

Colposcopy: the procedure

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*Improving Lives Through the Prevention & Treatment
of Anogenital & HPV-Related Diseases*

Courses
Comprehensive Colposcopy

Disclosures

- Edward J. Mayeaux, MD – Faculty – No Disclosures
- Please see www.asccp.org/CompOnlineCME for full program disclosures

Images used with permission:

- Apgar B, Brotzman G, Spitzer M. Integrated Colposcopy: A Text and Atlas. Elsevier; 2002, 2008. (ABS)
- Ferris D, Cox T, O'Connor D, Wright C. Modern Colposcopy. Wolters Kluwer, ASCCP; 2002
- Personal collections as noted on slides



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Objectives

- Define visualization of the cervix and Squamocolumnar Junction (SCJ) as fully visualized or not fully visualized
- Review steps to applying solutions on cervix
- Describe how to perform biopsy and ECC
- Review the history and theory behind the colposcopic examination and application of a contrast agent (acetic acid)

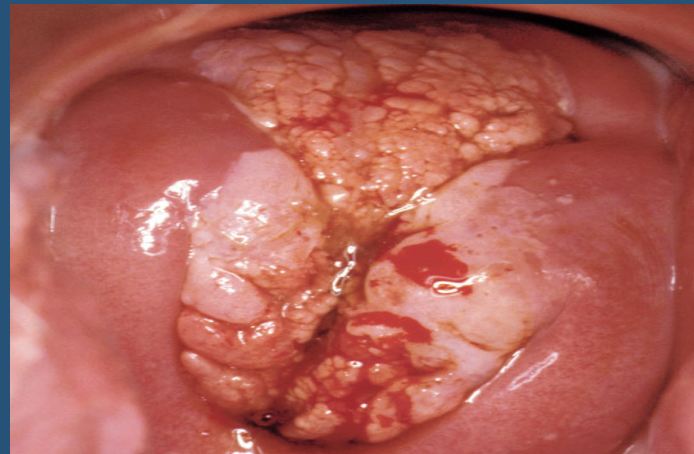
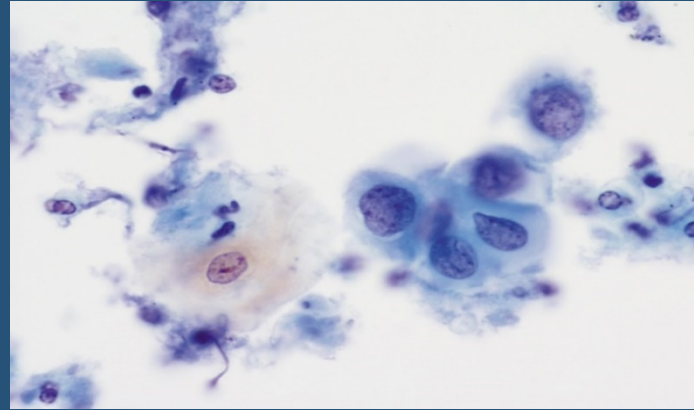
What is colposcopy?

Real time magnified and illuminated visualization of the uterine cervix and upper vagina, specifically the transformation zone

- 1 - Rule out invasive cancer
- 2 - Identify tissue for biopsy
“colposcopic-directed biopsy”

Indications for colposcopy

- Abnormal or inconclusive screening tests
- Symptoms or signs of cervical cancer
- Follow-up of prior pathologic abnormality
- Presence of a lesion



Apgar, Brotzman, Spitzer

Things to know

- If the colposcopic examination of the cervix and SCJ is fully visualized or not fully visualized
- Normal and abnormal colposcopic findings
- How to most effectively biopsy the colposcopic findings

Contraindications and precautions

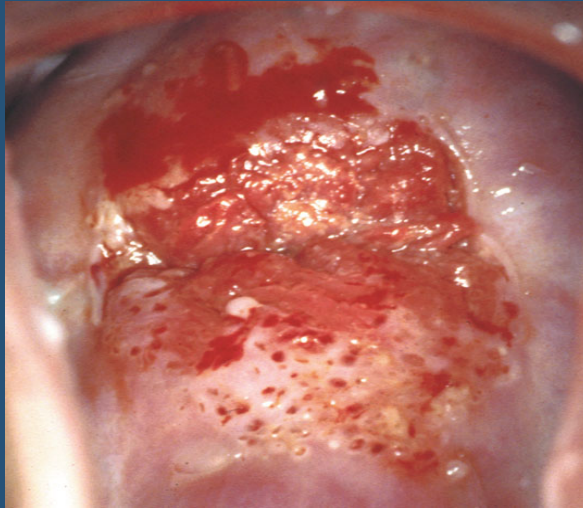
- No absolute contraindications to colposcopy
- No ECC in pregnancy
- Treat infections prior to colposcopy
- Colposcopy can be performed during menses if flow is light and patient agrees

Prepare patient for colposcopy

- No douching or intravaginal medications for 24 hours prior to procedure
- Explain procedure: speculum, vinegar, biopsy
- Informed consent signed
- Patient education information
 - Brochures (ACOG), plain paper (CDC, ASCCP)
- Pregnancy test, if indicated

Objectives of colposcopy

Visualize vulva, cervix, upper vagina, and perianal area



Apgar, Brotzman, Spitzer

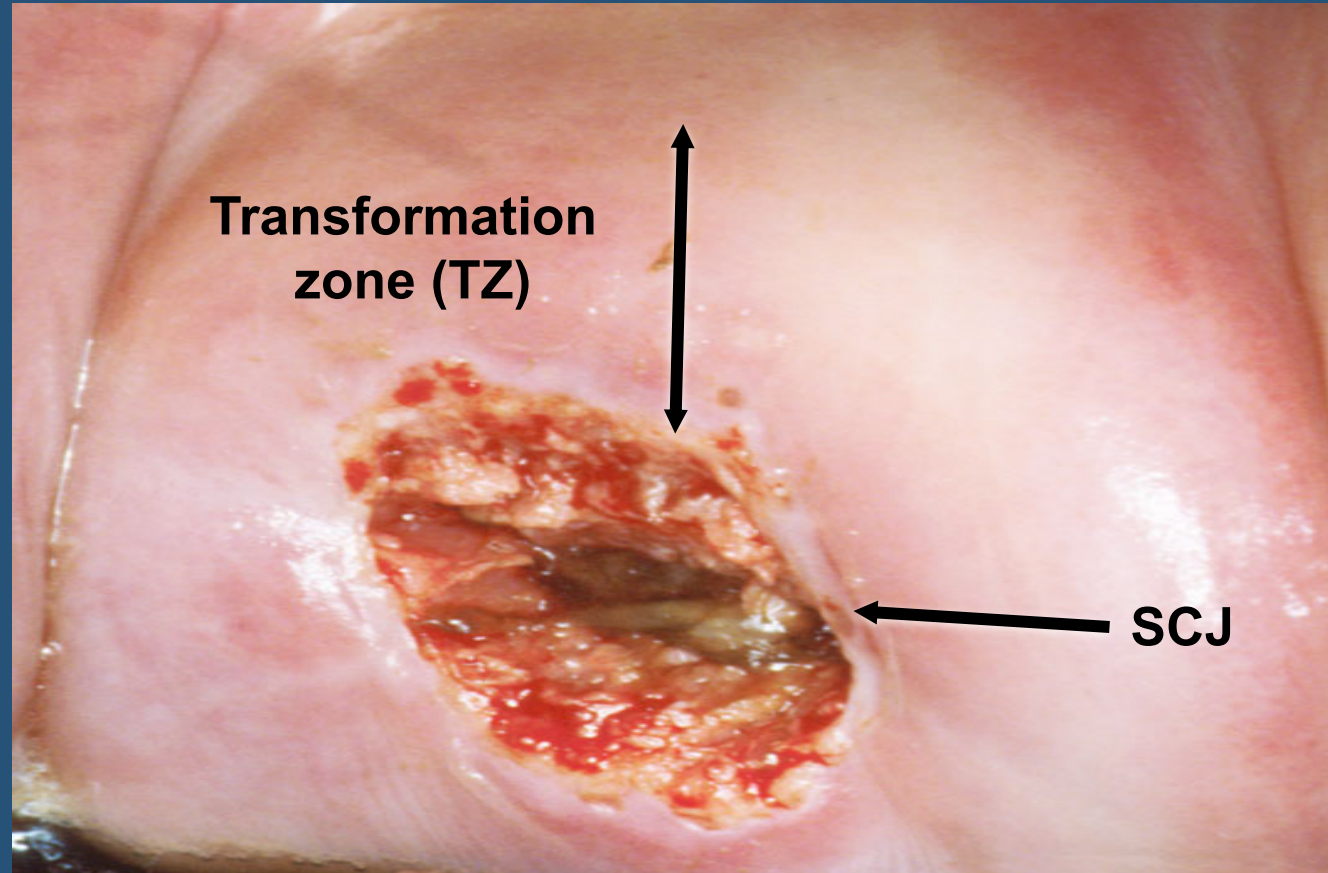


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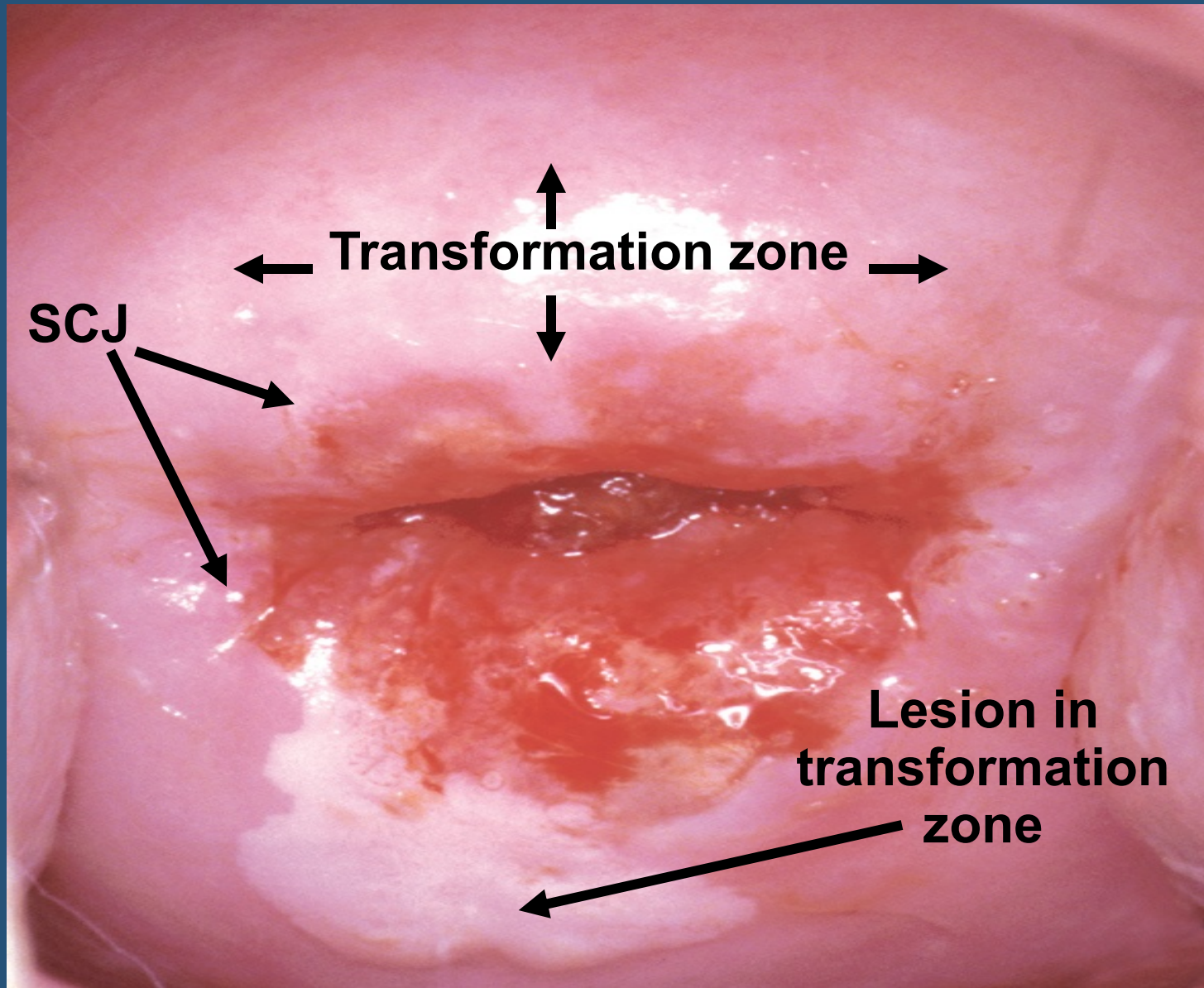
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Objectives of colposcopy

Identify the SCJ (fully visualized/not fully visualized)



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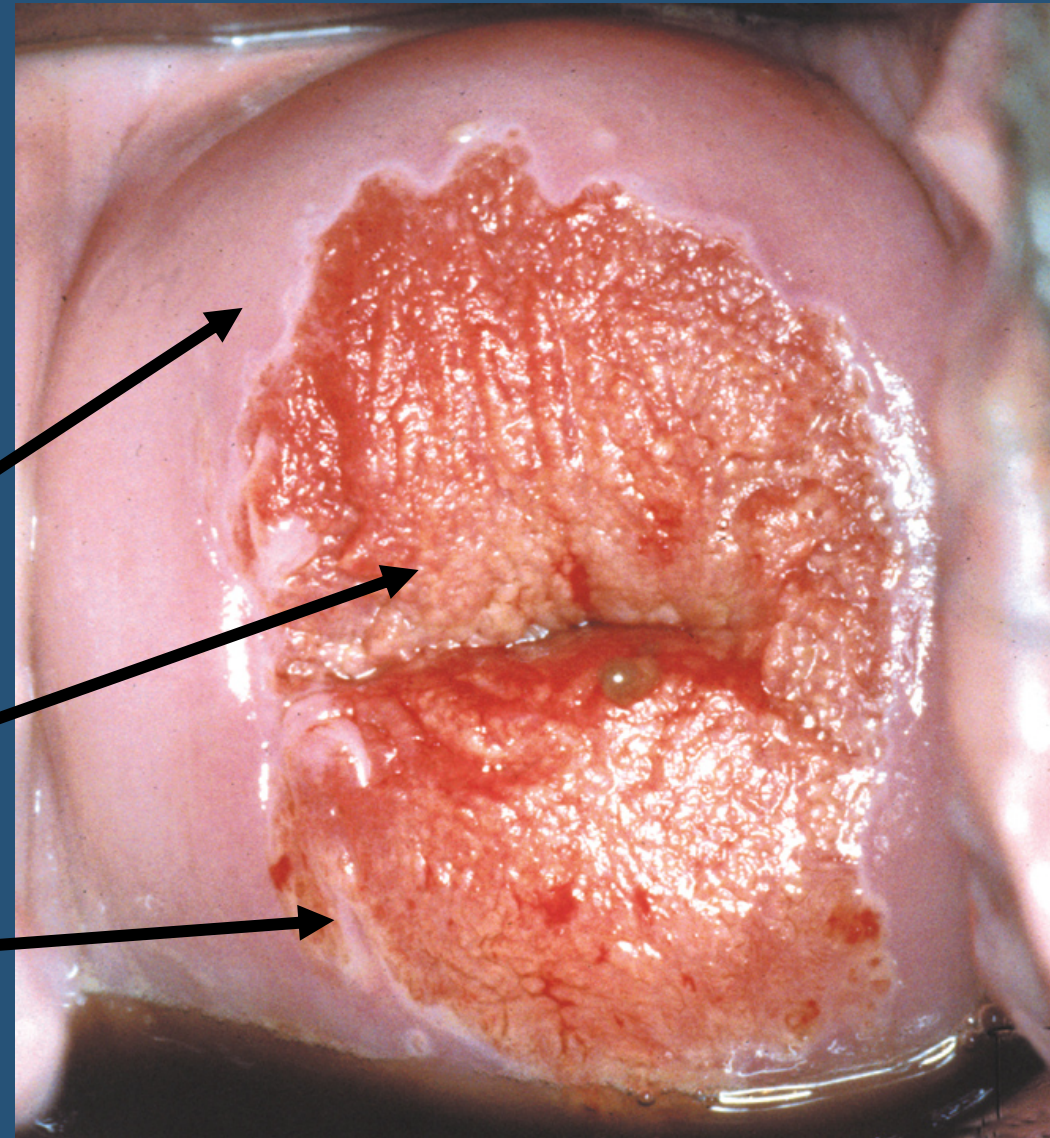
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18-year-old

