



# The Abnormal Pap: Updated Management Guidelines from the ASCCP and more...

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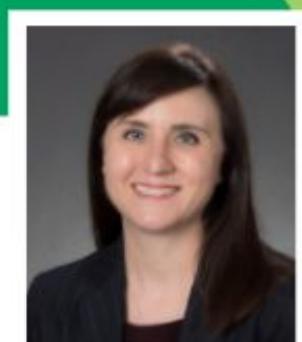
Olympic Peninsula Medical Conference  
November 11, 2022



# Our Physicians and APPs

## Gynecologic Oncology

Allison Barrie, MD & Amy Brockmeyer, MD



## Minimally Invasive Benign Gynecology

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Kirsten Wolff, MD, Megan Loring, MD



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Kate Behning, ARNP

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Jan Dwight, ARNP

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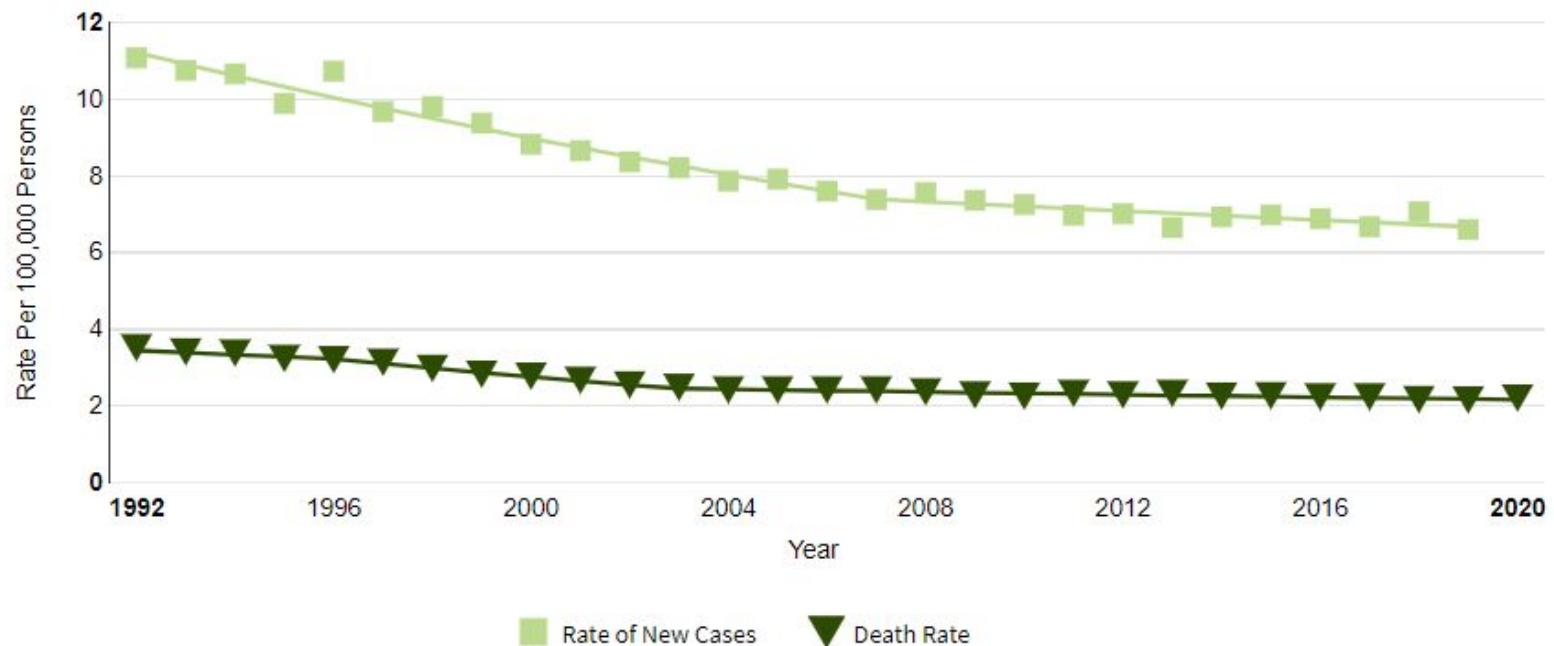


# Learning Objectives

- Understand why screening works.
- Know the vaccination recommendations
- Understand why [The American Society for Colposcopy and Cervical Pathology](#) (ASCCP) Consensus Guidelines were updated in 2019.
- Understand how to incorporate recommendations into your clinical practice
- Recognize racial determinants of cervical cancer mortality

# Cervical Cancer Incidence 2022

- Estimated new cases of cervical cancer in the US in 2022 is 14,100 with 4,280 deaths.

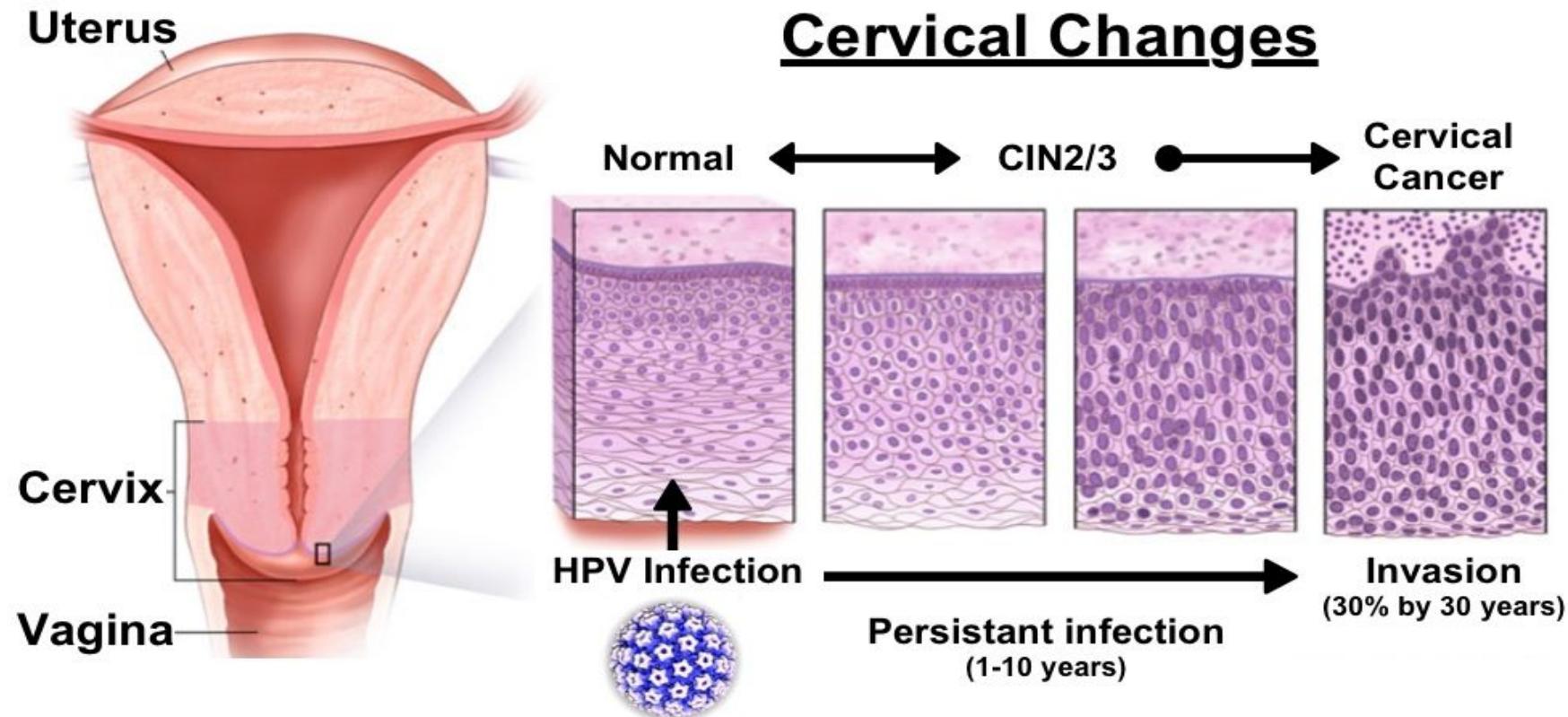


New cases come from SEER 12. Deaths come from U.S. Mortality.

All Races, Females. Rates are Age-Adjusted.

