

# Cervical Cancer Screening Guidelines Update

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# Cervical Cancer Epidemiology

- Pap testing introduced mid-20<sup>th</sup> century
- Cervical cancer was leading cause of cancer deaths in women, now 14<sup>th</sup>
- In 2012, ~12,170 cases of invasive cervical cancer, ~4,220 deaths
- 190,000 women die each year world wide
- Incidence rates of cervical CA 2-22 times higher in HIV
- HPV >100 types
  - >40 infect cervix
  - 13 oncogenic (16, 18, 31, 33...) → cancer
  - 6, 11 → genital warts
- Cervical cancer → AIDS-defining condition
- Cervical dysplasia → “B” condition

1. Cates W, *Sex Transm Dis*, 1999.

2. *Am J Epi*, 2003;157:218.

3. De Vuyst H, *EUR J CA Prev*, 2008

4. American Cancer Society, American Society for Colposcopy and Cervical Pathology, and American Society for Clinical Pathology Screening Guidelines for the Prevention and Early Detection of Cervical Cancer, 2012.

# Current Cervical Cancer Screening Guidelines

# Different Guidelines: Different Functions

- USPSTF/ACS/ASCCP/ASCP → age, interval and frequency of screening (updated March 2012)
- ASCCP Consensus Guidelines → interpretation and management of screening and colposcopy results (updated 2006, minor changes March 2012)
- IDSA/CDC/HHS OI Guidelines → both (updated October 2015)
- Ultimate goal of all guidelines is cervical cancer prevention via:
  - Screening (cytology with or without HPV DNA testing)
  - Evaluation of screen positive women using colposcopy and biopsy
  - Treatment of women with biopsy-confirmed high-grade cancer precursors

Moyer VA, *Ann Intern Med*, 2012.

CDC Guidelines for Prevention and Treatment of Opportunistic Infections in HIV-infected adults and adolescents, *MMWR*, 2015

18 year old woman perinatally-infected with HIV presents to establish care with you as she transitions from her pediatrician. A careful sexual history reveals she had sexual intercourse for the first time 3 months ago. What should you do for cervical cancer screening?

- A. Pap smear now and repeat in 6 m
- B. Pap smear and HPV now and repeat in 6 m
- C. Pap smear within 1 y of her first intercourse and repeat in 1 y
- D. Wait until she is 21 yo to initiate annual Pap screening

# Cervical Cancer Screening: Starting and Stopping

	WOMEN WITHOUT HIV USPSTF/ACS/ASCCP	WOMEN WITH HIV
AGE AT INITIATION	21 regardless of risk factors	Within 1 year of onset of sexual activity, but no later than 21
DISCONTINUATION	Age 65 if 3 normal Paps or HPV-	Never
s/p HYSTERECTOMY	D/C if for benign reasons and no history of CIN 2+ for 20 years, otherwise screen for 20 years after	D/C if for benign reasons, but if history of CIN 2+ or worse, continue annual vaginal cuff Pap
HPV VACCINATED	No change	No change

**A second Pap smear within the first year of diagnosis is no longer required (CIII)**

Moyer VA, *Ann Intern Med*, 2012.

CDC Guidelines for Prevention and Treatment of Opportunistic Infections in HIV-infected adults and adolescents, *MMWR*, 2015



# Cervical Cancer Screening Guidelines: Women <30

	WOMEN WITHOUT HIV USPSTF/ACS/ASCCP	WOMEN WITH HIV
FREQUENCY	Pap every 3 years	Annually x 3, if 3 consecutive normal, then every 3 years

**Co-testing (Pap and HPV) is not recommended for screening in women <30**

Moyer VA, *Ann Intern Med*, 2012.

CDC Guidelines for Prevention and Treatment of Opportunistic Infections in HIV-infected adults and adolescents, *MMWR*, 2015

# Cervical Cancer Screening Guidelines: Women $\geq 30$

	WOMEN WITHOUT HIV USPSTF/ACS/ASCCP	WOMEN WITH HIV
If Pap testing only	Pap every 3 years	Annually x 3, if 3 consecutive normal, then every 3 years
If Pap and HPV Co-testing	<ul style="list-style-type: none"><li>Pap and HPV negative → co-test in 5 years</li></ul>	<ul style="list-style-type: none"><li>Pap and HPV negative → co-test in 3 years</li></ul>

Moyer VA, *Ann Intern Med*, 2012.

