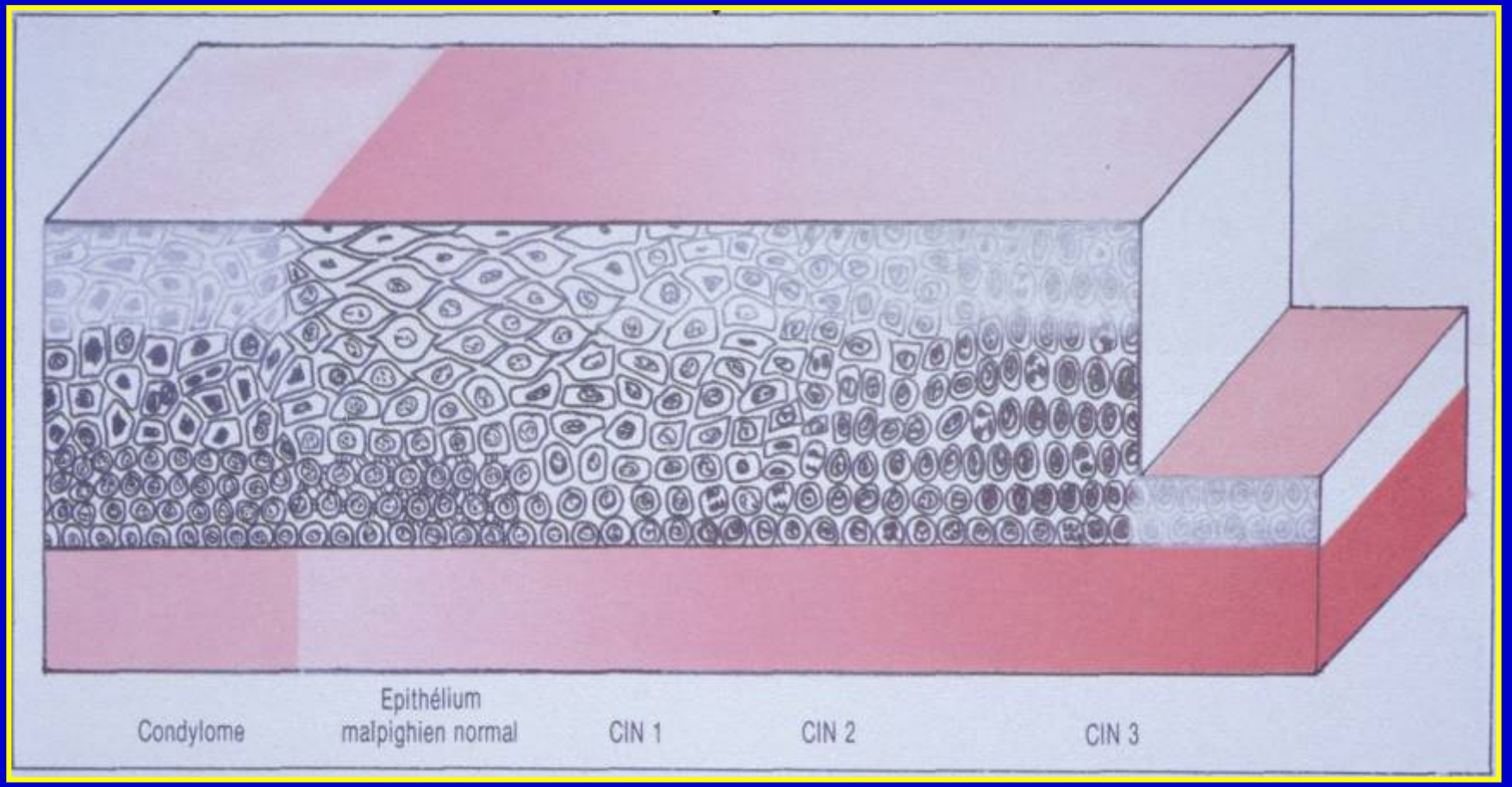



*The Lancet Dec 1984*

# Classifications Intra-epithelial cervical lesions

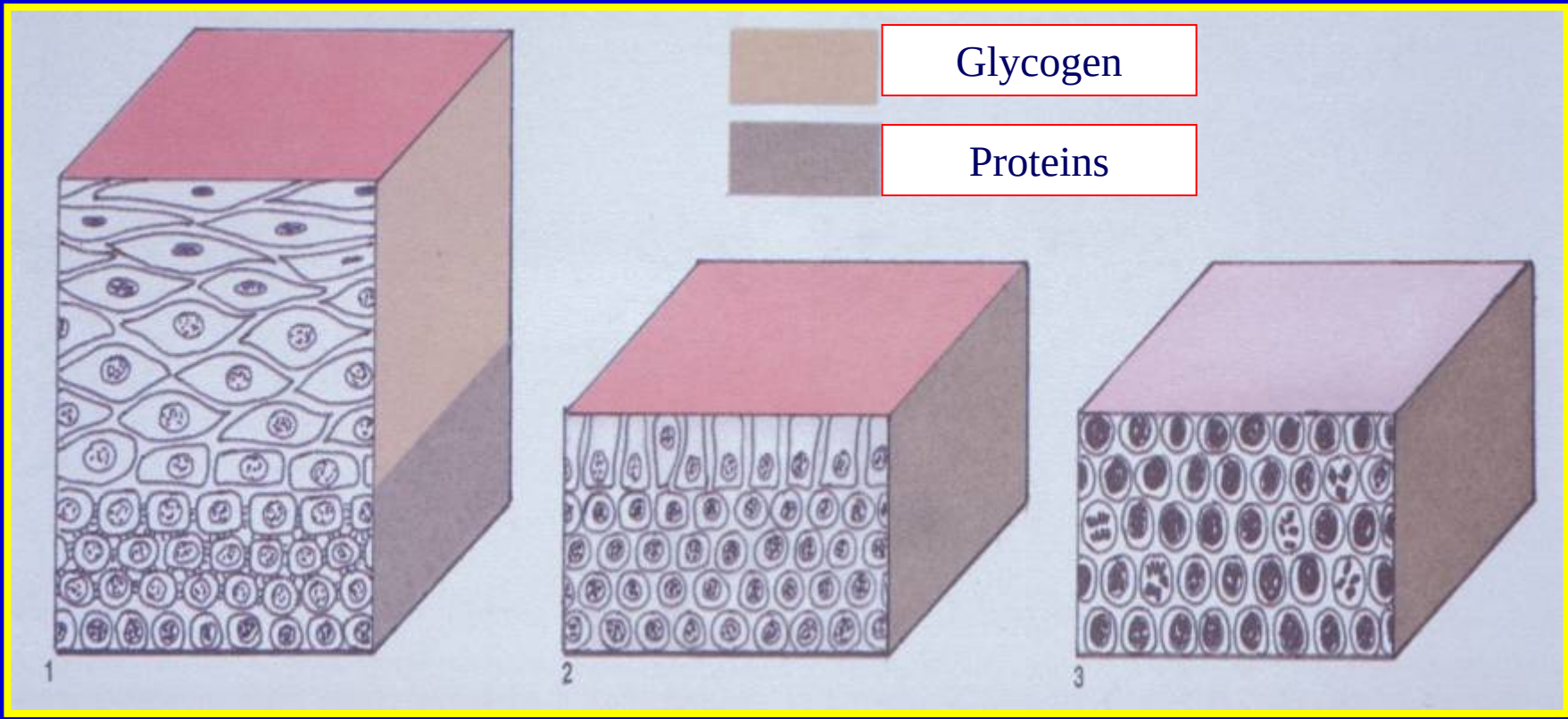
| HINSELMANN (1927) | MORICARD (1952) | WHO (1952-1973) | RICHART (1968) | PRACTICAL COLPOSCOPY (1984) | RICHART (1989) | PRACTICAL COLPOSCOPY (1993) |
|---|---|---|---|---|---|---|
| Simple atypical epithelium | Dysplasia with regular nuclei | – | – | Dystrophic states | – | Dystrophic states |
| Highly atypical epithelium | Dysplasia with irregular nuclei | Mild dysplasia | CIN I | Mild dysplasia | Low-grade CIN | Low-grade dysplasia |
| | | Moderate dysplasia | CIN II | Moderate dysplasia | High-grade CIN | High-grade dysplasia |
| | | Severe dysplasia | CIN III | Severe dysplasia | | |
| | Intra-epithelial carcinoma | Carcinoma *in situ* | | | | |

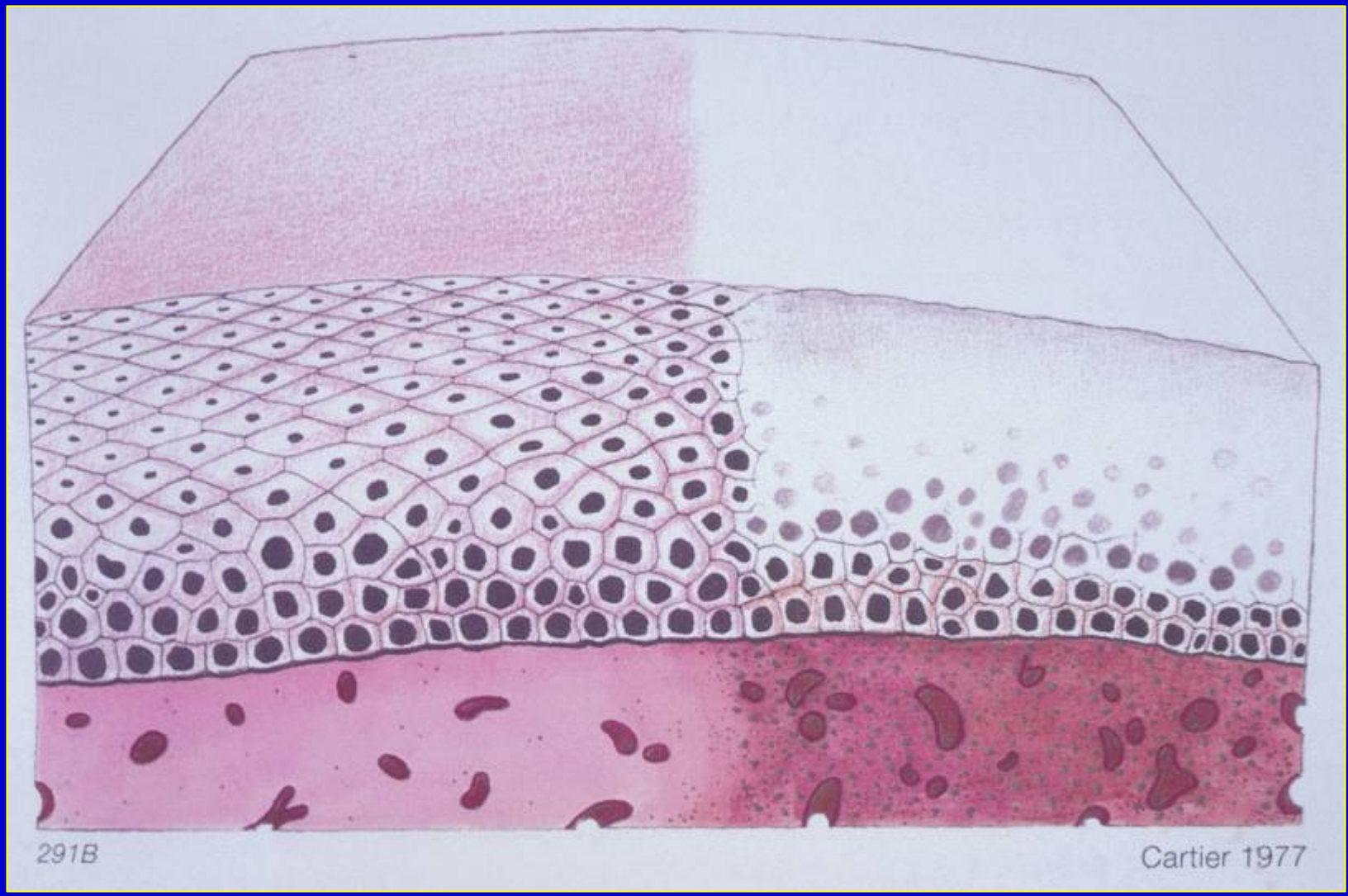
*Comparative table of the principal classifications of lesions of the cervical squamous epithelium.*