Squamous epithelium

Columnar epithelium

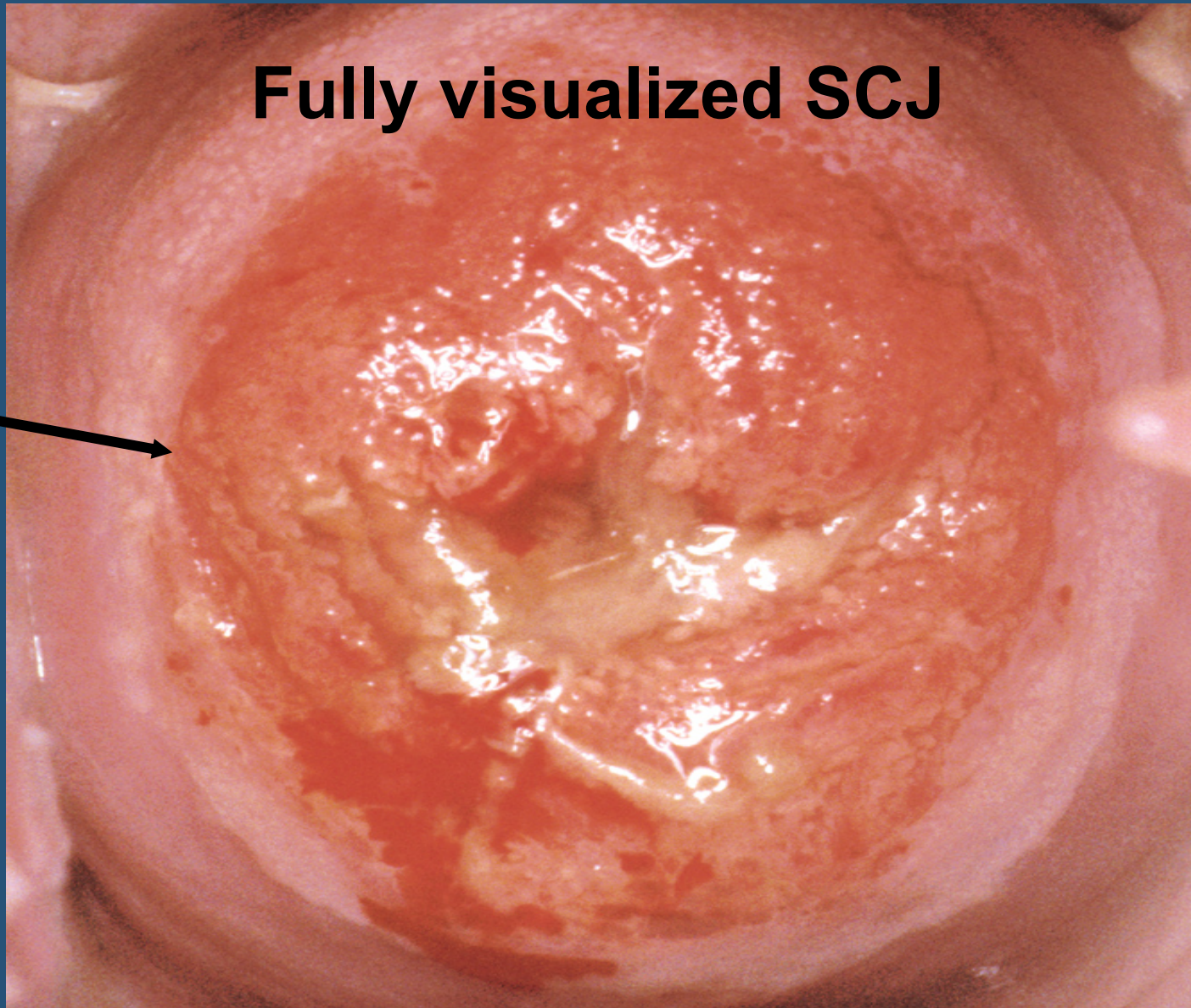
SCJ



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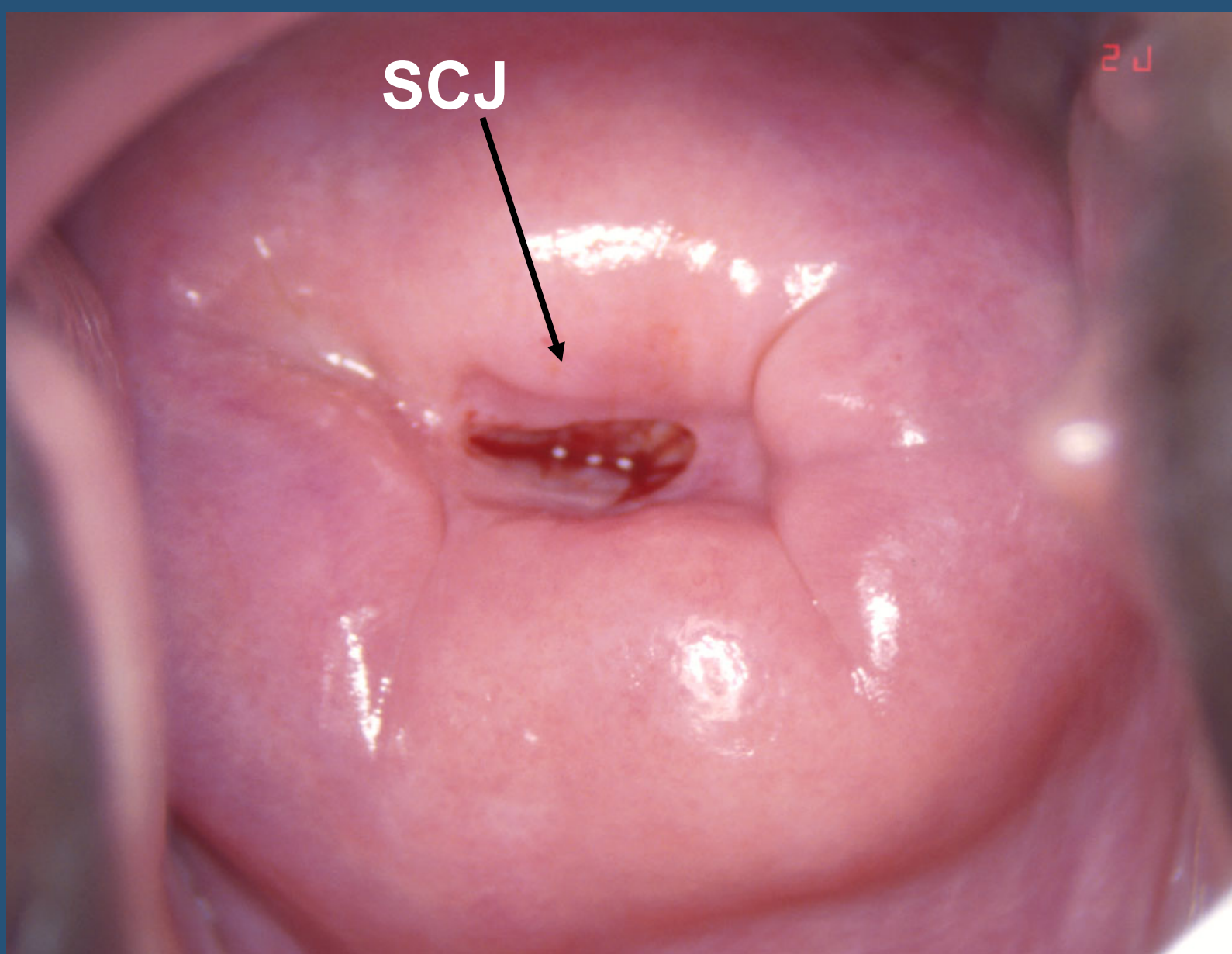
Fully visualized SCJ

SCJ



Apgar, Brotzman, Spitzer

**35-year-old
with previous
conization for
HSIL (CIN 3)**



Not fully visualized

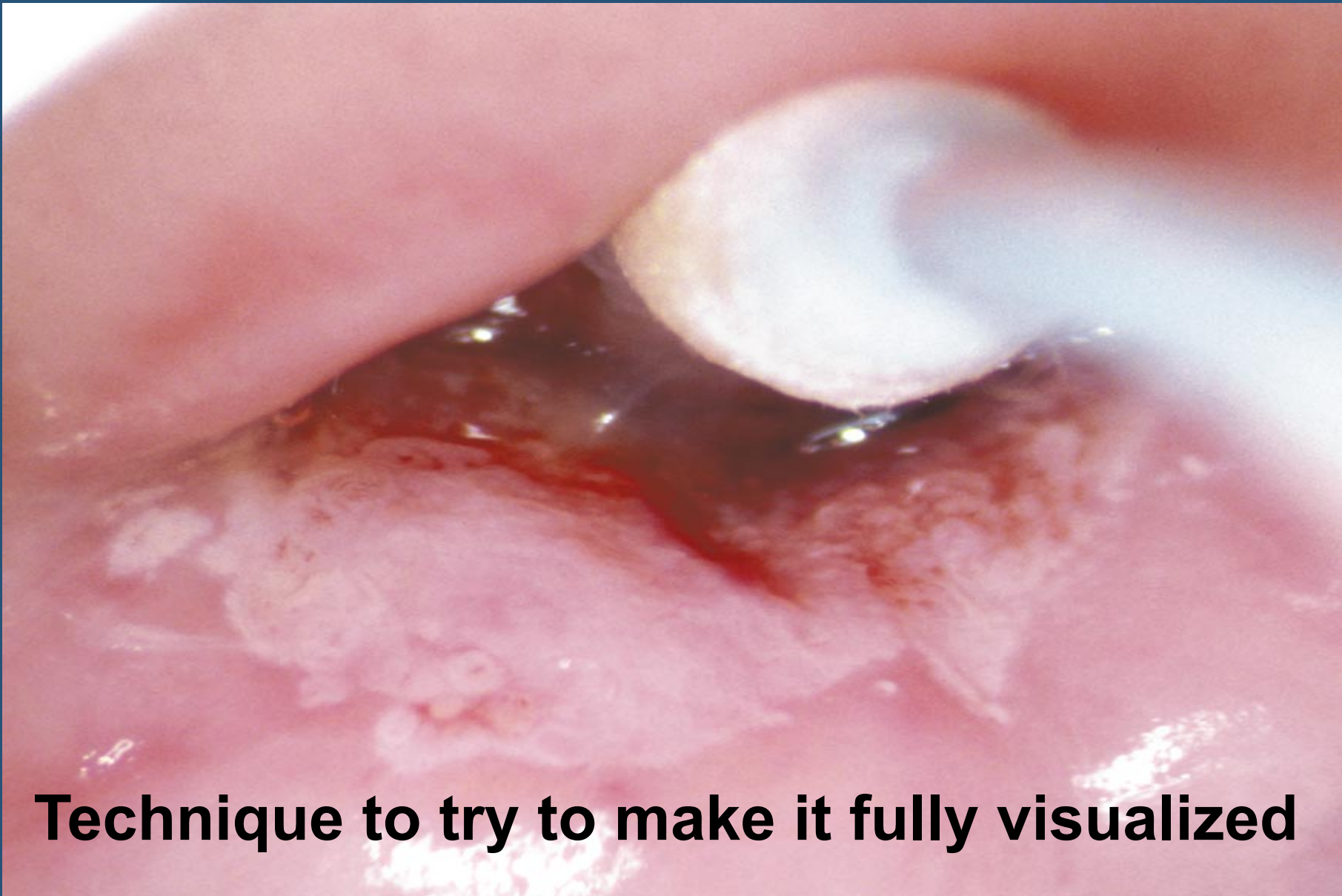


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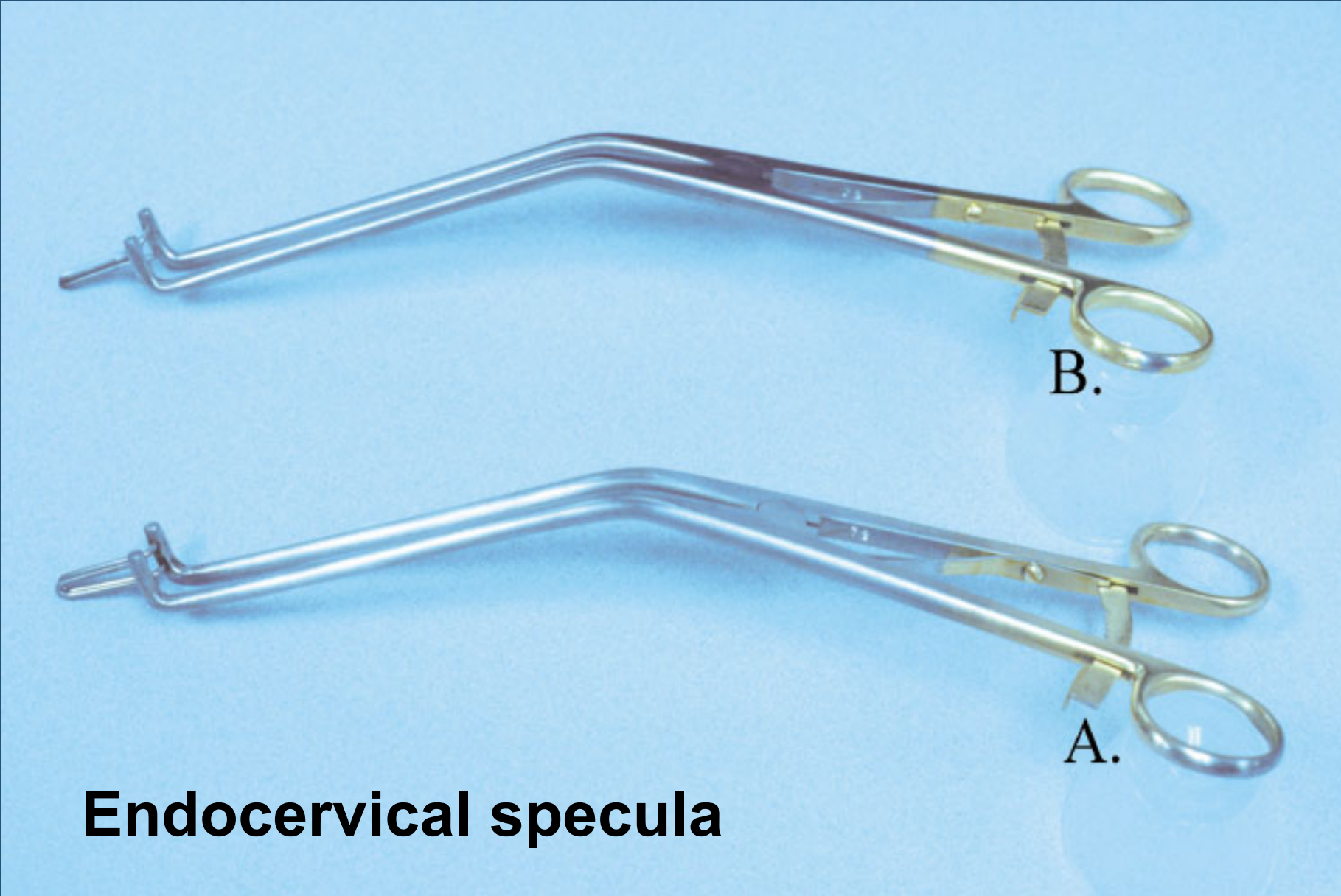
Technique to try to make it fully visualized

Apgar, Brotzman, Spitzer



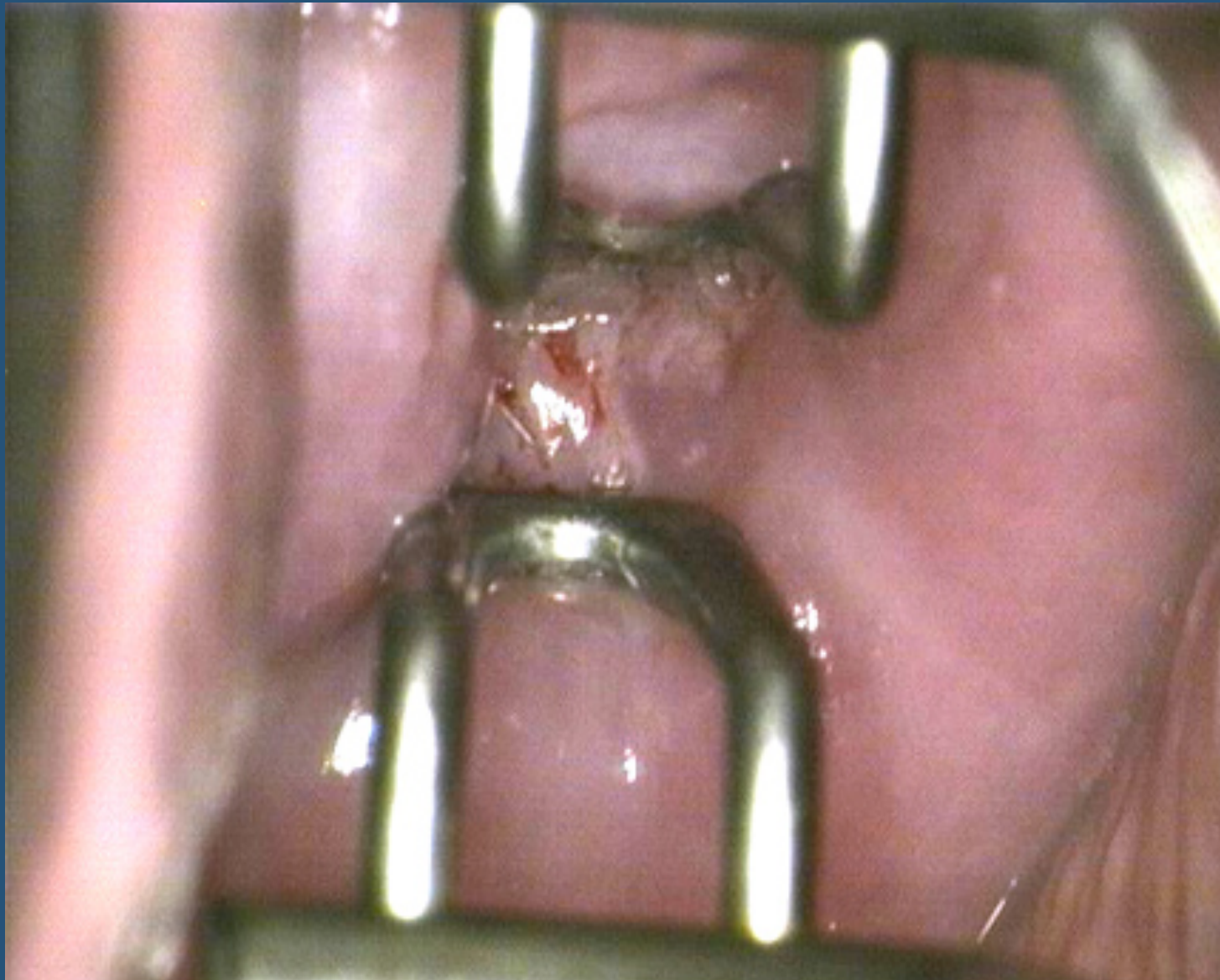
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Endocervical specula

