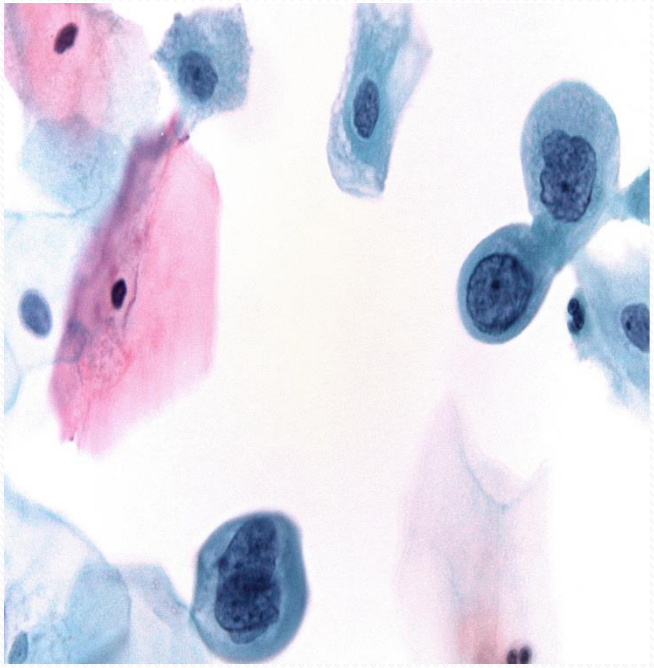
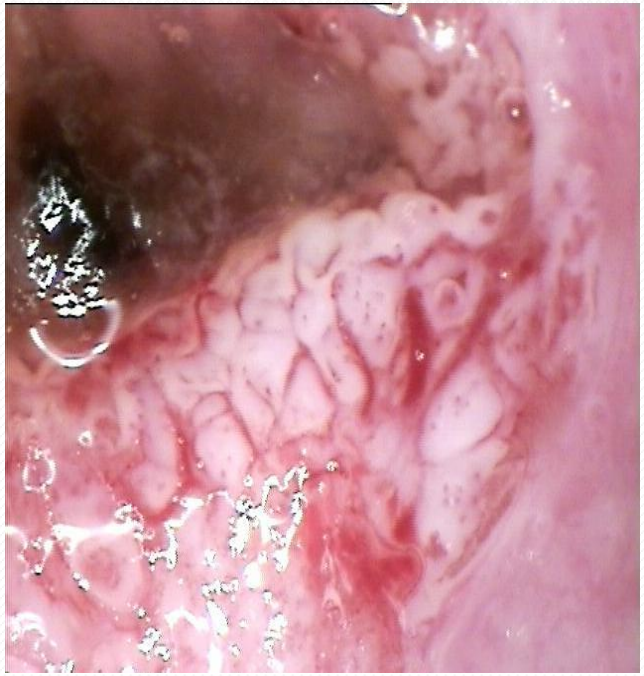
Cervical Intraepithelial Neoplasia (CIN) Screening and pap test





Cytological terminology of cervical precancer

I) Papanicolaou's classification

II) World Health Organization classification (WHO)

III) British Society for Clinical Cytology terminology (BSCC)

IV) Cervical Intraepithelial Neoplasia (CIN) terminology

V) The Bethesda System(TBS)

Squamous Intraepithelial Lesions/Cervical Intraepithelial Neoplasia

- Use of the Bethesda terminology for cytology specimens and the diagnostic terminology proposed by the LAST committee which is based on the Bethesda classification,
  for surgical pathology specimens.
- **SIL terminology** has gained wide acceptance, but there are still holdouts for the CIN terminology and we will adopt the practice, permitted under the LAST recommendations, of providing a two-part diagnosis, with SIL first and the equivalent CIN in parenthesis thereafter.

Comparison of terminologies used for abnormal squamous epithelial cells in cervical cytology

CIN grade	WHO	BSCC	Bethesda
		Borderline	Atypia (ASC)
I	Mild dysplasia	Mild dyskaryosis	Low-grade SIL
II	Moderate dysplasia	Moderate dyskaryosis	High- grade SIL
III	Severe dysplasia	Severe dyskaryosis	High- grade SIL
	Epidermoid carcinoma	Severe dyskaryosis Invasive carcinoma ?	Squamous cell carcinoma

- LSIL will thus appear as “LSIL (CIN1).”
- CIN2 and CIN3 are both considered **HSIL**, and the distinction between CIN2 and CIN3 is arbitrary **and not clinically** relevant.
- Subtle differences in natural history have been reported for CIN2 versus CIN3, but we would attribute these to inclusion in the former group of some cases better classified as CIN1, rather than being an indication that CIN2 and CIN3 are distinct diseases.

- Accordingly, we will not make an effort to distinguish between CIN2 and CIN3, instead using the terminology **HSIL (CIN2/3)** for all high-grade lesions.
- Most SIL are initially detected cytologically, which leads to colposcopic biopsy. Occasionally SIL will be an incidental finding, sometimes appearing in endometrial biopsy specimens.
- It is anticipated that there will be a decline in SIL with widespread HPV vaccination, but this has not impacted on practice yet.

- **LSIL (CIN1)** is inclusive of condyloma in the LAST criteria.
- The former practice of attempting to determine whether there is or is not dysplasia within condyloma (i.e., condyloma ± CIN1) has mercifully been brought to an end.
- Koilocytic viral cytopathic effect is the pathognomonic feature of condyloma; it is doubtful whether LSIL (CIN1), as an indicator of HPV infection, can be reproducibly diagnosed in the absence of koilocytic change.

In 1988, at the initial **Bethesda meeting**, it was recommended to classify SIL in the following categories:

(1) Atypical Squamous Cells of Undetermined Significance (ASCUS)

(2) Low-grade SIL

(3) High-grade SIL; and

(4) squamous cell carcinoma

❑ The current classification (**Bethesda 2014**) includes the following categories for squamous cell abnormalities:

1. Atypical squamous cells:

a. Of unknown significance (ASCUS)

b. Cannot exclude high-grade squamous intraepithelial lesion (ASC-H)

2. Low-grade squamous intraepithelial lesion (LSIL)
3. High-grade squamous intraepithelial lesion (HSIL)
4. Squamous cell carcinoma

IV) The Bethesda system

- The 1988 Bethesda system for Reporting

Cervical/ Vaginal cytologic Diagnoses:

Was published by a workshop of North Americian experts convened by the division of cancer prevention and control of the National Cancer Institue.

It includes a new term: **squamous intraepithelial lesion (SIL)**

- Bethesda workshop was reconvened in 1991 to assess the use of the Bethesda System in practice

- A further Bethesda workshop has been held in 2001 with proposals for further modifications (http: bethesda 2001. cancer. gov).

Squamous Cell

- Squamous Intraepithelial Lesion (SIL)
  - Low-grade squamous intraepithelial lesion (LSIL)
  - High-grade squamous intraepithelial lesion (HSIL)
    - With features suspicious for invasion (*if invasion is suspected*)
- Squamous cell carcinoma

Box 13.1

The Bethesda System of Cytologic Classification (2014)

Specimen Type

Indicate conventional smear (Pap smear) versus liquid-based preparation versus other

Specimen Adequacy

- Satisfactory for evaluation (describe presence or absence of endocervical/transformation zone component and any other quality indicators, e.g., partially obscuring blood, inflammation, etc.)
- Unsatisfactory for evaluation (specify reason)
- Specimen rejected/not processed (specify reason)
- Specimen processed and examined, but unsatisfactory for evaluation of epithelial abnormality because of (specify reason)

General Categorization *(Optional)*

- Negative for intraepithelial lesion or malignancy
- Other: See Interpretation/Result (e.g., endometrial cells in a woman ≥45 years old)
- Epithelial cell abnormality: See Interpretation/Result (specify "squamous" or "glandular" as appropriate)

Interpretation/Result

Negative for Intraepithelial Lesion or Malignancy

(When there is no cellular evidence of neoplasia, state this in the General Categorization above and/or in the Interpretation/Result section of the report—whether or not there are organisms or other non-neoplastic findings.)

Non-Neoplastic Findings *(Optional to Report)*

- Non-neoplastic cellular variations
- Squamous metaplasia
- Keratotic changes
- Tubal metaplasia
- Atrophy
- Pregnancy-associated changes
- Reactive cellular changes associated with:
- Inflammation (includes typical repair)
- Lymphocytic (follicular cervicitis)
- Radiation
- Intrauterine contraceptive device (IUD)
- Glandular cells status posthysterectomy

Organisms

- Trichomonas vaginalis
- Fungal organisms morphologically consistent with *Candida* spp.
- Shift in flora suggestive of bacterial vaginosis
- Bacteria morphologically consistent with *Actinomyces* spp.
- Cellular changes consistent with herpes simplex virus (HSV)
- Cellular changes consistent with cytomegalovirus

Other

- Endometrial cells (in a woman ≥45 years old)

  (Specify if "negative for squamous intraepithelial lesion")

Epithelial Cell Abnormalities

Squamous Cell

- Atypical squamous cells (ASCs)
- Of undetermined significance (ASC-US)
- Cannot exclude HSIL (ASC-H)
- Low-grade squamous intraepithelial lesion (LSIL)
  (Encompassing: Human papillomavirus (HPV)/mild dysplasia/CIN1)
- High-grade squamous intraepithelial lesion (HSIL)
  (Encompassing: Moderate and severe dysplasia, CIS; CIN2 and CIN3)
- With features suspicious for invasion *(if invasion is suspected)*
- Squamous cell carcinoma

Glandular Cell

- Atypical
- Endocervical cells (NOS or specify in comments)
- Endometrial cells (NOS or specify in comments)
- Glandular cells (NOS or specify in comments)
- Atypical
- Endocervical cells, favor neoplastic
- Glandular cells, favor neoplastic
- Endocervical adenocarcinoma in situ
- Adenocarcinoma
- Endocervical
- Endometrial
- Extrauterine
- NOS

Other Malignant Neoplasms *(Specify)*

Adjunctive Testing

Provide a brief description of the test method(s) and report the result so that it is easily understood by the clinician.

Computer-Assisted Interpretation of Cervical Cytology

If case examined by an automated device, specify device and result.

Educational Notes and Comments Appended to Cytology Reports *(Optional)*

Suggestions should be concise and consistent with clinical follow-up guidelines published by professional organizations (references to relevant publications may be included).

ACIS, Adenocarcinoma in situ; *CIN1,* cervical intraepithelial neoplasia grade 1; *CIN2,* cervical intraepithelial neoplasia grade 2; *CIN3,* cervical intraepithelial neoplasia grade 3; *NOS,* not otherwise specified.

From Nayar R, Wilbur DC (Eds.): *The Bethesda System for reporting cervical cytology: definitions, criteria, and explanatory notes,* ed 3, New York, 2015, Springer.

Low-Grade Squamous Intraepithelial Lesion (LSIL)

Criteria

- Cells occur singly, in clusters, and in sheets.
- Cytologic changes are usually confined to squamous cells with "mature" intermediate or superficial squamous cell type cytoplasm.
- Overall cell size is large, with fairly abundant "mature" well defined cytoplasm.
- Nuclear enlargement more than three times the area of normal intermediate nuclei slightly increased nuclear to cytoplasmic ratio.(the nucleus usually occupying less than half the area of the cell)
- Nuclei are generally hyperchromatic but may be normochromatic.
- Nuclei show variable size (anisonucleosis).
- Chromatin is uniformly distributed and ranges from fine or coarsely granular to smudgy or densely opaque .
- Contour of nuclear membranes is variable ranging from smooth to very irregular with notches .
- **Nuclear membranes are visible and their contours show slight irregularity except in cases with HPV effect: the membranes are wrinkled (raisin- like)**

Low-Grade Squamous Intraepithelial Lesion (LSIL)

- Binucleation and multinucleation are common .
- Nucleoli are generally absent or inconspicuous if present.
- Koilocytosis or perinuclear cavitation consisting of a broad, sharply delineated clear perinuclear zone and a peripheral rim of densely stained cytoplasm is a characteristic **viral cytopathic feature** but is not required for the interpretation of LSIL.
- Cells may show increased keratinization with dense, eosinophilic cytoplasm with little or no evidence of koilocytosis.
- Cells with koilocytosis or dense orangeophilia must also show nuclear abnormalities to be diagnostic of LSIL ;perinuclear halos or clearing in the absence of nuclear abnormalities does not qualify for the interpretation of LSIL.

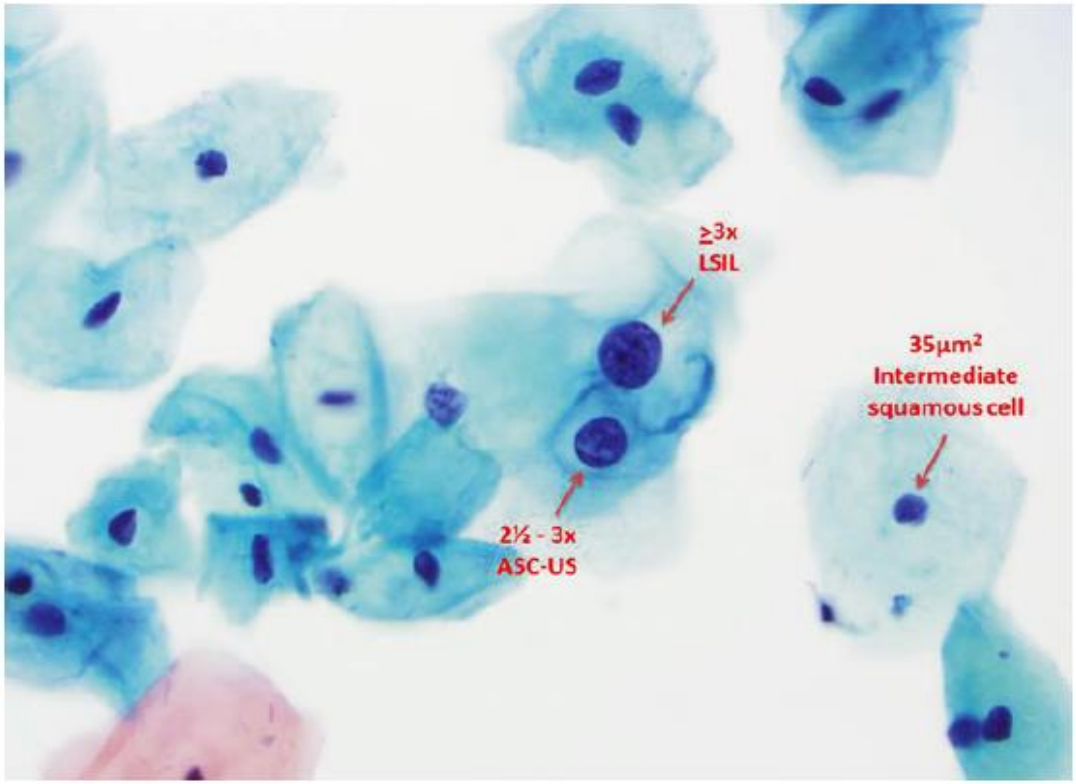
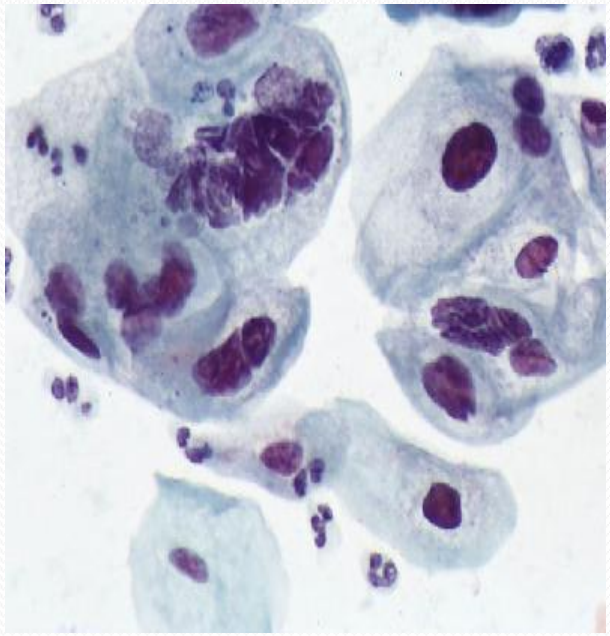


