Colposcopy

Today

A PRACTICAL APPROACH

PART I

Colposcopy workshop

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Director :-

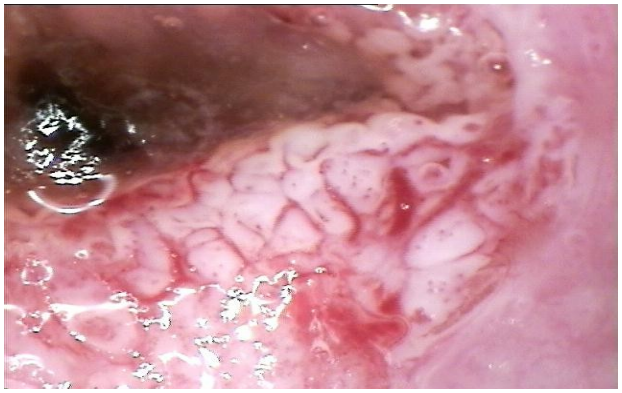
LifeCare center

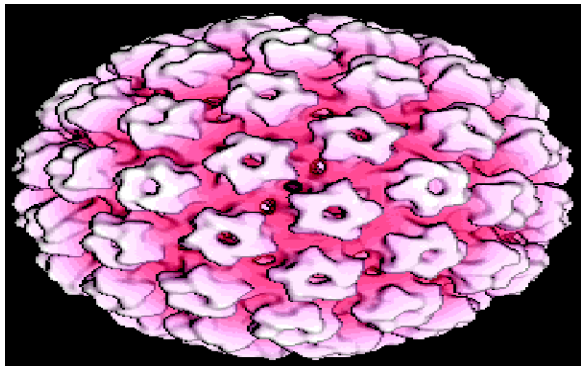
LifeCare A unit of Lifecare centre IVF

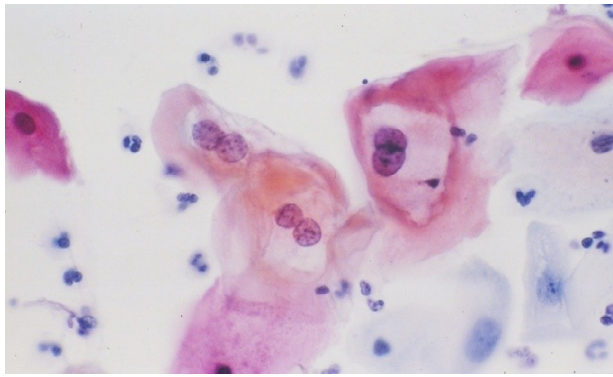
Founder Chairman, Gynae: Pushpanjali Croslay Hospital

