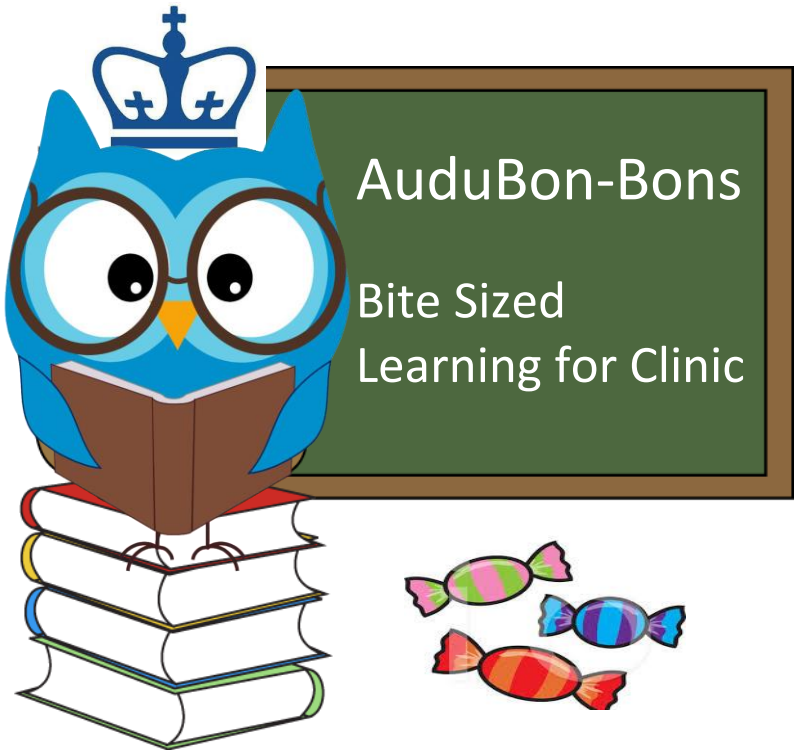
ABNORMAL PAP SMEAR TRIAGE



Week 22

Prepared by: **Stephanie Warsheski, MD**
With SDH and .phrase slides by Chloé Altchek, MS4

Homework Assignment:
Download ASCCP Mobile App

LEARNING OBJECTIVES

- To gain an understanding of the natural history of cervical intraepithelial neoplasia
- To review recommendations for management of abnormal pap smears
- To gain comfort in counseling a patient with an abnormal pap smear regarding etiology, risk factors, prognosis and management plans

PATHOPHYSIOLOGY:
NATURAL HISTORY OF CERVICAL INTRAEPITHELIAL NEOPLASIA

- HPV infection necessary for development of squamous cervical neoplasia and nearly all type of cervical cancer
- However, only a small percentage of women infected with HPV will develop high-grade cervical abnormalities and cancer
- HPV infections can result in:
  - Transient infections
  - Persistent infections
    - Persistence for 1-2 years strongly predicts subsequent risk of CIN 3+ REGARDLESS of age
    - Persistent infections manifested by CIN 2+ are true cancer precursors
- **HPV 16** has the **HIGHEST** carcinogenic potential followed by **HPV 18**
  - ~ 10 other HR HPV genotypes are responsible for the remainder of cases

PATHOPHYSIOLOGY

- **CIN 1**: acute HPV infection
  - High rate of regression to normal cells
  - Usually can manage expectantly
- **CIN 2:** mix of low-grade and high-grade lesions
- **CIN 3** and **adenocarcinoma in situ**: cancer precursors

- Progression from persistent infection to cancer is SLOW
  - Time between CIN 3 to invasive cancer: **8.1 – 12.6 years**

RISK FACTORS AND INCIDENCE

- Risk factors:
  - Cigarette smoking
  - Compromised immune system
  - HIV infection
- Lifetime risk for HPV infection is **80%**
- HPV infections most common in teenagers and women in early 20s
  - Most young women, esp < 21 y.o., have an effective immune response clearance of infection in ~ 8 months or REDUCED viral load in 85-90% to undetectable levels in 8-24 months

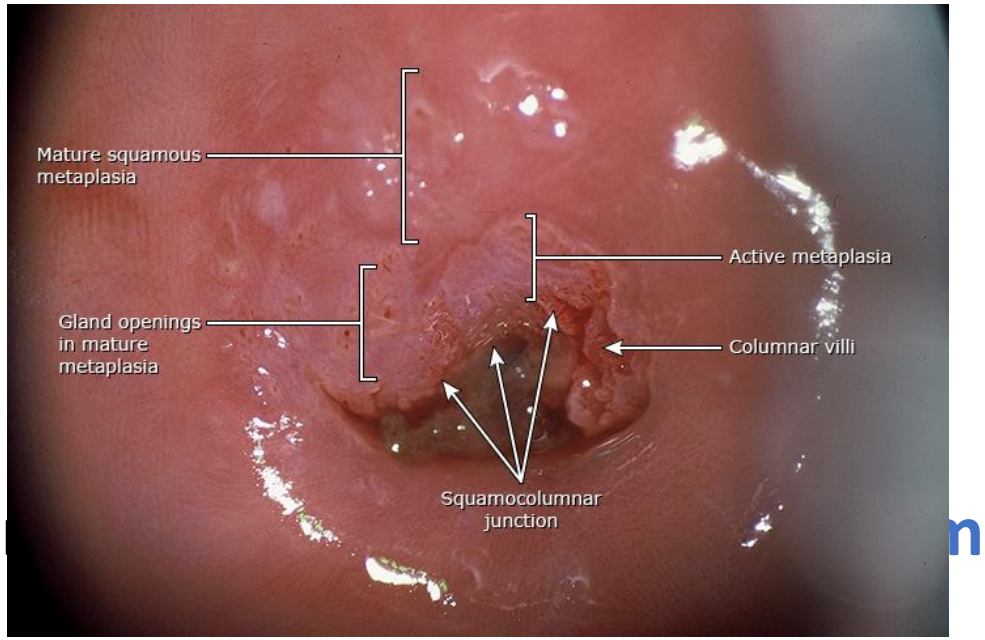
EVALUATION

- Routine cervical cancer screening
  - Covered in separate AuduBon-Bon module

- HPV testing
  - More reproducible than cytology
  - More sensitive than cytology
  - Less specific than cytology

MANAGEMENT

- **Colposcopy**: standard for disease detection, technique of choice for treatment decisions



- **I mpling**:
  - ASC-US or LSIL cytology and no lesions on colpo
  - Unsatisfactory colpo

USEFUL DEFINITIONS

• **Recommended**	Good data to support use when only one option is available
• **Preferred**	Option is the best (or one of the best) when there are multiple options
• **Acceptable**	One of multiple options when there are either data indicating that another approach is superior or when there are no data to favor any single option
• **Unacceptable**	Good evidence against use