Condylome
Epithélium malpighien normal
CIN 1
CIN 2
CIN 3


5
4
3
2
1

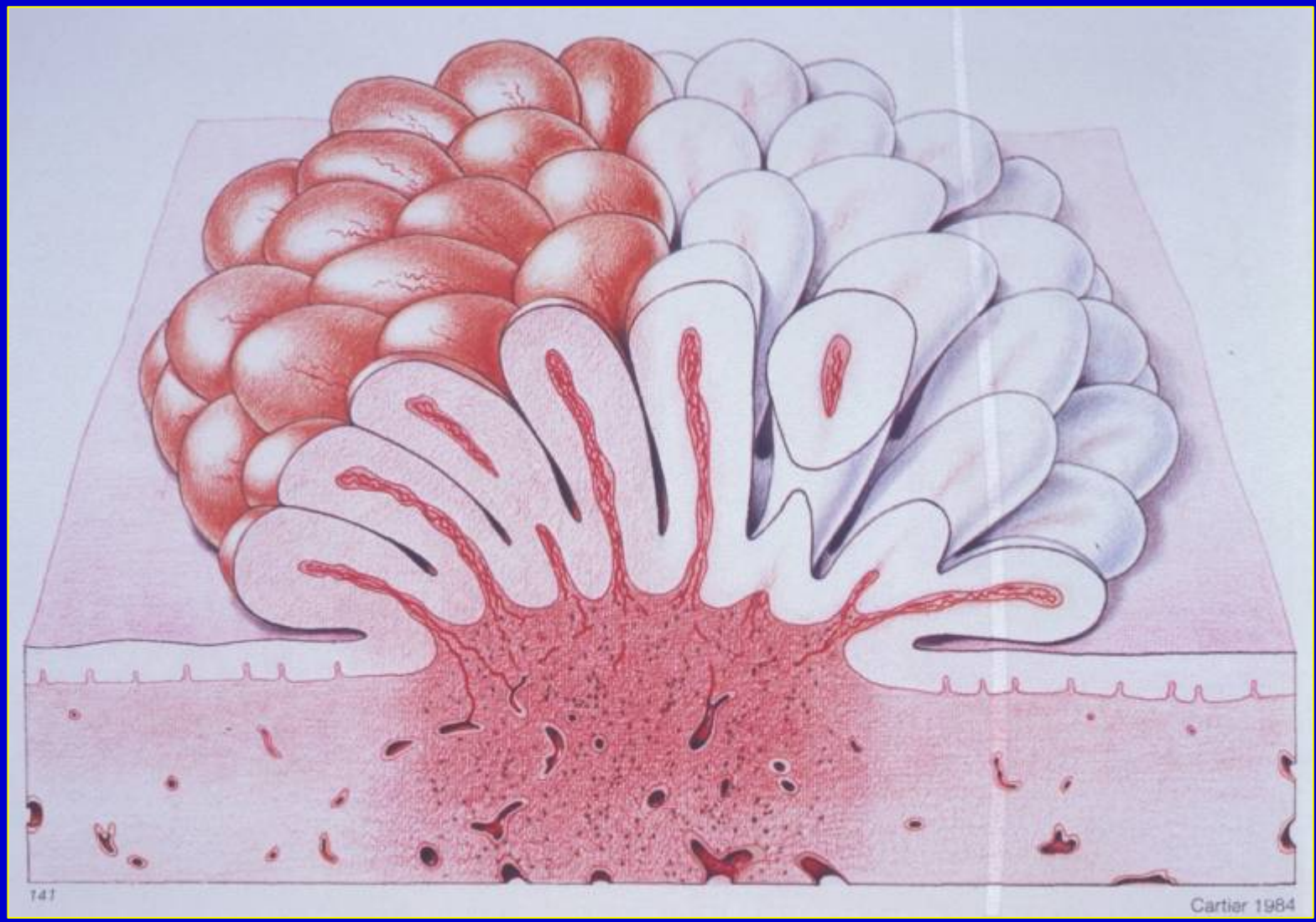

NaCl 0.9%
A.A. 3%
(EVENT. 5%)
LUGOL iodine


Glycogen
Proteins
1
2
3



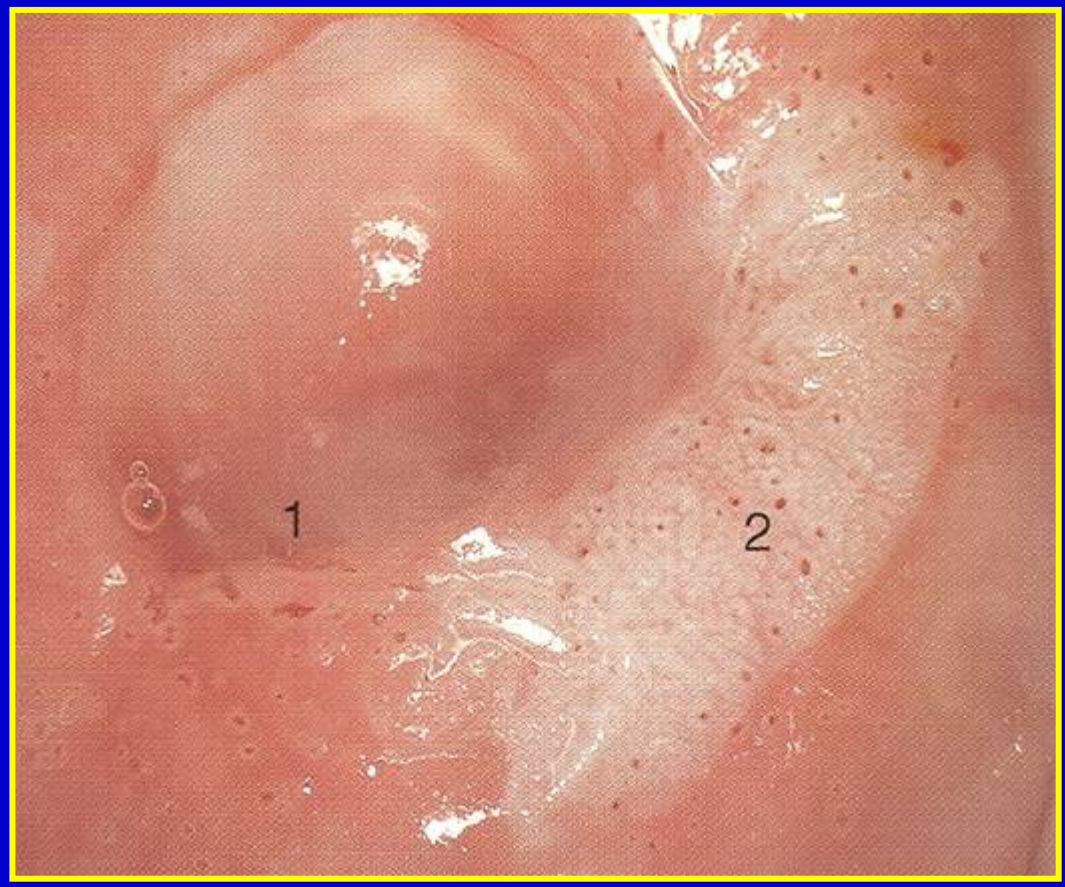
291B

Cartier 1977

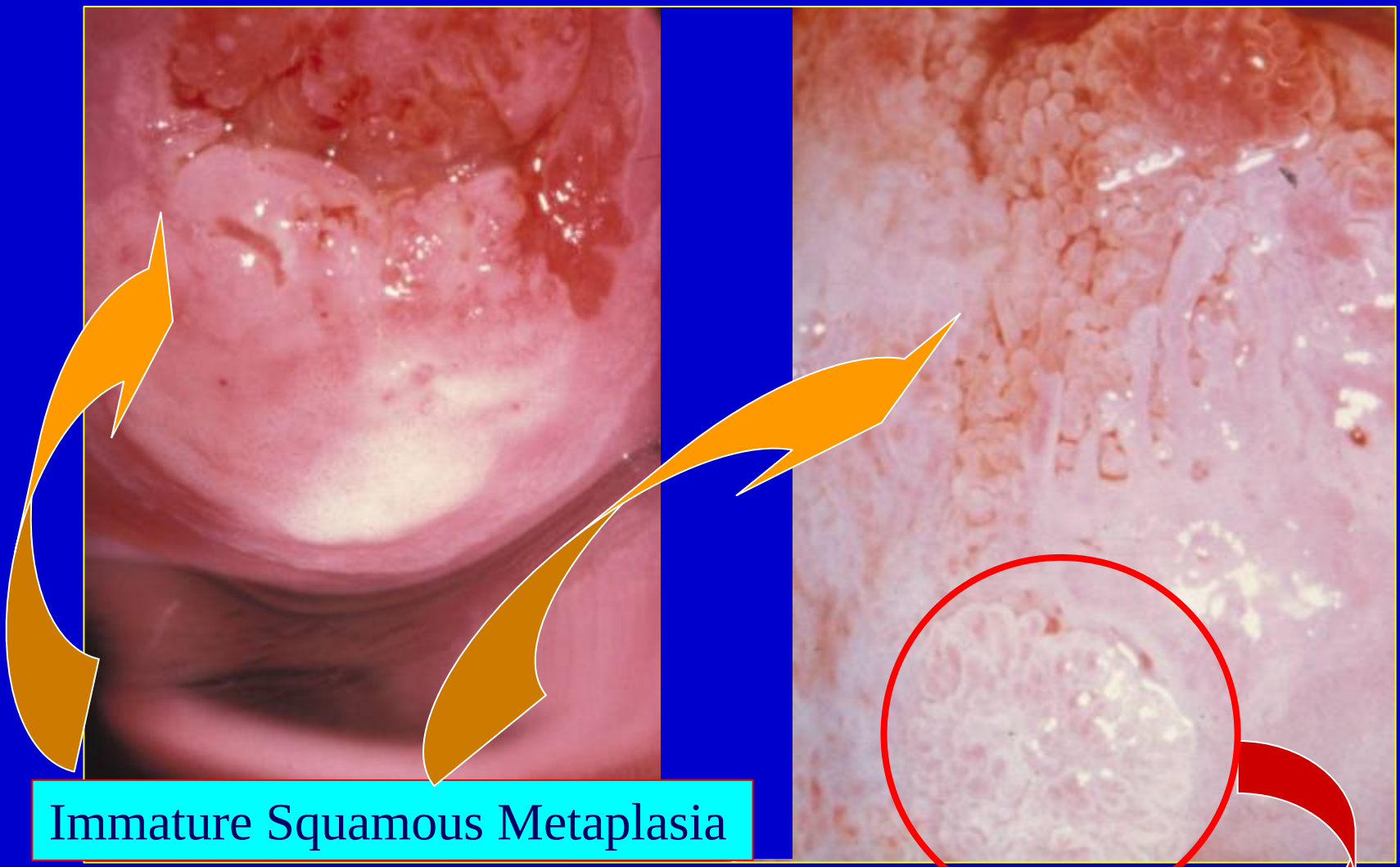


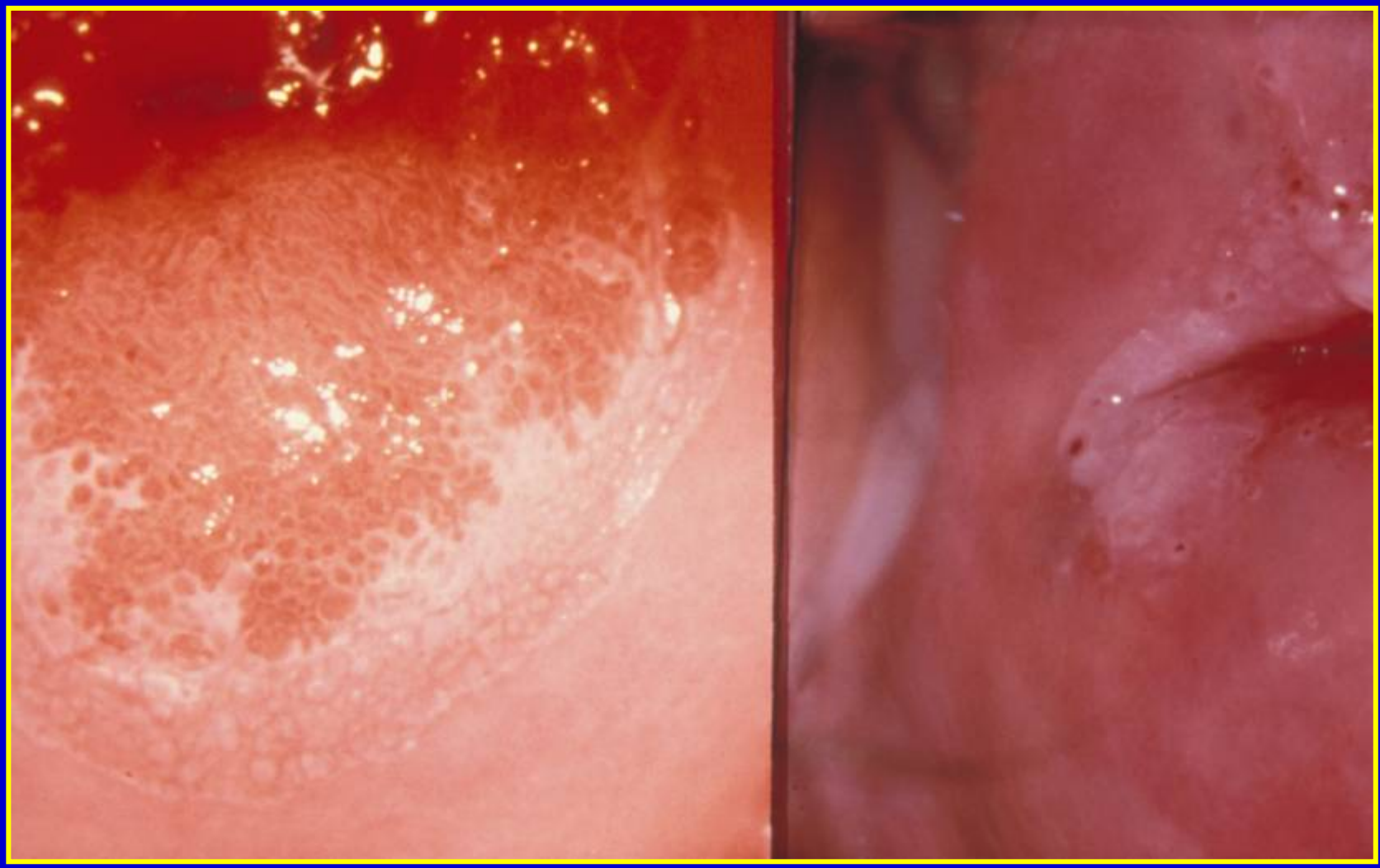

