COLPOSCOPY MADE EASY AND SIMPLE

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OBJECTIVES OF SCREENING

- Prevent morbidity and mortality of cervical cancer
- Prevent overzealous management of lesions that will most likely regress or disappear
- Risk of management also outweigh benefits
## OBJECTIVES

<table>
<thead>
<tr>
<th>Describe</th>
<th>Describe the anatomy, cytology, histology and colposcopic findings of the normal and abnormal cervix and genital tract</th>
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<tbody>
<tr>
<td>Describe and understand</td>
<td>Describe and understand the pathophysiology of lower genital tract dysplasia including HPV and its role</td>
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<tr>
<td>Apply</td>
<td>Apply new standards for cervical cancer screening including HPV</td>
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<tr>
<td>Recognize</td>
<td>Recognize the diagnostic characteristics of cervical abnormalities on cytology, colposcopic and histologic exam.</td>
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<td>See</td>
<td>See anatomic changes of the lower genital tract and recognize them and know treatment options</td>
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## PRE-TEST CERVICAL SCREENING MANAGEMENT, COLPOSCOPY, PATHOLOGIC DIAGNOSIS AND TREATMENT
QUESTION #1

Which of the following is not a risk factor for cervical cancer?

A. HIGH RISK HPV
B. CIGARETTE SMOKING
C. MULTIPARITY
D. FAMILY HISTORY OF CERVICAL CANCER
E. EARLY AGE AT FIRST SEXUAL INTERCOURSE

QUESTION #2

Which of the following is the highest risk for adenocarcinoma of the cervix?

A. HPV 18
B. HPV 31
C. HPV 16
D. HPV 33
E. HPV 22
QUESTION #3

HOW SHOULD WOMEN WITH UNSATISFACTORY CYTOLOGY TEST RESULTS BE MANAGED?
A. REPEAT PAP SMEAR IN ONE YEAR
B. REPEAT PAP IMMEDIATELY
C. NO NEED TO REPEAT PAP
D. REPEAT PAP SMEAR IN 2-4 MONTHS
E. IMMEDIATE COLPOSCOPY

QUESTION #4

FOR EACH OF THE FOLLOWING SCENARIOS, INDICATE THE APPROPRIATED FOLLOW UP TESTING

A 38 YO WITH 2 CONSECUTIVES UNSATISFACTORY CYTOLOGY RESULTS
A. REPEAT CYTOLOGY IN ONE YEAR
B. REPEAT CO-TESTING IN ONE YEAR
C. ROUTINE SCREENING
D. COLPOSCOPY
QUESTION #5

- For each of the following scenarios, indicate the appropriate follow up testing

- A 36 yo with negative cytology and a positive HPV co test
  A. Repeat cytology in one year
  B. Repeat co-testing in one year
  C. Routine screening
  D. Colposcopy

QUESTION #6

- For each of the following scenarios, indicate the appropriate follow up testing

- A 24 yo with two LGSIL PAPs 12 months apart and negative reflex HPV testing
  A. Repeat cytology in one year
  B. Repeat co-testing in one year
  C. Routine screening
  D. Colposcopy
QUESTION #7

• FOR EACH OF THE FOLLOWING SCENARIOS, INDICATE THE APPROPRIATE FOLLOW UP TESTING

A 32 YO WOMAN WITH NEGATIVE CYTOLOGY HPV POSITIVE CONTESTING, AND REFLEX GENOTYPING POSITIVE FOR HPV 16

A. REPEAT CYTOLOGY IN ONE YEAR
B. REPEAT CO-TESTING IN ONE YEAR
C. ROUTINE SCREENING
D. COLPOSCOPY

QUESTION #8

• FOR EACH OF THE FOLLOWING SCENARIOS, INDICATE THE APPROPRIATE FOLLOW UP TESTING

A 19YO WITH HGSIL

A. REPEAT CYTOLOGY IN ONE YEAR
B. REPEAT CO-TESTING IN ONE YEAR
C. ROUTINE SCREENING
D. COLPOSCOPY
QUESTION #9

• FOR EACH OF THE FOLLOWING SCENARIOS, INDICATE THE APPROPRIATED FOLLOW UP TESTING

☐ A 24 YO WITH ASCUS-US CYTOLOGY AND NEGATIVE REFLEX HPV TESTING
   A. REPEAT CYTOLOGY IN ONE YEAR
   B. REPEAT CO-TESTING IN ONE YEAR
   C. ROUTINE SCREENING
   D. COLPOSCOPY