B. Apgar, MD



Apgar, Brotzman, Spitzer



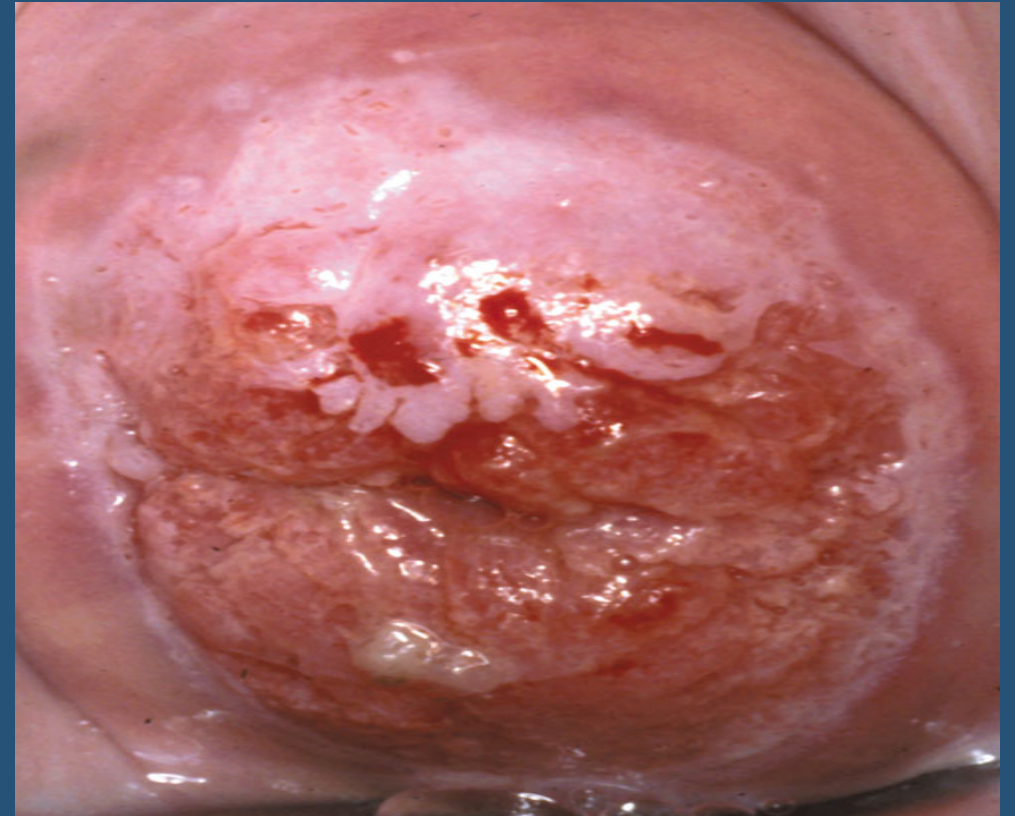
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Objectives of colposcopy

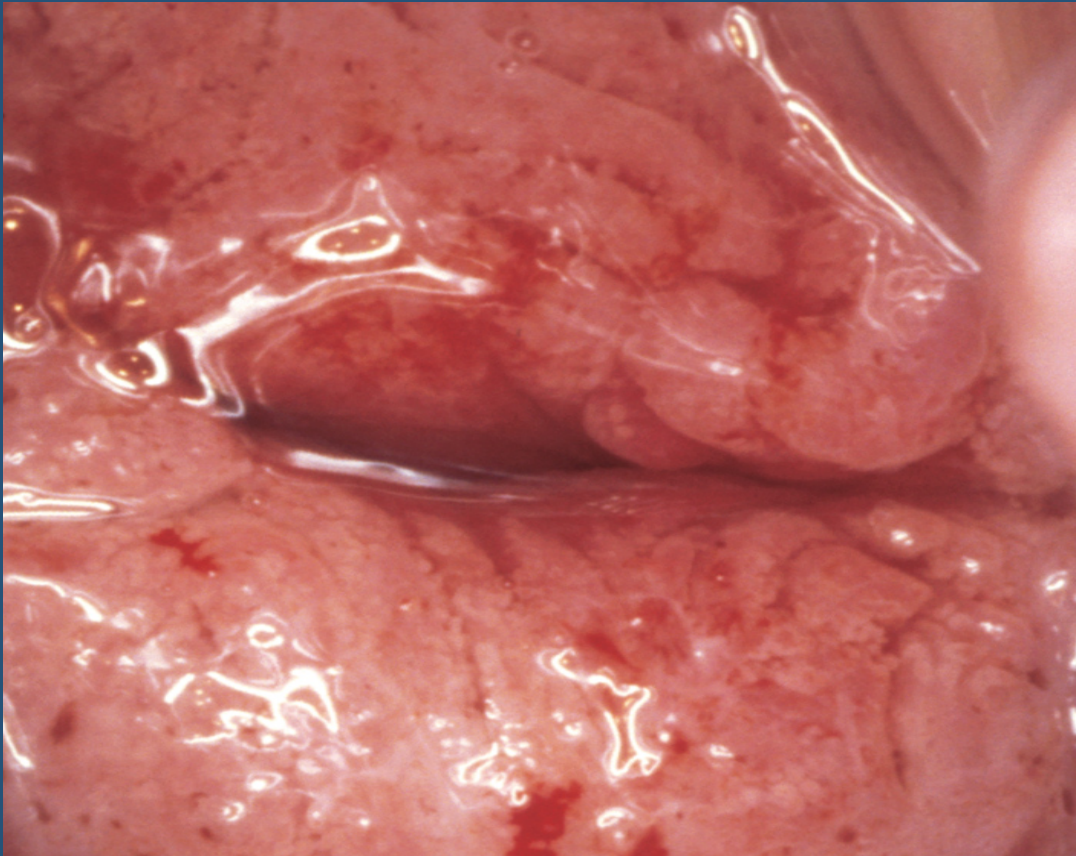
Identify presence or absence of acetowhitening and any lesions

- Indicate extent of lesion visualized, size, and location
- Include color, contour, border, vascular changes



Apgar, Brotzman, Spitzer

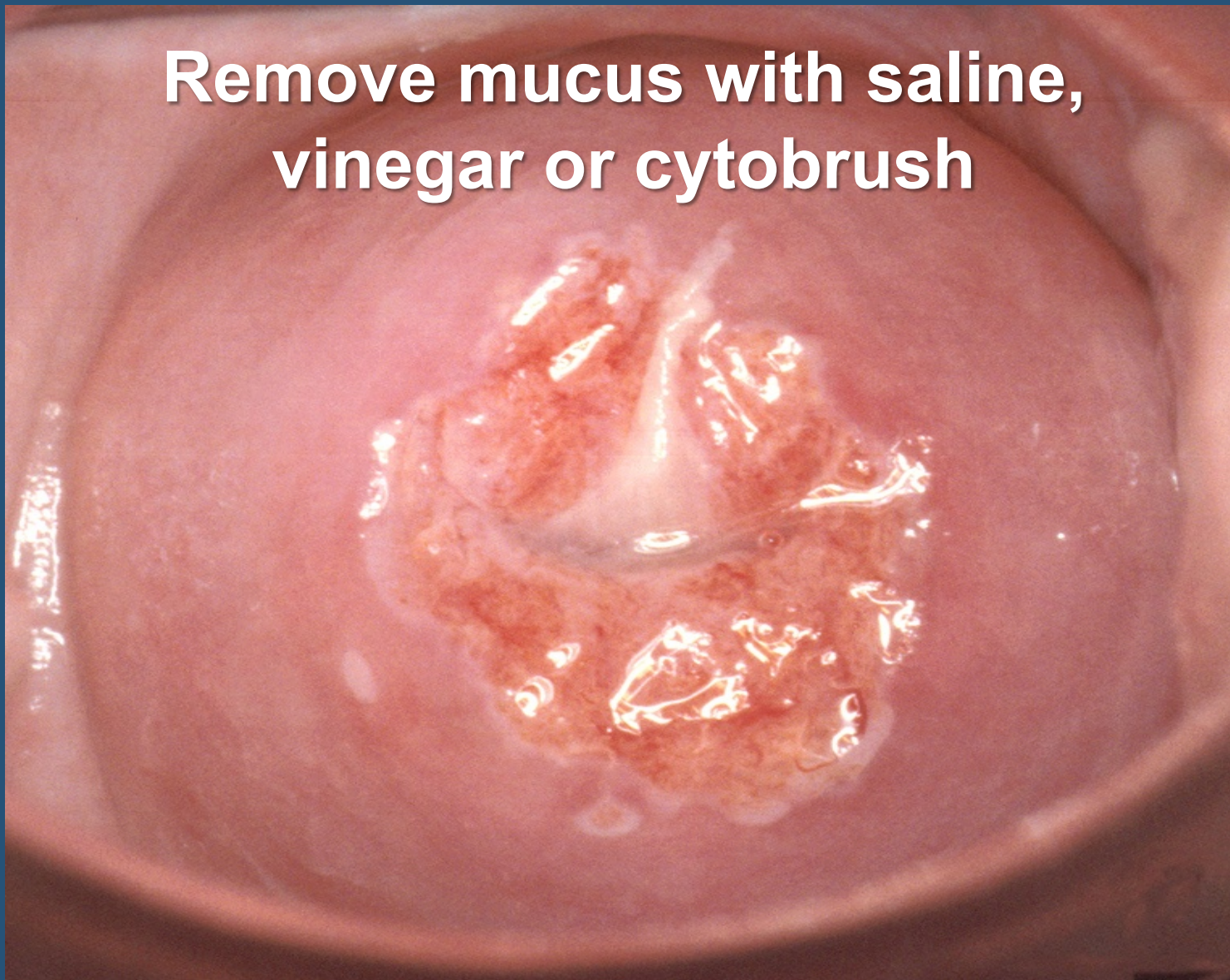
Use saline initially to moisten cervix and remove obscuring mucus



Saline helps to visualize vessels prior to application of dilute acetic acid

Apgar, Brotzman, Spitzer

**Remove mucus with saline,
vinegar or cytobrush**



Apgar, Brotzman, Spitzer

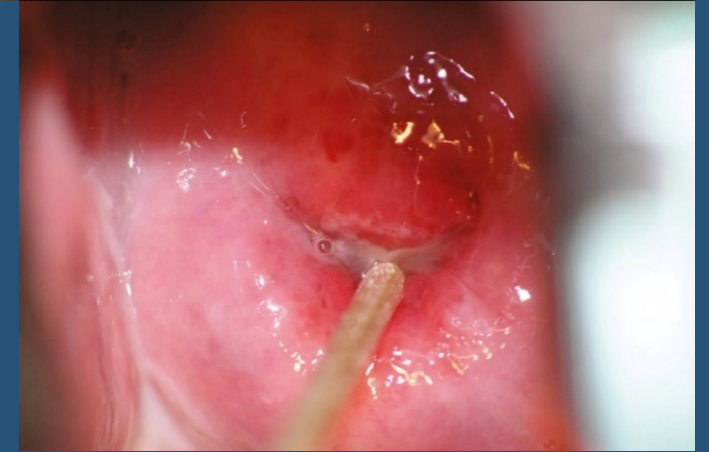
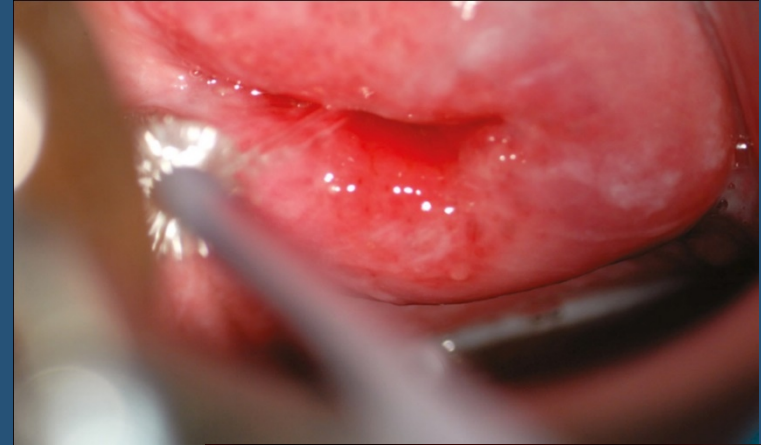


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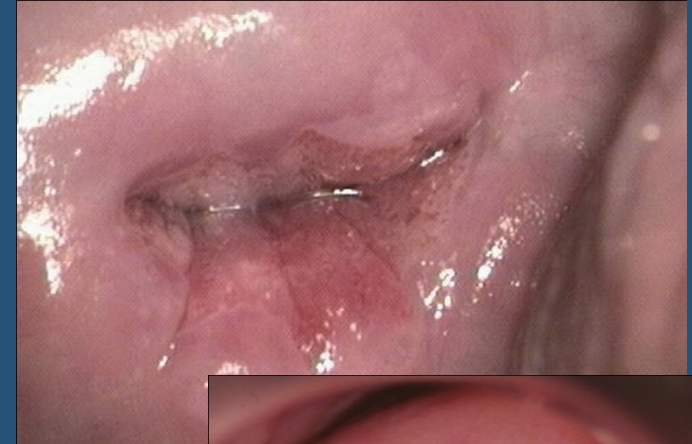
Thick tenacious cervical mucus

- Twirl a cytobrush (may have to be repeated several times with a fresh cytobrush each time)
 - Be gentle or you may cause bleeding
- Push the mucus further into the cervical canal



Blood and clear cervical mucus

- No matter how clear it is, clear mucus obscures the visualization of the underlying epithelium just as much as thick mucus
- A small amount of blood in the endocervical canal can fool you into thinking that you can see the SCJ