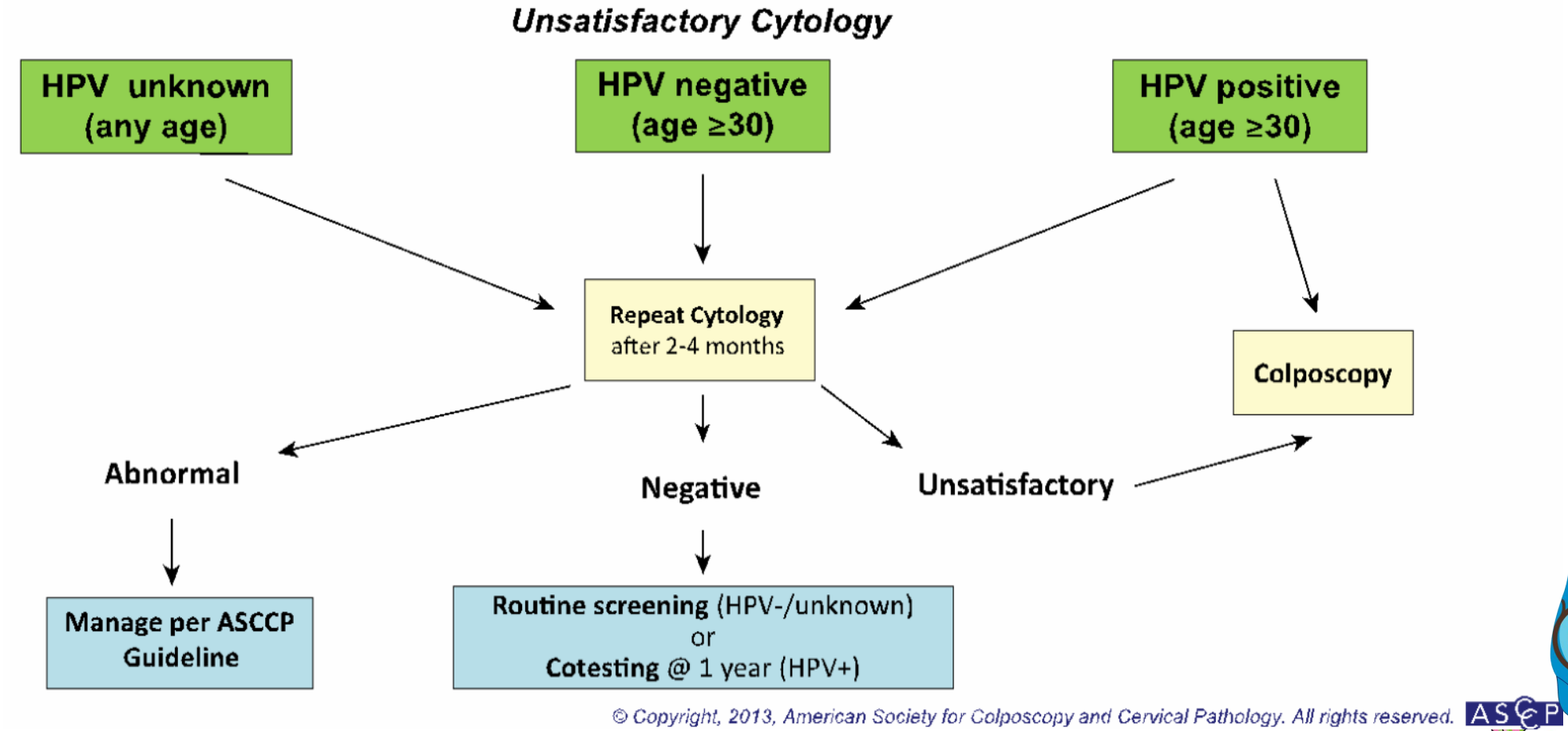
CASE VIGNETTE # 1

Ms. XX is a **47 yo** G2P2 who presented for her annual well woman exam.

- **OBHx:** FT NSVD x 2
- **GYNHx:** Denies h/o STI, fibroids, cysts, **+ remote h/o CIN 1, last pap NILM/HPV neg 5 years ago**
- **PMHx/PSHx:** Denies
- **Meds:** None
- **Allergies:** NKDA
- **SocHx:** + cigarette smoker, ½ PPD, + social ETOH, denies illicit drug use

- The result of her pap smear was **unsatisfactory cytology**.
- What is your next step?

CASE VIGNETTE # 1 – Unsatisfactory Cytology



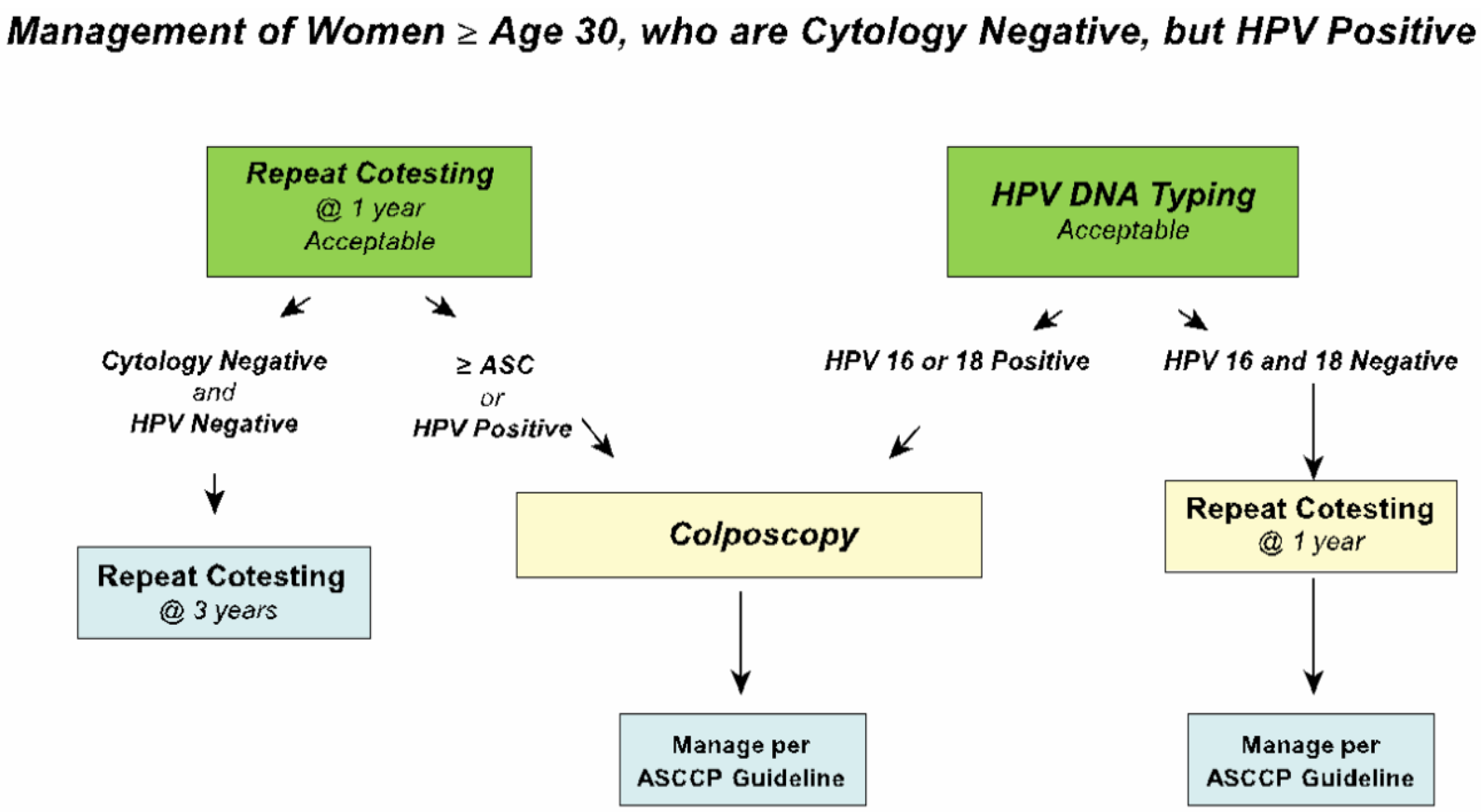
CASE VIGNETTE # 2

Ms. XX is a 47 y.o. G2P2 who presented for her annual well woman exam.