QUESTION #10

• FOR EACH OF THE FOLLOWING SCENARIOS, INDICATE THE APPROPRIATED FOLLOW UP MANAGEMENT

☐ A 62 YO WITH AGC CYTOLOGY
   A. COLPOSCOPY
   B. COLPOSCOPY + EMB
   C. REFLEX HPV TESTING
   D. REPEAT CYTOLOGY IN 1 YEAR
A 54-year-old multiparous woman was referred for colposcopy because of an abnormal cervical cytologic smear. The cervix appeared grossly normal. After application of 3% acetic acid, colposcopically-directed biopsy was taken of an area of acetowhite epithelium with mosaicism and punctation. The biopsy specimen measured 2.8 mm from the epithelial surface to the deep margin. (Please see illustration).

Which of the following is the most likely diagnosis?

A. Chronic cervicitis  
B. Low-grade squamous intraepithelial lesion (LSIL)  
C. High-grade squamous intraepithelial lesion (HSIL)  
D. Invasive cervical cancer

Which human papilloma virus (HPV) subtype is most commonly associated with this lesion?

A. 6  
B. 11  
C. 16  
D. 33
QUESTIONS 11-13

WHAT IS THE MOST APPROPRIATE NEXT STEP IN MANAGEMENT OF THIS PATIENT?
A. REPEAT CERVICAL CYTOLOGY IN 4 MONTHS
B. HPV DNA TESTING FOR HIGH-RISK SUBTYPES
C. CERVICAL CONIZATION
D. RADICAL Hysterectomy WITH PELVIC AND PARAAORTIC LYMPHADENECTOMY

QUESTION #14

A 63-YEAR-OLD WOMAN, G5P4014 REQUESTS EVALUATION BECAUSE OF A CHRONIC HISTORY OF VULVAR AND PERINEAL PRURITUS AND PAIN. SHE HAS BEEN TREATED WITH SHORT COURSES OF MEDICATION FOR RECURRENT YEAST INFECTIONS, WHICH HAS RESULTED IN PARTIAL RELIEF OF HER SYMPTOMS. THE PHOTOGRAPH ILLUSTRATES THE PRESENT APPEARANCE OF HER VULVA. WHICH OF THE FOLLOWING IS THE MOST APPROPRIATE NEXT STEP IN MANAGEMENT OF THIS PATIENT?
A. COLPOSCOPY
B. LONG-TERM ANTIFUNGAL MEDICATION
C. HIGH POTENCY TOPICAL STEROIDS
D. MULTIPLE PUNCH BIOPSIES
E. WIDE LOCAL EXCISION
QUESTIONS #15-17

• A 45 year old woman, P3003 presented with a "fleshy bulge" protruding from her vagina. She also reported occasional intermenstrual and postcoital spotting. Otherwise, she had regular menses and no history of abnormal PAP smears. Her last PAP smear was 13 months ago, and her urine pregnancy test was negative.

• On speculum examination, a smooth, soft, erythematous 8 cm x 1 cm lesion (see figure 1) protruded from the cervical os and extended to the introitus. The rest of the vagina and cervix appeared normal. The external os was dilated approximately 1 cm, and the base of the stalk of the lesion was palpated approximately 2 cm distal to the cervical os. On bimanual examination, her uterus, cervix, and adnexae were nontender.
QUESTIONS #15-17

 WHICH ONE OF THE FOLLOWING LESIONS IS THE LEAST LIKELY DIAGNOSIS?

