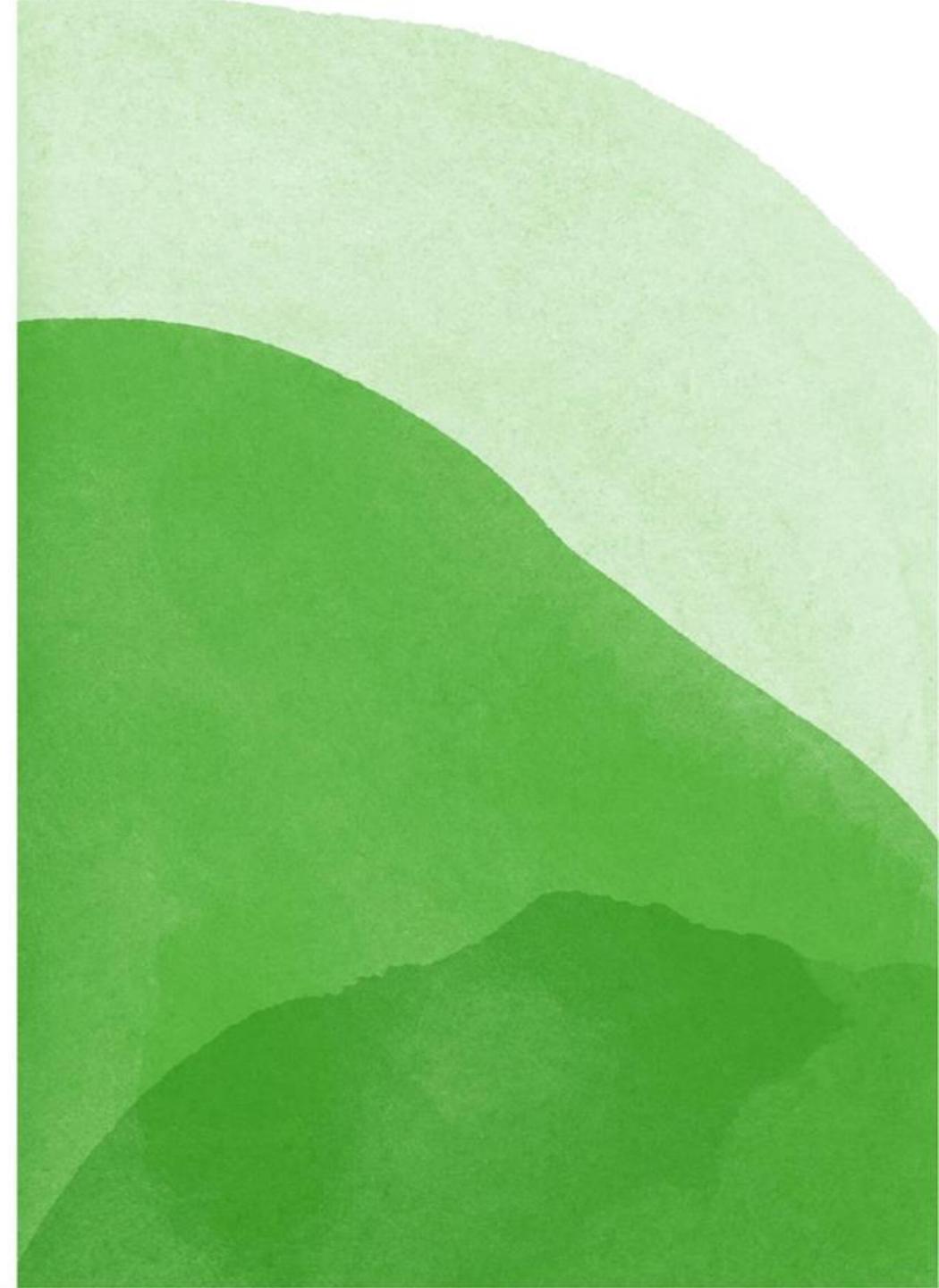


The Abnormal Pap: Updated ASCCP Management Guidelines

Amy Brockmeyer, MD

Section Head of Gynecology and Gynecologic
Oncology & Director of Gynecologic Oncology

