



Colposcopy

Today

A PRACTICAL APPROACH

PART II

Colposcopy workshop

Chief Moderator : Dr. Sharda Jain (DGF)

Co Moderator : Dr. Veena Singh (ICMR)



Part II

Colposcopy

Workshop

**ASSESSMENT & INTERPRETATION OF
ABNORMAL & MISCELLANEOUS
COLPOSCOPIC FINDINGS OF THE
CERVIX**



Dr. Sharda Jain

MD (PGIMER), MNAMS, FICOG FIMSA, DHM, QM & AHO

Director :- *LifeCare* 

LifeCare 
A unit of Lifecare centre

**Founder chairmen : Pushpanjali Crosly Hospital
Global Institute of Gynaecology
Sec General : Delhi Gynae Forum**

International Federation of Cervical Pathology & Colposcopy(1991)

Normal: Original squamous epithelium

Columnar epithelium

Normal transformation zone

Abnormal: Acetowhite epithelium

Mosaicism

Iodine negative

Punctation

Leukoplakia

Atypical vessels

Suspect invasive cancer:

Unsatisfactory: SCJ not visible, **severe inflam or atrophy, invisible cervix**

Miscellaneous: Nonacetowhite micropapillary surface,
exophytic condyloma, inflammation, atrophy, ulcer

SCORING SYSTEM FOR MODIFIED READ INDEX

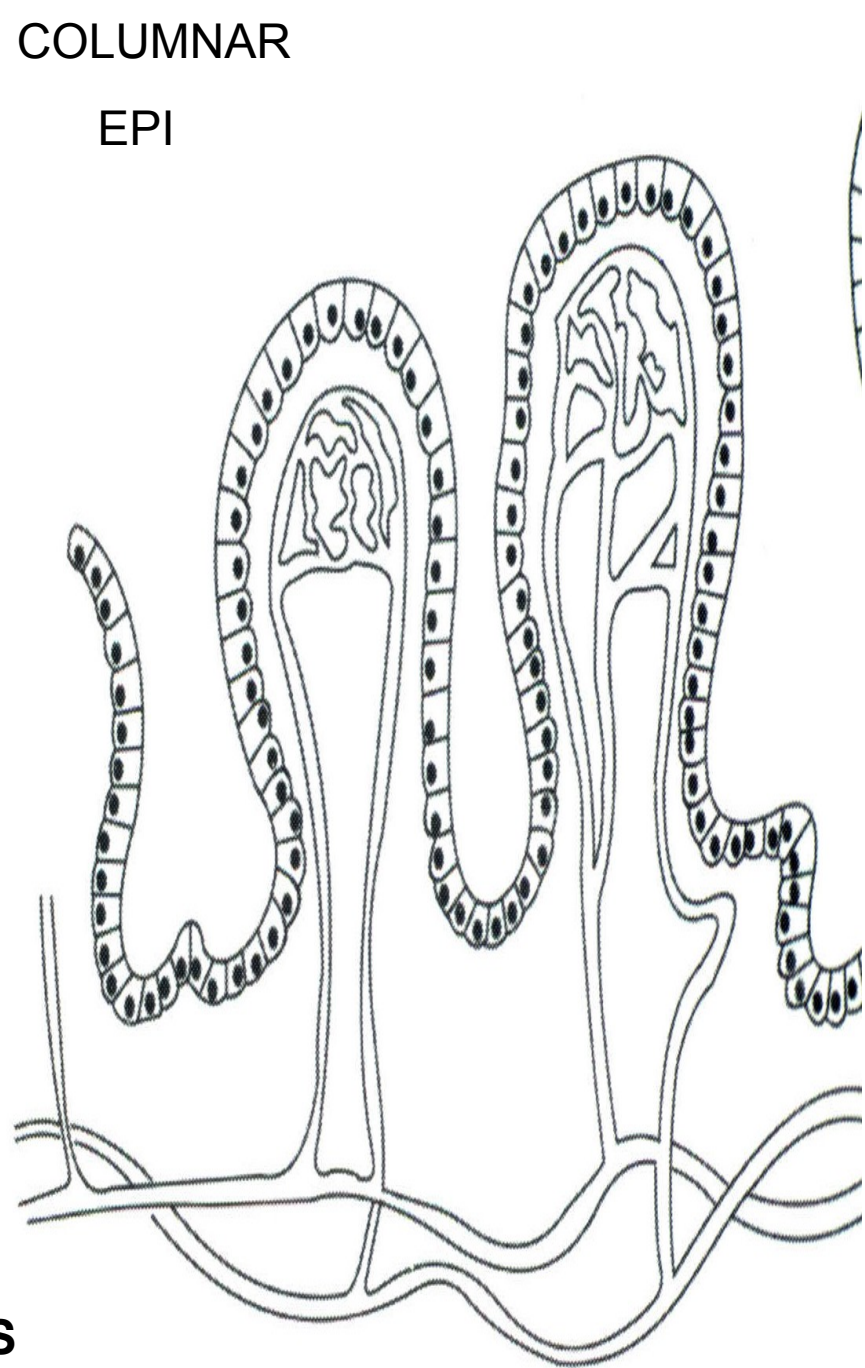
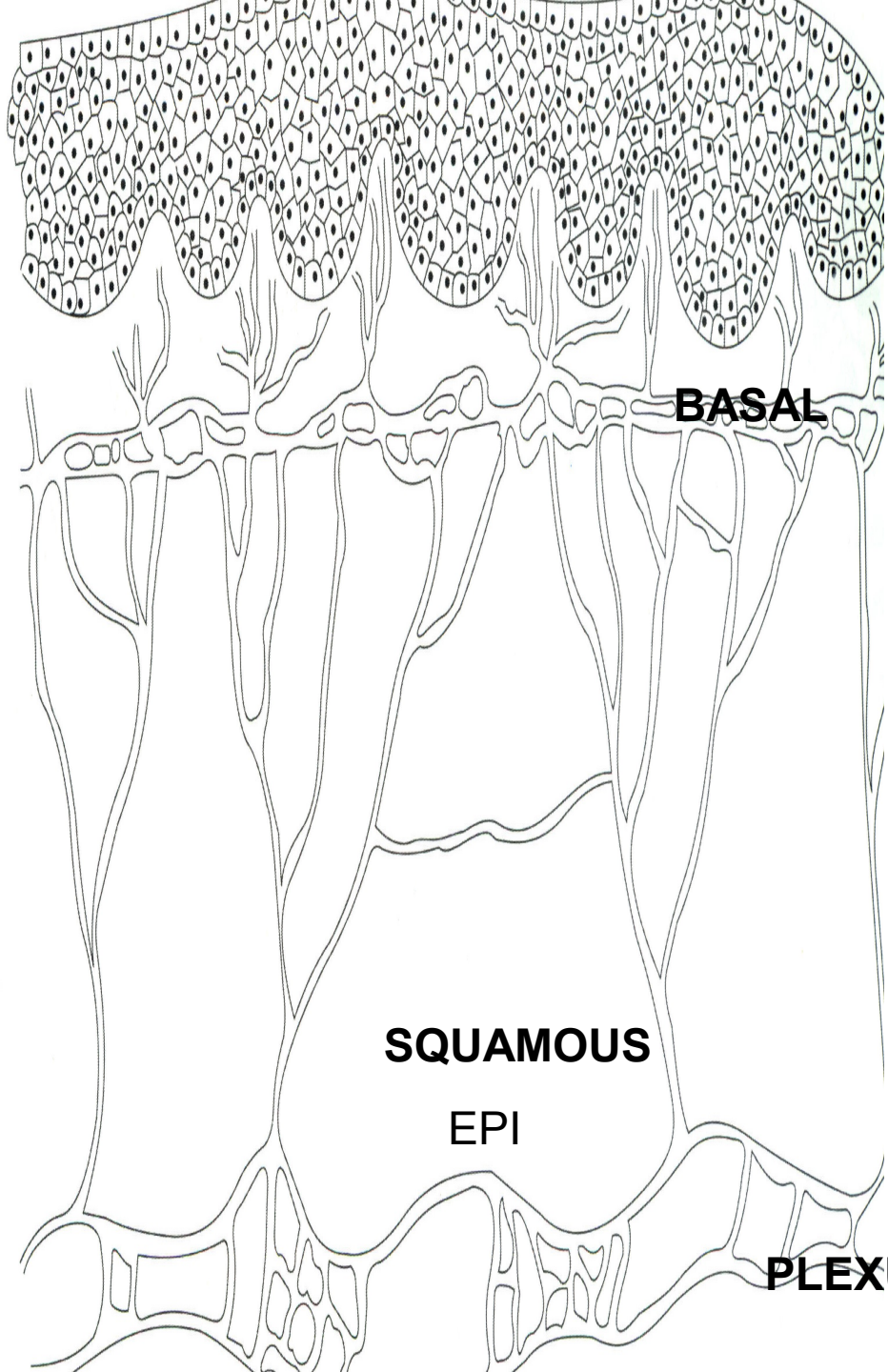
| Appearance | 0 | 1 | 2 |
|--------------------------------------|--|--|---|
| Color of acetowhite (AW) area | AW- low intensity snow white, shiny, AW indistinct, transparent | Grey white AW | Dull, oyster-white, grey |
| AW lesion margin and surface contour | Feathered, angular, jagged margins, flat, microcondylomatous or micropapillary surface | Regular lesions with smooth and straight outline | Rolled peeling edges |
| Vessels | Fine uniform punctations and mosaic beyond TZ. Micro condyloma or micropapillary surface | Absent Vessels | Well defined coarse punctations and coarse mosaic |
| Iodine negativity | Positive Mahogany brown | Partial uptake | Negative iodine up take |
| Score | 0-2 Likely to be CIN 1 4-4 Overlapping CIN 1 to CIN 2 8-8 Indicating CIN 3 | | |

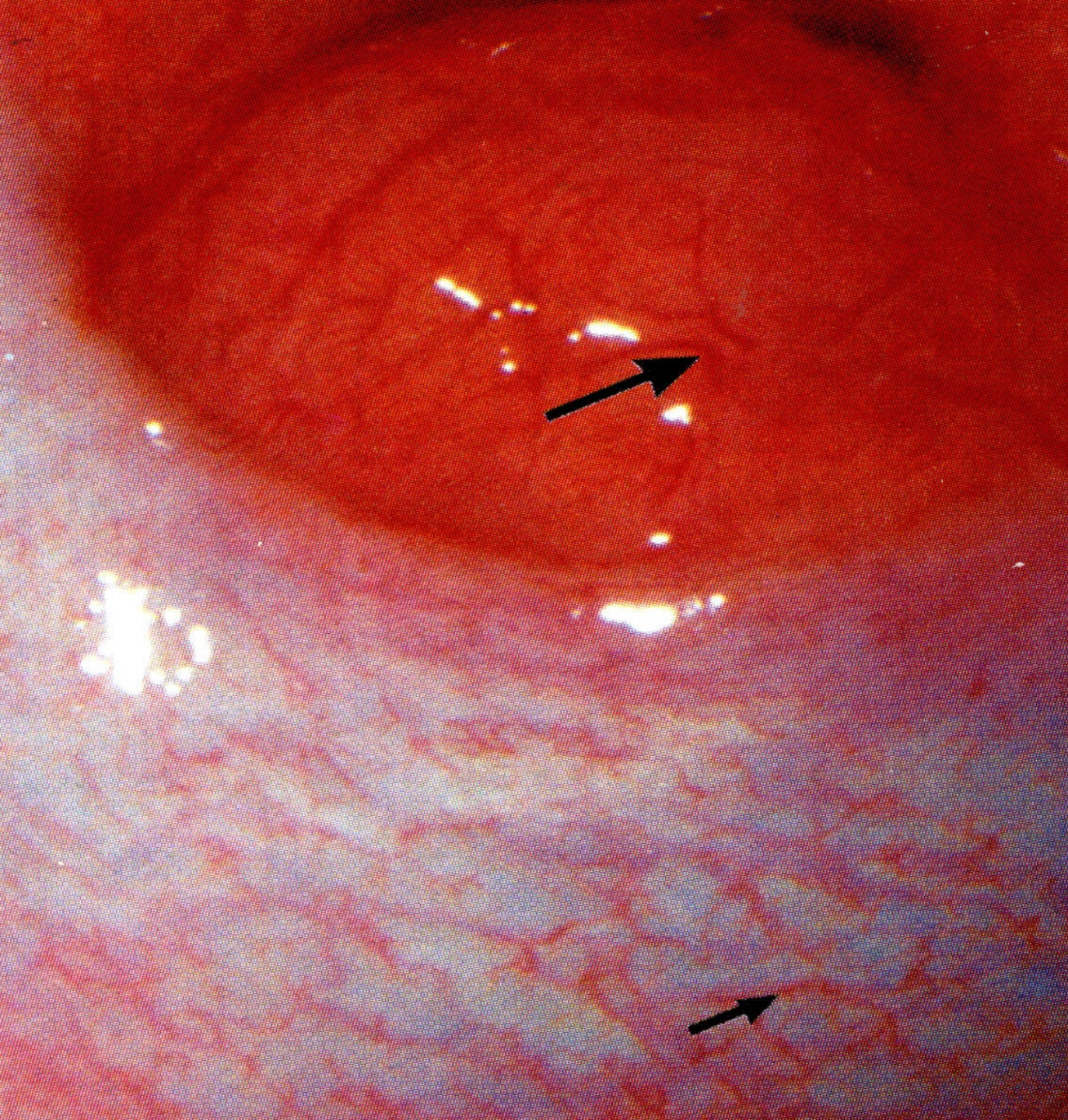
GRADING SYSTEM OF BURKE AND COWORKER

| <i>Grade</i> | <i>Surface</i> | <i>Margin</i> | <i>Color</i> | <i>Time</i> | <i>Vessels</i> | <i>Pathology</i> |
|--------------|----------------|---------------|--------------------------|--|--|---|
| I | Flat | Indistinct | Normal or slightly white | Appears slowly, remains for short time, disappears rapidly | Fine, with normal ICD | SPI, inflamm. immat metapl. pregnancy, regeneration, repair |
| II | Flat | Distinct | Whiter | Average time to appear, remains for several minutes, disappears with average speed | Punctations, mosaic, with slightly increased ICD | SPI, CIN 1 and CIN 2 |
| III | Raised | Sharp | Whitest | Appears rapidly, stays a long time, disappears slowly | Coarse punctations and mosaic, increased ICD, atypical vessels | CIN 3 and cancer |

SPI = subclinical papillomavirus infection; inflamm = inflammation; immat metapl = immature metaplasia; ICD = intercapillary distance.

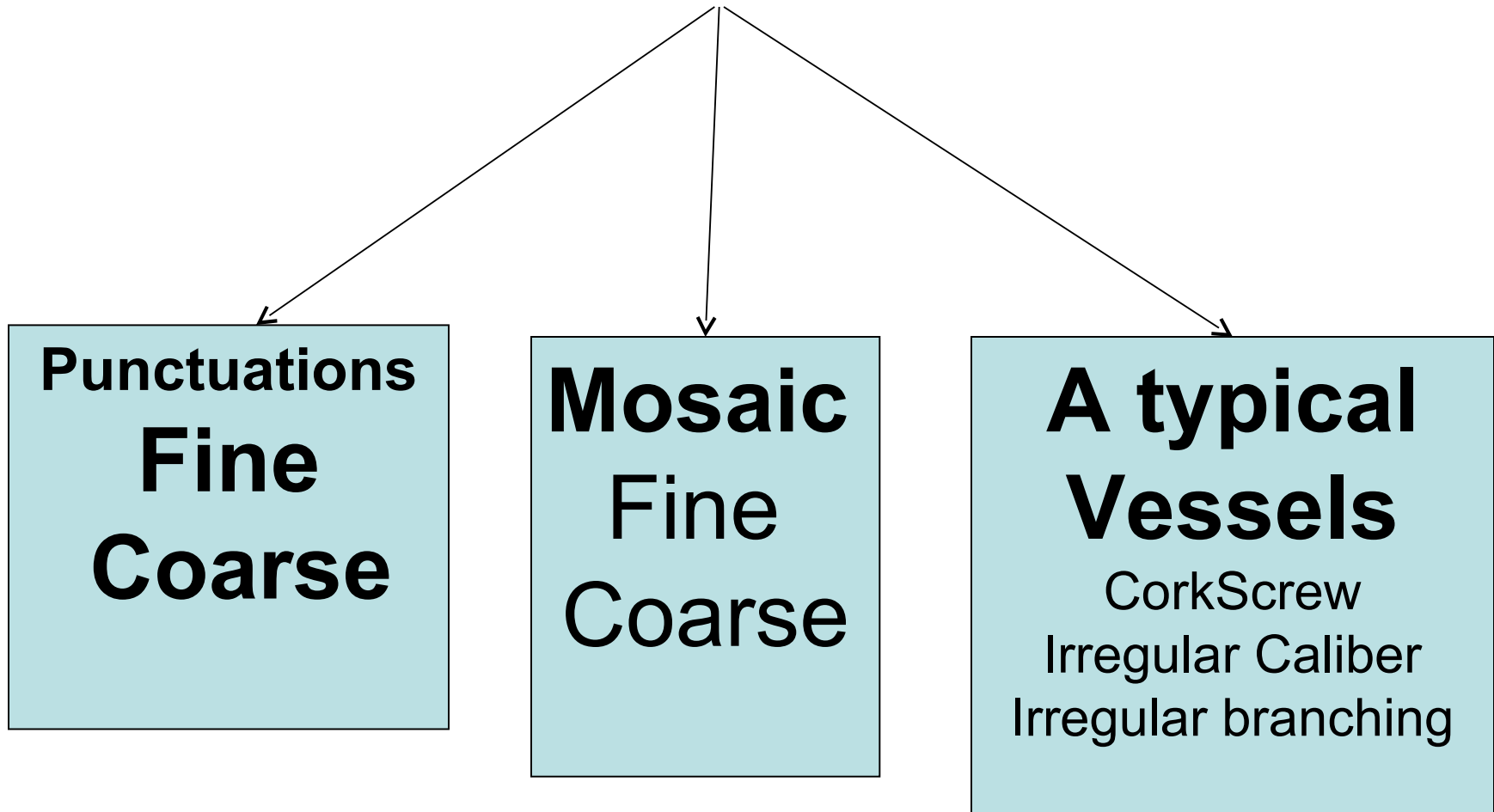
VESCULATURE PATTERN





**PROMINENT
BV
IN
ENDO &
ECTO CX**

Vascular pattern in abnormal epithelium...