CDC Guidelines for Prevention and Treatment of Opportunistic Infections in HIV-infected adults and adolescents, *MMWR*, 2015

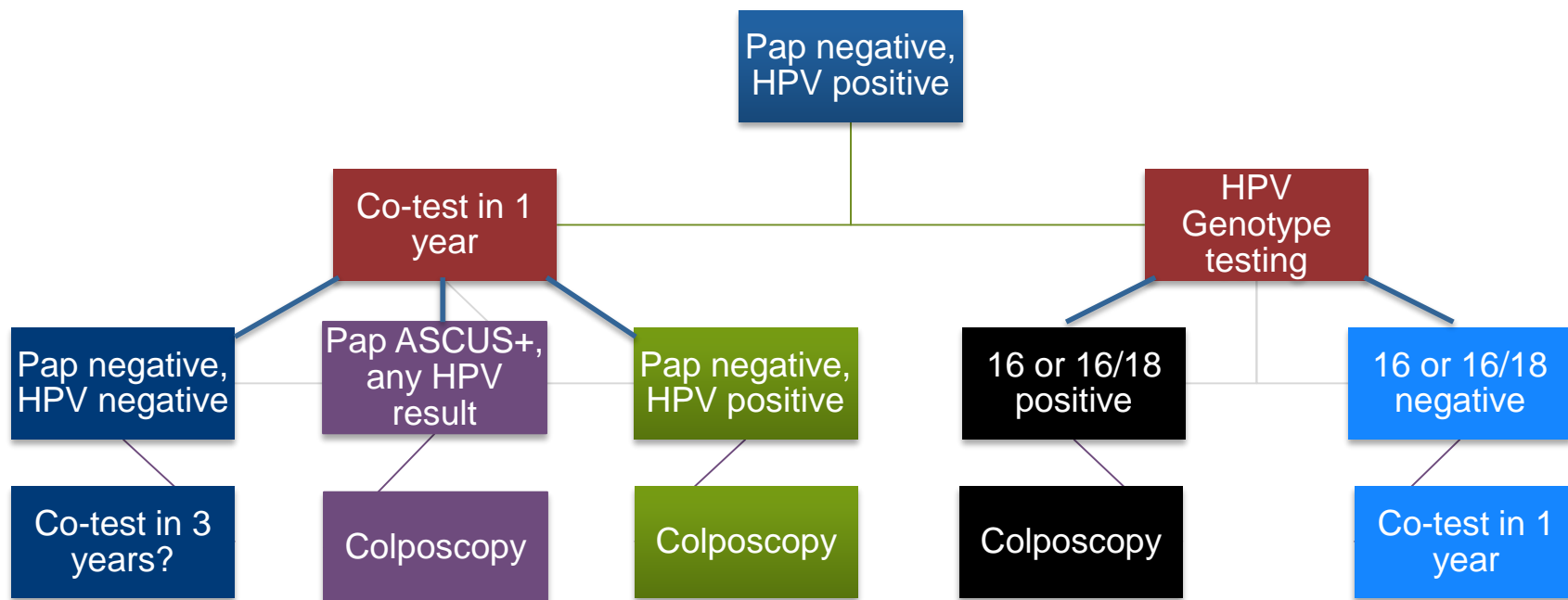




A 32 yo woman with HIV, comes in for her annual Pap smear. She has never had an abnormal Pap. She is very pleased to learn that she may only need to have Paps every 3 years, and you co-test with a Pap smear and HPV testing. Her results show a normal Pap and positive HPV. What do you do now?

- A. Refer to colposcopy now
- B. Ask the lab to perform HPV genotype testing
- C. Repeat Pap and HPV in 6 months
- D. Repeat Pap and HPV in 1 year

# Discordant Pap and HPV Results



**Genotype testing will rarely change the plan, increases risk of unnecessary colposcopies, and is expensive.**

# Cervical Cancer Screening Guidelines: Women $\geq 30$

	WOMEN WITHOUT HIV USPSTF/ACS/ASCCP	WOMEN WITH HIV
If Pap testing only	Pap every 3 years	Annually x 3, if 3 consecutive normal, then every 3 years
If Pap and HPV Co-testing	<ul style="list-style-type: none"> <li>Pap and HPV negative → co-test in 5 years</li> <li>Pap normal, HPV+ → co-test in 1 year and if either are abnormal → colposcopy</li> <li>If genotype testing done and 16 or 16/18+ → colposcopy</li> </ul>	<ul style="list-style-type: none"> <li>Pap and HPV negative → co-test in 3 years</li> <li>Pap normal, HPV+ → co-test in 1 year and if either are abnormal → colposcopy</li> <li>Genotype testing not recommended here, but if done and 16 or 16/18+ → colposcopy</li> </ul>