- **OBHx:** FT NSVD x 2
- **GYNHx:** Denies h/o STI, fibroids, cysts, **her last pap was 1 year ago and was NILM/HPV HR pos (16/18 neg)**
- **PMHx/PSHx:** Denies
- **Meds:** None
- **Allergies:** NKDA
- **SocHx:** + cigarette smoker, ½ PPD, + social ETOH, denies illicit drug use

- The result of her repeat pap smear is **cytology negative, HPV positive**
- What is your next step?

CASE VIGNETTE # 2 – Cytology Negative/HPV positive



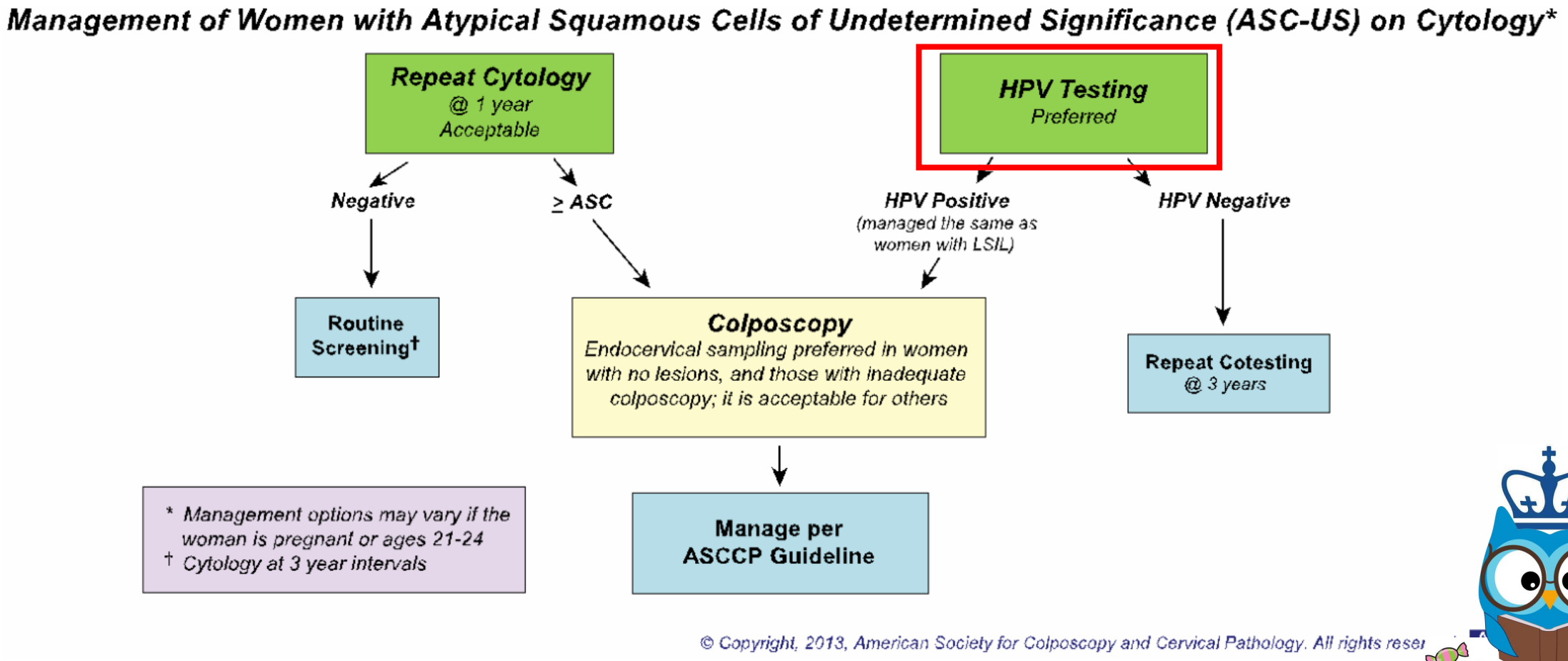
CASE VIGNETTE # 3

Ms. XX is a 27 y.o. G0P0 who presented for her annual well woman exam.

- **OBHx:** Nulligravid
- **GYNHx:** **Denies h/o STI, fibroids, cysts, abnormal pap smears, her last pap smear was 3 years ago**
- **PMHx/PSHx:** Denies
- **Meds:** None
- **Allergies:** NKDA
- **SocHx:** Denies use of tobacco, ETOH, illicit drugs

- The result of her pap smear was **ASC-US**.
- What is your next step?

CASE VIGNETTE # 3 – ASC-US (≥ 25 y.o.)