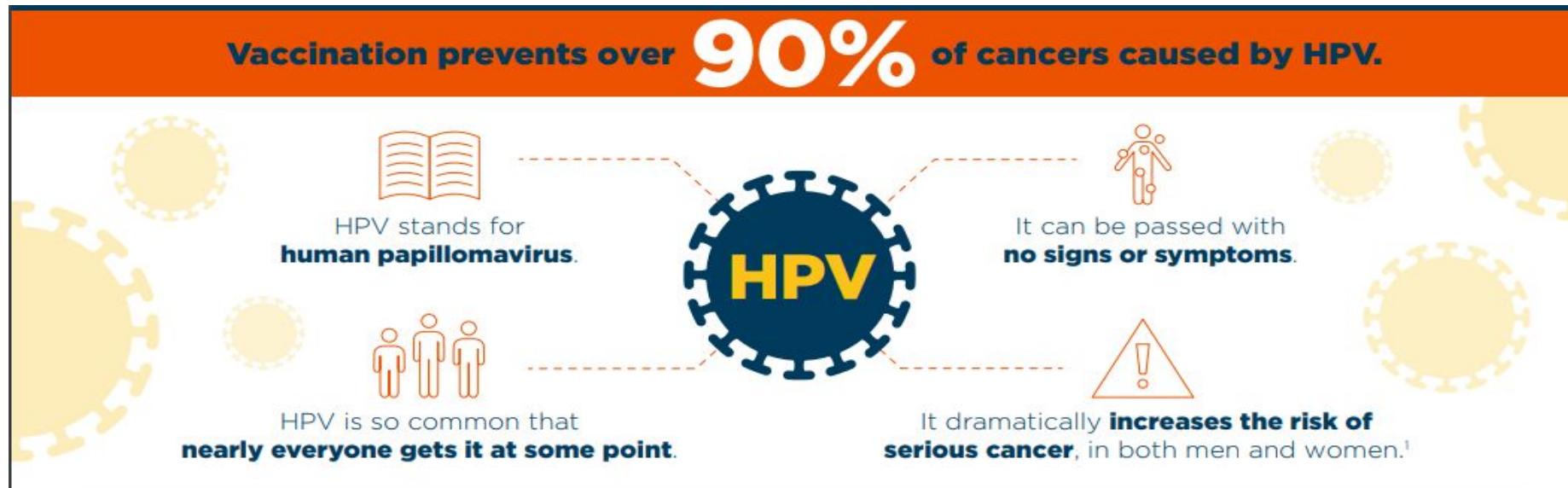
Modeled trend lines were calculated from the underlying rates using the [Joinpoint Trend Analysis Software](#).

# Cervical cancer has a long precancer stage.



# Two targets for cervical cancer prevention

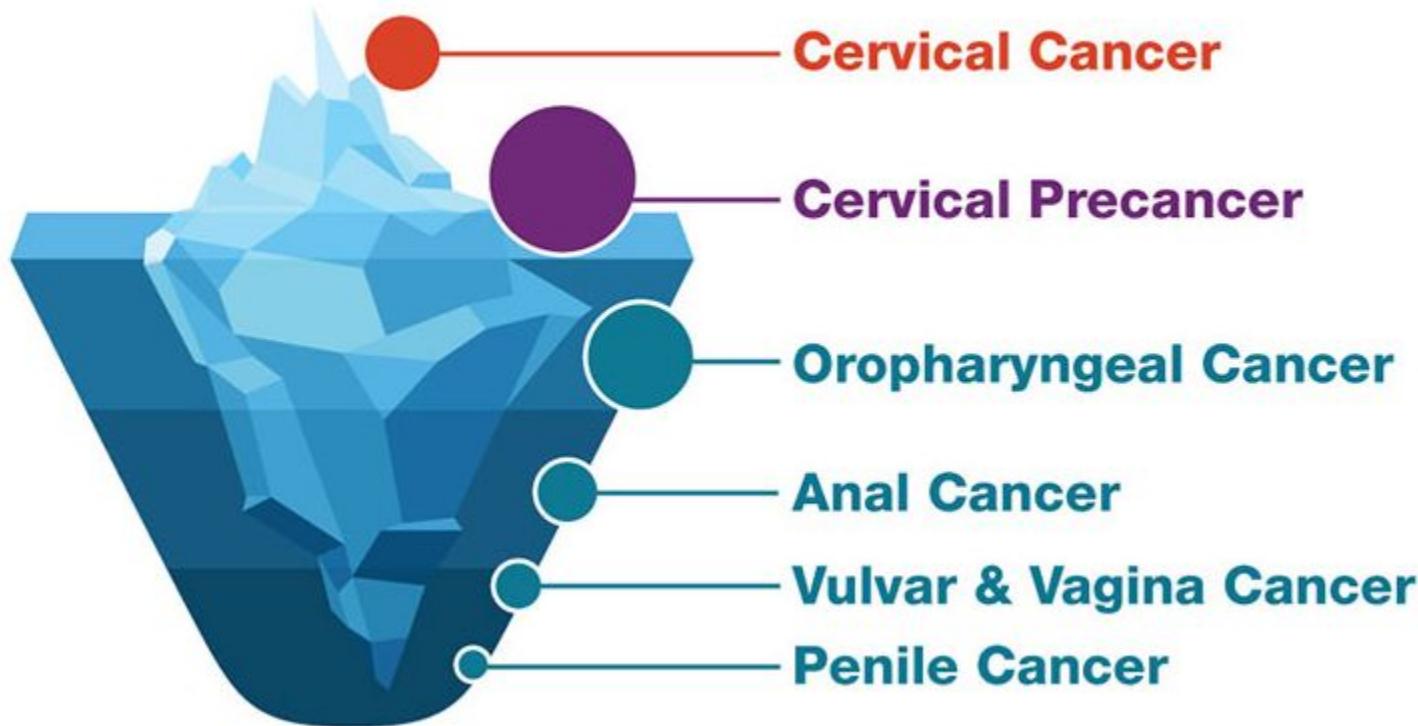
- **HPV Vaccination** to prevent HPV infection that causes cervical cancer



- Early detection and treatment of precancer and cancer via cytology and HPV detection

# HPV Vaccination

# Cancers caused by HPV are preventable.



# HPV Vaccination Schedule and Dosing

Routine vaccination	Age 11-12 years; can be started at age 9 years
Catch-up Vaccination*	Age 13-26 years, if not adequately vaccinated
Shared clinical decision-making*	Some adults age 27-45 years, if not adequately vaccinated

\*MMWR. 2019;68(32):698-702

About 85% of people will get an HPV infection in their lifetime. Vaccinating all 11-12-year-olds can protect them long before they are ever exposed.

CDC recommends two doses of HPV vaccine for all adolescents at age 11 or 12 years.

# Successful vaccination uptake decreases cancer

The New York Times

## HPV vaccine cutting cervical cancer by nearly 90%

4 November 2021



## Cervical Cancer Elimination Initiative

- Vaccination: 90% of girls fully vaccinated with the HPV vaccine by the age of 15;
- Screening: 70% of women screened using a high-performance test by the age of 35, and again by the age of 45;
- Treatment: 90% of women with pre-cancer treated and 90% of women with invasive cancer managed.

Each country should meet the 90-70-90 targets by 2030 to get on the path to eliminate cervical cancer within the next century.