Fig. 5.1 Nuclear area (*LBP*, *ThinPrep*). The nuclear area of an intermediate squamous cell is approximately 35 µm². This is used as a reference to measure abnormal squamous cells such as ASC-US (approximately 100 µm²) and LSIL (approximately 150–175 µm²)



Type of Preparation:
ThinPrep/ LBP

Magnification:
High

Clinical History:
32 year old female, LMP- 2 weeks ago

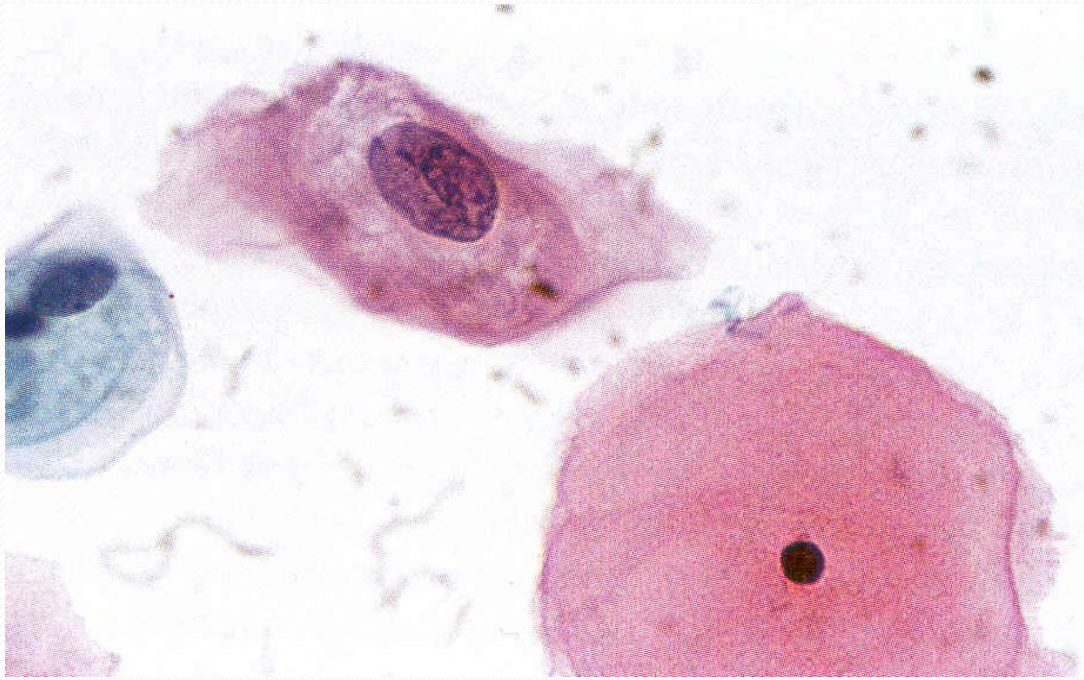
Interpretation:
LSIL

Cytomorphologic Criteria:

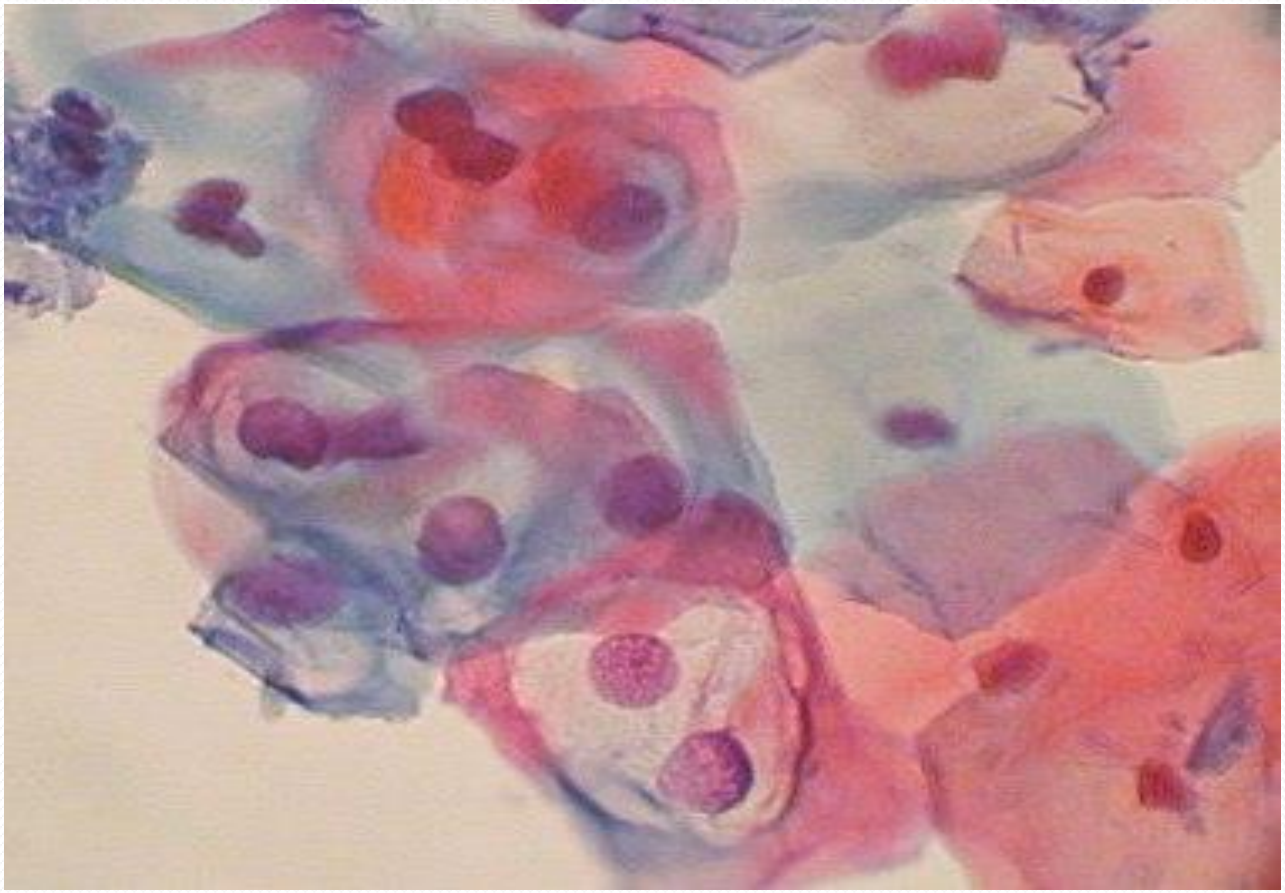
- Large, multinucleated dysplastic cells with "mature" cytoplasm and distinct cell borders.
  - Nucleus shows enlargement which is > 3X intermediate nuclei, hyperchromasia, pleomorphism of size and shape.
  - No nucleoli seen.

Explanatory Notes:
Note the overall large cell size, well-defined cytoplasm and multinucleation.

LSIL, HPV infection



LSIL in HPV changes



Problematic Patterns in LSIL

- An interpretation of LSIL should be based on strict criteria to avoid unnecessary follow-up of women for nonspecific morphologic changes.
- By and large, the interobserver reproducibility of LSIL on cytology is far greater than LSIL (CIN 1) on histology .A few pitfalls and gray areas should be kept in mind.

Mimics of LSIL

1. Pseudokoilocytosis
2. Herpes Cytopathic Effect
3. Radiation Changes

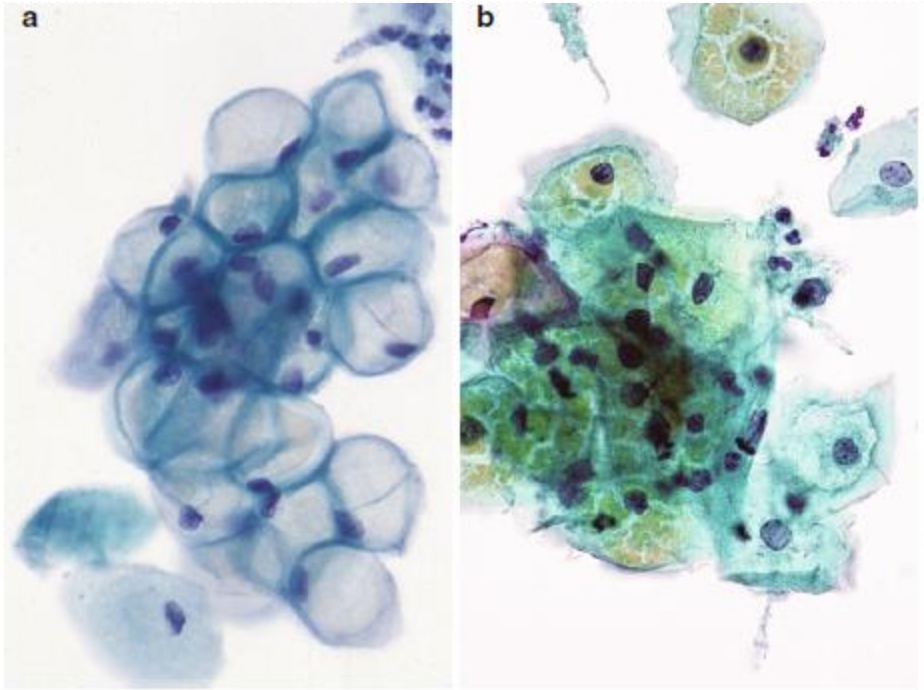


Fig. 5.7 Pseudokoilocytes (*LBP*, *ThinPrep*). Glycogen in squamous cells can give the appearance of "pseudokoilocytosis" (**a**). The halos associated with glycogen often have a yellow refractile appearance (**b**). The nuclear abnormalities required for an interpretation of LSIL are absent. Follow-up in both cases was NILM

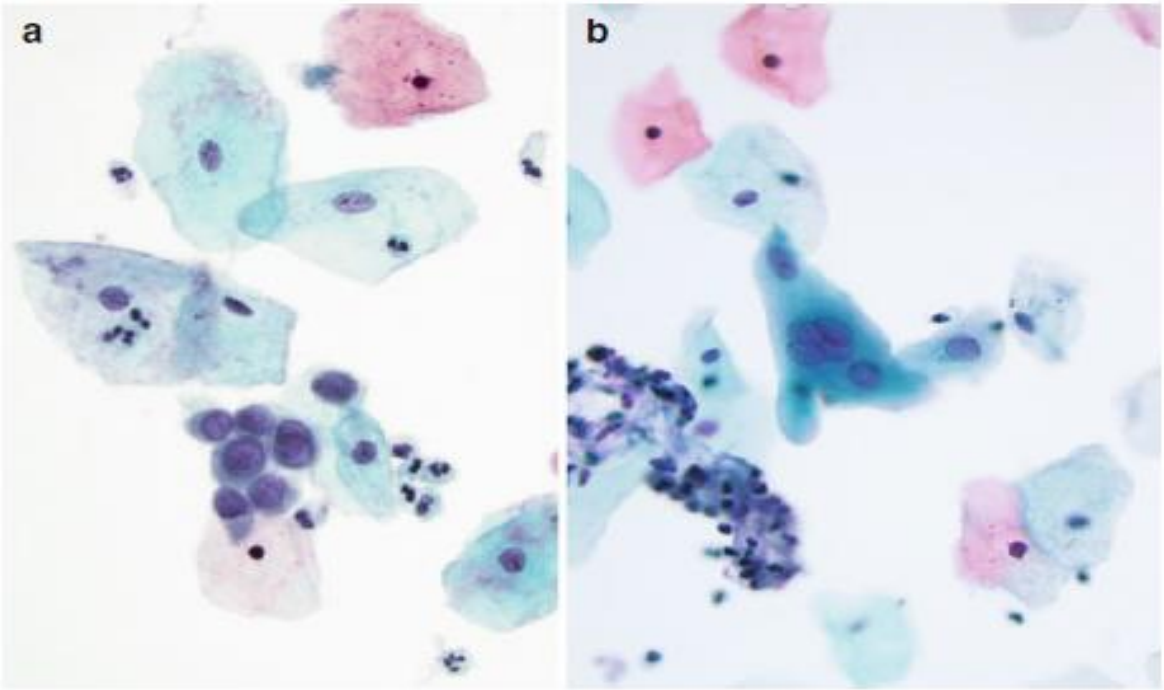


Fig. 5.12 Herpes (*LBP, ThinPrep*). Routine cervical cytology. A 25-year-old woman. Endocervical cell (**a**) and intermediate cells (**b**) showing herpes virus cytopathic effect with clearing of chromatin. These cells can be mistaken for ASC-US or LSIL (**b**) or occasionally HSIL (**a**) when obvious nuclear changes associated with herpes virus infection are not seen. Looking elsewhere on the same slide will usually clarify that the changes are due to herpes cytopathic effect

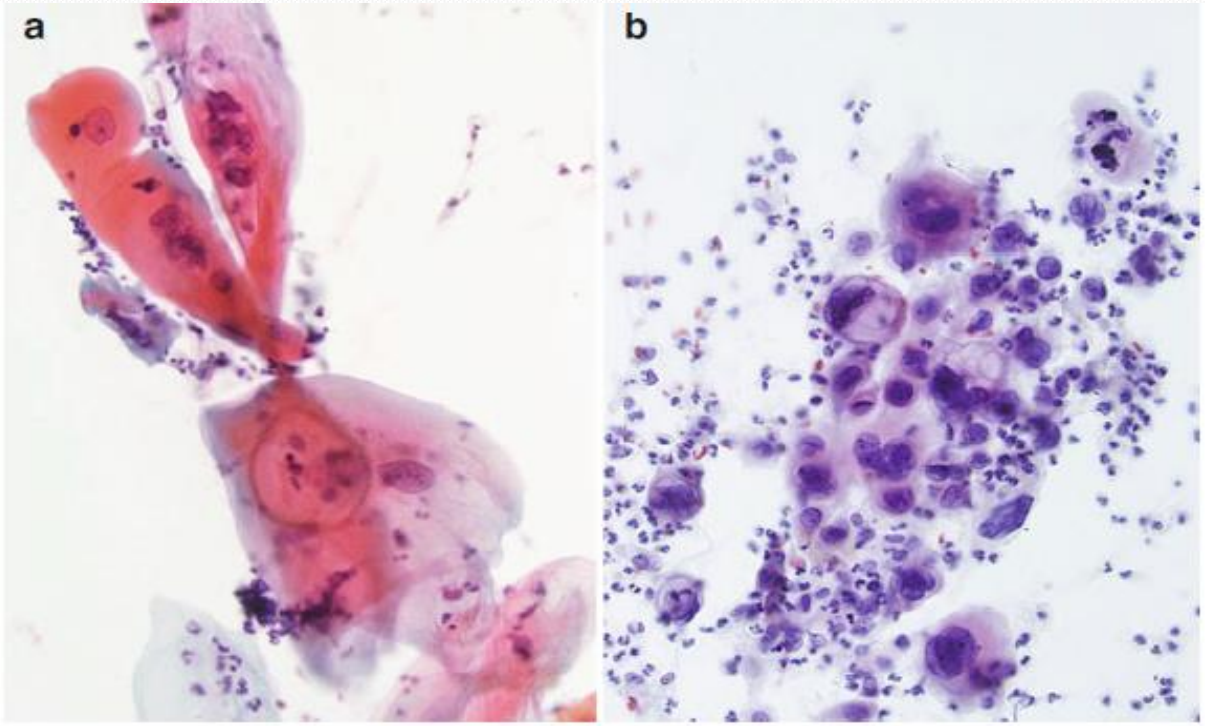


Fig. 5.13 Radiation change versus squamous cell carcinoma (*CP*). (**a**) A 61-year-old woman with a history of squamous cell carcinoma and radiation. Mature squamous cell showing cytomegaly, low N/C ratios, intracytoplasmic vacuoles with neutrophils. The mild enlargement of the nucleus should not be mistaken for LSIL. (**b**) Patients radiated for squamous cell carcinoma may also show tumor cells with radiation effect. These changes should be distinguished from radiation changes in benign cells (**a**)

Keratinized cells of keratinizing invasive SCC

* May be mistaken for LSIL.