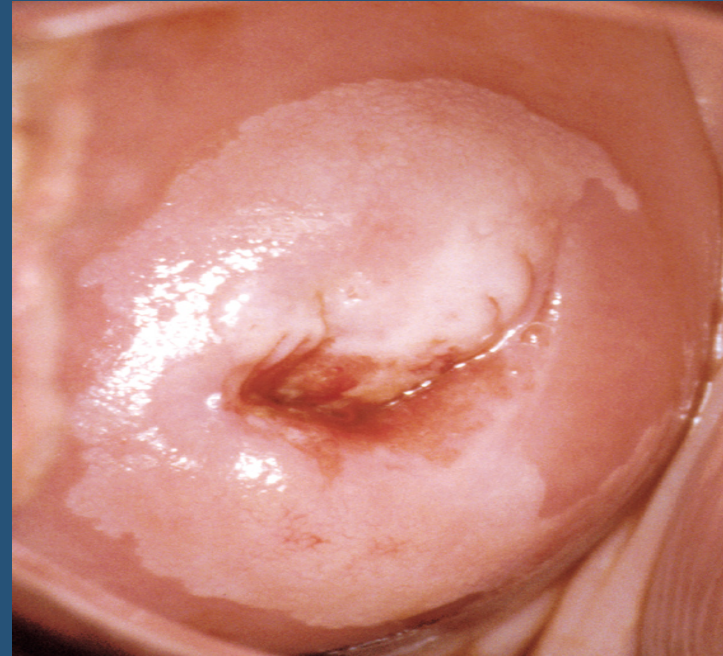


**Use 3-5% acetic acid
or vinegar**

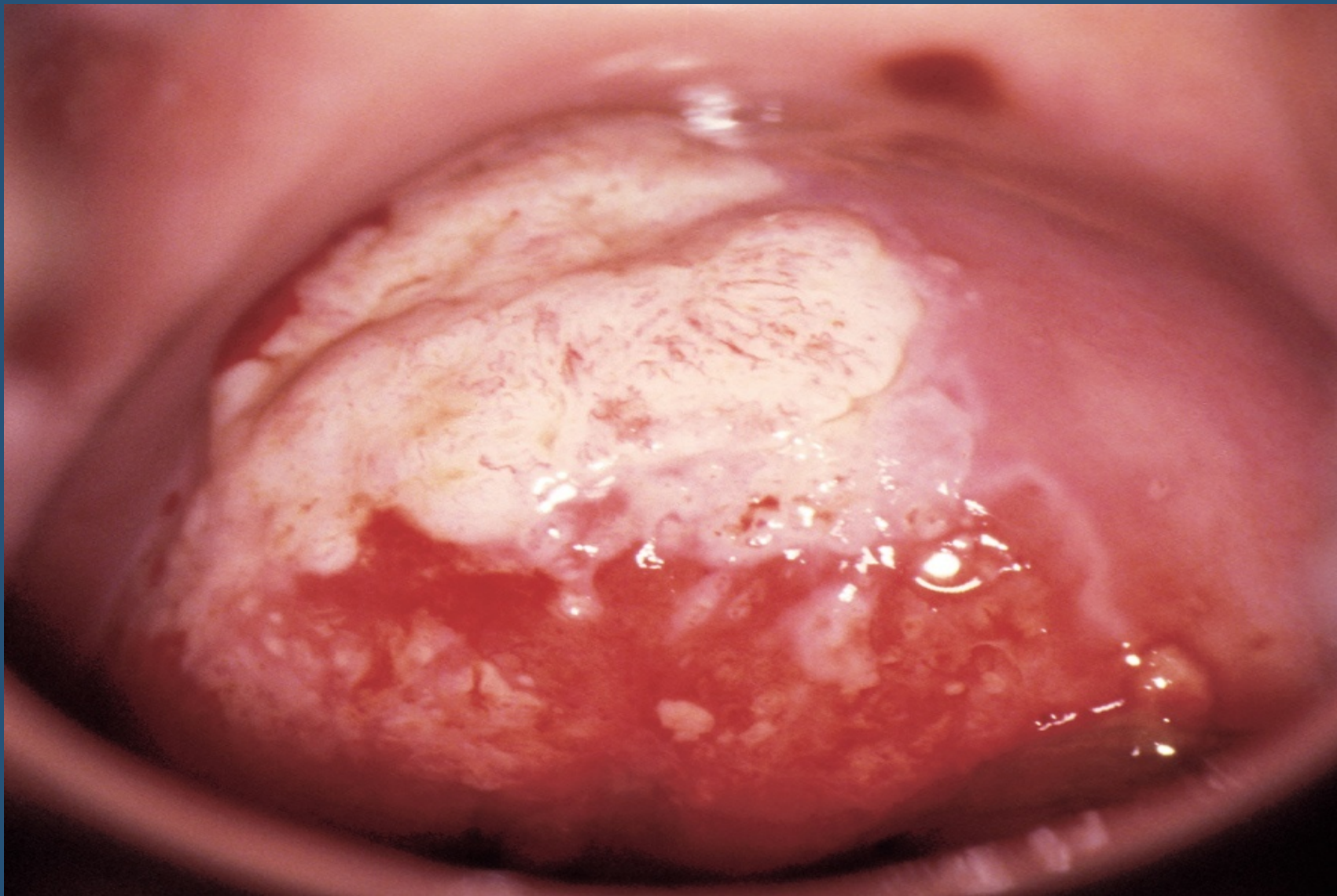


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“Acetowhiteness”



Apgar, Brotzman, Spitzer



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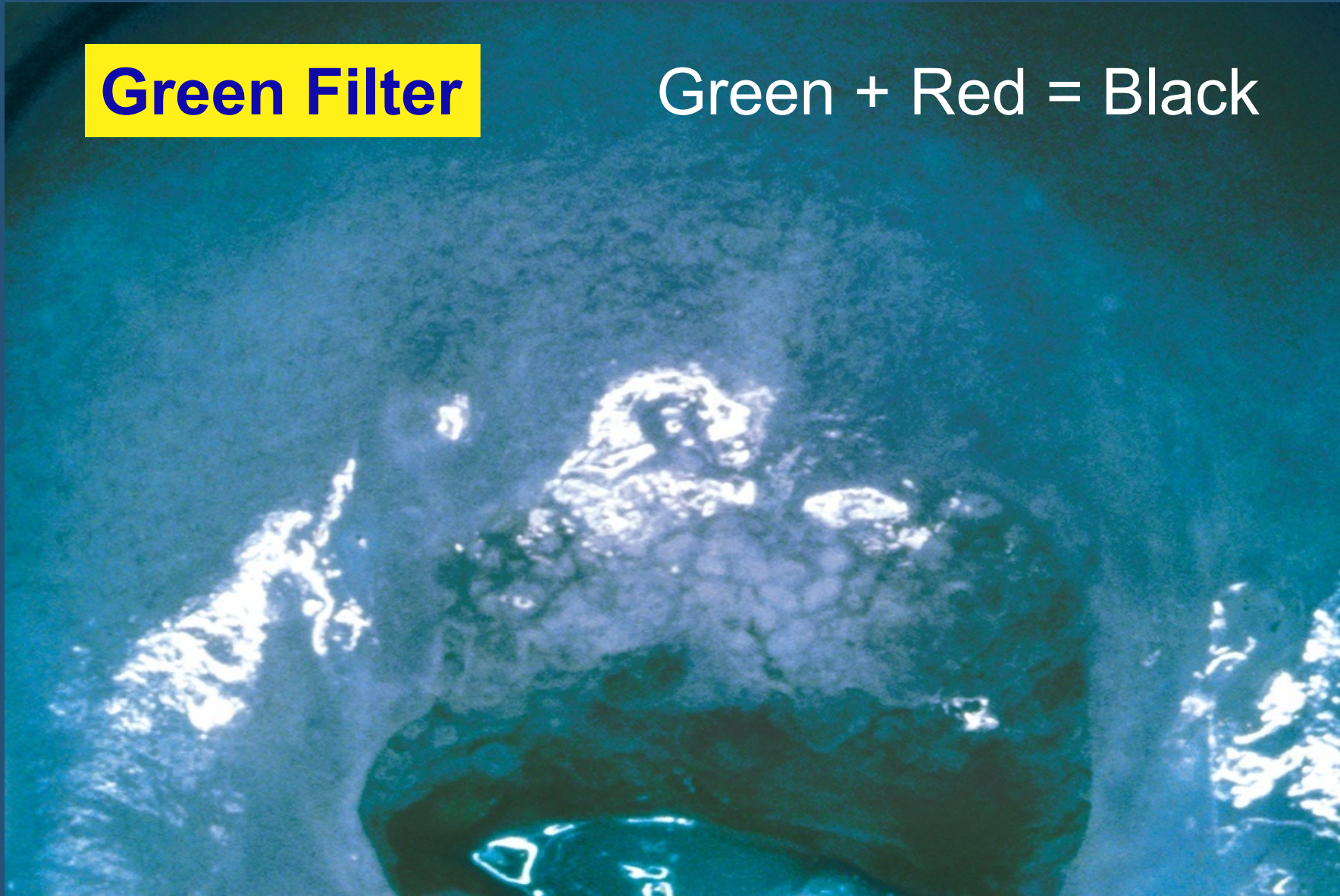


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Green Filter

Green + Red = Black



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ASCP

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Magnification helps to biopsy appropriately

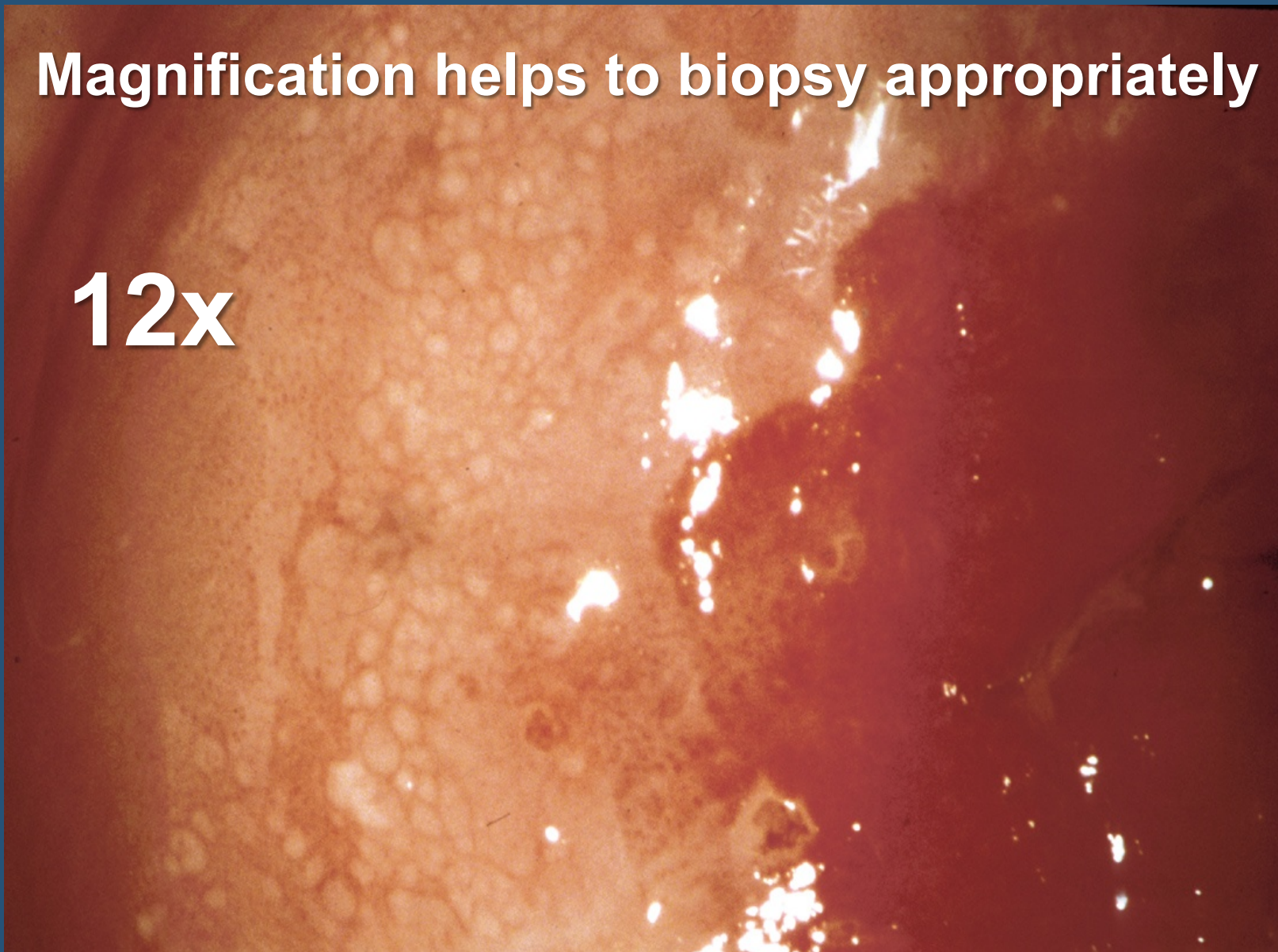
8x



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Magnification helps to biopsy appropriately

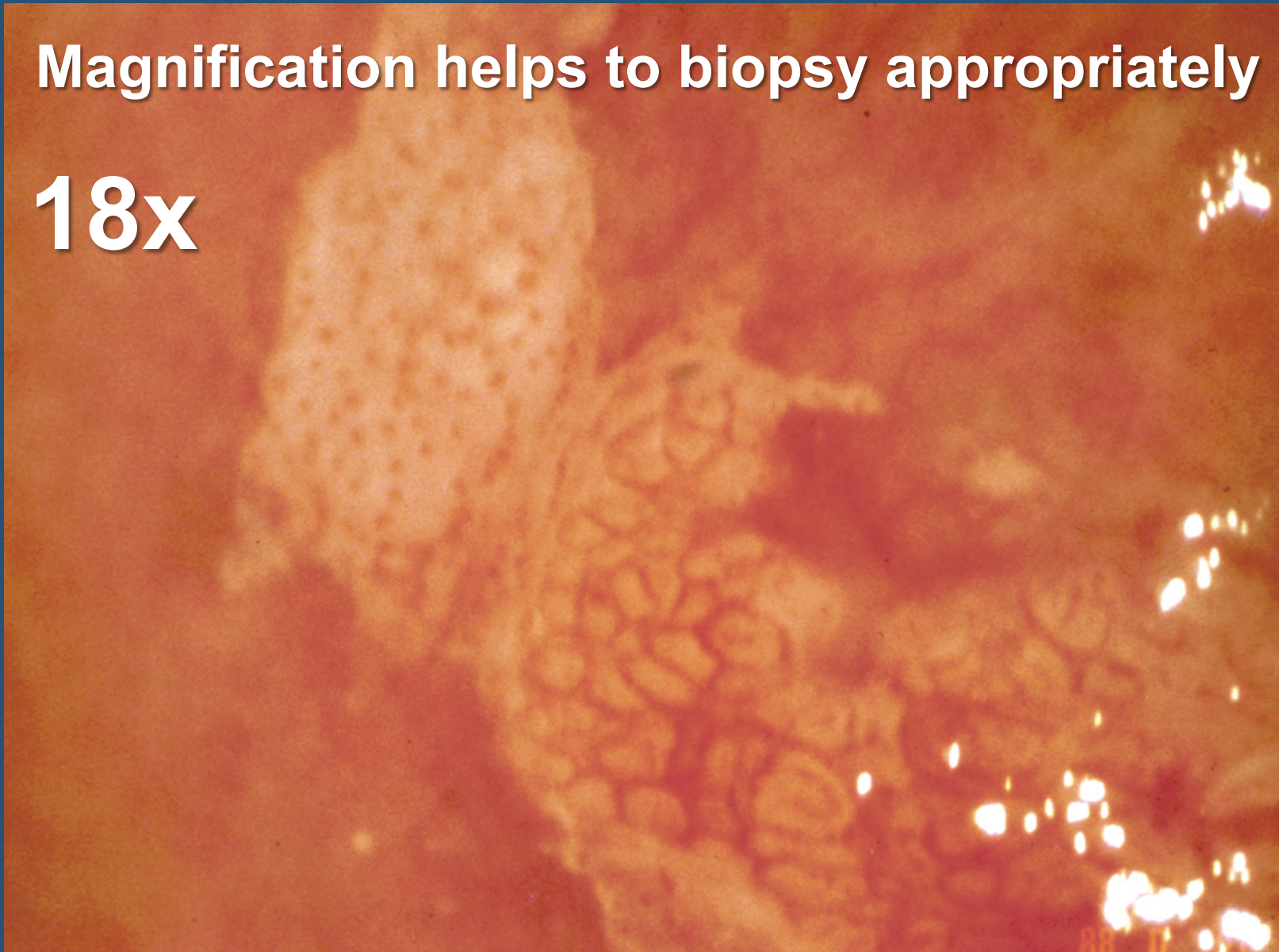
12x



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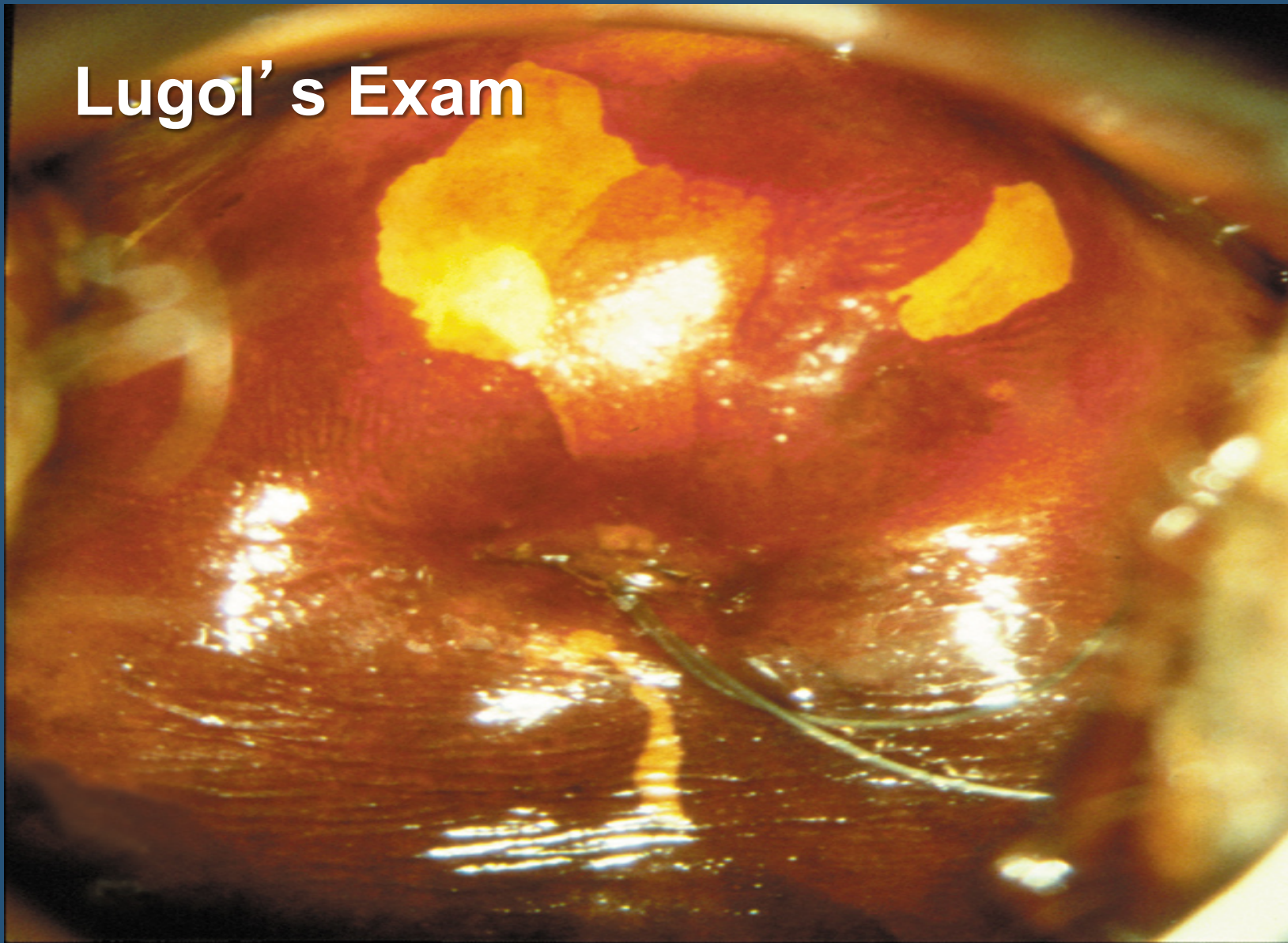
Magnification helps to biopsy appropriately