December 4, 2021

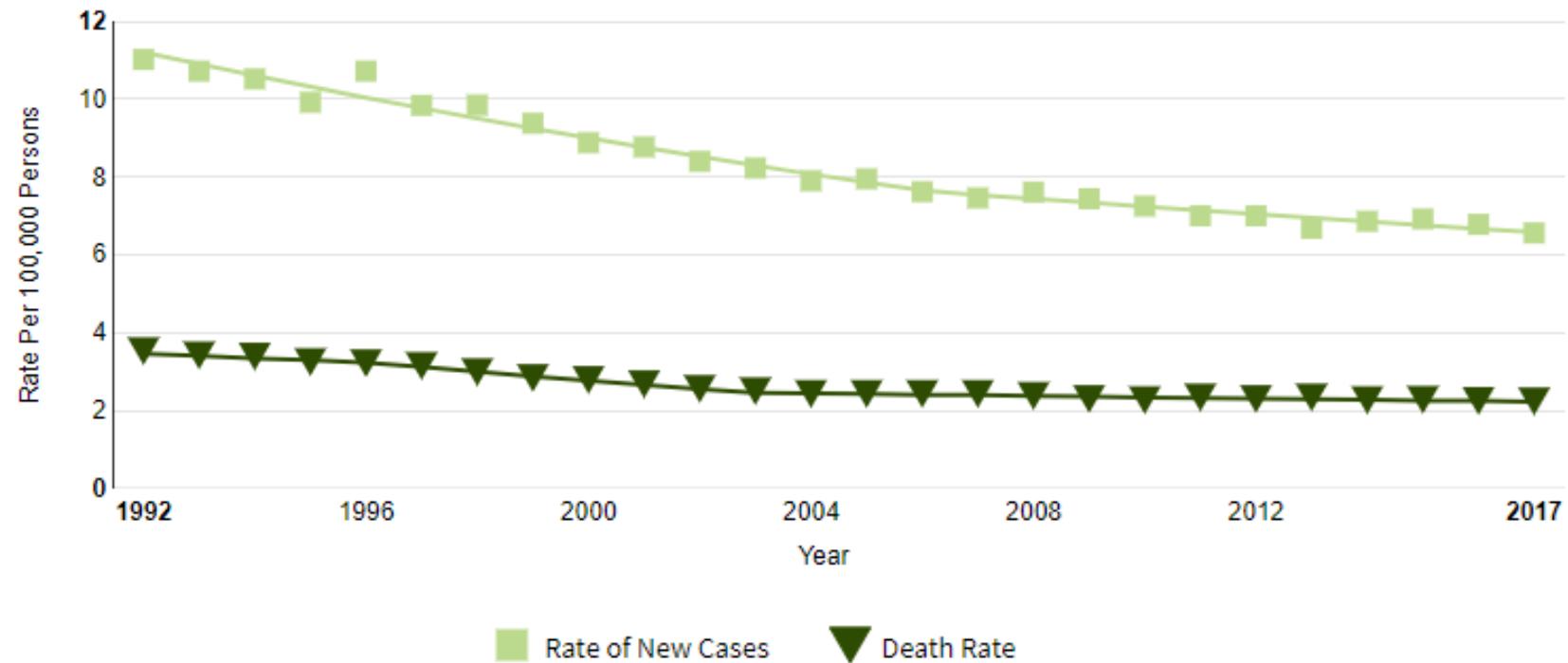


Learning Objectives

- Understand why screening works.
- Know the vaccination recommendations
- Understand why **The American Society for Colposcopy and Cervical Pathology (ASCCP) 2019 Consensus Guidelines** were created.
- Understand how to apply recommendations to your care
- Recognize racial determinants of cervical cancer incidence mortality
- Identify action items that work for system change

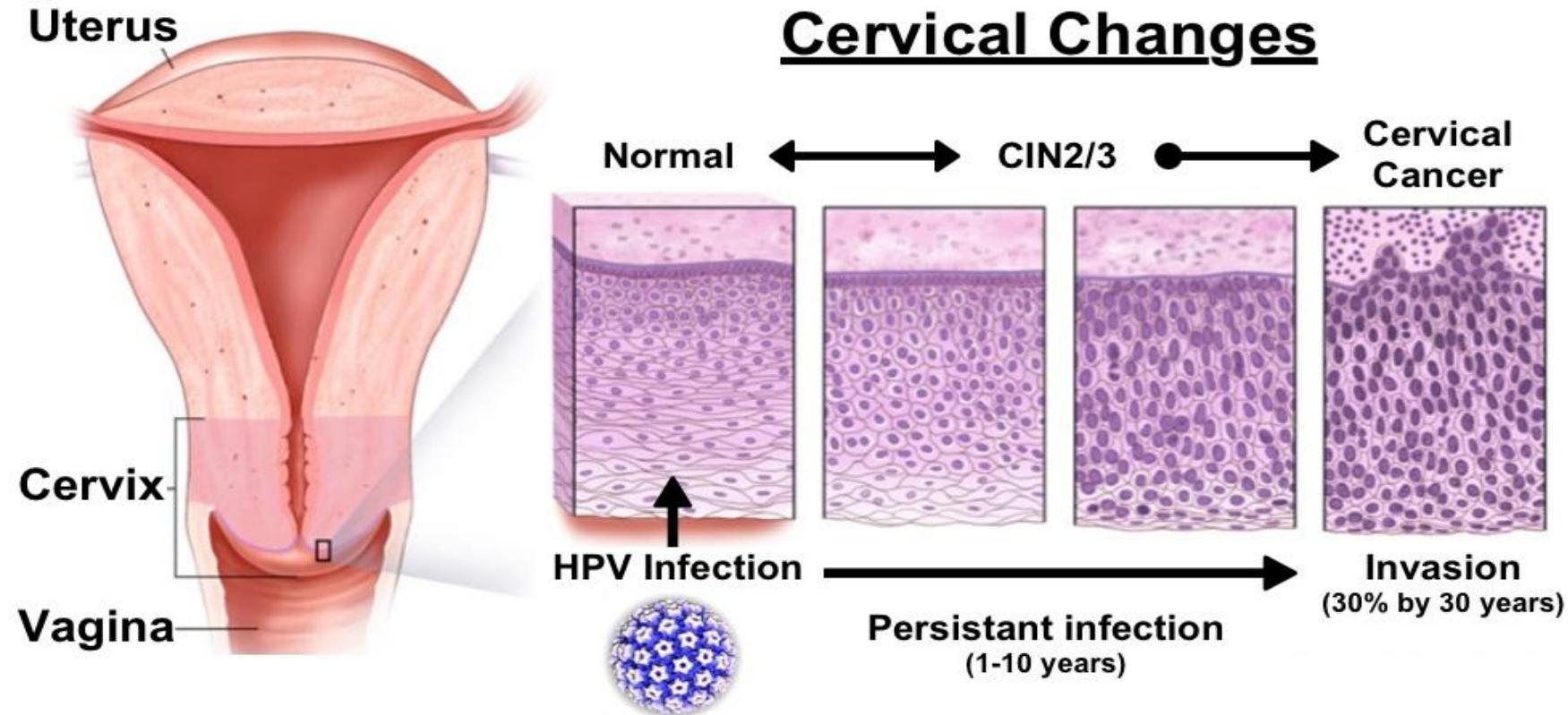
Cervical Cancer Incidence

- Estimated new cases of cervical cancer in the US in 2020: 13,800
- The case incidence has been steadily falling since the 1970s as a direct result of screening.



New cases come from SEER 13. Deaths come from U.S. Mortality.

Cervical cancer pathogenesis...



Two targets for cervical cancer prevention

- **HPV Vaccination** to prevent HPV infection that causes cervical cancer
 - In vaccinated women, the percentage of precancers...**dropped by 40%**.
- **Early detection and treatment of precancer** and cancer via cytology and HPV detection
 - Use screening guidelines avoid overtreatment
 - Infertility and preterm birth
 - Anxiety, unneeded uncomfortable exams
 - Test for HPV to identify those with persistent infection
 - Examine/refer appropriately
 - Abnormal bleeding, bleeding after sex, pain, visible lesion

HPV Vaccination

Vaccinate ages 11/12 (2 shots) completed by 13

When does my child need the HPV vaccine?

THE AMERICAN CANCER SOCIETY RECOMMENDS THE HPV VACCINE FOR BOYS AND GIRLS AGES 11 OR 12.