* Malignant diathesis may be very important.

Verrucous carinoma

- Is a rare.
- Typically, the smear contains a large quantity of anucleate fragments of think keratinized cytoplasm.
- Nucleated cells tend to contain small hyperchromatic but pyknotic nuclei.
- The distinction from benign reactive hyperkeratosis or HPV infection is difficult.
- Clinical symptoms and signs are important.

High-Grade Squamous Intraepithelial Lesion (HSIL)

- The cells of HSIL are **smaller** and show less cytoplasmic maturity than cells of LSIL cells occur singly, in sheets, or in syncytial-like aggregates .
- Syncytial aggregates of dysplastic cells may result in **hyperchromatic crowded groups (HCG)** of immature cells which should always be carefully assessed for nuclear abnormalities.
- While overall cell size is variable, in general, the cells of HSIL are smaller than those of LSIL. Higher-grade lesions often contain quite small basal-type cells
- **Degree of nuclear enlargement is more variable** than that seen in LSIL.

1. Some HSIL cells have the same degree of nuclear enlargement as in LSIL, but the cytoplasmic area is decreased, leading to a marked increase in the nuclear to cytoplasmic ratio .
2. Other cells have very high nuclear/cytoplasmic ratios, but the actual size of the nuclei may be considerably smaller than that of LSIL, at times even as small as a normal intermediate cell nucleus.

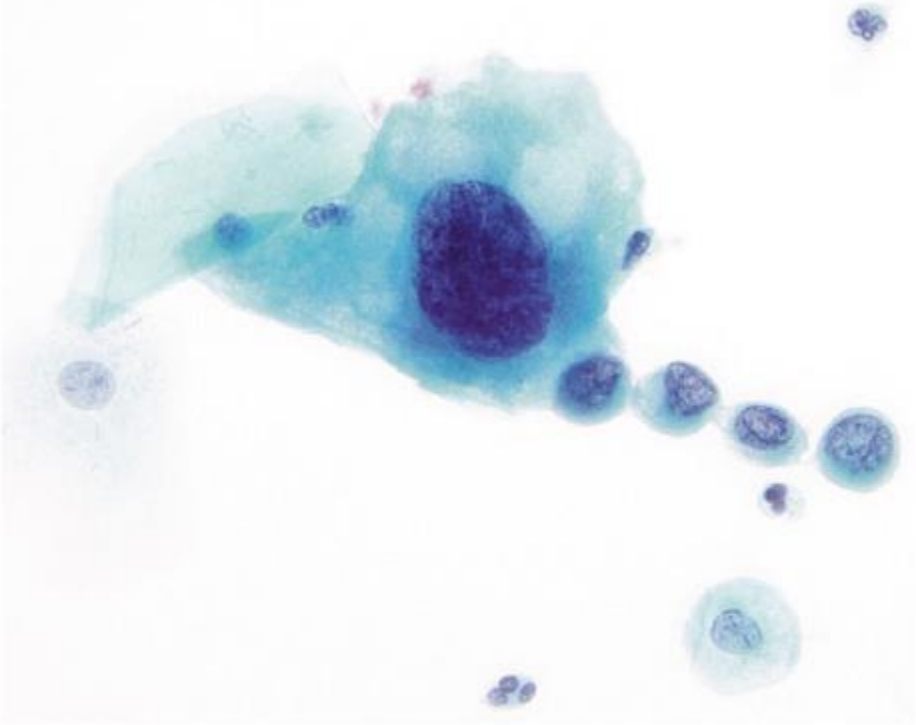


Fig. 5.14 High-grade squamous intraepithelial lesion (HSIL) (*LBP*, *ThinPrep*). There is a mixture of dysplastic cells here, one large LSIL cell, and four adjacent, small, high N/C ratio cells with nuclear features consistent with HSIL

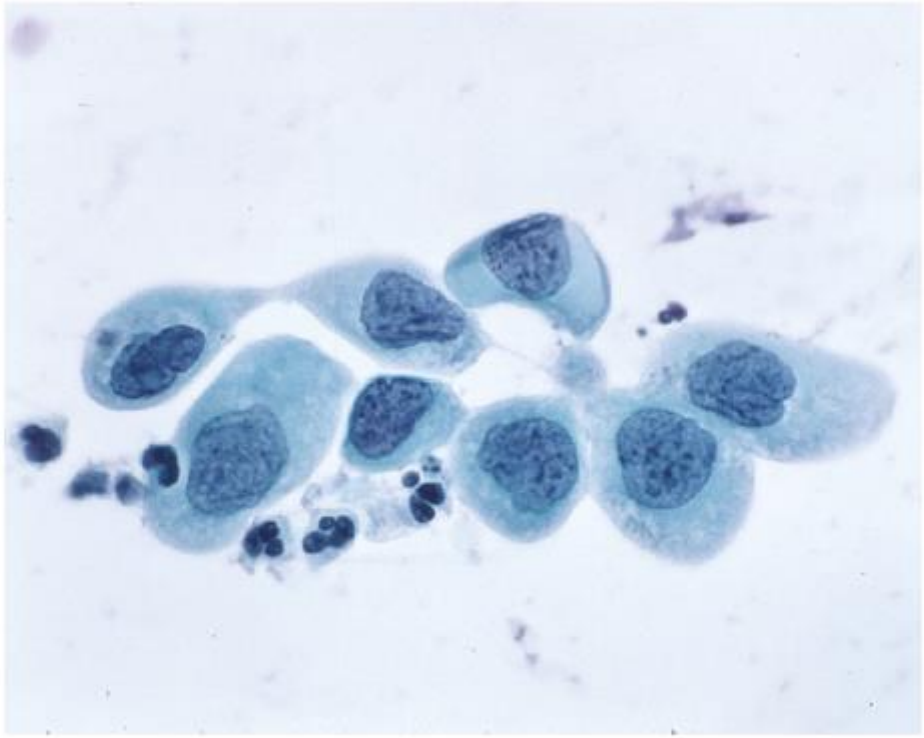


Fig. 5.18 HSIL (*CP*). Nuclear changes are HSIL; however, the nuclear/cytoplasmic (N/C) ratio is on the low end for HSIL

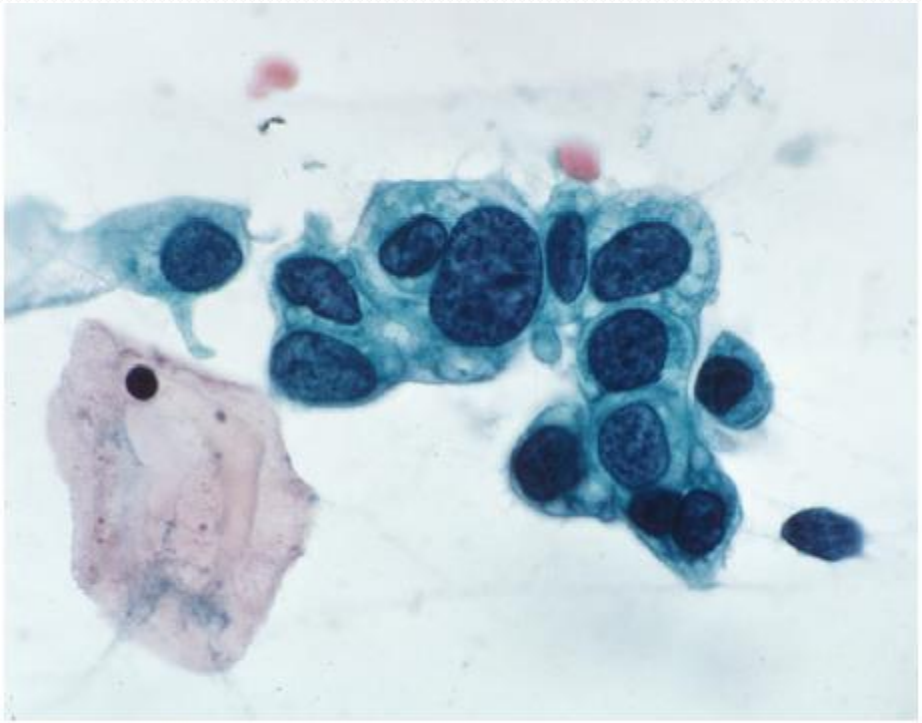


Fig. 5.19 HSIL (*CP*). There is variation in nuclear size and shape, and the cells have delicate cytoplasm

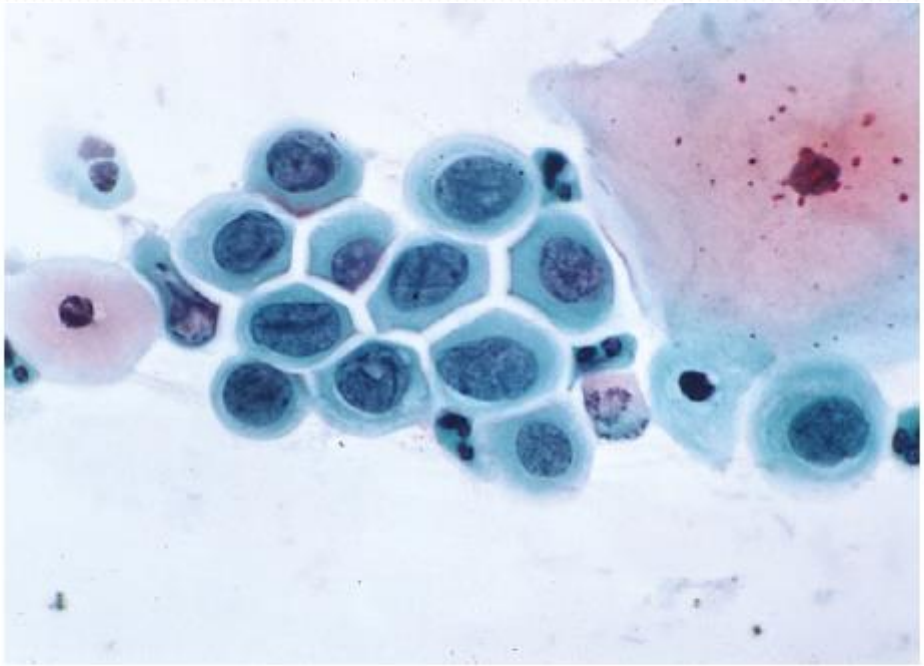
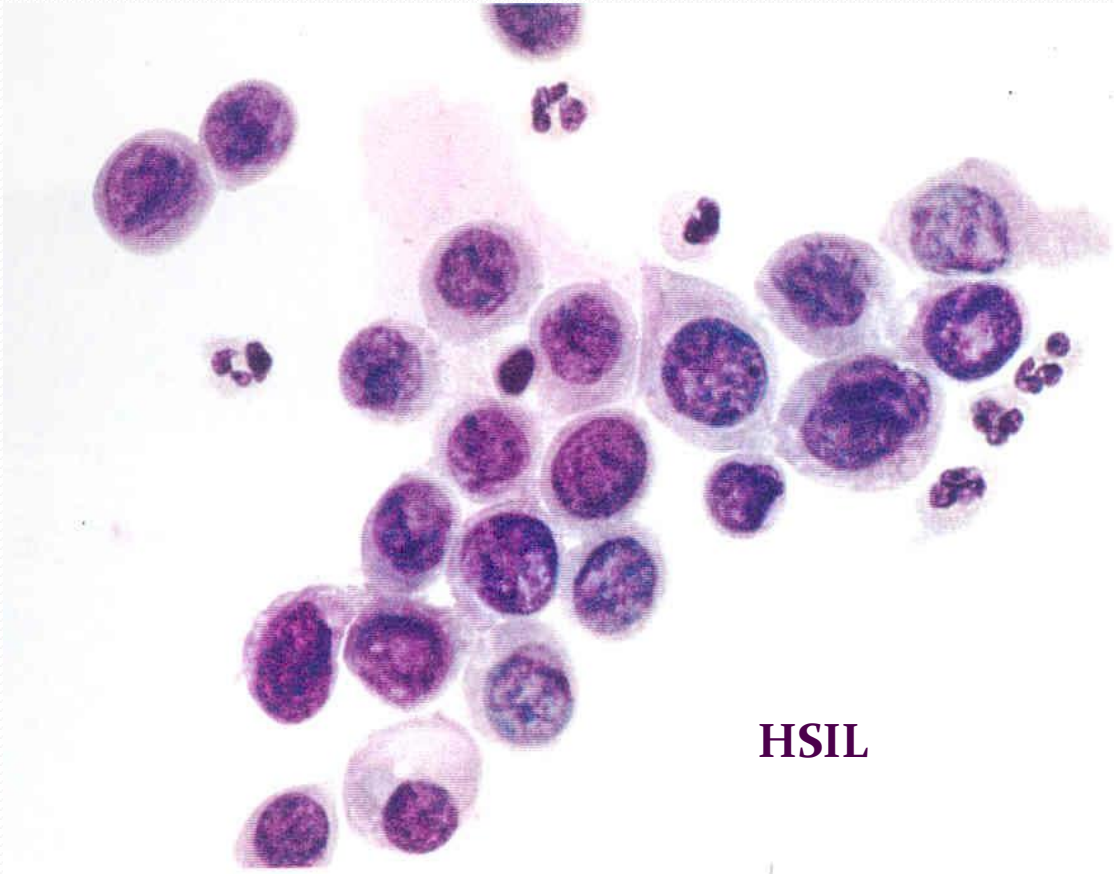
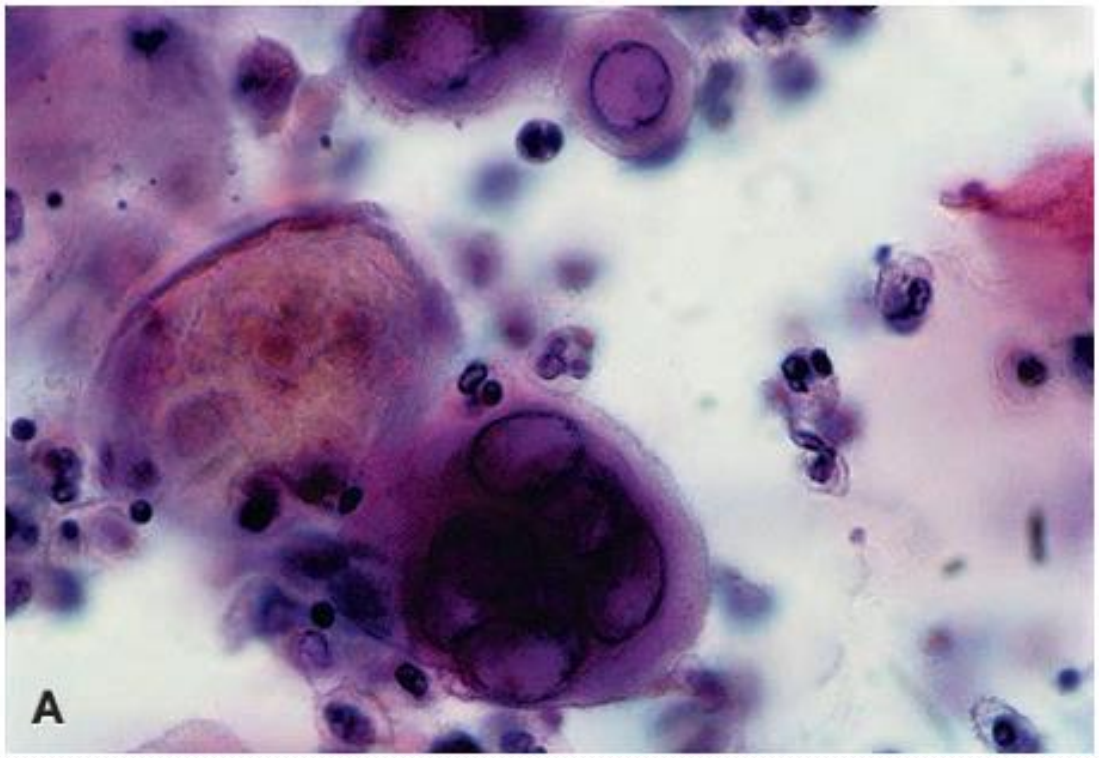