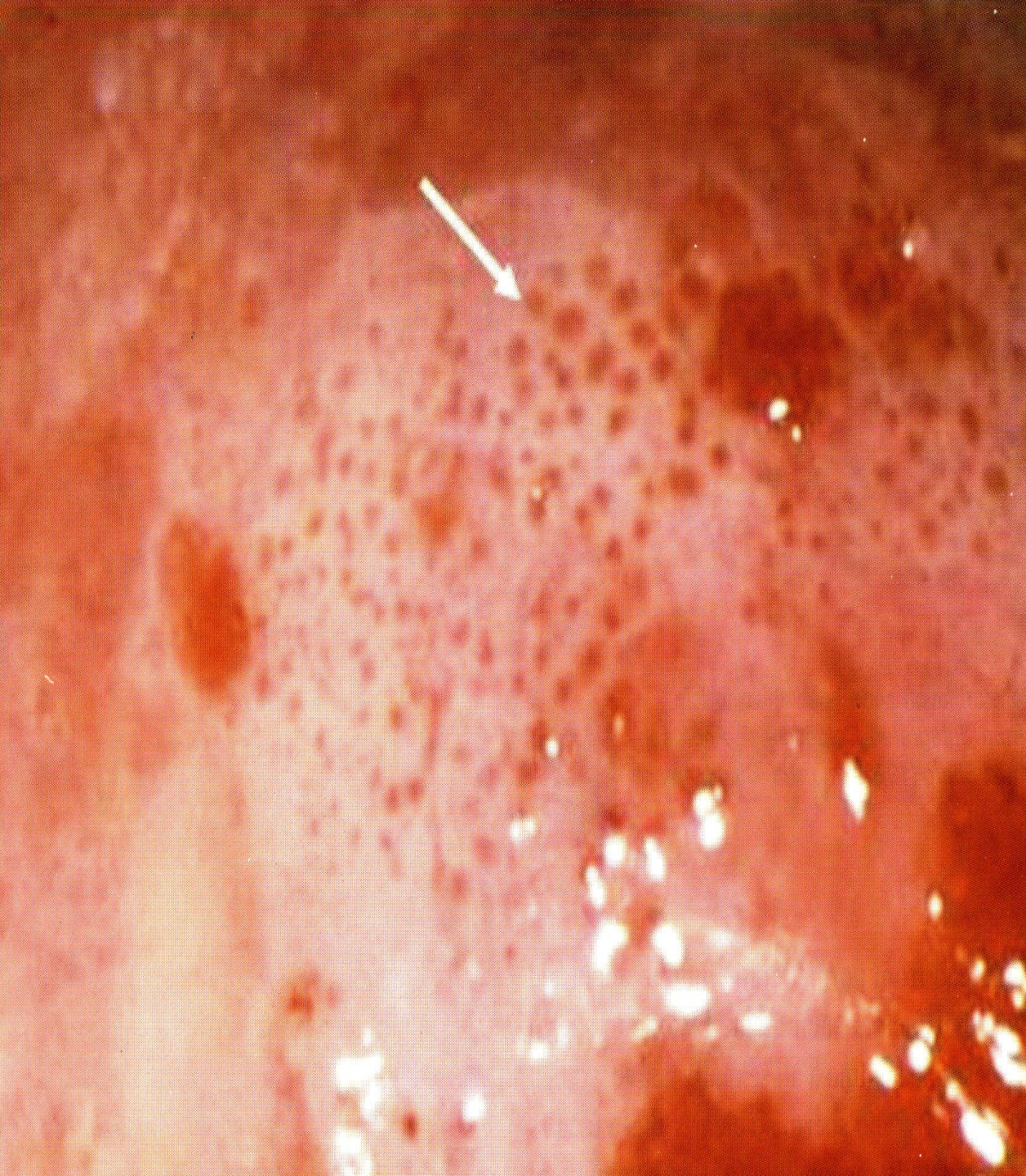
Columnar epithelium

Metaplastic epithelium

Punctations

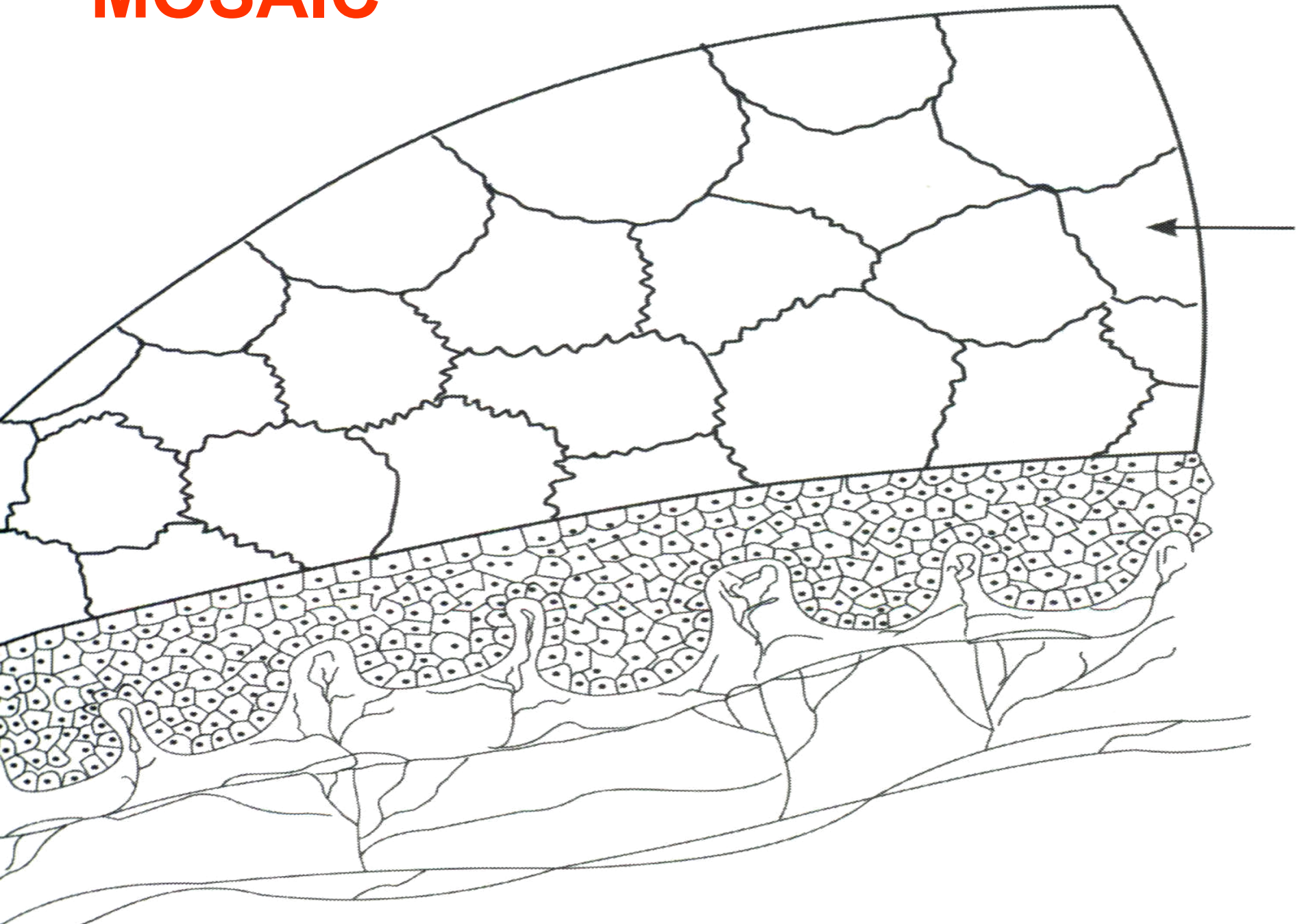


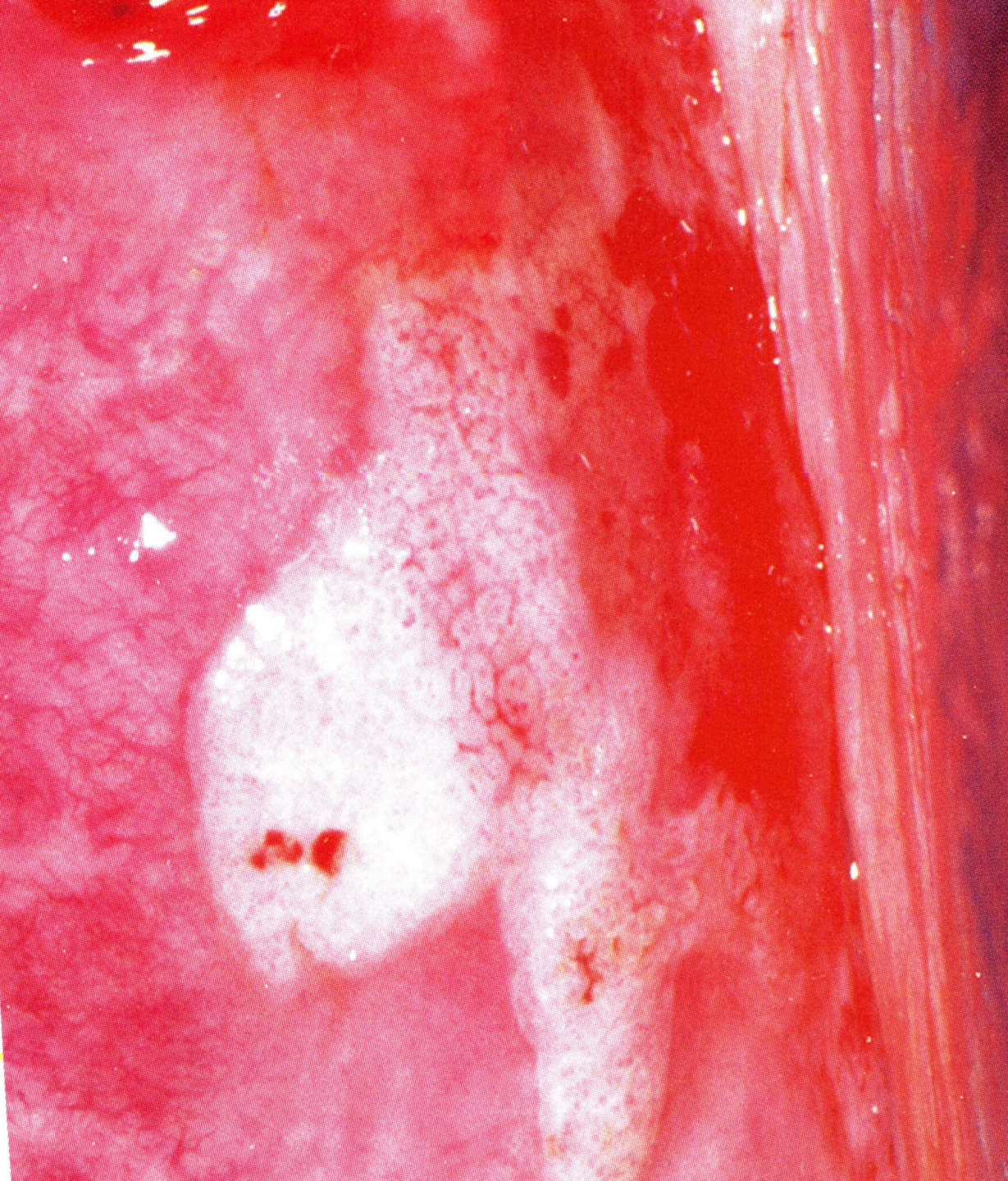
Punctations



PUNCTATION


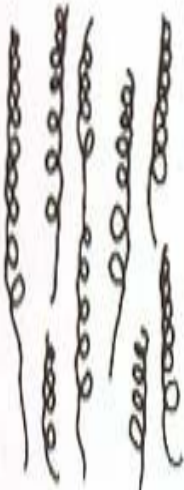

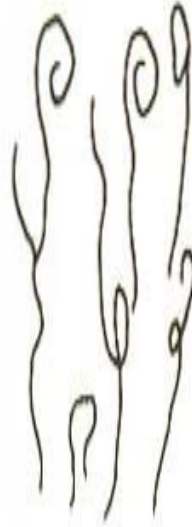



MOSAIC





Coarse mosaic
and coarse
punctations

Terminal Vasculature in Cervical Carcinoma

| Glomeruloid hairpin-like (AV-1) | Corkscrew-like (AV-2) | Mosaic (AV-3) | Tendrils-like (AV-4) | Waste-thread-like (AV-5) | Willow-branch-like (AV-6) | Root-like (AV-7) |
|---|--|--|---|--|--|--|
|  |  |  |  |  |  |  |

Atypical Blood Vessel

Inter Capillary Distance

Normal – 50-200 microns

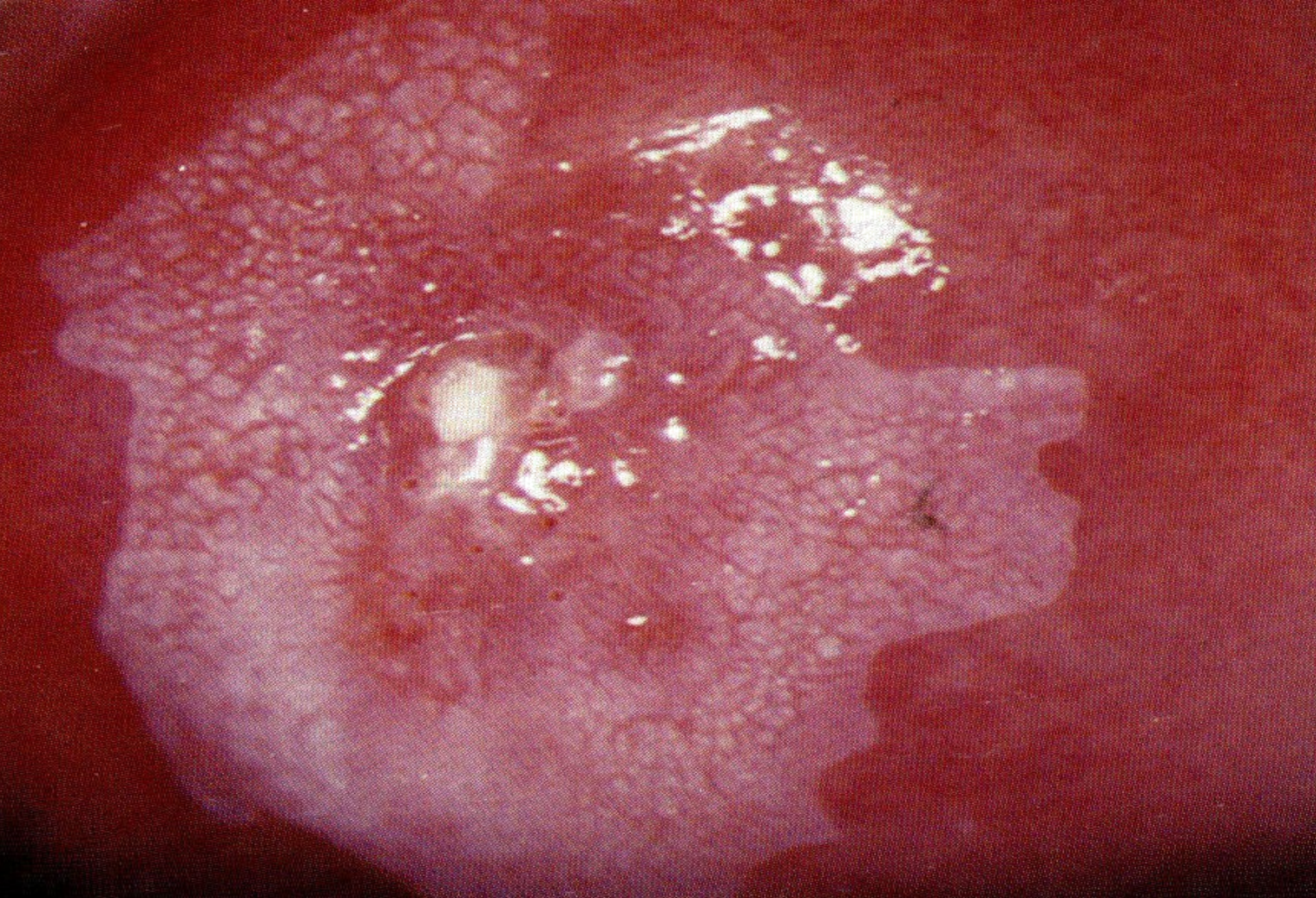
Average- 100 microns

>200 is abnormal

450-500 microns is diagnostic of CIN-3



Mosaic after acid applied on the white epithelial

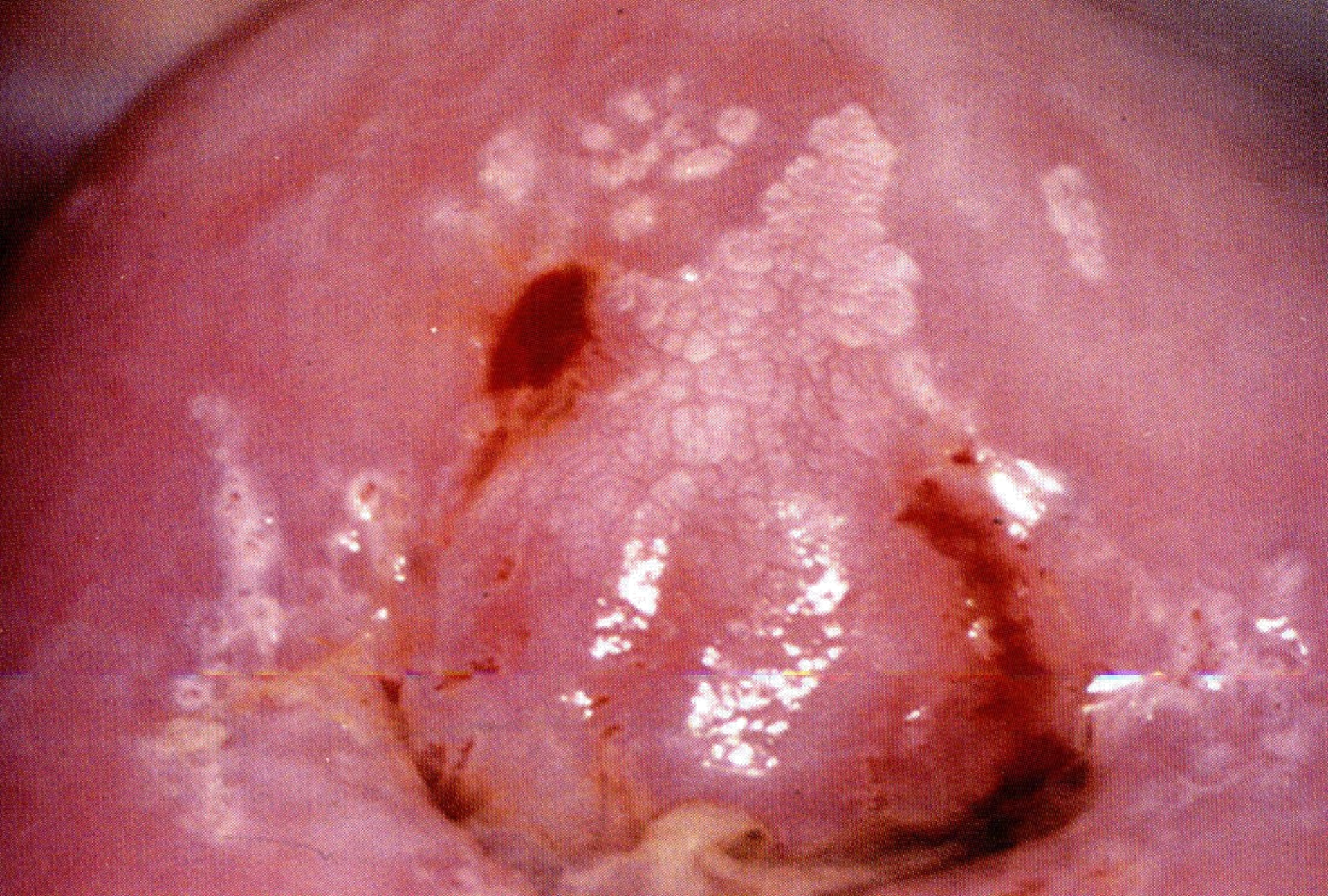


FINE MOSAIC/ CIN II HPV

Reverse Mosaic – Beginning of Atypical Epithelium



Red colored mosaic
surrounded by whitish
border



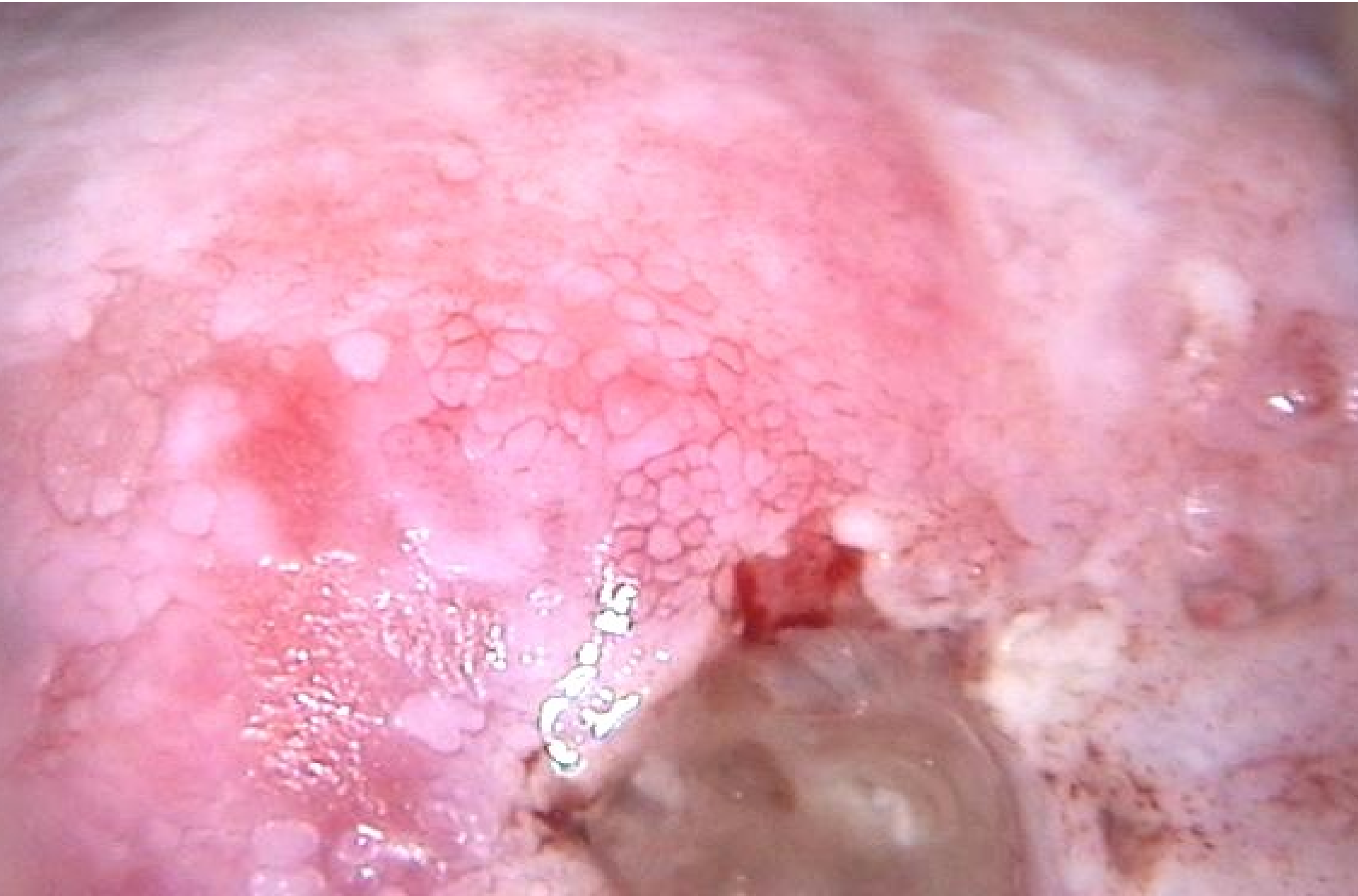
SATELLITE LESIONS/ COARSE MOSAIC/CIN II

COARSE MOSAIC, ICD



**C
A
N
C
E
R**

MOSAIC (CANCER)





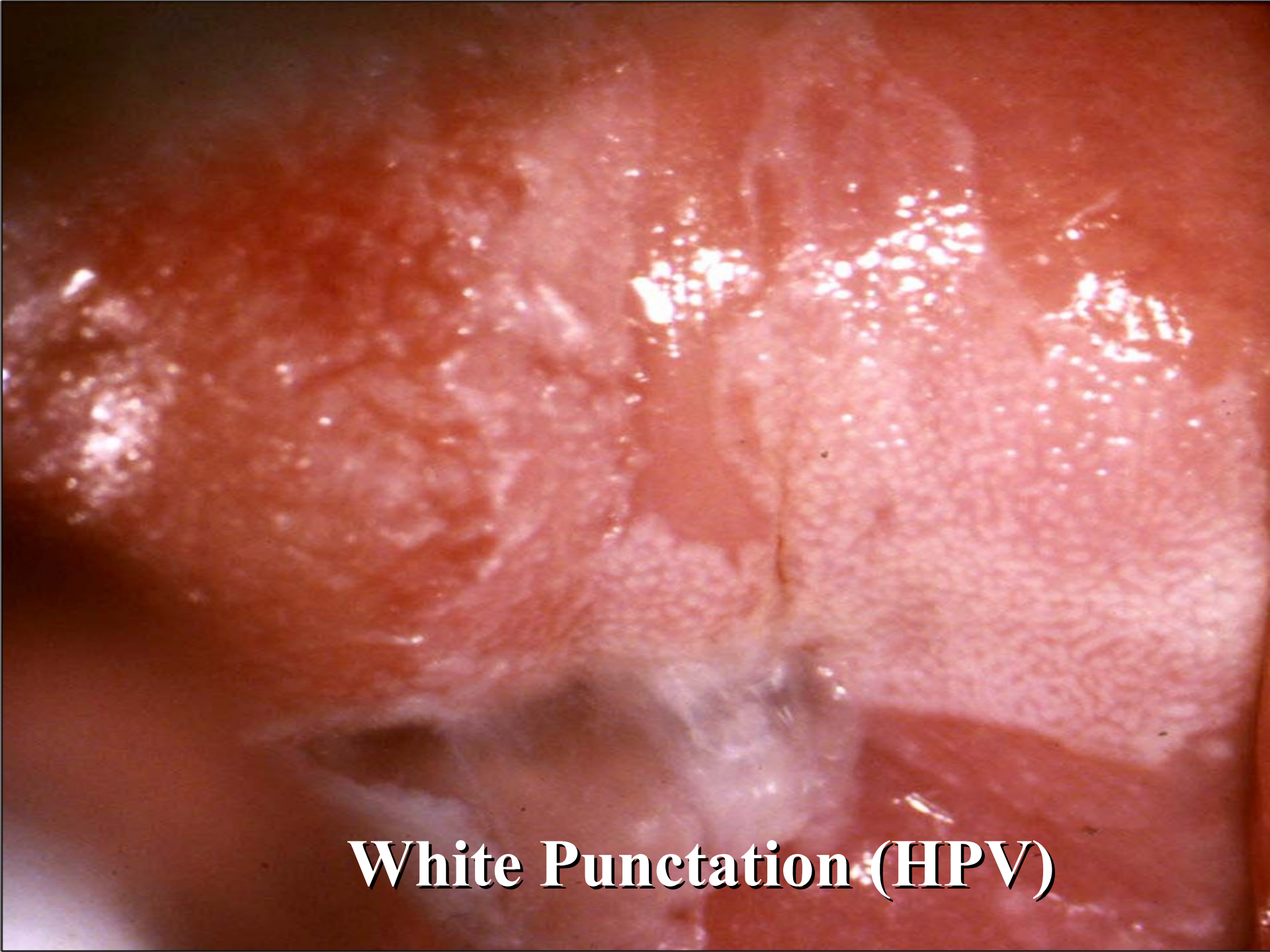
**COARSE
MOSIAC**

CANCER

A typical Mosaic Pattern



Irregular mosaic with increased intracapillary distance



White Punctation (HPV)