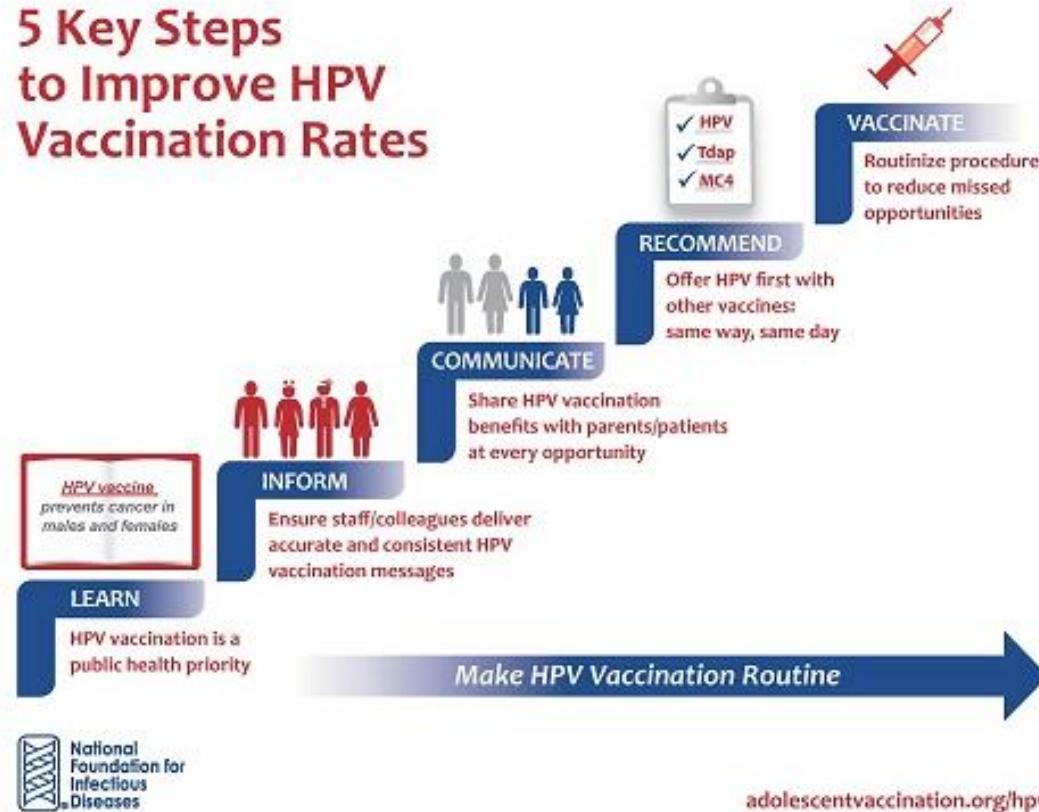
The vaccine can be started as early as age 9, and **should be completed by your child's 13th birthday.**

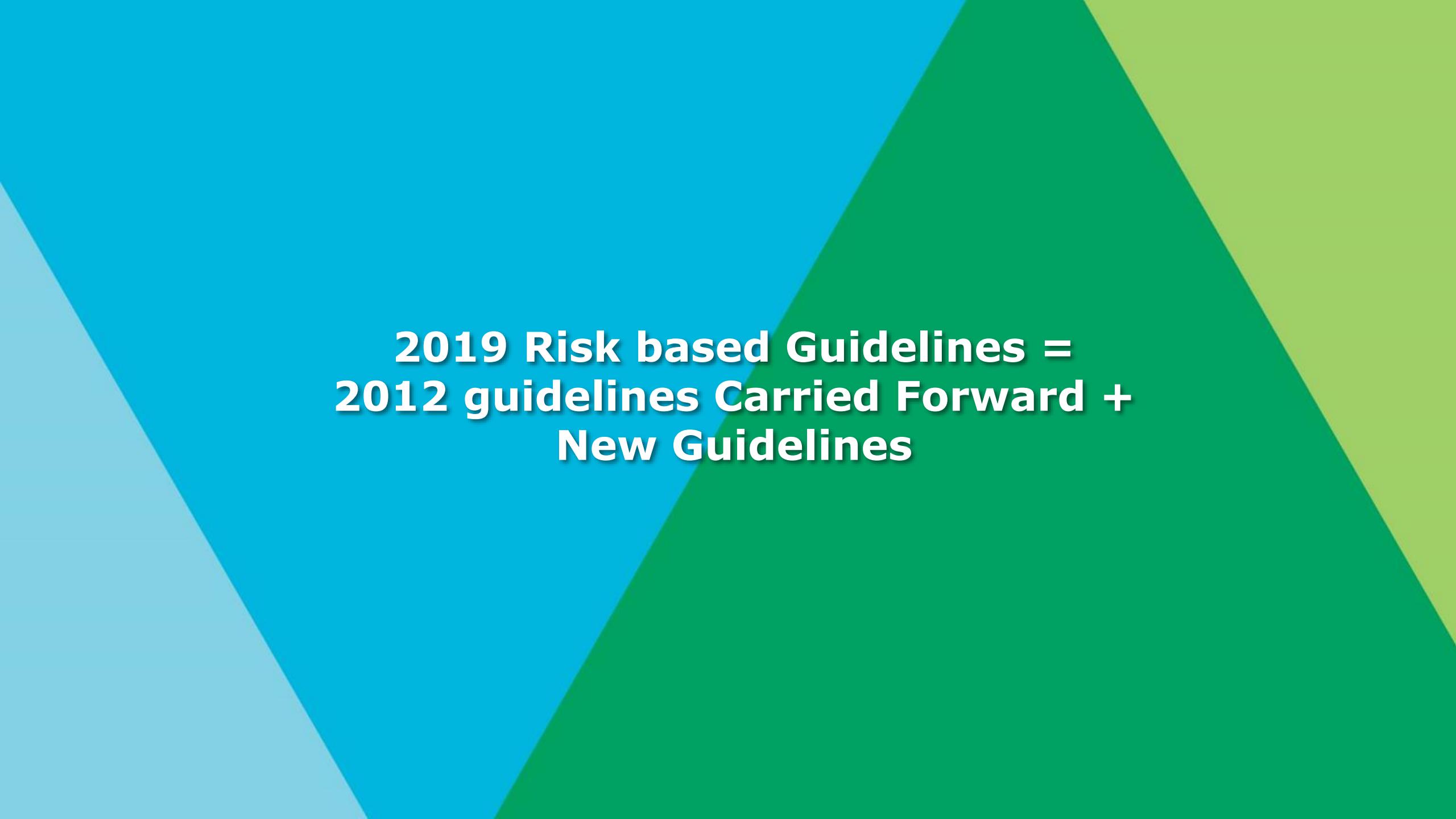
The vaccine is given in **two shots**, with 6 to 12 months between shots.* **HPV vaccination works best at ages 11 or 12**, before HPV exposure.