Fig. 5.20 HSIL (*CP*). HSIL with "metaplastic" or dense cytoplasm, in contrast to that seen in the syncytial groups of HSIL (Fig. 5.19)

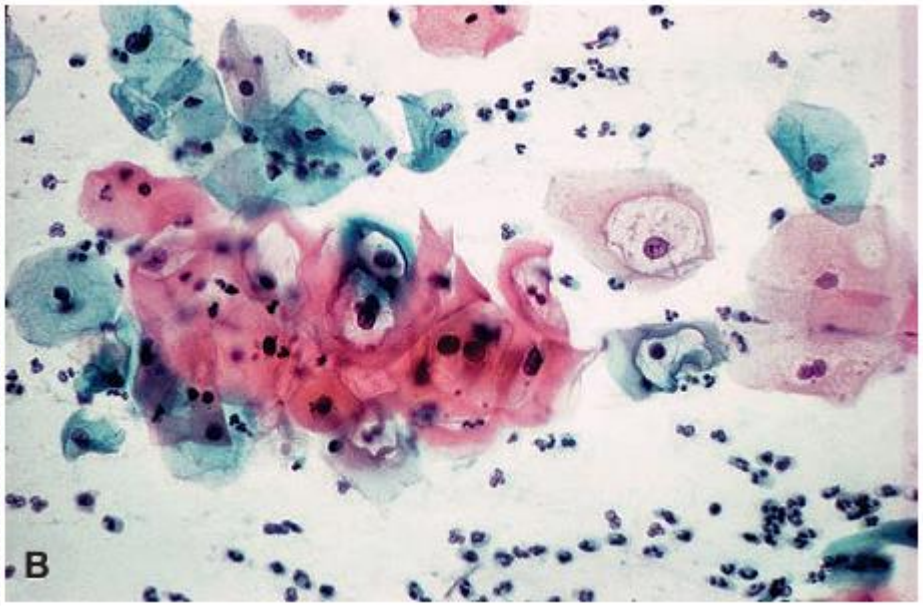


HSIL

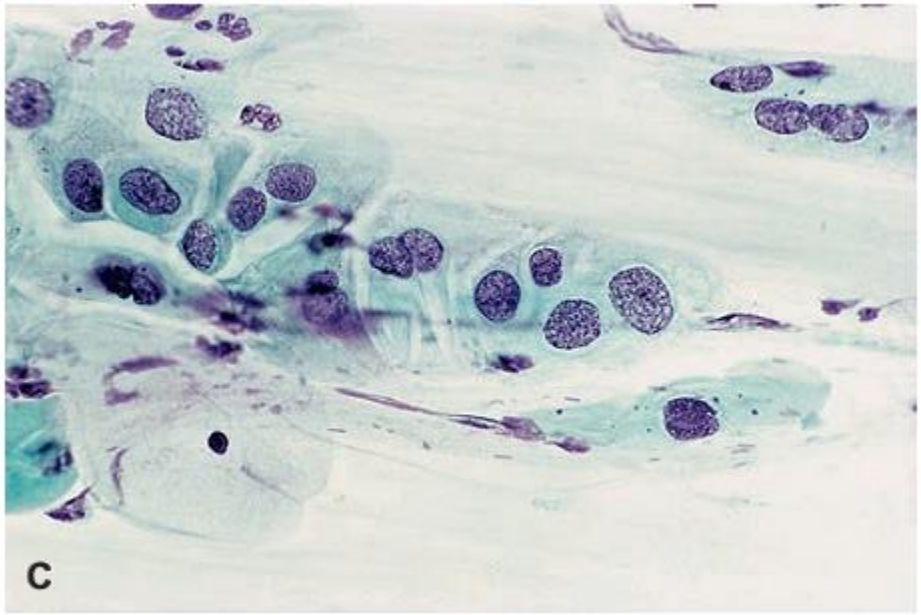
A, herpes simplex infection



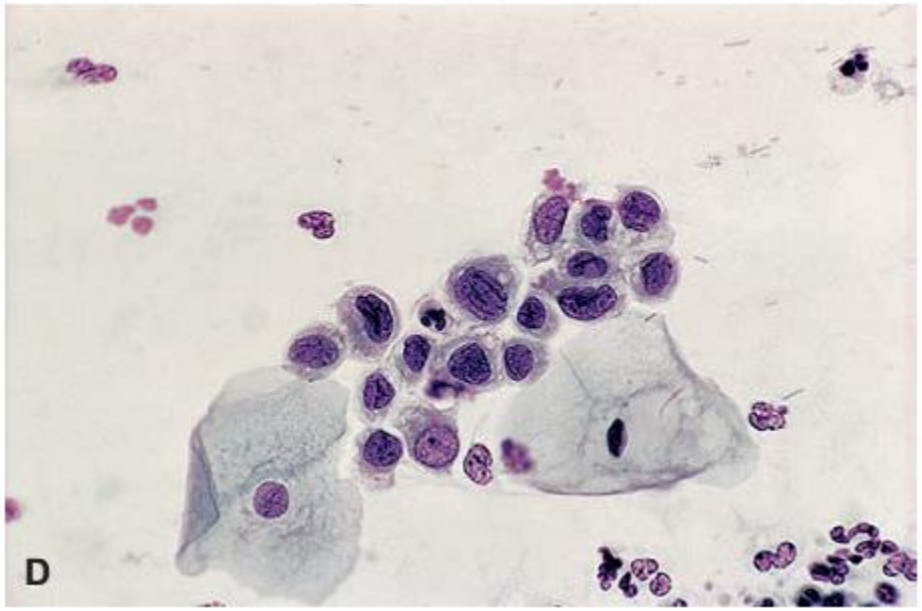
B, LSIL;



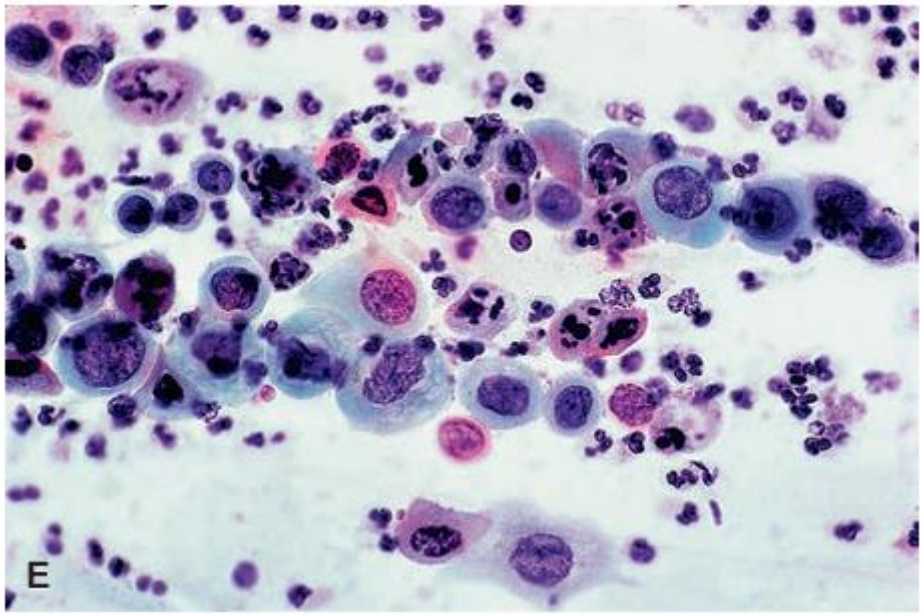
C, LSIL (1);



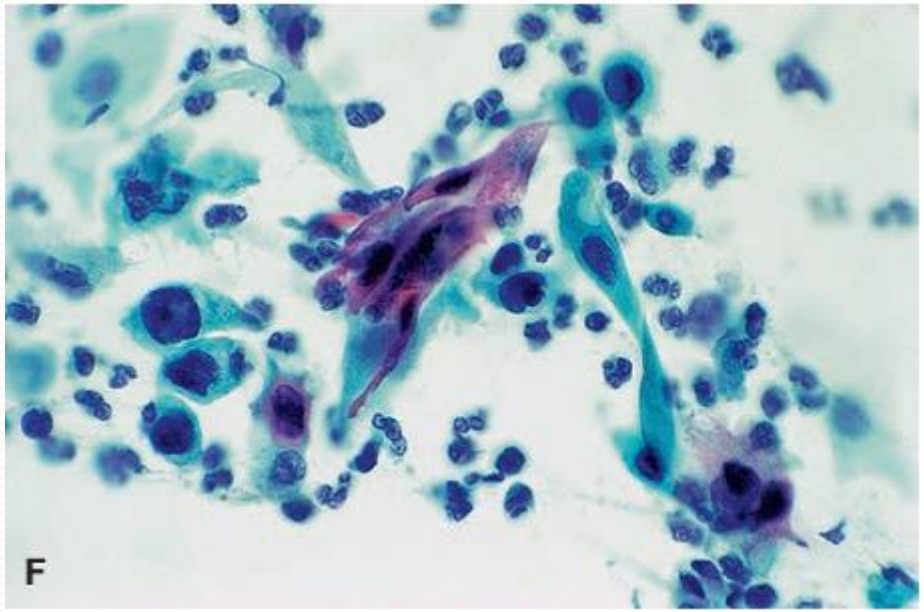
D, HSIL;



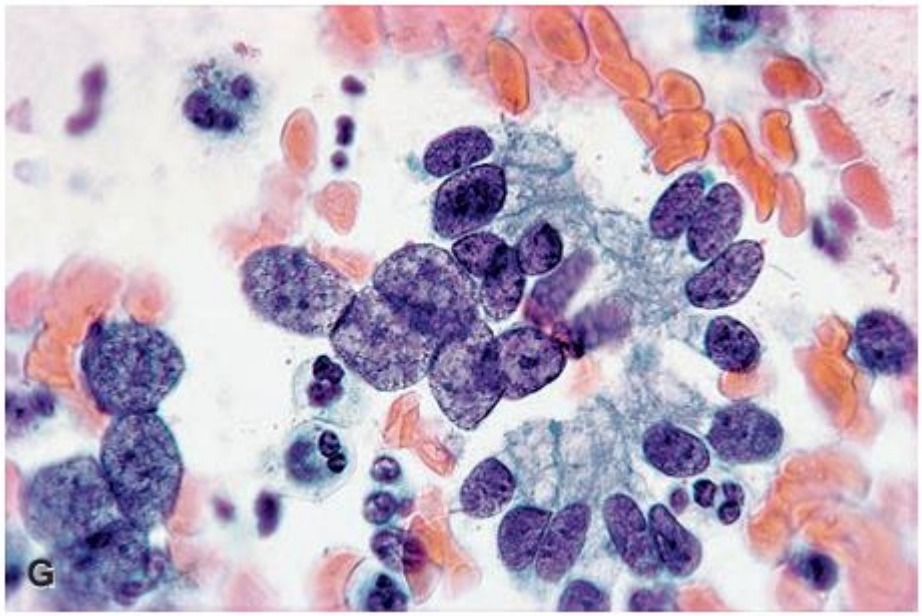
E, HSIL;



F, invasive squamous cell carcinoma;



G, adenocarcinoma.



Problematic Patterns in HSIL

Syncytial Aggregates/Hyperchromatic Crowded Groups

- The differential diagnosis for syncytial groups includes a variety of **benign** entities such as:

1. **immature squamous metaplasia**
2. **atrophy**
3. **benign endocervical or endometrial cells**

- **SIL with Endocervical Gland Involvement**

SIL with Endocervical Gland Involvement

When SIL, especially HSIL, extends into the endocervical glands, resultant cell clusters may be misinterpreted as being of glandular origin(AIS).

- **Clues that the lesion is actually of squamous origin include:**

centrally located cells showing spindling or whorling with flattening of the nuclei at the periphery of the cluster, giving a smooth,rounded border .

- **Clue in favor of AIS:**

1. peripheral palisading of cells
2. nuclear pseudostratification

- Nucleoli may be visualized in HSIL within glands on liquid-based preparations, but are not as prominent as in AIS.