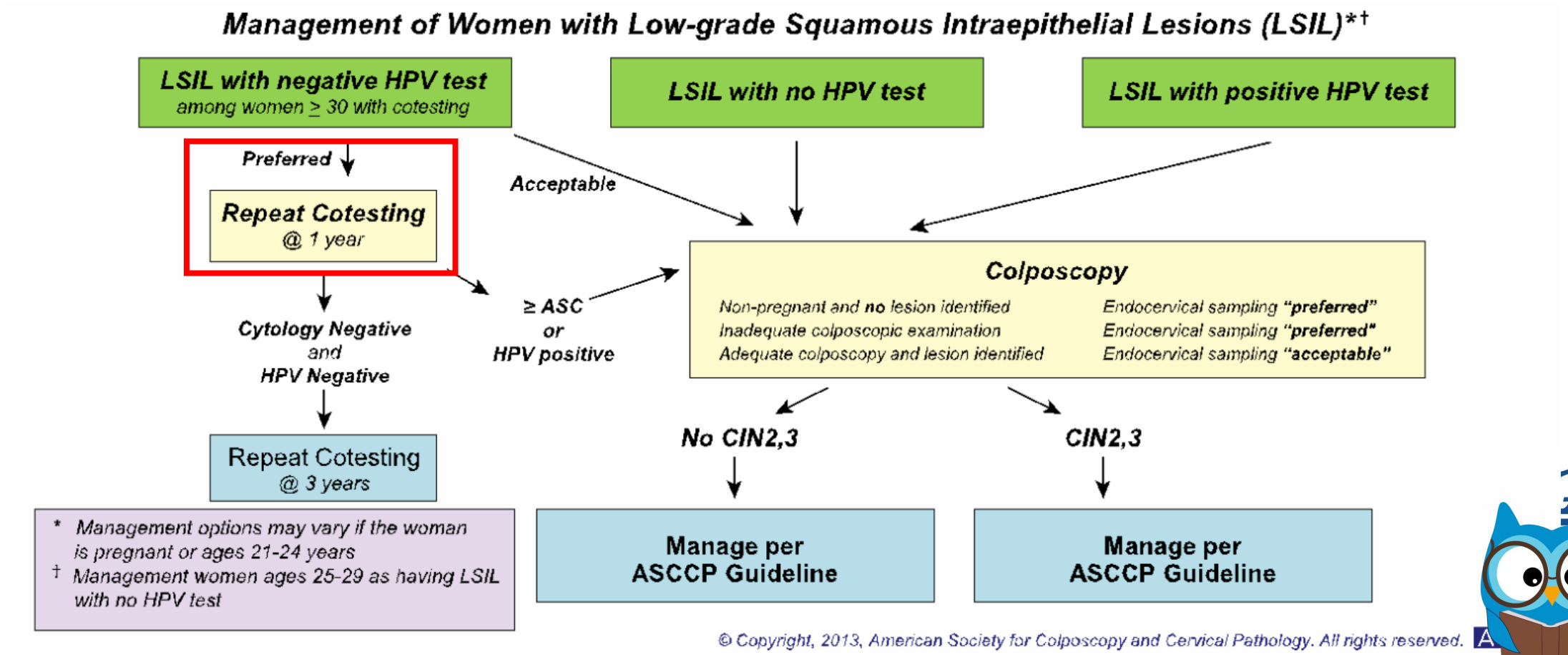
CASE VIGNETTE # 4

Ms. XX is a 35 y.o. G1P1 who presented for her annual well woman exam.

- **OBHx:** FT NSVD x 1
- **GYNHx:** **Denies h/o STI, fibroids, cysts, abnormal pap smears, her last pap smear was 3 years ago**
- **PMHx/PSHx:** Denies
- **Meds:** None
- **Allergies:** NKDA
- **SocHx:** Denies use of tobacco, ETOH, illicit drugs

- The result of her pap smear was **LSIL**.
- What is your next step?

CASE VIGNETTE # 4 – LSIL (≥ 25 y.o.)



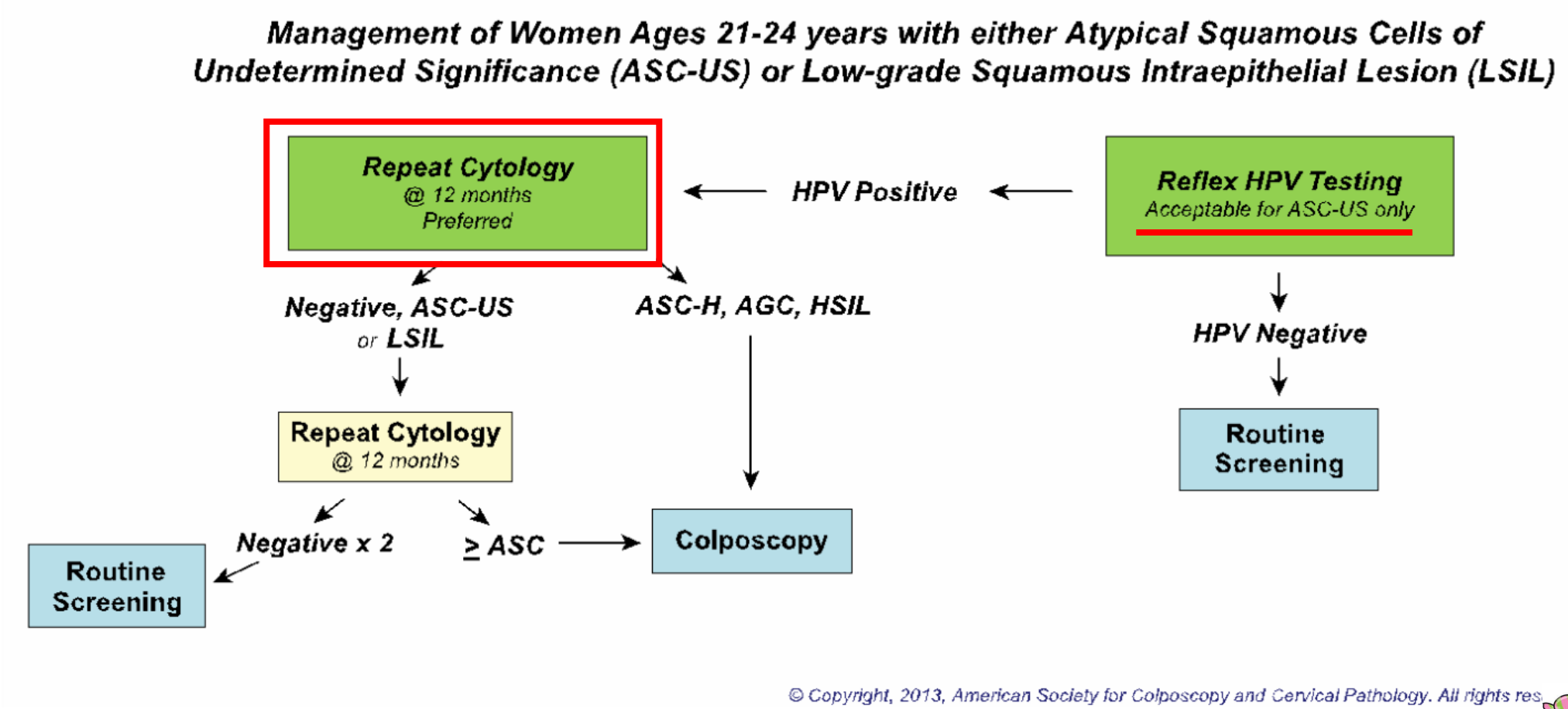
CASE VIGNETTE # 5

Ms. XX is a 22 y.o. G0P0 who presented for her annual well woman exam.

- **OBHx:** Nulligravid
- **GYNHx:** **Denies h/o STI, fibroids, cysts, she has never had a pap smear before**
- **PMHx/PSHx:** Denies
- **Meds:** None
- **Allergies:** NKDA
- **SocHx:** Denies use of tobacco, ETOH, illicit drugs

- The result of her pap smear was **LSIL**.
- What is your next step?

CASE VIGNETTE # 5 – LSIL (21 – 24 y.o.)



CASE VIGNETTE # 6

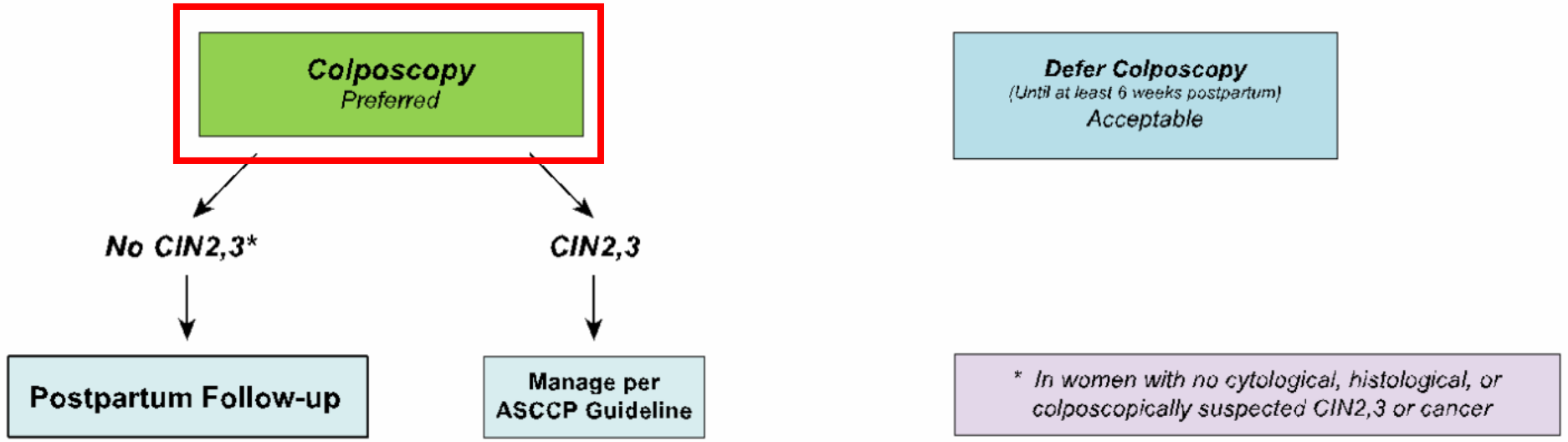
Ms. XX is a 32 y.o. G2P1001 woman at 8 weeks EGA who presented to establish prenatal care.