A. RETAINED PRODUCTS OF CONCEPTION
B. ENDOCERVICAL POLYP
C. ENDOMETRIAL POLYP
D. PROLAPSING MYOMA
E. CERVICAL CANCER

QUESTIONS 15-17

• WHICH OF THE FOLLOWING SHOULD NOT BE PART OF THE INITIAL MANAGEMENT OF THIS PATIENT?

A. PAP SMEAR
B. COLPOSCOPY
C. AVULSION OF THE POLYP WITH A FORCEPS AND HISTOLOGIC EVALUATION
D. ENDOMETRIAL BIOPSY
QUESTIONS 15-17

What is the approximate probability that this lesion is malignant?
A. 25%
B. 14%
C. 5%
D. 0.5%

QUESTIONS #18-21

A 40-year-old woman presents to your office with a complaint of postcoital spotting. Her external genitalia and vaginal and cervical mucosa appear grossly normal on examination. Bimanual examination demonstrates a non-tender, axial, freely mobile uterus, approximately 10 weeks size, and no adnexal masses or tenderness. The Pap smear and cultures that you perform are negative. The patient continues to complain of postcoital spotting, and you perform a hysteroscopy. The key intraoperative finding is shown in the photograph.
QUESTIONS 18-21

□ THIS TYPE OF UTERINE LESION IS MOST COMMON IN WHAT AGE GROUP?
   A. 10 TO 19 YEARS OLD
   B. 20 TO 29 YEARS OLD
   C. 40 TO 49 YEARS OLD
   D. OVER 60 YEARS OLD
QUESTIONS # 18-21

FROM WHAT AREA OF THE UTERUS ARE THESE LESIONS MOST LIKELY TO ARISE?
A. FUNDUS
B. CORPUS
C. CERVIX

QUESTIONS 18-21

WHICH MEDICATION IS MOST LIKELY TO BE ASSOCIATED WITH THIS LESION?
A. ORAL CONTRACEPTIVES
B. DEPOT-LUPRON
C. TAMOXIFEN
D. MEDROXYPROGESTERONE ACETATE
QUESTIONS # 18-21

If malignant change occurs within this lesion, it is usually associated with what stage/grade of endometrial cancer?

A. IA  
B. IC  
C. II  
D. IV

QUESTIONS # 22-24

- A 58-year-old woman, G3P2101, requested evaluation because of postmenopausal bleeding. Her physical examination was normal. Her Pap smear is shown in Figure 1. Her endometrial biopsy is shown in Figure 2.
QUESTIONS #22-24

- WHAT TYPE OF CELLS ARE SEEN IN THE PAP SMEAR?
  A. MALIGNANT SQUAMOUS CELLS
  B. MALIGNANT ENDOMETRIAL CELLS
  C. DYSPLASTIC SQUAMOUS CELLS
  D. NORMAL ENDOCERVICAL CELLS

QUESTIONS 22-24

- WHAT FINDING IS ILLUSTRATED ON THE ENDOMETRIAL BIOPSY?
  A. ENDOMETRIAL CARCINOMA
  B. CLEAR CELL CARCINOMA
  C. PAPILLARY SEROUS CARCINOMA
  D. ADENOSQUAMOUS CARCINOMA
QUESTIONS # 22-24

WHICH OF THE FOLLOWING IS THE MOST APPROPRIATE TREATMENT FOR THIS PATIENT?

A. TAH, BSO, OMENTECTOMY
B. TAH, BSO, PELVIC LYMPHADENECTOMY
C. TAH, BSO, PELVIC AND AORTIC LYMPHADENECTOMY
D. TAH, BSO, OMENTAL BIOPSY, PELVIC AND AORTIC LYMPHADENECTOMY
CERVICAL CANCER FACTS

Cervical cancer is the most common gynecological cancer in women worldwide.

Most of these cancers stem from HPV infections 99.7%.

HPV 16 is the most common and most oncogenic for squamous and HPV 18 for adenocarcinoma.

Genital HPV is the most common STD in the United States.

Most sexually active adults will have it at some point in their lives.