Professor Ian Frazer, a co-creator of the HPV vaccine, Gardasil, said he hoped other countries would follow Australia's lead. David Maurice Smith for The New York Times

# Barriers to and Facilitators of Human Papillomavirus Vaccination Among People Aged 9 to 26 Years: A Systematic Review

Zheng, Luyan MD; Wu, Jie PhD; Zheng, Min PhD

Author Information

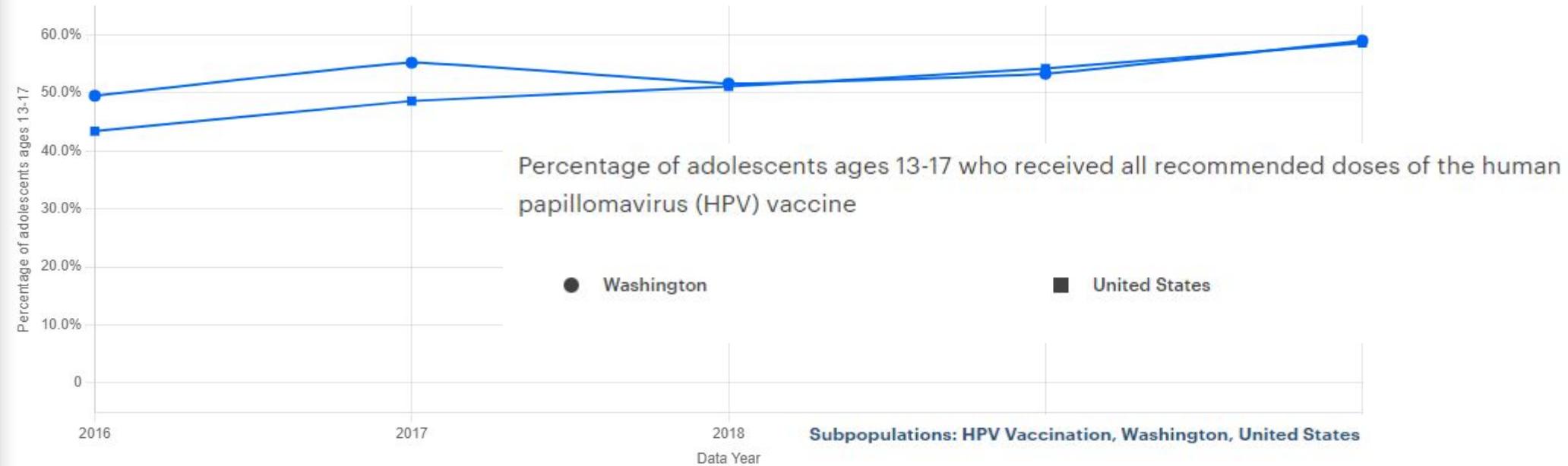
**Sexually  
Transmitted Diseases**

JOURNAL OF THE AMERICAN SEXUALLY TRANSMITTED DISEASES ASSOCIATION

- Perceived Barriers
  - Policy-level (non-mandatory, incomplete insurance coverage)
  - Fear about safety and efficacy of the vaccine
  - Fear about not being able to pay for the vaccine
  - Discrimination (religious authority against STD education)
    - facilitators can be recommendation from clinician
  - Other (lack of time, fear of pain, negative vaccine experience)

# How are we doing in US? WA state?

Trend: HPV Vaccination, Washington, United States



## Source:

- CDC, National Immunization Survey-Teen

## GENDER

### HPV Immunization - Females



### HPV Immunization - Males



Percentage of adolescents ages 13-17

# Screening Recommendations: when to start and how often

# 2018 USPSTF Cervical Cancer Screening Recommendations for Average-Risk Women

## Apply to

- All individuals with a cervix
- Asymptomatic patients/normal exam
- US population

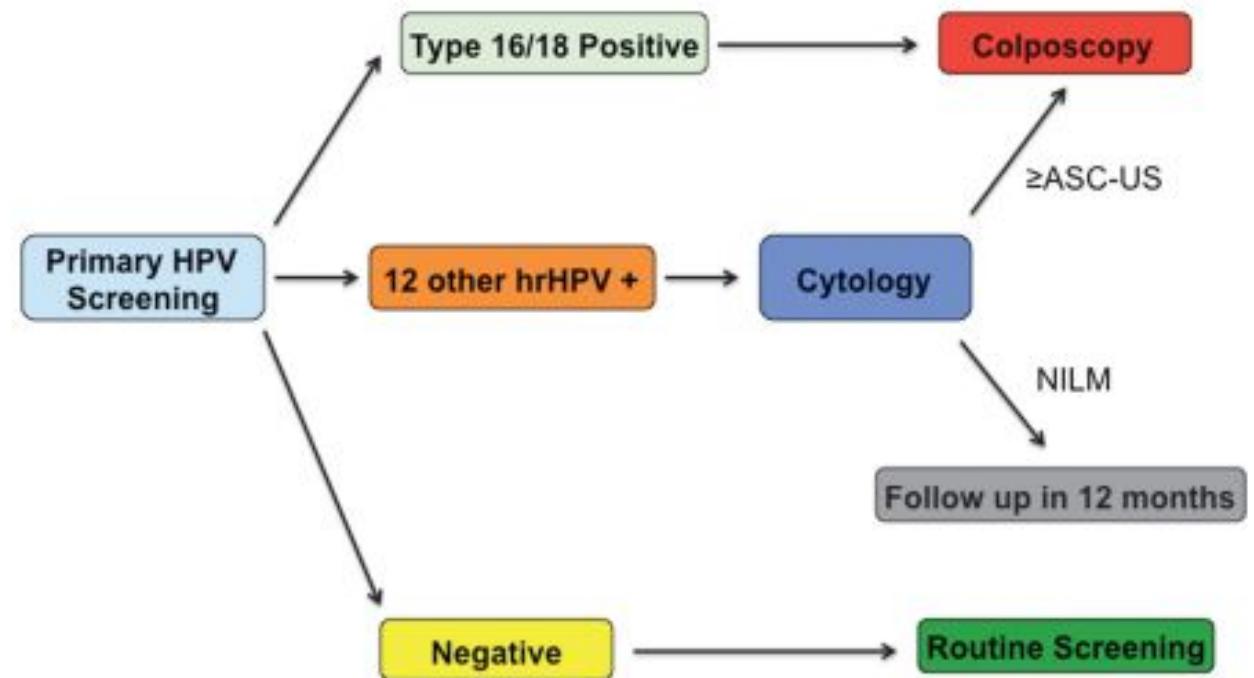
## Do NOT apply

- Previous high-grade lesion
- History of DES exposure
- Immunocompromised

Table 1. 2018 USPSTF Cervical Cancer Screening Recommendations for Average-Risk Women

Population*	Recommendation	Recommendation Grade†
Women aged <21 years	No screening	D
Women aged 21 – 29 years	Cervical cytology alone every 3 years	A
Women aged 30 – 65 years	Cervical cytology alone every 3 years <b>OR</b> hrHPV testing‡ alone every 5 years <b>OR</b> Co-testing (hrHPV testing‡ and cervical cytology) every 5 years	A
Women aged >65 years with adequate prior screening	No screening	D
Women who have had a hysterectomy with removal of the cervix and do not have a history of a high-grade cervical precancerous lesion or cervical cancer	No screening	D

# 2015 Primary HPV screening Algorithm



**FIGURE 1.** Recommended primary HPV screening algorithm. HPV, human papillomavirus; hrHPV, high-risk human papillomavirus; ASC-US, atypical squamous cells of undetermined significance; NILM, negative for intraepithelial lesion or malignancy.



Journal of the American Society of Cytopathology

Volume 8, Issue 3, May–June 2019, Pages 149–156



Original Article

HPV status in women with high-grade dysplasia on cervical biopsy and preceding negative HPV tests

Yimin Ge MD <sup>a, b</sup> Roxanne R. Mody MD <sup>c</sup>, Randall J. Olsen MD <sup>a, b</sup>, Haijun Zhou MD, PhD <sup>a</sup>, Eric Luna CT (ASCP) <sup>d</sup>, Donna Armylagos CT (ASCP) <sup>d</sup>, Natu Puntachart MB (ASCP) CM <sup>a</sup>, Heather Hendrickson MBA, MB (ASCP) CM <sup>a</sup>, Mary R. Schwartz MD <sup>a</sup>, Dina R. Mody MD <sup>a, b</sup>

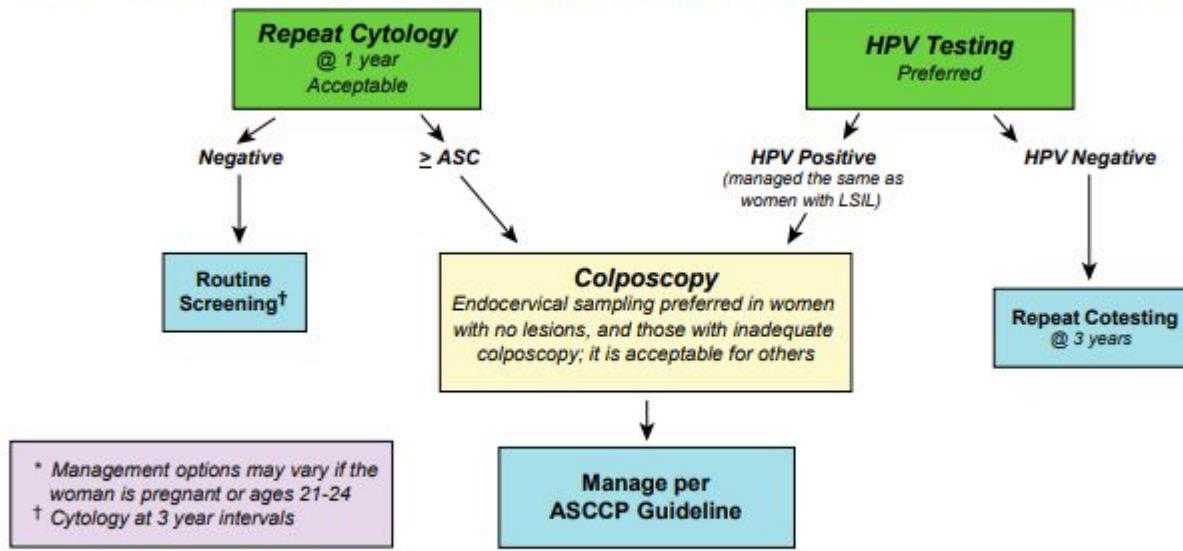
2012 Guidelines Relied on  
algorithms that were updated every  
5-10 years and could be out of date  
rapidly