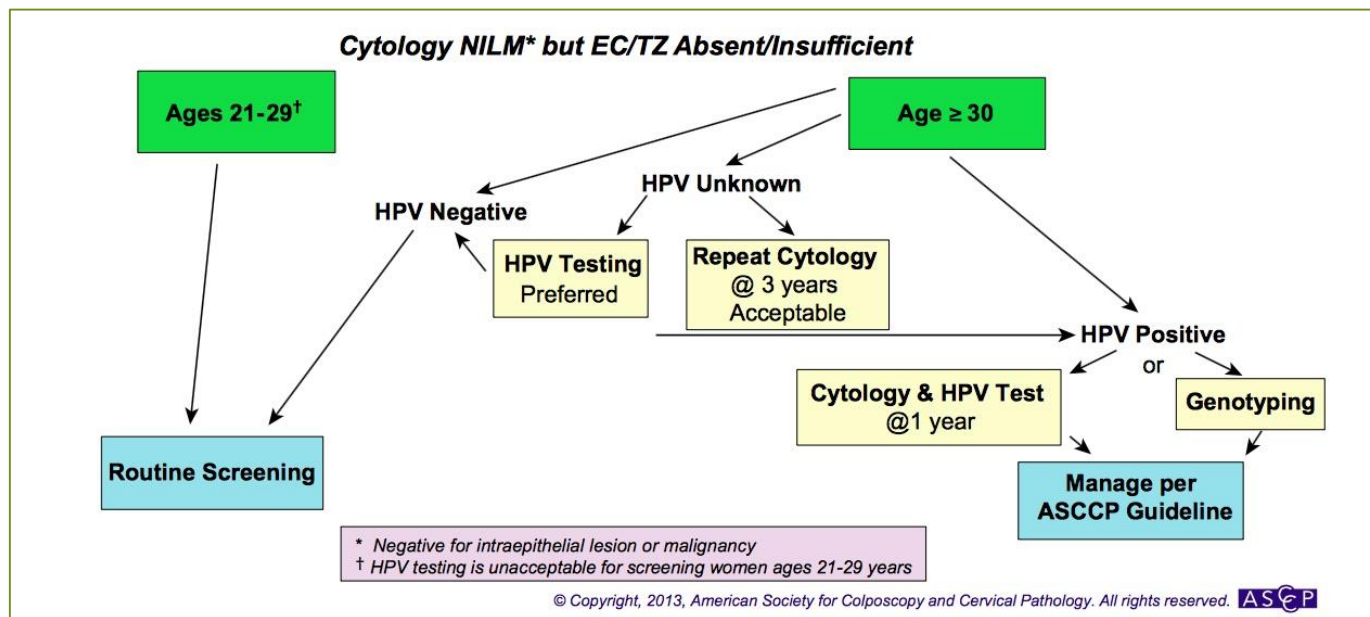
Moyer VA, *Ann Intern Med*, 2012.

CDC Guidelines for Prevention and Treatment of Opportunistic Infections in HIV-infected adults and adolescents, *MMWR*, 2015

# Follow-up of Abnormal Screening

# ASCCP Algorithms

- Available at ASCCP website (free), also as an app (\$9.99)
  - [http://www.asccp.org/Portals/9/docs/ASCCP%20Management%20Guidelines\\_August%202014.pdf](http://www.asccp.org/Portals/9/docs/ASCCP%20Management%20Guidelines_August%202014.pdf)
- Not specifically for women with HIV, but very similar to the OI Guidelines now with exception of ASCUS and LSIL



# Follow-up of ASCUS and LSIL

- ASCUS
  - Reflexive HPV testing and if HPV+ → colposcopy
  - If HPV testing negative → unclear, repeat Pap (+/-HPV) in 1 year?
  - If HPV not done, repeat Pap in 6-12 months and if ≥ASCUS → colposcopy
- LSIL (or worse, including ASC-H, AGC and HSIL)
  - Colposcopy (HPV testing not recommended here)