* 3 shots of the HPV vaccine are needed for children who started the vaccine at age 15 or older, up to age 26 for women and age 21 for men, and those who have certain immune system conditions.

5 Key Steps to Improve HPV Vaccination Rates





**2019 Risk based Guidelines =
2012 guidelines Carried Forward +
New Guidelines**

2018 USPSTF Cervical Cancer Screening Recommendations for Average-Risk Women

Do NOT apply to women who are a high risk of disease

- Those with 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 OR hrHPV testing‡ alone every 5 years OR 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

2012 Guiding Principles Carried Forward

- Primary goal is **cancer prevention** through detection and early treatment
- Guidelines apply to **all individuals with a cervix**
 - Includes **women and transgender men** with a cervix, and those who underwent supracervical hysterectomy.
 - Can **extrapolate to those post total hyst with previous dysplasia**
- Equal management for equal risk
- Balance benefits and harms
 - We cannot prevent all cancers
 - All interventions cause harm
- Apply to asymptomatic patients
- For US use



The society for lower genital tract disorders since 1964.

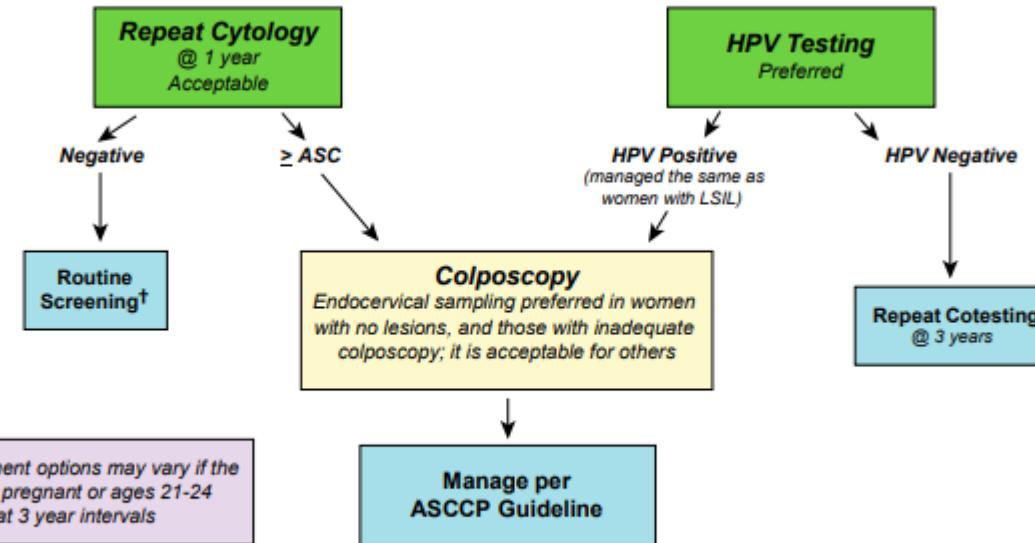
Algorithms

American Society for Colposcopy and Cervical Pathology

ASCCP.org/management-guidelines

Updated Consensus Guidelines for
Managing Abnormal Cervical Cancer
Screening Tests and Cancer Precursors

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



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Case Study/Previous guidelines 64 yo

Year	PAP	Recommendation
2017	NIL/HR HPV Positive	<p>Normal Cytology/HPV Positive</p> <p>Management of Women \geq Age 30, who are Cytology Negative, but HPV Positive</p> <pre>graph TD A[Normal Cytology/HPV Positive] --> B[Management of Women >= Age 30, who are Cytology Negative, but HPV Positive] B --> C[Repeat Cotesting @ 1 year Acceptable] B --> D[HPV DNA Typing Acceptable] B --> E[HPV 16 or 18 Positive] E --> F[HPV 16 and 18 Negative] F --> G[Repeat Cotesting @ 1 year] C --> H[Cytology Negative and HPV Negative] H --> I[Repeat Cotesting @ 3 years] C --> J[> ASC or HPV Positive] J --> K[Colposcopy] K --> L[Manage per ASCCP Guideline] D --> M[HPV 16 and 18 Negative] M --> N[Repeat Cotesting @ 1 year] N --> O[Manage per ASCCP Guideline]</pre> <p>© Copyright, 2013, American Society for Colposcopy and Cervical Pathology. All rights reserved. ASCP</p>

65 year old

Year	PAP/Test	Recommendation
2018	LSIL/ HR HPV Negative	<p>Management of Women with Low-grade Squamous Intraepithelial Lesions (LSIL)*†</p> <p>LSIL with negative HPV test among women ≥ 30 with cotesting</p> <p>Preferred ↓</p> <p>Repeat Cotesting @ 1 year</p> <p>Acceptable ↓</p> <p>LSIL with no HPV test</p> <p>LSIL with positive HPV test</p> <p>Colposcopy</p> <p>Non-pregnant and no lesion identified Inadequate colposcopic examination Adequate colposcopy and lesion identified</p> <p>Endocervical sampling "preferred" Endocervical sampling "preferred" Endocervical sampling "acceptable"</p> <p>\geq ASC or HPV positive</p> <p>Cytology Negative and HPV Negative</p> <p>Repeat Cotesting @ 3 years</p> <p>* Management options may vary if the woman is pregnant or ages 21-24 years † Management women ages 25-29 as having LSIL with no HPV test</p> <p>Manage per ASCCP Guideline</p> <p>Manage per ASCCP Guideline</p> <p>© Copyright, 2013, American Society for Colposcopy and Cervical Pathology. All rights reserved. ASCP</p> <p>LSIL</p>