- **OBHx:** FT NSVD x 1
- **GYNHx:** **Denies h/o STI, fibroids, cysts, abnormal pap smears, her last pap smear was 3 years ago**
- **PMHx/PSHx:** Denies
- **Meds:** None
- **Allergies:** NKDA
- **SocHx:** Denies use of tobacco, ETOH, illicit drugs

- The result of her pap smear was **LSIL**.
- What is your next step?

CASE VIGNETTE # 6 – LSIL in Pregnancy

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



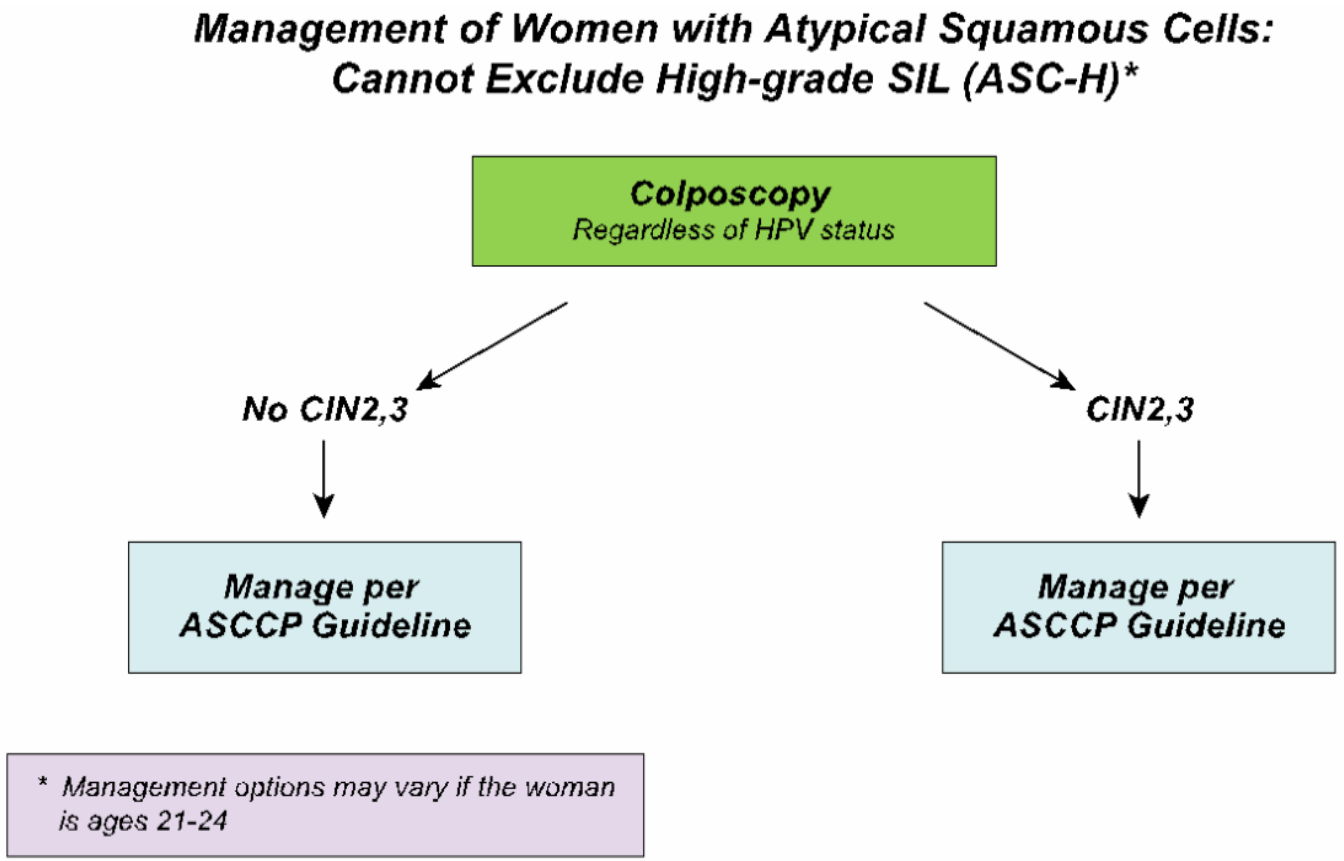
CASE VIGNETTE # 7

Ms. XX is a 27 y.o. G0 woman who presented for her annual well woman exam.

- **OBHx:** Nulligravid
- **GYNHx:** **Denies h/o STI, fibroids, cysts, abnormal pap smears, her last pap smear was 3 years ago**
- **PMHx/PSHx:** Denies
- **Meds:** None
- **Allergies:** NKDA
- **SocHx:** Denies use of tobacco, ETOH, illicit drugs

- The result of her pap smear was **ASC-H**.
- What is your next step?