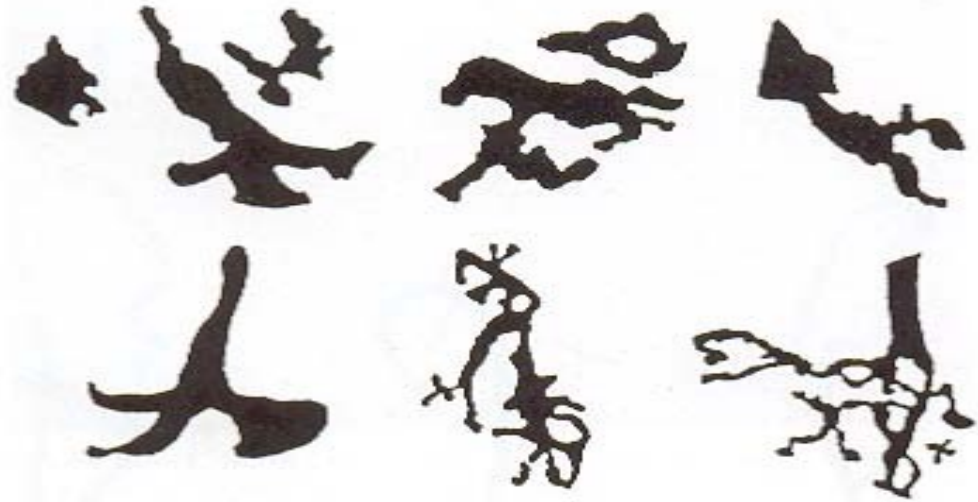
Big Punctuation & Mosaic Pattern





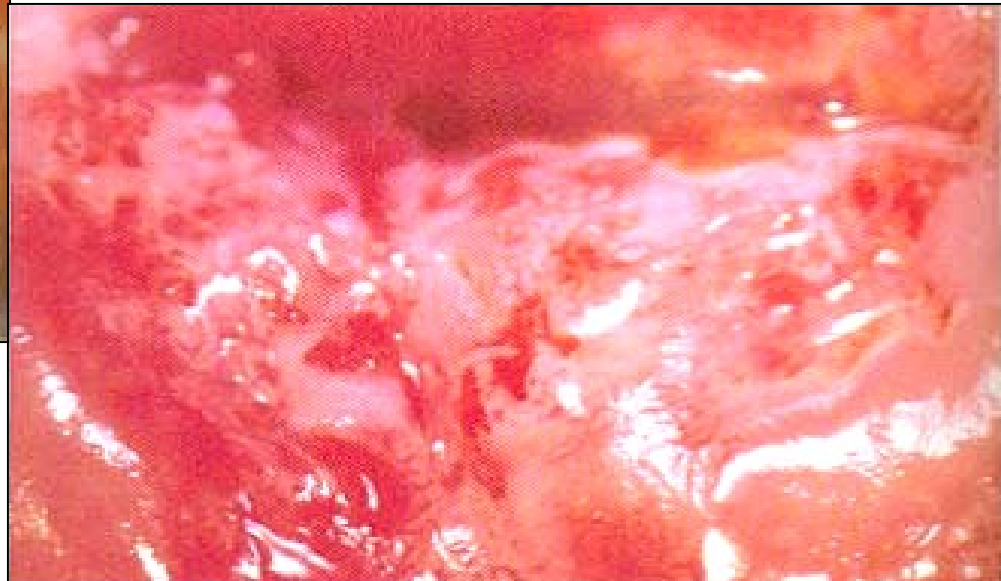
**COARSE
PUNCTATION
&
MOSAIC**

Adenocarcinoma

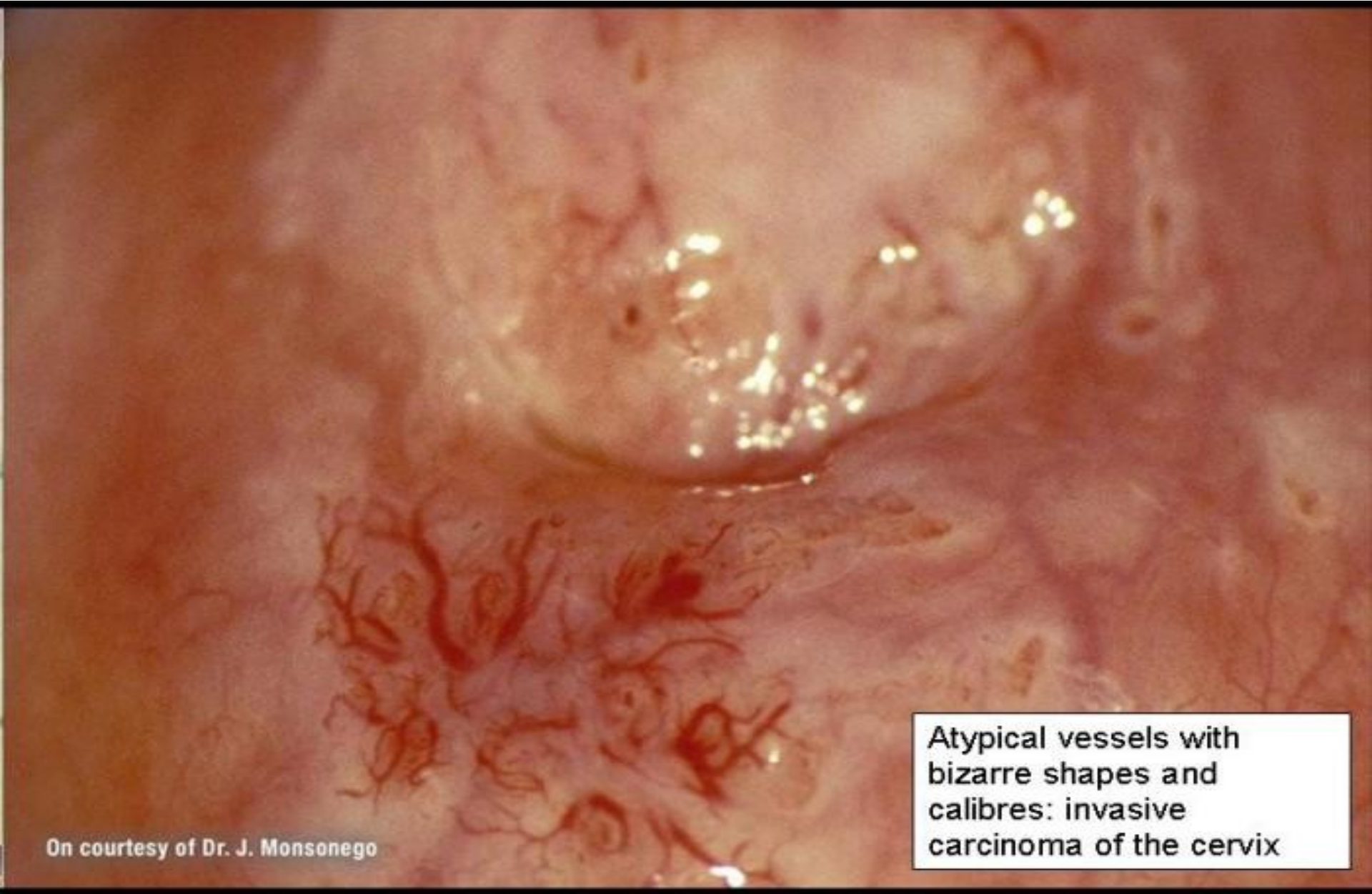


Root like blood vessels

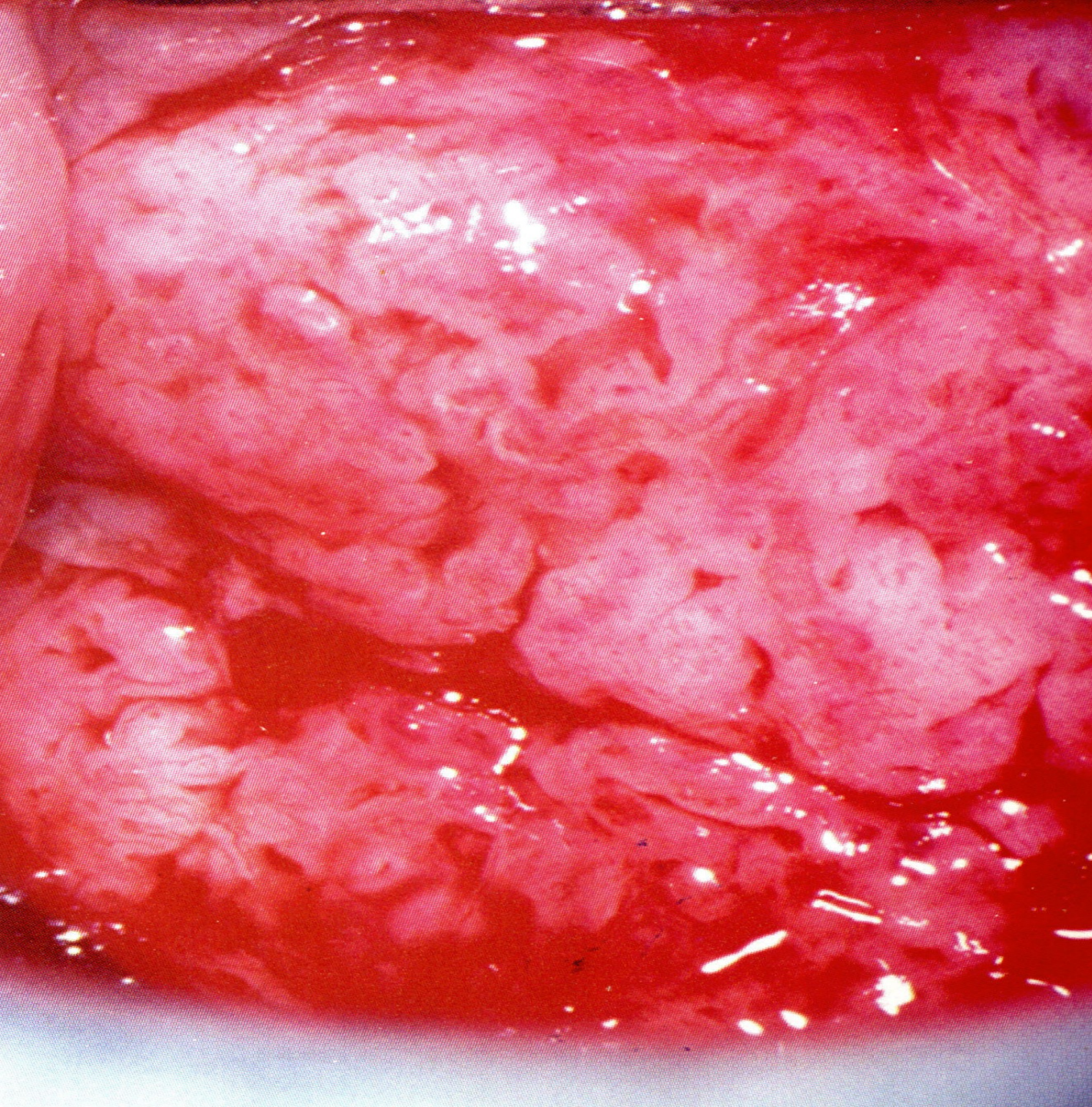
**Irregular Dilated
tuberous, root like BV,**



Carcinoma of the Cervix



Atypical vessels with
bizarre shapes and
calibres: invasive
carcinoma of the cervix