18x



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Lugol's Exam



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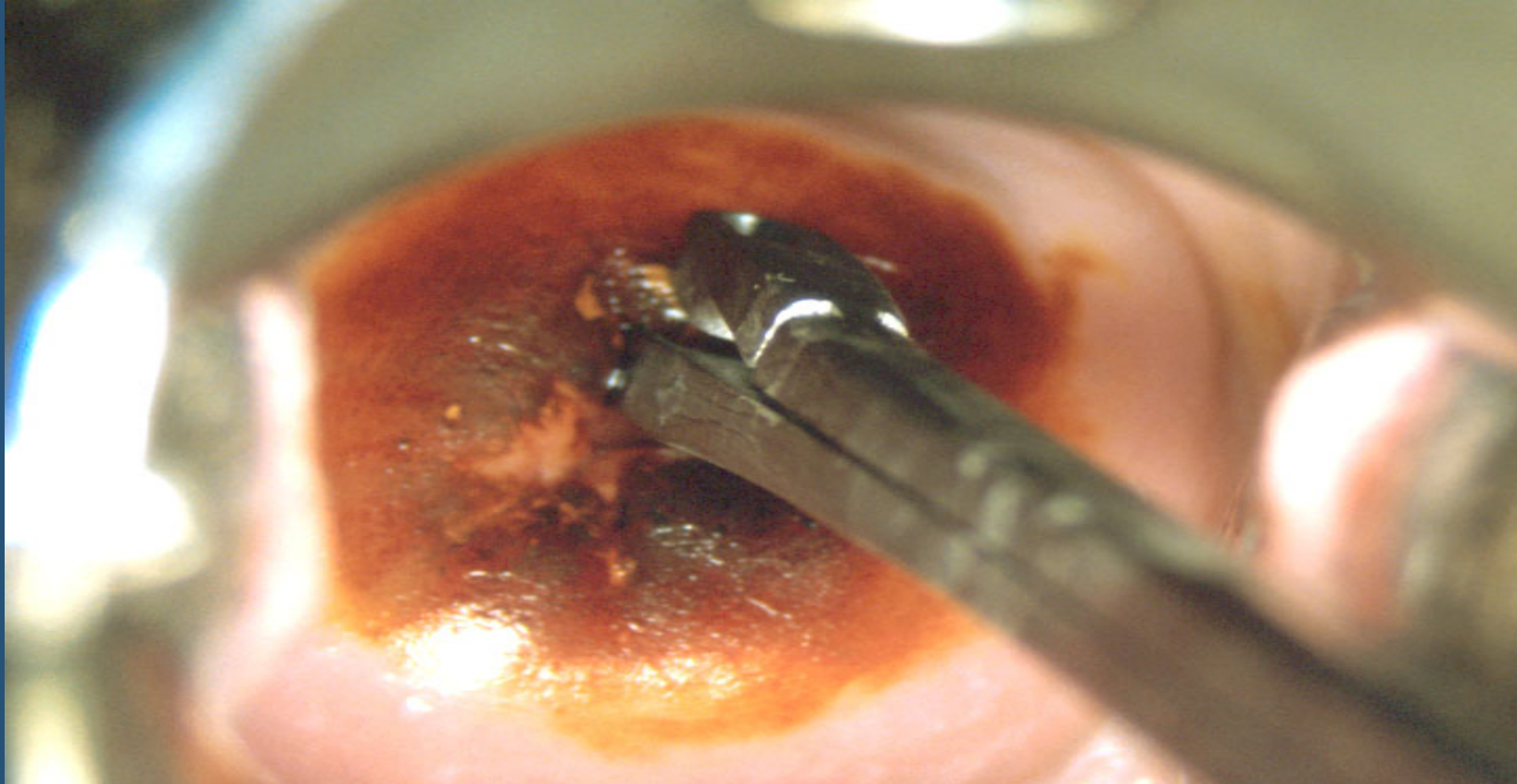


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Objectives of colposcopy

Identify and biopsy appropriately



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Colposcopic-directed biopsy

- Send the pathologist a specimen that is sampled appropriately
 - Avoid shallow superficial biopsies
- Colposcopic skill cannot be measured solely by the histology
 - Histology only as good as the proper sampling of the selected biopsy site

Taking a biopsy of the cervix

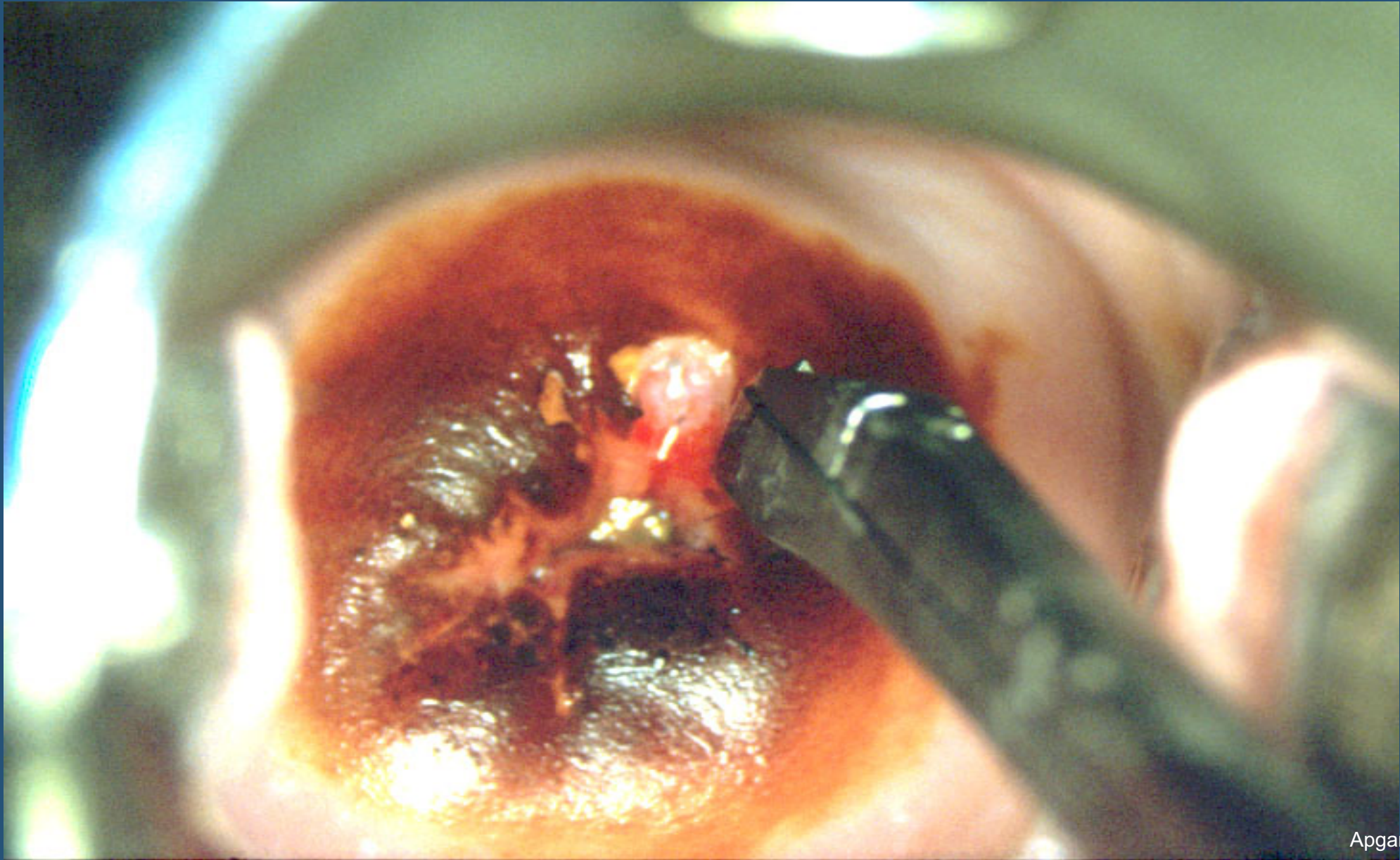


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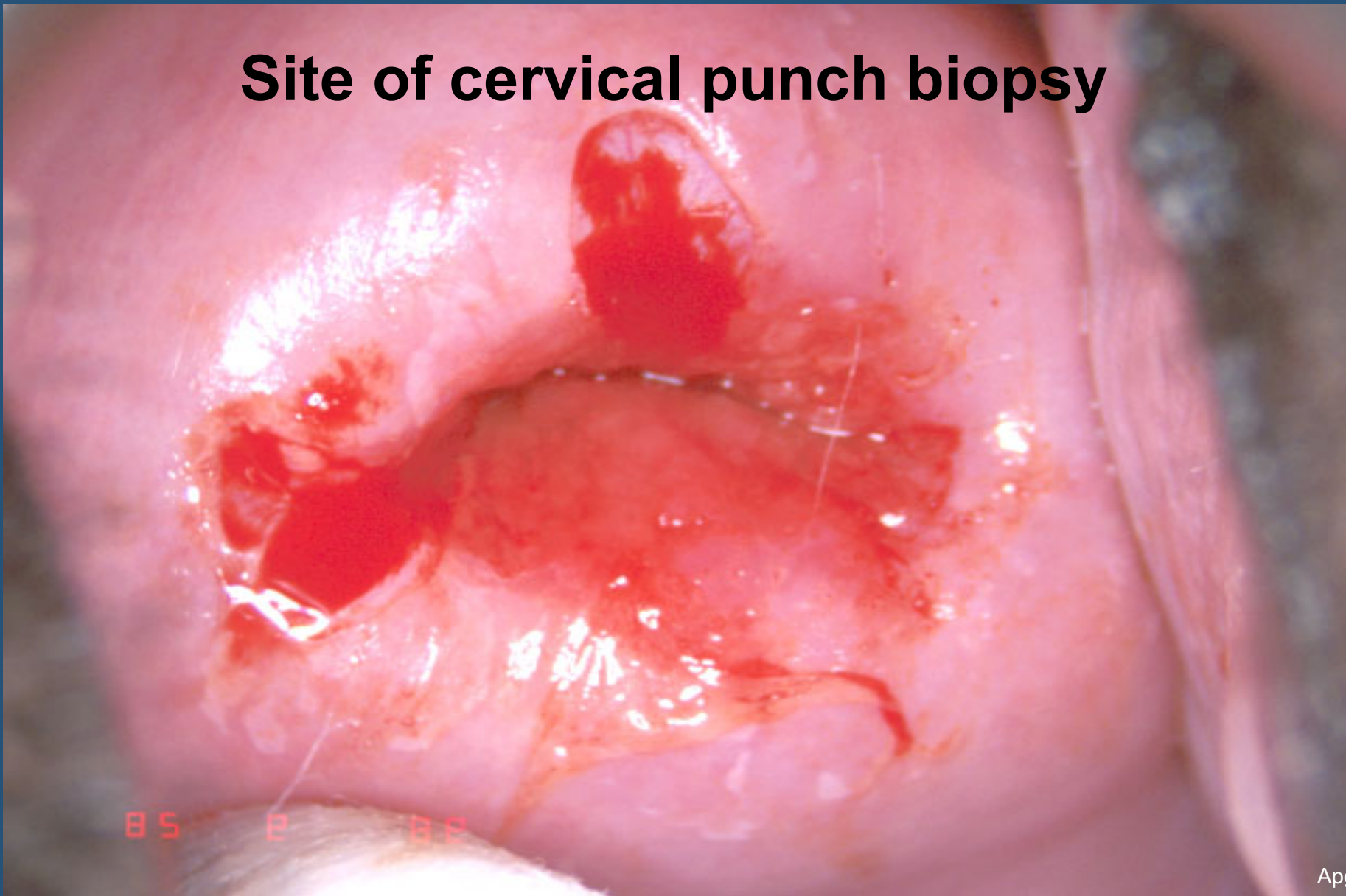
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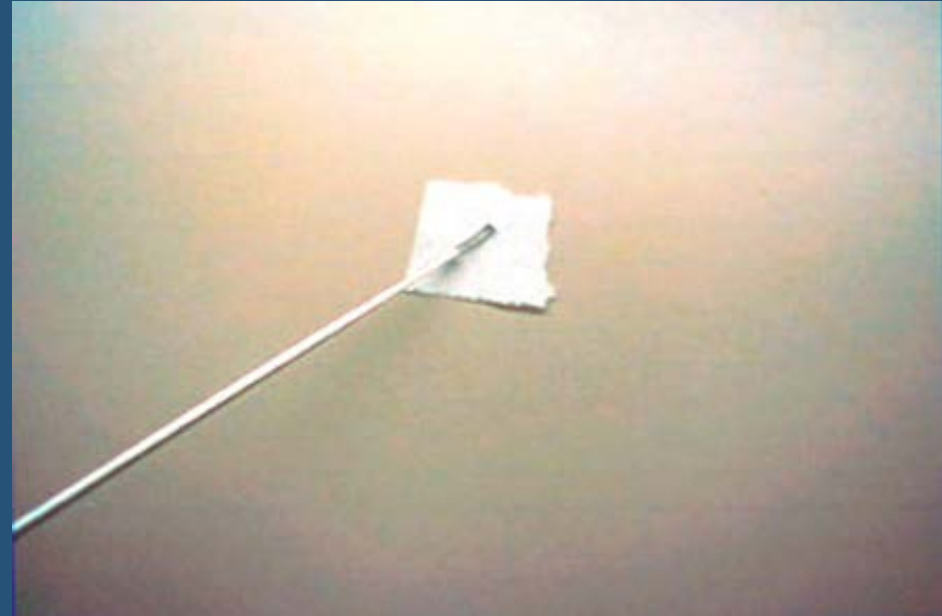
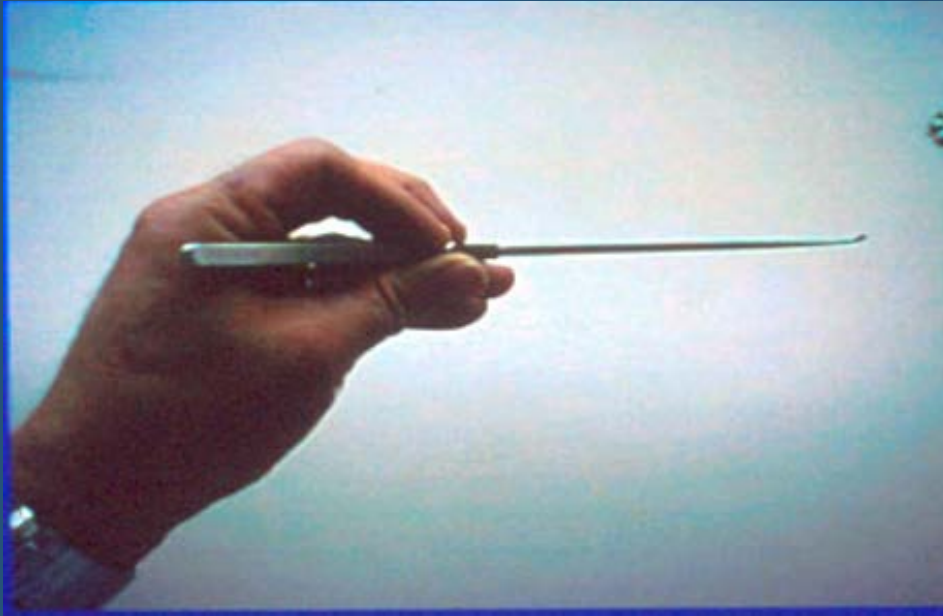
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Site of cervical punch biopsy