Improving lives through the prevention and treatment of anogenital & HPV-related diseases

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



© Copyright, 2013, American Society for Colposcopy and Cervical Pathology. All rights reserved. **ASCP**

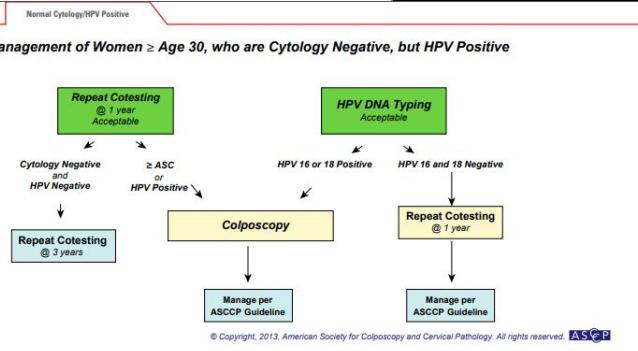
ASC-US

[ASCCP.org/management-guidelines](http://ASCCP.org/management-guidelines)

# Old guidelines

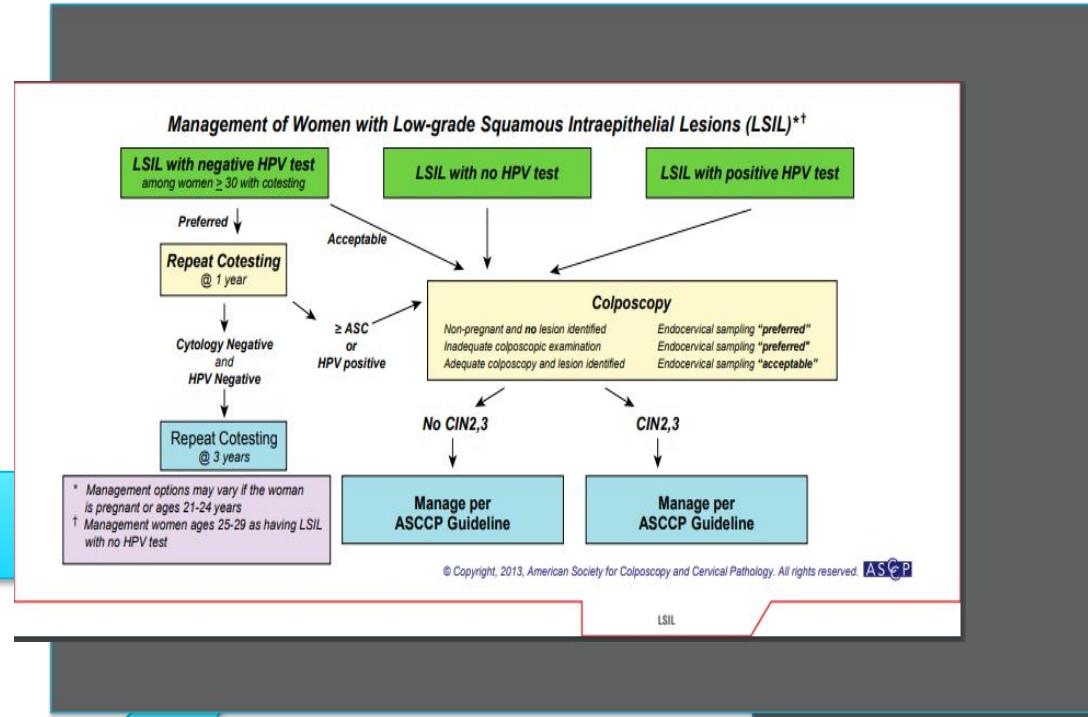
2017 PAP:  
NIL with  
HR HPV +

2017



2017 PAP:  
NIL with  
HR HPV +

2017

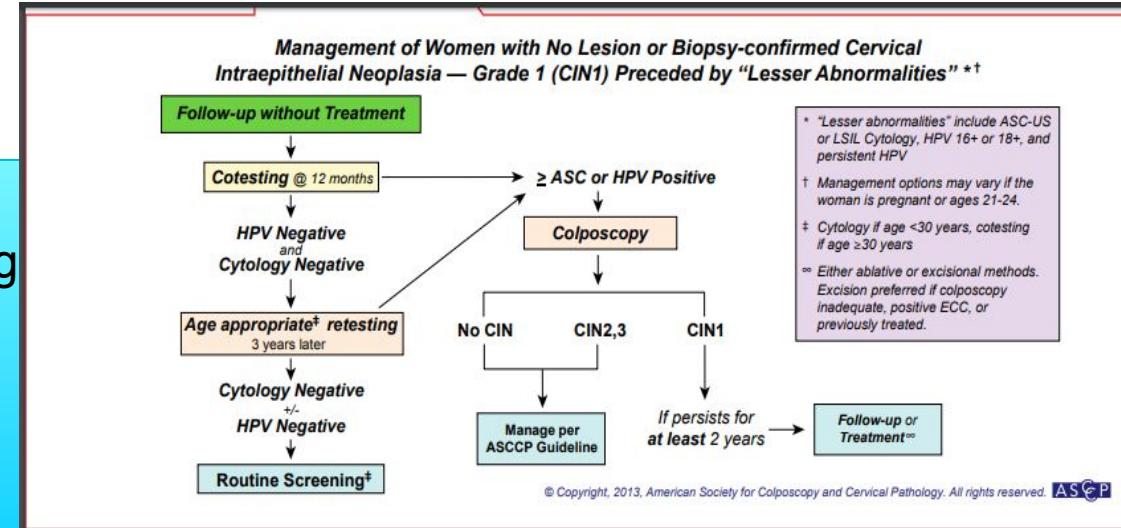


2020

2018 PAP:  
LSIL with  
HR HPV negative

2018 PAP:  
LSIL with  
HR HPV negative

2018  
Colposcopy: ECC: Benign  
Cervical Biopsy: mild  
atypia  
Vagina Biopsy: VAIN 1  
(explains pap)

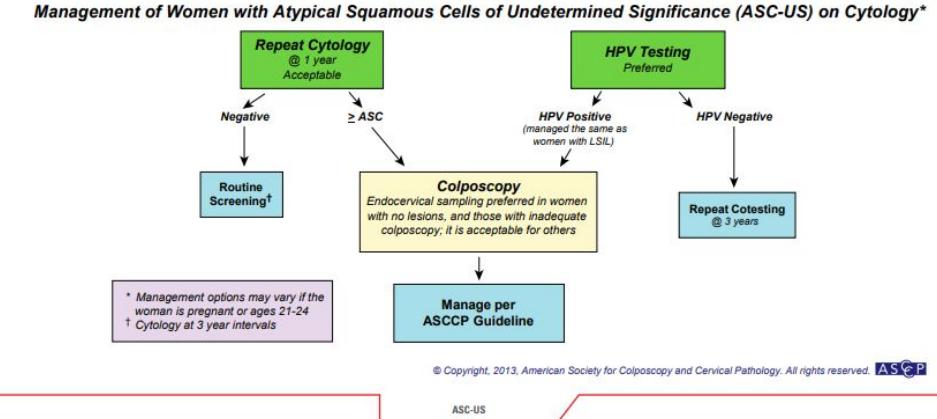


2018

2019

2020

2018  
Colposcopy: ECC: Benign  
Cervical Biopsy: mild  
atypia  
Vagina Biopsy: VAIN 1  
(explains pap)

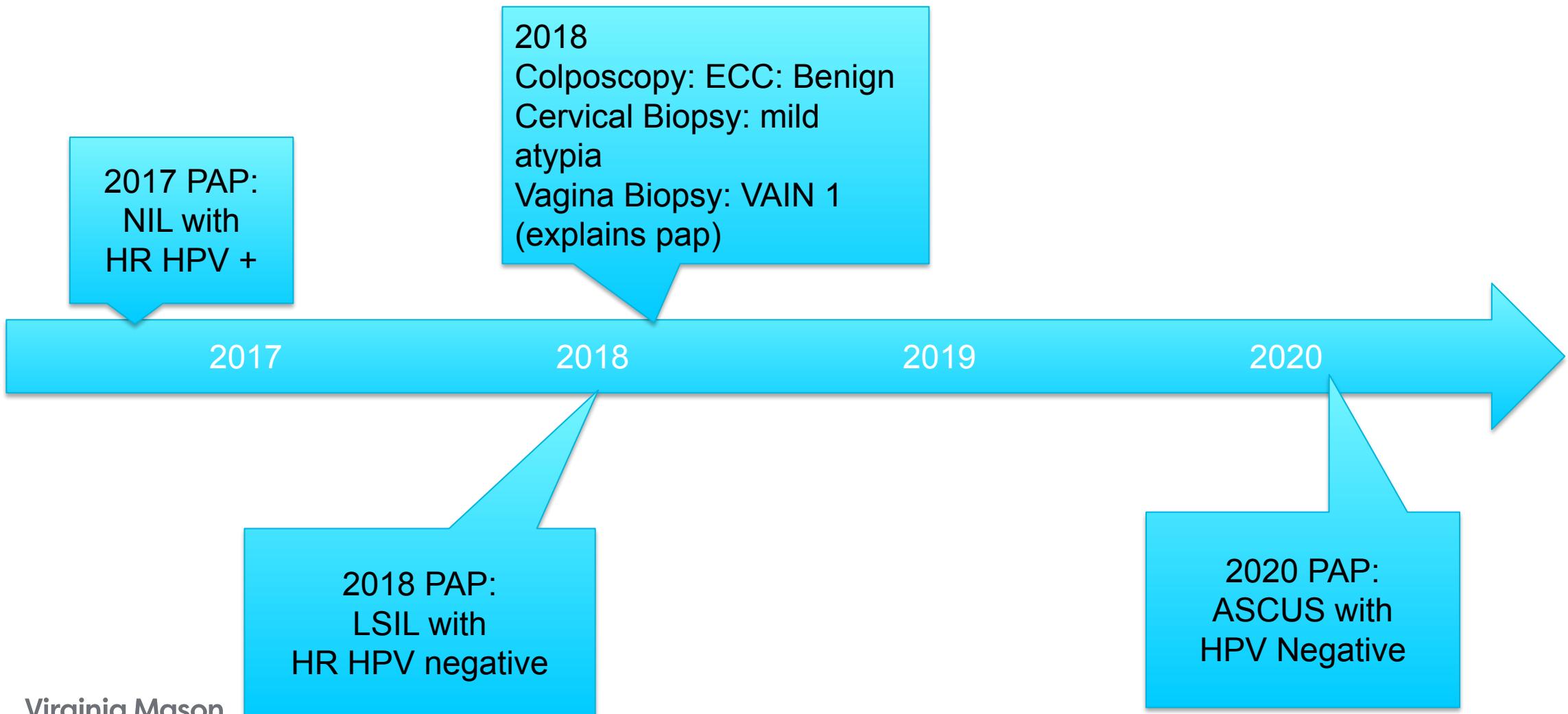


2019

2020

2020 PAP:  
ASCUS with  
HPV Negative

# Case study: Old guidelines



Updated ASCCP  
management guidelines  
are enduring because  
they estimate risk.

# Goals of Updated Guidelines

- Collaboration amongst 19 groups and patient advocates
- Increase accuracy and **reduce complexity for providers and patients**
  - Optimal Risk estimation incorporates **current results AND past history**
- Allow for easier dissemination of updated information

## Medical Professional Societies

- ASCCP
- American Academy of Family Physicians
- American Cancer Society
- American College of Nurse-Midwives
- American College of Obstetricians and Gynecologists