65 year old: Colposcopy

Year	Colposcopy	Recommendation
2018	Colposcopy: ECC: Benign Cervical Biopsy: mild atypia Vagina Biopsy: VAIN 1 (explains pap)	<p>Management of Women with No Lesion or Biopsy-confirmed Cervical Intraepithelial Neoplasia — Grade 1 (CIN1) Preceded by "Lesser Abnormalities" *†</p> <p>Follow-up without Treatment</p> <p>Cotesting @ 12 months</p> <p>≥ ASC or HPV Positive</p> <p>Colposcopy</p> <p>Age appropriate‡ retesting 3 years later</p> <p>Cytology Negative +/- HPV Negative</p> <p>Routine Screening‡</p> <p>No CIN</p> <p>CIN2,3</p> <p>CIN1</p> <p>Manage per ASCCP Guideline</p> <p>If persists for at least 2 years</p> <p>Follow-up or Treatment∞</p> <p>* Lesser abnormalities include ASC-US or LSIL Cytology, HPV 16+ or 18+, and persistent HPV † Management options may vary if the woman is pregnant or ages 21-24 ‡ Cytology if age <30 years, cotesting if age ≥30 years ∞ Either ablative or excisional methods. Excision preferred if colposcopy inadequate, positive ECC, or previously treated</p> <p>© Copyright, 2013, American Society for Colposcopy and Cervical Pathology. All rights reserved. ASCP</p>

67 year old

Year	PAP	Recommendation
6/2020	ASCUS/ HPV Negative	<p>Management of Women with Atypical Squamous Cells of Undetermined Significance (ASC-US) on Cytology*</p> <pre>graph TD; A[Repeat Cytology @ 1 year Acceptable] --> B[Negative]; A --> C["≥ ASC"]; B --> D[Routine Screening†]; C --> E[Colposcopy Endocervical sampling preferred in women with no lesions, and those with inadequate colposcopy; it is acceptable for others]; E --> F[Manage per ASCCP Guideline]; C --> G[HPV Positive (managed the same as women with LSIL)]; G --> H[HPV Negative]; G --> I[Repeat Cotesting @ 3 years]; H --> I</pre> <p>* Management options may vary if the woman is pregnant or ages 21-24 † Cytology at 3 year intervals</p> <p>© Copyright, 2013, American Society for Colposcopy and Cervical Pathology. All rights reserved. ASCCP</p> <p>ASC-US</p>