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Holding the curette



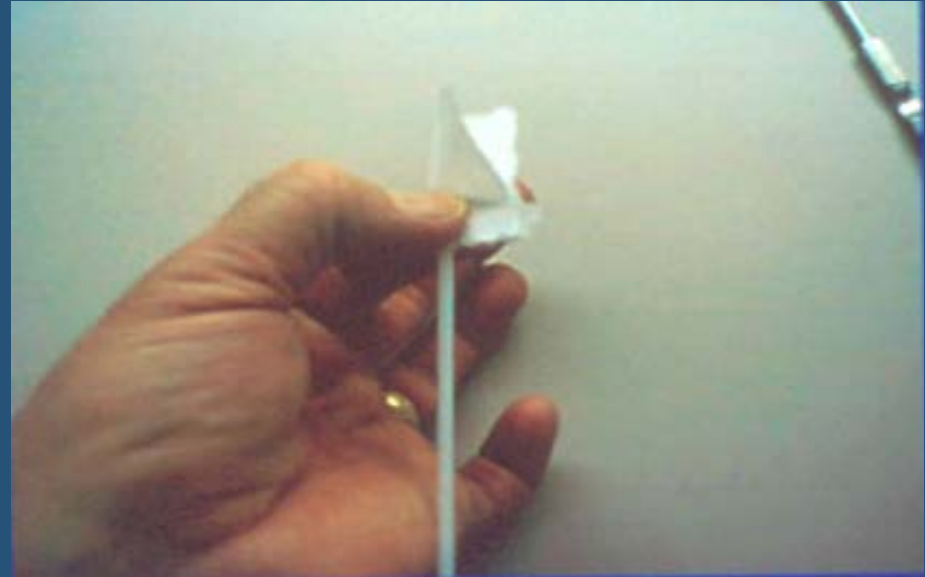
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Collection of ECC specimen



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Basic colposcopic evaluation: this is the procedure



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Keep surgical instruments handy



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Instruments sterilized in advance



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Examine the vulva




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Select the correct size of speculum

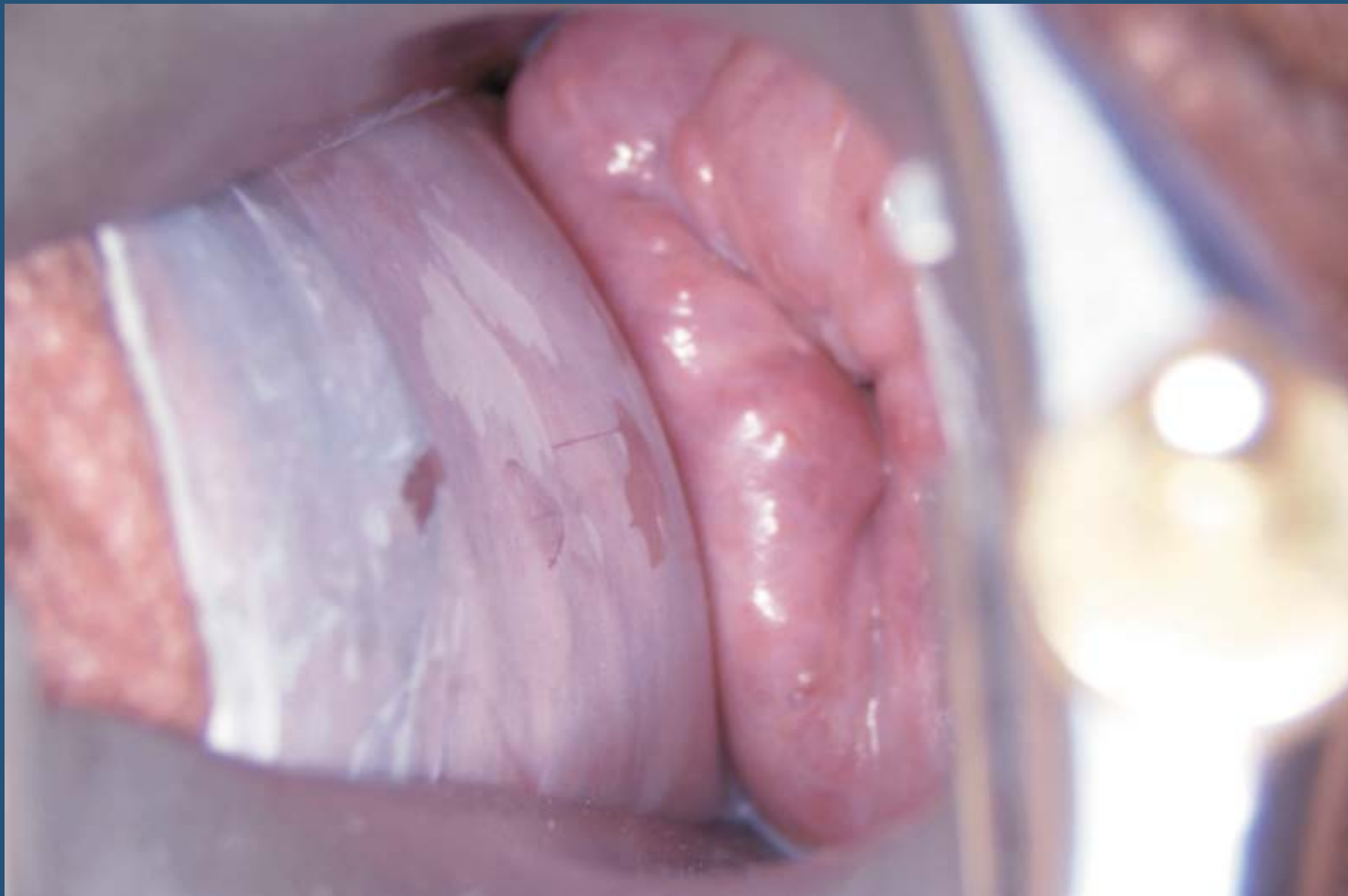


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A photograph of a metal speculum with a white condom cover. The speculum is shown from a side profile, with the handle on the right and the blades on the left. The condom is stretched over the blades and secured with a white rubber band. The background is a plain, light-colored surface.

Grave's speculum with condom cover

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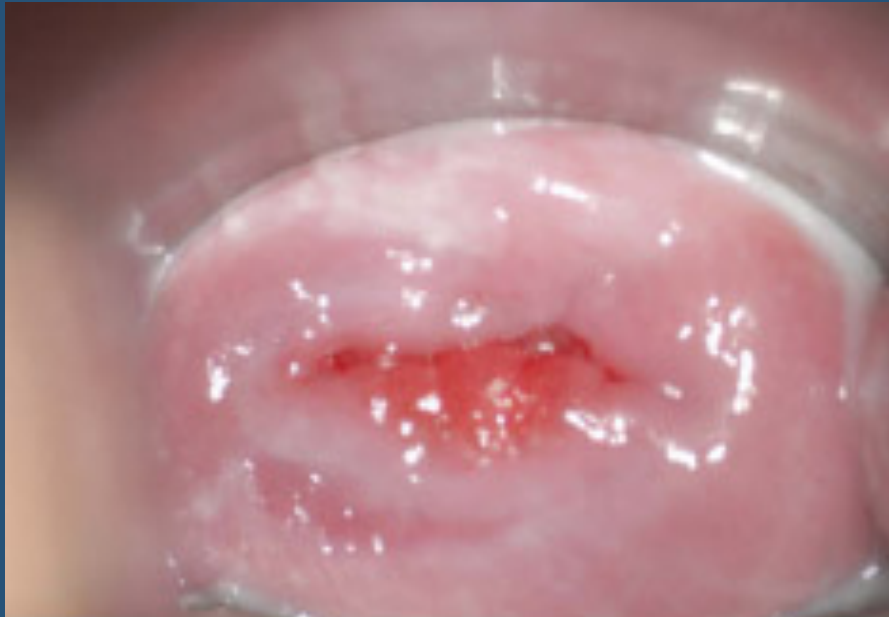


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Technique to try to get a fully visualized SCJ at colposcopy

Opening the speculum a little at the introitus and a lot at the vaginal vault everts the cervix and increases the likelihood of a fully visualized SCJ at the colposcopic examination



**Adjust the
speculum to see
the entire cervix
(usually wider
than performing
Pap test)**



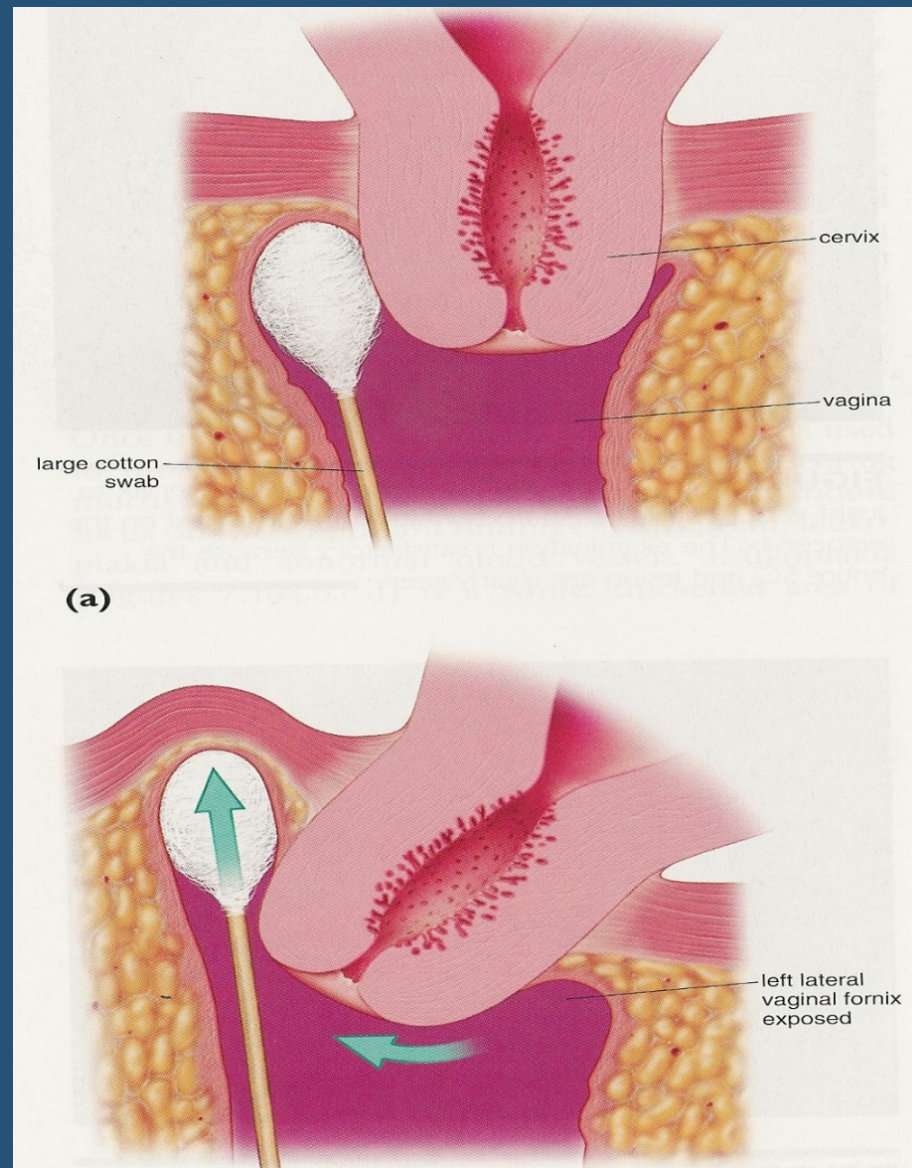
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Move cervix to get better visualization



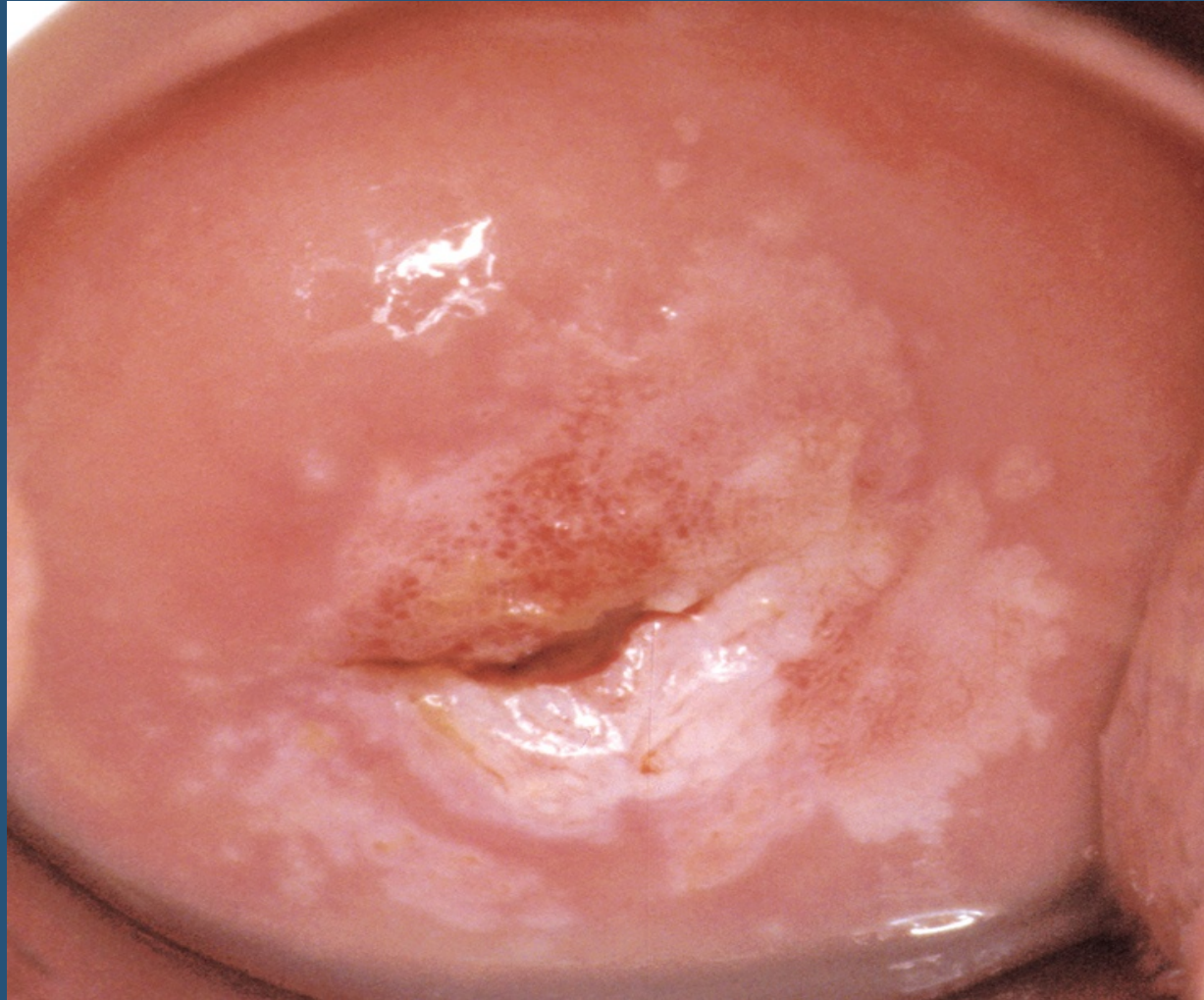
Modern Colposcopy



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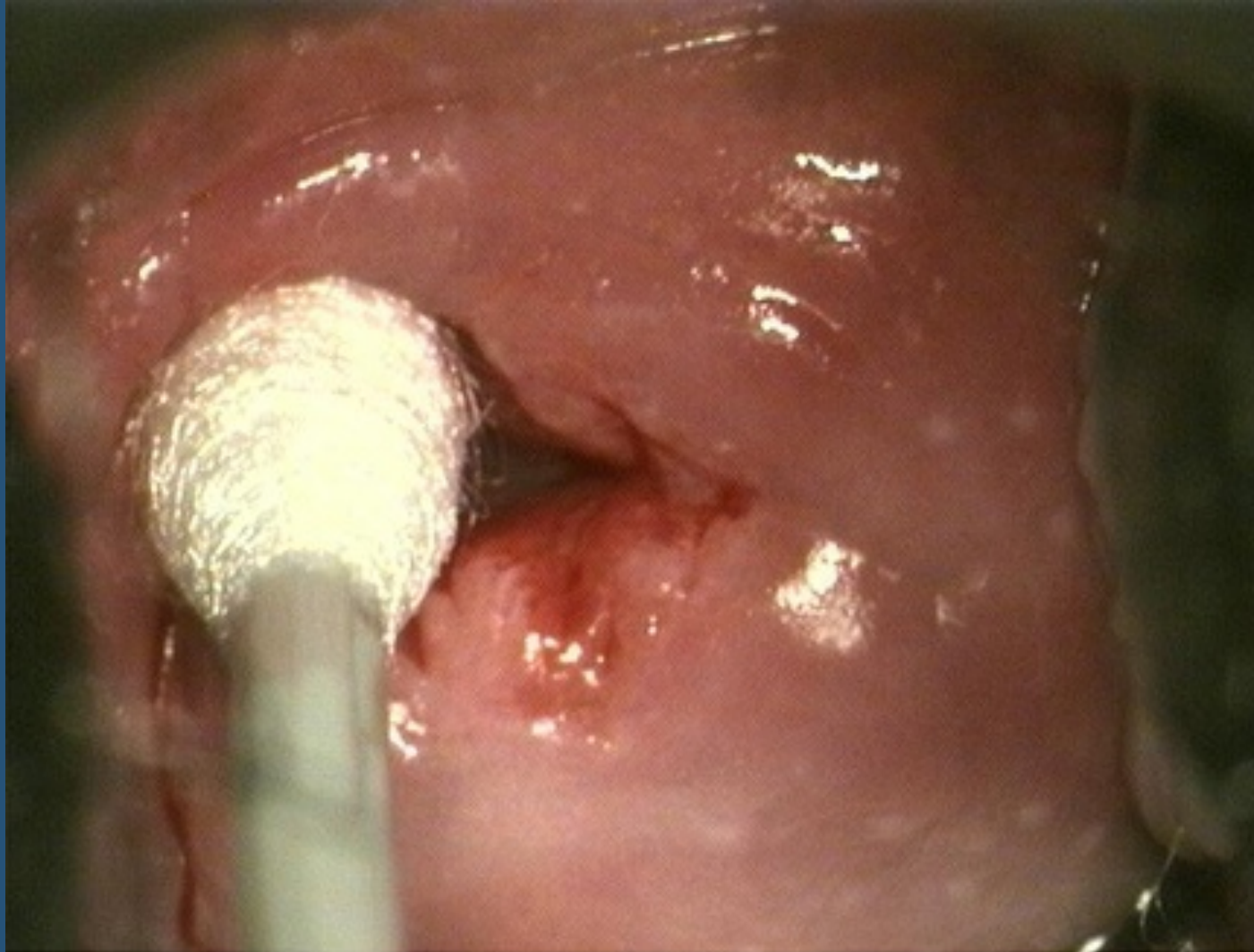
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Apply 3-5% acetic acid or vinegar