Sec General : Delhi Gynae Forum

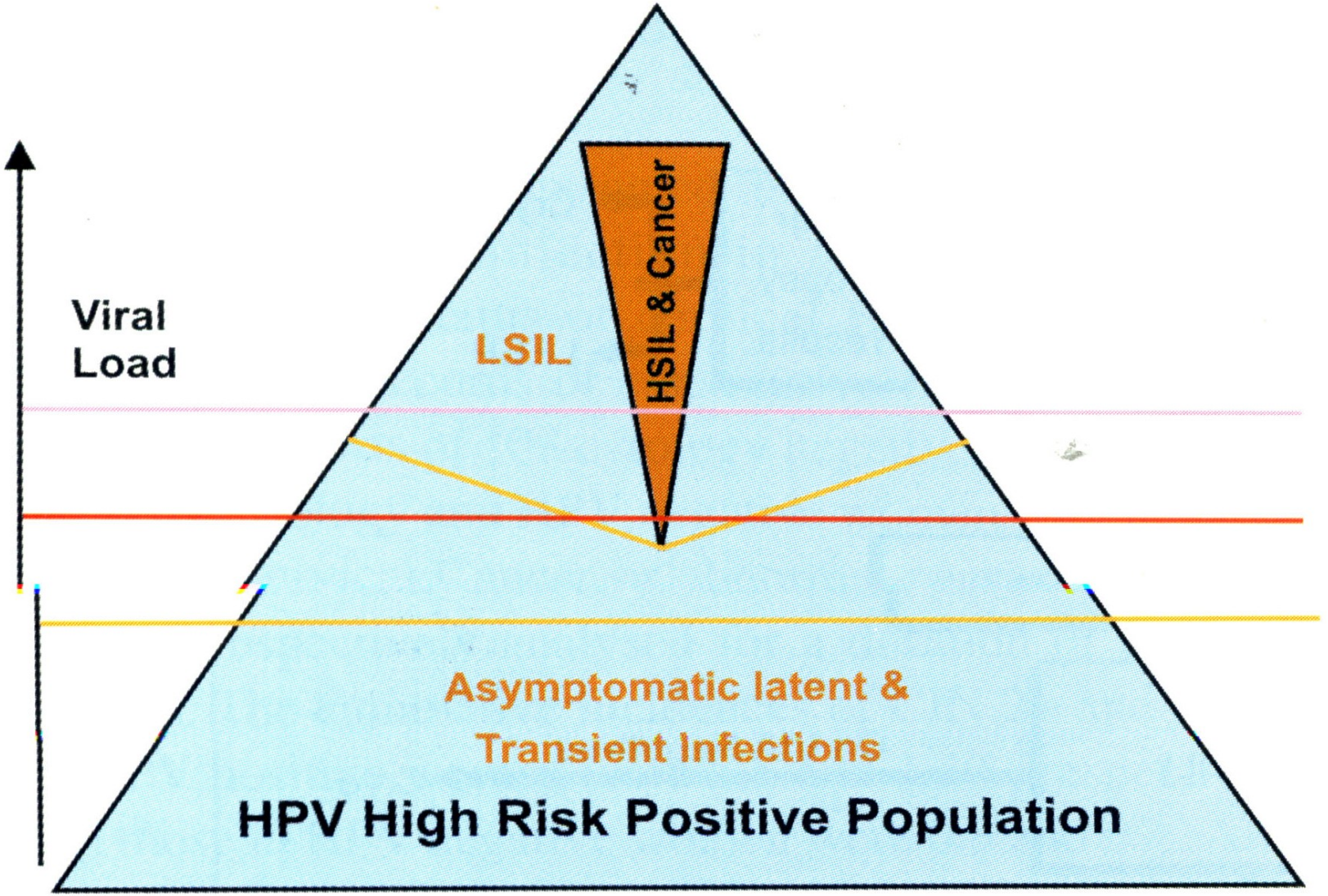
Cervical Cancer Screening





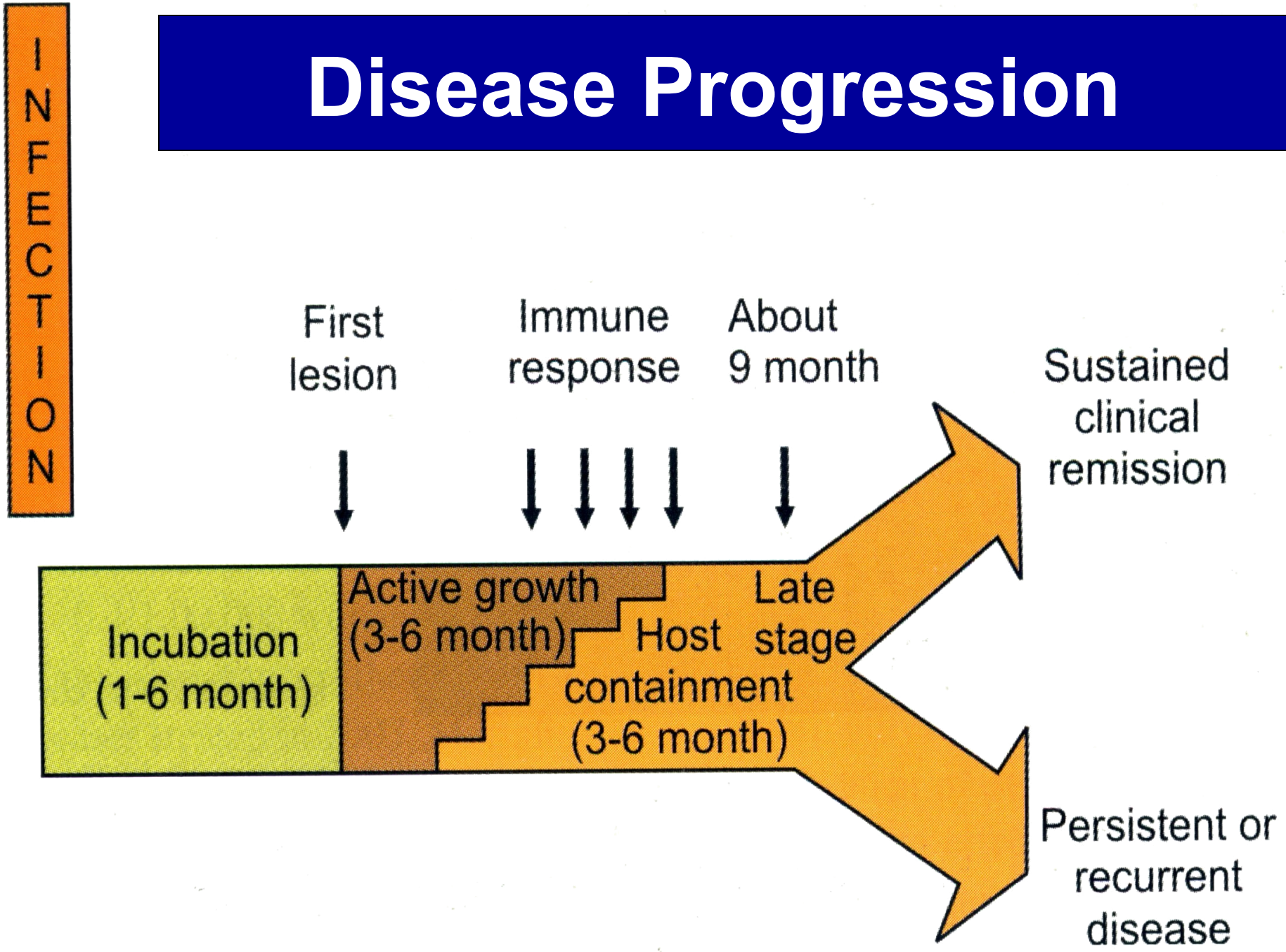


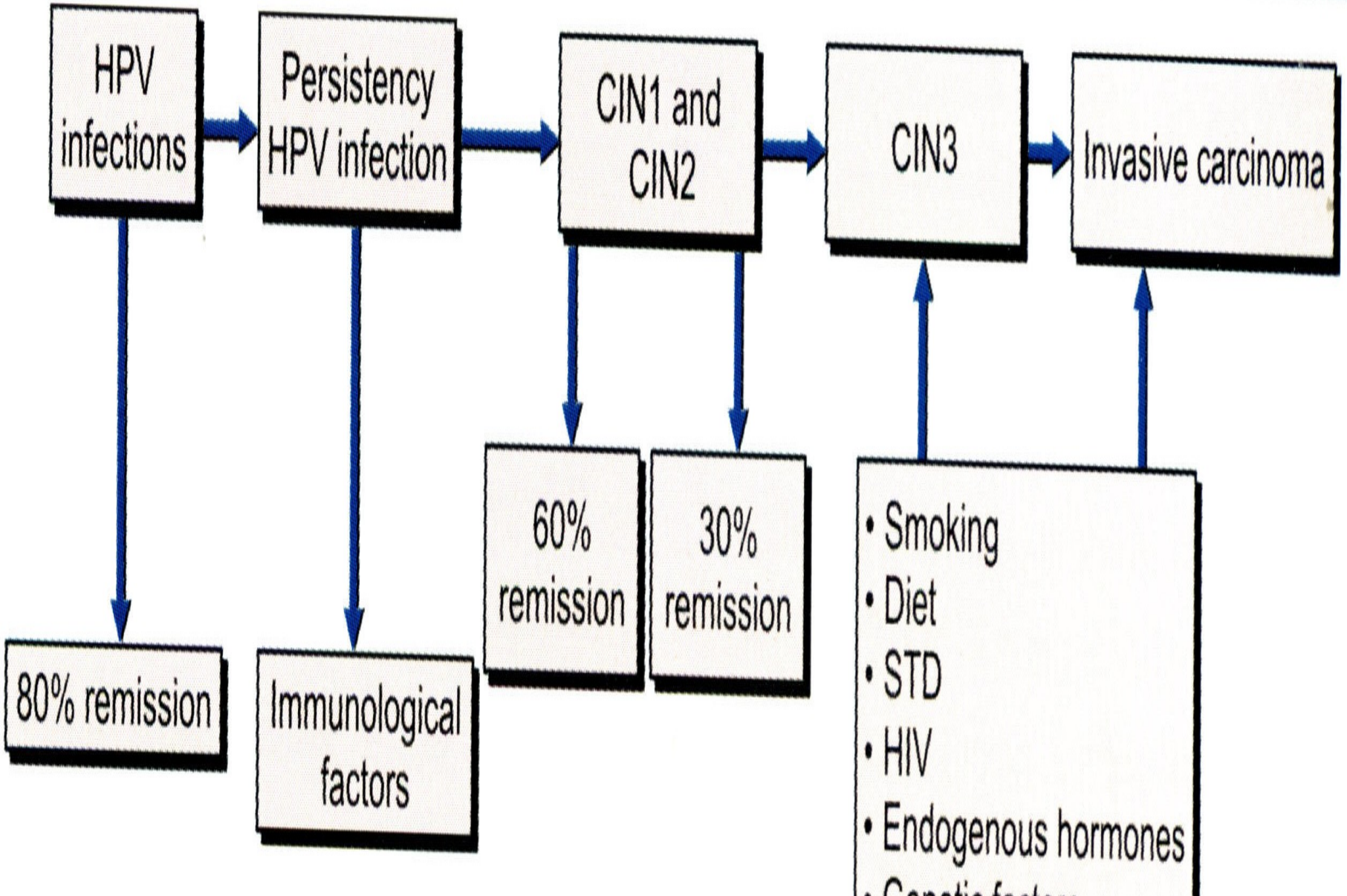
- Concept of cervical cancer screening& down staging
- Why Colposcopy ?
- Uses / Indications
- Method of Colposcopy
- Normal Colposcopy
- Abnormal; Colposcopy



Every HPV + Case does not become cancer

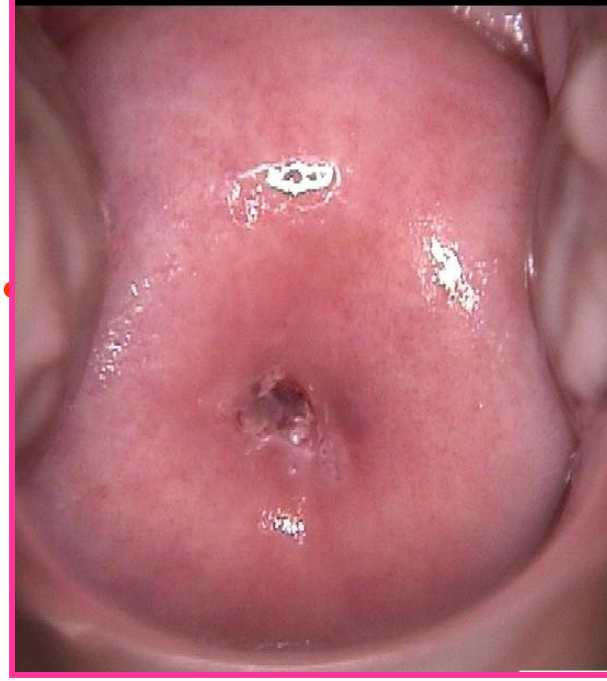
Disease Progression





Disease Regression

Accesibility of CERVIX……



- seen instantly after putting speculum inside the vagina and becomes apparent.
- The success of colposcopy lies in visualising the cervical epithelia in the region of transformation zone in its entirely.

Historic events related to colposcopy

1925: Invention of colposcope *(Hinselman)*

1928: Schiller test

1938: Acetic acid test *(Hinselman)*

1939: Green filter *(Kratz)*

1940: Pap test

1942: First photographs of cervix *(Treite)*

1960: Cryosurgery

1980: Laser surgery

1988: Computer-aided colposcope

1989: LLETZ *(Prendiville & Cullimore)*

1991: Pap Net

2000: Telecolposcopy *(Harper et al)*

Office Colposcopy

is technically feasible can be done in Gynaecologists's office with limited technical support & is preferred by women.

- Computer technology has made it possible to capture images directly on to a computer & these images allow teaching & follow up easy

Indications for COLPOSCOPY….

- Abnormal PAP Smear
- Persistent vaginal discharge
- Long standing foul smelling vaginal discharge
- Unhealthy Cervix
- Bleeding- post coital/ Postmenopausal
- HPV positive / external vulval warts
- Post treatment follow up

Benefits of Colposcopy…….

- Non invasive, no anaethesia for pain
- Helps in precise examination of cervix and TZ
- Guide to locate the biopsy, improve accuracy of early diagnosis
- Reduce over-treatment
- Easy for follow up
- This is an outpatient procedure
- It takes only a few minutes

Screening Colposcopy

More sensitive & more cost effective then cytological screening, it is a gold standard for diagnosis.

Portable Colposcopy

in rural areas - is cost effective & highly acceptable (Martin et al, 1998).

with

SEE (VIA & VILI) AND TREAT PROGRAMME

Other Uses

The Colposcopy improved detection of genital trauma in adult **Female Sexual Assault Victims** as compared with gross visual examination alone

Lenahan 1998)

Diagnostic Criteria

1. Vascular Pattern
2. intercapillary distance
3. Color
4. Contour
5. Clarity of demarcation
6. Appearance of gland opening
7. Negative after iodine test

Diagnosis Criteria

8. Whiteness after acetic acid:

   Density of whiteness, time needed to appears & disappear, demarcation

   Changes >35 yr are thinner & less demarcated, punch biopsy (Zahm et al1998)

9. Surface extent of the lesion ; more important prognostic indicator for invasion than hisological grading (Tidbury et al 1992)

Niekerk (1998)

Low grade	High grade
•Acetowhite epithelium: shiny or snow white,semitransparent	dull, oyster white color
•Surface: flat	irregular contour, microexophytic
•Demarcation: diffuse, irregular, flocculated, feathered, internal demarcation absent	sharp, straight line, internal demarcation present
•Vessels: fine, regular shape, uniform caliber, normal arborization, spaghetti changing calibers	coarse, dilated, increased ICD, bizarre, commas, corkscrews sharp bends
•Iodine: uniform mahogany brown	mustard yellow, yellow or iodine -ve

COLPOSCOPIC CLASSIFICATIONS

(IFCPC 1991)

International Federation of Cervical Pathology & Colposcopy

International Federation of Cervical Pathology & Colposcopy(1991)

Normal: Original squamous epithelium

Columnar epithelium

Normal transformation zone

Abnormal: Acetowhite epithelium — Punctation

Mosaicism — Leukoplakia

Iodine negative — Atypical vessels

Suspect invasive cancer:

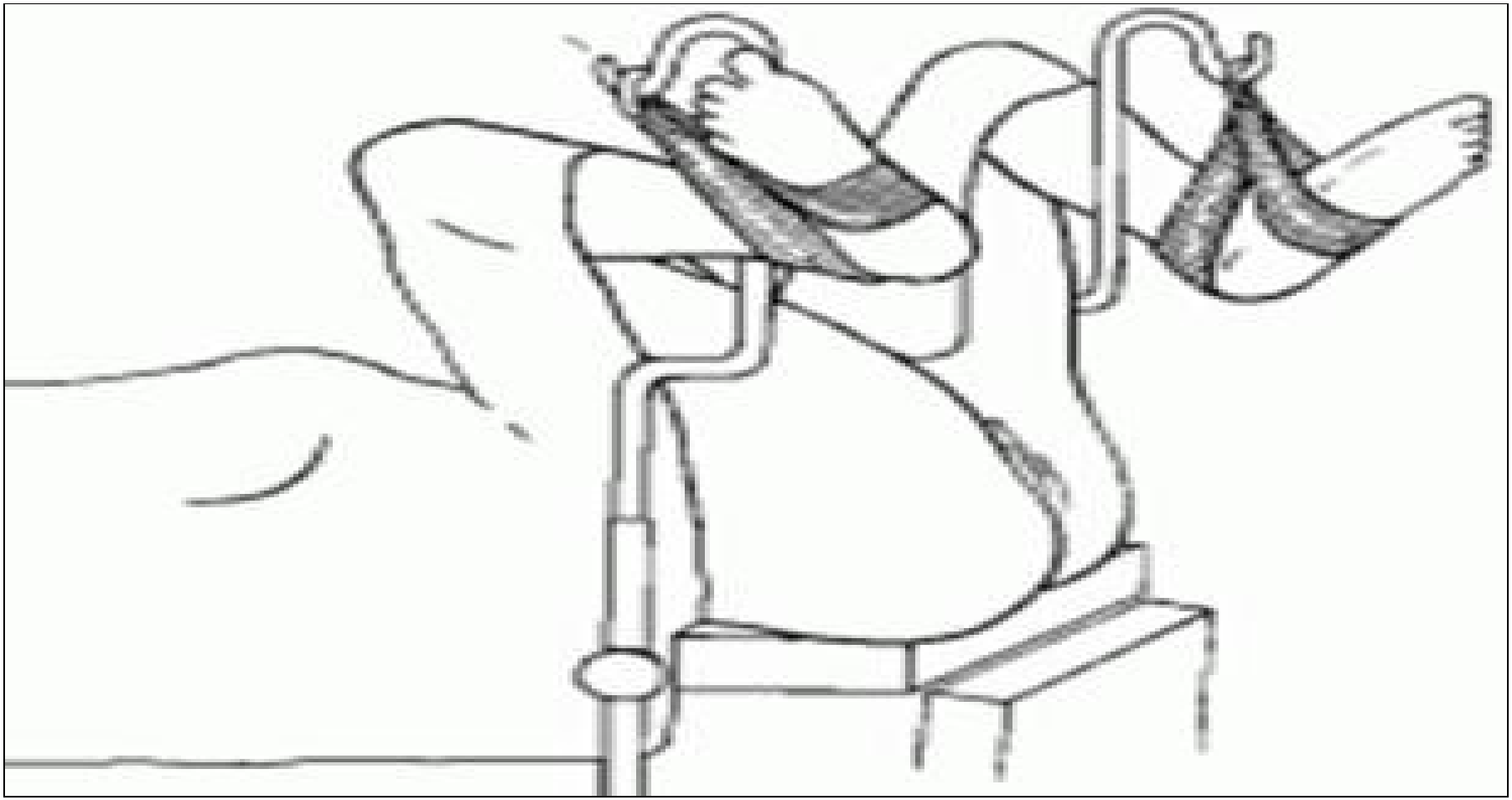
Unsatisfactory: SCJ not visible, severe inflam or atrophy, invisible cervix