Old guidelines

2017 PAP:
NIL with
HR HPV +

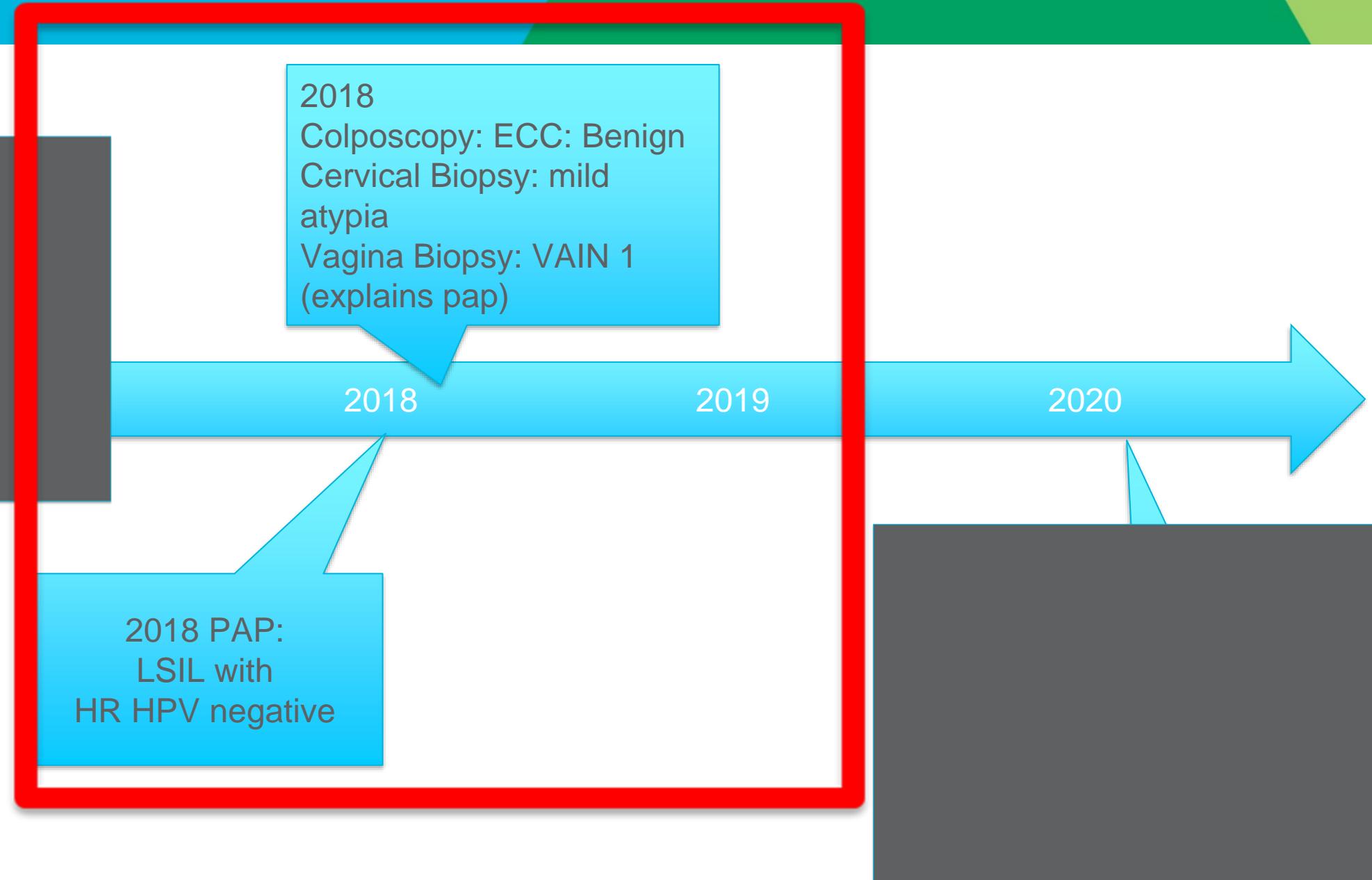
2017

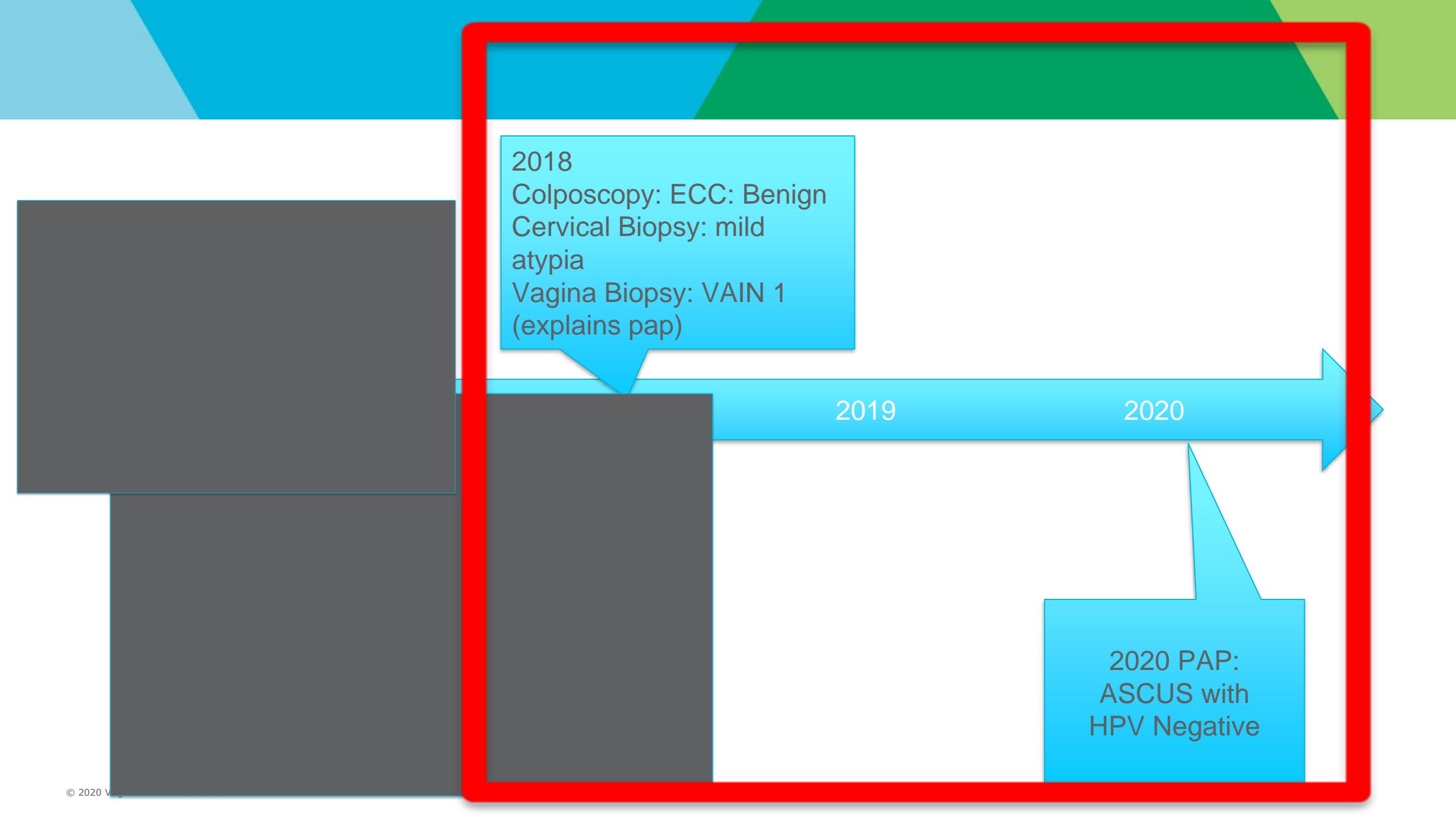
2017 PAP:
NIL with
HR HPV +

2017

2018 PAP:
LSIL with
HR HPV negative

2020





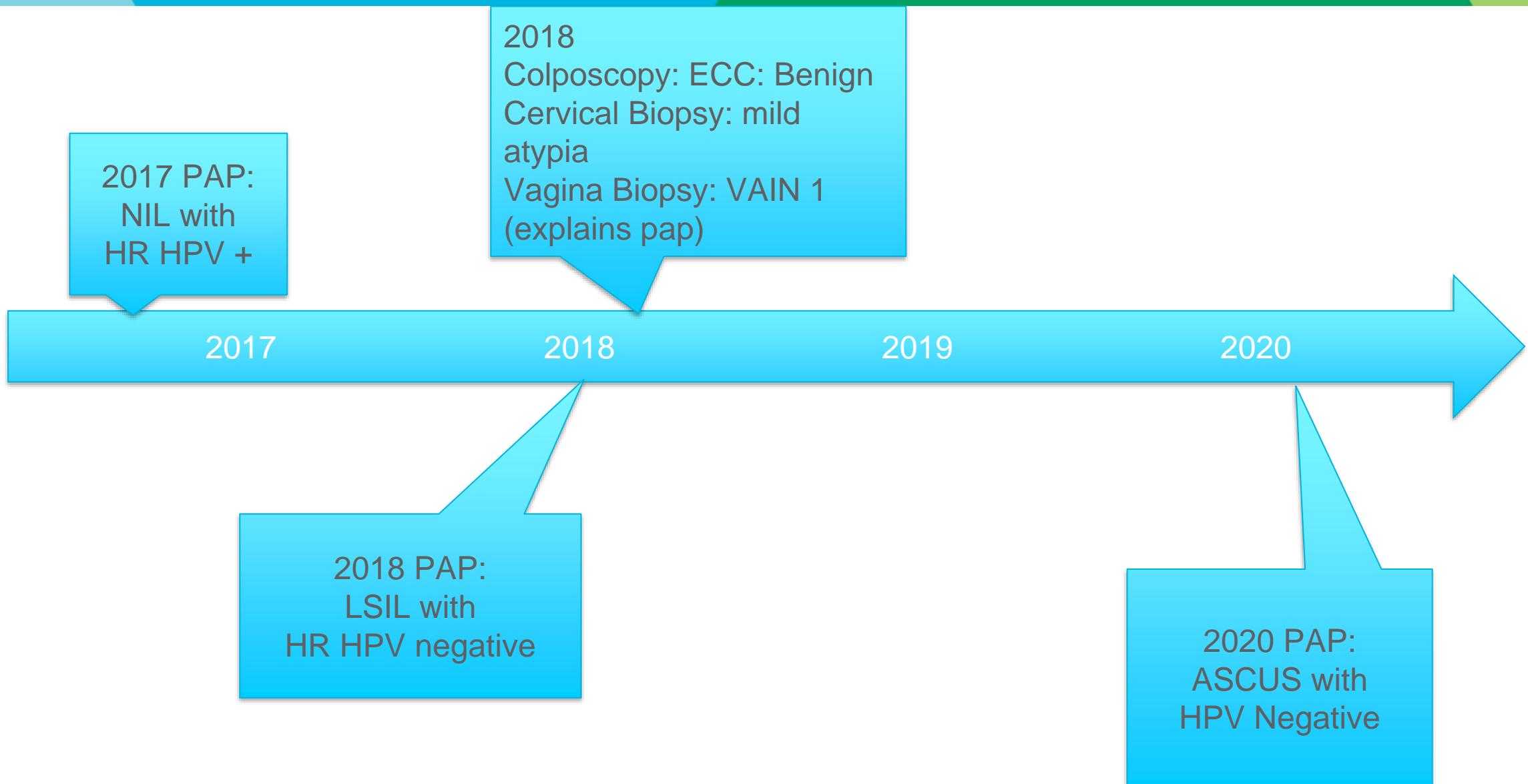
2018
Colposcopy: ECC: Benign
Cervical Biopsy: mild
atypia
Vagina Biopsy: VAIN 1
(explains pap)