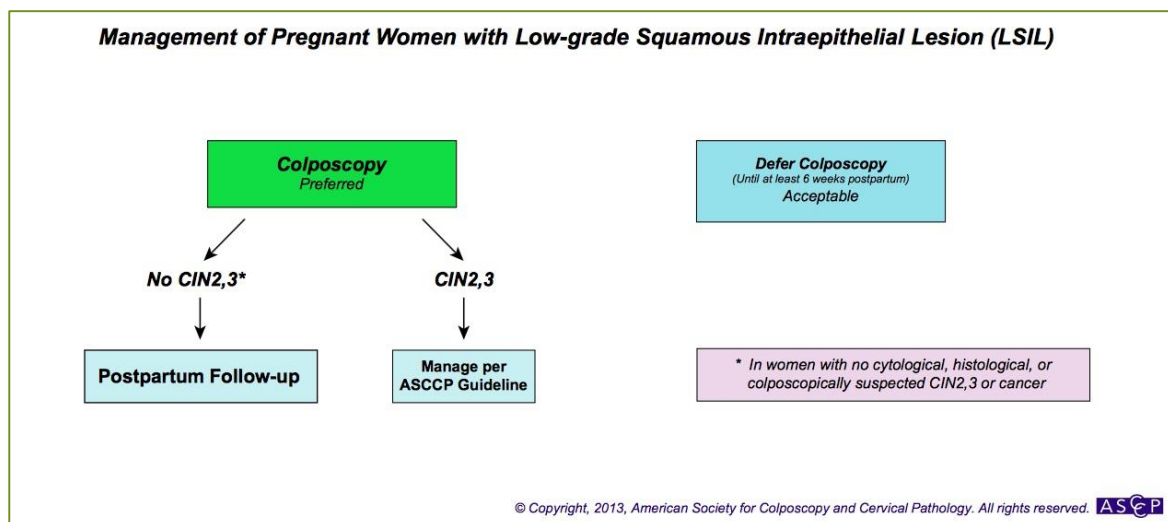
REGARDLESS OF AGE

A 28 yo woman with HIV, comes in for her first antenatal visit at 9 weeks gestation. She is G3P1 and has had a history of genital warts, now resolved. She reports 6 male partners in the past year. She has never had an abnormal Pap smear. You perform a Pap smear and the results are LSIL. What do you do now?

- A. Refer to colposcopy now for biopsies and ECC
- B. Perform HPV testing and if negative, repeat co-test in 1 year
- C. Plan for colposcopy 6 weeks post-partum
- D. Refer to colposcopy now for biopsies only, no ECC

# Management of the Pregnant HIV-infected Woman

- Screening same as non-pregnant woman
  - Okay to use cytobrush
- Want to avoid invasive interventions in pregnant women
- Only finding that would affect management, timing, route of delivery is invasive cancer
- Can defer colposcopy for ASCUS and LSIL until  $\geq 6$  weeks post-partum
- Immediate colposcopy for HSIL or AGC
  - Biopsy okay, no endocervical curettage
- Refer to Gyn-Onc for suspected or proven cervical cancer





# HPV Prevention

# All HPV Vaccines Can Now Be Used in HIV



## Bivalent: GSK Cervarix®

- Types 16, 18
- Prevents cervical cancer
- FDA-approved for females 10-25 yrs
- 3-dose series; \$365

## Quadrivalent: Merck Gardasil®

- Types 6, 11, 16, 18
- Prevents warts, cervical cancer, anal cancer
- FDA-approved for females and males 9-26 yrs
- 3-dose series; \$375



## Nonavalent: Merck Gardasil9®

- Types 6, 11, 16, 18, 31, 33, 45, 52, 58
- FDA-approved for females 9-26 yrs and males 9-15 yrs, ACIP allows up to age 26
- 3-dose series; \$50 more than Gardasil?



# Resources

- Adult and Adolescent OI Guidelines, pages P1-P20
  - <https://aidsinfo.nih.gov/guidelines/html/4/adult-and-adolescent-oi-prevention-and-treatment-guidelines/343/hpv>
- American Society for Colposcopy and Cervical Pathology (ASCCP) Guidelines
  - [www.asccp.org](http://www.asccp.org)
- ACS/ASCCP/ASCP Screening Guidelines
  - <http://onlinelibrary.wiley.com/doi/10.3322/caac.21139/abstract>
- USPSTF Screening Guidelines
  - <http://www.uspreventiveservicestaskforce.org/uspstf/uspscerv.htm>
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