Miscellaneous: Nonacetowhite micropapillary surface,

exophytic condyloma, inflammation, atrophy, ulcer

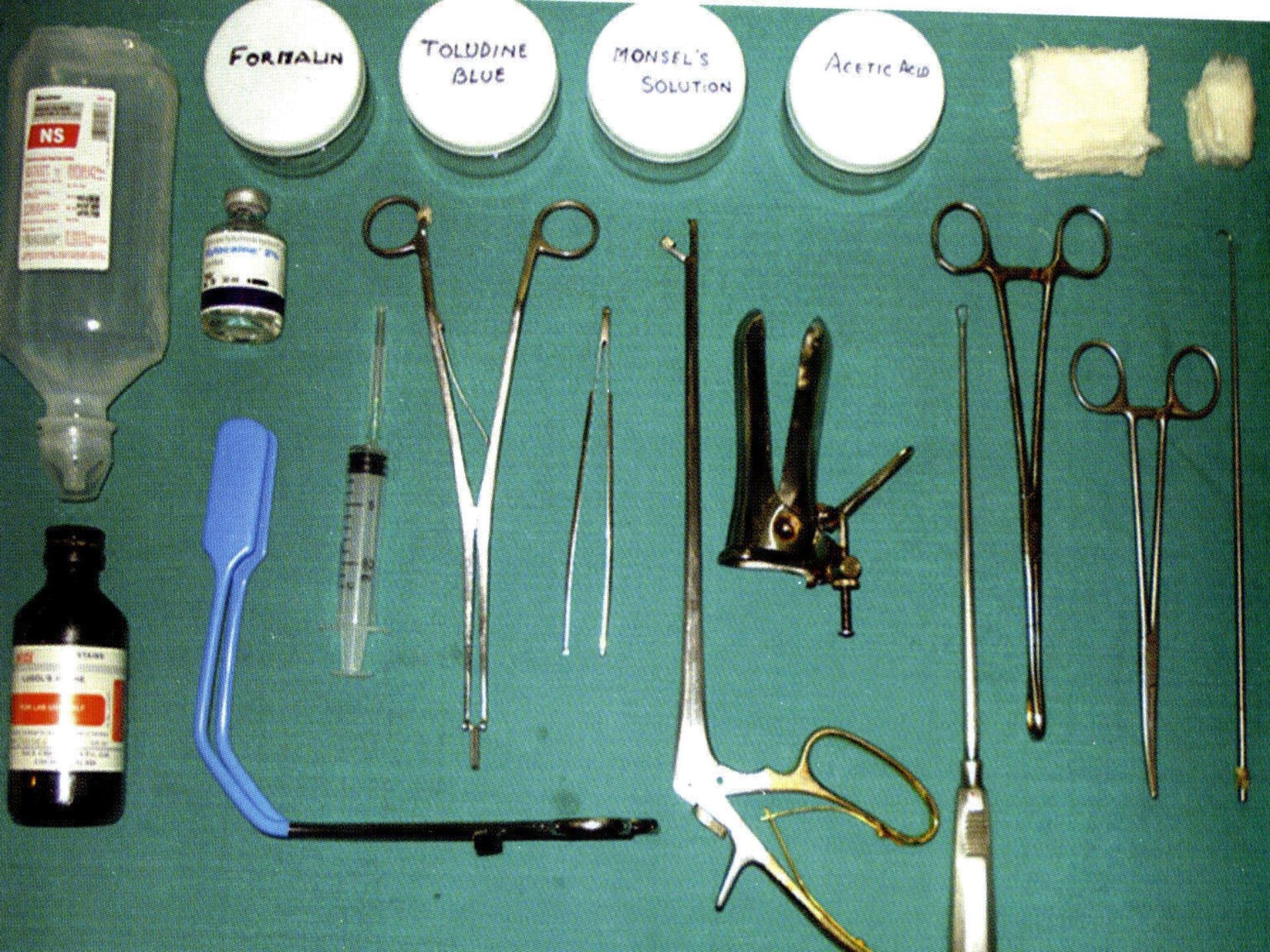
COLPOSCOPY PROCEDURE

PATIENT POSITION



Lithotomy Position

Consent Time

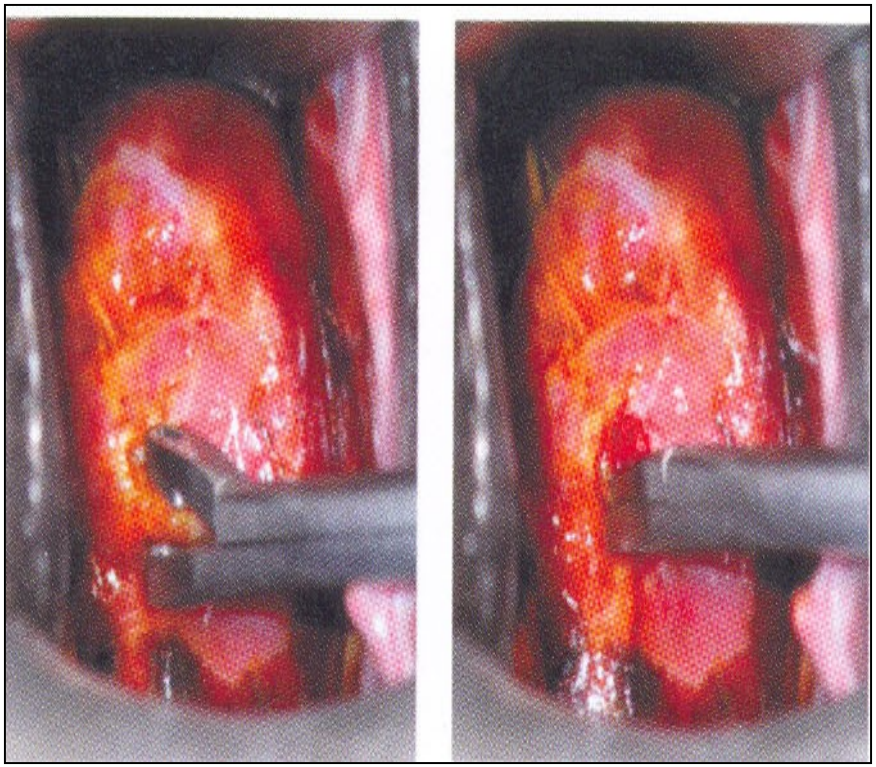

FORMALIN
TOLUDINE BLUE
MONSEL'S SOLUTION
ACETIC ACID
NS

STEPS FOR PERFORMING VIDEO COLPOSCOPY….

- Normal Inspection after cleaning with normal saline
- Inspection through Green filter
- Inspection after application of acetic acid
- Inspection after application of lugols Iodine
- Examination of Vagina
- Directed Biopsy.

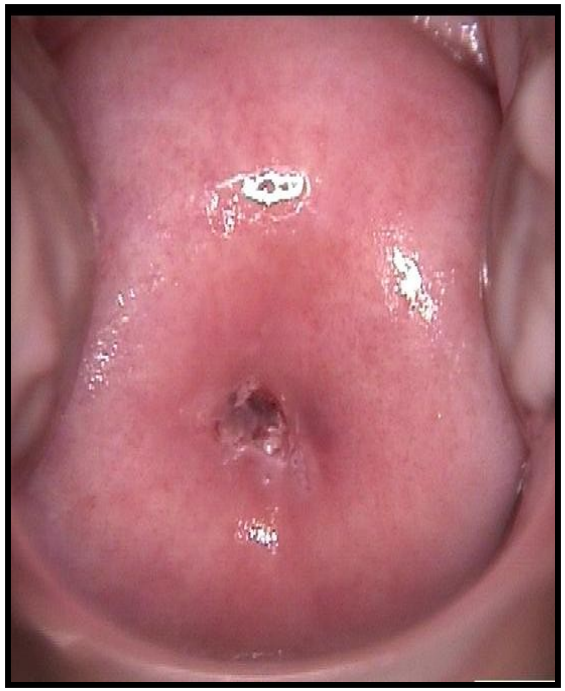
COLPOSCOPY DIRECTED

- **Biopsy forceps: Punch biopsy forcep is preferred**

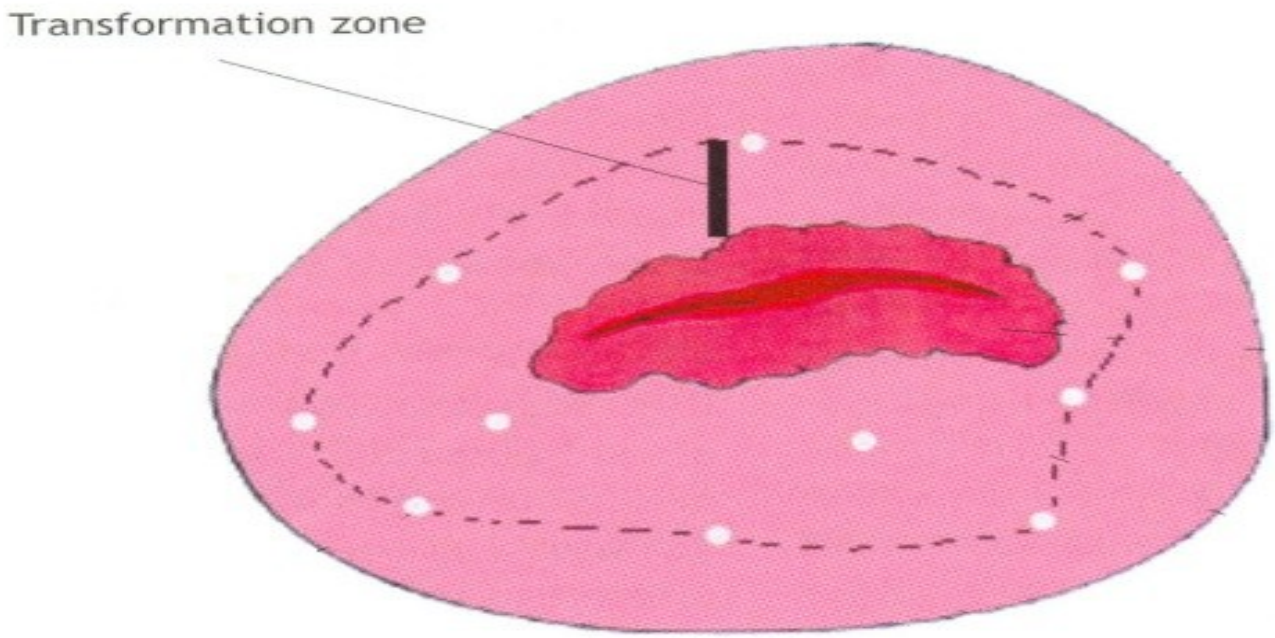


- **Tissue specimen is sent to Lab for testing further.**

NORMAL INSPECTION AFTER CLEANING WITH NORMAL SALINE….