Of women with cervical cancer 60% have never been screened or have not had a pap smear in over 5 years.

CERVICAL CANCER FACTS

Cervical cancer incidence has decreased more than 50% over past 30 years and mortality has decreased about the same.

Most cases of cervical cancer occur in women who were either never screened or screened inadequately.

Over 50% cervical cancers never had cytology and another 10% had not been screened within 5 years before diagnosis.

In the U.S., approximately 12,000 cervical cancers a year and around 4100 deaths.

In the countries with no screening programs 525,000 cases and 265,000 deaths.
CERVICAL RISK FACTORS

- HPV
- Smoking
- HIV
- Immunocompromised
- Chlamydia
- Obesity
- Multiparity
- Early age of first pregnancy less than 17yo
- DES
- High risk sexual activity

THE CERVIX

- Divided into 2 portions, lower portio or vaginal cervix extends into the vagina. The upper or supracervical cervix extends from the vaginal attachment to the lower uterine segment.
- Cervix is 3cm in length and 2cm in diameter in nulliparous patients
- Cervix is supported by uterosacral and cardinal ligaments
- Cervix is perfused by the descending cervico-vaginal branches of the uterine art.
- Innervation from paracervical and uterosacral plexes (Frankenhausers) and S2–4. There is a relative lack of ectocervical innervation which may account for the minimal discomfort associated with cryotherapy or ectocervical biopsy than that from ECC or LEEP
THE CERVIX

HISTOLOGY

- MAJORITY OF THE CERVIX IS COVERED BY STRATIFIED SQUAMOUS EPITHELIUM.
- CERVIX IS DIVIDED INTO 4 DISTINCT LAYERS
- A SINGLE LAYER OF TALL COLUMNAR CELLS LINES THE ENDOCERVICAL CANAL. OFTEN REFERRED TO AS GLANDULAR CELLS
- ENDOCERVICAL CELLS PROTRUDE INTO THE CERVICAL STROMA TO A DEPTH OF 5-8MM
- THE AREA WHERE THE STRATIFIED SQUAMOUS AND COLUMNAR CELLS MEET IS KNOWN AS THE SQUAMOCOLUMNAR JUNCTION (SCJ)

FIGURE 2.5 Normal ectocervix. The stratified squamous epithelium is divided into four more or less distinct layers.
**FIGURE 2.6** Atrophic ectocervix. The number of squamous cell layers is decreased and parabasal cells predomi-

**FIGURE 2.7** Normal endocervix. A single layer of columnar cells with basal nuclei covers the surface (hema-
Infection of HPV is a necessary factor for the development of cervical neoplasia.

Only a small fraction of women infected with HPV will develop HGSIL and cancer; HPV is either transient or persistent.

Most HPV infection is transient and poses little risk of infection.

Few infections persist but persistence at 1 year and 2 years strongly predicts subsequent risk of HGSIL regardless of age.
NATURAL HISTORY OF CIN
WHAT HPV INFECTIONS PERSIST

HPV genotype appears to be the most important determinant of persistence and infection.
HPV 16 has the highest carcinogenic potential accounting for 55-60% of all cervical cancer cases worldwide. HPV 18 is next responsible for 10-15% ca. HPV 18 is most commonly associated with adenocarcinoma of the cervix.

Other risk factors that increase likelihood of persistence include:
- Cigarette smoking
- Immunocompromised
- HIV

HPV PROGRESSION AND PERSISTENCE

HPV is most common in teenagers and women in their early 20’s, in some studies approx. 60% young women had HPV infection over 3 year period.

HPV infection decreases with age, lifetime risk of infection is at least 80%.