Condyloma

Condylomata accuminata

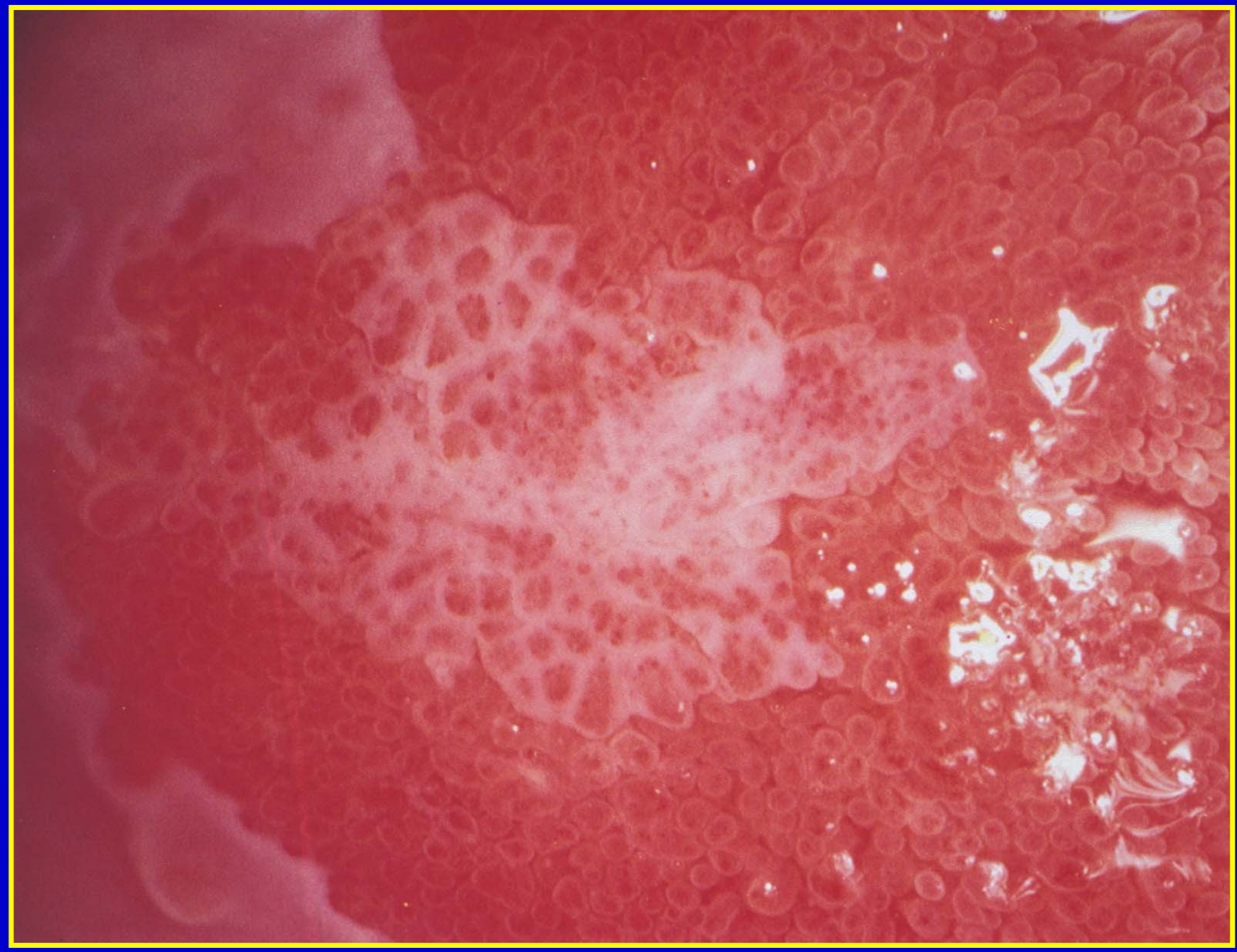



Flat condyloma


Immature Squamous Metaplasia
Condyloma

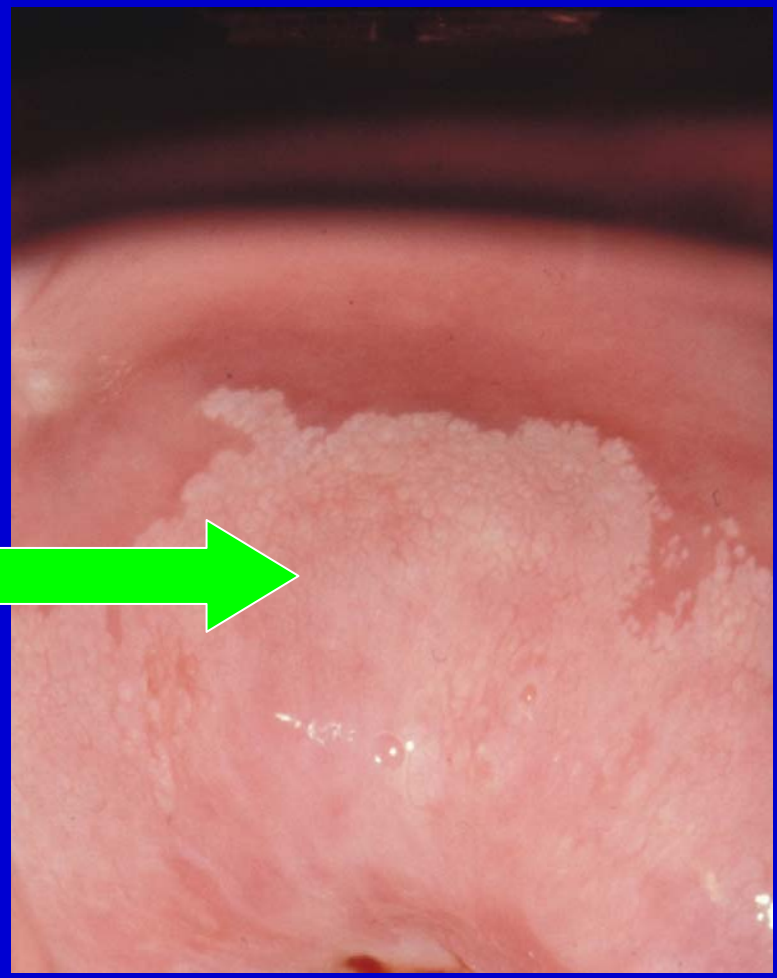


Immature squamous metaplasia

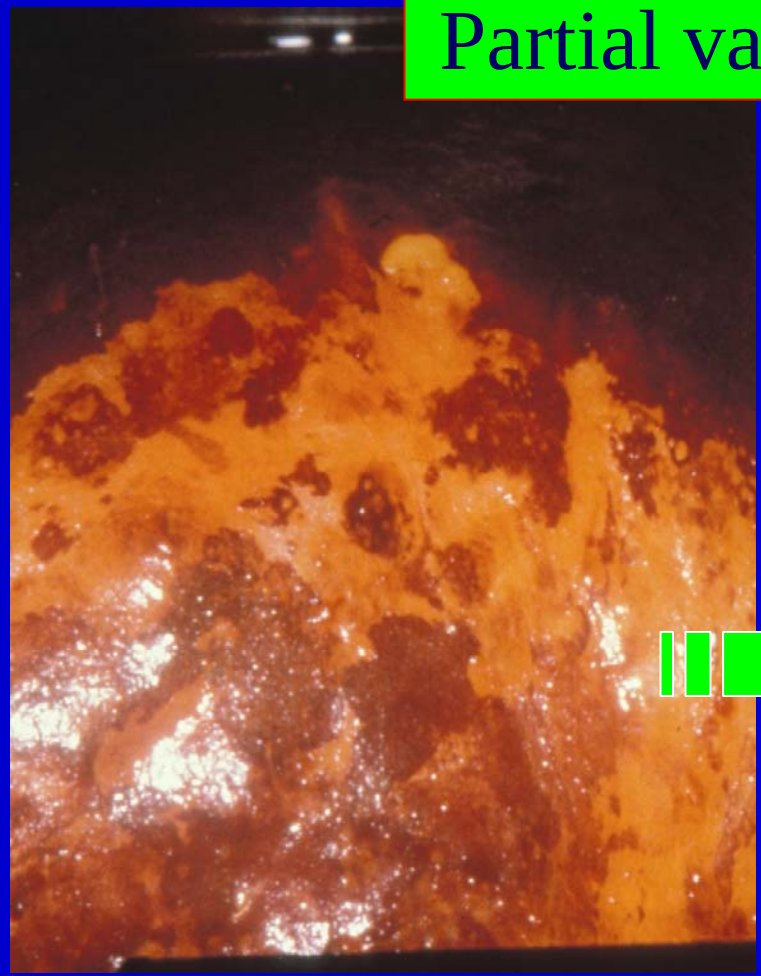


Immature squamous metaplasia

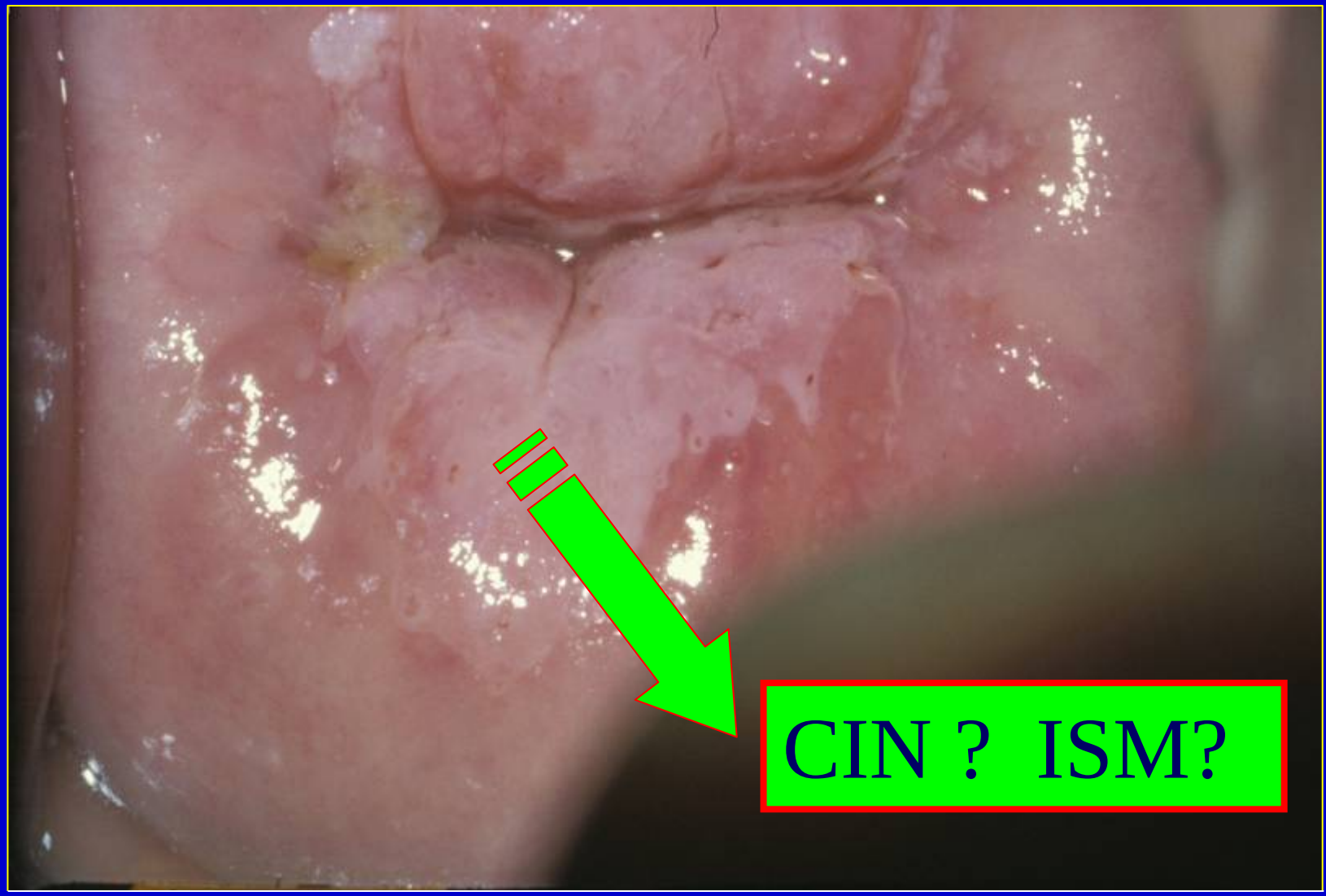
CIN ? ISM ?