It must always be remembered that HSIL and AIS can coexist in a single specimen.

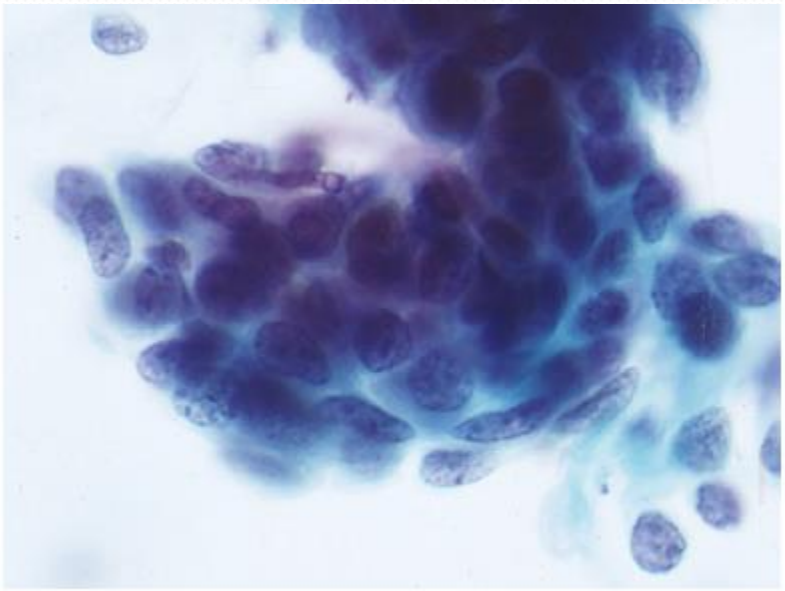


Fig. 5.31 HSIL with extension into endocervical gland space (*LBP*, *SurePath*). Note flattening of cells at the edge of the cluster, a feature that favors HSIL over a glandular lesion

HSIL Pattern Resembling Endometrial Cells and Repair

- HSIL may rarely present in cervical specimens in a pattern which resembles *endometrial stromal* or *glandular cells* or as *squamous repair.*

HSIL Pattern Resembling Repair

HSIL: Abnormal Stripped Nuclei

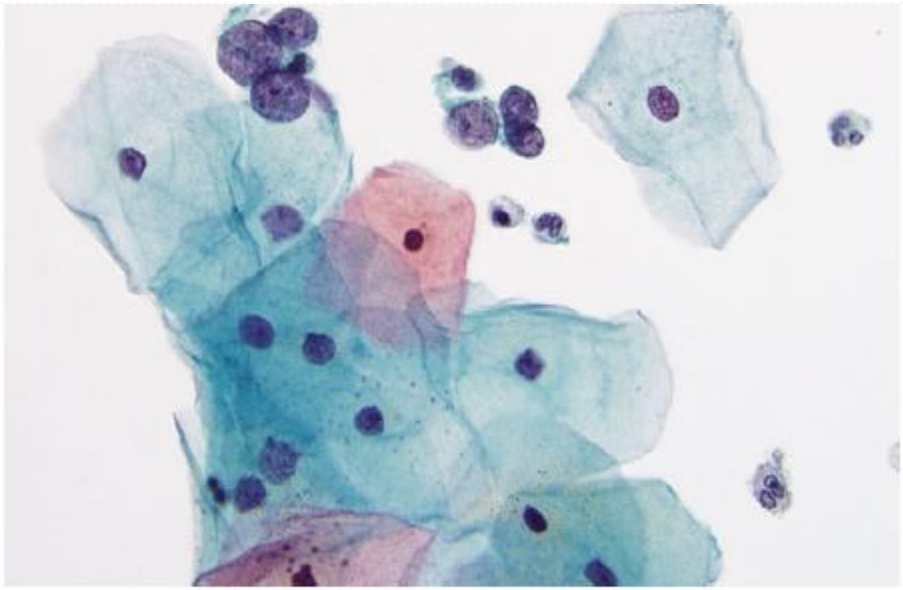


Fig. 5.38 HSIL (*LBP*, *ThinPrep*). Abnormal, large stripped nuclei are seen that are considerably bigger than the intermediate cell nuclei. Such cells should elicit a search for classic, intact HSIL cells elsewhere on the same preparation. These stripped nuclei should be distinguished from endometrial cells or the stripped clusters of atrophic nuclei that are often seen in *LBPs* in the background of atrophy

A 20 year old G1P1 presents for contraception. She has had annual Pap's (all normal) since her pregnancy at age 16. She has had 7 partners since age 15 and a new partner for 3 months.
What would you advise her about cervical cancer screening?

1. No Pap test now but at age 21.
2. Pap test now and annually because of multiple partners.
3. HPV testing now.
4. Pap test and HPV testing at age 21

The mother of a 17 year old comes in with her daughter because she found her OCPs. The daughter told her she had been sexually active for 2 years with multiple partners. Mother wants her tested for all STI's and wants her to have a Pap test. She has not received the HPV vaccine series.

What do you do?

1. question the daughter without the mother.
2. STI test her now, no Pap.
3. Pap and STI test her now.
4. Pap and HPV at age 21.
5. STI testing and Pap at age 21.

2012 Consensus Guidelines
When to begin screening

Women younger than 21 Years: No screening.

1. Saslow et al. ACS/ASCCP/ASCP. CA Cancer J Clin 2012; 62: 147-72 and AJCP 2012; 137: 516 – 542.
2. Moyer VA, et al. USPSTF. Ann Int Med 2012; 156: 880-91
3. ACOG Practice Bulletin #131, November 2012
4. NCCN Cervical Cancer Screening Guideline v. 2-2012. www.NCCN.org

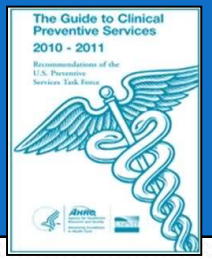
A 21 year old comes in for her first cervical cancer screening. She is sexually active. Assuming Pap is negative, when is her next screening?

1. 1 year, Pap only.
2. 2 years, Pap only.
3. 3 years, Pap only
4. 3 years, Pap and HPV testing.

2012 Consensus Guidelines: Screening Frequency

Age 21-29. Testing with cytology (Pap) alone every 3 years.

- Co-testing should NOT be performed for women under age 30.
- Reflex HPV testing for ASCUS only.



1. Saslow et al. ACS/ASCCP/ASCP. CA Cancer J Clin 2012; 62: 147-72 and AJCP 2012; 137: 516 – 542.
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3. ACOG Practice Bulletin #131, November 2012
4. NCCN Cervical Cancer Screening Guideline v. 2-2012. www.NCCN.org

Risk in young women, not exactly adolescents

- The risk of cervical cancer is 10-fold higher than risk in adolescents (1.4/100,000).
  - *High enough to justify screening.*
    - ~ 55,000 Pap's must be obtained for every cervical cancer diagnosed.
  - *Low enough to allow observation* for minor cytologic abnormalities

A 21 year old had a negative Pap 2 years ago while pregnant. What screening should be done now?

1. Pap now.
2. Pap and HPV testing now.
3. No Pap needs to be done now.

21 year old G2P0 on Depo. She presents for her first cervical cancer screening. Multiple partners for 3 years. Pap shows ASC-US, reflex HPV type 16 + What is the next step?

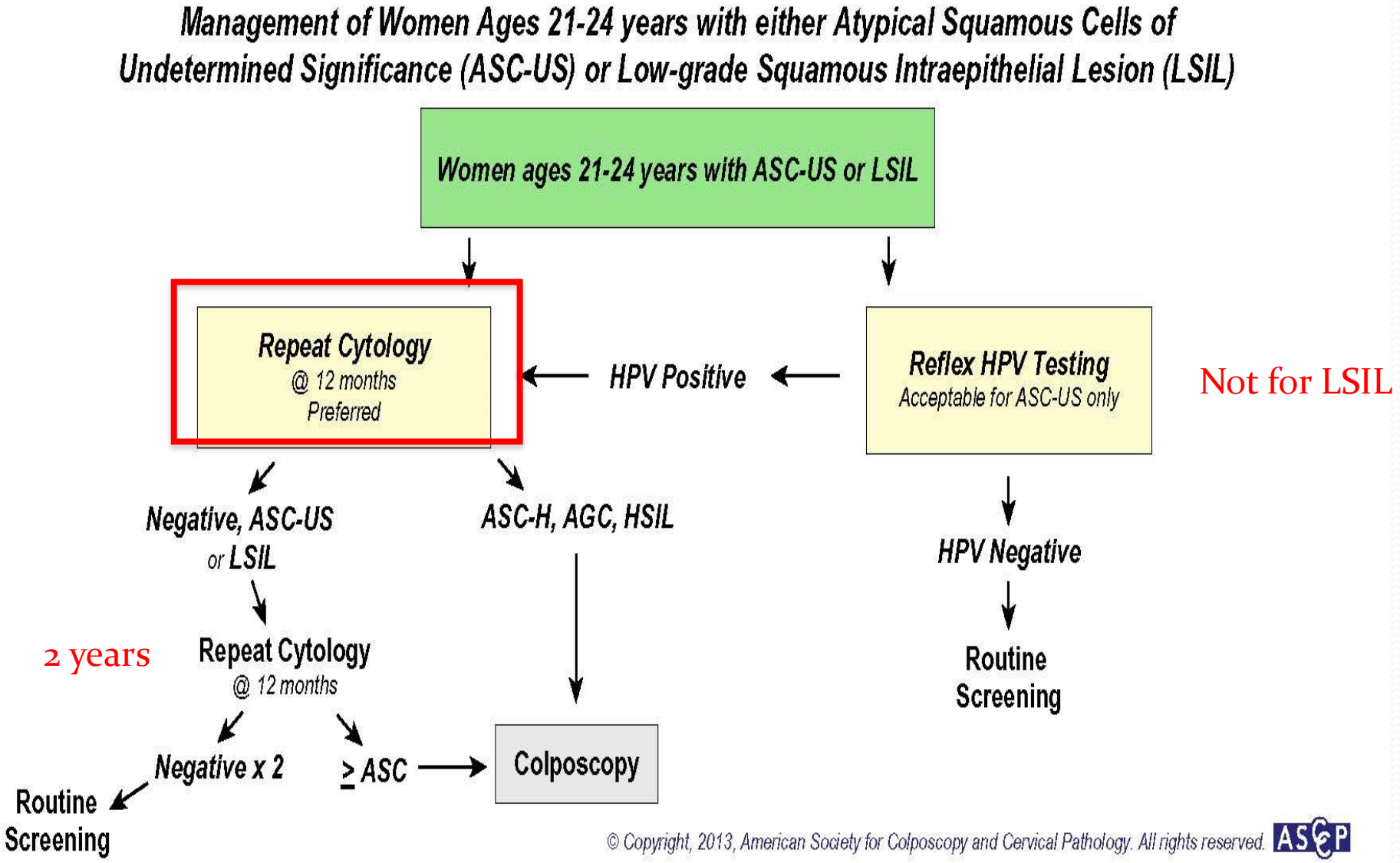
Immediate colposcopy.

Pap in one year.

Pap and HPV in one year.

Routine screening (Pap in 3 years).

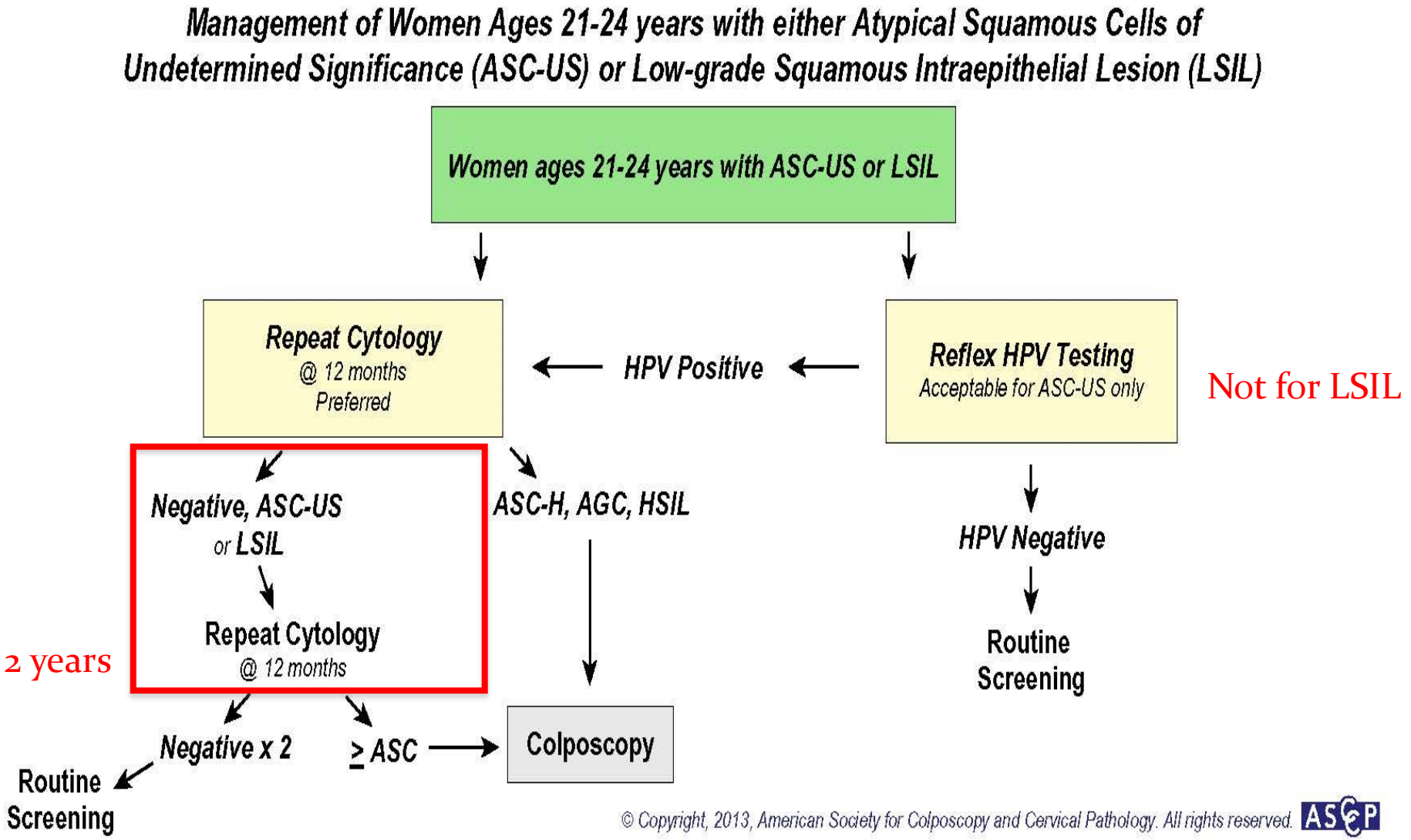
ASCUS or LSIL in young women – very common cytologic diagnosis in this age group



She returns in one year. Her Pap is still ASCUS. What is the next step?