Most young patients can clear the infection in an average of 8 months hence most cervical neoplasia will also spontaneously resolve in this population.
**HPV TESTING**

- High risk oncogenic testing no need for low risk testing
- Only used FDA approved testing for HPV

**NATURAL HISTORY OF CIN LESIONS**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Regression %</th>
<th>Persistence %</th>
<th>Progression to CIS %</th>
<th>Progression to Invasion %</th>
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<tbody>
<tr>
<td>CIN 1</td>
<td>57</td>
<td>32</td>
<td>11</td>
<td>1</td>
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<tr>
<td>CIN 2</td>
<td>43</td>
<td>35</td>
<td>22</td>
<td>5</td>
</tr>
<tr>
<td>CIN 3</td>
<td>32</td>
<td>&lt;56</td>
<td>-</td>
<td>&gt;12</td>
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</table>
## Cervical Cancer Incidence by Age

<table>
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<th>Age</th>
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<tr>
<td>0-19</td>
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<tr>
<td>20-29</td>
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<td>40-49</td>
<td>16.5</td>
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<tr>
<td>50-64</td>
<td>15.4</td>
</tr>
<tr>
<td>65+</td>
<td>14.6</td>
</tr>
<tr>
<td>All ages</td>
<td>9.4</td>
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### Cervical Cytology Screening Techniques

- **Liquid base and conventional methods of cervical cytology collection** are acceptable.
- **Exfoliated cells are collected from the TZ of the cervix and transferred to vial of liquid.**
- **Blood, discharge, and some lubricants may interfere with interpretation.**
- **A small amount of water based lubricant on the speculum does not decrease the quality of cervical cytology testing.**
- **Overall 0.4% tests had obscuring material that caused misinterpretation.**
- **Liquid based specimens has the advantage of allowing a single specimen for cytology, HPV, and testing for STIs.**
COLPOSCOPY

Gold standard to evaluate abnormal cervical cytology

Lower sensitivity 50-80%, interobserver agreement, and reproducibility are less than we think.

Use acetic acid or lugols solution to accentuate areas of dysplasia

Directed biopsies as needed and ECC

PREPARATION FOR COLPOSCOPY

Best to do during days 8-12 of menses but can be done anytime

Avoid intravaginal products, medications, douching, or sexual intercourse for 24 hours prior to exam

Informed consent

Pregnancy testing

Remove blood and mucous
COLPOSCOPY

3 components of the colposcopic examination

Cervical visualization
SCJ visibility
TZ classification

PERFORMING THE COLPOSCOPIC EXAM

1. Clear visualization of the cervix
2. Wipe off blood and mucous
3. Apply acetic acid 3-5%
4. Wait at least 1-2 minutes: a common mistake
5. Increase magnification
6. Use vascular lights as needed
PERFORMING THE COLPOSCOPIC EXAM

Document what you did, pictures taken or drawn

Helps immensely for future colposcopic exams if needed

CLINICAL CONSIDERATIONS DIRECTING COLPOSCOPY

Clinical objectives
- Provide a magnified view of LGT
- Identify cervical squamocolumnar junction
- Detect lesions suspicious for neoplasia
- Direct lesion biopsy
- Monitor patients with current or past LGT neoplasias

Contraindications
- none

Relative contraindications
- upper or lower tract infection
- uncontrolled severe HTN

Clinical indications
- Grossly visible LGT lesions
- Abnormal cervical cytology screening
- DES exposure

uncooperative or anxious pt
**COLPOSCOPY**
WHAT ARE WE LOOKING FOR

- Acetowhite changes
- Mosaic pattern
- Punctuation
- Leukoplakia
- Distance between the capillaries and intensity of color
- Sharpness of the borders
- The surface pattern irregular or regular
- Angles of the vessels
- Full visualization of TZ and cervix

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**REID COLPOSCOPIC INDEX**

<table>
<thead>
<tr>
<th>Colposcopic sign</th>
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<th>2 points</th>
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<tbody>
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<td>Satellite lesions</td>
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</table>
Colposcopy is inadequate or colposcopy is adequate but no lesion is identified

Initial evaluation of ASC-H, HSIL, AGC, or AIS cytology results

Surveillance 4 to 6 months after excisional therapy if specific margins are positive for hsil

Surveillance after conization for AIS has been performed in women wishing fertility preservation
### Endocervical Sampling (ASC-US or LGSIL)