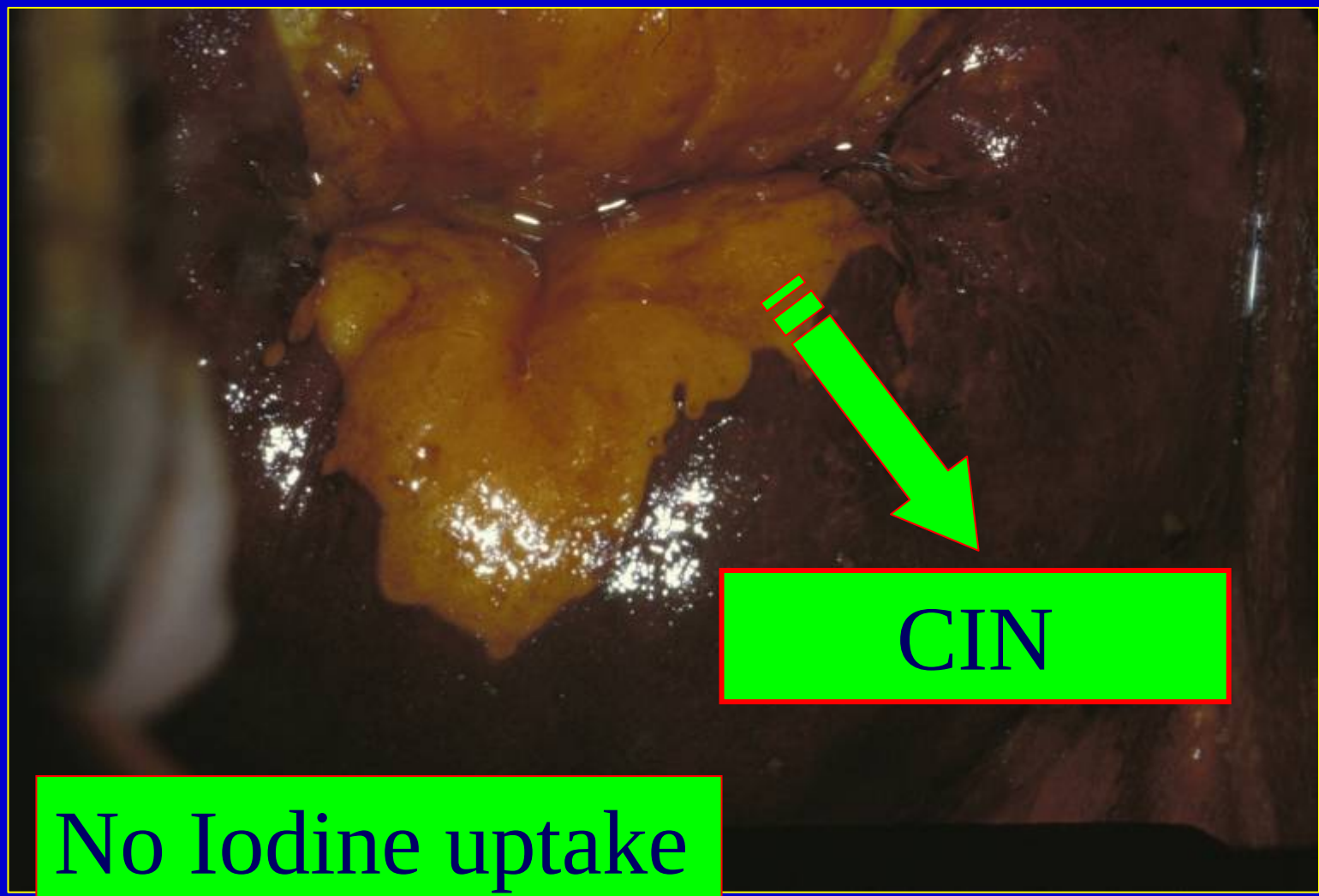


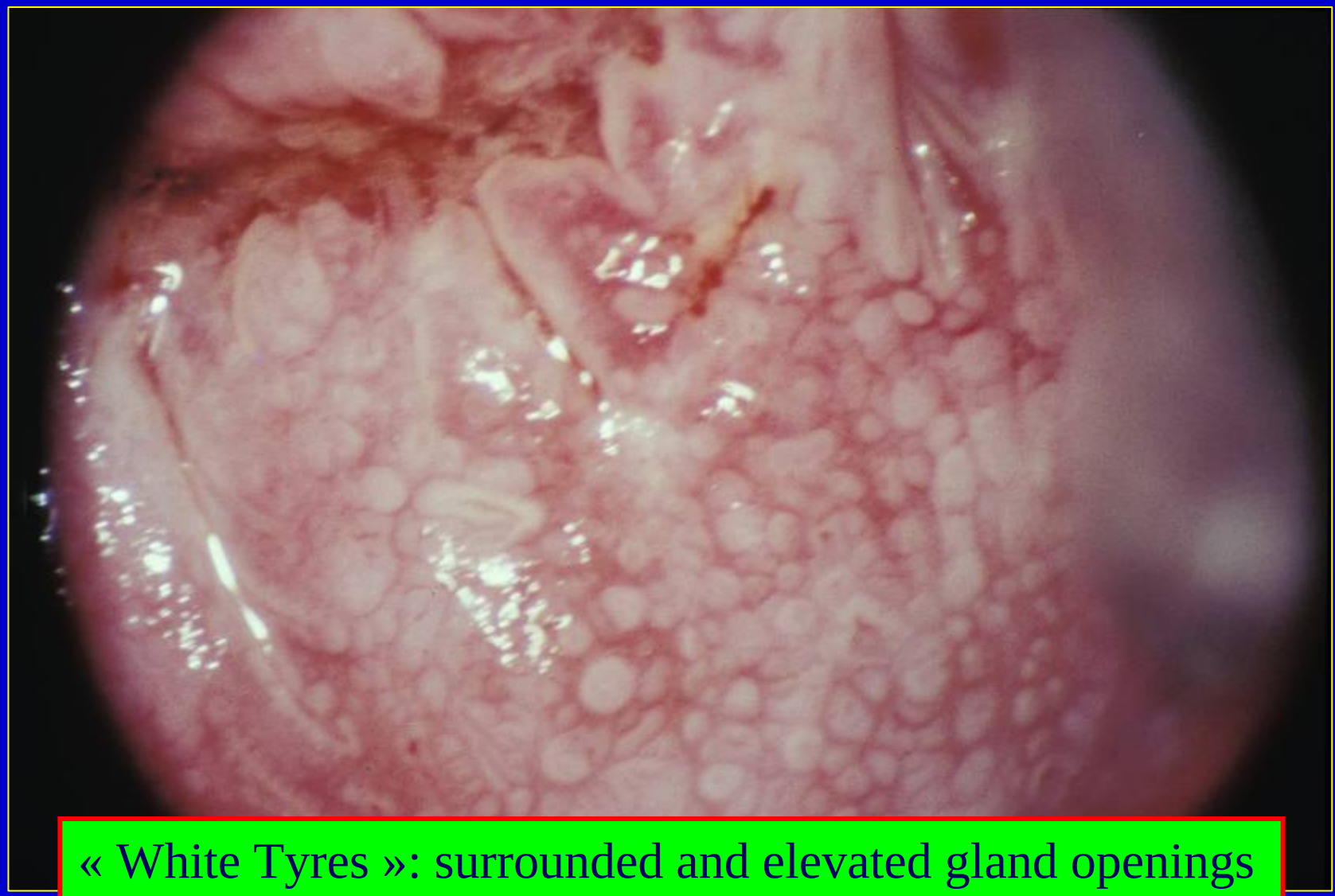
Partial variegated iodine uptake



ISM

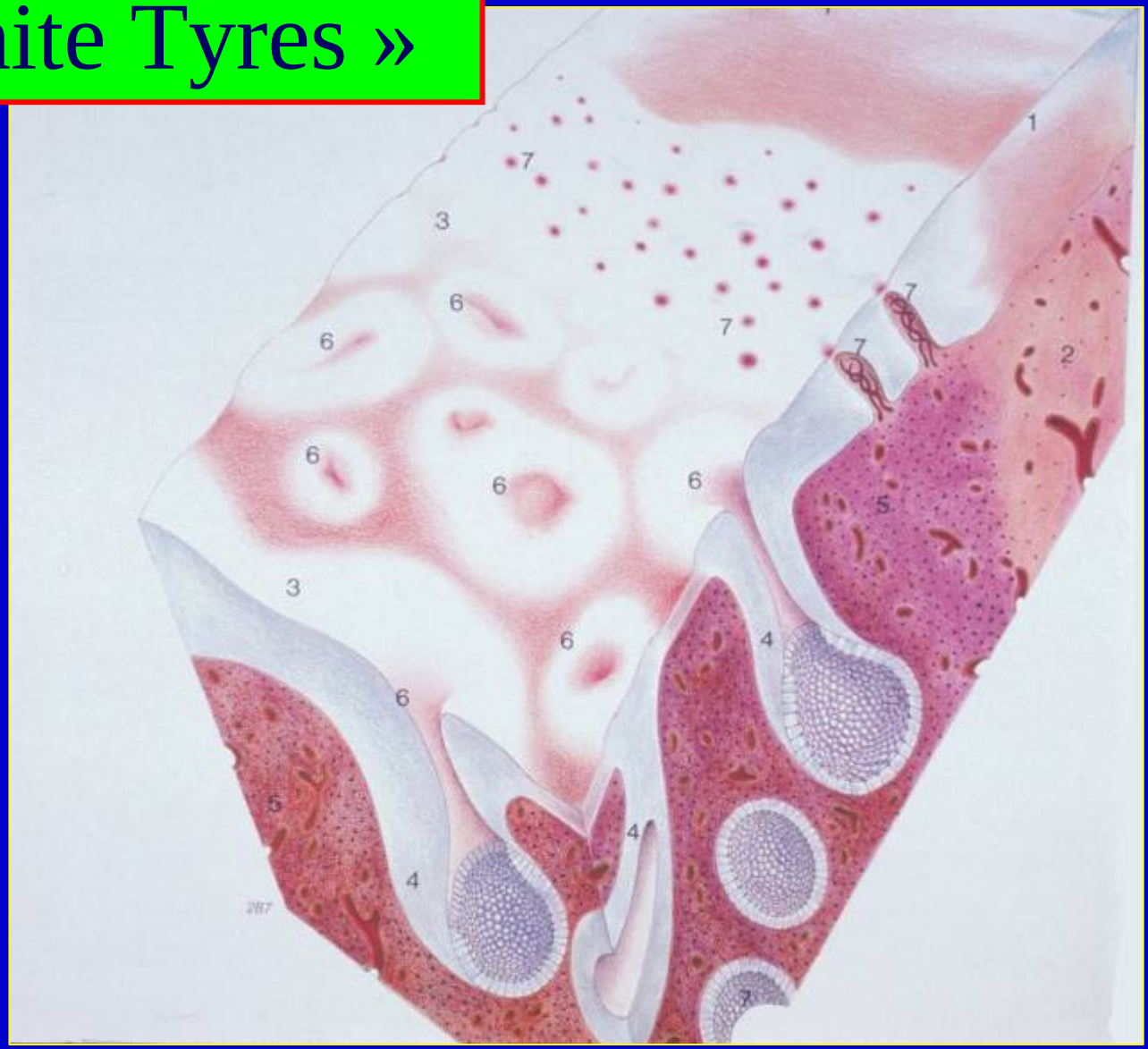

CIN ? ISM?


CIN
No Iodine uptake



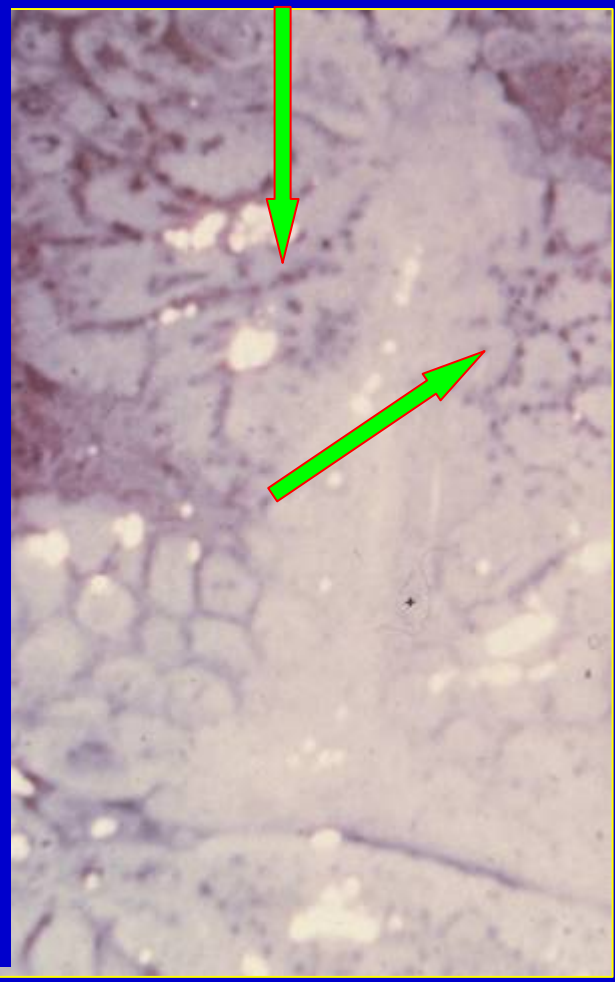
« White Tyres »: surrounded and elevated gland openings

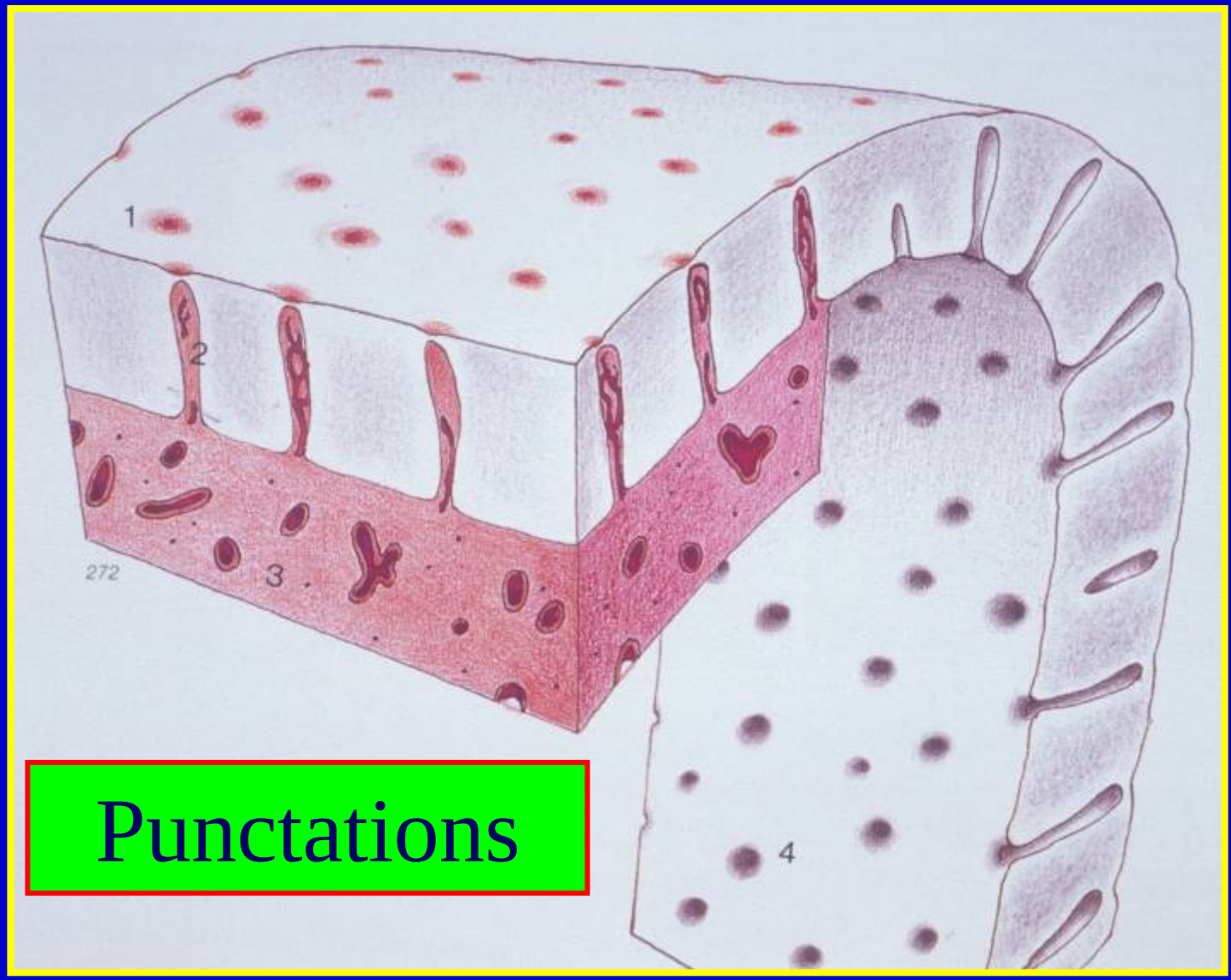
# « White Tyres »