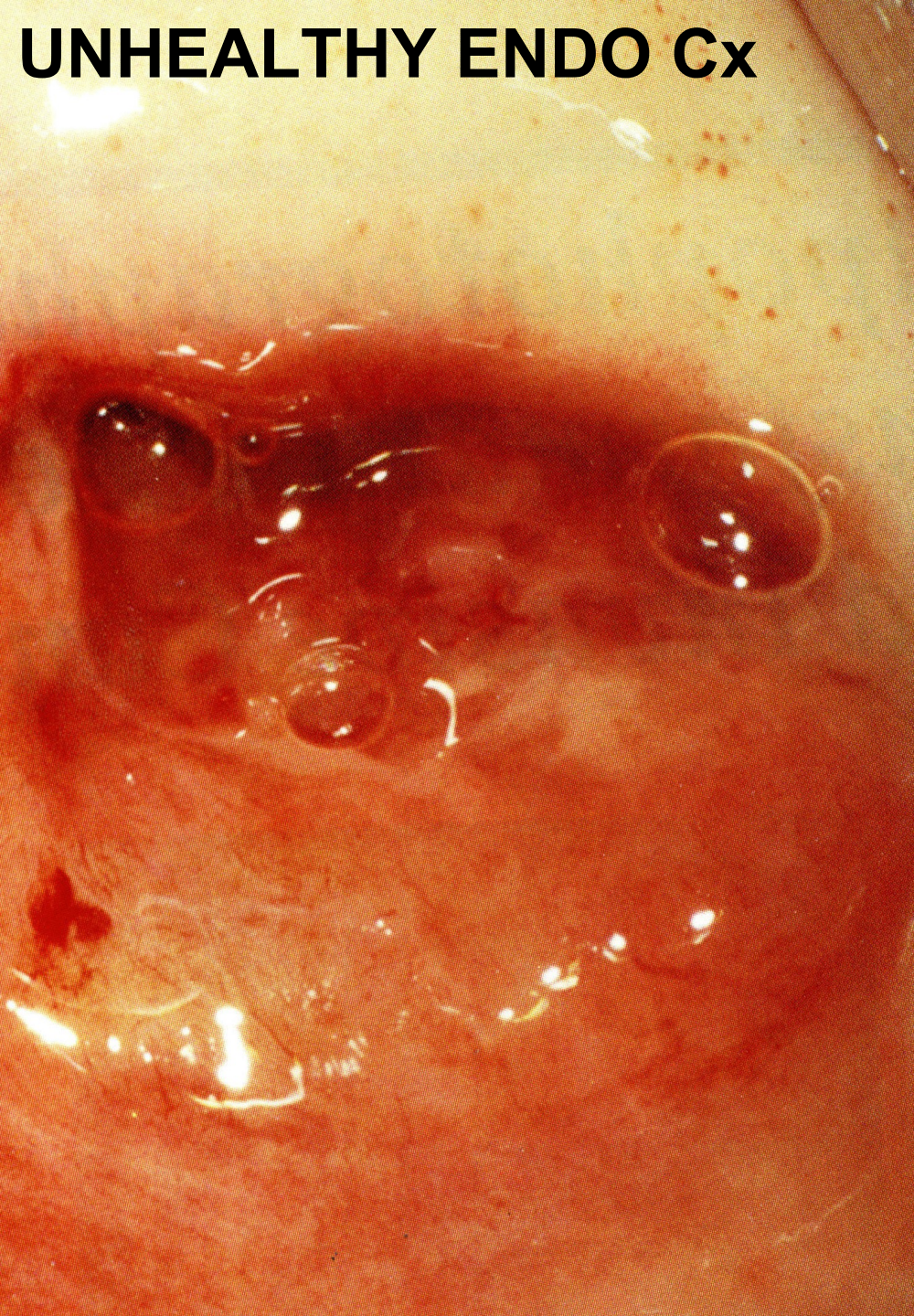
GRADE 3

AW

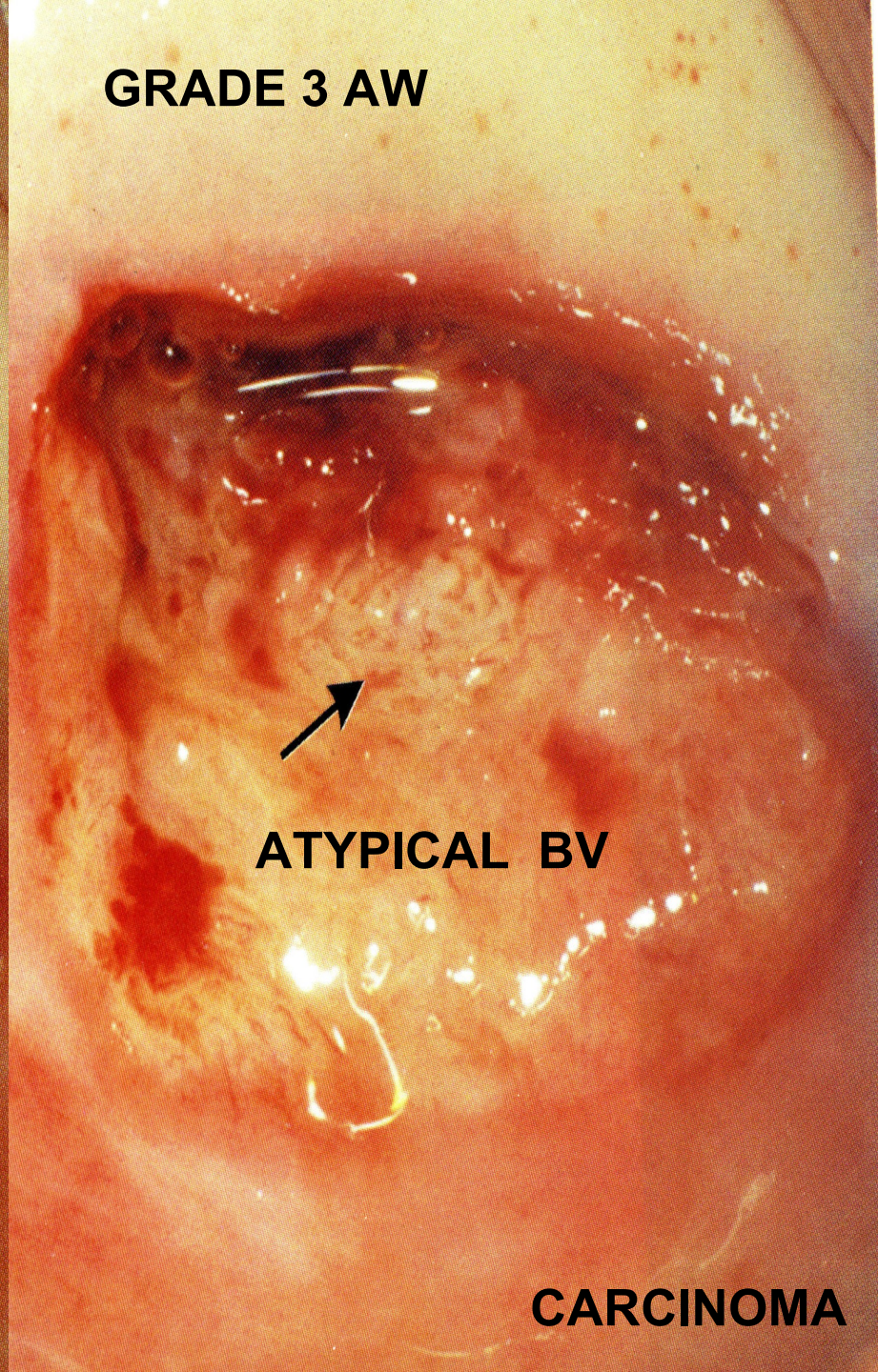
ATYPICAL

B V

UNHEALTHY ENDO Cx

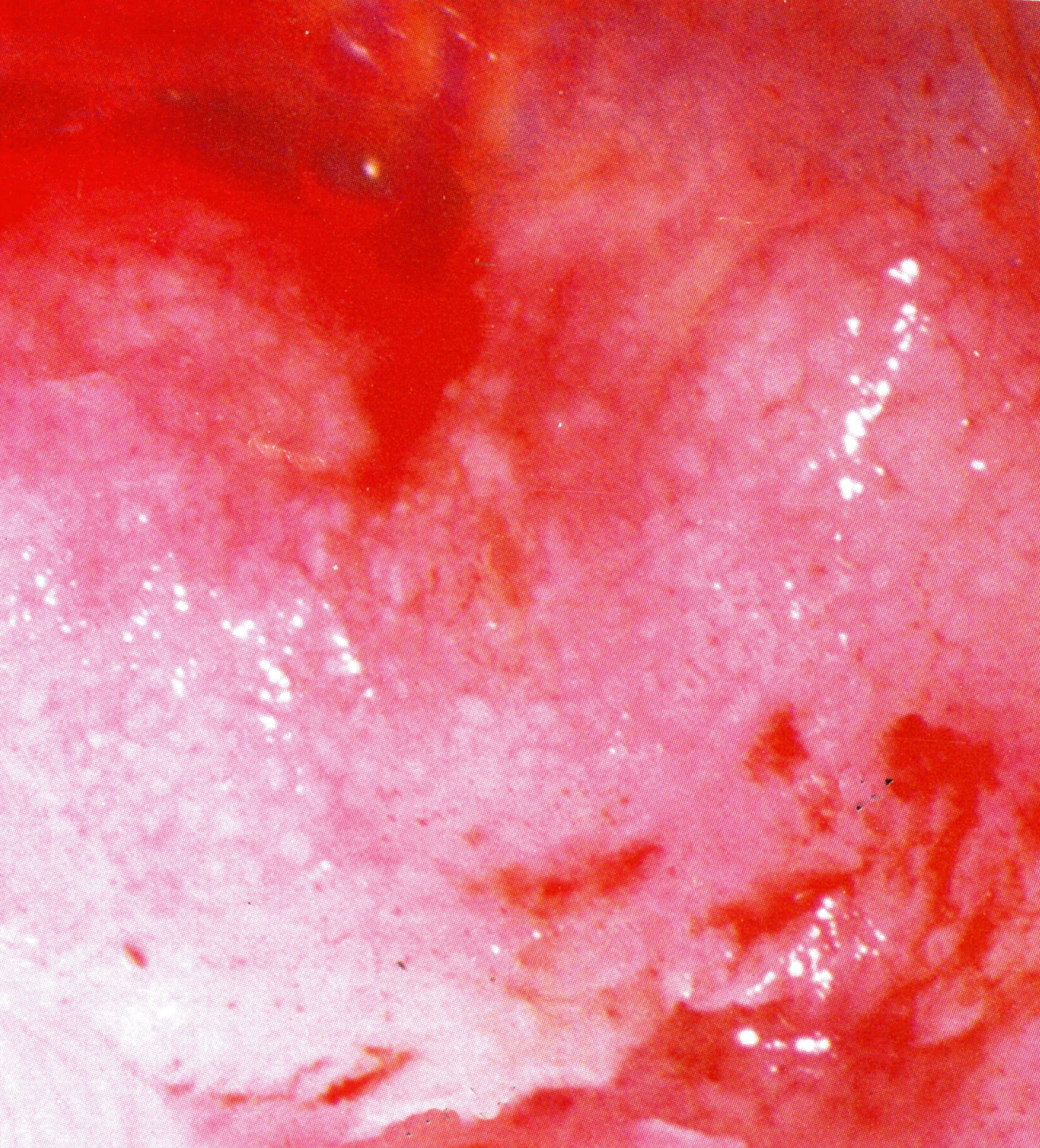


GRADE 3 AW



ATYPICAL BV

CARCINOMA



INVASIVE CA

**COARSE
MOSAIC**

ATYPICAL BV

A Case of Malignancy & Cancerous Vessels



TYPICAL CERVIX

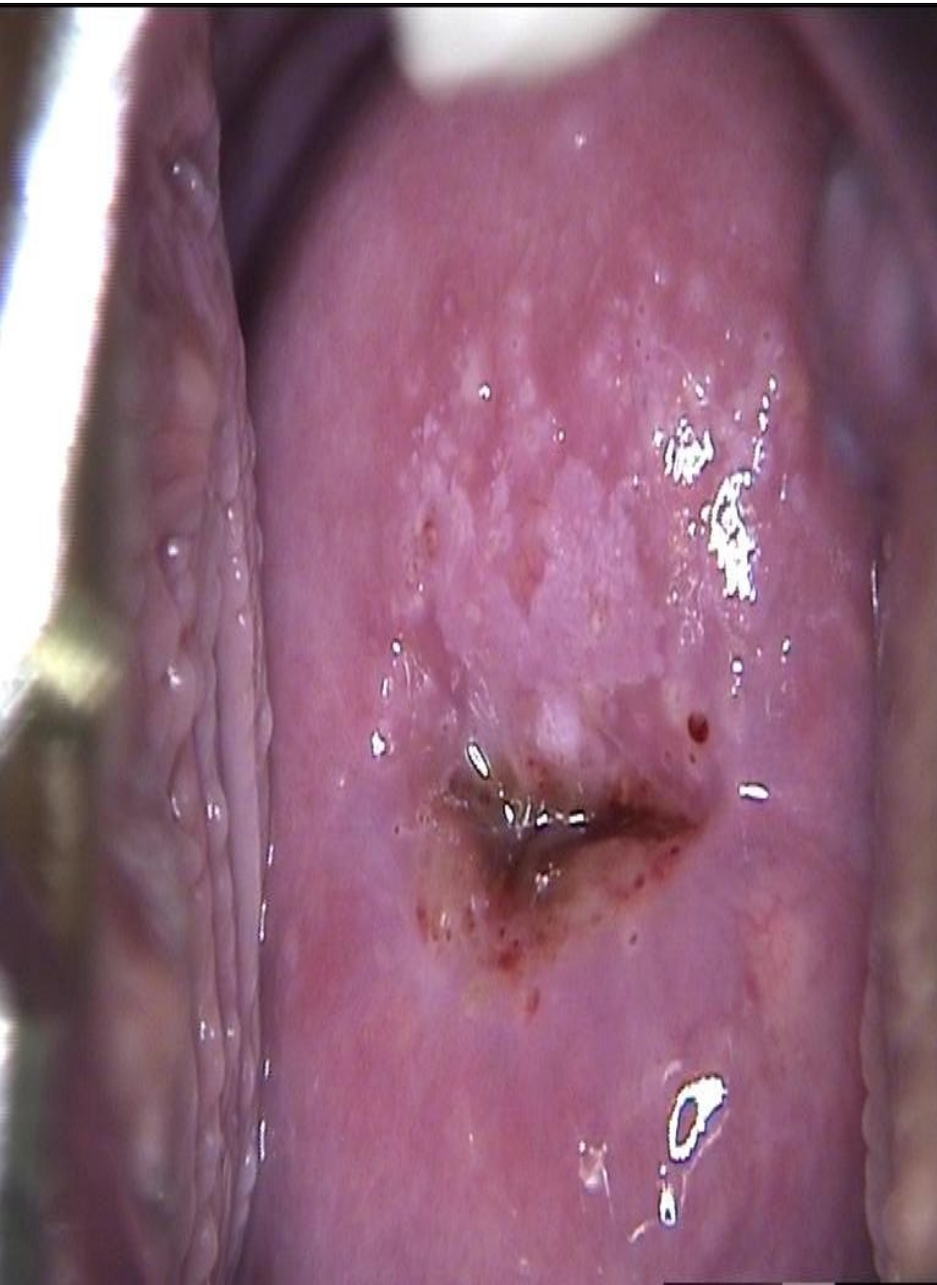
CIN - 1

CIN - II

CIN - III

Invasive Care

CIN I



CIN II colposcopy image ---- Acetowhite epithelium & Lugols effect

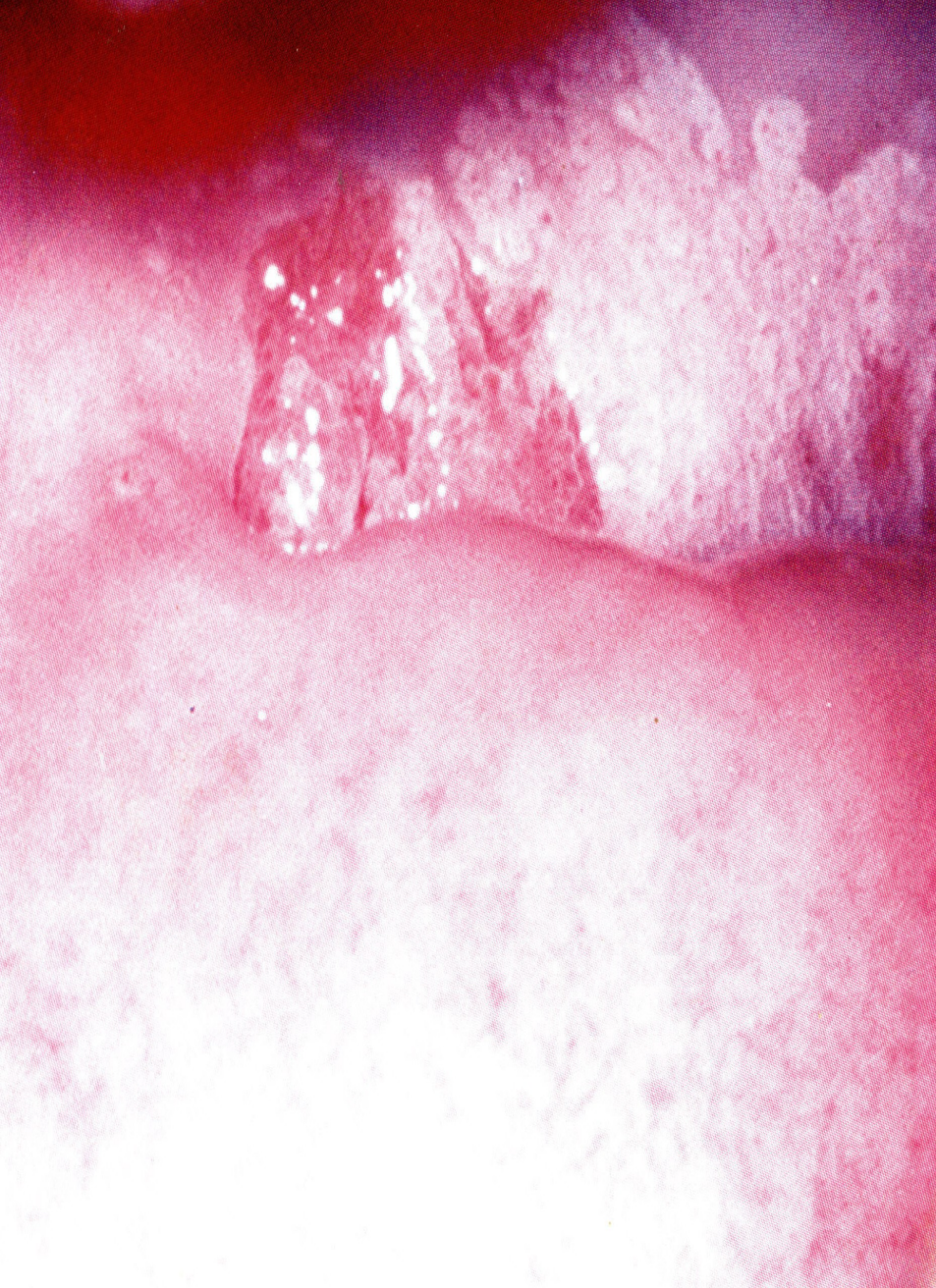


CIN- II



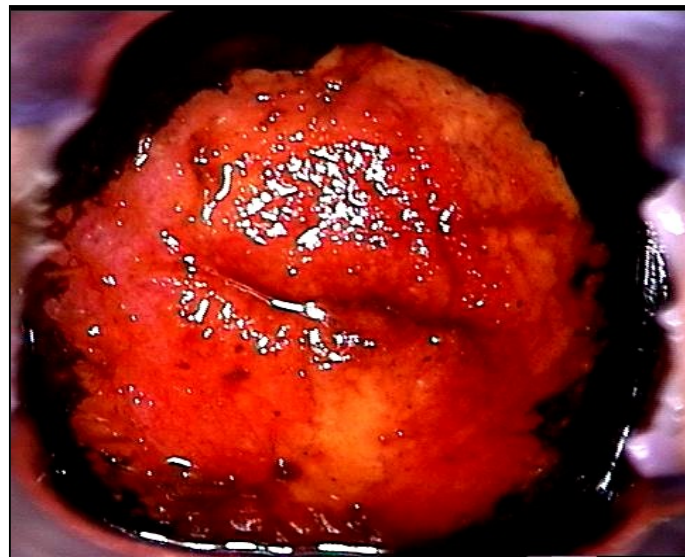
GRADE 2 AW

HSIL- CIN-3



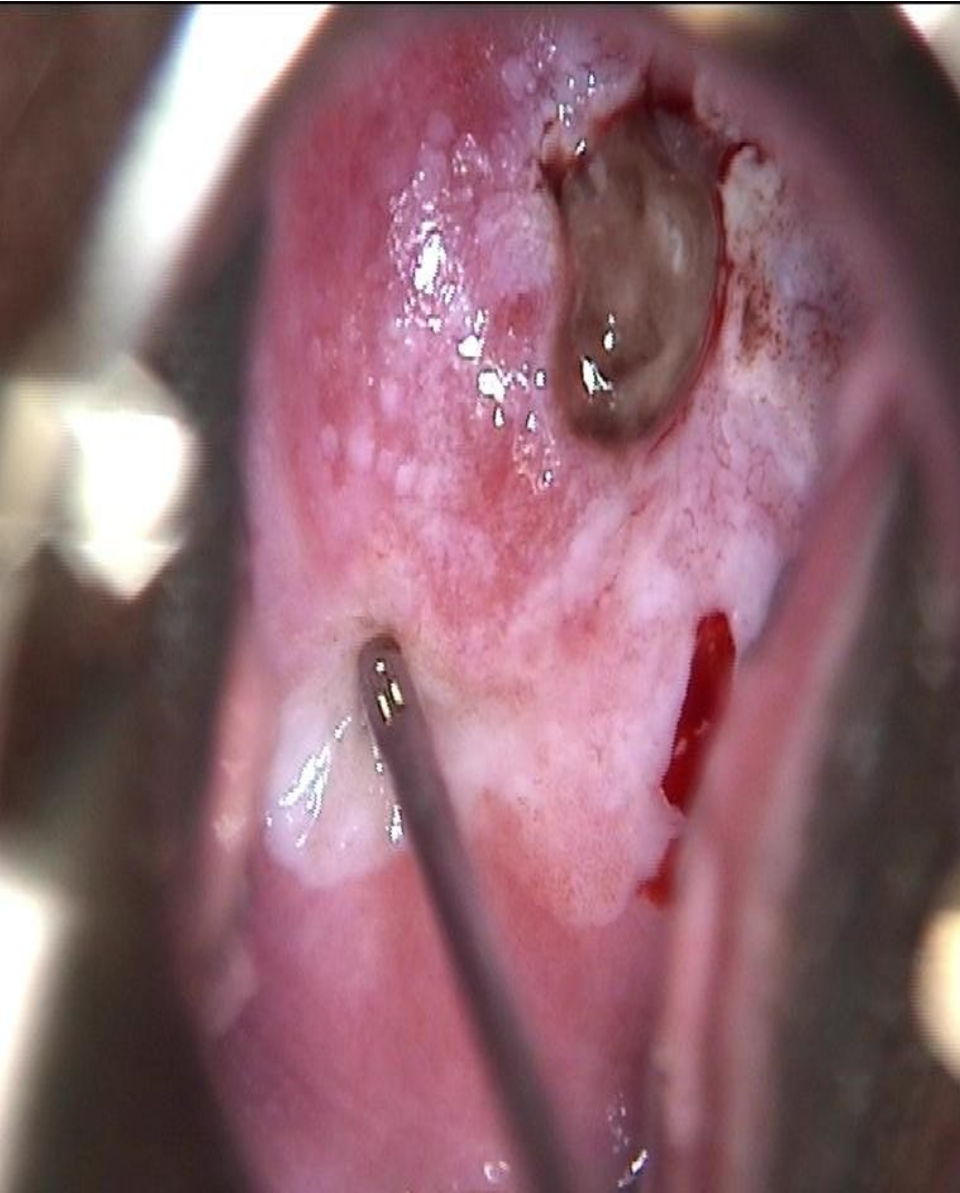
SIG. NEGATIVITY

Grade-3 Acetowhite epithelium + Punctuation