- **In women with ASC-us or LGSIL cervical cytology, ECC is preferred when no lesion is identified on colpo, or colpo is unsatisfactory, or in women with previous excision or ablation of TZ.**

- **When a lesion is identified in the TZ ECC is also acceptable.**

- **In women with ASCUS cannot exclude HGSIL.**

### Histology of the Cervix

#### CIN 1
- Koilocyte formation
- Basal cell proliferation extends through 1/3 squamous surface

#### CIN 2
- Basal cell proliferation extends through 1/2 of the surface epithelium
- Mitoses are present at the epithelial surface
HISTOLOGY OF THE CERVIX

- CIN 3 CIS
  - Proliferation of immature dysplastic cells throughout the squamous epithelium from base to surface
  - Basement membrane remains intact

- Invasive cancer
  - Irregular borders, small malignant nests, if less than 5x7mm (depth and horizontal spread) then microinvasion
  - Cytoplasm is eosinophilic and contains keratin sometimes

**FIGURE 3.6** Mild dysplasia (cervical intraepithelial neoplasia or CIN 1). Basal cell proliferation extends through one third of the squamous surface. Note the mitosis (small arrow). The remaining two thirds contain koilocytotic cells (arrowheads) (hematoxylin and eosin, high-power magnification).
FIGURE 3.7 Moderate dysplasia (cervical intraepithelial neoplasia or CIN 2). The basal proliferation of dysplastic cells extends through approximately one half of the surface epithelium. Mitoses are also present at the epithelial surface midpoint (arrows). Koilocytic cells are still present near the surface (hematoxylin and eosin, high-power magnification).
KEY POINTS

- **CERVICAL INTRAEPITHELIAL NEOPLASIA 1 (CIN 1)**
  - HAVE LITTLE PREMALIGNANT POTENTIAL
  - MANIFESTATION OF **ACUTE** HPV INFECTION
  - HIGH RATE OF REGRESSION
Generally, LSIL cytology is associated with transient HPV infection such as CIN I. But up to 28% of LSIL have CIN 2 or 3 identified on colposcopy.

High-grade squamous intraepithelial lesion (HSIL) is associated with persistent and transforming infection and cancer risk.

Bottom line:
- Transient = GOOD
- Persistent = BAD

**KEY POINTS**

- **CIN 2**
  - Seem to represent a mix of low grade and high grade lesions
  - Not an intermediate grade lesion
  - Considered a cancer precursor
KEY POINTS

- CIN 3 AND ADENOCARCINOMA IN SITU
  - CLEAR CANCER PRECURSORS
  - ALTHOUGH PROGRESSION FROM PERSISTENT INFECTION TO CANCER IS SLOW
  - TIME FROM CIN 3 TO INVASIVE CANCER AVERAGES 8.1 TO 12.6 YRS

Low Grade

High Grade
Colposcopy and ECC is recommended regardless of HPV status.

Endometrial sampling is recommended in pts greater than 35yo or less than 35 if clinical conditions exist bleeding or anovulation.

If NO CIN 2 is identified co testing at 12 months and 24 months is recommended, then continue with repeat co testing in 3 years.

9-38% of women with AGUS have CIN 2.

3-17% have invasive cancer.
If invasive disease is not identified during initial colposcopic work up, a diagnostic excisional procedure is recommended.

Type of diagnostic excisional procedure used provides specimen with interpretable margins.

Ecc sampling after excision is preferred.

Difficult to identify on colposcopy.

• EMB AND ECC CONSIDER COLPOSCOPY AND IF NO ENDOMETRIAL ABNORMALITY IS IDENTIFIED THEN PROCEED WITH COLPOSCOPY.
ENDOMETRIAL CELLS ON PAP

No further evaluation in premenopausal women

For menopausal women endometrial assessment is recommended regardless of symptoms

Endometrial adenocarcinoma in 5% of postmenopausal women

SCREENING FOR AGES 21-29

Cytology alone every 3 years

HPV testing not used as part of screen
RATIONAL FOR LONGER SCREENING INTERVALS

- Sensitivity of single pap: 50-70%
- Risk of HSIL/cancer <3 yrs after negative pap not significantly higher than risk after 1 year
- 99,997 women screened unnecessarily to help 3

- Cancer risk 18mo after 3 neg paps: 1.5/100,000
- Cancer risk 36mo after 3 neg paps: 4.7/100,000

Screening can be harmful: lifetime risk of colpo

Screening q3yrs: 760 colpo/1000 women
Screening annually: 2000 colpo/1000 women

WHY AVOID HPV TESTING AGES 21-29?