1. Immediate colposcopy.
2. Pap in one year.
3. Pap and HPV in one year.
4. Routine screening.

ASCUS or LSIL in young women



A 31 year old has not had a Pap test in 3 years. What is her "preferred" cervical cancer screening?

1. Co-testing (Pap and HPV) now.
2. Pap only now.
3. No screening now.

2012 Consensus Guidelines: Screening Frequency

Age 30-65. Testing with cytology alone every 3 years or co-testing with cytology and testing for high-risk HPV types every 5 years.

- Co-testing "preferred" and cytology "acceptable" by all but USPSTF.
  - USPSTF says either acceptable.

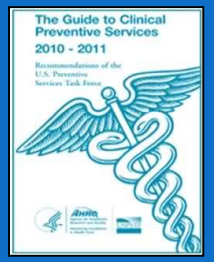
American Cancer Society

ASCCP American Society for Colposcopy and Cervical Pathology. The society for lower genital tract disease since 1964

ASCP American Society for Clinical Pathology

NCCN National Comprehensive Cancer Network

The American College of Obstetricians and Gynecologists • Women's Health Care Physicians • 1951



45 year old G2P2 presents as a new patient. No history of abnormal Paps. Last Pap 3 years ago. New sexual partner for 6 mos. Monogamous prior.

What is the ***preferred*** cervical cancer screening ?

1. Pap now and then annually since she has a new partner.
2. Pap test/HPV co-testing now and if both negative, repeat every 5 years.
3. Pap test now and if normal, every 3 years.
4. No cervical cancer screening is needed today.

A 51 year old postmenopausal woman had a LEEP 2 years ago for CIN 3. 2 negative Pap's since then. She had a TAH for fibroids 6 months ago. What would you advise her about vaginal cancer screening?

1. She does not need further Pap tests.
2. She should have Pap tests until age 65 and then discontinue.
3. Routine age based screening for 20 years.

Management of Women with Biopsy-confirmed Cervical Intraepithelial Neoplasia - Grade 2 and 3 (CIN2,3) *

*Management options will vary in special circumstances or if the woman is pregnant or ages 21-24

†If CIN2,3 is identified at the margins of an excisional procedure or post-procedure ECC, cytology and ECC at 4-6mo is preferred, but repeat excision is acceptable and hysterectomy is acceptable if re-excision is not feasible.

Adequate Colposcopy

Either Excision† or Ablation of T-zone *

Inadequate Colposcopy or Recurrent CIN2,3 or Endocervical sampling is CIN2,3

Diagnostic Excisional Procedure†

Cotesting *at 12 and 24 months*

2x Negative Results

Repeat cotesting *in 3 years*

Routine screening

20 years

Any test abnormal

Evaluation for recurrent disease

Colposcopy
With endocervical sampling

Figure 16

You are considering stopping cervical cancer screening in a 65 year old woman who has never had an abnormal Pap. She has not had co-testing but had 2 Pap's in the past 10 years with the most recent one 6 years ago.

Is her screening “adequate” enough to stop screening?

1. Yes
2. No

Adequate screening: ACOG, ASCCP, ACS*

- *Adequate negative prior screening is defined as:*
  - 3 consecutive negative cytology results

    OR
  - 2 consecutive negative co-tests

  - done within the 10 years before stopping screening with *the most recent test within 5 years.*

**USPSTF does not define adequate screening*

A 71 year old widow is dating several widowed men. She has always had negative Pap's. Does she need screening?

1. No

1. Yes

1. Depends if any of the men had a wife with cervical cancer.

A 69 year old woman's husband died 5 years ago. She has no hx abnormal Pap's and her last Pap was at age 66. New sexual partner.

What would you advise her about cervical cancer screening?

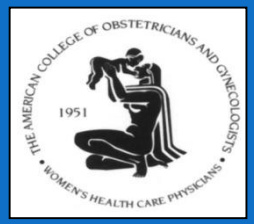
1. Pap test only now.
2. Pap and HPV testing now.
3. Pap test 3 years after resuming sexual activity.
4. No further Pap test is necessary.

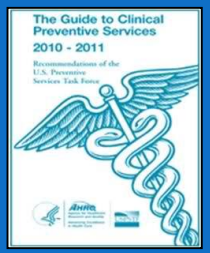
2012 Consensus Guidelines: When to stop screening

Women older than 65 Years: ***After adequate negative prior screening results.***

Women with a history of CIN2, CIN3, or AIS should continue routine age-based screening for at least 20 years.

Screening should not be resumed for any reason, even if a woman reports having a new sexual partner.





1. Saslow et al. ACS/ASCCP/ASCP. CA Cancer J Clin 2012; 62: 147-72 and AJCP 2012; 137: 516 – 542.

1. Moyer VA, et al. USPSTF. Ann Int Med 2012; 156: 880-91
2. ACOG Practice Bulletin #131, November 2012
3. NCCN Cervical Cancer Screening Guideline v. 2-2012. www.NCCN.org

A 55 year old had a hysterectomy for fibroids 3 years ago. She has had 3 normal Pap's since then. She had normal Pap's prior to the TAH. What would you advise her about *vaginal* cancer screening?

- Continue age-based "routine" screening with Pap's.
- Continue age-based "routine" screening with co-testing.
- Stop Pap's now.
- Stop Pap's now but start again if she has a new sexual partner.

2012 Consensus Guidelines: Women with prior hysterectomy

No screening is necessary. Applies to women without a cervix and without a history of CIN2, CIN3, AIS, or cancer in the past 20 years. Evidence of adequate negative prior screening is not required (USPSTF requires).

Screening should not be resumed for any reason, including if a woman reports having a new sexual partner.

1. Saslow et al. ACS/ASCCP/ASCP. CA Cancer J Clin 2012; 62: 147-72 and AJCP 2012; 137: 516 – 542.
2. Moyer VA, et al. USPSTF. Ann Int Med 2012; 156: 880-91
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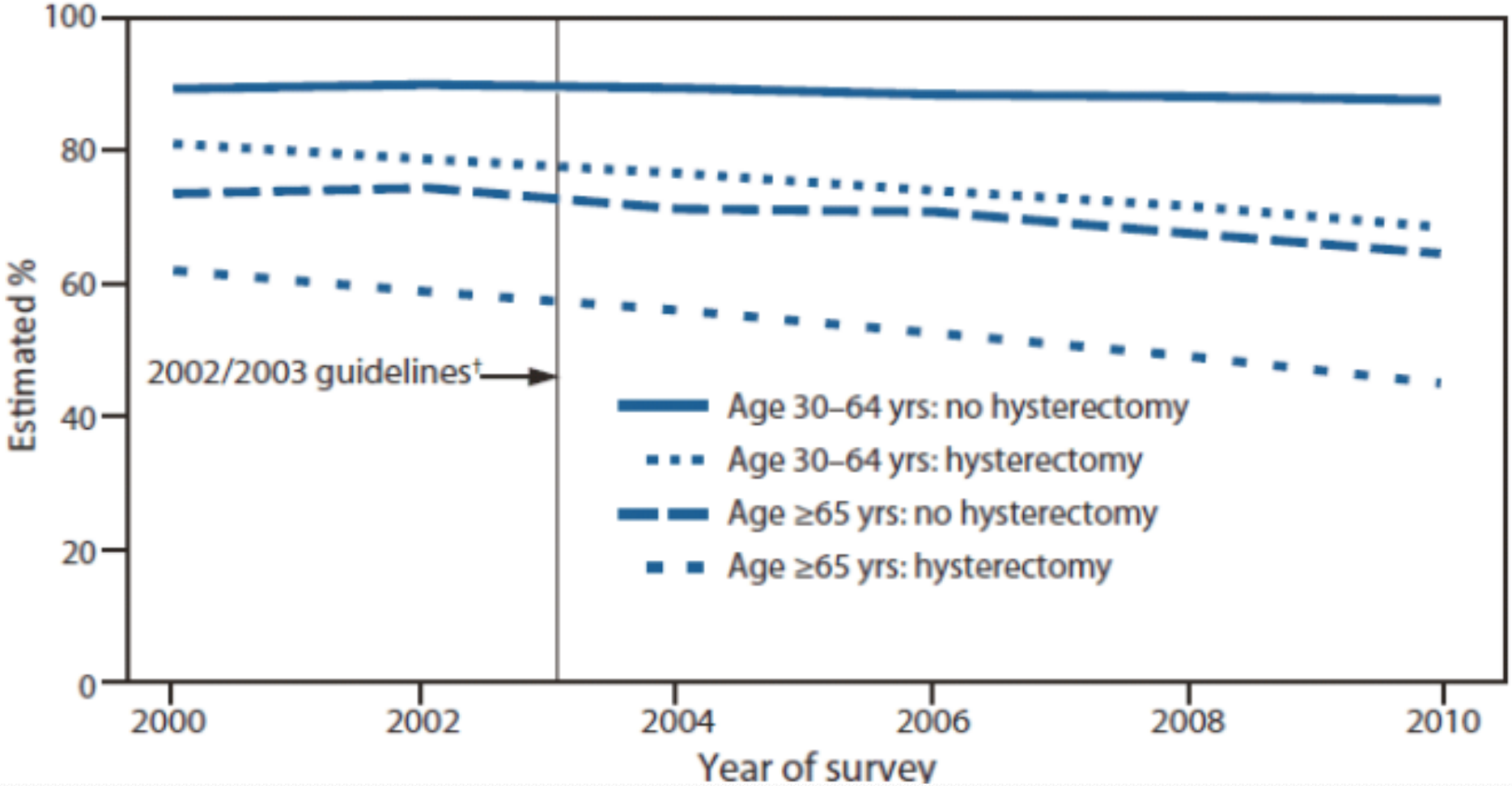
Percentage of women who had a Pap test within 3 years

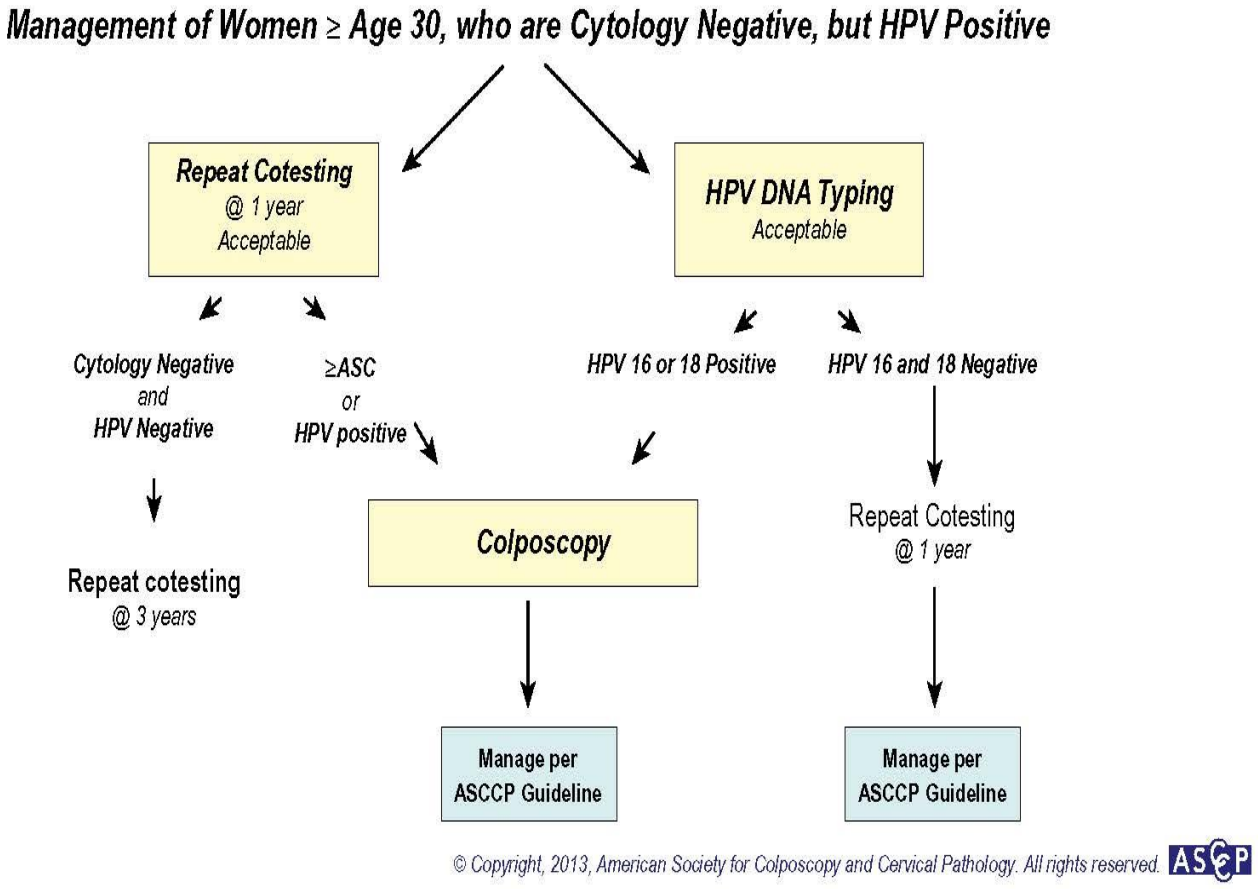


A 35 year old G1P1 presents after routine co-testing showing a *negative Pap test and positive HPV testing*. She was previously screened with cytology only but has not had screening in 5 years. She's had multiple sexual partners in the past year but before was monogamous for 15 years

What is the next step??