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Find the SCJ



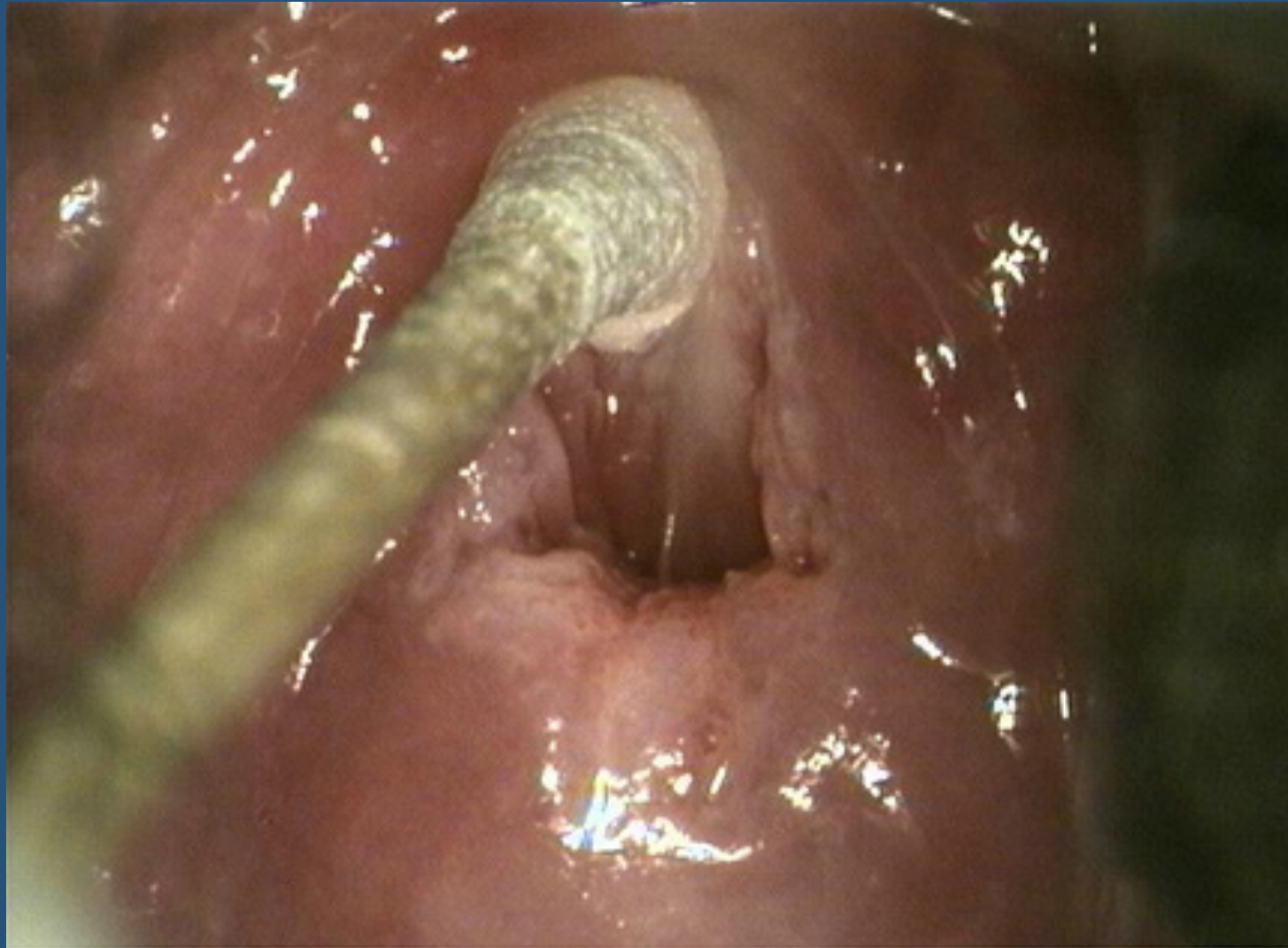
Modern Colposcopy



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Identify the transformation zone and SCJ



Modern Colposcopy

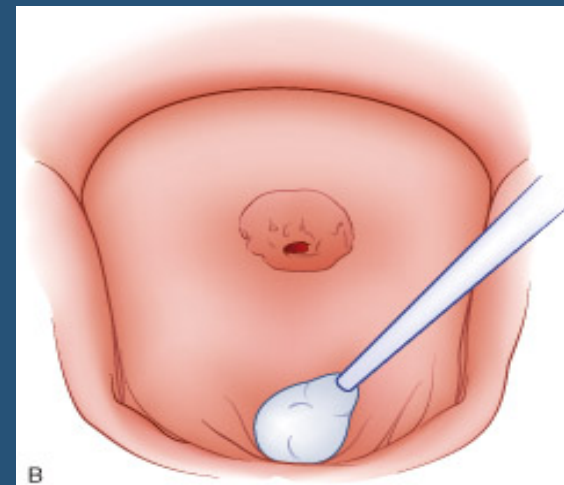
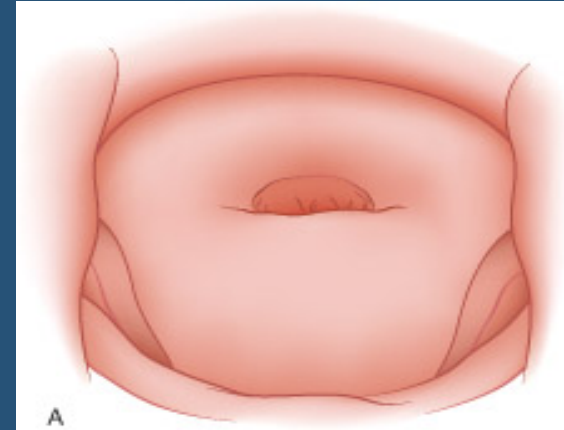


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Getting a fully visualized SCJ at colposcopy

A cotton-tipped applicator should be inserted into the vaginal fornix and pushed inward to cause the cervix to deviate anteriorly or posteriorly. This allows easier visualization of the SCJ



Green Filter



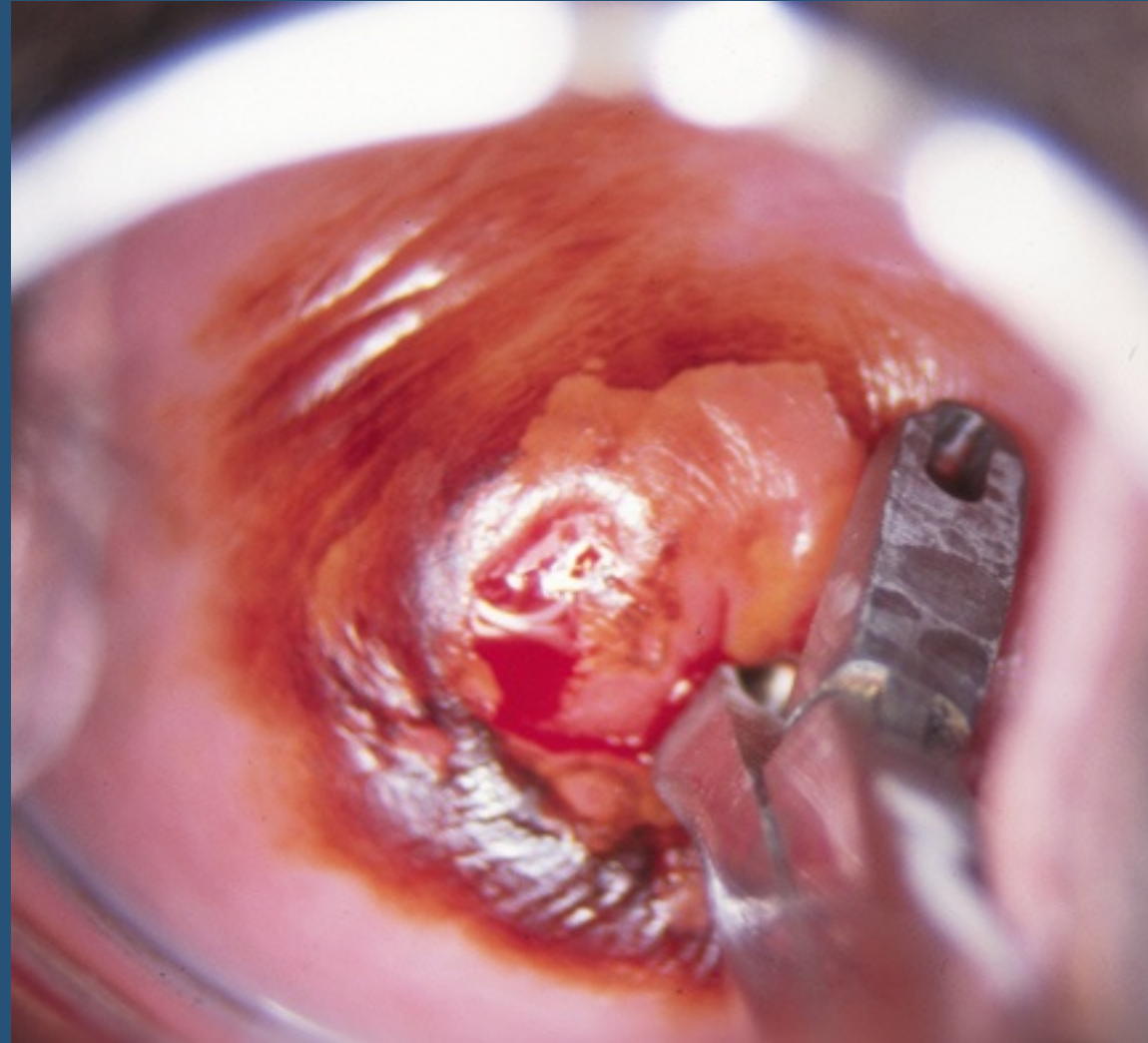
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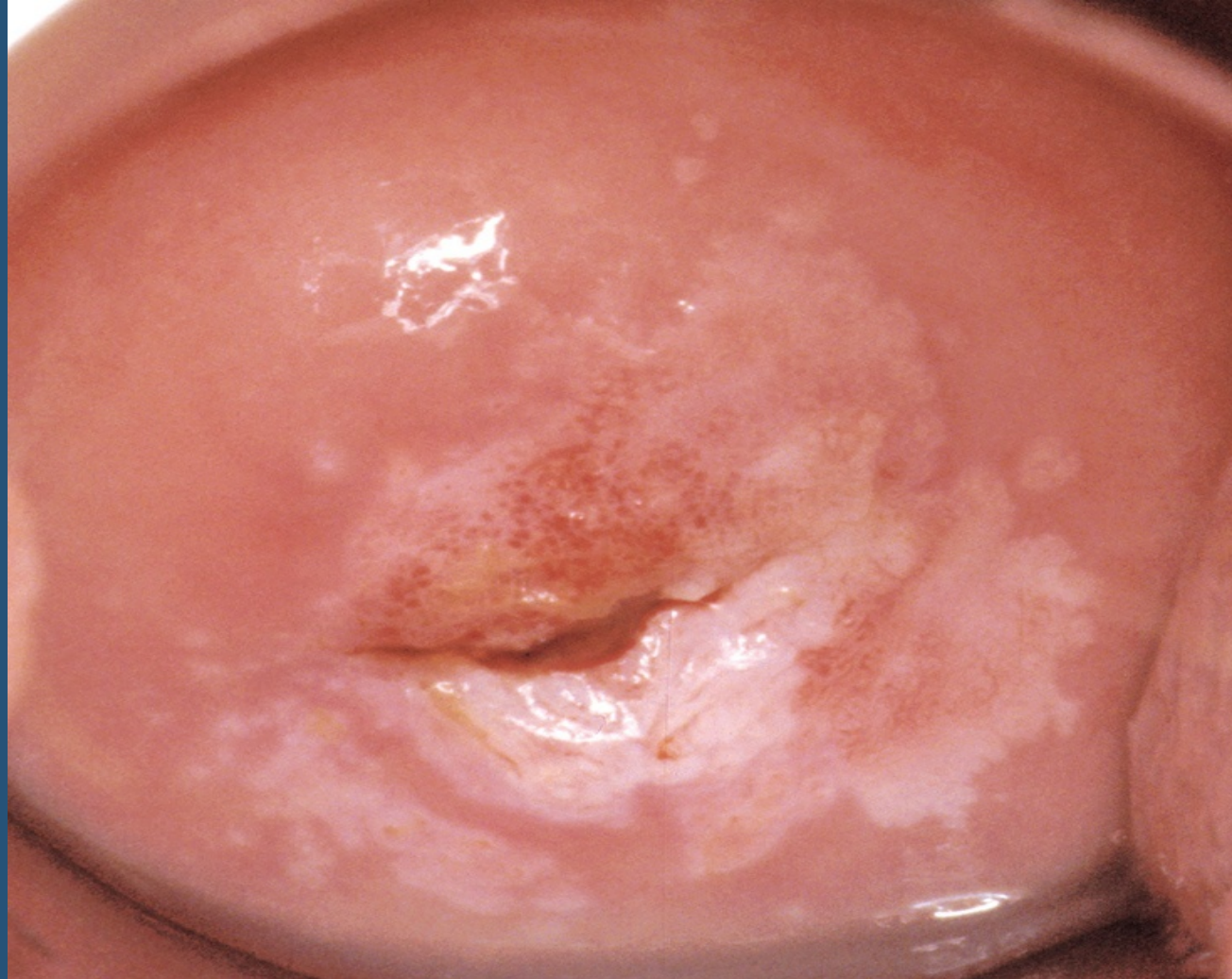
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Biopsy the lesion(s)