CASE VIGNETTE # 7 – ASC-H



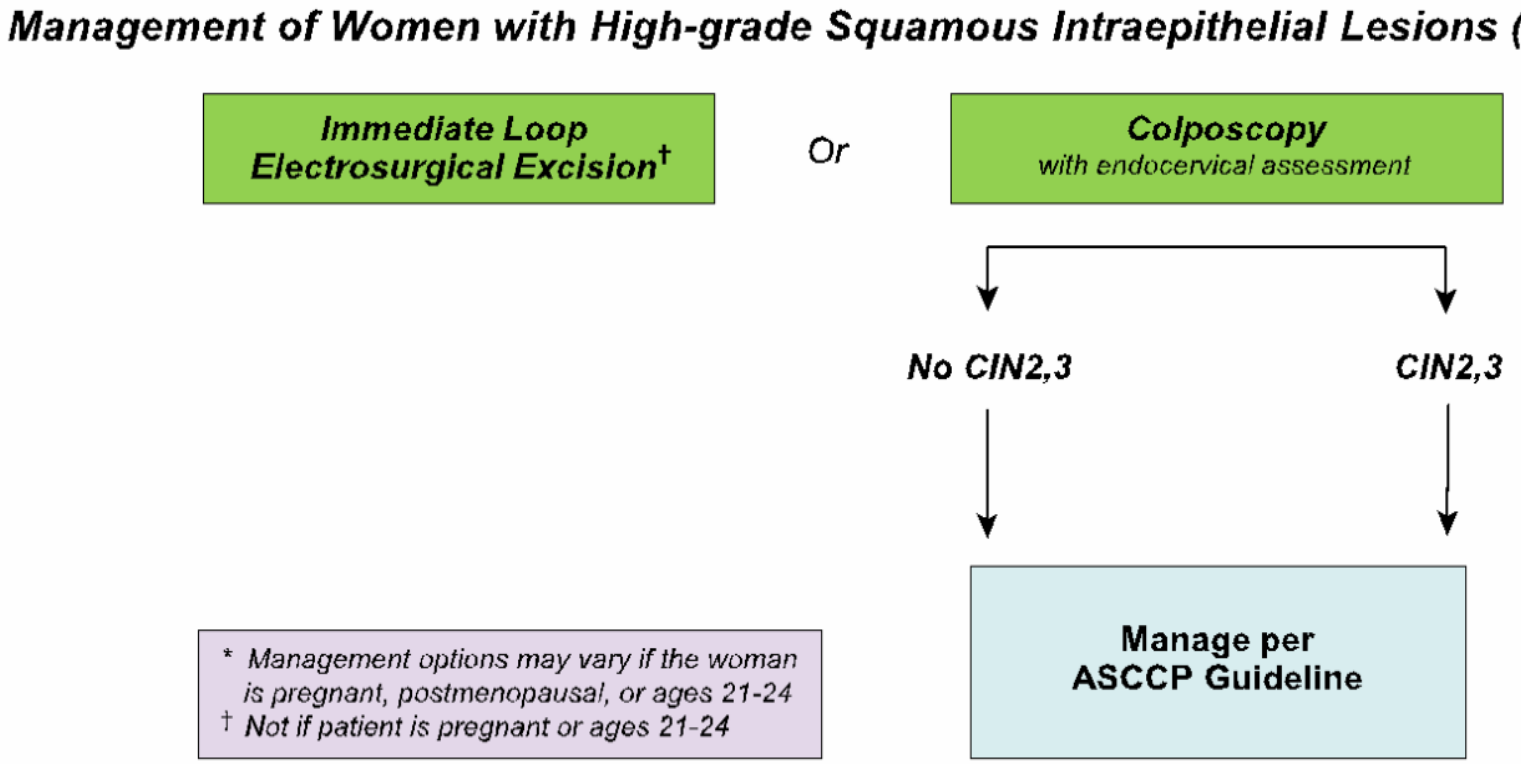
CASE VIGNETTE # 8

Ms. XX is a 27 y.o. G0P0 who presented for her annual well woman exam.

- **OBHx:** Nulligravid
- **GYNHx:** **Denies h/o STI, fibroids, cysts, abnormal pap smears, her last pap smear was 3 years ago**
- **PMHx/PSHx:** Denies
- **Meds:** None
- **Allergies:** NKDA
- **SocHx:** Denies use of tobacco, ETOH, illicit drugs

- The result of her pap smear was **ASC-H**.
- What is your next step?

CASE VIGNETTE # 8 – HSIL (> 25 y.o.)



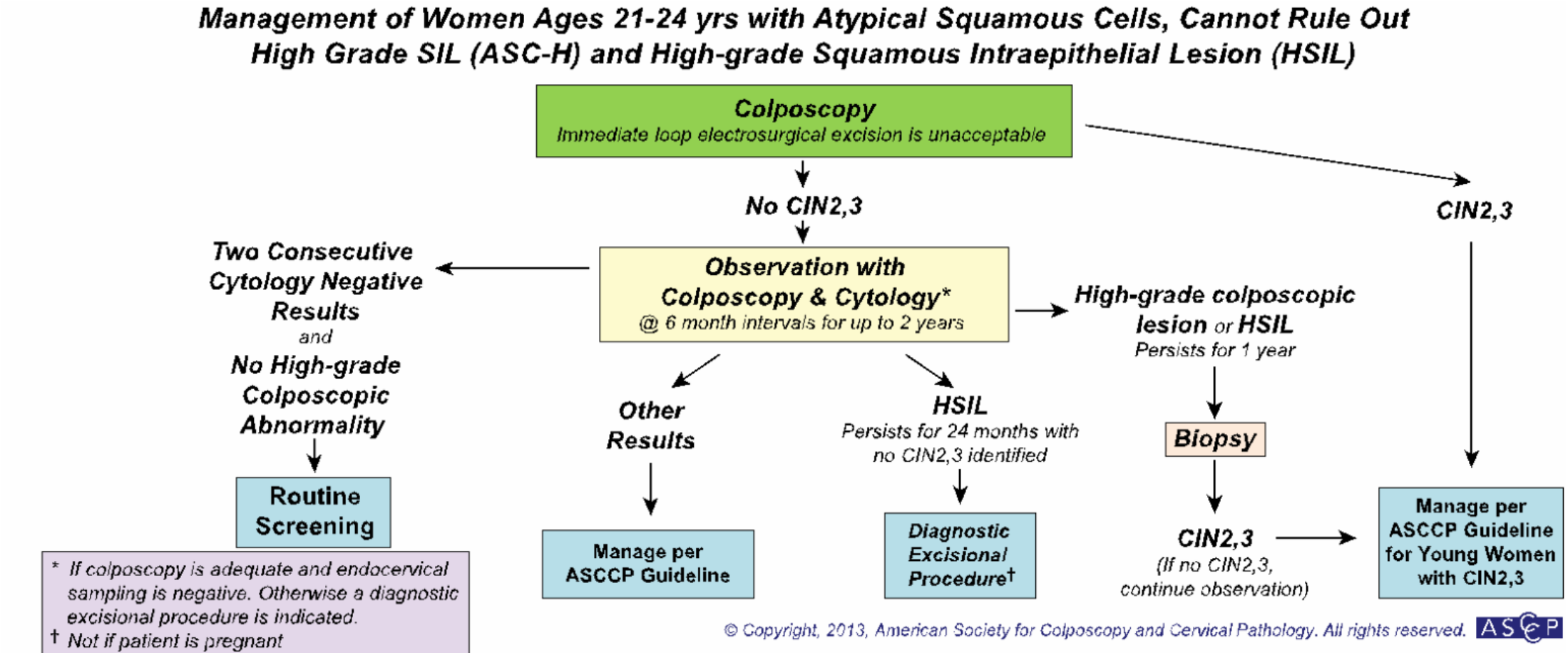
CASE VIGNETTE # 9

Ms. XX is a 22 y.o. G0P0 who presented for her annual well woman exam.

- **OBHx:** Nulligravid
- **GYNHx:** **Denies h/o STI, fibroids, cysts, she has never had a pap smear before**
- **PMHx/PSHx:** Denies
- **Meds:** None
- **Allergies:** NKDA
- **SocHx:** Denies use of tobacco, ETOH, illicit drugs

- The result of her pap smear was **HSIL**.
- What is your next step?

CASE VIGNETTE # 9 – ASC-H or HSIL (21 – 24 y.o.)