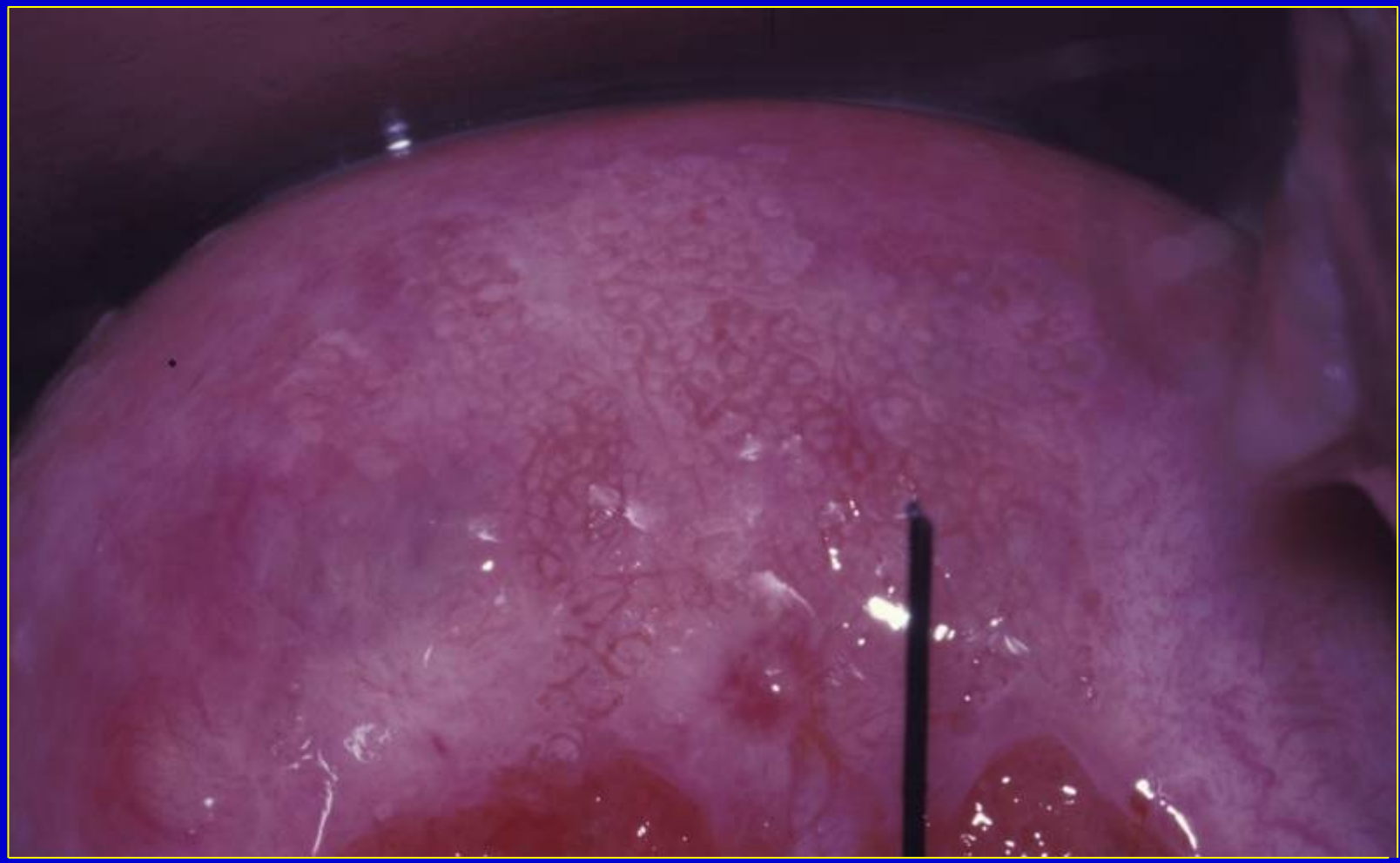
Punctations

Mosaicism

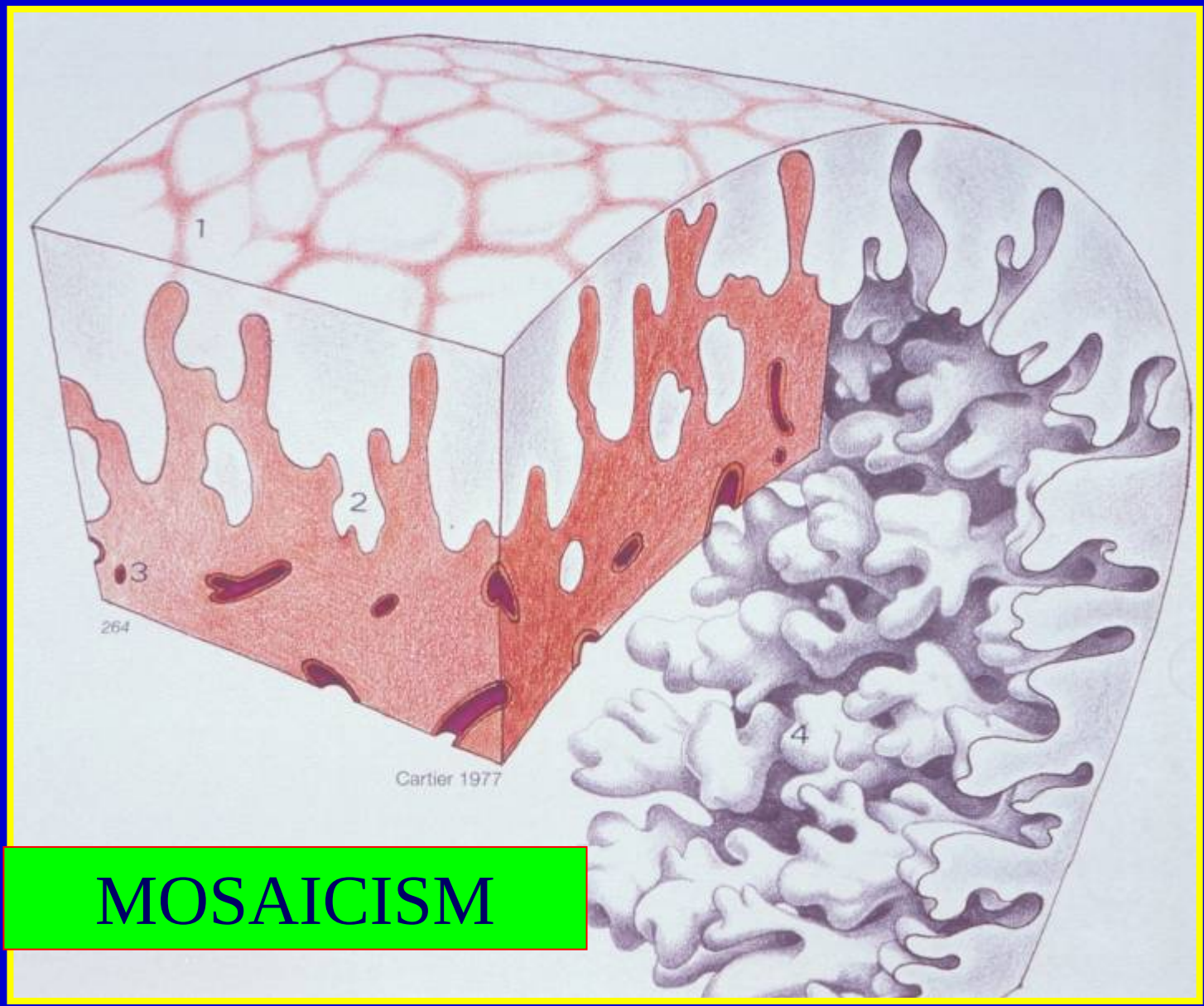





Punctations

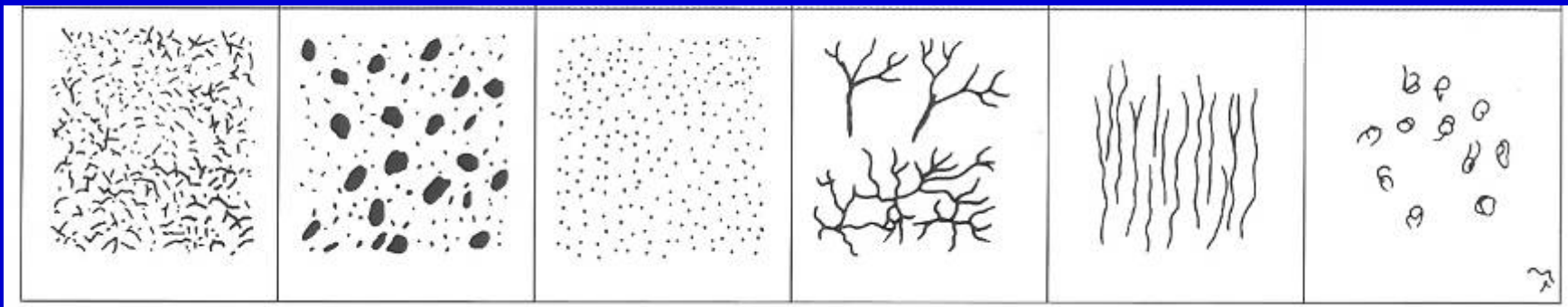


Mosaicism



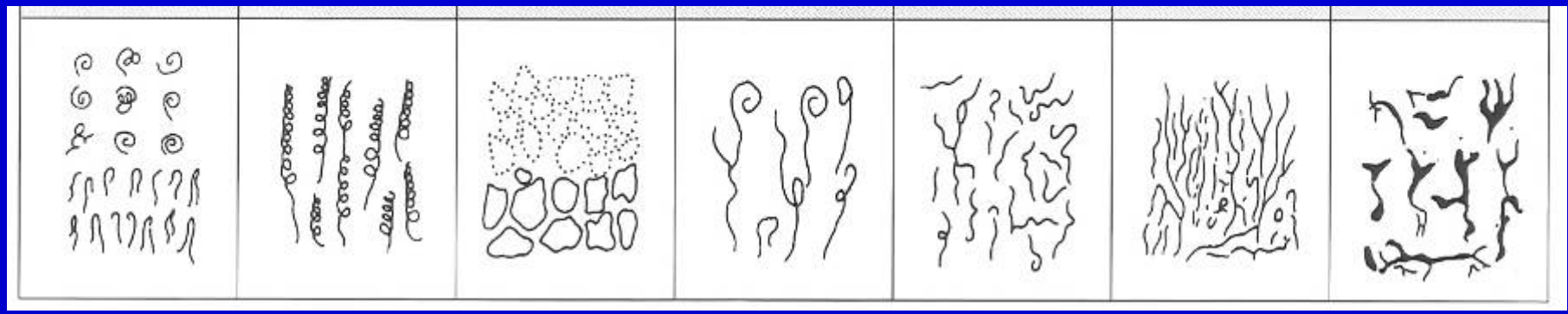

# MOSAICISM

# Vascular pattern: non malignant



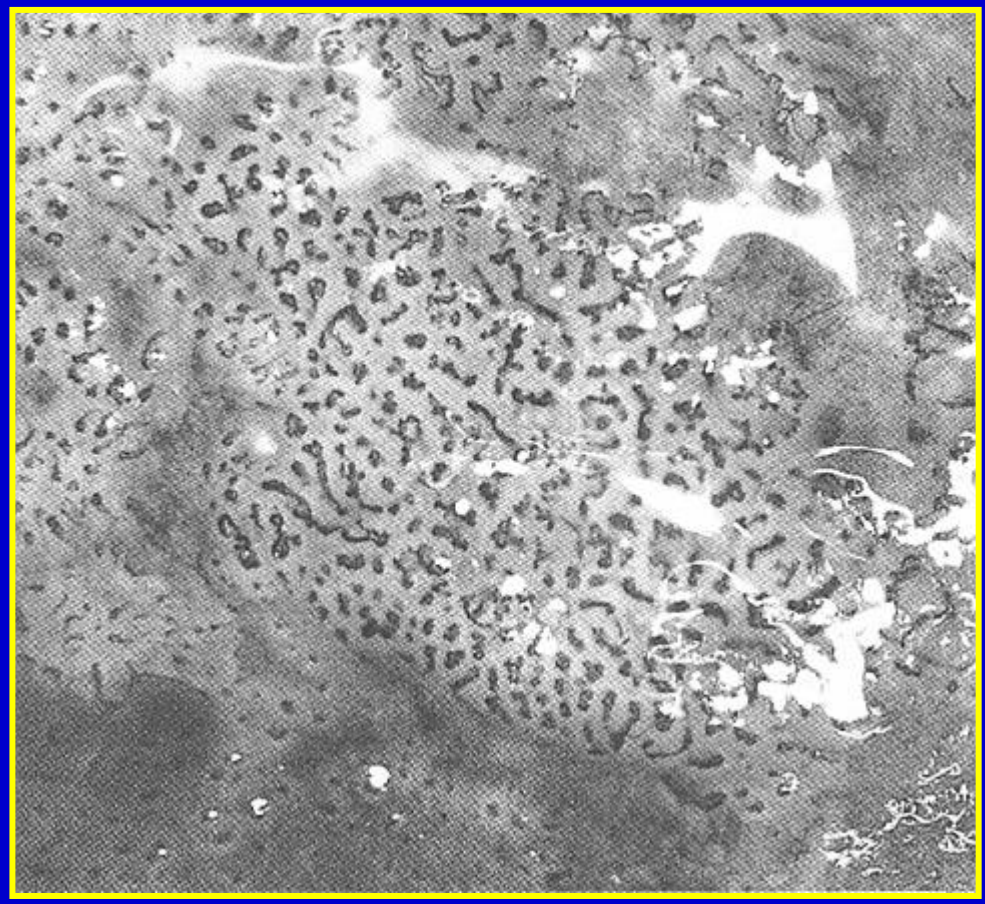
*Network-like* *Red-dotted* *Red-spotted* *Branch-like* *lineal* *loop-like*

# Vascular pattern: malignant

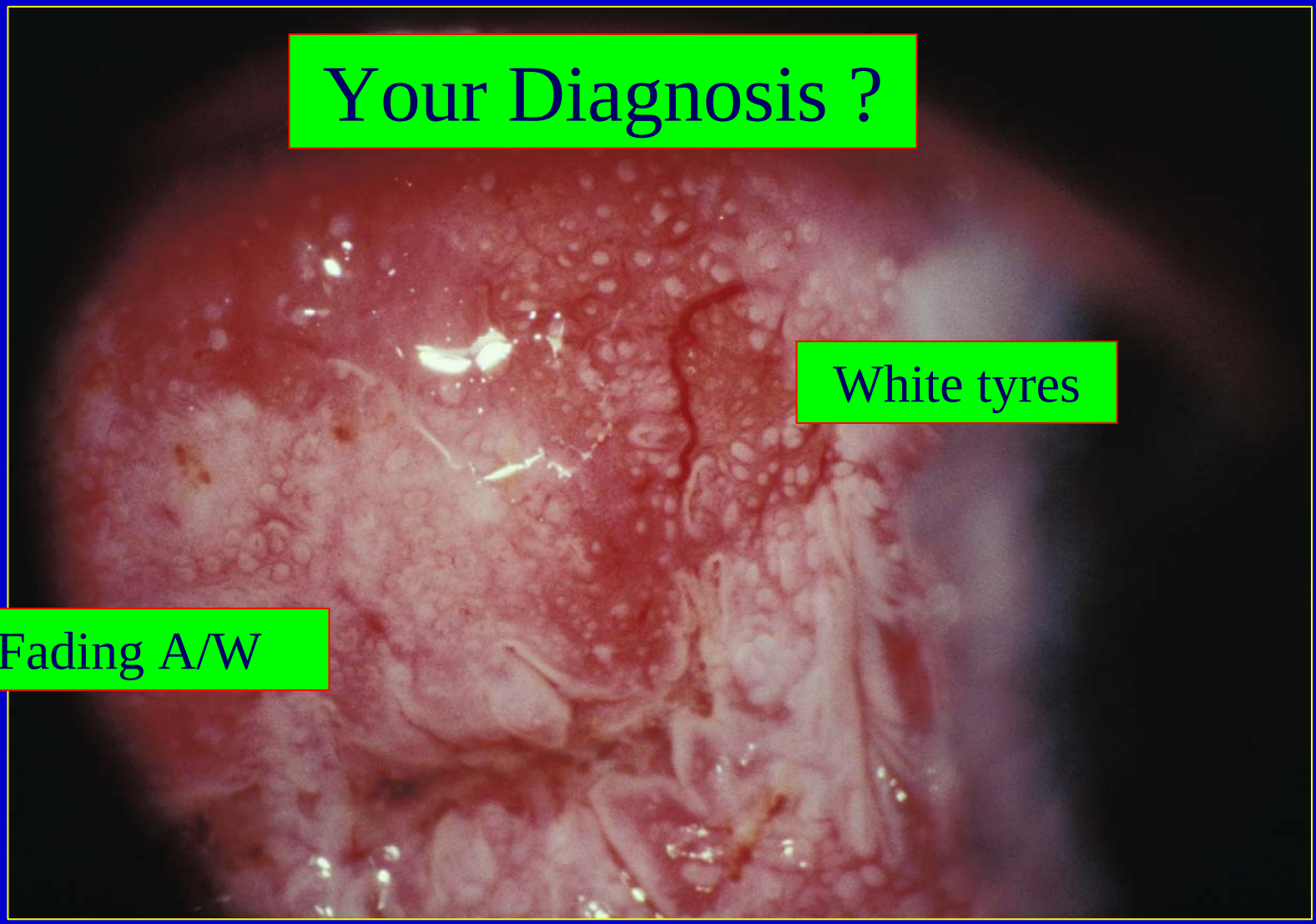


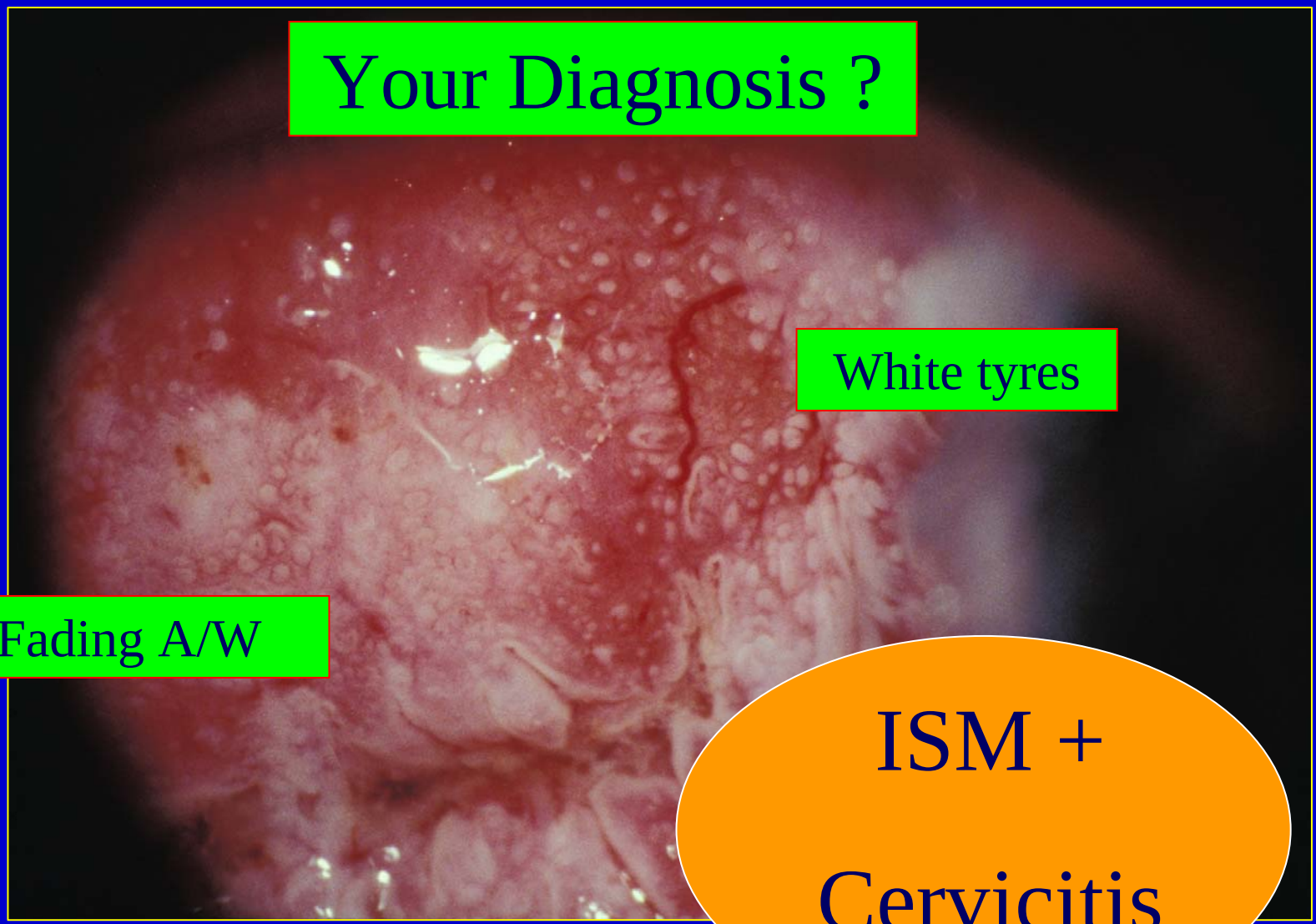
*Hairpin* *corkscrew* *mosaic* *tendril* *waste-thread* *branches* *root-like*