2019

2020

2020 PAP:
ASCUS with
HPV Negative

Case study: Old guidelines



Updated ASCCP management guidelines

Goals of Updated Guidelines

- Increase accuracy and **reduce complexity for providers and patients**
 - Optimal Risk estimation incorporates **current results AND past history**
- Collaboration amongst 20 groups and patient advocates

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

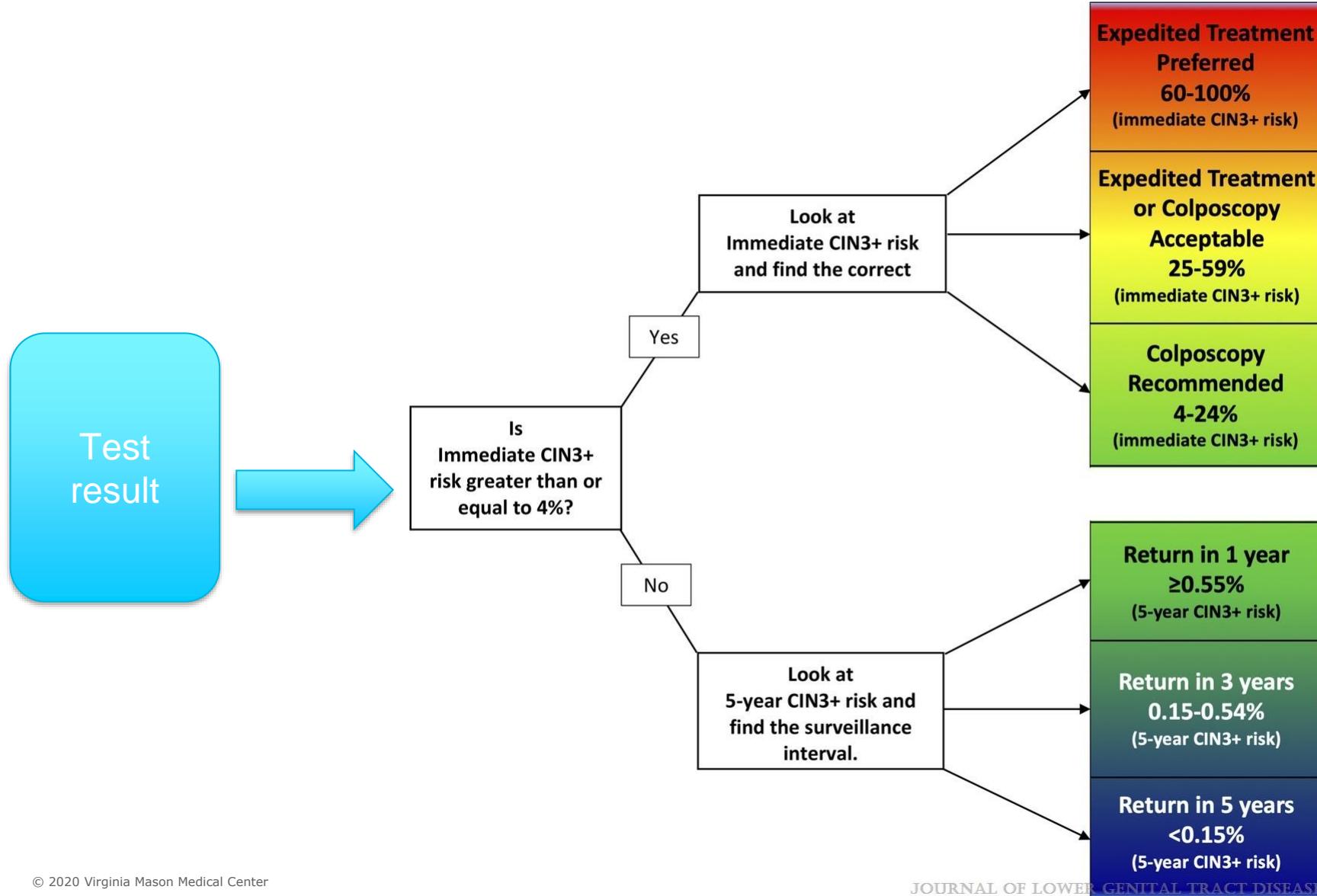
New 2019 Principles

- HPV-based testing is the basis for **risk of CIN 3+** estimation
 - 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
- Allow updates to incorporate new test methods as they are validated, and to adjust for decreasing CIN3+ risks as more patients who received HPV vaccination reach screening age
- Colposcopy practice must follow ASCCP guidelines with goal of **finding CIN II or higher.**