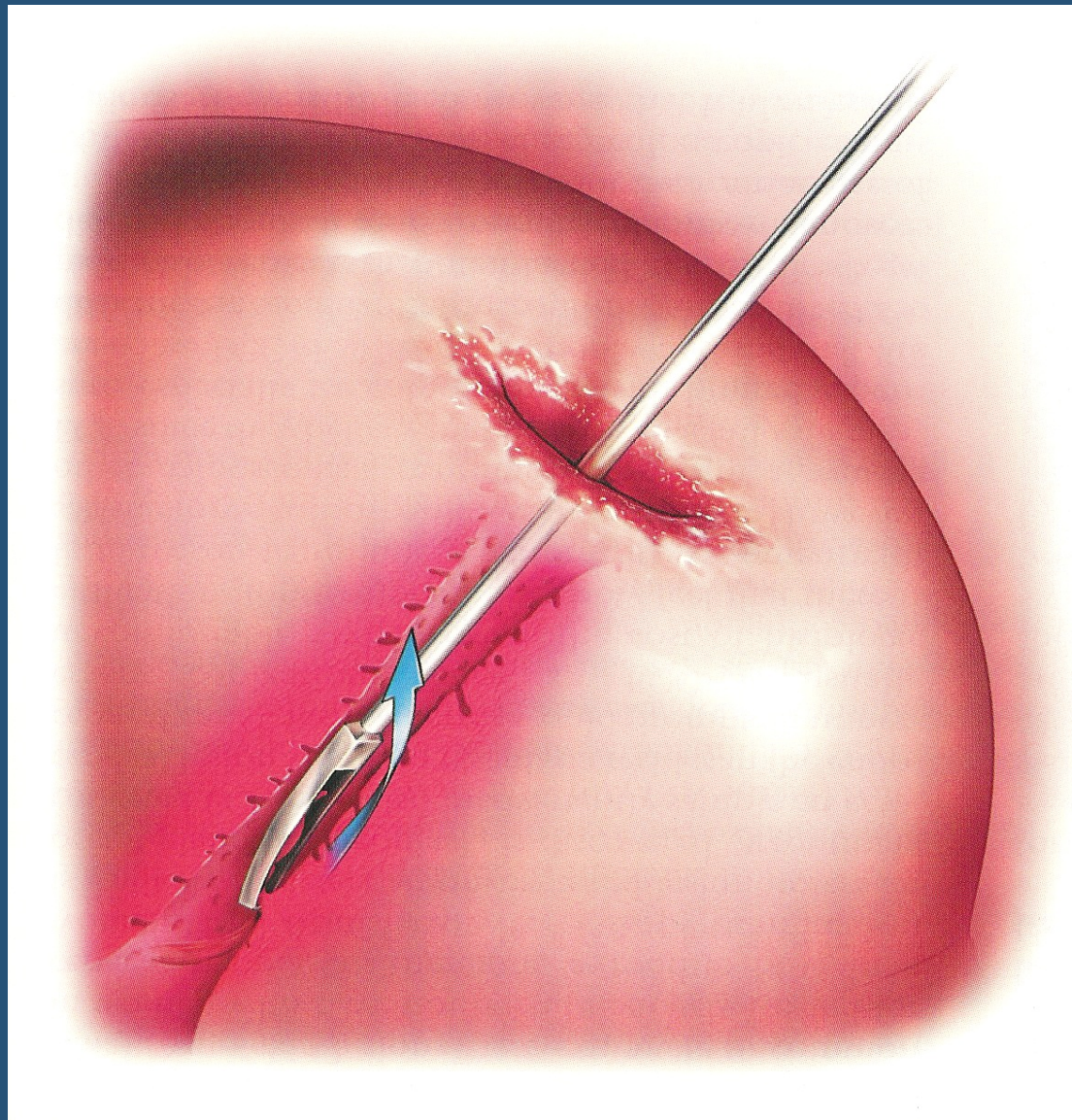


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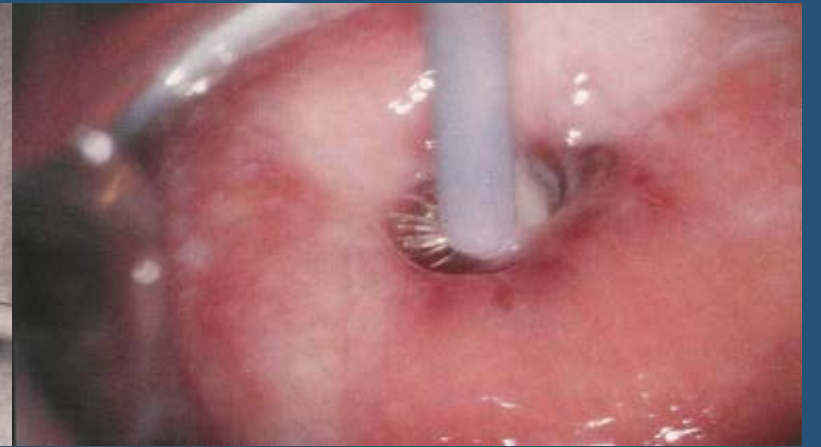
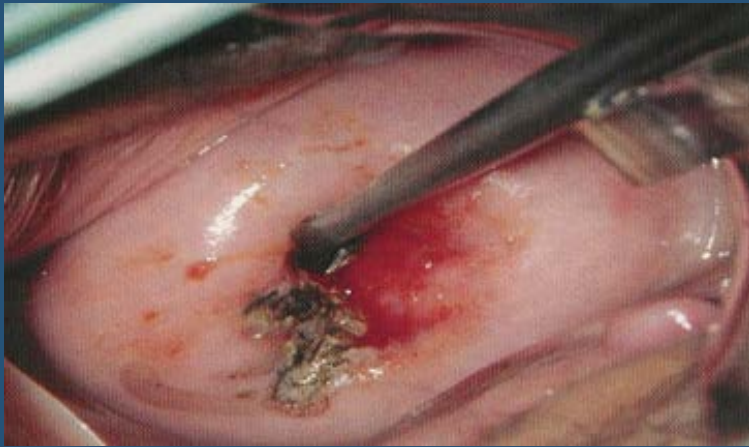
Do the ECC



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Modern Colposcopy, Chapter 6 Figure 636a Screwtype ECC



Endocervical curette

- Send for histologic evaluation
- Need to do a good scraping to get enough sample: SHARP curette

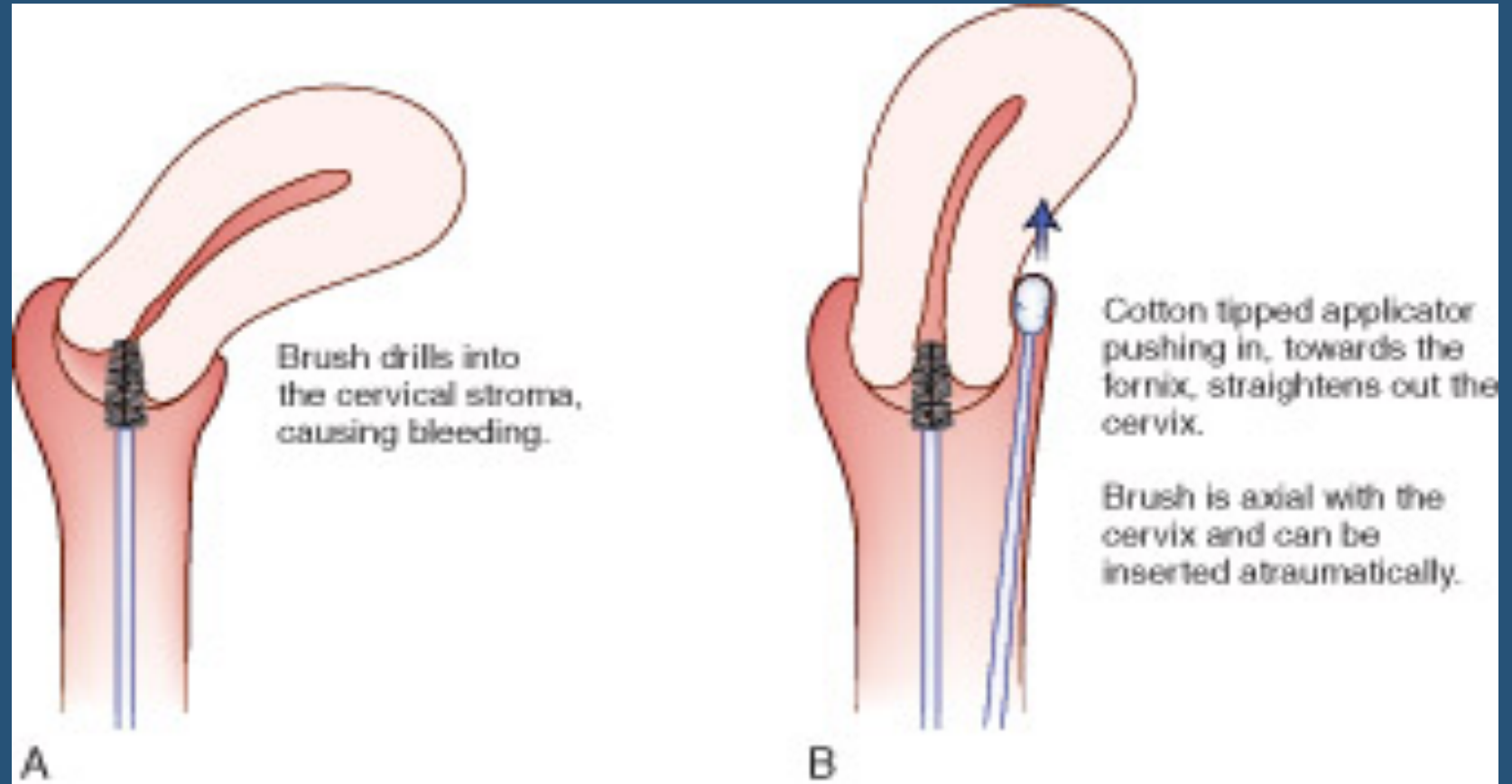
Cytobrush (vigorous)

- Send as histological sample- let pathologist know
- ****Better tolerated than curette**

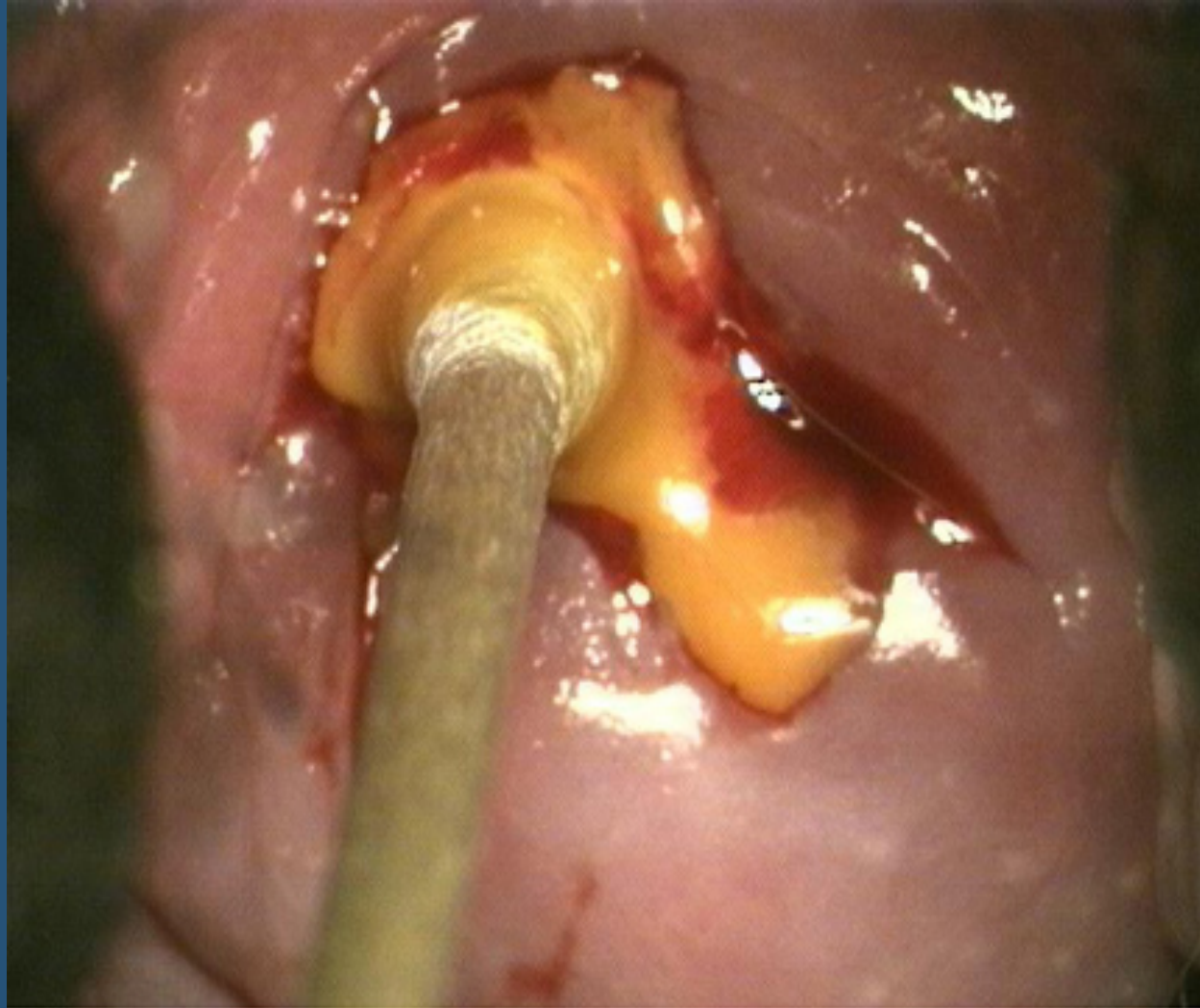
**EQUAL sensitivity, SAME inadequate samples
NO ECC in pregnancy!**

Proper alignment for an ECC

Return the cervix to an axial position



Apply Monsel's



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Which comes first?

ECC

- Bleeding may be significant
- Discomfort
- Patient may be “done” after the ECC

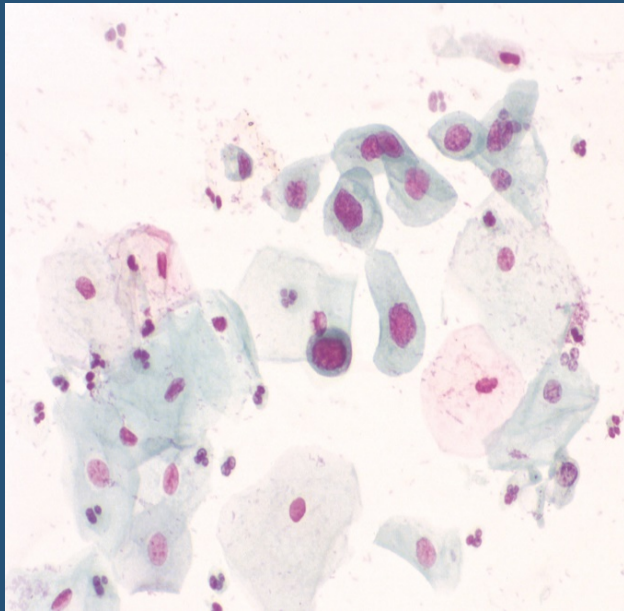
Cervical biopsy

- Perform more rather than fewer biopsies
- The more biopsies you take, the more bleeding there will be but the colposcopy will be more sensitive

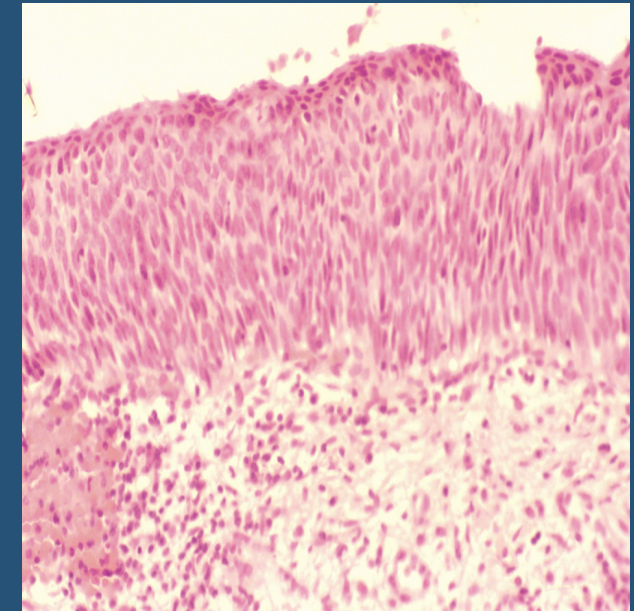
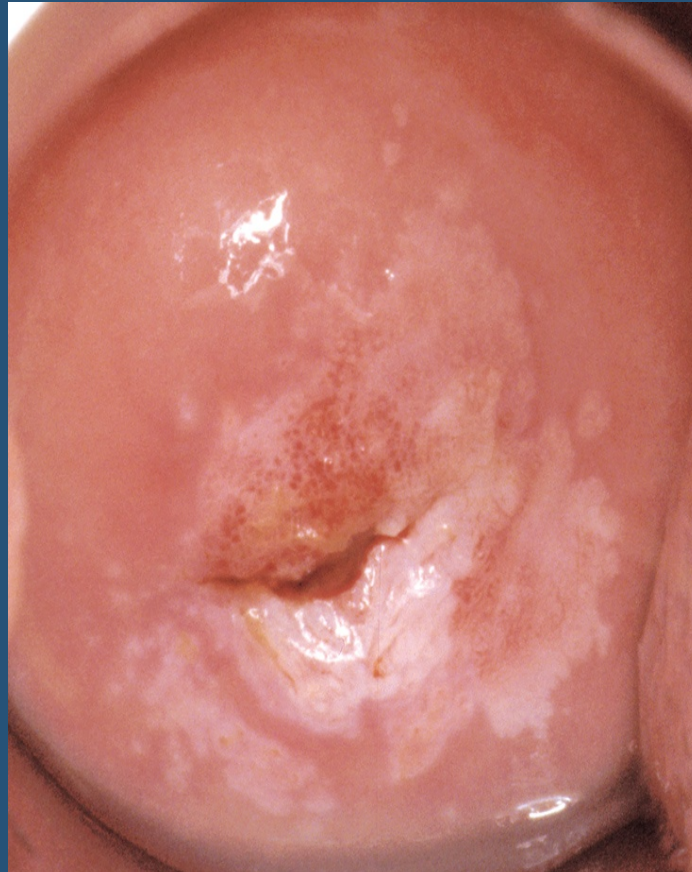
Everyone has an opinion on this one!

Objectives of colposcopy

Correlate Pap, Colpo and Histology – Document your impression!



Important!



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- Avoid dropping the instruments in a stainless container and dulling the tips or breaking them
- They are expensive
- Rubber containers work nicely



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Summary

- Colposcopy is a magnified and illuminated exam of the cervix
- Colposcopy is utilized to identify tissue for biopsy and rule out invasive cancer
- A basic colposcopy exam should always include:
 - Complete visualization of the cervix and transformation zone
 - Application of dilute acetic acid
 - Biopsy and ECC if indicated