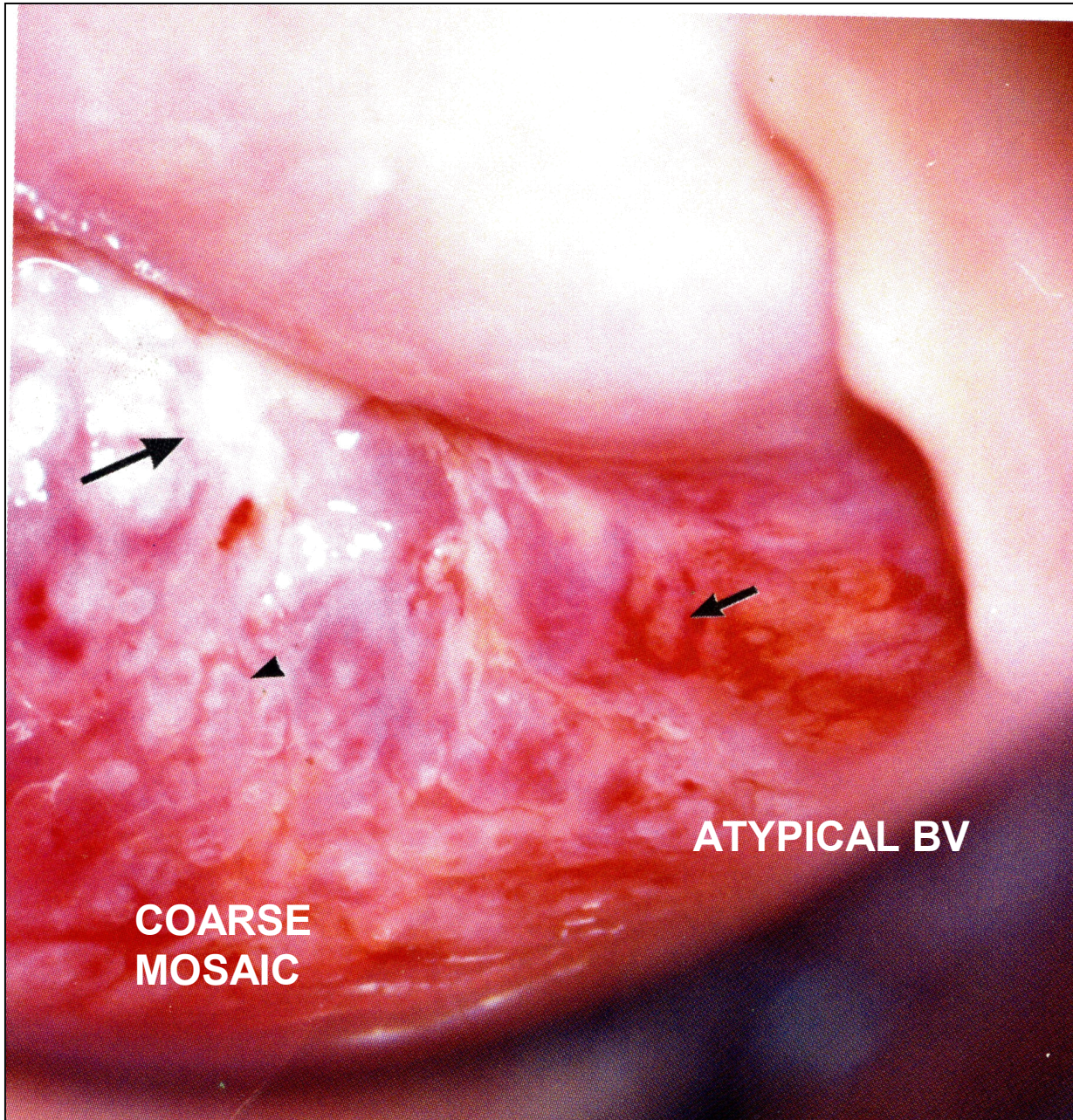


CIN-3

CIN- III



CANCER CX ---- GRADE 3 AW

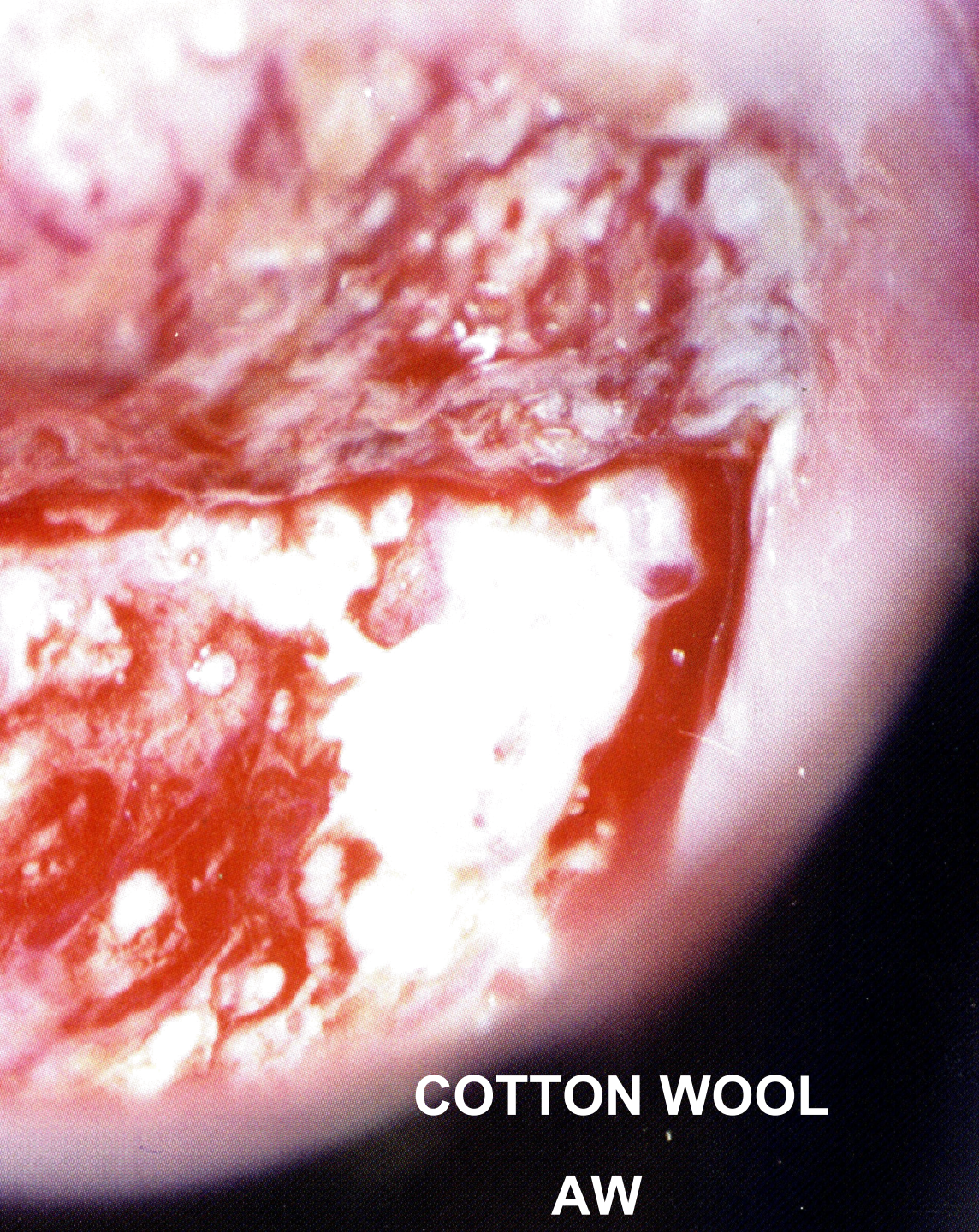


**COARSE
MOSAIC**

ATYPICAL BV

**COARSE
MOSAIC**

ATYPICAL BV



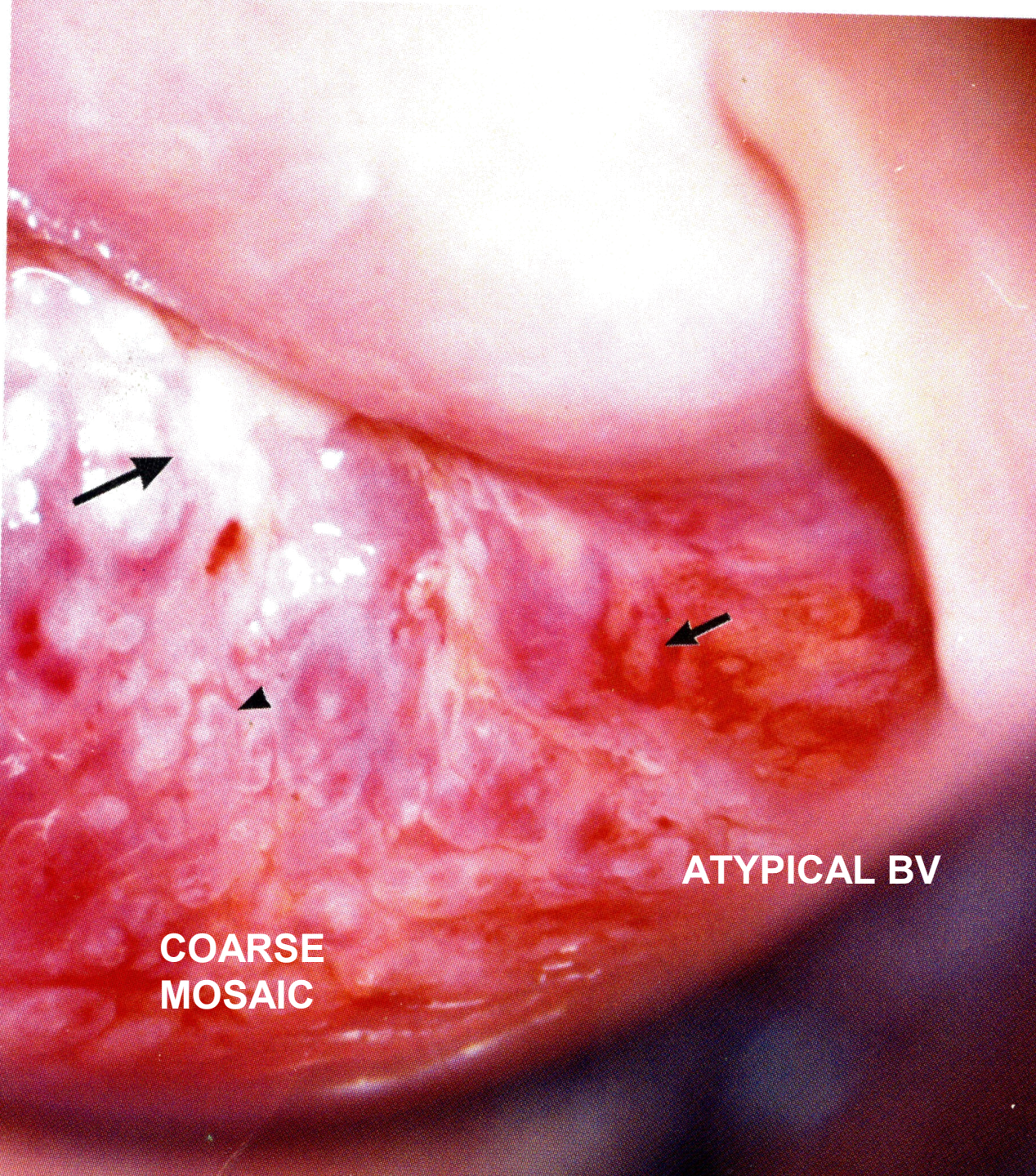
COTTON WOOL

AW

- **GRADE III AW**
- **Atypical BV**
- **CANCER**

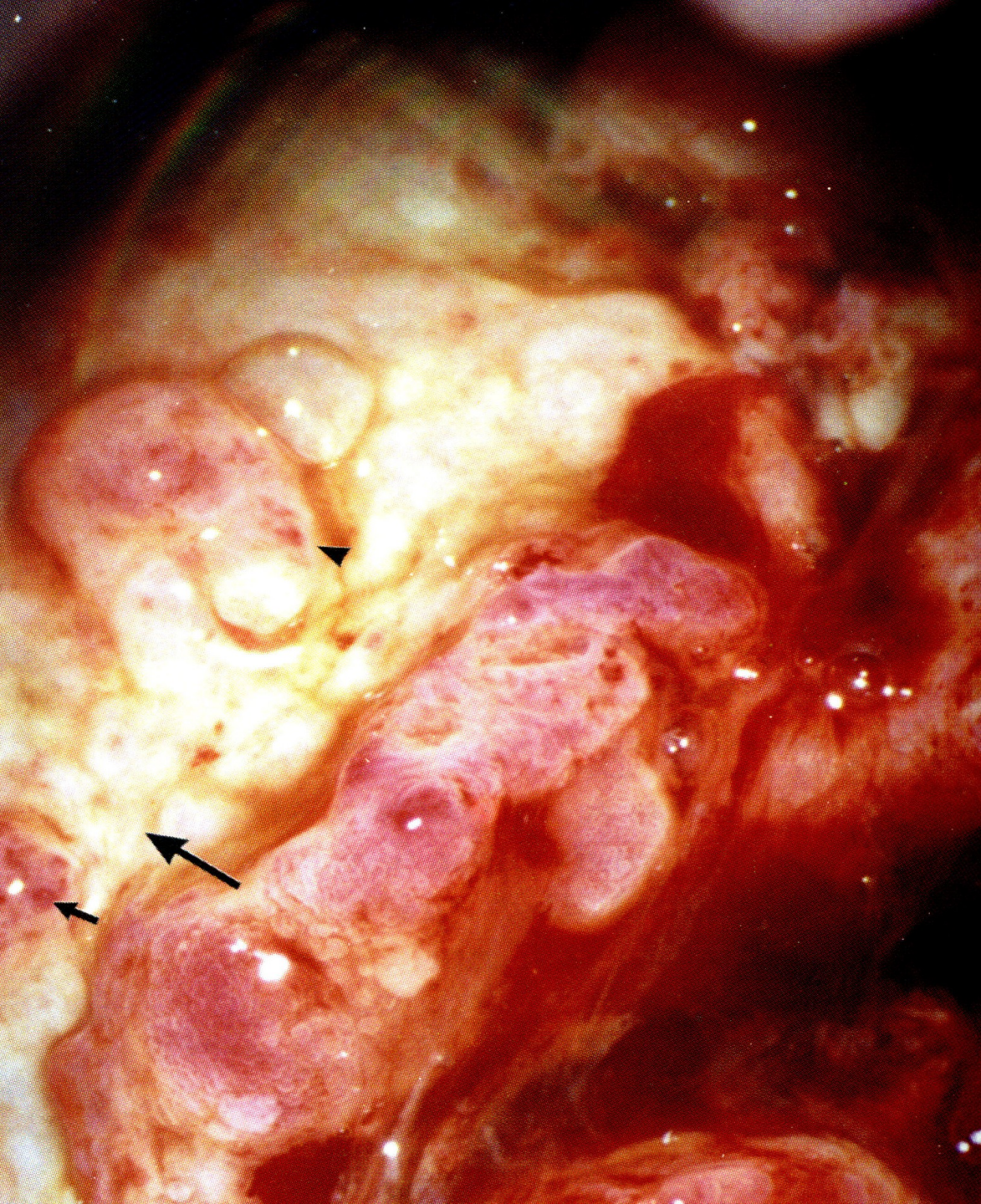
CANCER CX

- **GRADE 3 AW**
- **Atypical BV**
- **Course Mosaic**

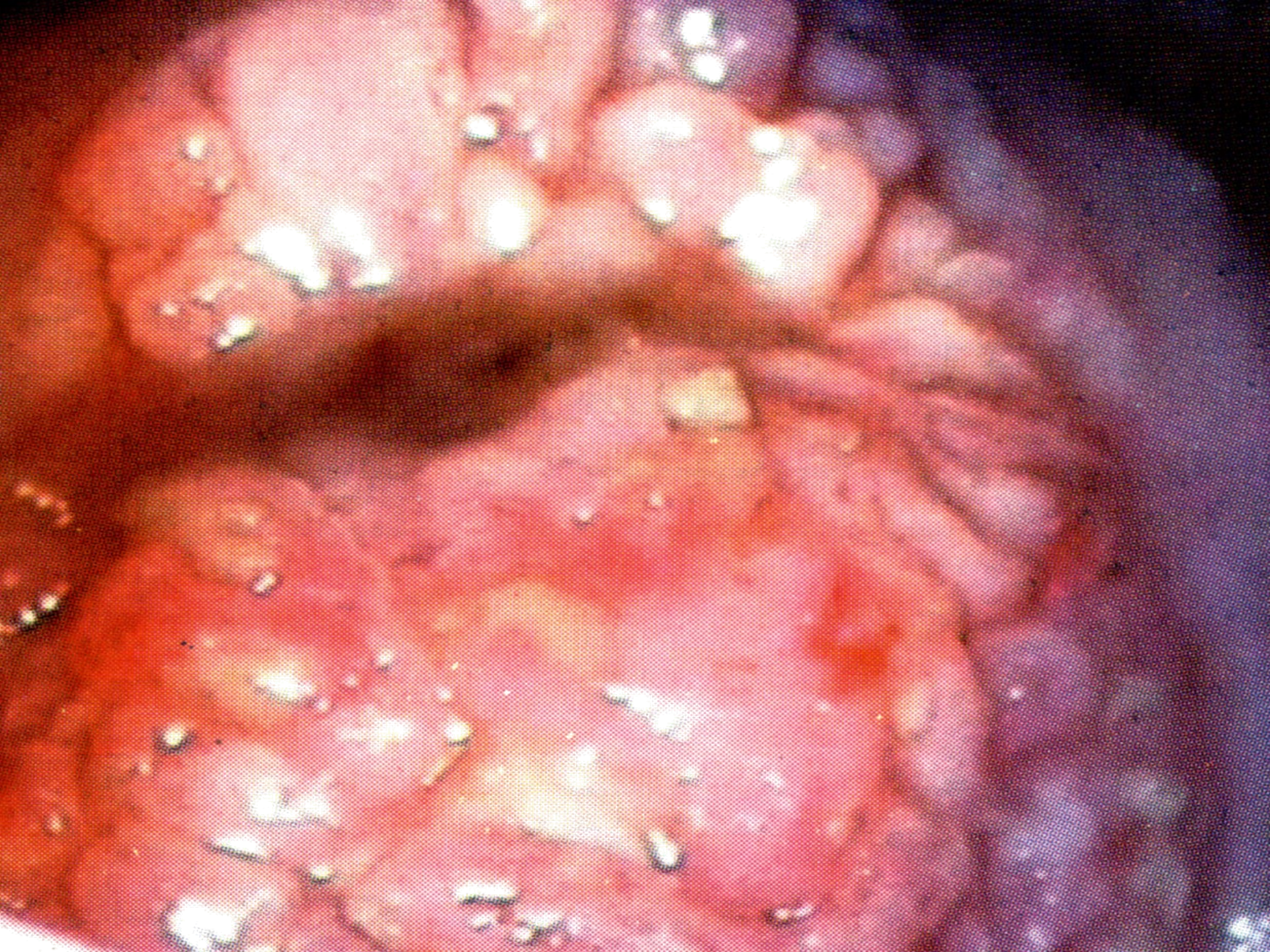


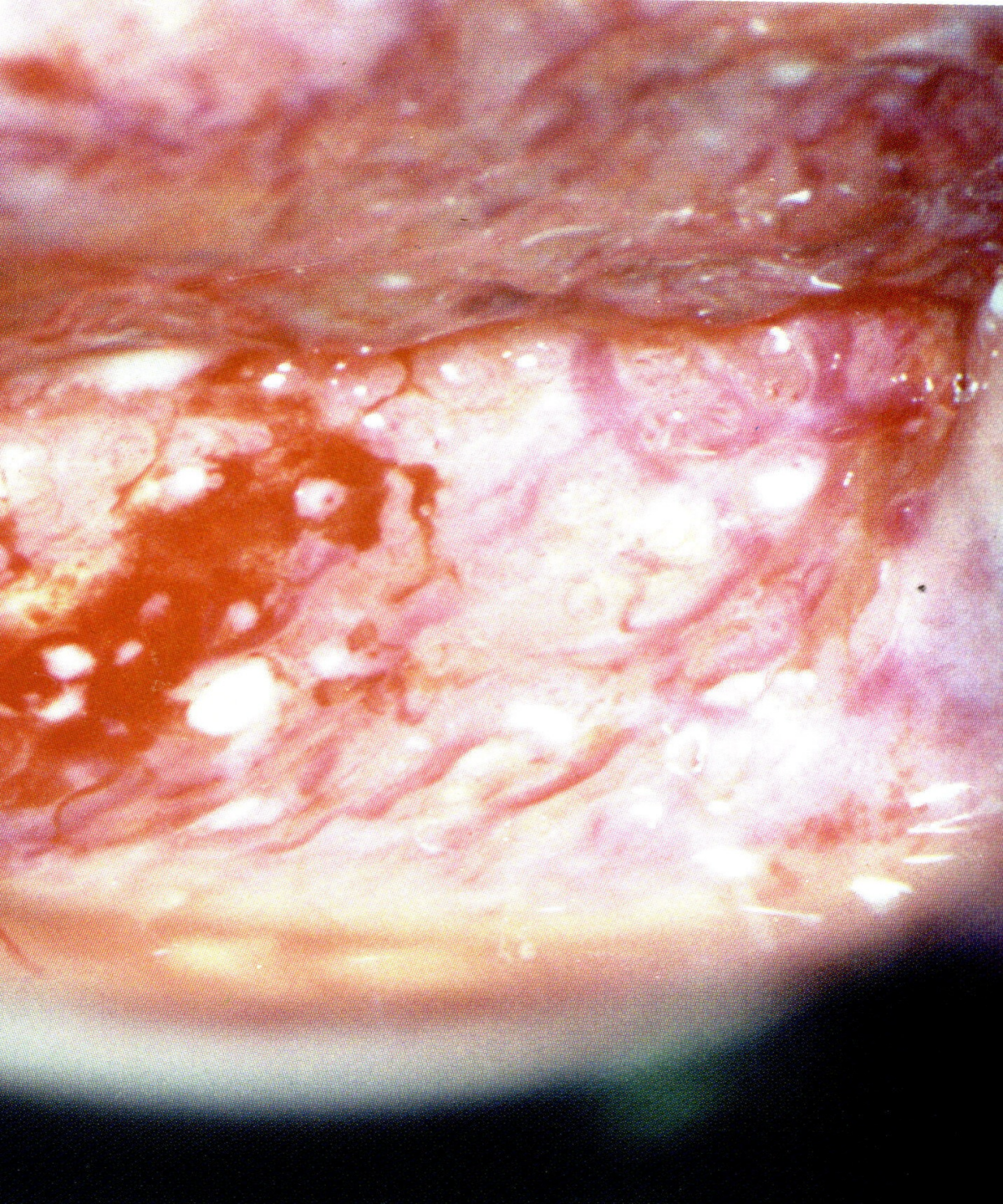
ATYPICAL BV

COARSE
MOSAIC



Invasive
cancer



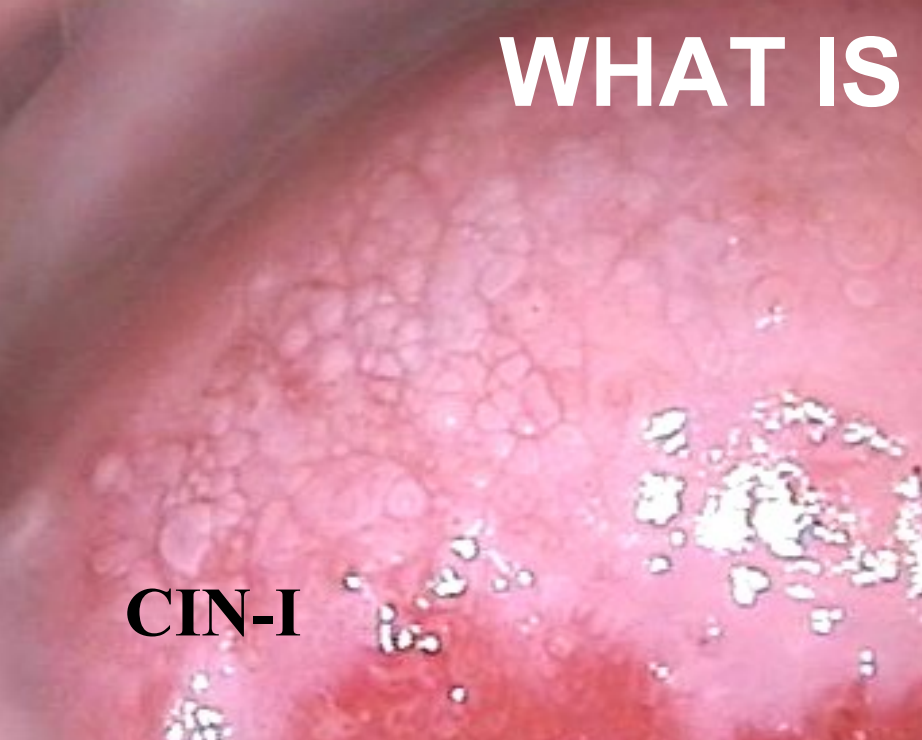


INVASIVE CA

ATYPICA BV

**COARSE
KERATOSIS**

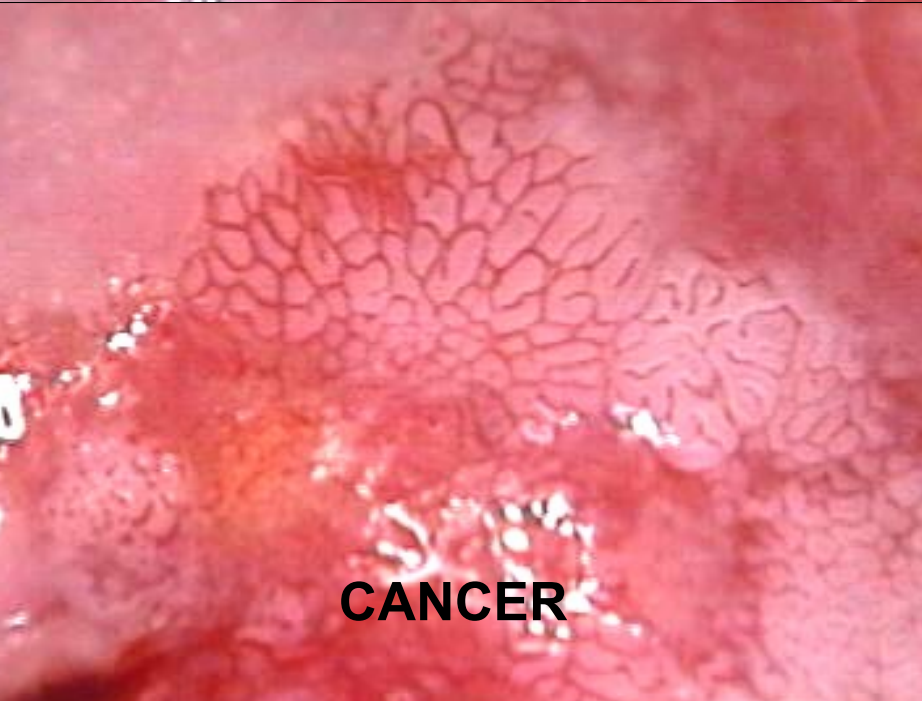
WHAT IS COMMON?