- American Society for Clinical Pathology
- American Society of Cytopathology
- College of American Pathologists
- Nurses for Sexual and Reproductive Health
- Nurse Practitioners in Women's Health
- Papanicolaou Society of Cytopathology
- Society of Gynecologic Oncology
- Women Veterans Health Strategic Healthcare Group

## Patient Advocacy Organizations

- American Sexual Health Association
- Cervivor
- Latino Cancer Institute
- Team Maureen

## Federal Agencies

- Centers for Disease Control and Prevention
- National Cancer Institute

# New 2019 Principles estimate CIN3+ risk

- HPV-based testing
  - Either primary HPV testing alone
  - HPV testing with cytology (co-testing)
- Personalized risk management is possible with knowledge of current results and past history.
  - **Special populations** have different recommendations

# How was/is risk of CIN 3+ determined?

- Multiple **large prospective longitudinal US databases** following patients of diverse racial, ethnic, and socioeconomic strata to assure relevance to all women.
  - KPNC, Clinical trials, New Mexico HPV Pap Registry, Others
  - Encompass diverse populations because we know CIN 3+ prevalence is driven by **geographic location, race, ethnicity & socioeconomic status**
- Patients with similar test results and screening history combinations have largely the same risk of CIN 3+
- In cases where the data could not predict risk, literature review or prior consensus data was used.

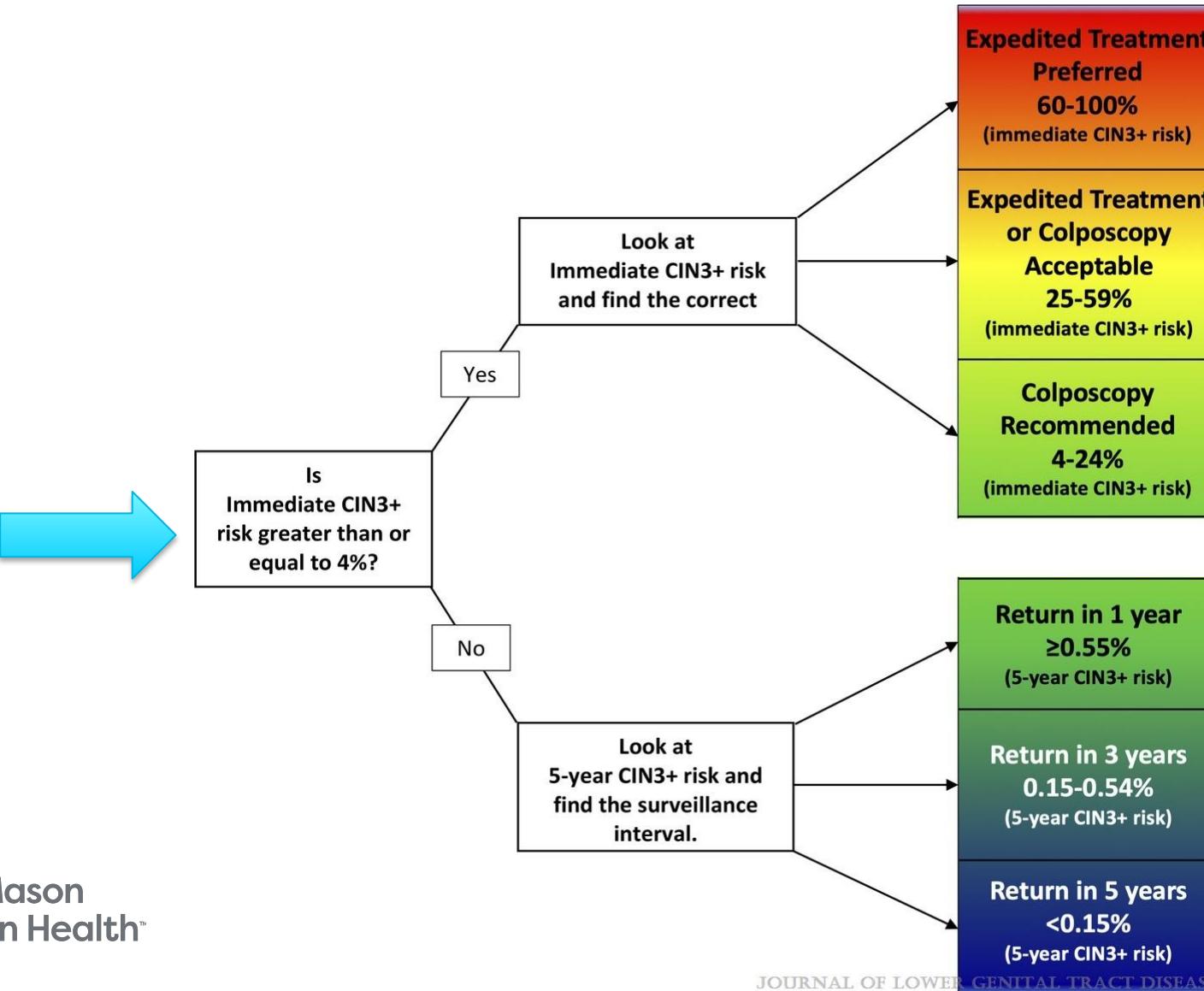
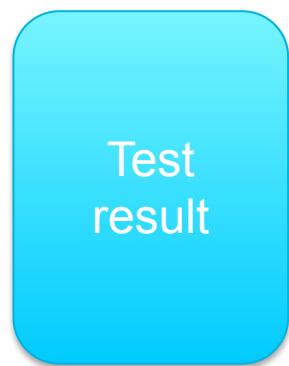
# asccp.org/management-guidelines