Vascular pattern

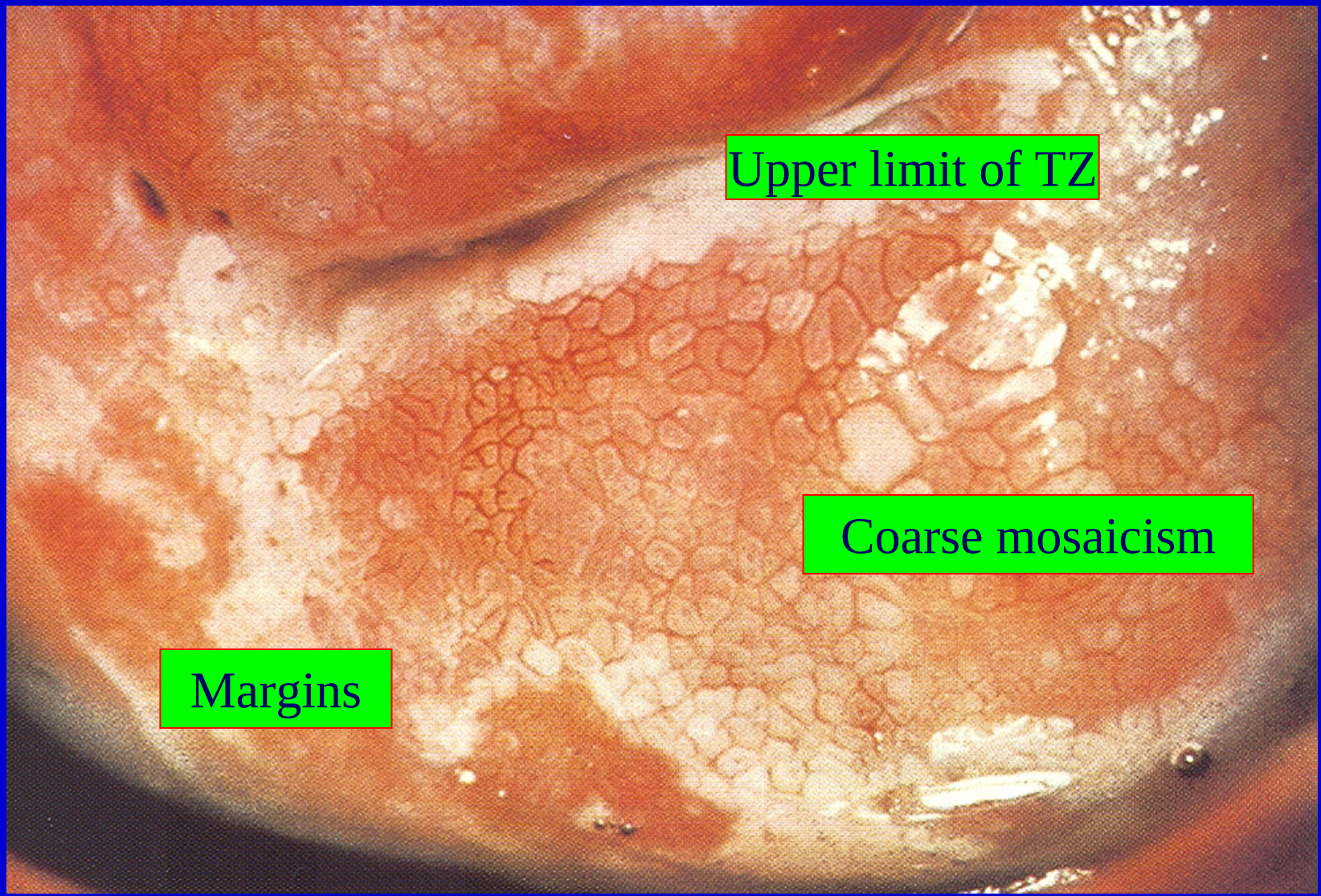


Vascular pattern

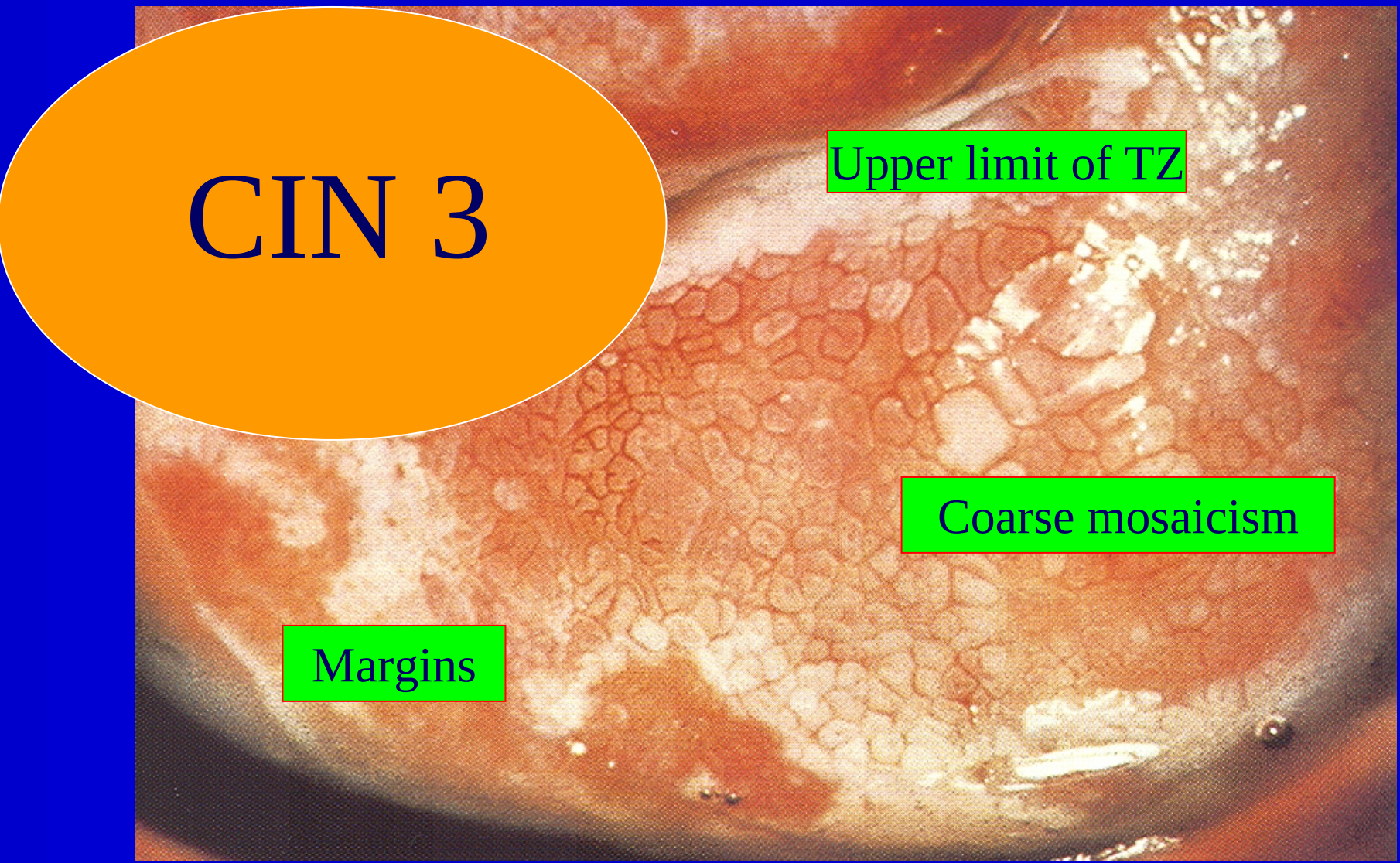

Your Diagnosis ?
White tyres
Fading A/W


Your Diagnosis ?
White tyres
Fading A/W
ISM +
Cervicitis

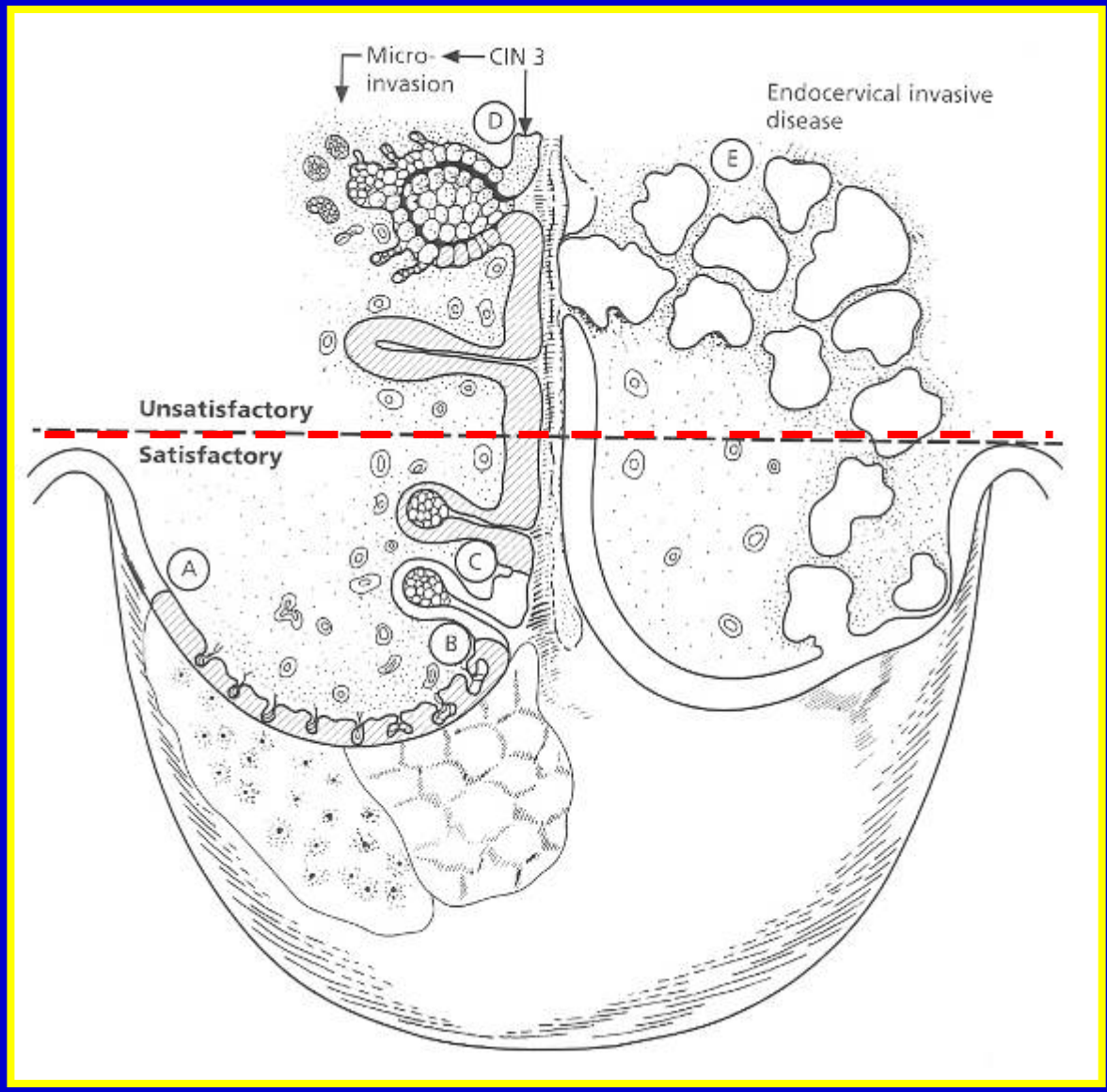
# Your diagnosis ?



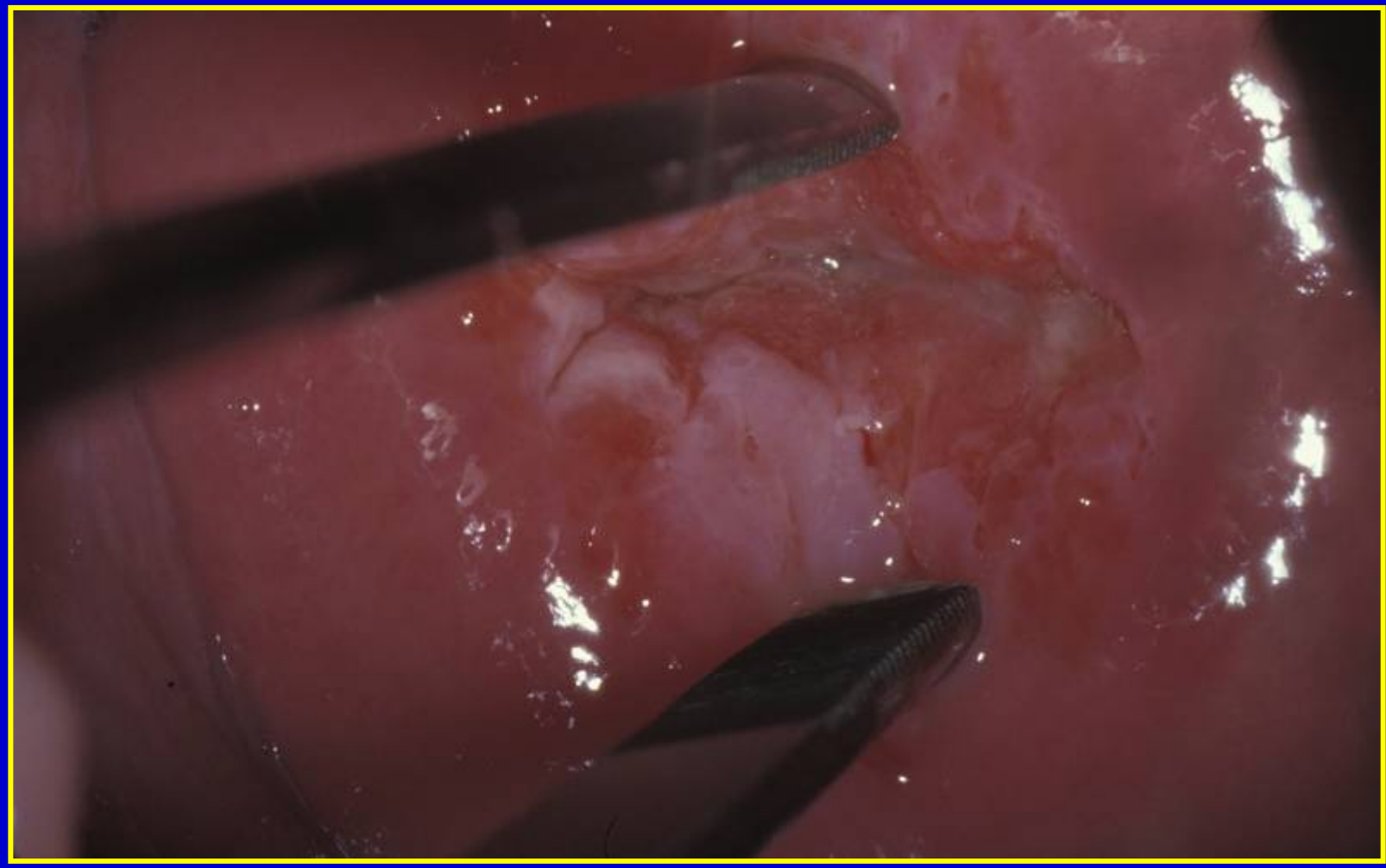
# Your diagnosis ?