CIN-I



CIN-II

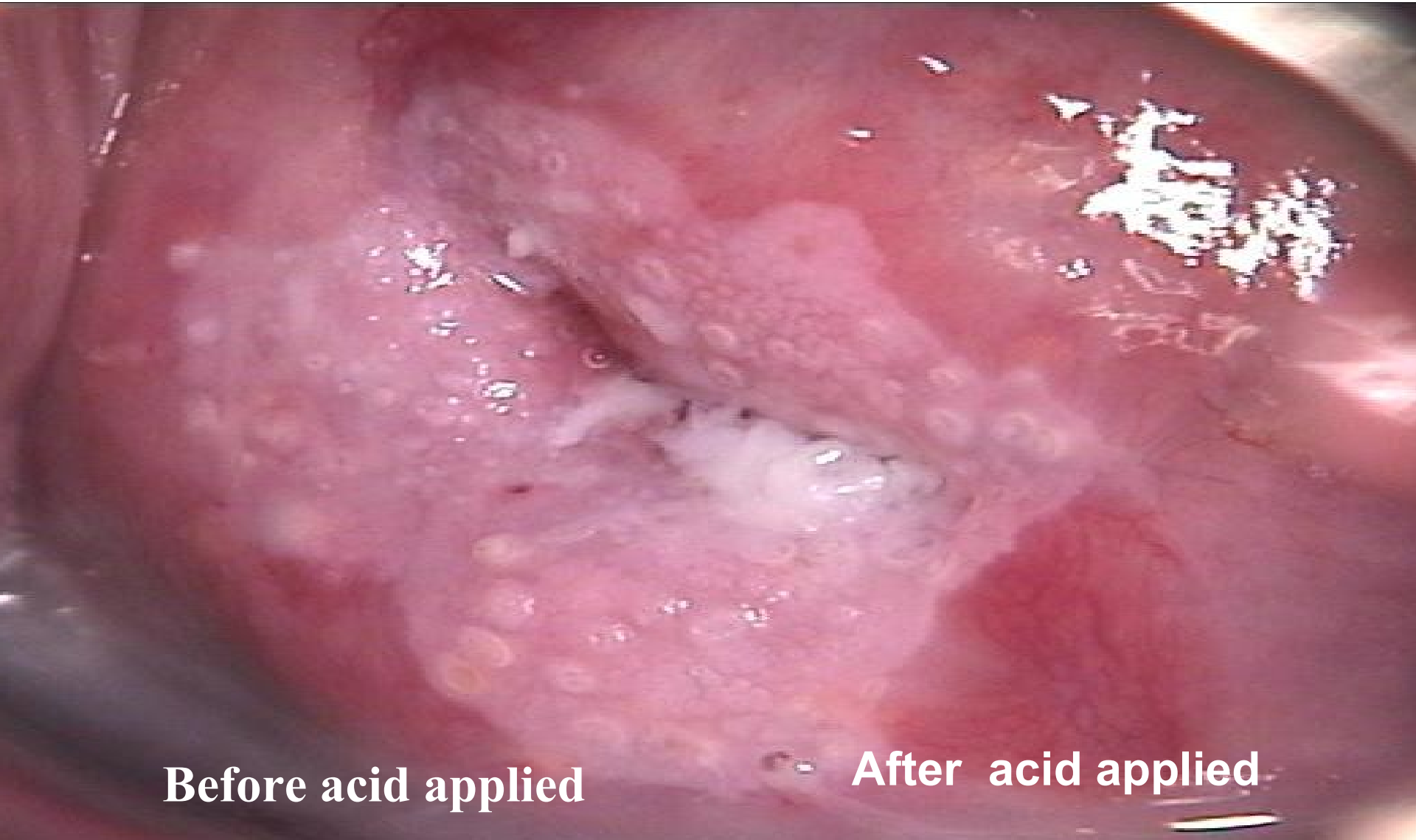


CANCER



CIN 3

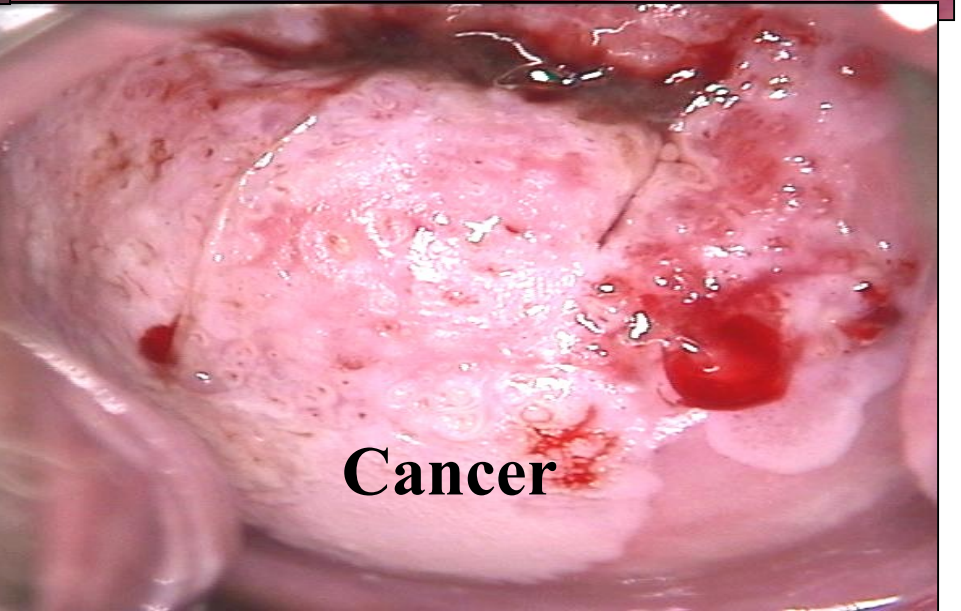
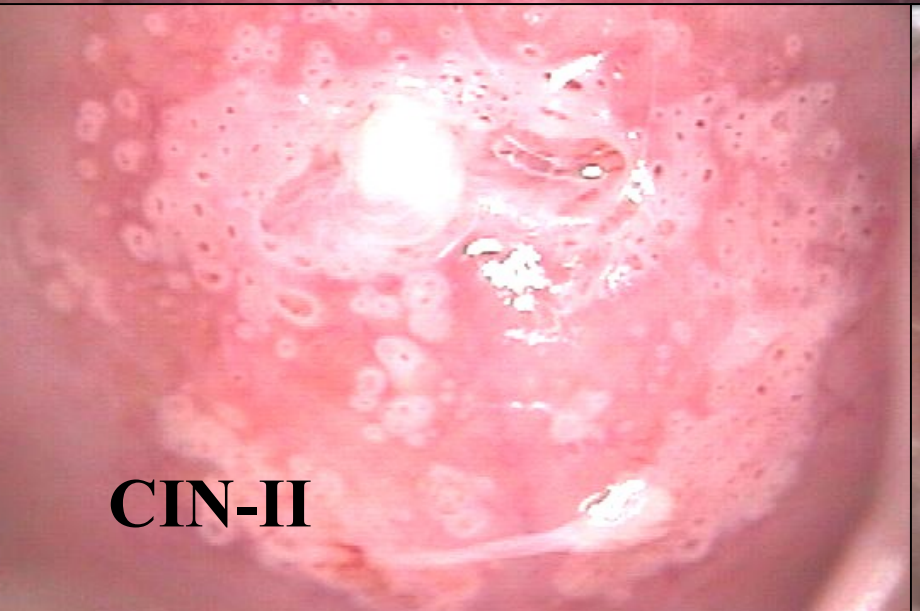
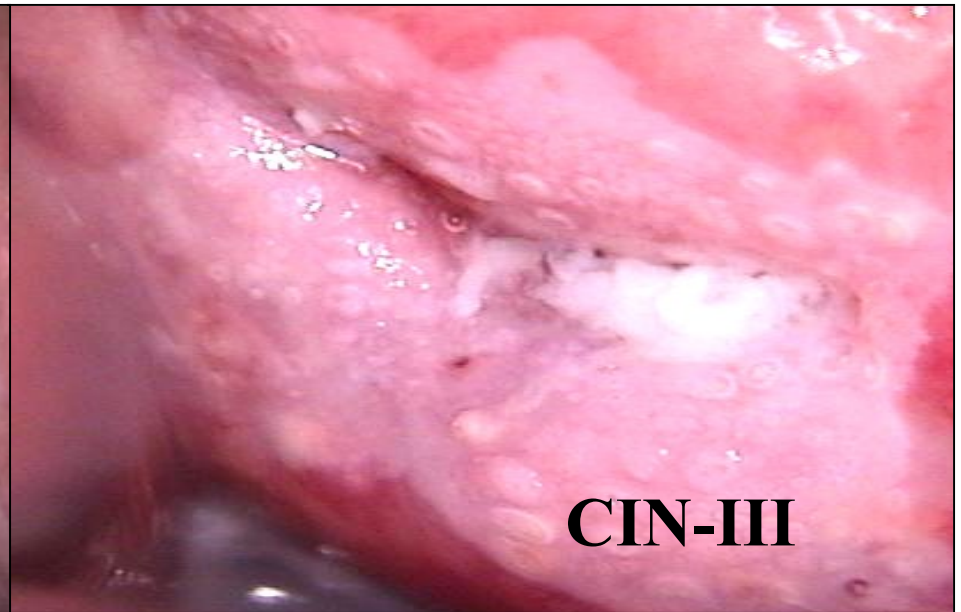
Acetowhite epithelium + glandular opening

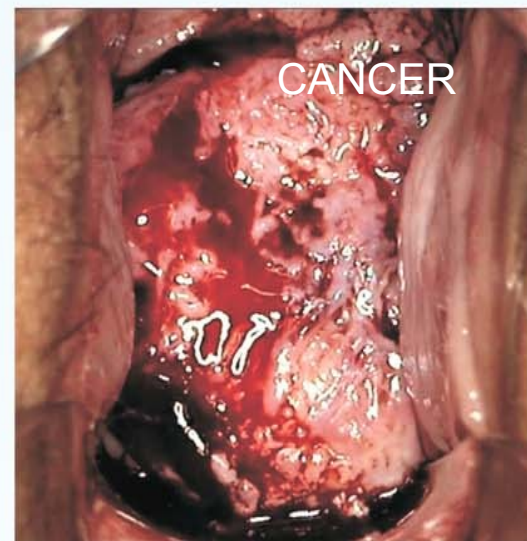
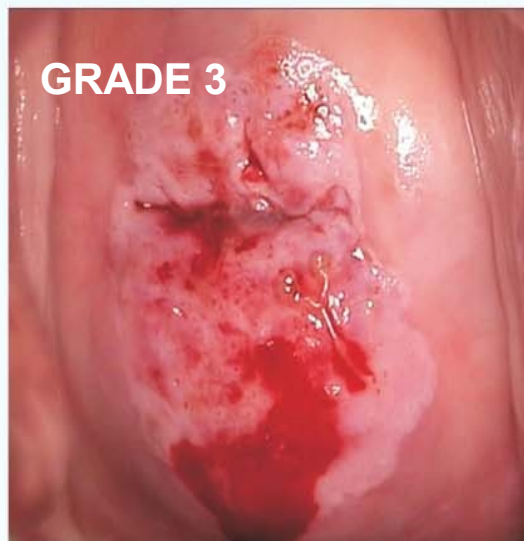
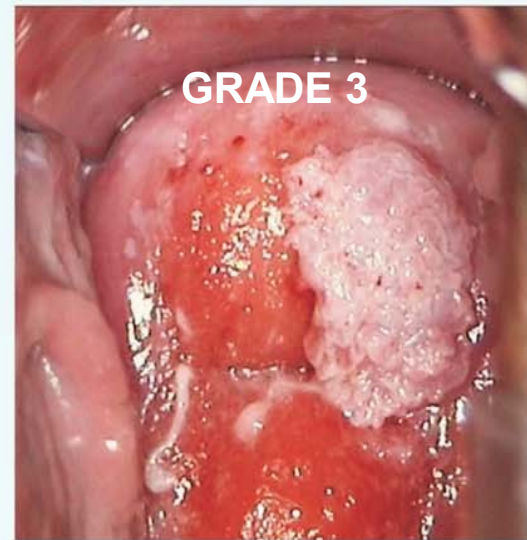
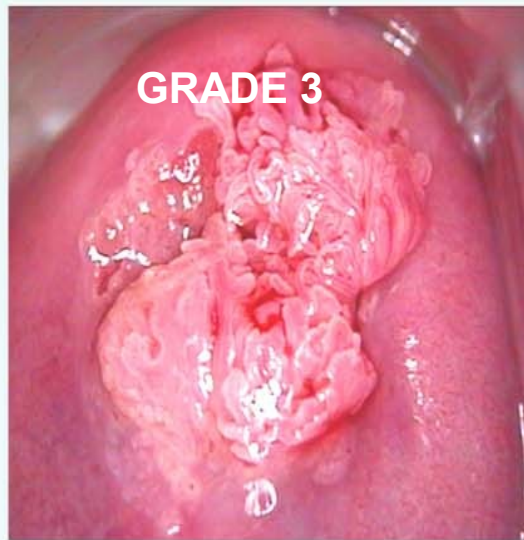
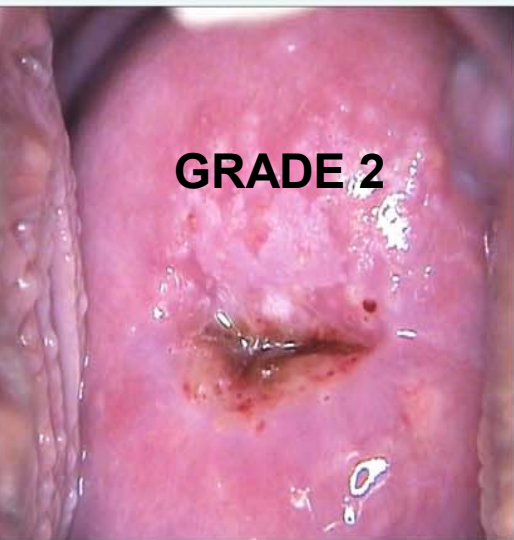


Before acid applied

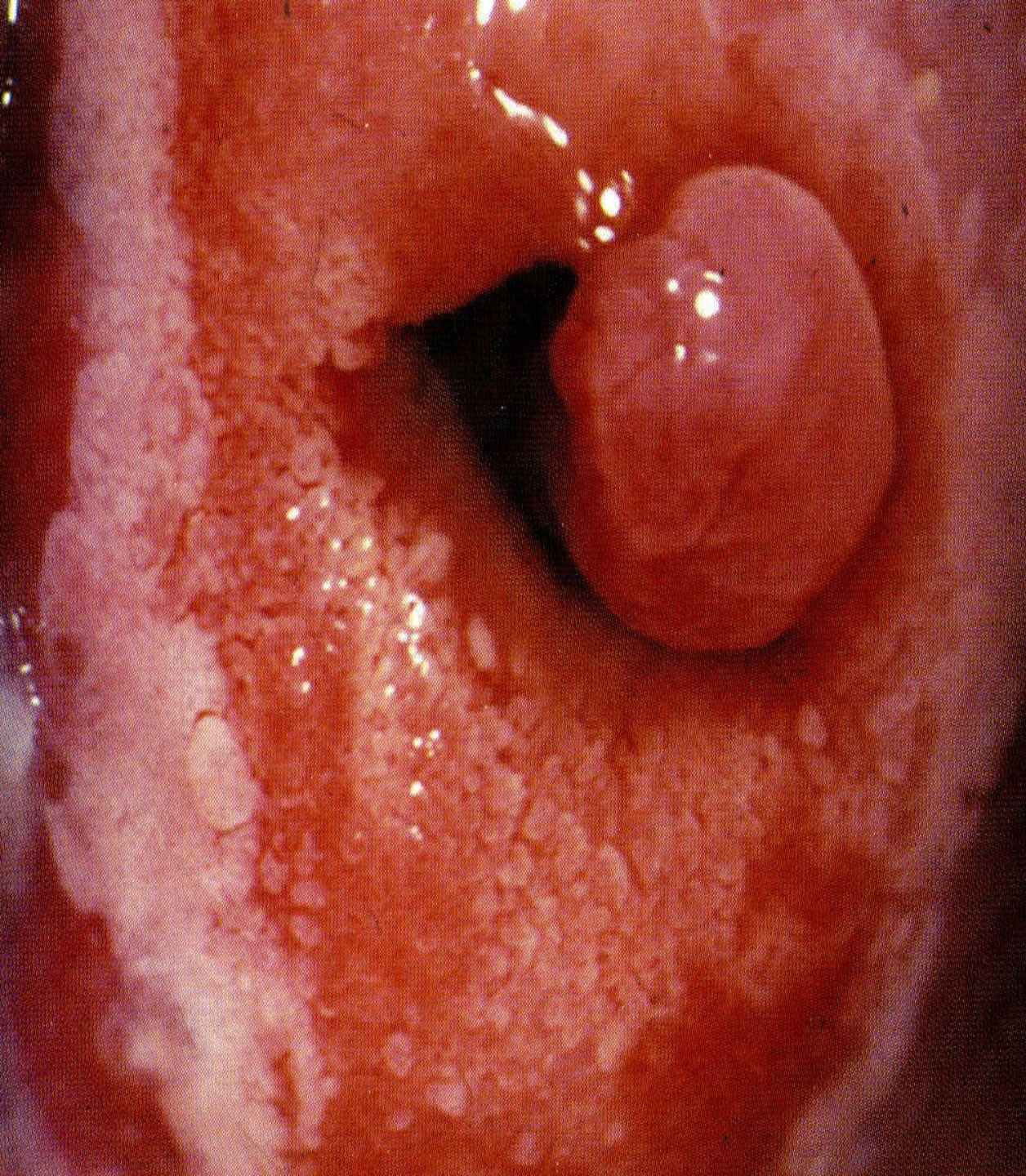
After acid applied

CIN & Glandular Opening

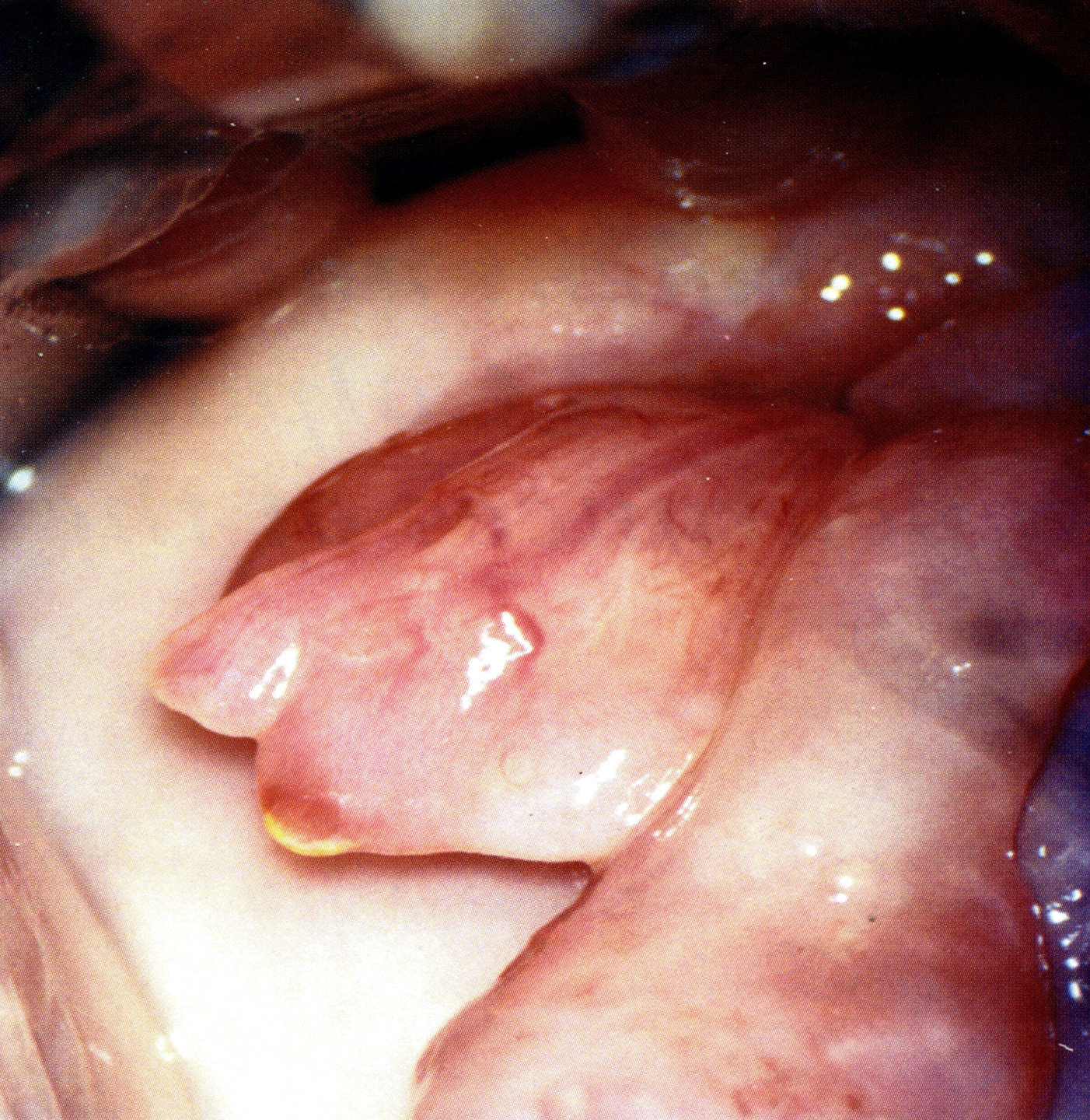




MISCELLANEOUS CATEGORY

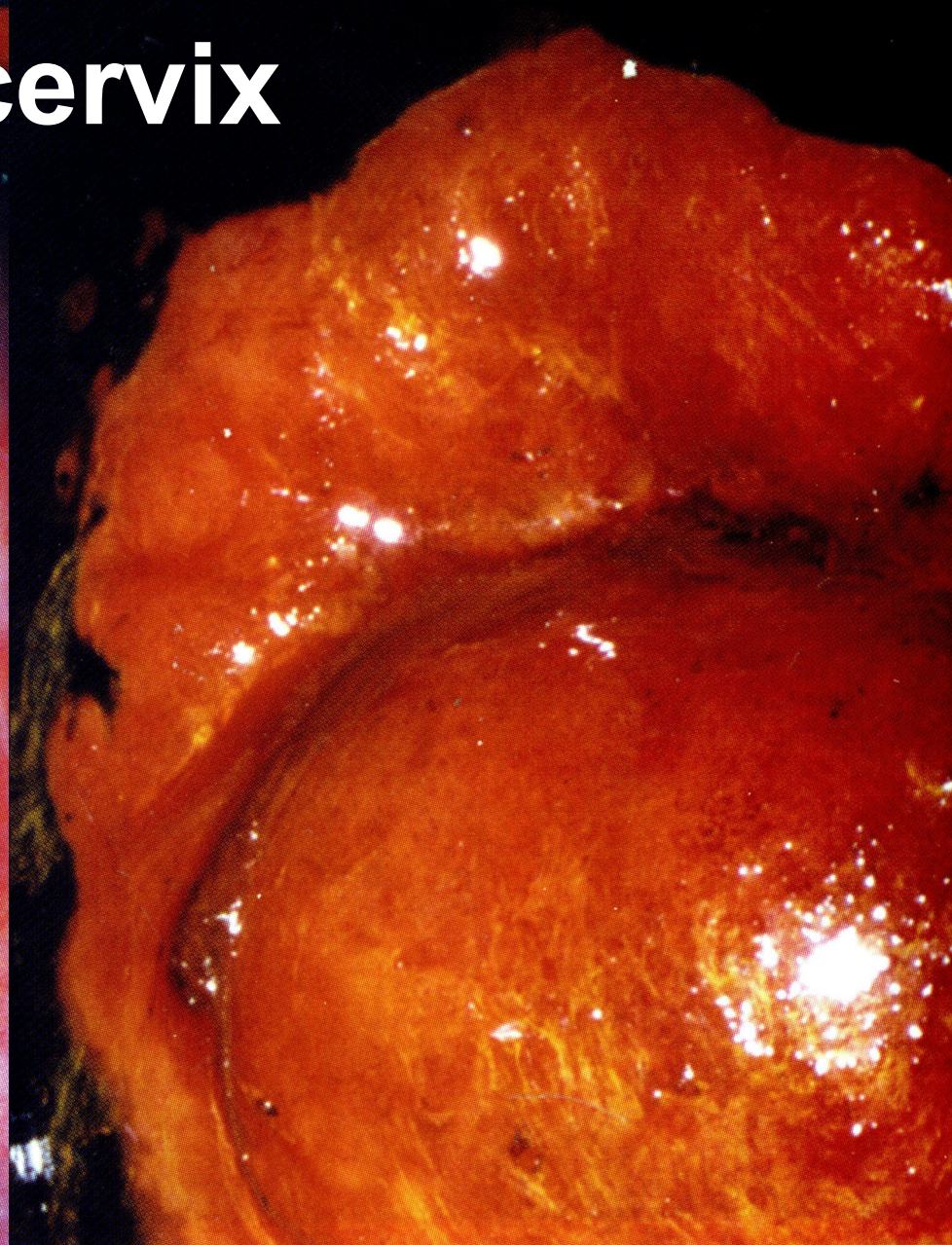
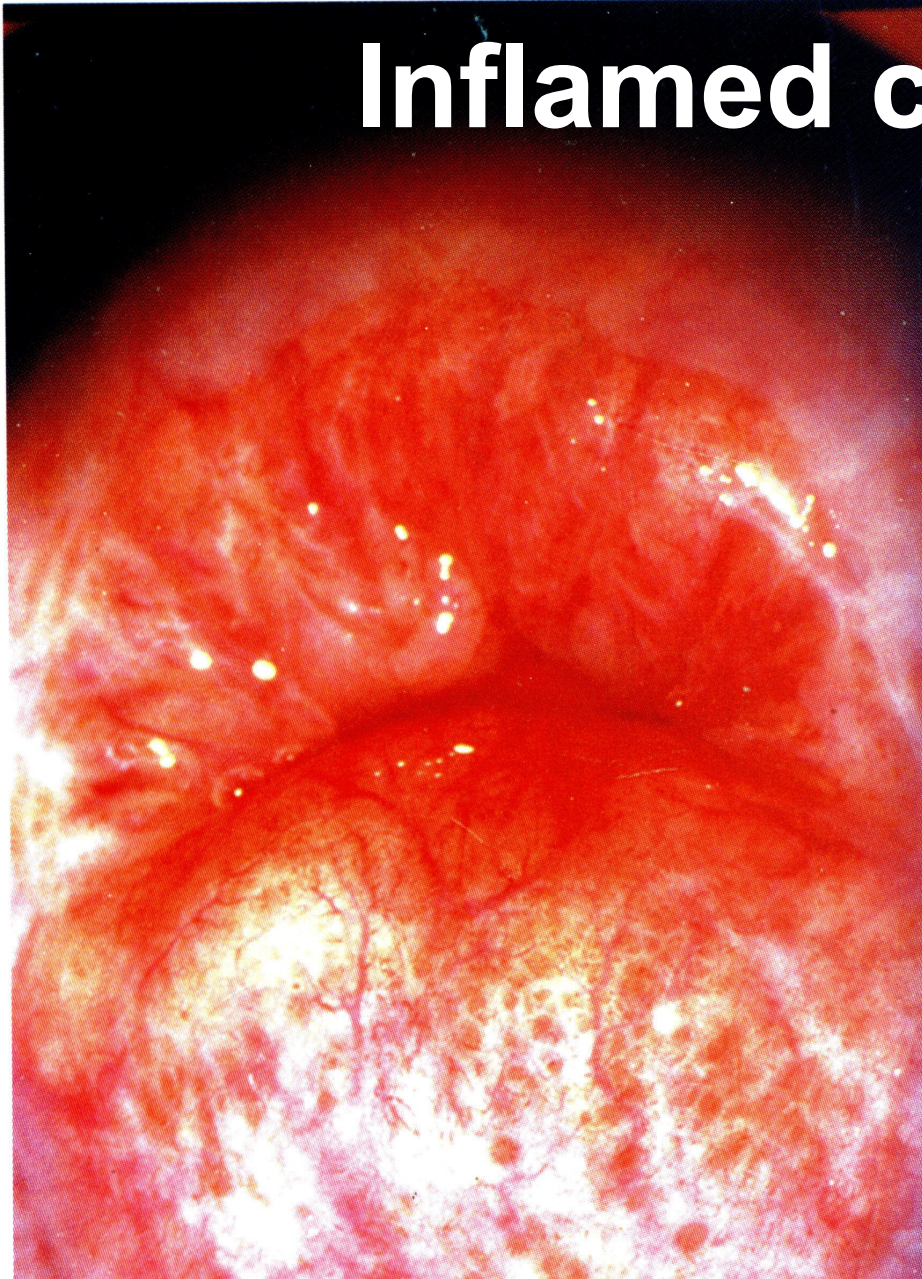