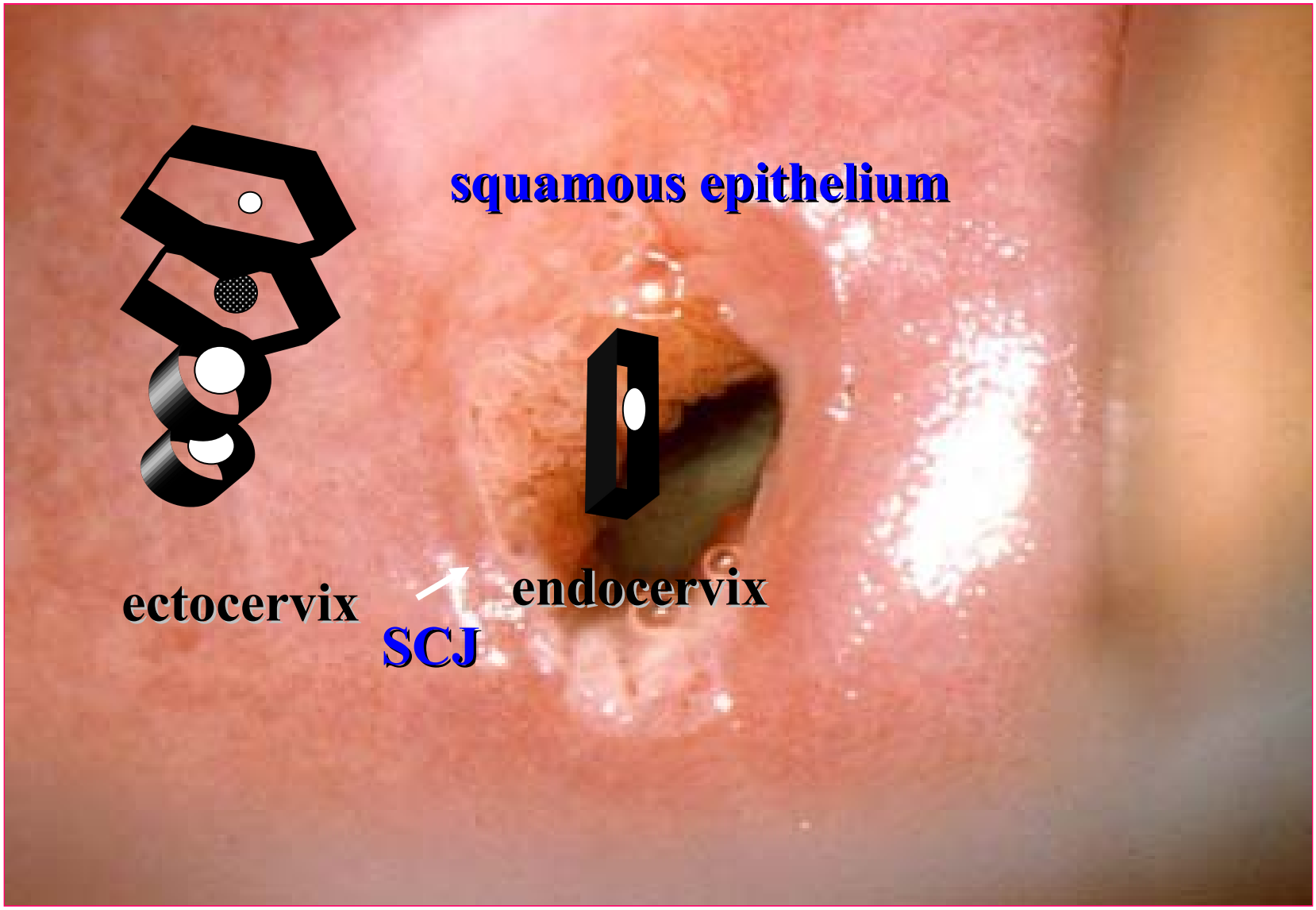


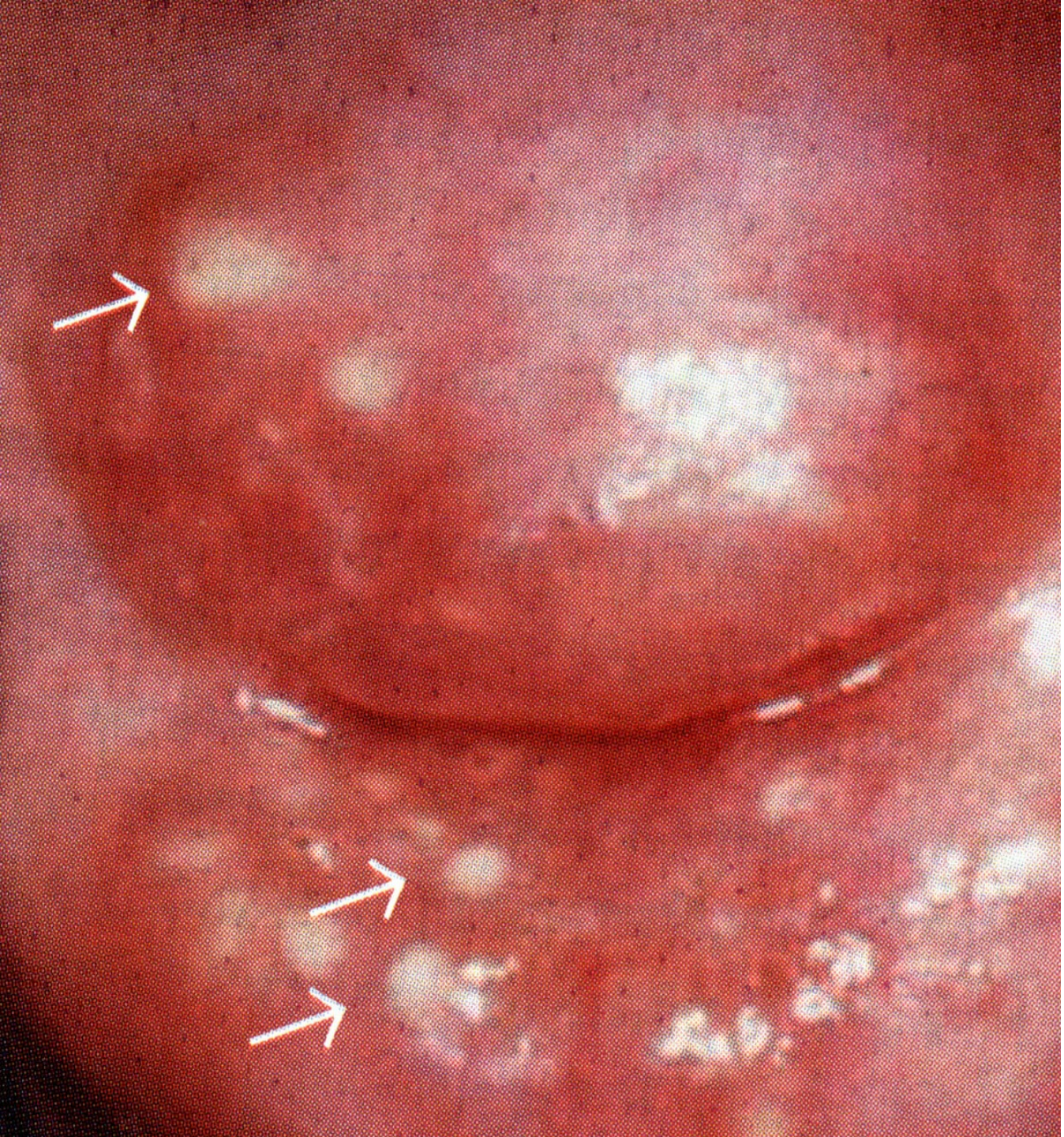
- **To make the tissues and vascular details more clear.**



TZ lies between the original squamo-columner junction and the new (or the present) squamo-columner junction. This is a **highly active zone of metaplastic tissues** in which the single layered columnar epithelium is transformed by metaplastic cellular divisions into multilayered squamous epithelium.

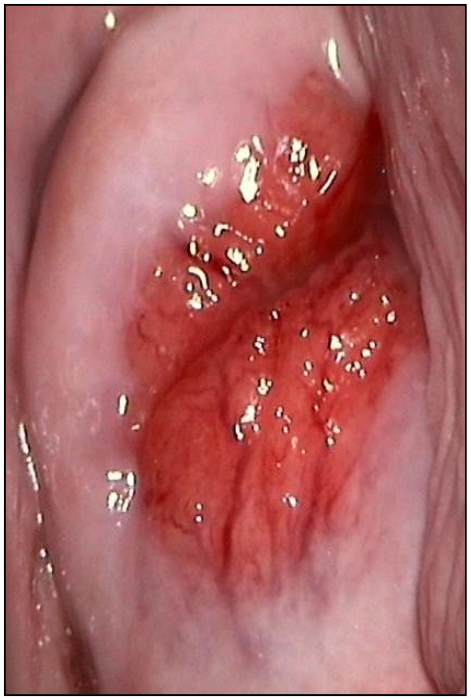
Understanding of “Transformation Zone”

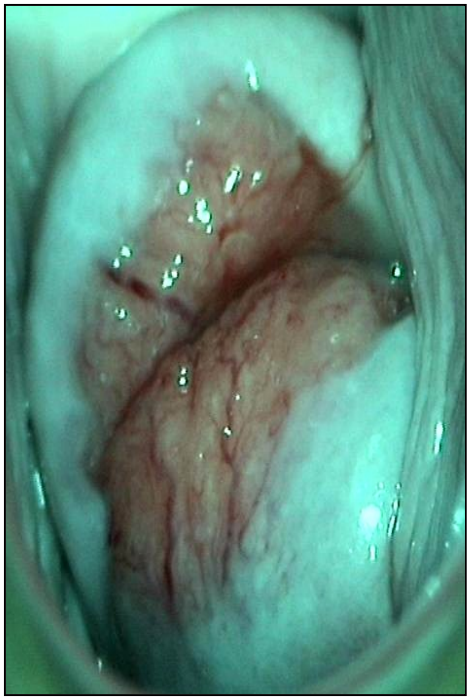




NYBOTHIAN FOLLICLE

VIEW WITH GREEN FILTER





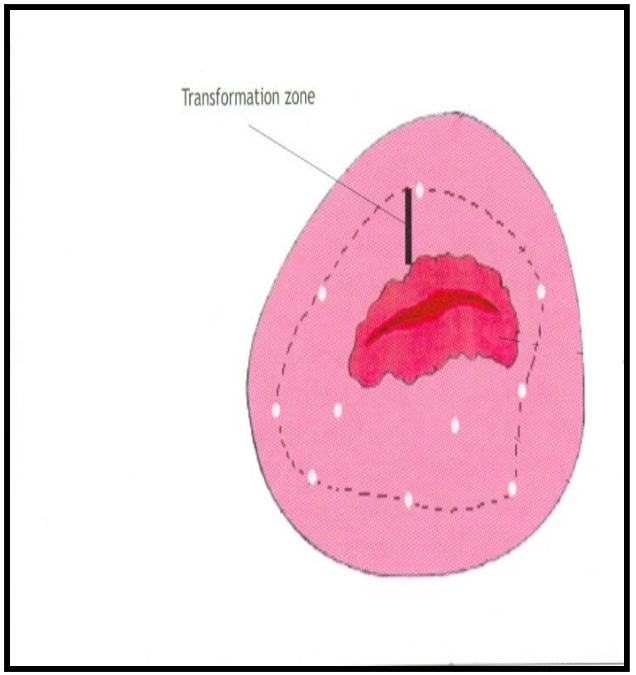
- For vascular pattern of cervix.
- This absorbs the red color and makes the appearance of blood vessels black
- Black blood vessels can be viewed clearly.

ACETIC ACID TEST

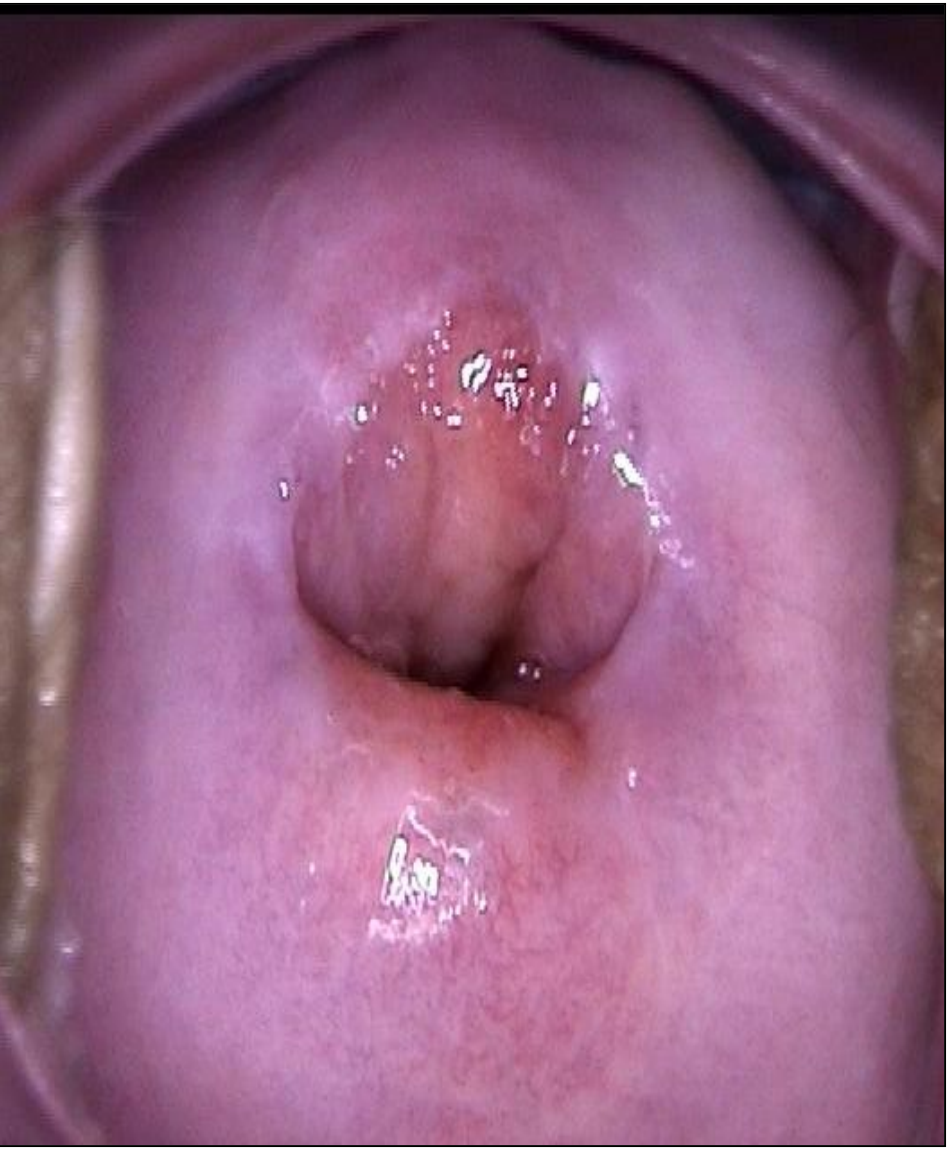
- **Coagulation of cell protein seen an interval of 1 mint.**
- **If white layer is very thick (opaque) that area becomes area of concern.**
- **The impact of acetic acid fades away normally in 1-3 mints, So repeated application is recommended for proper visualization of pathological lesions.**