1. Routine screening in 5 years.
2. Immediate colposcopy.
3. Repeat HPV testing in one year.
4. Repeat both cytology and HPV testing (cotesting) in

2013 ASCCP consensus guidelines
Women ≥ age 30, Pap -, HPV +

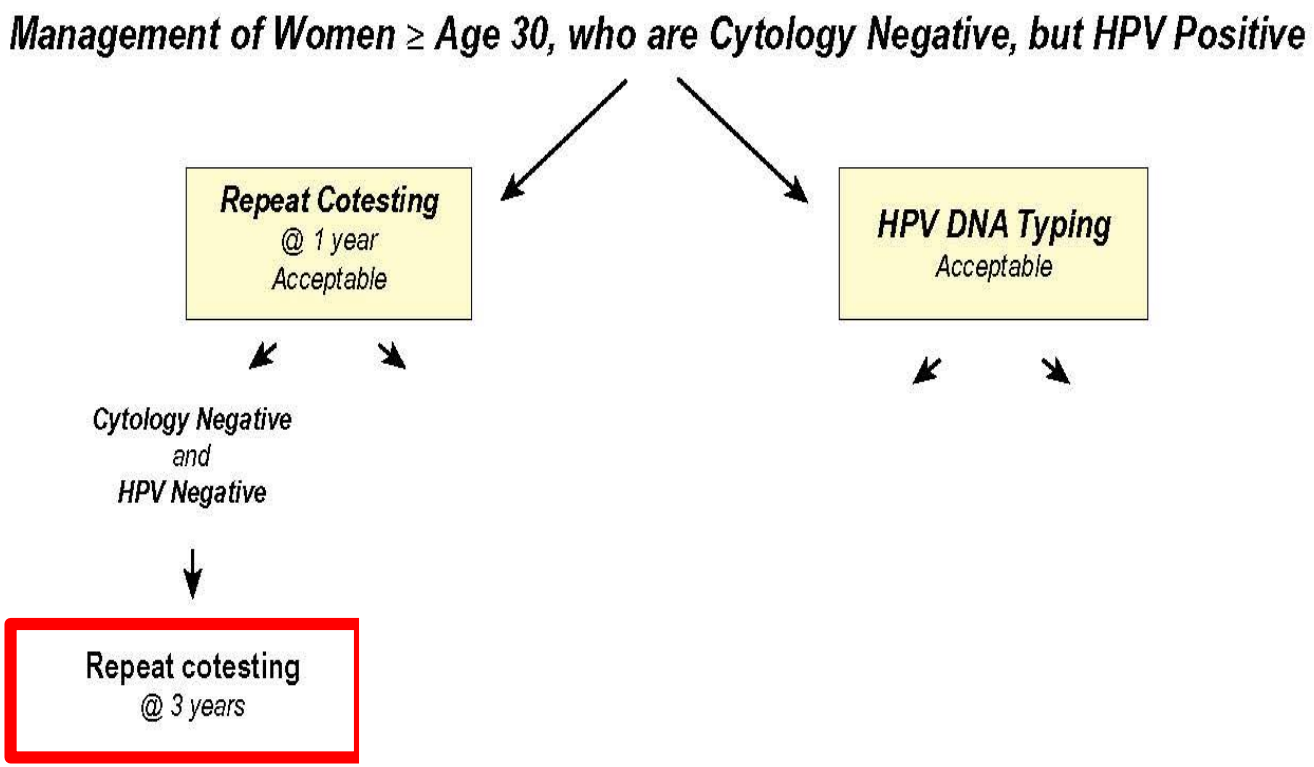


Wright TC, et al. J Lower Genital Tract Disease, 2007; 11: 201-222 and 223-239

She returns in one year. Cotesting results show Pap –
HPV –
What is the next step?

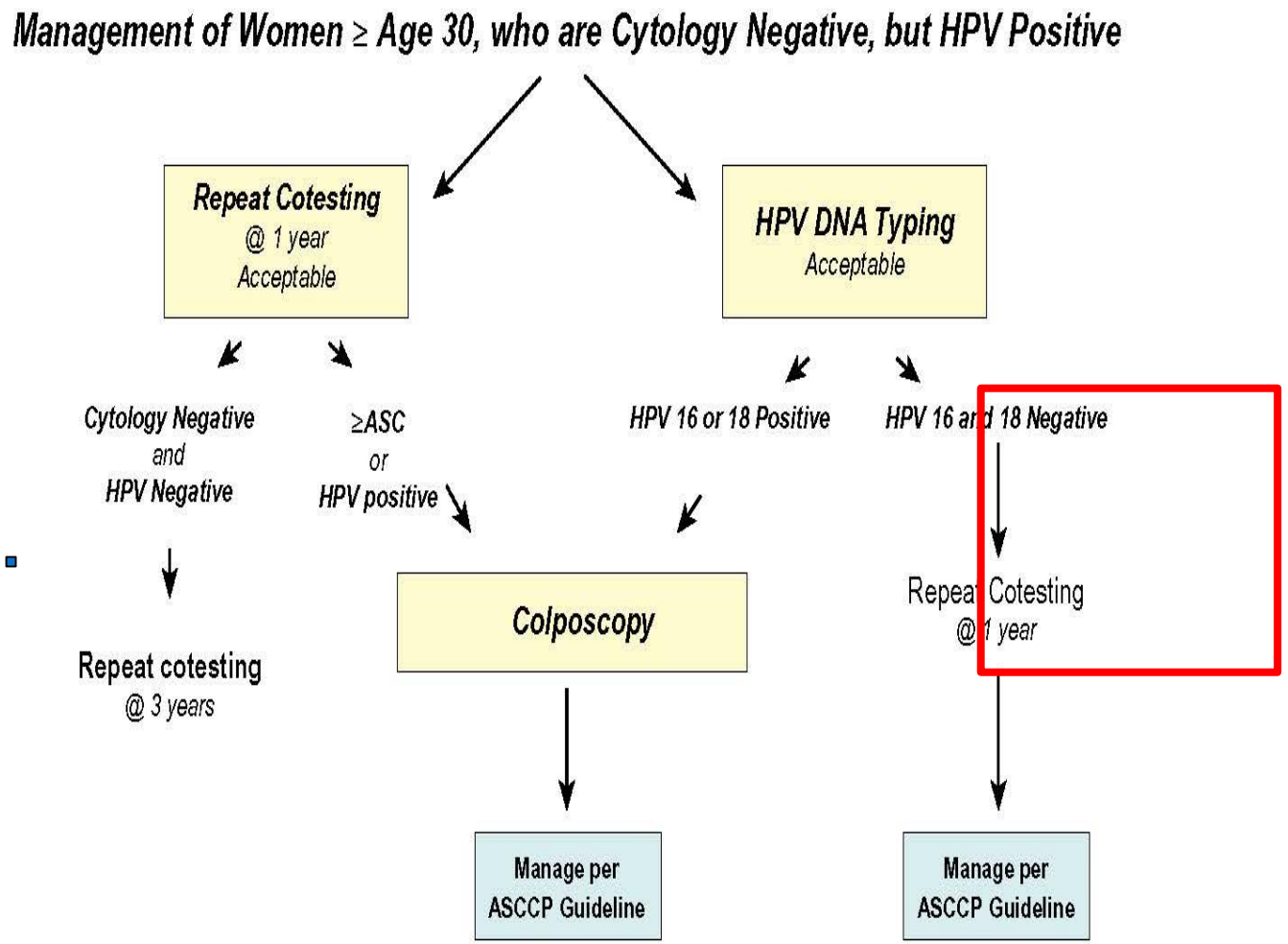
1. Repeat cotesting in one year.
2. Repeat cotesting in 3 years.
3. Repeat cotesting in 5 years.
4. Pap only in 3 years.

2013 ASCCP consensus guidelines Women ≥ age 30, Pap -, HPV +



42 year old woman is Pap – HPV +
Your lab uses genotyping and she is HPV 16 and 18 negative.
What is the next step?

1. Repeat cotesting in one year.
2. Repeat cotesting in 3 years.
3. Repeat cotesting in 5 years.
4. Colposcopy.



Her cotesting in one year is Pap – HPV 16 +. What do you do now?

Immediate colposcopy.

Repeat cotesting in 1 year.

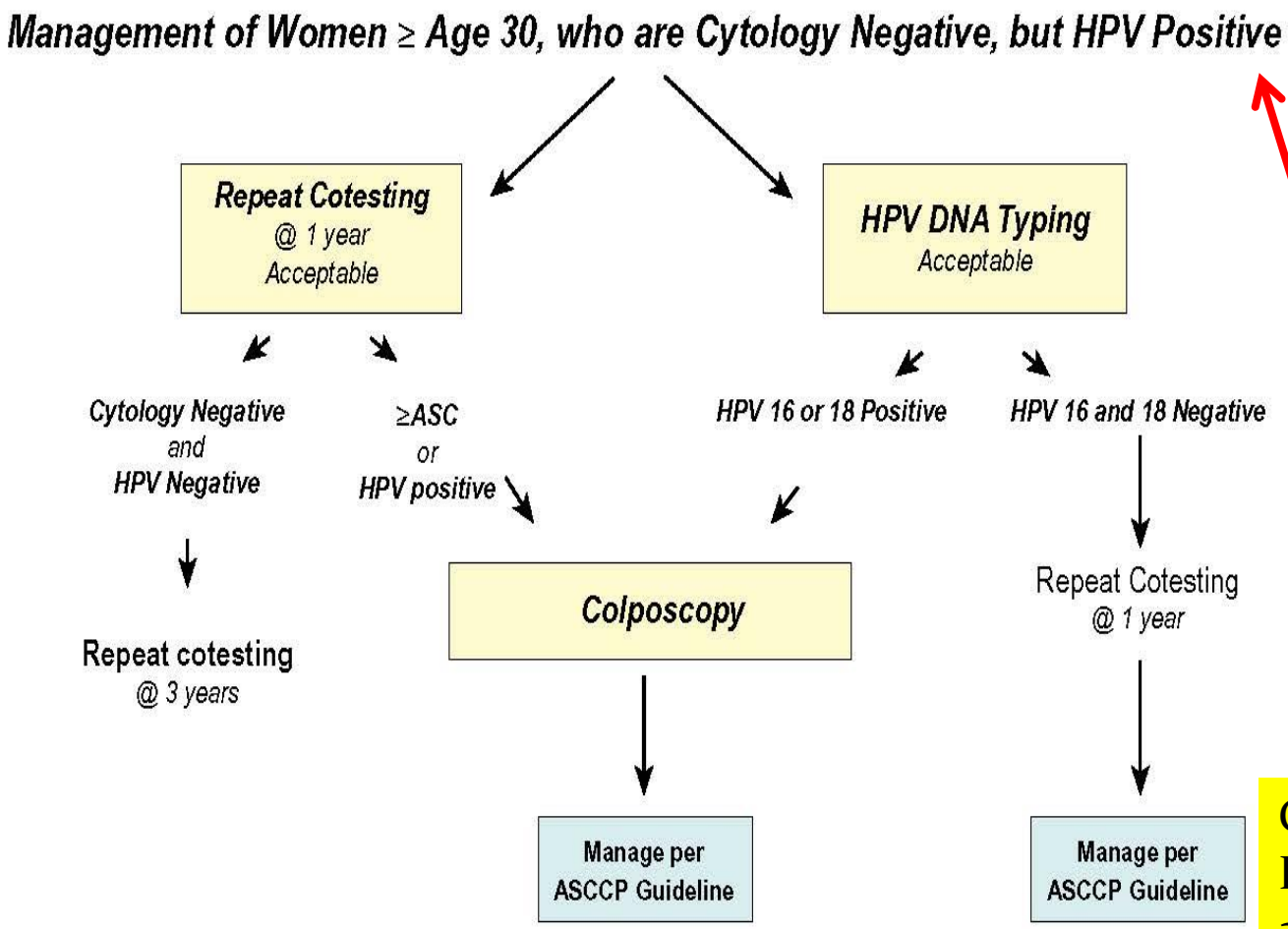
Repeat cotesting in 3 years.

Return to routine screening.

Unsatisfactory Pap

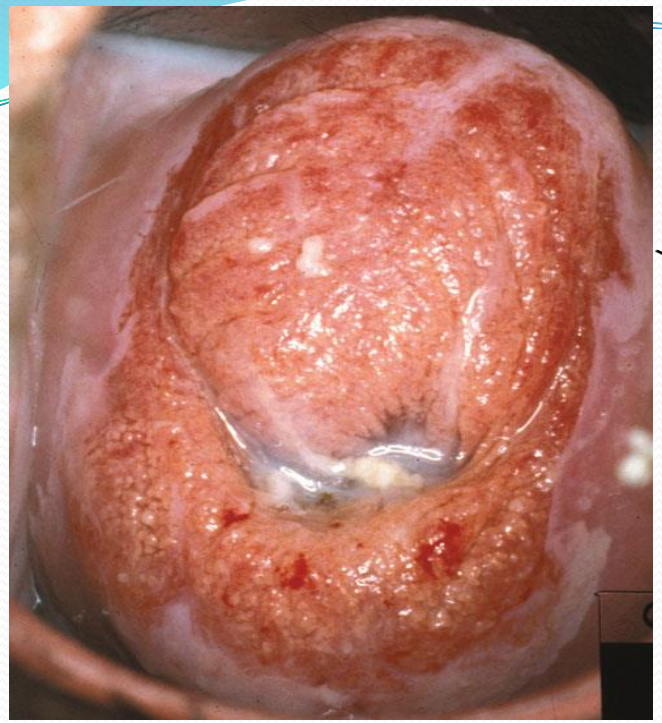
- Unsat Pap's are *unreliable* for detecting cervical abnormalities.
- Conventional Pap: "obscuring factors" rendered Pap unsatisfactory.
- ThinPrep: can control for obscuring factors.
  - Unsat Pap's arise largely from insufficient squamous cells.
  - ***Caution: a negative HPV test cannot be relied on as it may be falsely negative because of an insufficient sample.***