POLYP



**ADENOMATOUS
Polyps**

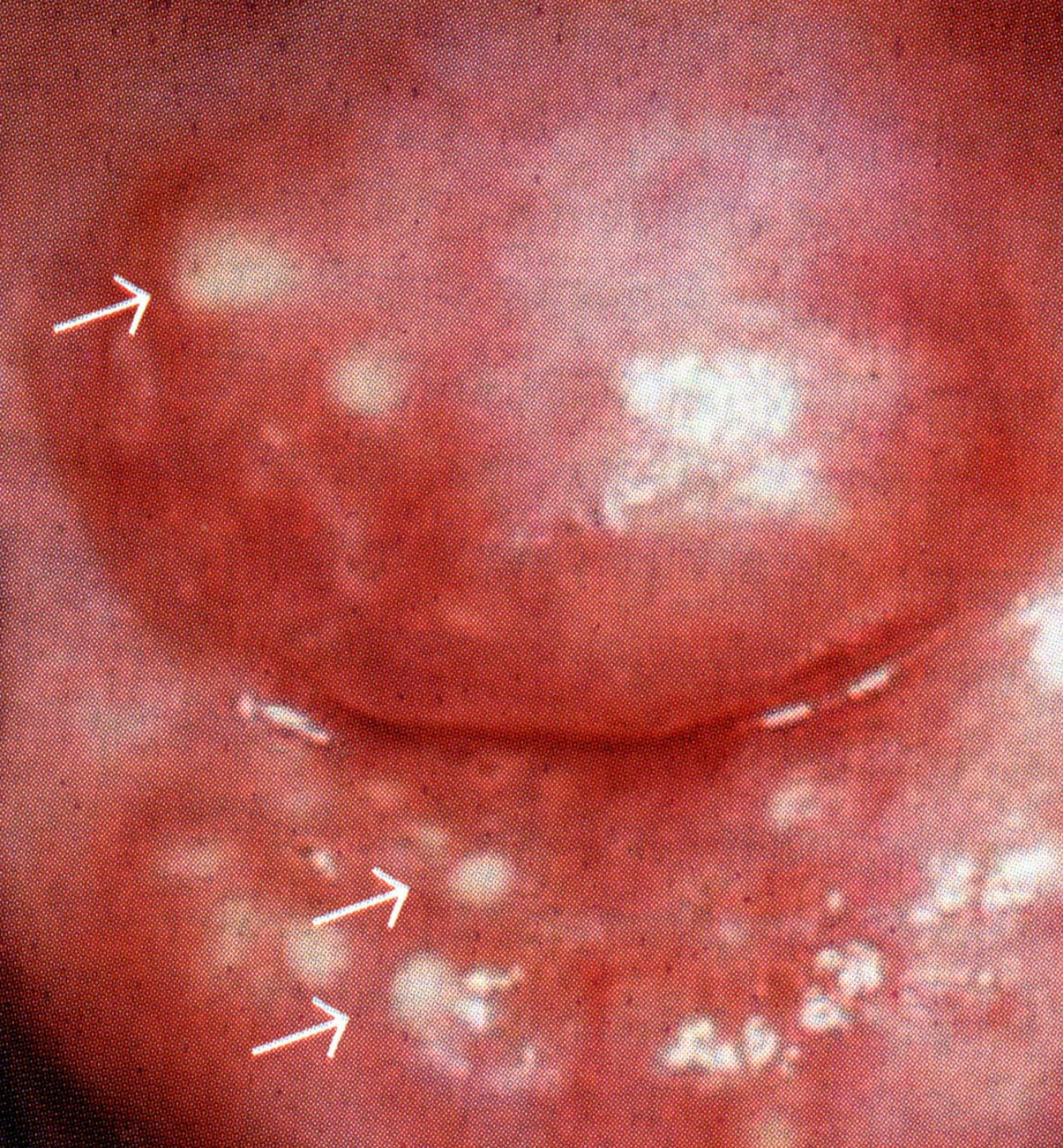
Inflamed cervix



Chronic Cervicitis

Nabothian CYST





**NYBOTHIAN
FOLLICLE**

Condyloma

- **Lesions may be located within or outside TZ**
- **Surface hyperkeratotic**
- **Multiple (Satellite) lesions**
- **Types**
 - **Flat**
 - **Papillary**
 - **Spiked**

Update of colposcopy of genital HPV

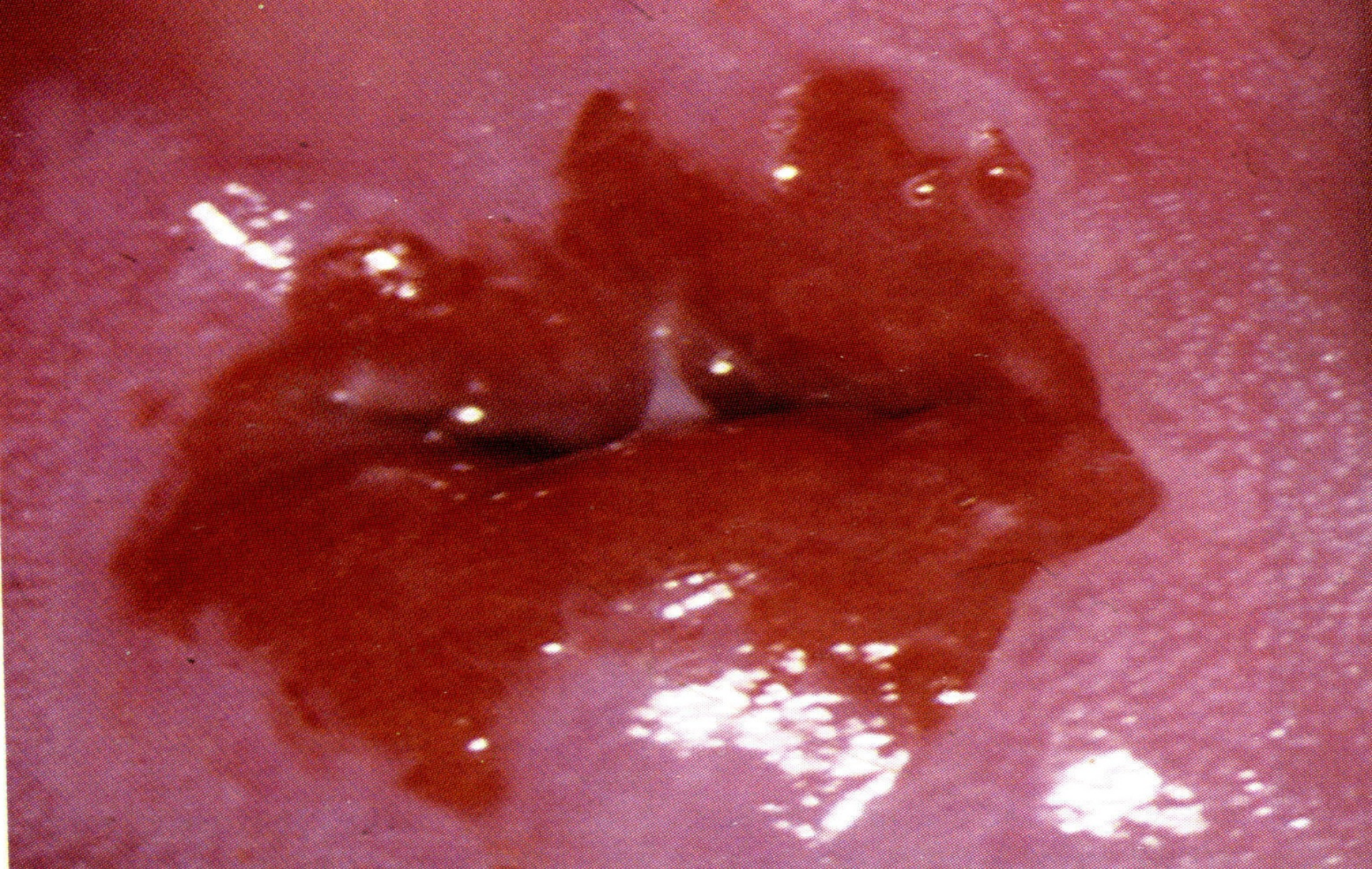
Meisels et al (1982): Florid, spiked, flat, condylomatous vaginitis.

Flat condyloma & mild dysplasia represent the same biologic phenomenon, namely, productive HPV infection (*Reid, 1993*).

The expression of viral activity may be **clinical or subclinical** when it is recognizable only on colposcopy.

Exophytic & flat condylomata are not homologous diseases. Exophytic is usually caused by cutaneotropic viruses (6, 11). Flat are more likely to contain medium (31, 33) or high risk (16, 18) HPV types.

Micropapillary condyloma should not be confused with micropapillomatous labialis.