Aceto white lesion

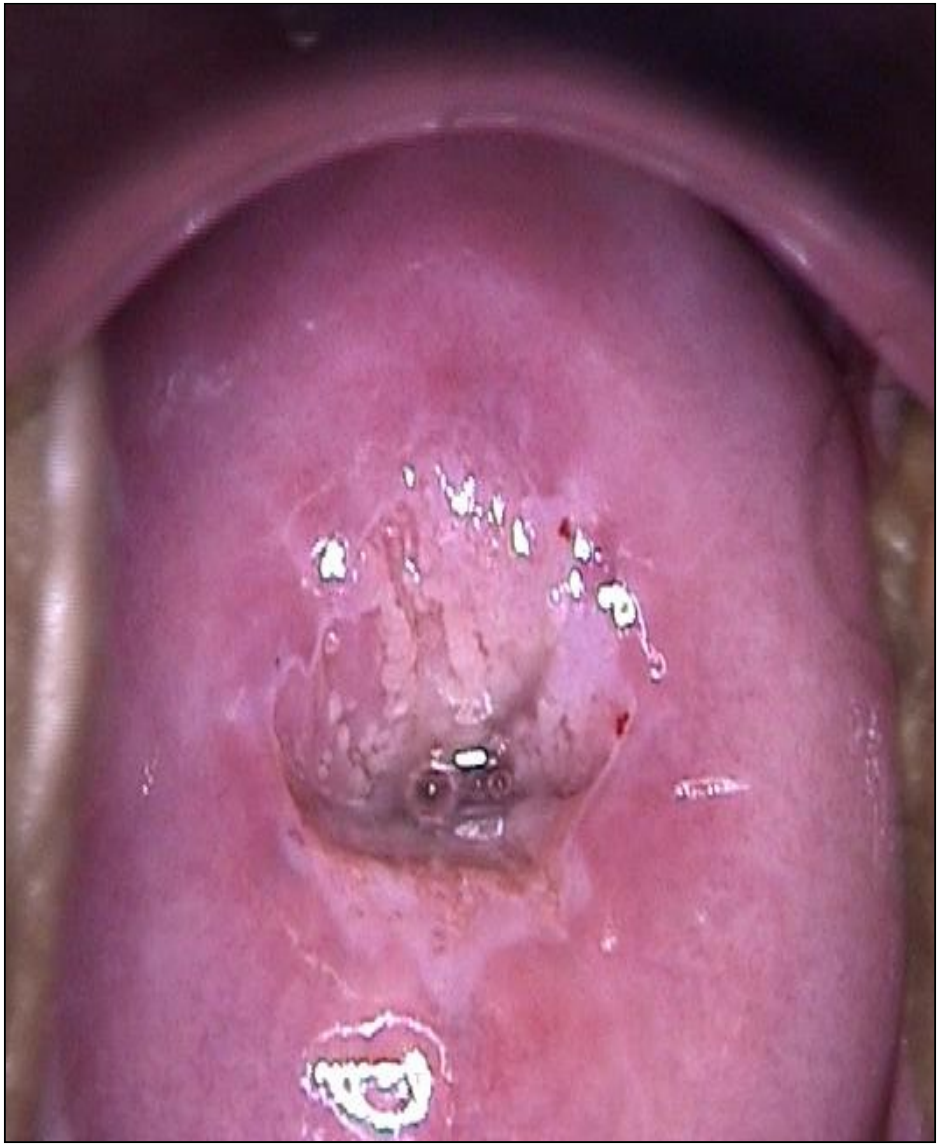
- **Intensity**
- **Duration of stay**
- **speed of Appearance**
- **speed of disappearance**
- **margins Relation to SCJ Inside TZ/ outside TZ**