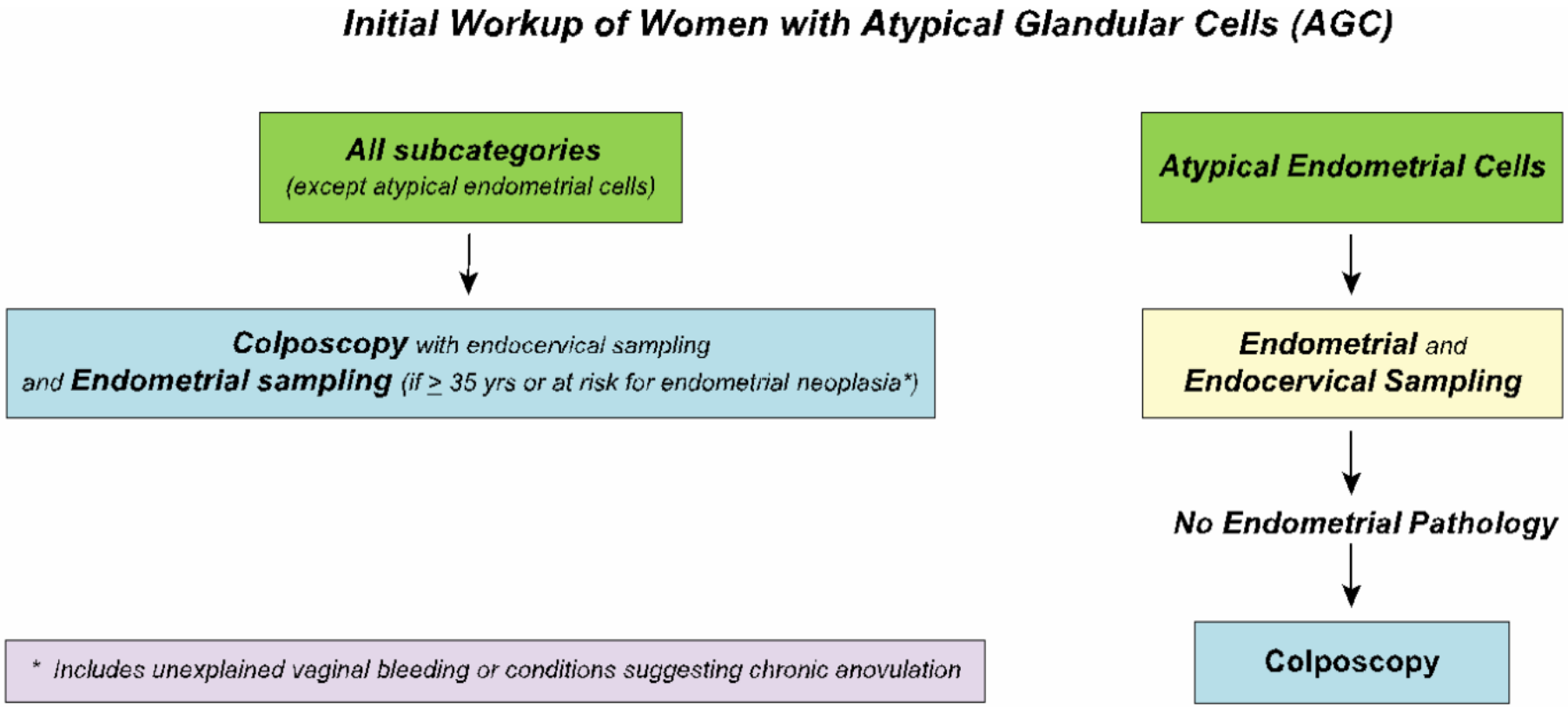
CASE VIGNETTE #10

Ms. XX is a 57 y.o. G2P2 who presented for her annual well woman exam.

- **OBHx:** FT NSVD x 2
- **GYNHx:** LMP 3 years ago, denies h/o STI, fibroids, cysts, **+ remote h/o CIN 1, last pap NILM/HPV neg 5 years ago**
- **PMHx/PSHx:** HTN, T2DM
- **Meds:** HCTZ, Metformin
- **Allergies:** NKDA
- **SocHx:** + cigarette smoker, ½ PPD, + social ETOH, denies illicit drug use

- The results of her pap smear was **atypical glandular cells**.
- What is your next step?

CASE VIGNETTE #10 – AGC

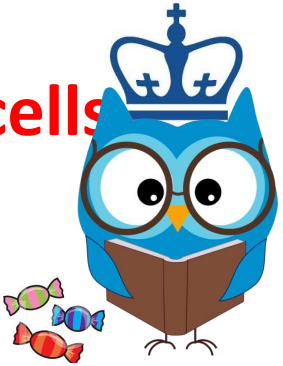


CASE VIGNETTE #11 – Endometrial Cells

Ms. XX is a 57 y.o. G2P2 who presented for her annual well woman exam.

- **OBHx:** FT NSVD x 2
- **GYNHx:** LMP 3 years ago, denies h/o STI, fibroids, cysts, **+ remote h/o CIN 1, last pap NILM/HPV neg 5 years ago**
- **PMHx/PSHx:** HTN, T2DM
- **Meds:** HCTZ, Metformin
- **Allergies:** NKDA
- **SocHx:** + cigarette smoker, ½ PPD, + social ETOH, denies illicit drug use

- The results of her pap smear showed presence of **endometrial cells**
- What is your next step?



COUNSELING

Regardless of type of abnormality, counseling patients regarding their diagnosis is imperative and can include:

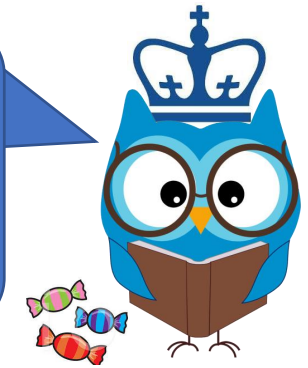
- Emphasis on high rates of HPV; this can be reassuring to patients
- Encouragement in smoking cessation if applicable
- Discussion of progression and timing of disease
- Basics of what to expect during a colposcopy
- Importance of compliance with follow up

SOCIAL DETERMINANTS OF HEALTH

Loss-to-follow-up among women with abnormal Pap smears remains a significant cancer control problem

Lower return rates were associated with:	**Race**: a black and Latina women were 2x more likely to be lost to follow-up
	Relationship status: women with no live-in relationship are more likely to be lost to follow-up
	Age: younger patients are more likely to be lost to follow-up
	Result severity: women with less severe abnormal test results are more likely to be lost to follow-up
	Scheduling delay: longer delay after the initial Pap smear leads to higher loss-to-follow-up rates

Interventions such as counseling, distributing educational materials, telephone follow-up, transportation incentives, a slide-tape program viewed in the waiting room have all been proven to reduce loss to-follow-up among women with abnormal Pap smear.



Epic .phrase

BBonNegPapNewHPV

Description: Counseling on negative PAP with new positive HPV

Pt was notified of negative PAP result and new positive HPV result. Education on HPV was provided, including HPV rates, modes of transmission, risk of pre-cancerous/cancerous cervical changes, and role of screening/testing/colpo. Patient was reassured that PAP result indicated normal cervical cells and HPV may resolve, thus no intervention is required at this time. The plan to continue with PAP smear in 1 year was discussed. Pt counseled on the importance of compliance with recommended PAP screening appointments. *** If smoker, counseling on the importance of smoking abstinence was provided. Pt's questions were answered.