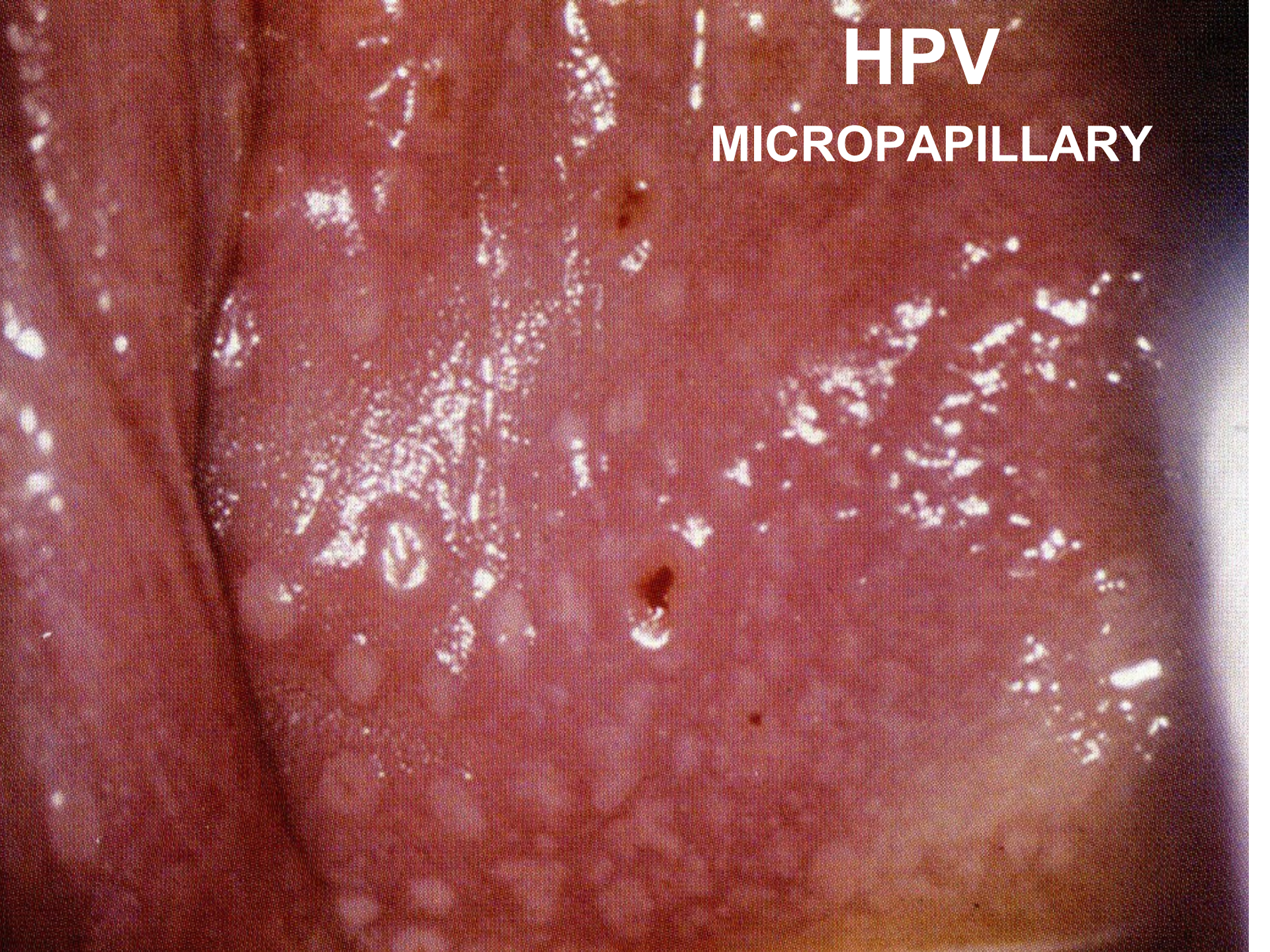


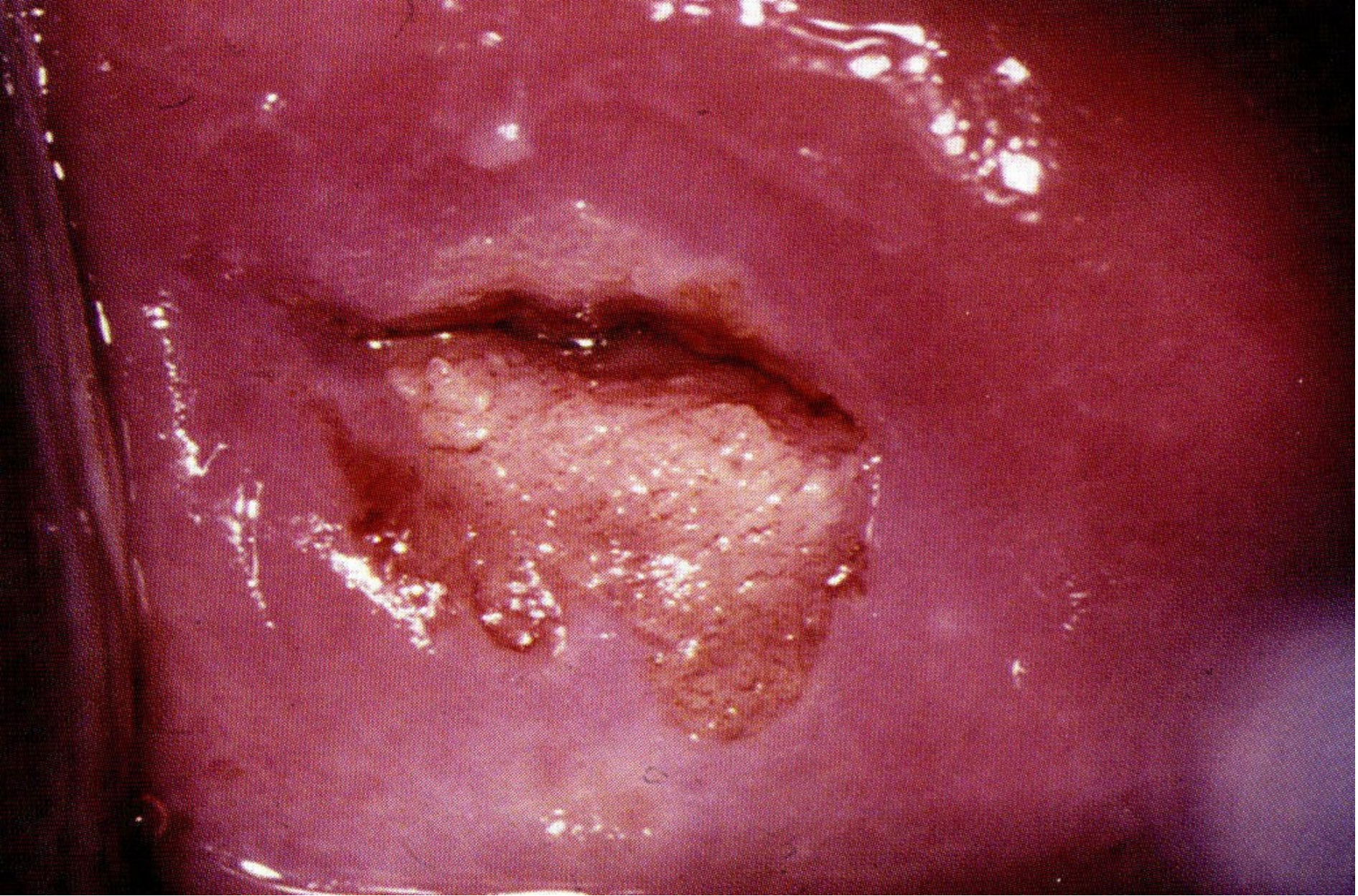
White Punctation

SPI

HPV

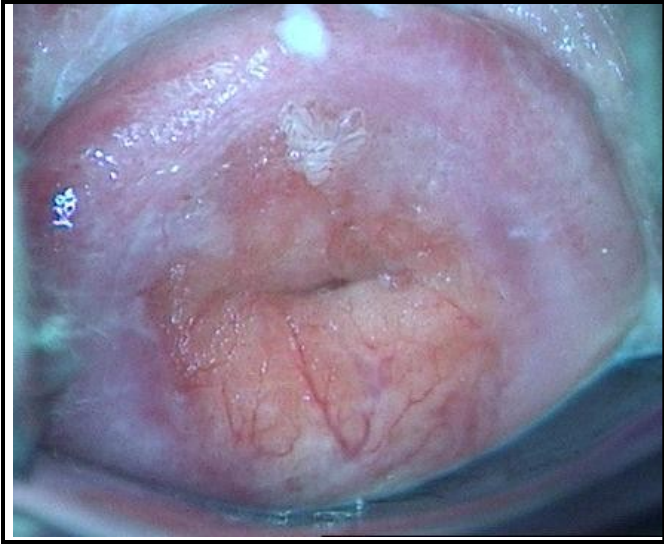
MICROPAPILLARY





HPV EXOPHYTIC CANDYLOMA

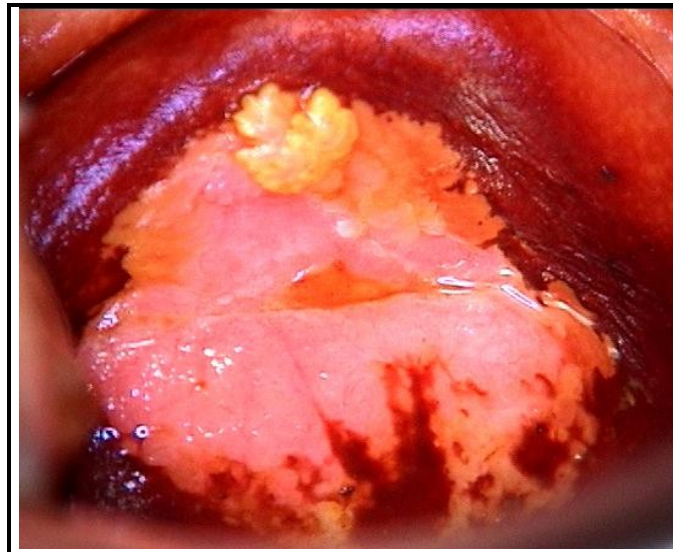
Condyloma



Before acid applied

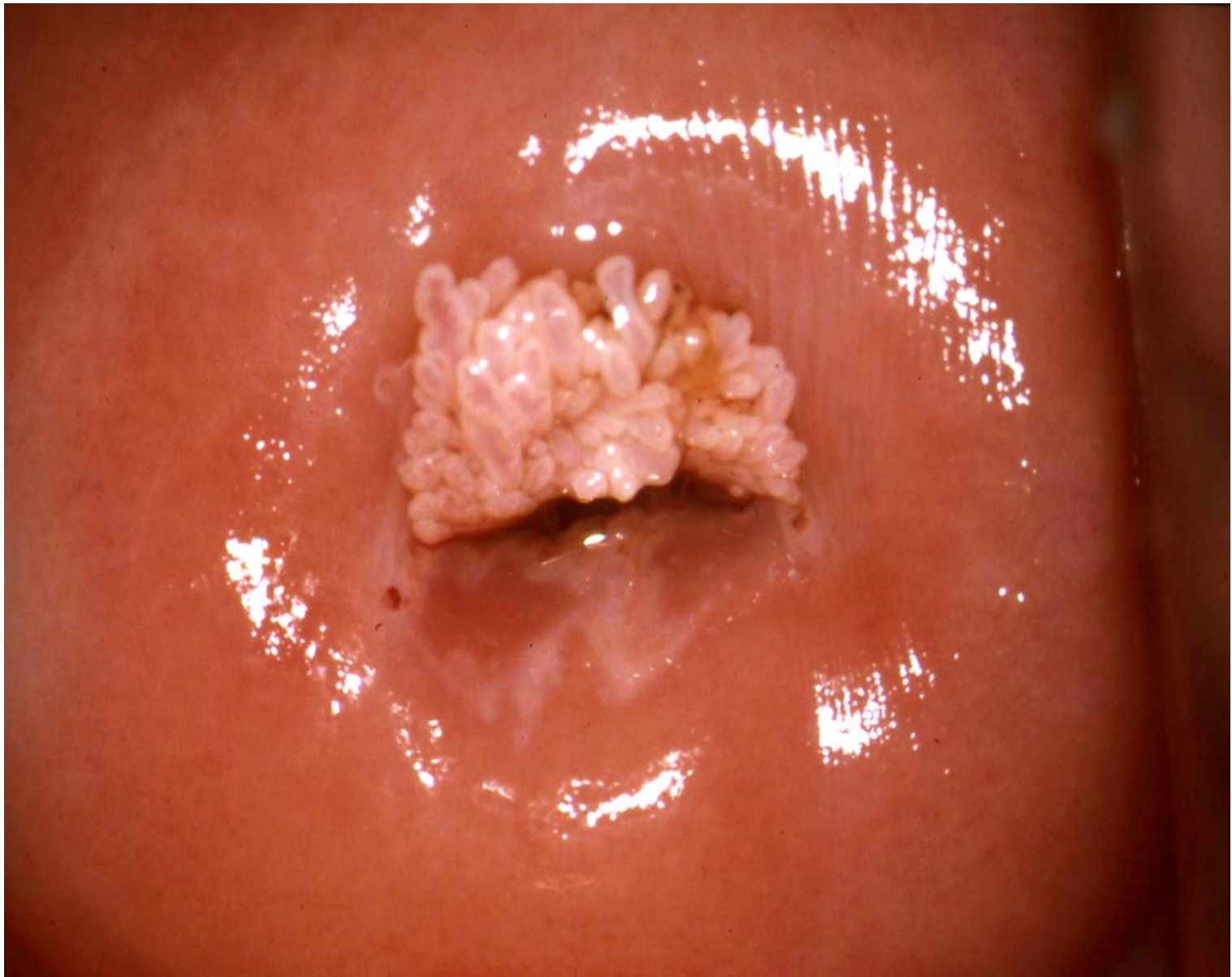


After acid applied

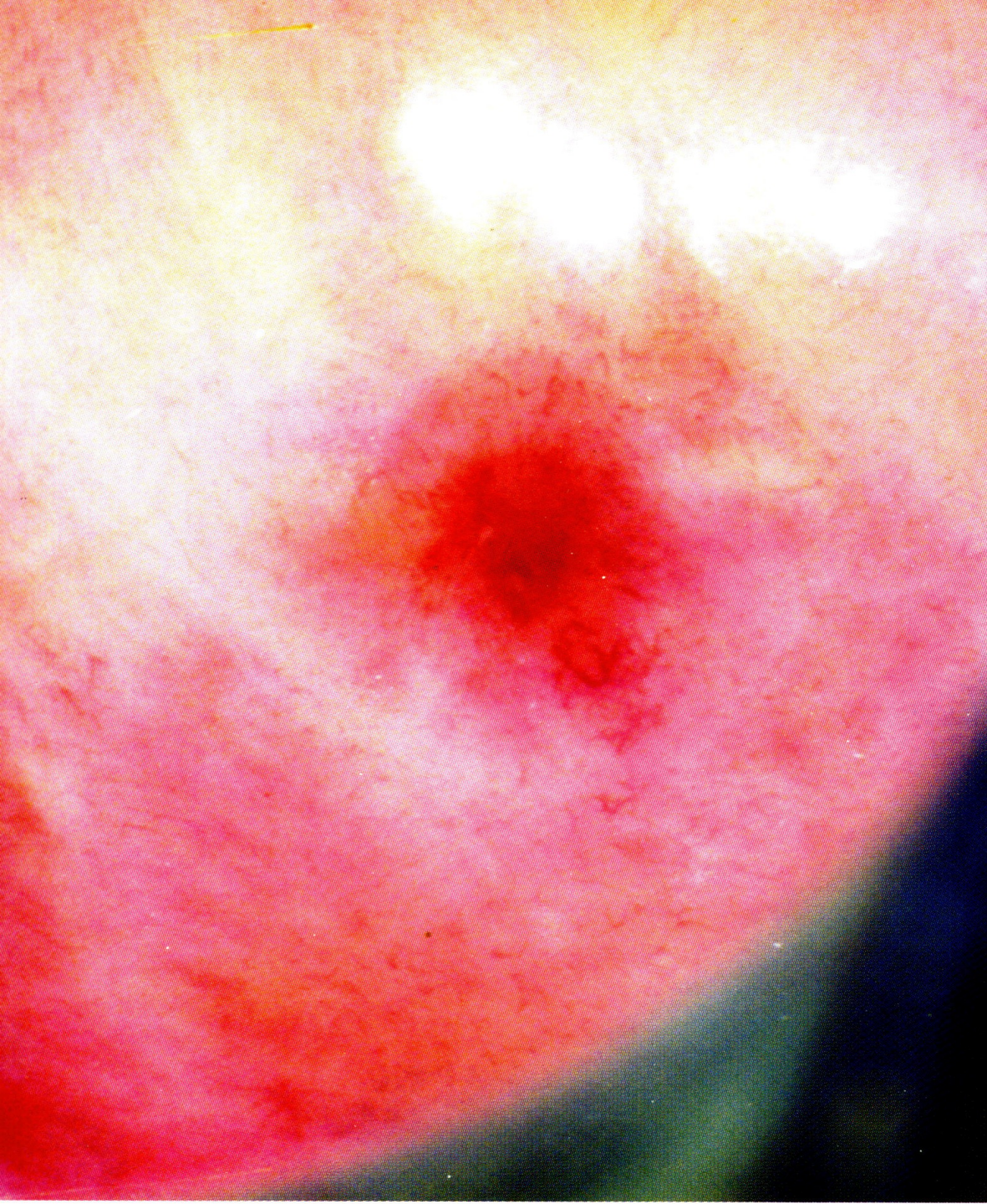


Mustard Yellow

After iodine liquor applied



Cervical Exophytic Condyloma

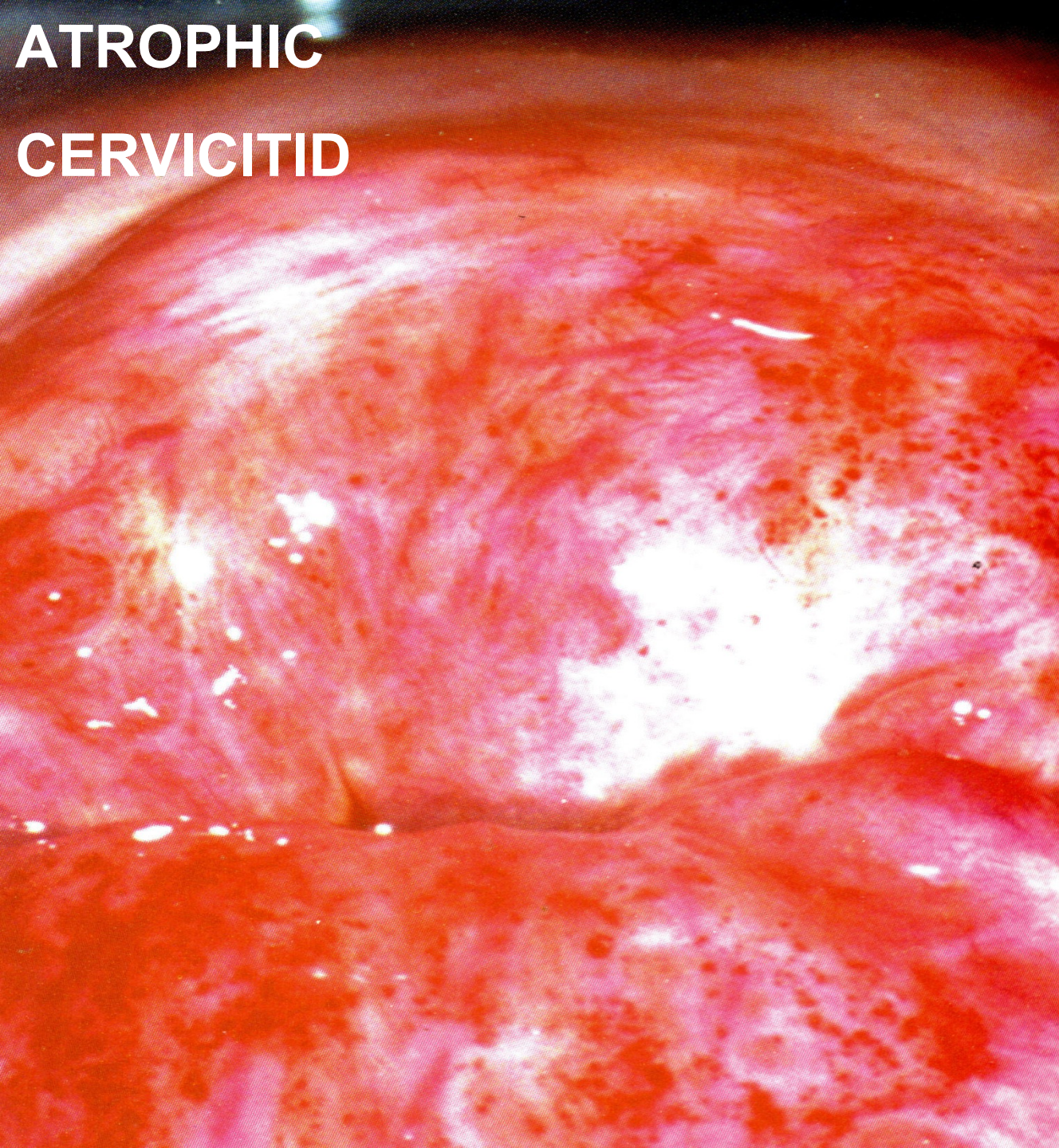


**Postmenopausal
women showing
pale**

atrophic

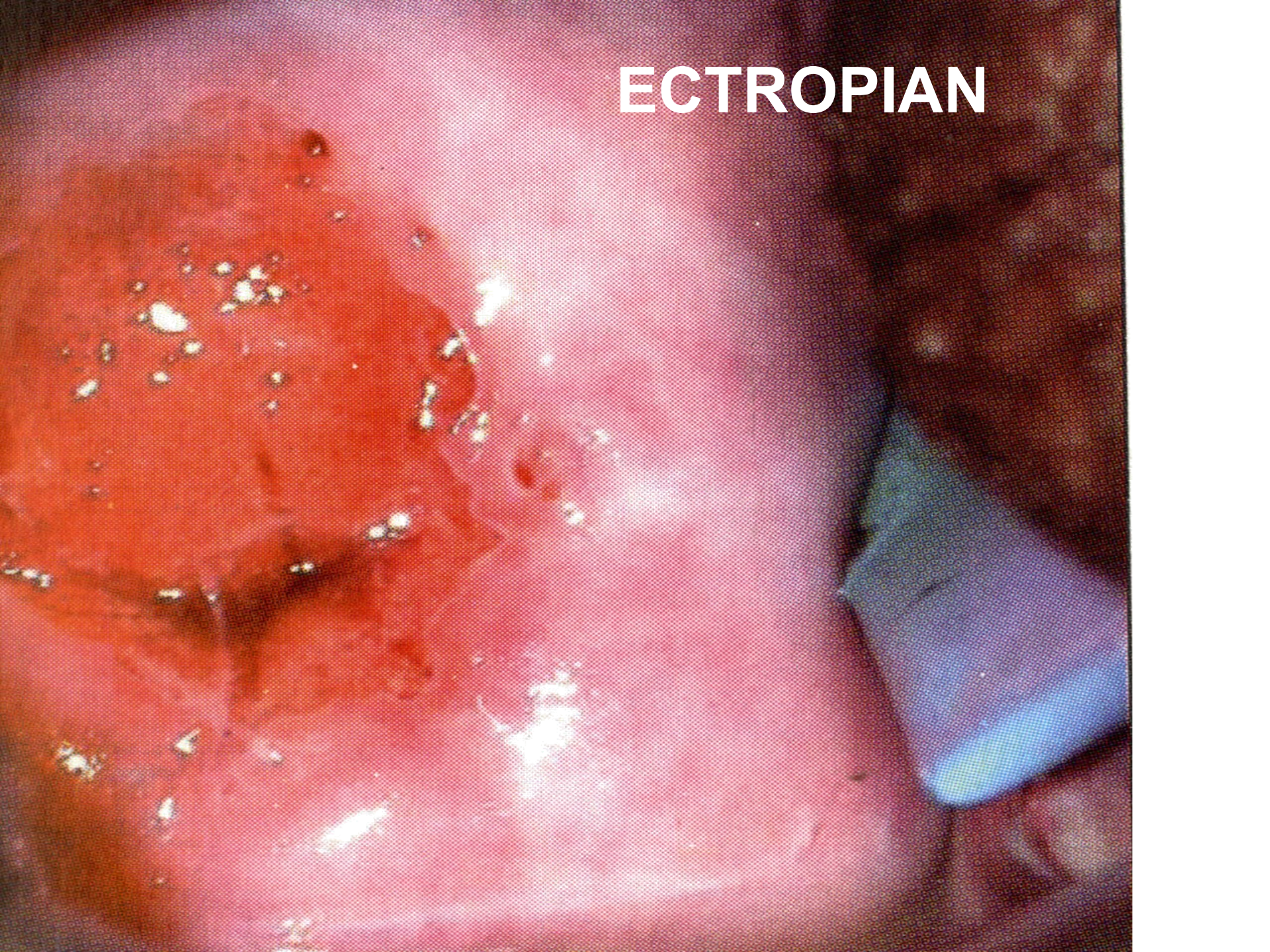
**squamous
epithelium**

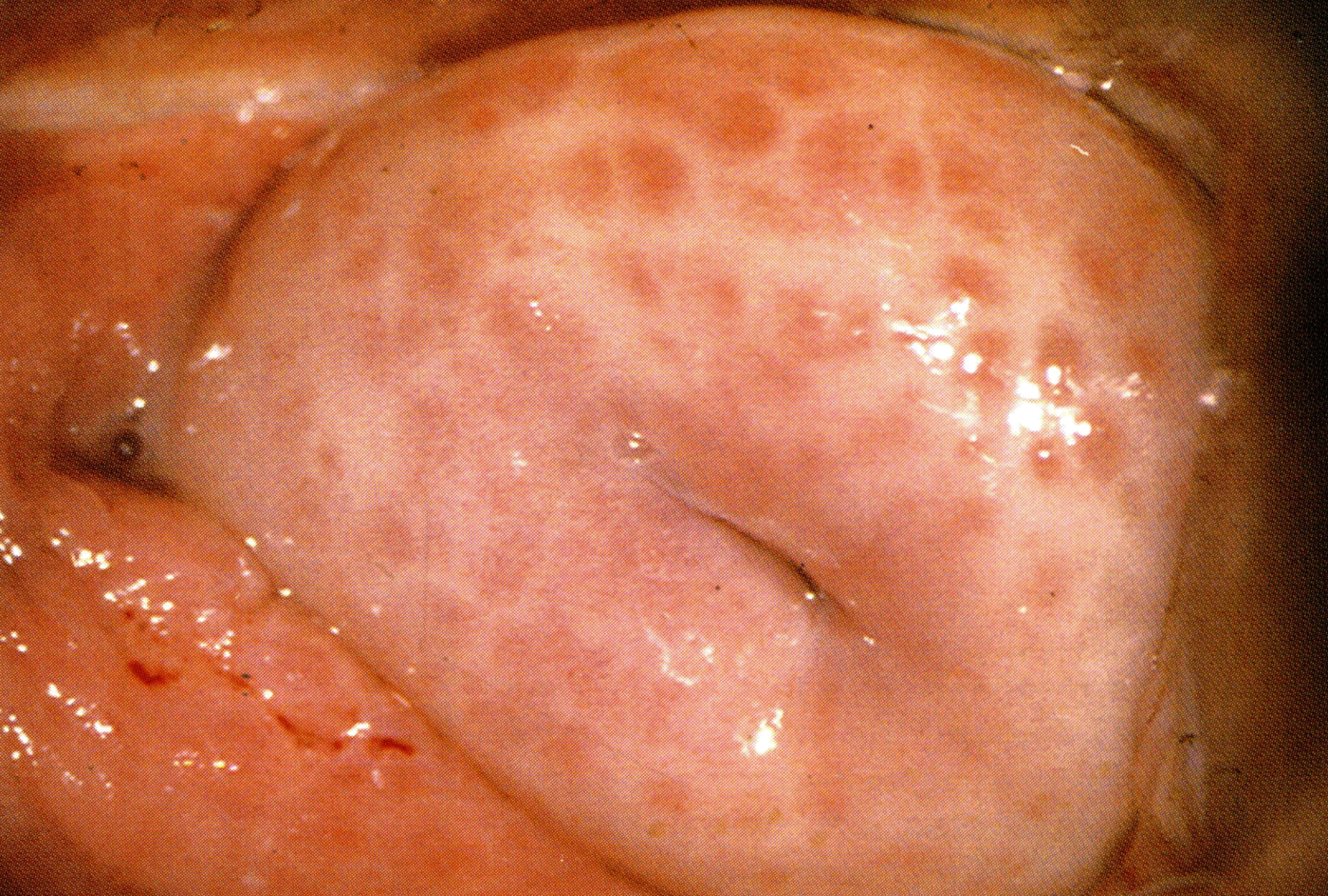
**ATROPHIC
CERVICITID**



**PROMINENT
STROMAL BV
RESEMBLING
COARSE
PUNCTATIONS**

ECTROPIAN



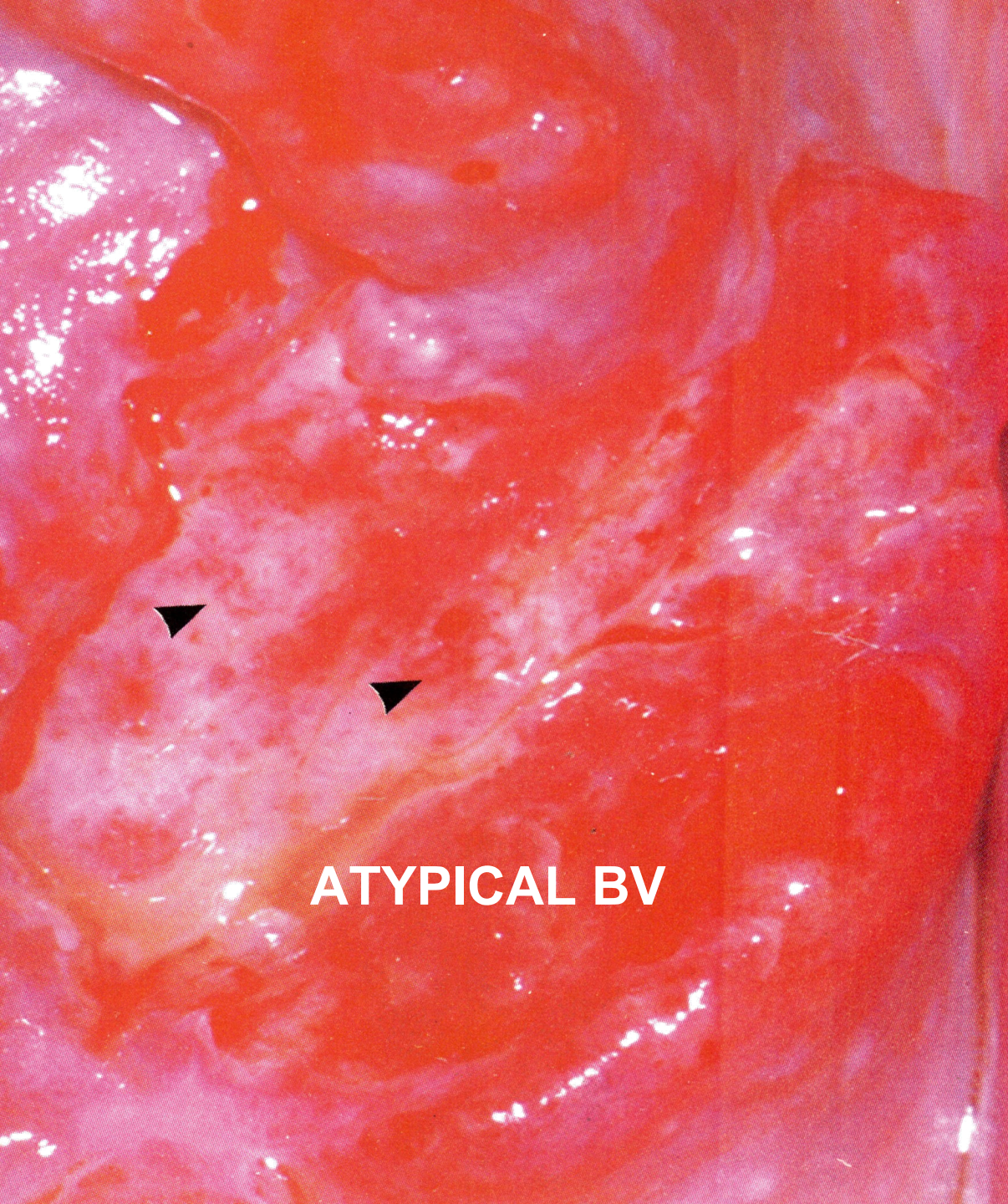


TV infection

A Typical Infectious CERVIX....



TUBERCULOSIS



ATYPICAL BV



HERPETIC VESICLES

Colposcopy of the vulva

*Steps:

1. Examination after smearing with a water soluble lubricant.
2. Prolonged acetic acid test
3. Toluidine blue test: little clinical value.

* **The junction** between the glycogen bearing vaginal epithelium & keratin producing vulval epithelium: high risk for intraepithelial neoplasia.

* **Abnormalities:** diffuse acetowhite, localized acetowhite, leukoplakia, micropapillae, papules.

Update on colposcopy in pregnancy

Difficult. & reserved for the most experienced colposcopist.

Reassurance of the patient.

ECC is contraindicated & one directed **biopsy**.

Large **speculum** is usually needed

Sponge forceps to remove **the mucous** & acetic acid as a mucolytic

Unsatisfactory colposcopy: repeat after 8 w

The aim is to exclude cancer

CIN: follow up & definitive treatment 1-2 m postpartum.

PREVENTION

Primary prevention

- **Avoid high risk sexual behavior**
- **Avoid smoking**
- **Vaccines**

Secondary prevention

- **Treatment of pre-cancerous lesions before they progress to cervical cancer (implies practical screening test)**

**2013 Guidelines : ACS, ASCCP,
American Society for Clinical Pathology
CA Cancer J CLIN March 2012**

- **1st time that all 3 organizations involved with cervical cancer prevention and the USPSTF have endorsed equivalent guidelines**

| AGE | SCREENING |
|--|---|
| < 21 | No Screening |
| 21-29 | Cytology alone every 3 years |
| 30-65 | Acceptable: Cytology alone every 3 years* |
| | Preferred ??: Cytology + HPV every 5 years* OR |
| > 65 | No screening, following 3 consecutive neg prior screens in last decade |
| After total hysterectomy | No screening, if no history of CIN2+ in the past 20 years of cervical cancer ever |
| HIV-positive -Immunosuppressed (e.g., | Annually |

LESSON TO LEARN !!!

- ☞ **All female patients visiting a practitioner should have a thorough per speculum examination under good light.**
- ☞ **To perform hysterectomies without prior evaluation of any cervical lesions is the greatest sin.**
- ☞ **Each of us should take a pledge today that we will give our whole hearted support to prevent this preventable cancer... !!!**

Training is must before doctor does Colposcopy

It would be a legal document that would safeguard the public & raise the status of the colposcopist



LIFE'S MOST URGENT QUESTION IS:
"WHAT ARE YOU DOING FOR OTHERS"

-MARTIN LUTHER KING, JR.-

ANY QUESTION ?



Thank You



ADDRESS

35 , Defence Enclave, Opp. Preet Vihar
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