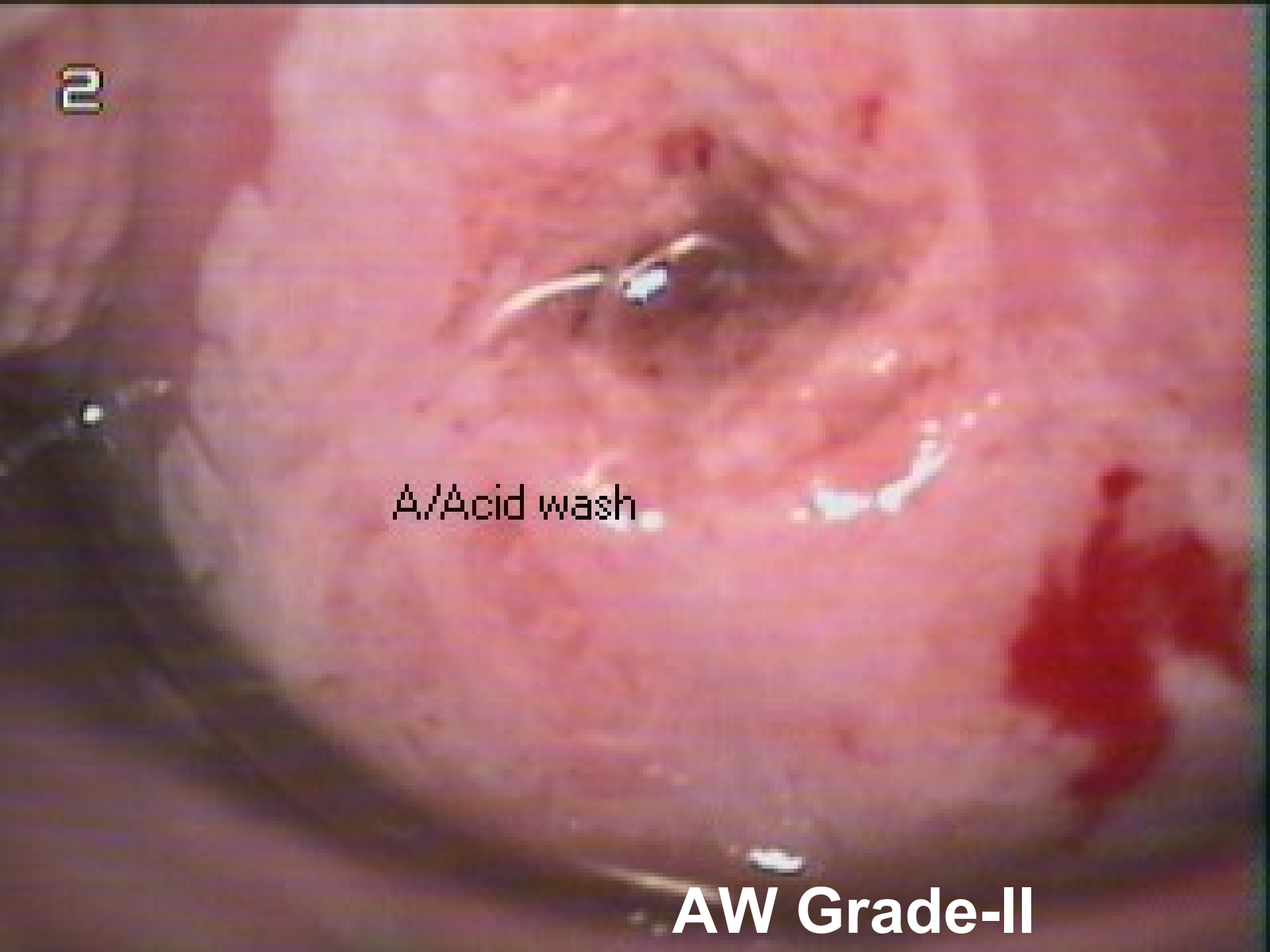
GRADE 1 AW



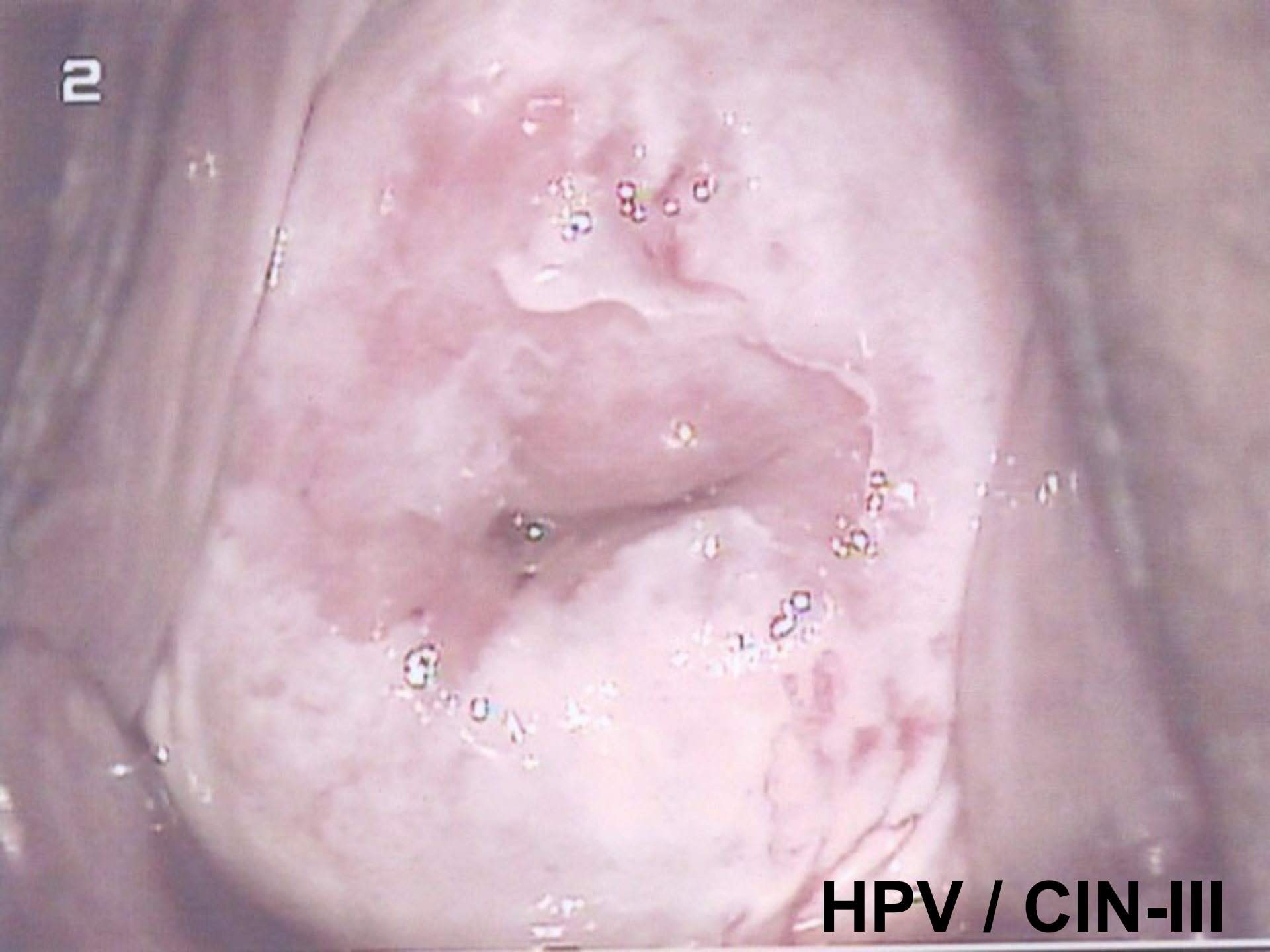
Before



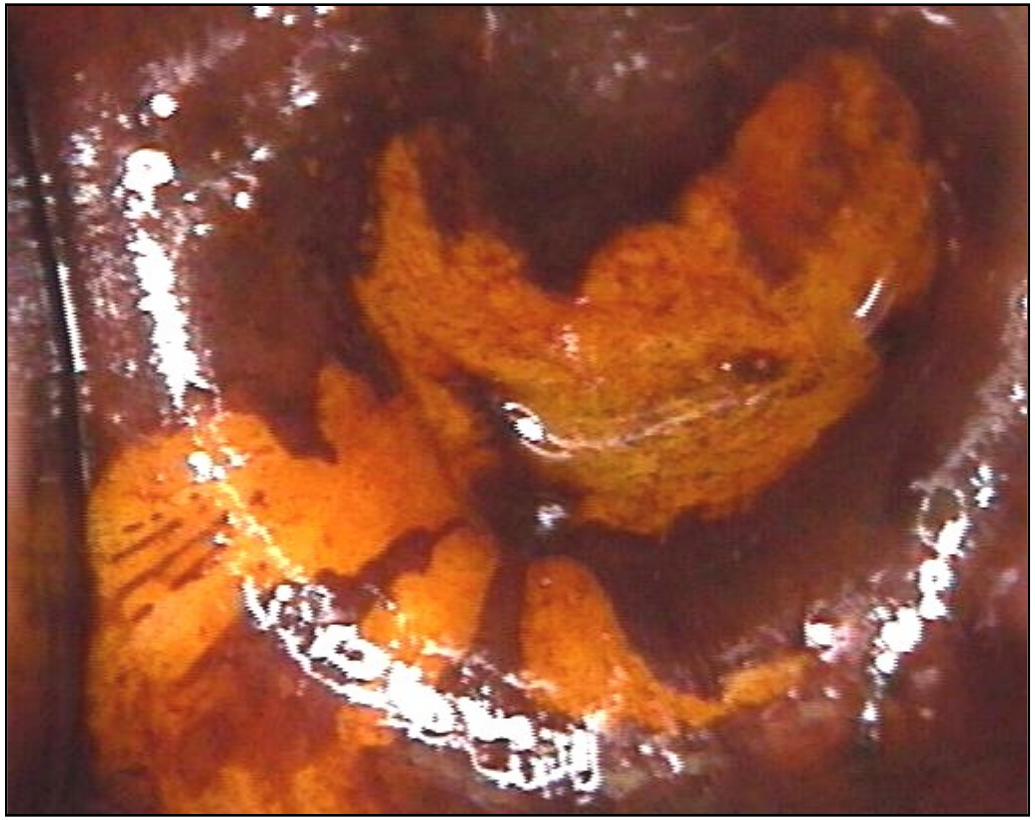
Snow White After AA



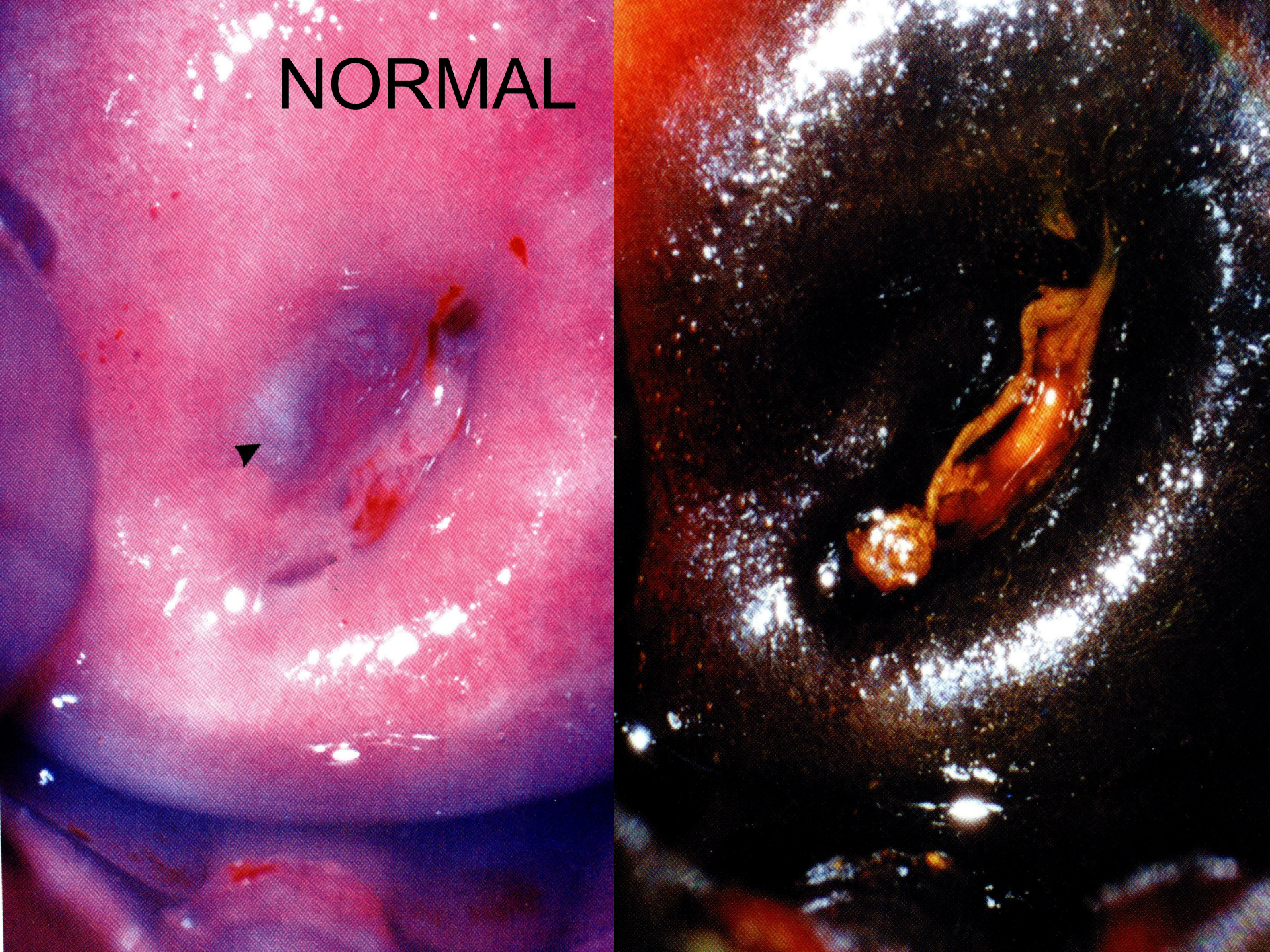
AW Grade-II


2
HPV / CIN-III

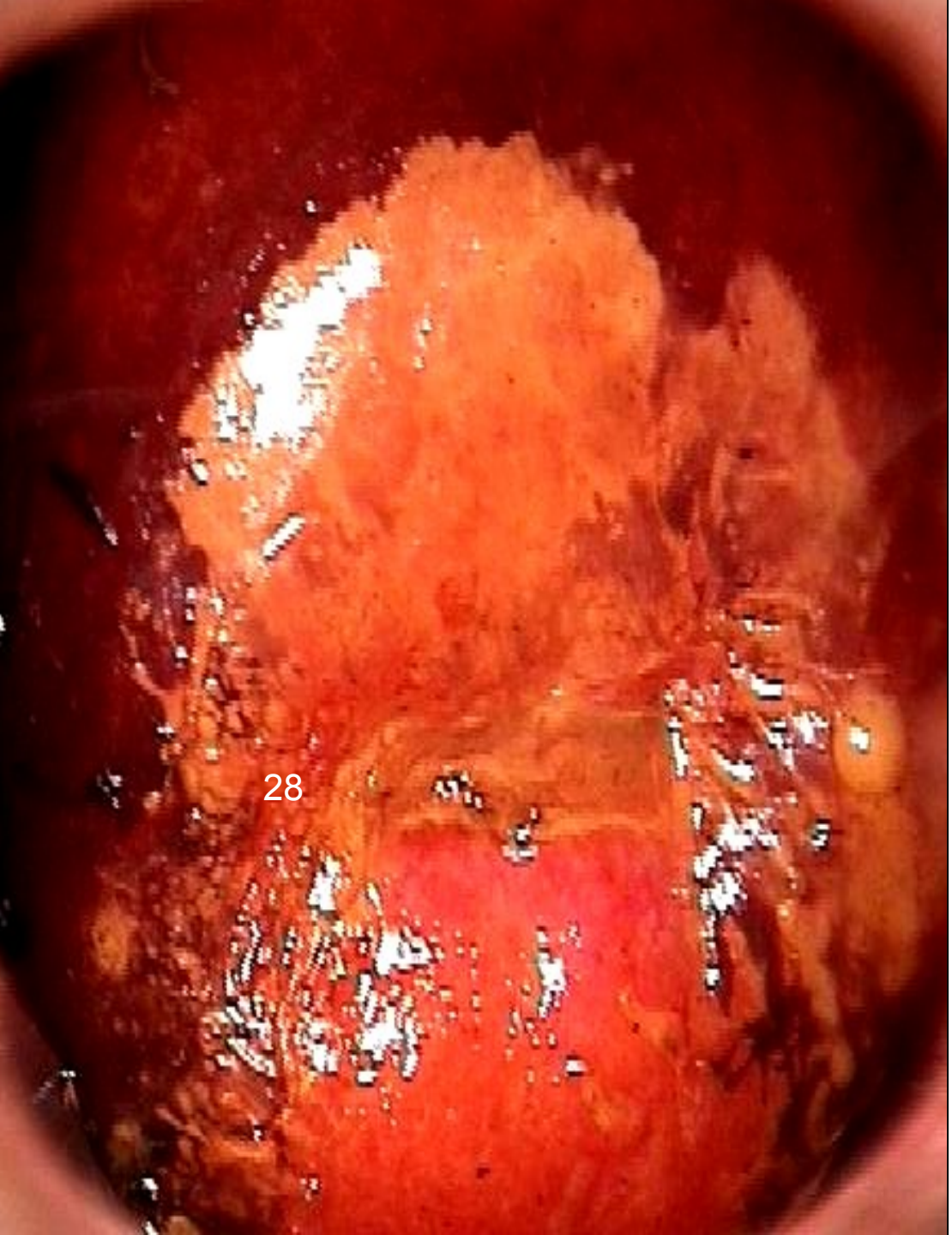
LUGOL'S IODINE TEST



- Rich glycogen area appears dark brown
- Areas which do not stain are considered iodine negative and needs attention.
- Iodine doesn't stain columnar, immature matalplastic, regenerating squamous epithelium after surgical trauma, intra epithelial neoplasia and invasive carcinoma.
- Staining is superficial and fades off in 8-10 mints.