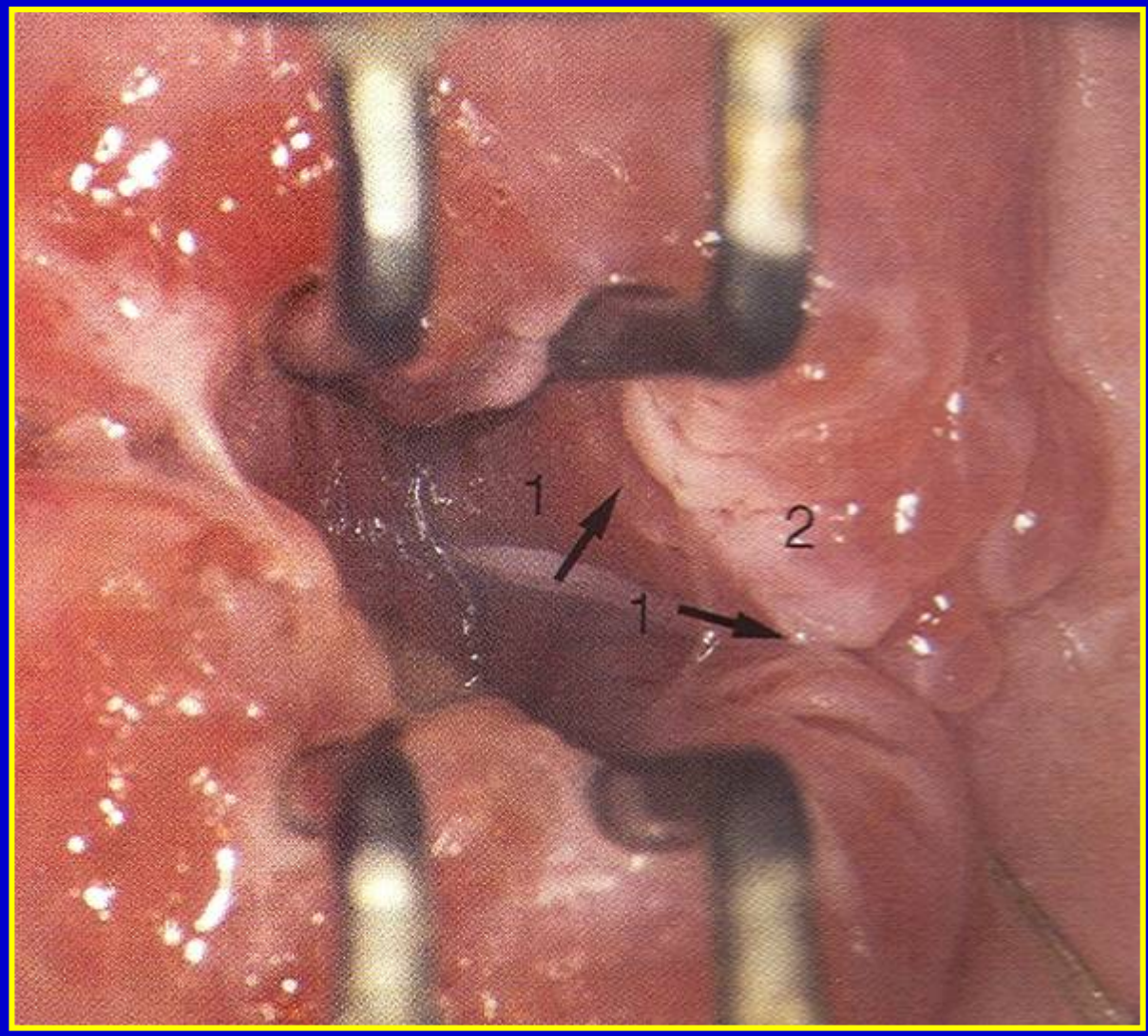
# Adequacy of colposcopy




Endocervical Canal



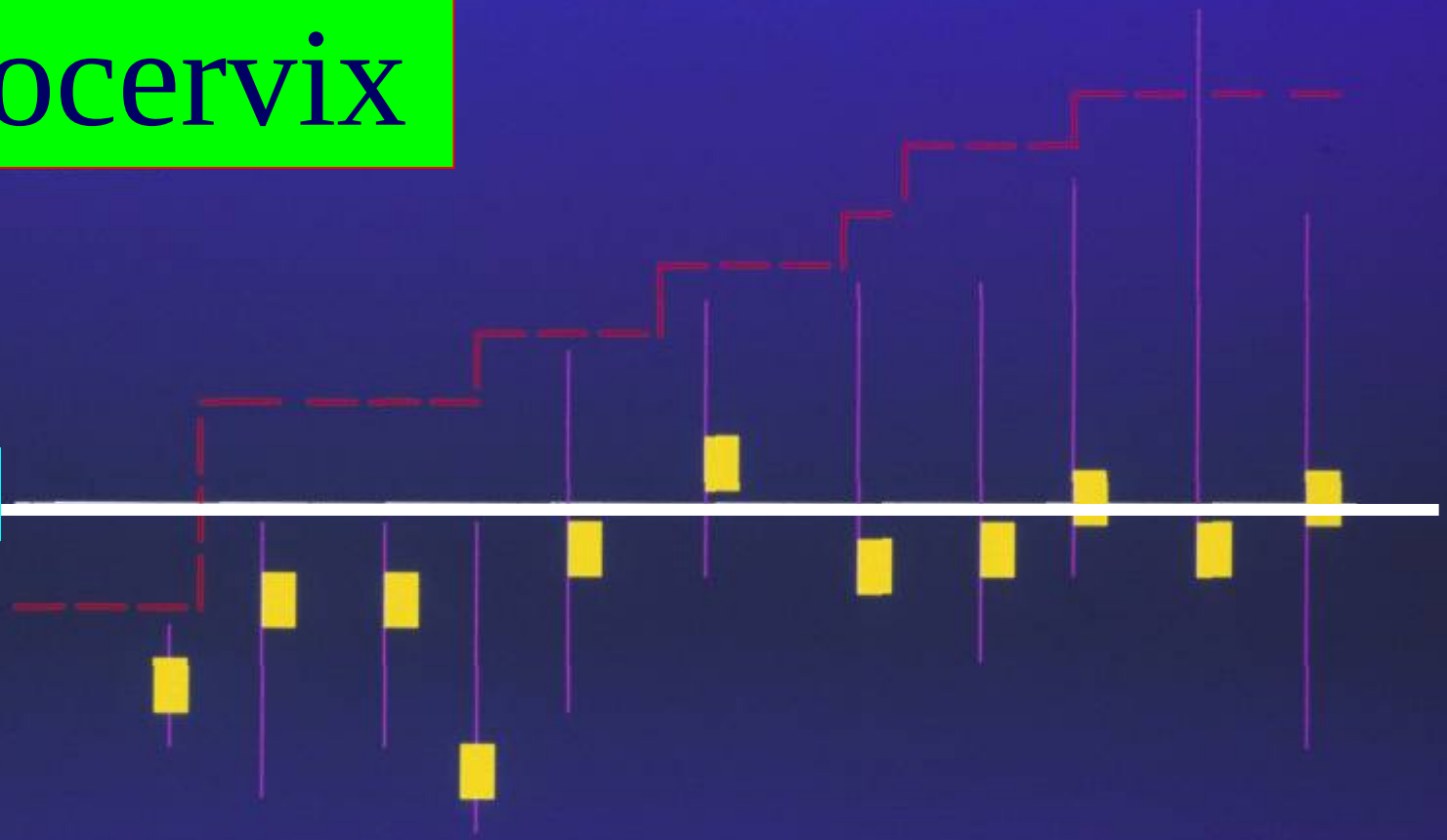
Anatomical forceps




# Koogan Speculum

Ectocervix

E.O.



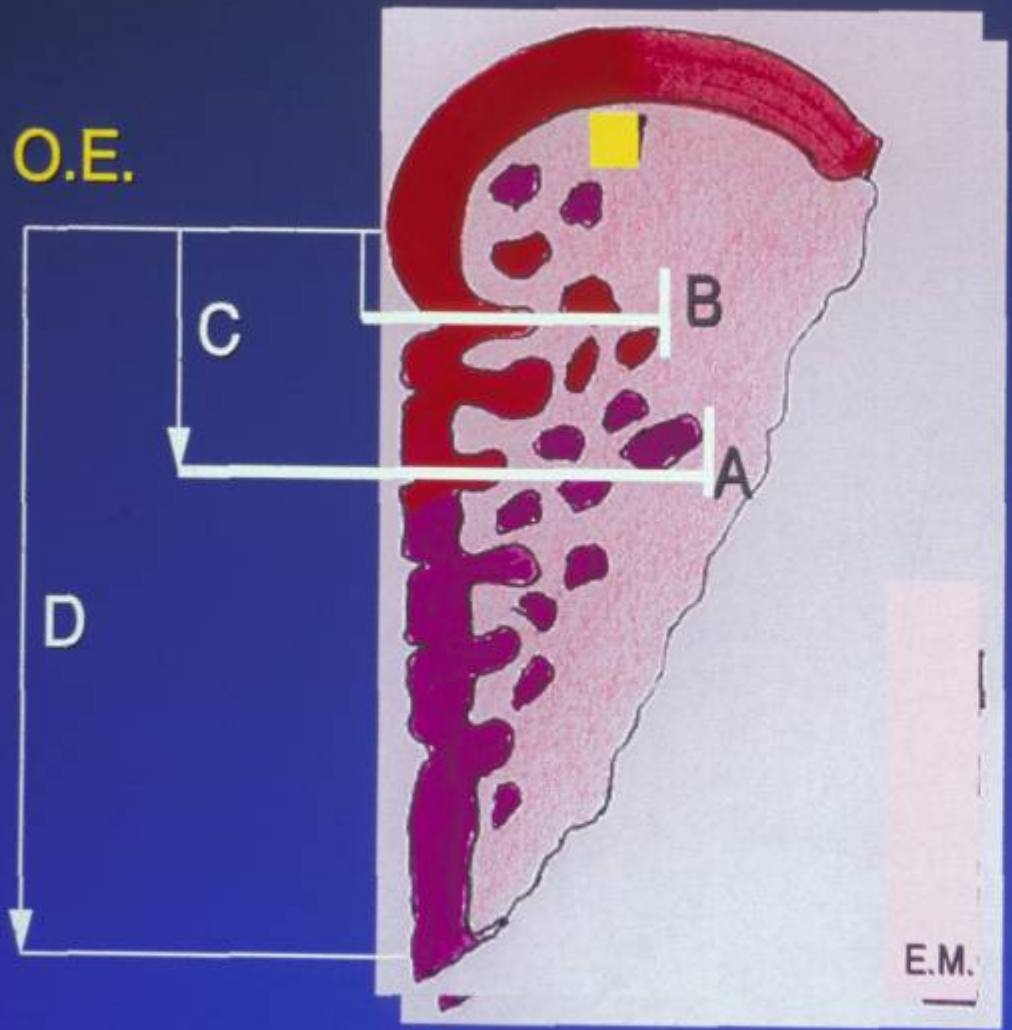
Endocervix

Ca in situ

Invasion débutante

Dernière glande

Dargent 1990




Epithélium épidermoïde

Métaplasie ± atypique

Epithélium glandulaire

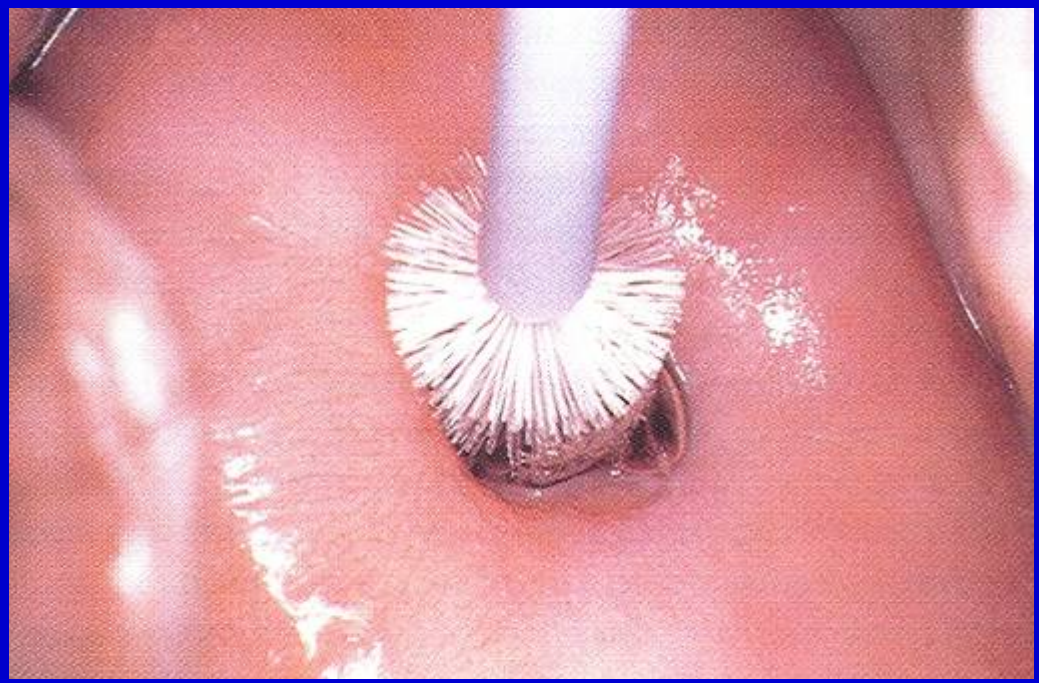
Dernière glande

**A.** Glande la plus profonde 0.7 cm (0.3-1.6)

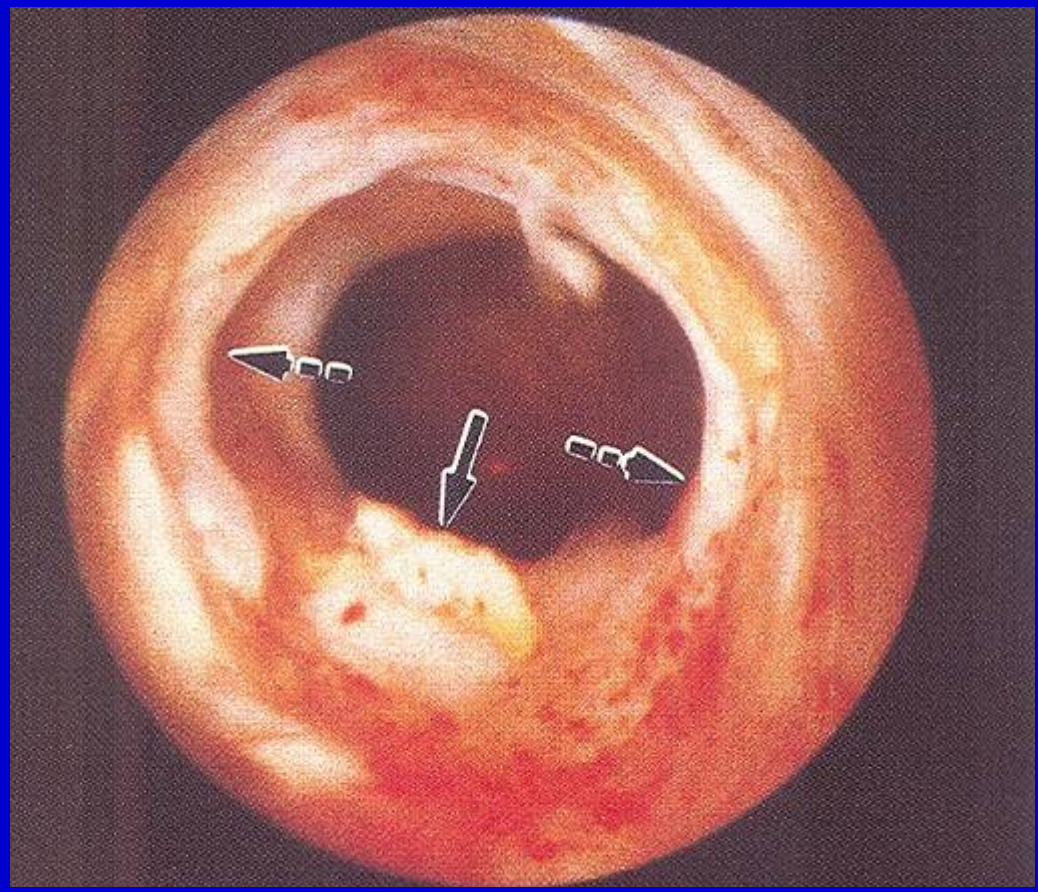
**B.** Glande dysplasique la plus profonde 0.45 cm (029-0.52)