2013 ASCCP consensus guidelines
Women ≥ age 30, Pap -, HPV +



Go back to Initial algorithm

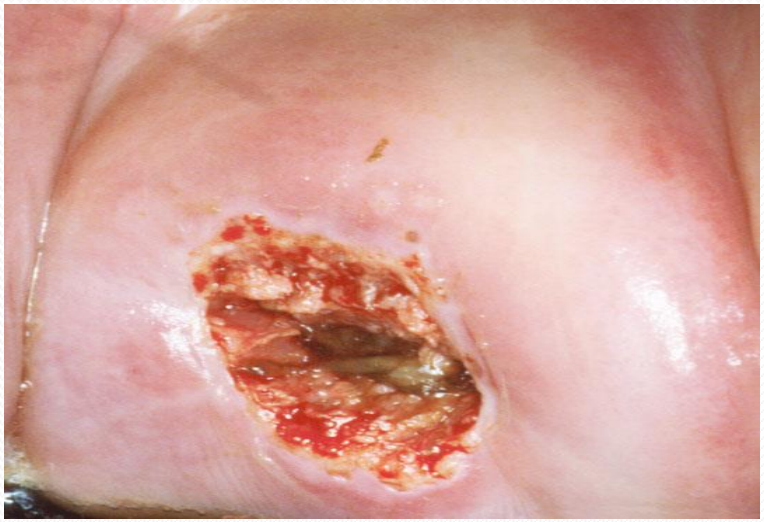
Life cycle of the SCJ

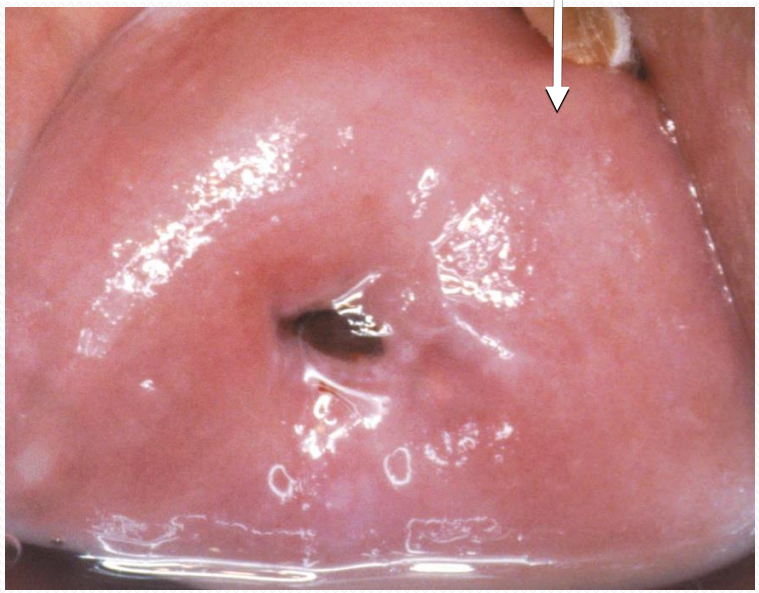


Adolescents and young women

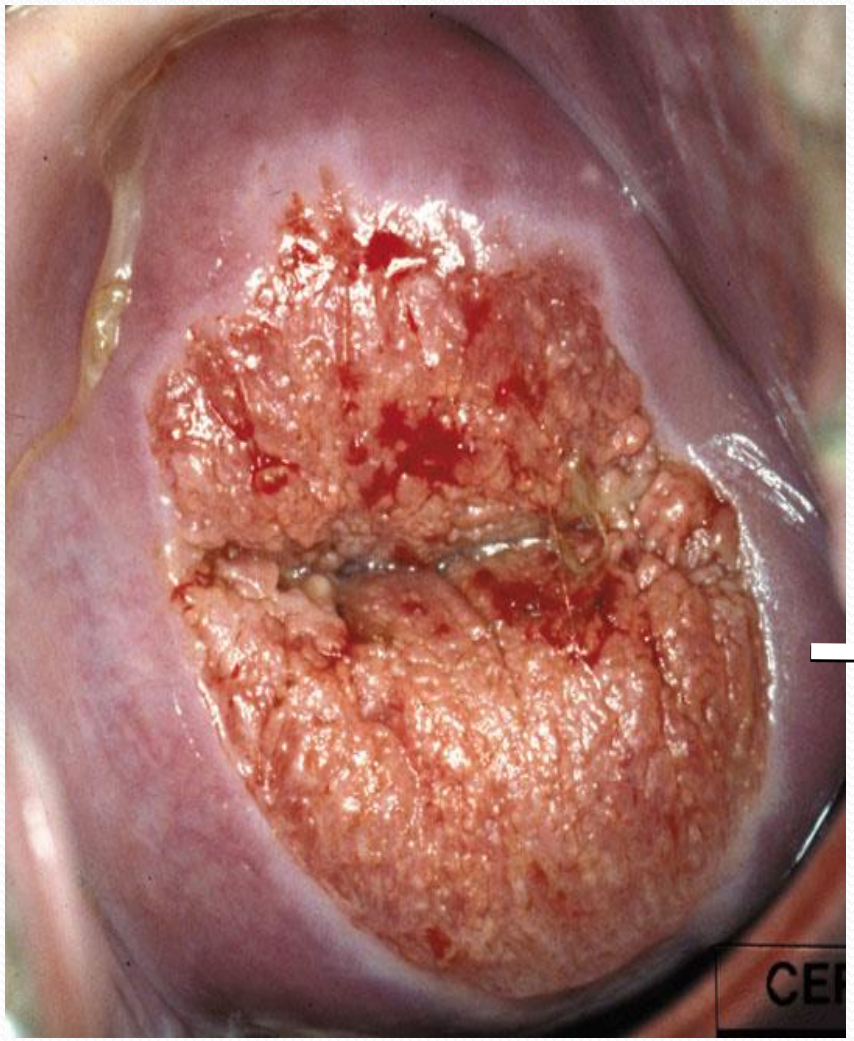
Reproductive years

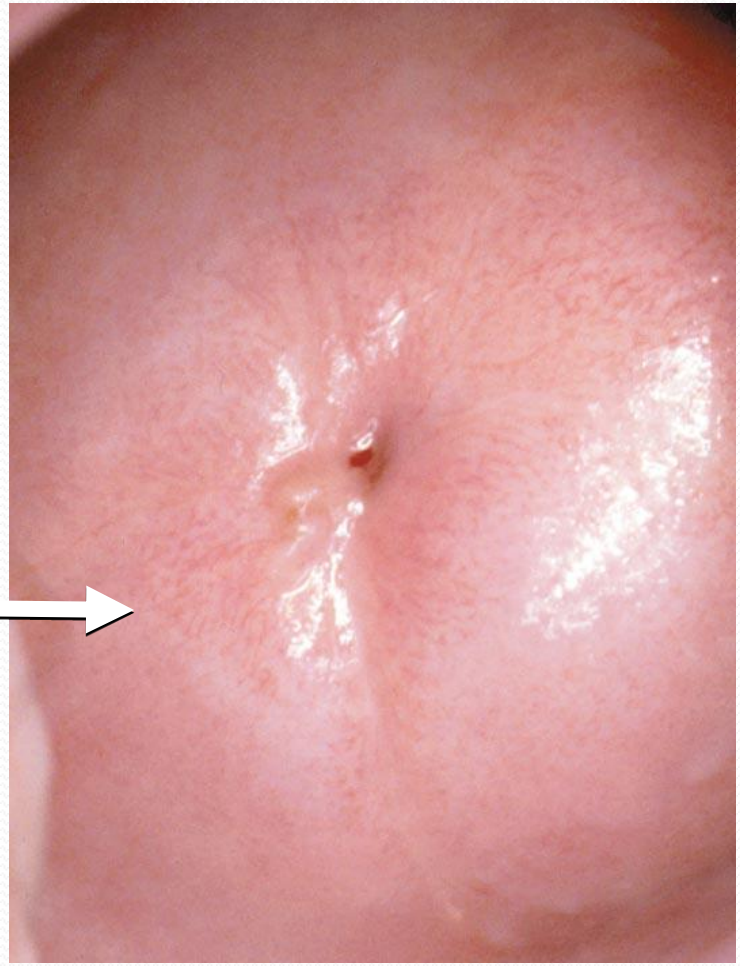
Postmenopause





The cervical transformation process

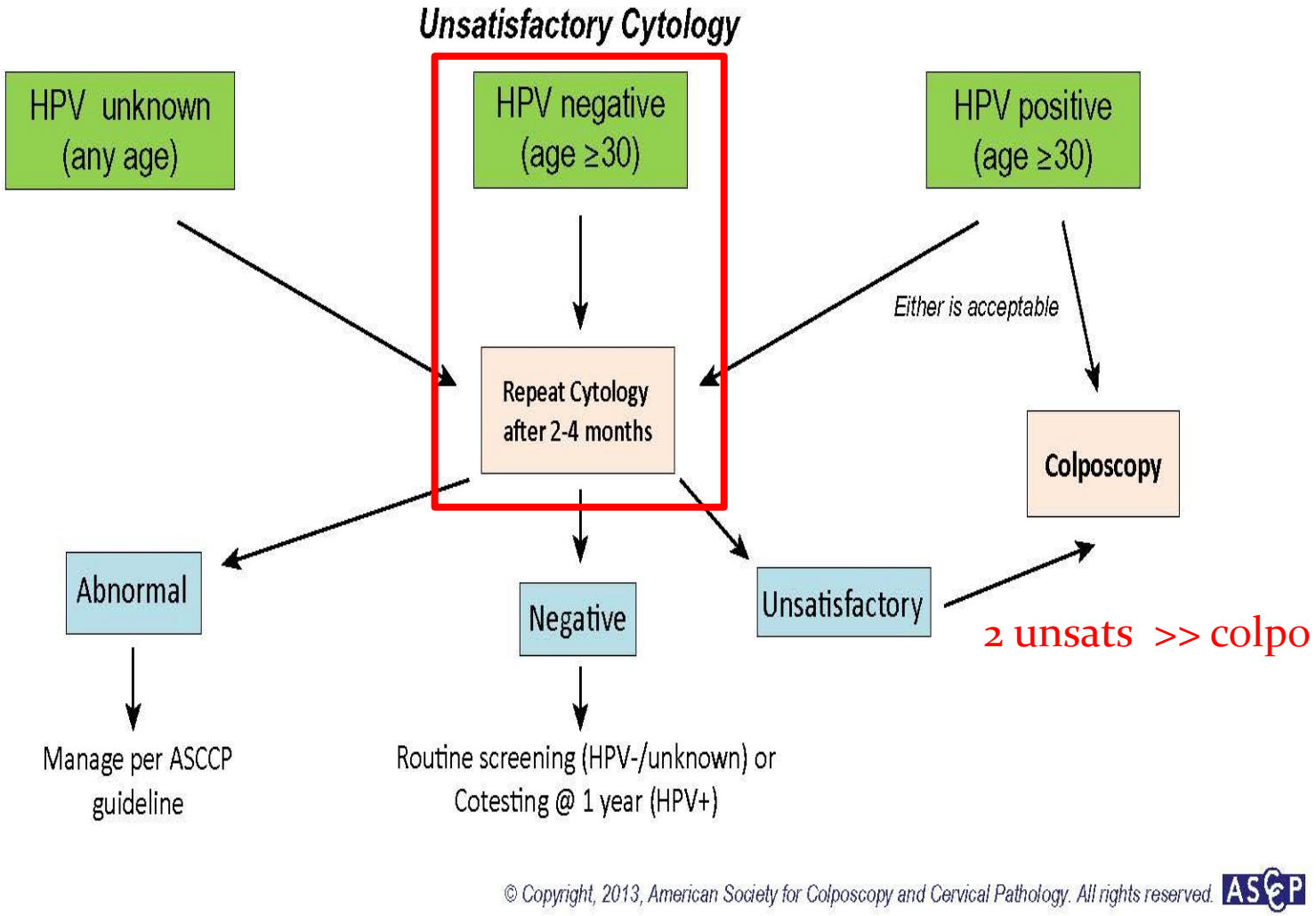




Apgar, Brotzman, Spitzer

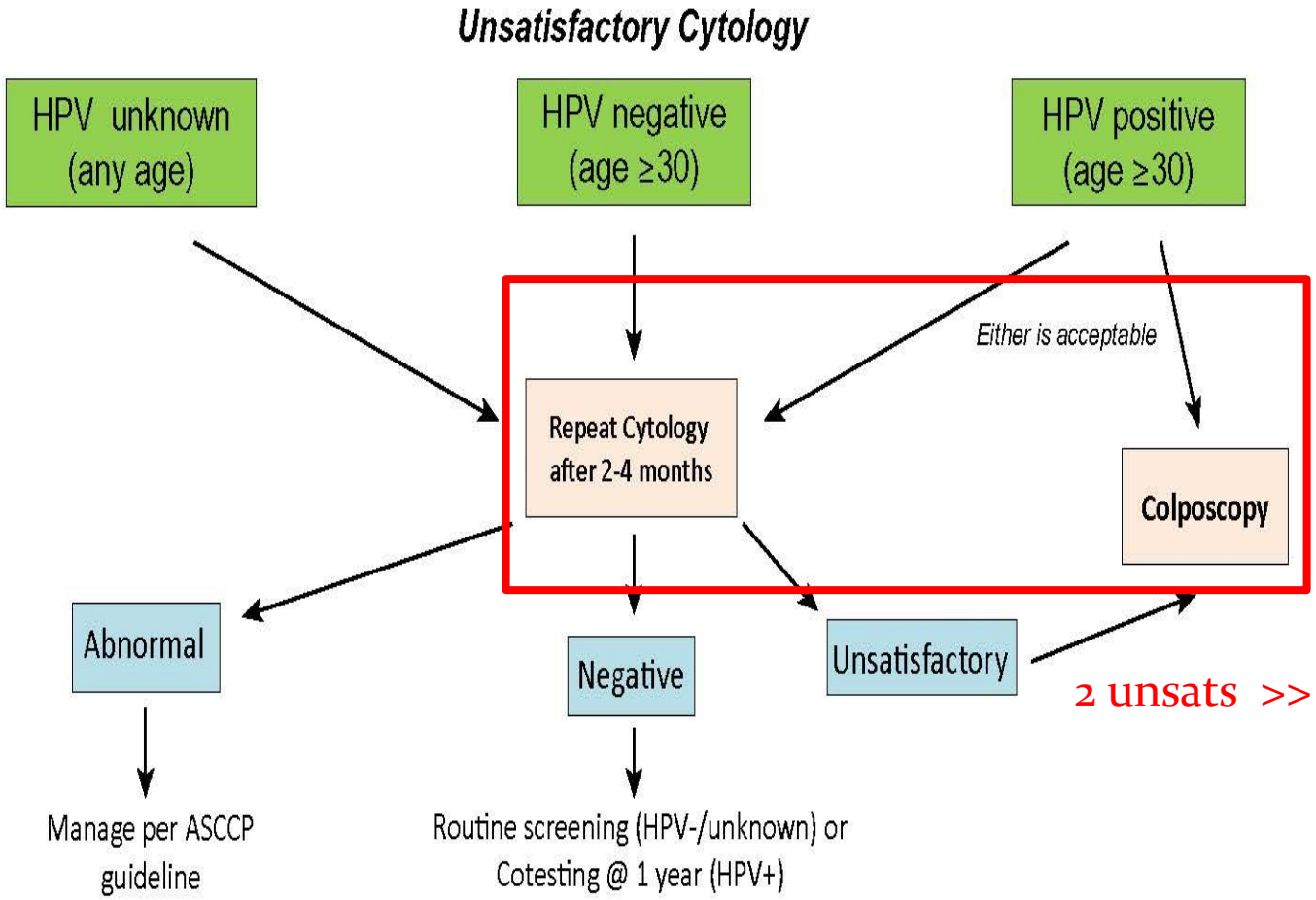
31 year old presents for her “annual” Pap. Her last Pap was 4 years ago at a prenatal visit. No hx abnormal Pap's. She had sex last night and used a lot of lubrication. Because she has a hx of no-shows, you do her Pap today. It is *unsatisfactory* due to low numbers of squames. *HPV is negative*. What is the next step

1. Bring her in immediately for a repeat Pap.
2. Pap and HPV in one year because she has no hx of abnormal Pap's.
3. Ask the lab to repeat the HPV test.
4. Repeat the Pap in 2-4 months.


Unsatisfactory Cytology
HPV unknown (any age)
HPV negative (age ≥30)
HPV positive (age ≥30)
Either is acceptable
Repeat Cytology after 2-4 months
Colposcopy
Abnormal
Negative
Unsatisfactory
2 unsats >> colpo
Manage per ASCCP guideline
Routine screening (HPV-/unknown) or Cotesting @ 1 year (HPV+)
© Copyright, 2013, American Society for Colposcopy and Cervical Pathology. All rights reserved.
ASCCP

35 year old had a negative Pap 3 years ago. You decide to cotest her. Her Pap is *unsatisfactory* but her HPV is + What is the next step?

1. Repeat cotesting now.
2. Repeat cotesting in one year.
3. Repeat Pap in 2-4 months.
4. Immediate colposcopy.



2 unsats >> colpo

نحوه پیگیری موارد سلولهای پوششی غیرطبیعی با اهمیت نامشخص یا ASC-USطبق آخرین راهنمای ASCCP

- سلولهای پوششی غیرطبیعی با اهمیت نامشخص یا ASC-US شایعترین اختلال سیتولوژیک بوده ولی ریسک CIN 3+ در آن بسیار کم است، زیرا یک تا دو سوم موارد آن ربطی به HPV ندارند. موارد ASC-USکه HPV مثبت و ژنوتایپ 16 یا 18 مثبت گزارش شده، ریسک ابتلا به CIN 3+ در آنها 2 برابر بیشتر از موارد ASC-USاست که در آنها سایر گروه های پرخطر HPVمثبت شده اند.

سپاس فراوان