## Data tables (5+ tables, 68 rows x 82 columns)

Age	Pre-Colpo Test Result	Post-Colpo Test Result - PAST HISTORY	Current HPV Result	Current PAP Result	UL95 4-ye (%)	CANCER 5 year risk	SE 5-year	LL95 5-ye (%)	UL95 5-ye (%)	Management
25-65	Low Grade		HPV-negative	ALL	0.06	0.05	0.02	0.01	0.09	3-year follow-up
25-65	High Grade		HPV-negative	ALL	0.22	0.15	0.08	0.00	0.30	1-year follow-up
25-65	Low Grade	Cotest-negative	HPV-negative	NILM	0.08	0.04	0.03	-0.01	0.09	3-year follow-up
25-65	High Grade	Cotest-negative	HPV-negative	NILM	0.35	0.15	0.10	-0.06	0.35	3-year follow-up
25-65	Low Grade	HPV-negative	HPV-negative	ALL	0.07	0.03	0.02	-0.01	0.07	3-year follow-up
25-65	High Grade	HPV-negative	HPV-negative	ALL	0.39	0.18	0.10	-0.02	0.39	3-year follow-up
25-65	Low Grade	Cotest-negative	HPV-negative	ASC-US/LSIL	NA	0.00	NA	NA	NA	3-year follow-up
25-65	Low Grade	Cotest-negative	HPV-positive	NILM	NA	0.47	NA	NA	NA	1-year follow-up
25-65	Low Grade	Cotest-negative	HPV-positive	ASC-US/LSIL	NA	0.00	NA	NA	NA	1-year follow-up
25-65	Low Grade	Cotest-negative	HPV-negative	High Grade	NA	0.00	NA	NA	NA	Colposcopy
25-65	Low Grade	Cotest-negative	HPV-positive	High Grade	NA	0.00	NA	NA	NA	Colposcopy
25-65	High Grade	Cotest-negative	HPV-negative	ASC-US/LSIL	0.00	0.00	0.00	0.00	0.00	3-year follow-up
25-65	High Grade	Cotest-negative	HPV-positive	NILM	0.00	0.00	0.00	0.00	0.00	1-year follow-up
25-65	High Grade	Cotest-negative	HPV-positive	ASC-US/LSIL	0.00	0.00	0.00	0.00	0.00	1-year follow-up
25-65	Low Grade	HPV-negative/ASCUS/LSIL	HPV-negative	NILM	0.00	0.00	0.00	0.00	0.00	3-year follow-up
25-65	Low Grade	HPV-negative/ASCUS/LSIL	HPV-negative	ASC-US/LSIL	0.00	0.00	0.00	0.00	0.00	1-year follow-up
25-65	High Grade	HPV-negative x2	HPV-negative	ALL	0.42	0.14	0.14	-0.14	0.42	3-year follow-up
25-65	Low Grade	HPV-negative x2	HPV-negative	ALL	0.00	0.00	0.00	0.00	0.00	5-year follow-up
25-65	Low Grade	Cotest-negative x2	HPV-negative	NILM	0.00	0.00	0.00	0.00	0.00	5-year follow-up
25-65	High Grade	Cotest-negative x2	HPV-negative	NILM	0.00	0.00	0.00	0.00	0.00	3-year follow-up

# How do we use this in our clinics?

# Risk prediction and Action Thresholds



Journal of Lower Genital Tract Disease 24(2):102-131, April 2020.

# Mobile App for iOS and Android & Web-based (free) Platforms

## Management Guidelines

### New Management Guidelines Are Here

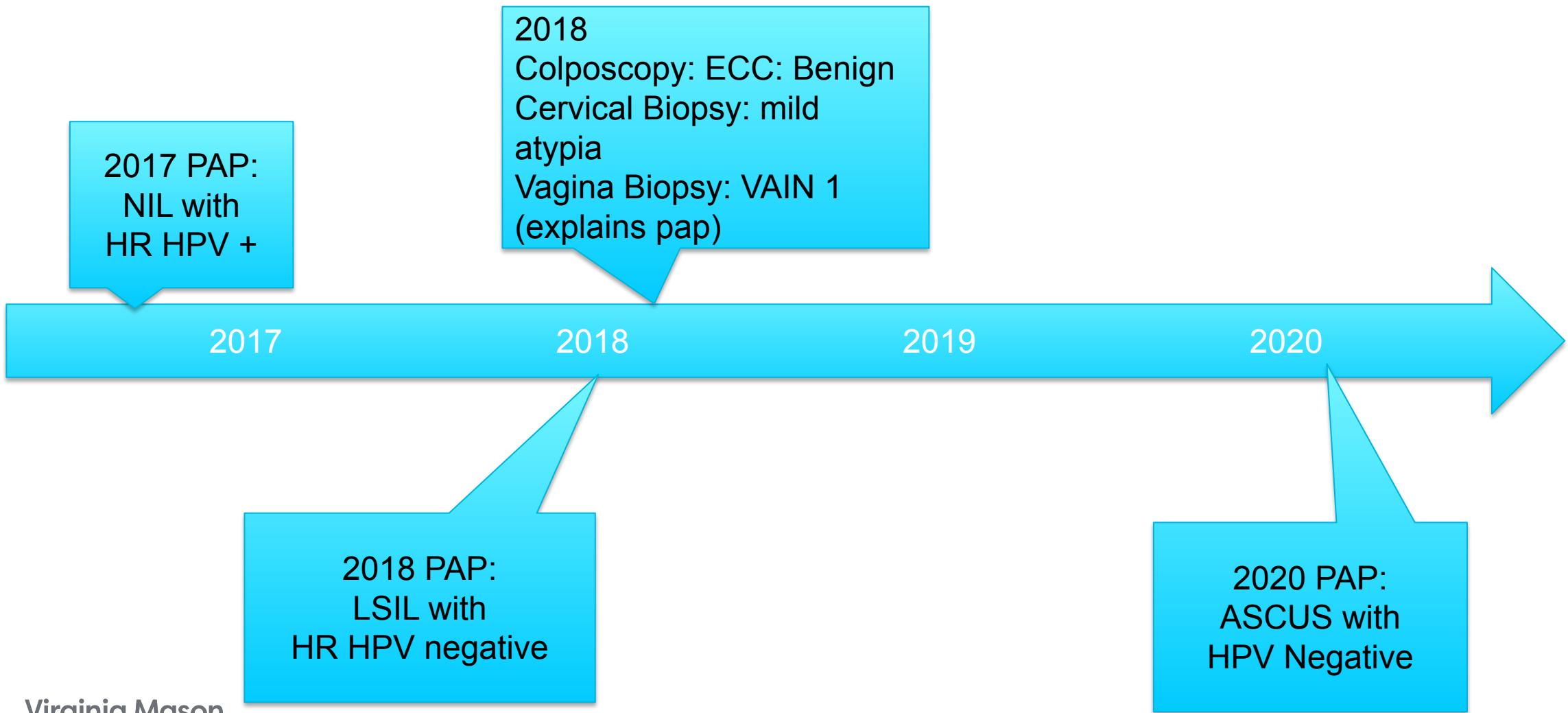
ASCCP Risk-Based Management Consensus Guidelines for abnormal cervical cancer screening tests and cancer precursors have been published.