**C.** 1.68 cm (0.33-3.25)

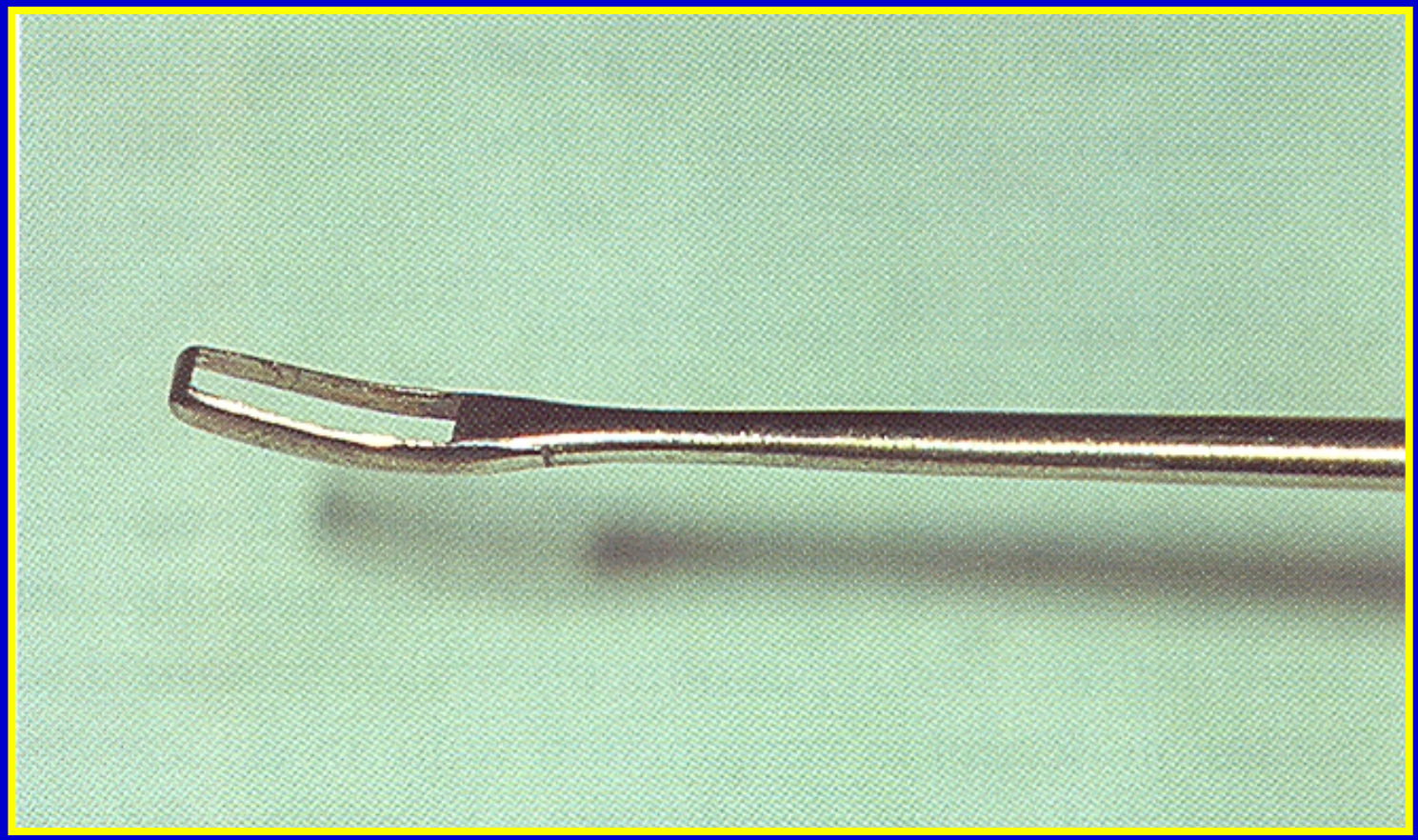
**D.** Canal cervical 2.8 cm (1.3-4.7)



Sampling the endocervical canal



Skipping lesions of AIS



Endocervical curette

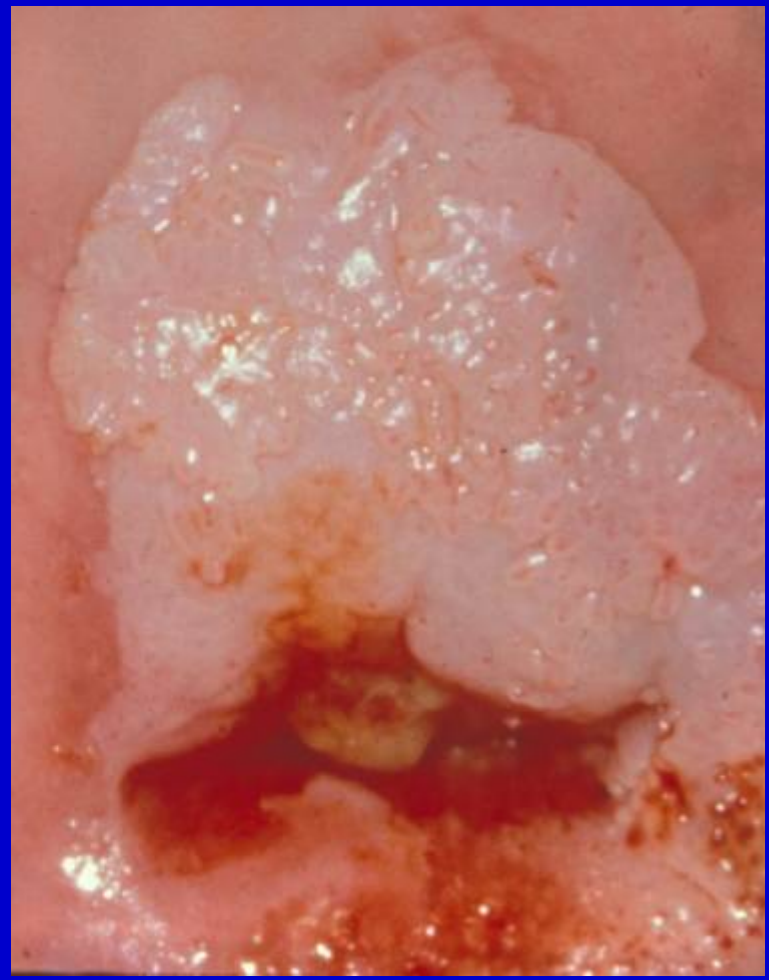
**Table 6.2** The modified Reid Colposcopic Index (RCI)*.

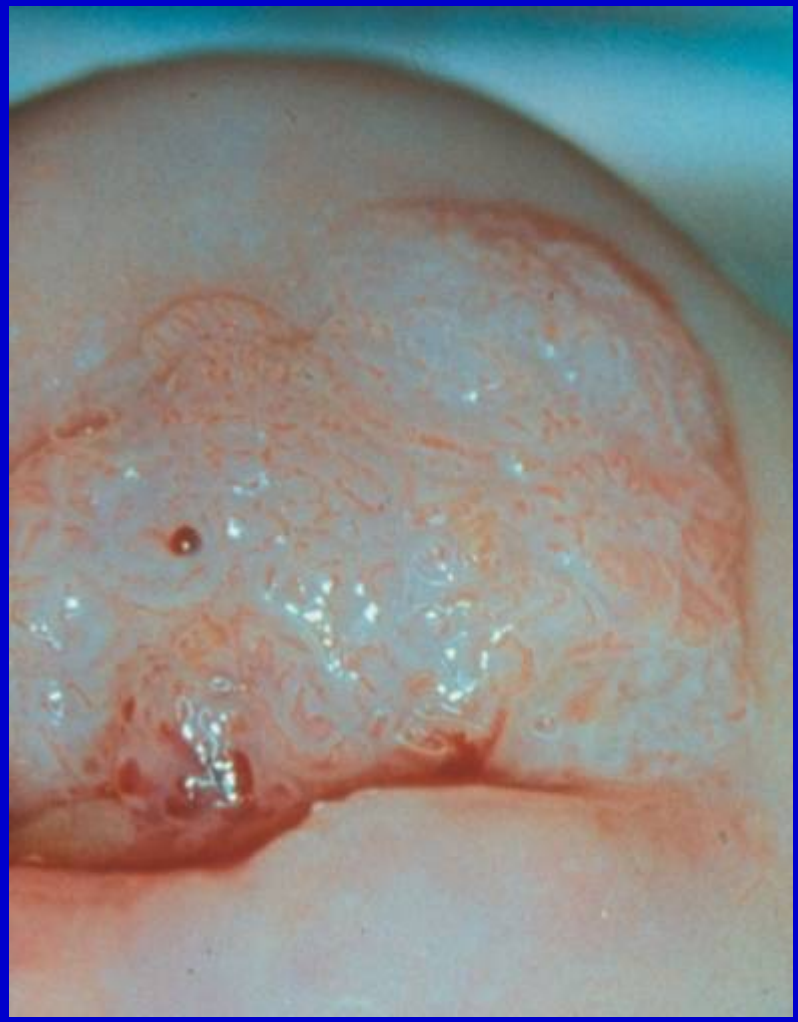
| Colposcopic signs | Zero points | One point | Two points |
|---|---|---|---|
| Color | Low intensity acetowhitening (not completely opaque); indistinct acetowhitening; transparent acetowhitening<br>Acetowhitening beyond the margin of the transformation zone<br>Pure snow-white color with intense surface shine (rare) | Intermediate shade — gray-white color and shiny surface (most lesions should be scored in this category) | Dull, oyster-white Gray |
| Lesion margin and surface configuration | Microcondylomatous or micropapillary contour†<br>Flat lesions with indistinct borders<br>Feathered or finely scalloped margins<br>Angular, jagged lesions§§<br>Satellite lesions beyond the margin of the transformation zone | Regularly shaped symmetrical lesions with smooth, straight outlines | Rolled, peeling edges‡<br>Internal demarcations between areas of differing colposcopic appearance; a central area of high-grade change and peripheral area of low-grade |
| Vessels | Fine/uniform caliber vessels¶<br>Poorly formed patterns of fine punctation and/or mosaic<br>Vessels beyond the margin of the transformation zone<br>Fine vessels within microcondylomatous or micropapillary lesions†† | Absent vessels | Well-defined coarse punctation or mosaic, sharply demarcated** |
| Iodine staining | Positive iodine uptake giving mahogany brown color<br>Negative uptake of insignificant lesion, i.e. yellow staining by a lesion scoring three points or less on the first three criteria<br>Areas beyond the margin of the transformation zone, conspicuous on colposcopy, evident as iodine negative areas, such areas are frequently due to parakeratosis‡‡ | Partial iodine uptake — variegated, speckled appearance | Negative iodine uptake of significant lesion, i.e. yellow staining by a lesion already scoring four points or more on the first three criteria |

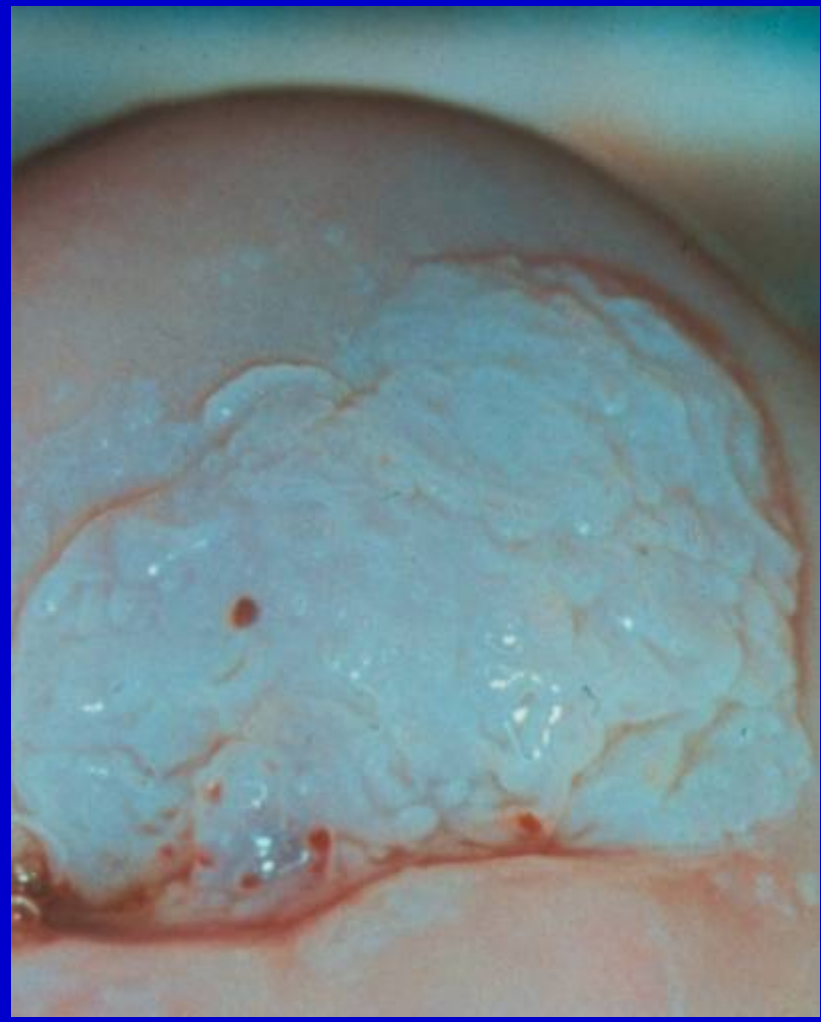
*Reid Colposcopic Index*

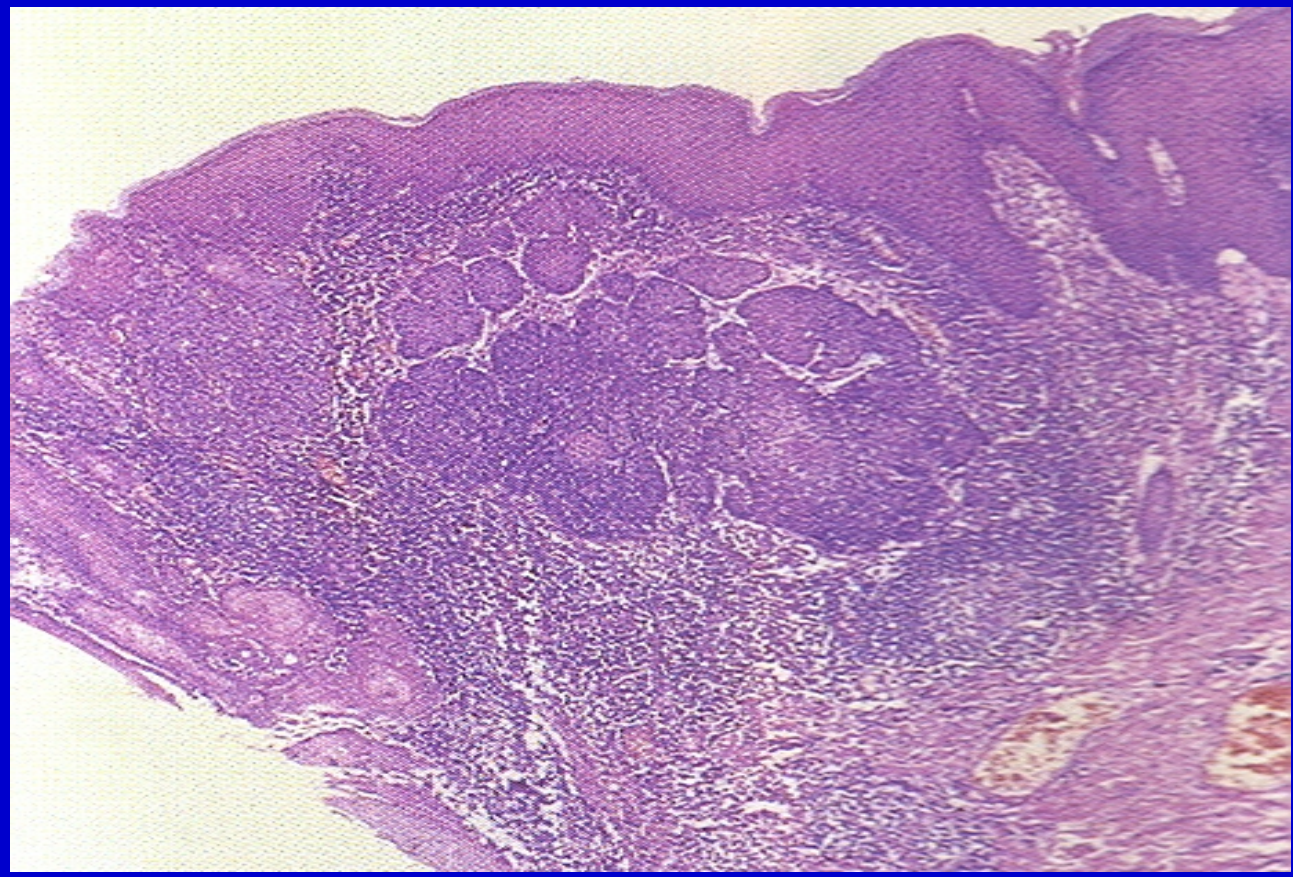
# Reid Colposcopic Index (RCI)

| RCI (overall score) | Histology |
|---|---|
| 0–2 | LSIL–HPV/atypia |
| 3–4 | Overlap* |
| 5–8 | HSIL |









Rely only on Histology !