BBonNegPapPersHPV

Description: Counseling on negative PAP with persistent HPV

Pt notified of negative PAP result and persistent positive HPV result. Education on HPV was provided, including HPV rates, modes of transmission, increased risk of pre-cancerous/cancerous cervical changes given persistent HPV, and role of screening/testing/colpo. Pt was informed that the persistence of the virus indicates a need for colposcopy with possible biopsy to further evaluate the screening tool's (PAP) negative result. Counseling on the important of compliance with screening and diagnostic testing appointments/recommendations to be able to detect cellular changes early and possible intervene prior to cervical cancer diagnosis. *** If smoker, counseling on the importance of smoking abstinence was provided. Pt's questions were answered. Colposcopy scheduled for ***DATE***.

CODING AND BILLING

- Diagnostic Codes (ICD-10)
  - R87.61 Abnormal cytological findings in specimens from cervix uteri
    - R87.610 Atypical squamous cells of undetermined significance on cytologic smear of cervix (ASC-US)
    - R87.611 Atypical squamous cells cannot exclude high grade squamous intraepithelial lesion on cytologic smear of cervix (ASC-H)
    - R87.612 Low grade squamous intraepithelial lesion on cytologic smear of cervix (LGSIL)
    - R87.613 High grade squamous intraepithelial lesion on cytologic smear of cervix (HGSIL)
    - R87.614 Cytologic evidence of malignancy on smear of cervix
    - R87.615 Unsatisfactory cytologic smear of cervix
    - R87.616 Satisfactory cervical smear but lacking transformation zone
    - R87.618 Other abnormal cytological findings on specimens from cervix uteri
    - R87.619 Unspecified abnormal cytological findings in specimens from cervix uteri

CODING AND BILLING

- Diagnostic Codes (ICD-10)
  - R87.62 Abnormal cytological findings in specimens from vagina
    - R87.620 Atypical squamous cells of undetermined significance on cytologic smear of vagina (ASC-US)
    - R87.621 Atypical squamous cells cannot exclude high grade squamous intraepithelial lesion on cytologic smear of vagina (ASC-H)
    - R87.622 Low grade squamous intraepithelial lesion on cytologic smear of vagina (LGSIL)
    - R87.623 High grade squamous intraepithelial lesion on cytologic smear of vagina (HGSIL)
    - R87.624 Cytologic evidence of malignancy on smear of vagina
    - R87.625 Unsatisfactory cytologic smear of vagina
    - R87.628 Other abnormal cytological findings on specimens from vagina
    - R87.629 Unspecified abnormal cytological findings in specimens from vagina
    - R87.69 Abnormal cytological findings in specimens from other female genital organs
  - R87.7 Abnormal histological findings in specimens from female genital organs
  - R87.8 Other abnormal findings in specimens from female genital organs
    - R87.81 High risk human papillomavirus (HPV) DNA test positive from female genital organs
    - R87.810 Cervical high risk human papillomavirus (HPV) DNA test positive
    - R87.811 Vaginal high risk human papillomavirus (HPV) DNA test positive
  - R87.82 Low risk human papillomavirus (HPV) DNA test positive from female genital organs
    - R87.820 Cervical low risk human papillomavirus (HPV) DNA test positive
    - R87.821 Vaginal low risk human papillomavirus (HPV) DNA test positive
  - R87.89 Other abnormal findings in specimens from female genital organs
  - R87.9 Unspecified abnormal finding in specimens from female genital organs

CODING AND BILLING – NEW PATIENT

HISTORY	EXAM	MEDICAL DIAGNOSIS MAKING	CODE	APPLICABLE GUIDELINES
Problem focused: - Chief complaint - HPI (1-3)	Problem focused: - 1 body system	Straight forward: - Diagnosis: minimal - Data: minimal - Risk: minimal	99201	- Personally provided - Primary care exception - Physicians at teaching hospitals
Expanded problem focused: - Chief complaint - HPI (1-3) - ROS (1-3)	Expanded problem focused: - Affected areas and others	Straight forward: - Diagnosis: minimal - Data: minimal - Risk: minimal	99202	- Personally provided - Primary care exception - Physicians at teaching hospitals
Comprehensive - Chief complaint - HPI (4) - ROS (2-9) - Past, family, social history (1)	Detailed: - 7 systems	Low: - Diagnosis: limited - Data: limited - Risk: low	99203	- Personally provided - Primary care exception - Physicians at teaching hospitals
Comprehensive - Chief complaint - HPI (4+) - ROS (10+) - Past, family, social history (3)	Comprehensive: - 8 or more systems	Moderate: - Diagnosis: multiple - Data: moderate - Risk: moderate	99204	- Personally provided - Physicians at teaching hospitals
Comprehensive - Chief complaint - HPI (4+) - ROS (10+) - Past, family, social history (3)	Comprehensive: - 8 or more systems	High: - Diagnosis: extended - Data: extended - Risk: high	99205	- Personally provided - Physicians at teaching hospitals

CODING AND BILLING – ESTABLISHED PATIENT

HISTORY	EXAM	MEDICAL DIAGNOSIS MAKING	CODE	APPLICABLE GUIDELINES
Expanded problem focused: - Chief complaint - HPI (1-3)	Problem focused: - 1 body system	Straight forward: - Diagnosis: minimal - Data: minimal - Risk: minimal	99212	- Personally provided - Primary care exception - Physicians at teaching hospitals
Expanded problem focused: - Chief complaint - HPI (1-3) - ROS (1)	Expanded problem focused: - Affected area and others	Low: - Diagnosis: limited - Data: limited - Risk: low	99213	- Personally provided - Primary care exception - Physicians at teaching hospitals
Detailed - Chief complaint - HPI (4+) - ROS (10+) - Past, family, social history (3)	Detailed: - 7 systems	Moderate: - Diagnosis: multiple - Data: moderate - Risk: moderate	99214	- Personally provided - Physicians at teaching hospitals
Comprehensive - Chief complaint - HPI (4+) - ROS (10+) - Past, family, social history (2)	Comprehensive: - 8 or more systems	High: - Diagnosis: extended - Data: extended - Risk: high	99215	- Personally provided - Physicians at teaching hospitals

EVIDENCE

- References
  - 2012 Updated Consensus Guidelines for the Management of Abnormal Cervical Cancer Screening Tests and Cancer Precursors. Journal of Lower Genital Tract Disease, Volume 17, Number 5, 2013, S1YS27.
  - Colposcopy. https://www.uptodate.com/contents/image?topicKey=3260&search=colposcopy&source=outline_link&imageKey=OBGYN%2F105122 (Accessed on November 30, 2019).
  - Management of abnormal cervical cancer screening test results and cervical cancer precursors. Practice Bulletin No. 140. American College of Obstetricians and Gynecologists. Obstet Gynecol 2013;122: 1338 – 67.
  - APA Marcus, Alfred C. PhD*; Kaplan, Celia P. Dr. PH, MA†; Crane, Lori A. PhD, MPH*,‡; Berek, Jonathan S. MD§; Bernstein, Gerald MD¶; Gunning, John E. MD‖; McClatchey, Maureen W. PhD# Reducing Loss-to-Follow-Up Among Women With Abnormal Pap Smears: Results From a Randomized Trial Testing an Intensive Follow-Up Protocol and Economic Incentives, Medical Care: March 1998 - Volume 36 - Issue 3 - p 397-410