- Prevalence of carcinogenic HPV approaches 20% in teens and early 20s
- Most carcinogenic HPV infections resolve without intervention
- Can lead to repeated call backs, anxiety, and interventions WITHOUT benefit
SCREENING FOR AGES 30-64

Cytology + HPV testing (cotesting) every 5 years is PREFERRED

Cytology alone every 3 years is acceptable

RATIONALE FOR COTESTING

Increased detection of CIN 3
Decreased CIN3 in subsequent screening
Achieves risk of detecting CIN3 equal to cytology alone at 1-3 yr intervals
Enhances detection of AIS/Adenocarcinoma
Minimizes increased number of colposcopies
WHY NOT ANNUAL COTESTING?

High NPV of one cotest means most abnormal screens at 1-3 year intervals are TRANSIENT HPV infection and not precancer.

Potential harms are amplified (invasive management) that has not benefit to the patient.

WHEN TO STOP SCREENING

Stop at age 65 for those with adequate negative prior screening.

Definition of adequate negative screening:

- NO CIN2+ within last 20 years
- 3 consecutive negative Paps or
- 2 consecutive negative HPV tests

Stop after hysterectomy with removal of cervix and no history of CIN2+.

Evidence of adequate negative prior screen is not required.
STOP SCREENING AT AGE 65
SCREENING SHOULD NOT RESUME FOR ANY REASON, EVEN IF A WOMAN REPORTS HAVING A NEW PARTNER

RATIONALE FOR STOPPING AT AGE 65

• CIN2+ IS RARE AFTER AGE 65
  • MOST ABNORMAL SCREENS, EVEN HPV+ ARE FALSE POSITIVES AND DO NOT REFLECT PRECANCER
  • HPV RISK REMAINS 5-10%
  • COLPOSCOPY/BIOLOGY/TREATMENT ARE MORE DIFFICULT
  • THUS HARMS ARE MAGNIFIED
• INCIDENTAL HPV INFECTION UNLIKELY LEAD TO CANCER WITHIN REMAINING LIFETIME
HISTORY OF CIN 2, CIN 3 OR AIS

CONTINUE ROUTINE SCREENING FOR AT LEAST 20 YEARS SINCE THE DIAGNOSIS EVEN IF THIS EXTENDS SCREENING PAST THE AGE OF 65

RATIONALE FOR STOPPING AFTER HYST

- Vaginal cancer rate is 7/million/year
- 2066 women followed after hyst for average of 89 months
  - 3% had VAIN, 0 had cancer
- Risk of Pap abnormality after hyst is 1%
- 663 vag cuff paps needed to find 1 VAIN

Compare this risk to risk of breast cancer in men (we do not screen men with MMG)
HPV VACCINE

- Does NOT change screening
- Reduces CIN3+ by 17-33%
- Reduces colposcopy by 10%
- Reduces treatment by 25-30%

3 FDA approved vaccines now a 9-valent vaccine with more to come, covers 20% more high risk HPV infections

Ages 9-26 ? Now later ages

If you have been vaccinated with bivalent or quadivalent you do NOT need re-vaccination
HPV AS A PRIMARY SCREENING TEST

• IT MAY REPLACE COTESTING IN THE FUTURE
  • HIGH NPV
  • BUT SPECIFICITY IS LACKING
    • UNCLEAR FOLLOWUP TO HPV+
      TEST
    • HPV STATUS BIASES CYTOLOGY
      REPORTS TO ABNORMAL