NORMAL

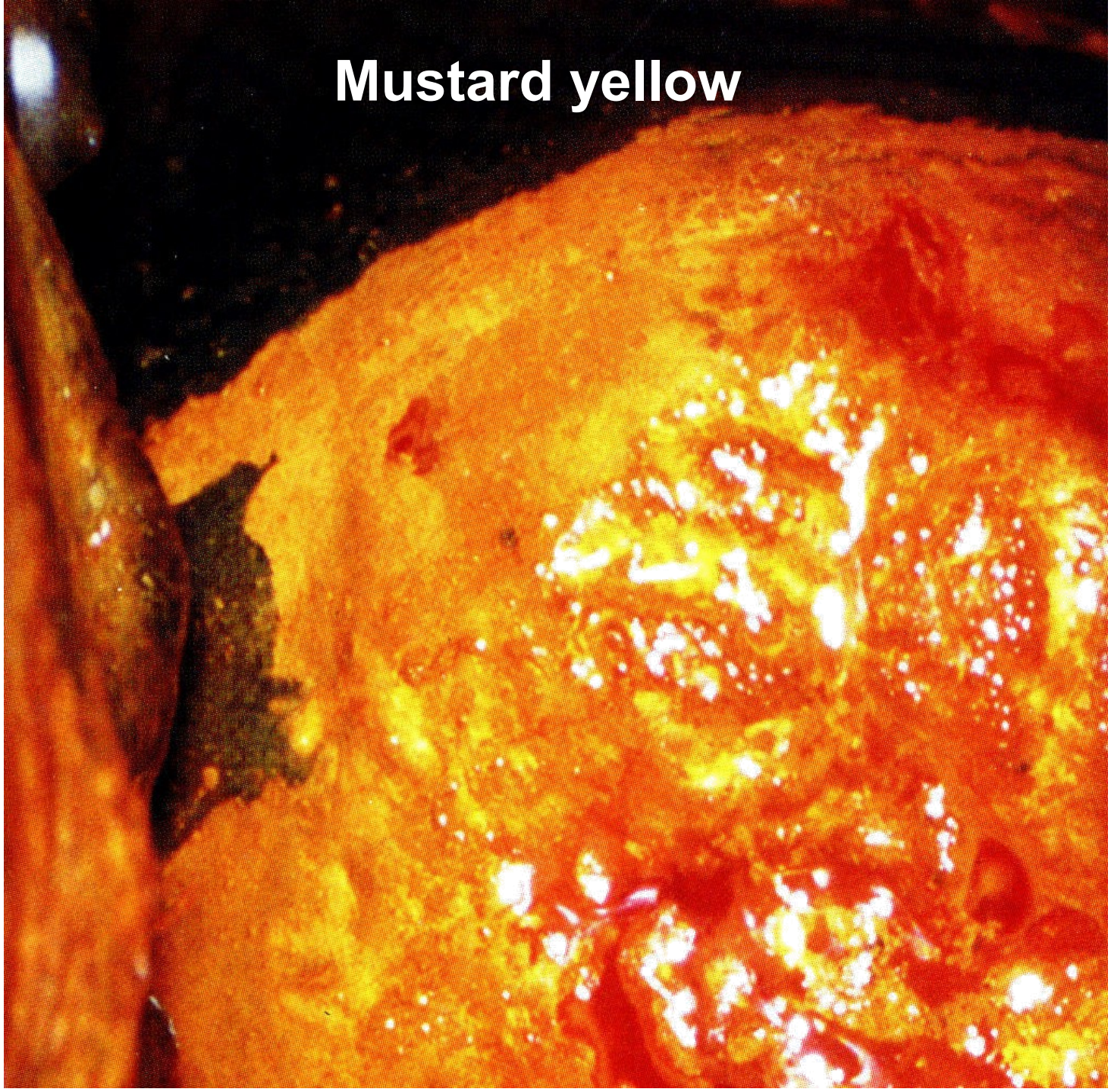
IODINE PARTIAL POSITIVITY



IODINE

NEGATIVITY

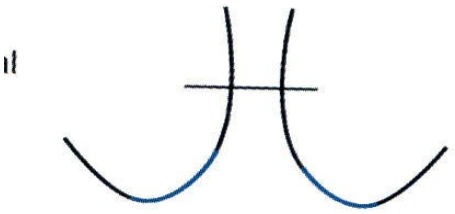
MAJOR CHANGES


Mustard yellow

TYPE I

- Completely ectocervical
- Fully visible
- Small or large

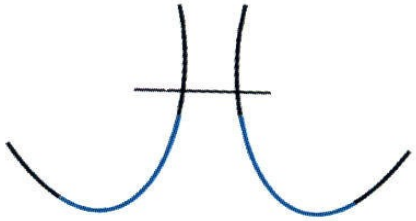
Transformation Zone Classification



TYPE II

- Has endocervical component
- Fully visible
- May have ectocervical which may be small or large

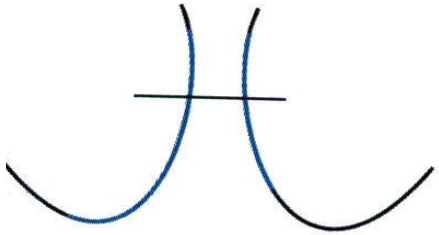
Transformation Zone Classification

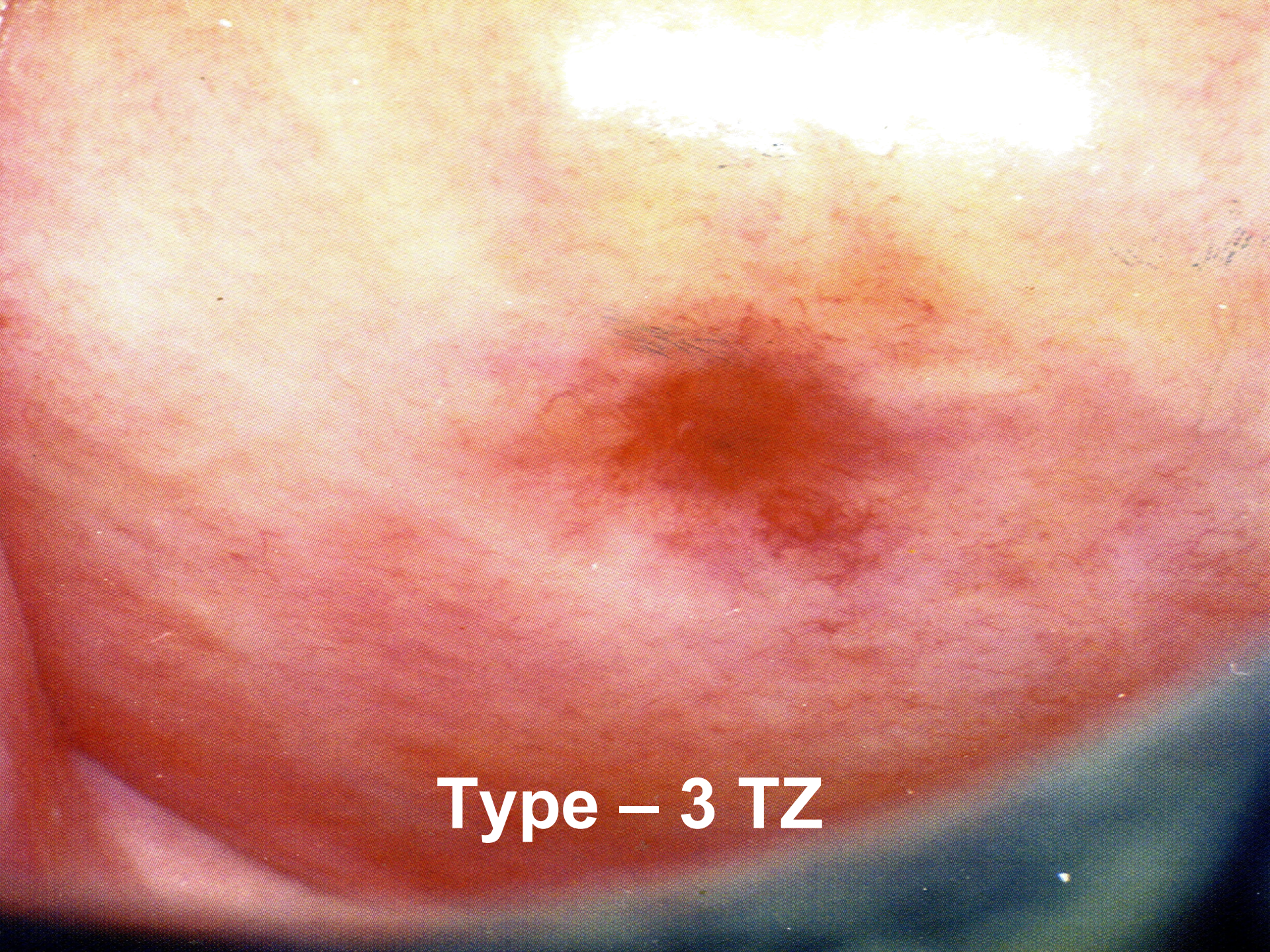


TYPE III

- Has endocervical component
- Is not fully visible
- May have ectocervical component which may be small or large