The [new iOS & Android mobile apps and the Web application](#), to streamline navigation of the guidelines, have launched.



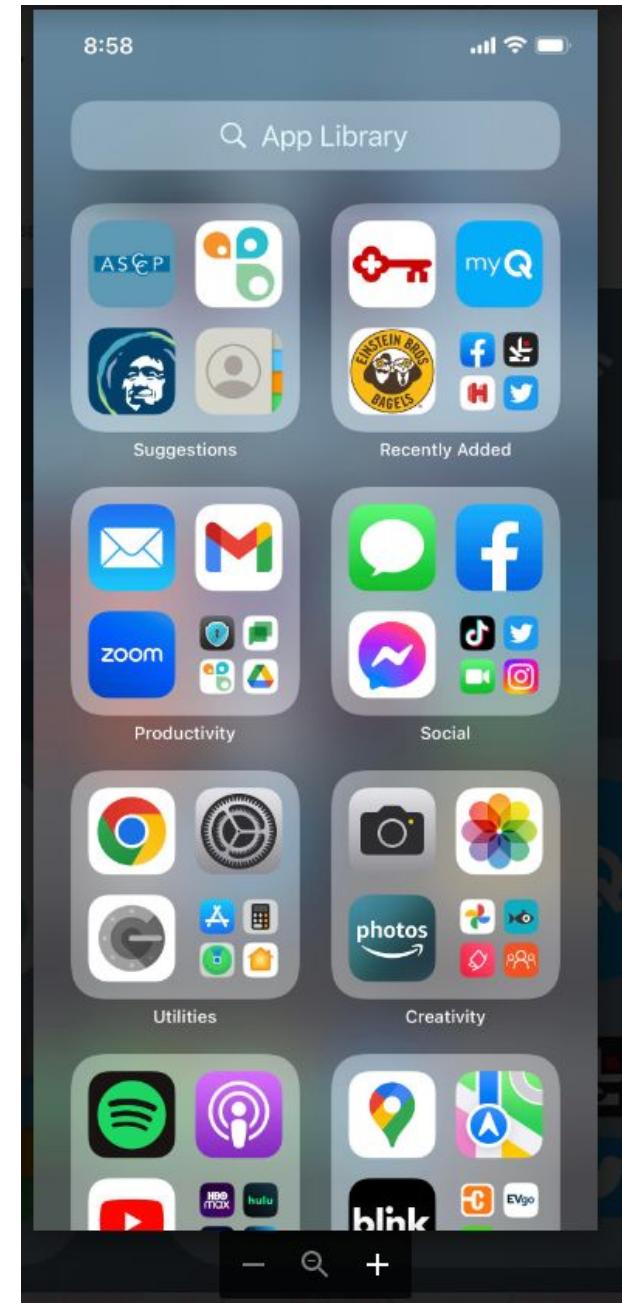
Improving lives through the prevention and treatment of anogenital & HPV-related diseases

# Case Study: NEW guidelines



# Case 1

- 47 year old
- Current pap ASCUS with HPV 16 +, HPV 18+
- Prior pap NIL and HPV negative



12:03

◀ Search

ASCP

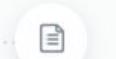
Screening Management Publications Definition



Clinical Situation



Testing



Recommendation

## Current testing

HPV



None



Negative



Positive (untyped)



Positive (genotyped)

HPV DNA



HPV 16



HPV 18



HPV Other

Cytology



ASC-US



LSIL



ASC-H



AGC

Does the patient have previous screening



12:03

12:03

◀ Search

ASCP

Screening Management Publications Definition

test results?

Yes

No

## Prior testing

HPV



None



Negative



Positive

Cytology



Normal



ASC-US



LSIL

Does the patient have previous screening test results?



Yes

No

← Back

Next →



12:03

12:03

ASCP

Screening Management Publications Definition



Clinical Situation



Testing



Recommendation

## Confirmation

Routine screening (within past 5 years)

Age: 30 to 65

Current results

Cotest with a HPV16 positive result and abnormal cytology result of ASC-US

Prior results

Cotest with negative HPV and normal cytology

← Back

Next →

12:03

12:03

ASCP

Screening Management Publications Definition



Clinical Situation



Testing



Recommendation

## Recommendation

Colposcopy<sup>1</sup>

## Risk

Immediate risk of CIN3+ is 4.40%<sup>1</sup>Immediate risk of CIN3+ is 4.40%<sup>1</sup>

← Back

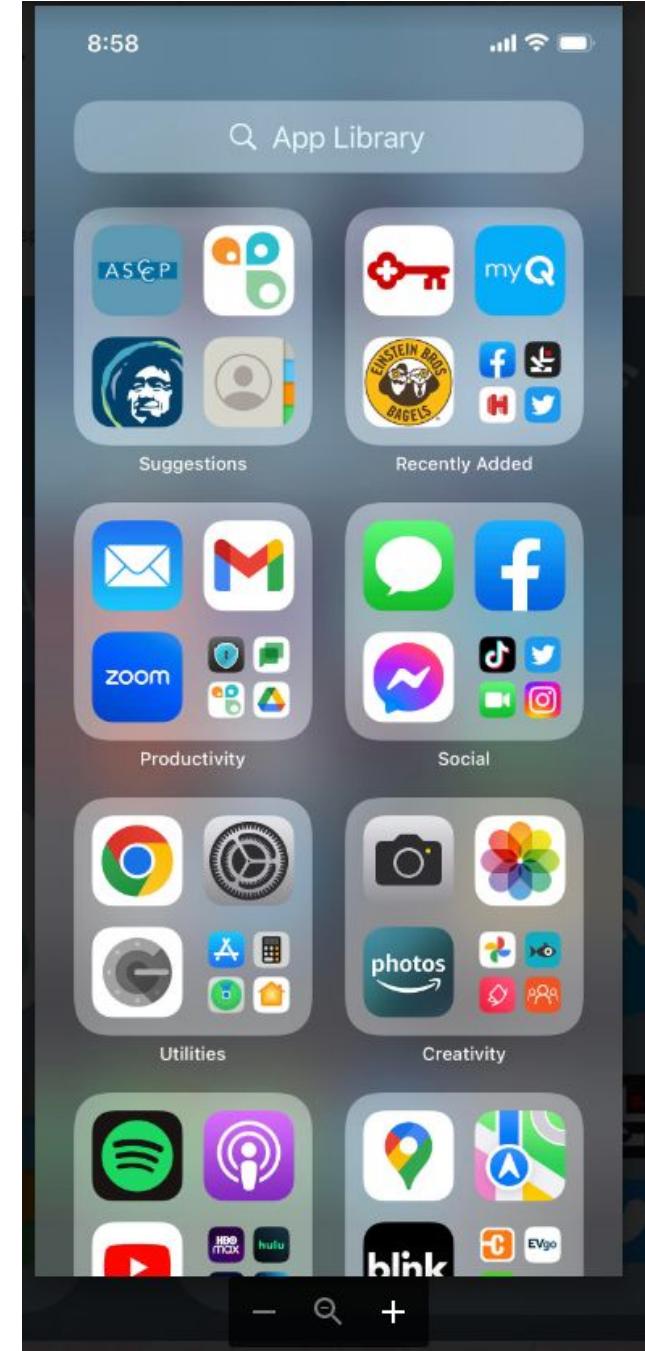
Start Over

## References

1. Risk estimates supporting the 2019 ASCCP Risk-Based Management Consensus Guidelines. <https://cervixca.nlm.nih.gov/RiskTables/>

# Case 2

- 64 year old
- Current pap: ASCUS neg HPV
- Prior pap: LSIL, neg HPV
- Prior pap: NIL, HPV Positive



11:34

Search

# ASCP

Screening Management Publications Definition

Age

Under 25 YEARS 25 to 29 YEARS **30 to 65 YEARS** Over 65 YEARS

Clinical Situation

Routine screening (within past 5 years) >

Rarely screened (>5 years ago) >

Evaluation of a colposcopic biopsy >

Management of results during post colposcopy surveillance (within past 7 years) >

Follow-up after treatment >

Special Situation

Unsatisfactory cytology >

Post hysterectomy >

Symptomatic >

Immunosuppressed >

Help me decide

Next →

11:54

# ASCP

Screening Management Publications Definition

Clinical Situation Testing Recommendation

Current testing

HPV

None **Negative** Positive (untyped) Positive (genotyped)

Cytology

None **Normal** ASC-US LSIL

Does the patient have previous screening test results? *i*

Yes No

Prior testing

HPV

11:54

# ASCP

Screening Management Publications Definition

Prior testing

HPV

None **Negative** Positive

Cytology

None Normal ASC-US **LSIL**

Does the patient have previous screening test results? *i*

Yes No

Prior testing (x2)

HPV

None **Negative** Positive



Screening Management Publications Definition

None Normal ASC-US LSIL

Does the patient have previous screening test results?