• AT THIS TIME, IN MOST CLINICAL
  SETTINGS, WOMEN SHOULD NOT BE
  SCREENED WITH HPV TESTING ALONE

SPECIAL POPULATIONS

HIV+
• screen twice in the first year after dx
• Then annually
• Initiate year of diagnosis even if younger than 21 (ACOG rec)

Immunocompromised (e.g. transplant pts)
• No major committee recs
• Reasonable to start screen at 21 ya then annually
SPECIAL POPULATIONS

- Women who were exposed to DES in-utero
- Women previously treated for CIN 2, CIN 3, or cancer
Management of Women ≥ Age 30, who are Cytology Negative, but HPV Positive

- **Normal Cytology/HPV Positive**

  - **Repeat Cytology @ 1 year Acceptable**
    - Cytology Negative and HPV Negative
  - **HPV DNA Typing Acceptable**
    - HPV 16 or 18 Positive
    - HPV 16 and 18 Negative
  - **Repeat Cytology @ 3 years**
    - HPV Positive
  - **Colposcopy**
    - Manage per ASCCP Guidelines

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Management of Women Ages 21-24 years with either Atypical Squamous Cells of Undetermined Significance (ASC-US) or Low-grade Squamous Intraepithelial Lesion (LSIL)

- Repeat Cytology @ 12 months Preferred
- HPV Positive
  - Reflex HPV Testing Acceptable for ASC-US only
  - ASC-H, AGC, HSIL
  - HPV Negative
    - Routine Screening
- Negative, ASC-US or LSIL
  - Repeat Cytology @ 12 months
    - Negative x 2 > ASC
    - Colposcopy
- Routine Screening

Management of Women with Atypical Squamous Cells of Undetermined Significance (ASC-US) on Cytology*

- Repeat Cytology @ 1 year Acceptable
- HPV Testing Preferred
  - HPV Positive (managed the same as women with LSIL)
  - HPV Negative
    - Repeat Cytology @ 1 year
  - Negative
    - > ASC
    - Colposcopy
    - Endocervical sampling preferred in women with no lesions, and those with inadequate colposcopy; it is acceptable for others
    - Manage per ASC-CP Guideline

* Management options may vary if the woman is pregnant or ages 31-24
1. Cytology at 3 year intervals
Management of Women with Low-grade Squamous Intraepithelial Lesions (LSIL)

**LSIL with negative HPV test among women ≥ 29 with cytology preferred:**
- Repeat Cytology @ 1 year
  - Cytology Negative and HPV Negative
  - Repeat Cytology @ 2 years

**LSIL with no HPV test:**
- Acceptable
  - 2 ASC-US or HPV positive

**LSIL with positive HPV test:**
- Non-pregnant and no lesion identified, inadequate colposcopic examination
- Adequate colposcopy and lesion identified
- Management per ASCCP Guideline

**Colposcopy**
- Non-pregnant and no lesion identified, inadequate colposcopic examination
- Adequate colposcopy and lesion identified
- Management per ASCCP Guideline

**CIN2-3**: Manage per ASCCP Guideline

*Management options may vary if the woman is pregnant or ages 21-25 years
Management women ages 25-29 as having LSIL with no HPV test

Management of Pregnant Women with Low-grade Squamous Intraepithelial Lesion (LSIL)

**Colposcopy Preferred**
- No CIN2-3
- CIN2-3

**Deter Colposcopy (not an acan/thick/parabasal)**

**Postpartum Follow-up**

**Manage per ASCCP Guideline**

*In women with no cytological, histological, or colposcopically suspected CIN2-3 or cancer"
Initial Workup of Women with Atypical Glandular Cells (AGC)

All subcategories (except atypical endometrial cells)

Colposcopy with endocervical sampling and Endometrial sampling (if ≥25 y/o or at risk for endometrial neoplasia)

* Includes unexplained vaginal bleeding or conditions suggesting chronic estroversion

Atypical Endometrial Cells

Endometrial and Endocervical Sampling

No Endometrial Pathology

Colposcopy