Transformation Zone Classification




Type – 3 TZ

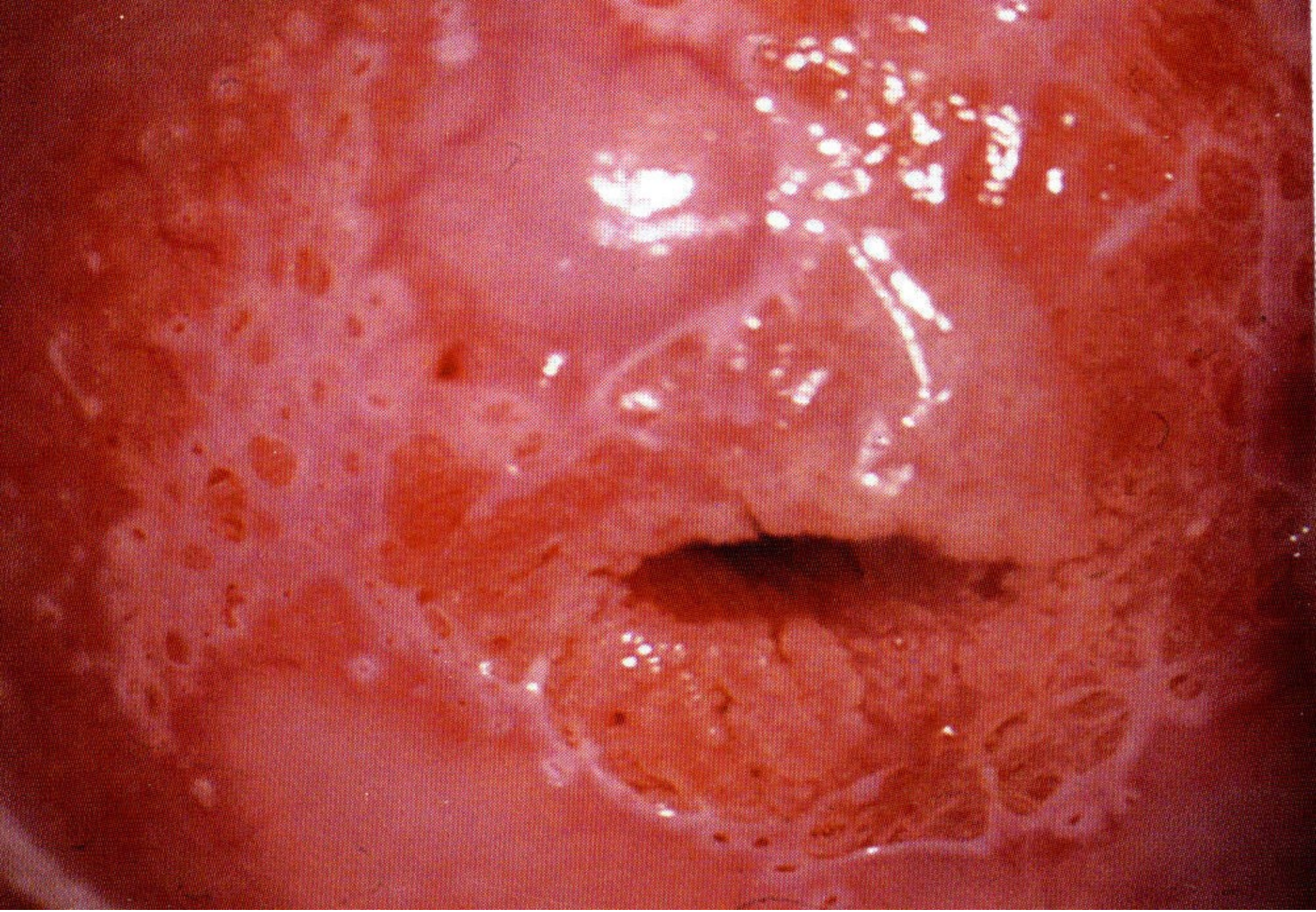
SQUAMOUS METAPLASIA & GLAND OPENING

IMMATURE METAPLASIA

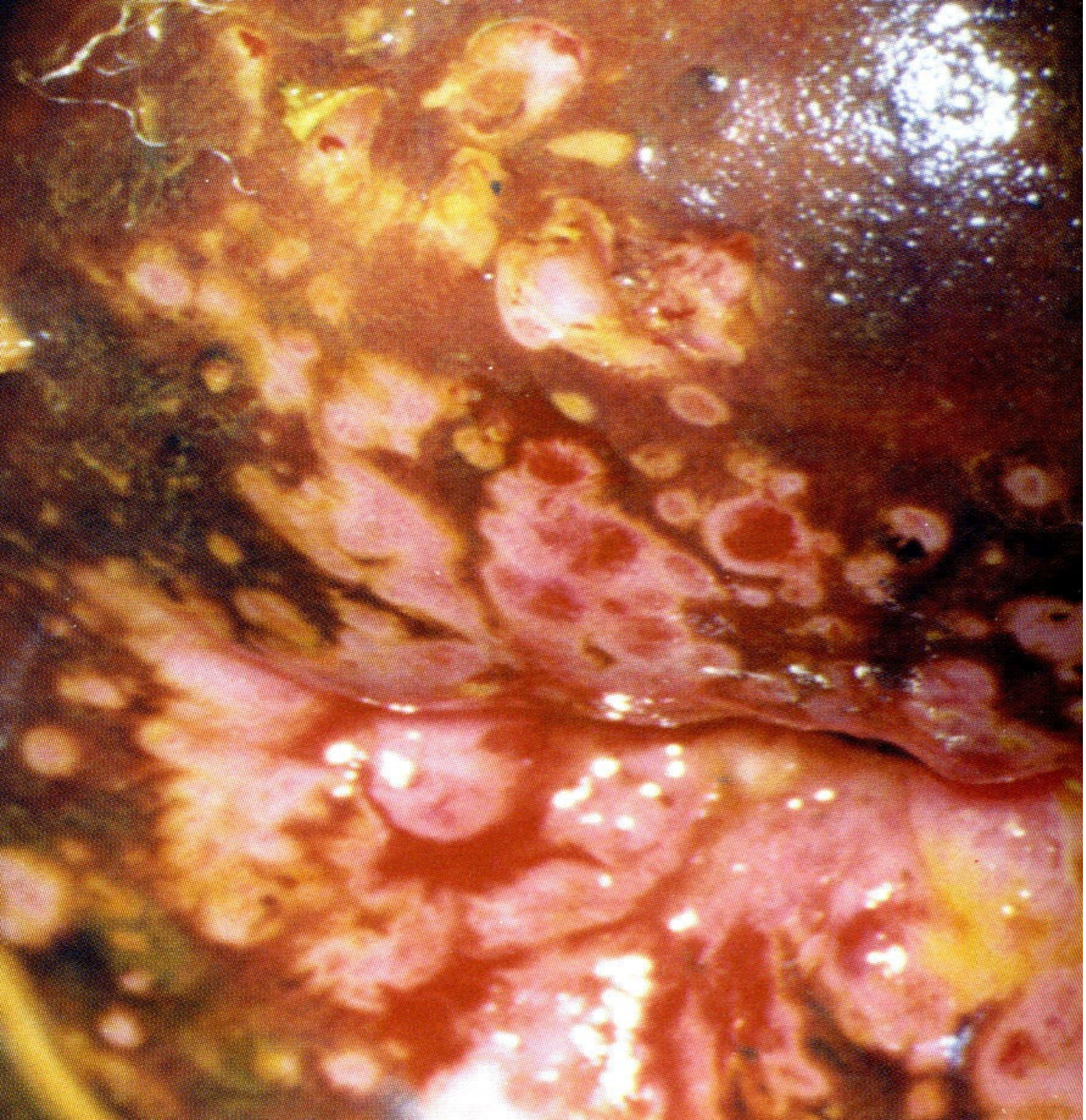
Step I = Loss of tranlucency,
Grape like configuration +

Step II = Loss of grape like
configuration

Step III = villus pattern is lossed



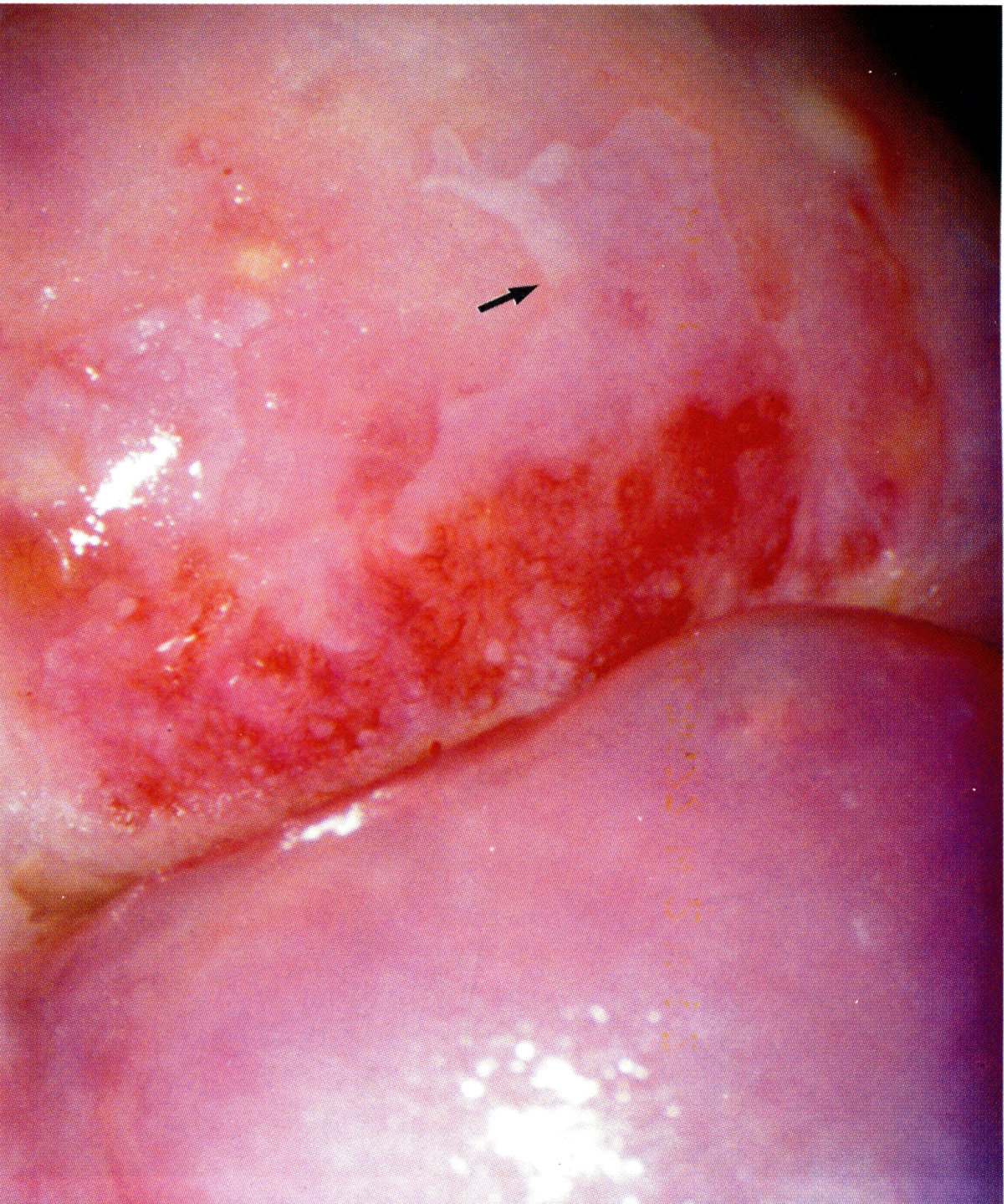
METAPLASIA /GLAND OPENINGS



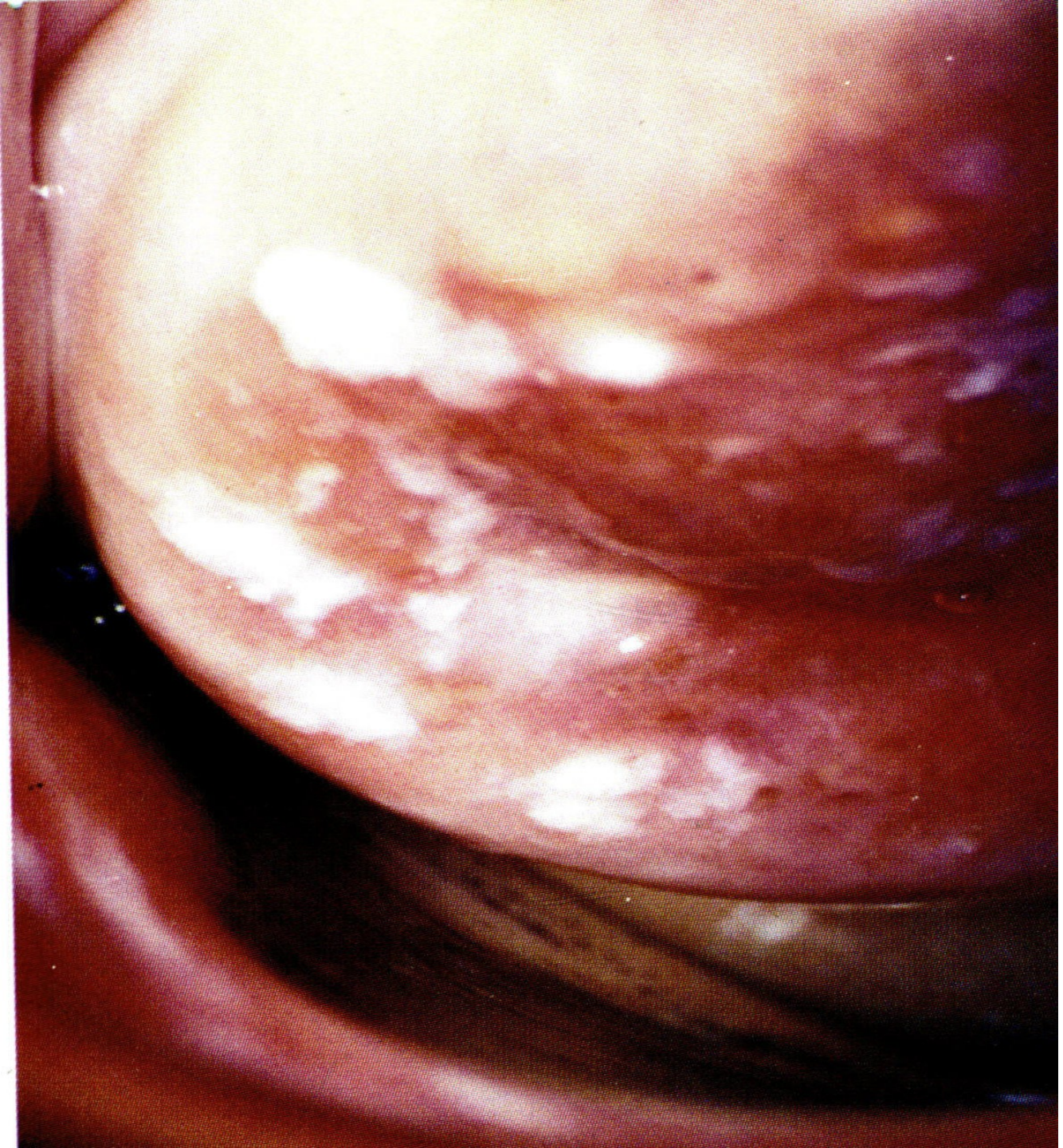
NORMAL TZ

CUFFED GLAND OPENING

IODINE NEGATIVE



Fine keratosis



KERATOSIS
CANCER

Pitfalls in practical of colposcopy

A. IN THE TECHNIQUE

1. Failure to use a diagnostic Protocol
2. Deviation from a diagnostic protocol
3. Failure to visulaise TZ

B. IN THE DIAGNOSIS

1 Misinterpretation of exagereted patter of pregnancy , previous treated cervix, cervical cancer.

2. Failure to select appropriate biopsy sites, enough biopsy, sufficient volume of tissue.

3 .Failure to accurate record colposcopy findings

pitfalls in practical of colposcopy

C IN MANAGEMENT

1. **Miscommunication with the pathologist**
2. **Failure to correlate cytology, Colposcopy & histopathology**
3. **Destructive therapy without biopsy, for invasive of glandular lesions.**

D IN COLPOSCOPIST

1. **Inadequate Training & experience**
2. **Inadequate understanding of the disease**
3. **Failure to keep up with scientific developments**
4. **Failure to maintain skills**
5. **Failure to seek consultation**

Training is must before doctor does Colposcopy

It would be a legal document that would

safeguard the public & raise the status of the colposcopist

Colposcopy

Workshop

A PRACTICAL APPROACH

PART II

ASSESMENT & INTERPRETATION OF ABNORMAL & MISCELLANEOUS COLPOSCOPIC FINDINGS OF THE CERVIX

Chief Moderator : Dr. Sharda Jain (DGF)
Co Moderator : Dr. Veena Singh (Ex DGPT

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