Yes

No

Prior testing (x2)



None

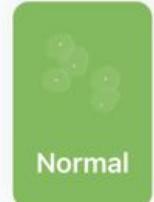


Negative



Positive

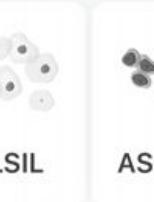
Cytology



Normal



ASC-US



LSIL



ASC-H

← Back

Next →



Screening Management Publications Definition



Clinical Situation



Testing



Recommendation

### Confirmation

Routine screening (within past 5 years)

Age: 30 to 65

Current results

Cotest with negative HPV and abnormal cytology result of ASC-US

Prior results

Cotest with negative HPV and abnormal cytology result of LSIL

Prior results (x2)

Cotest with positive HPV and normal cytology

← Back

Next →



Screening Management Publications Definition



Clinical Situation



Testing



Recommendation

### Recommendation

**1-year follow-up<sup>1</sup>**HPV-based screening at follow-up visit<sup>2</sup>The management recommendation is based on the current results in the setting of a prior low grade abnormal pap result and/or a positive HPV test.<sup>2</sup>

← Back

Start Over

### References

1. Egemen D, Cheung LC, Chen X, et al. Risk estimates supporting the 2019 ASCCP Risk-Based Management Consensus Guidelines. *J Low Genit Tract Dis* 2020;24:132–43.
2. Perkins RB, Guido RS, Castle PE, et al. 2019 ASCCP risk-based management consensus guidelines for abnormal cervical cancer screening tests and cancer precursors. *J Low Genit Tract Dis* 2020;24:102–31.

# Special populations/ Exceptions

## Symptomatic patients

- Abnormal bleeding, visibly or palpably abnormal cervix
- REQUIRES a **DIAGNOSTIC TEST** and physical examination
- Consider referral to gynecology or gynecologic oncology

## Immunosuppressed patients

- Baseline higher risk for CIN 3+ exists
- Earlier treatment and quicker follow up may be recommended
- Consider referral to gynecology or gynecologic oncology

## COVID-19 considerations

## Age > 65/Rarely screened patients

# Paps should continue after age 65 for some...

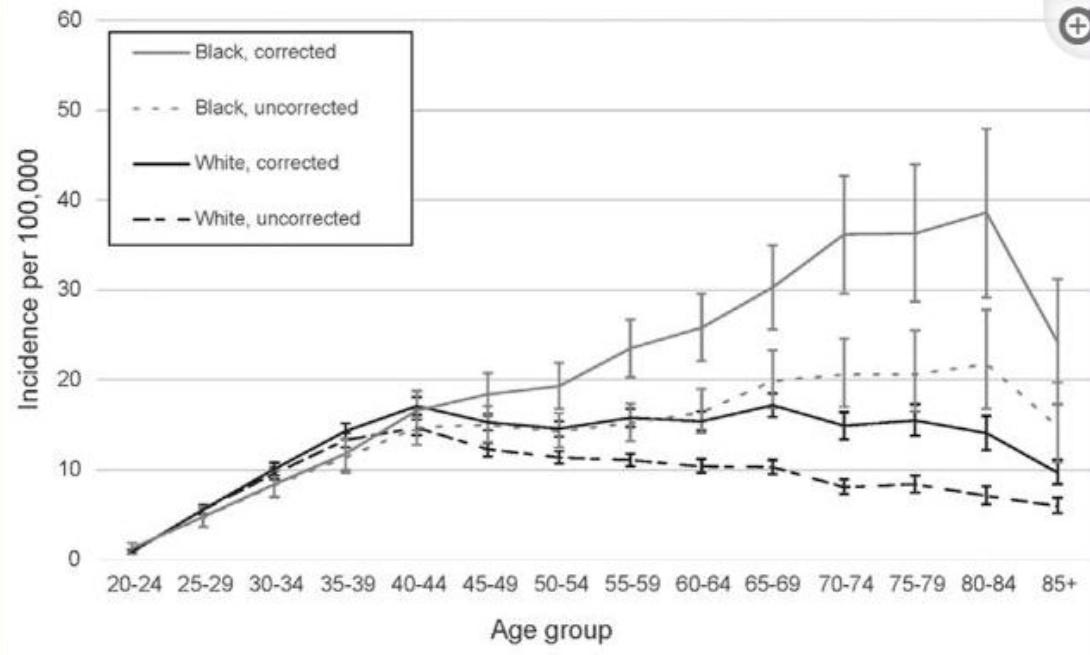


Figure 1

Age-specific incidence and 95% CI of cervical cancer in the U.S., 2013, corrected and uncorrected for hysterectomy, by race.

- Some of the highest incidence of is after age 65
- “Stopping age” applies only to the following for the 10 years prior to stopping:
  - 3 normal paps in a row for cytology alone
  - 2 normal pap/HPV for co-test
  - Lack of high risk feature
    - Previous high-grade lesion
    - History of DES exposure
    - Immunocompromised

*Am J Prev Med.* 2017 September ; 53(3): 392–395. doi:10.1016/j.amepre.2017.02.024.

## Cervical Cancer Screening and Incidence by Age: Unmet Needs Near and After the Stopping Age for Screening

Mary C. White, ScD, Meredith L. Shoemaker, MPH, and Vicki B. Benard, PhD  
Division of Cancer Prevention and Control, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention (CDC), Atlanta, Georgia

# COVID-19 pandemic considerations

- Treatment delays are not warranted based on COVID-19 anymore.
- Screening and vaccinations may have lapsed.



# Racism is Serious Threat to the Public's health.

# There is inequity in Cancer Prevention and control.

- Health equity is when everyone has equal opportunity to be as healthy as possible.
  - Some Americans can't make healthy choices because of where they live, their race or ethnicity, their education, their physical or mental abilities, their income.
- Social Determinants of health affect screening and include access to:
  - A good education
  - Healthy food
  - A safe home to live in
  - Reliable transportation
  - Clean air and water



## Health Equity in Cancer

Cancer Home

[Español \(Spanish\)](#) | [Print](#)



### Equity in Cancer Prevention and Control

Equity is when everyone has an equal opportunity to be as healthy as possible.

[More](#)



### How Racism Leads to Cancer Health Disparities

Racism is a serious threat to the public's health.

[More](#)



### What Data Are Used to Measure Cancer Health Disparities?

Measurements describe how much a group of people is affected by cancer.

[More](#)

Access affects cancer risk.  
Being rarely or never screened is  
the major contributing factor to  
most cervical cancer deaths today.

# Who are the Rarely and Never Screened

## Descriptions

- People of color
- Low Socioeconomic status
- Foreign born
  - Living in the US < 10 years
- No usual source of health care

## Where are the data?

- US Census
- CDC
  - National Center of Health Statistics
  - Behavioral Risk Factor Surveillance System
  - National Health Interview Survey



Centers for Disease Control and Prevention  
CDC 24/7: Saving Lives, Protecting People™

# CDC's Efforts to Address Racism as a Fundamental Driver of Health Disparities

- The CDC has launched Nationwide Public Health efforts to address Health equity
- Increase funding to address disparities for racial/ethnic minorities who live in rural areas
- Increase funding for community health programs
- Work to identify and remove barriers to health
  - Structural racism
    - (Native Americans live farther from colonoscopy labs and are more likely to die of colon CA)
  - Institutional racism
    - (Black women are 5x less likely to live 5 years after a cervical cancer diagnosis)
  - Interpersonal racism (Best appts offered to patients who look scheduler)



# Conclusion

We have the tools to eliminate cervical cancer.

- Vaccination for HPV for boys and girls before the age of 15 > 90%

- Screening with pap + HPV or HPV alone as recommended

- Identify and catch up those lapsed/not up to date

- Support public health measures to improve access/education

- Consider supporting policies that address disparities and inequity



# Thank you