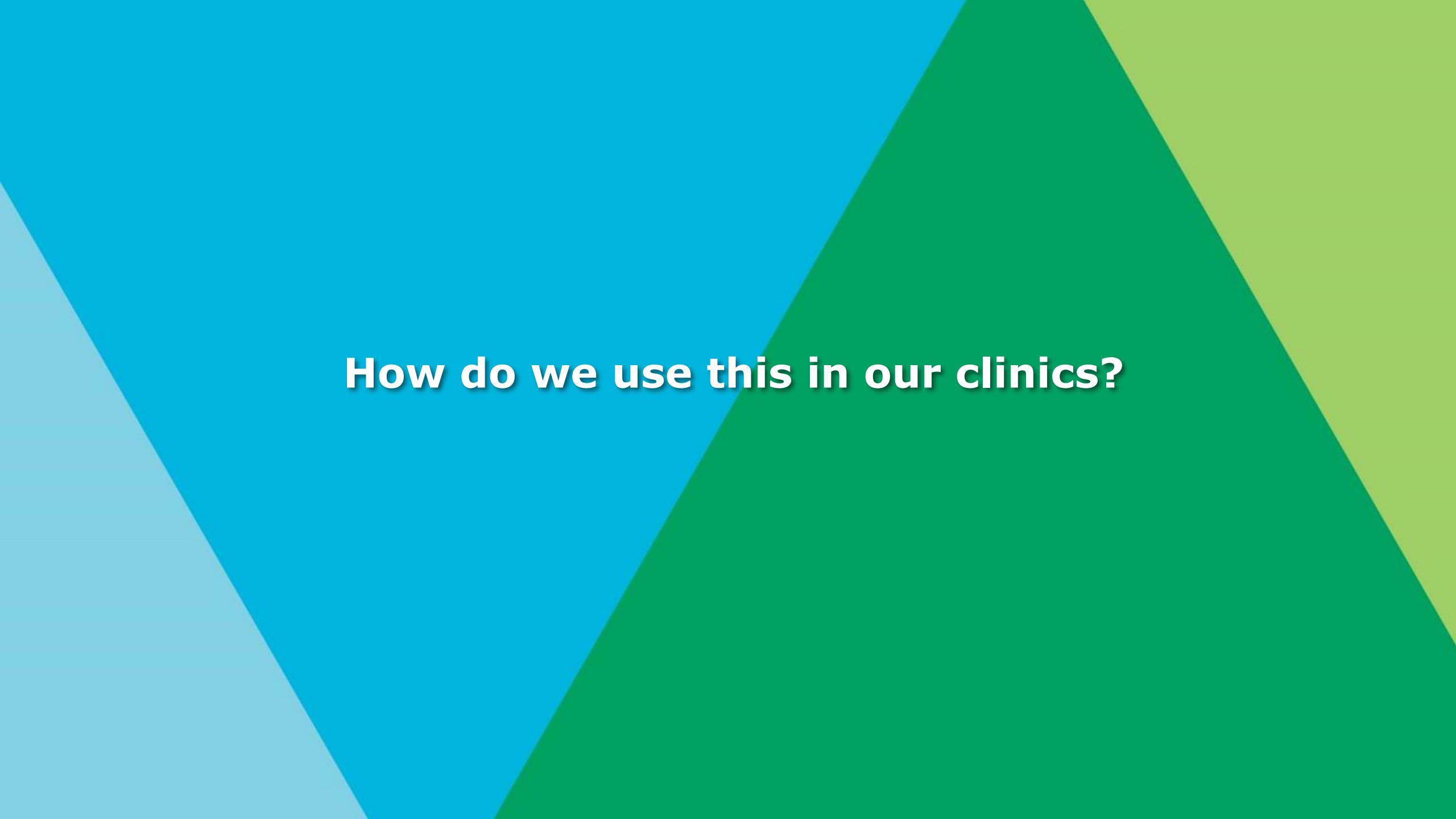
How is risk of CIN 3+ determined?

- 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.

Risk prediction and Action Thresholds



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



How do we use this in our clinics?

asccp.org/management-guidelines

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

Age	PAST HISTORY (most recent)	Current HPV Result	Current PAP Result	UL95 3-year (%)	CANCER 4 year risk			CANCER 5 year risk			Management	Management Confidence	Probability	80% Confidence Satisfied for the Suggested Management (%)	
					SE 4-year	LL95 4-year	UL95 4-year (%)	SE 5-year	LL95 5-year	UL95 5-year (%)					
25-65	NO HISTORY	HPV16+	LSIL	1.09	0.52	0.31	-0.08	1.12	0.52	0.31	-0.09	1.12	Colposcopy	1.00	Y
25-65	NO HISTORY	HPV16+	ASC-H	3.87	2.06	0.92	0.25	3.87	2.06	0.92	0.25	3.87	Colposcopy/Treatment	0.78	N
25-65	NO HISTORY	HPV16+	AGC	4.52	1.53	1.53	-1.47	4.52	1.53	1.53	-1.47	4.52	Colposcopy/Treatment	0.92	Y
25-65	NO HISTORY	HPV16+	HSIL+	13.89	10.06	2.08	5.98	14.14	10.08	2.09	5.98	14.17	Treatment	0.52	N
25-65	NO HISTORY	HPV16-, HPV18+	NILM	0.78	0.49	0.25	0.01	0.98	0.56	0.28	0.01	1.11	Colposcopy	Special Situation	
25-65	NO HISTORY	HPV16-, HPV18+	ASC-US	0.83	0.28	0.28	-0.27	0.83	0.28	0.28	-0.27	0.83	Colposcopy	Special Situation	
25-65	NO HISTORY	HPV16-, HPV18+	LSIL	1.36	0.46	0.46	-0.44	1.36	0.46	0.46	-0.44	1.36	Colposcopy	Special Situation	
25-65	NO HISTORY	HPV16-, HPV18+	ASC-H	5.70	1.92	1.93	-1.87	5.70	1.92	1.93	-1.87	5.70	Colposcopy	0.93	Y
25-65	NO HISTORY	HPV16-, HPV18+	AGC	25.69	14.95	5.48	4.22	25.69	14.95	5.48	4.22	25.69	Colposcopy/Treatment	0.83	Y
25-65	NO HISTORY	HPV16-, HPV18+	HSIL+	17.50	10.47	3.58	3.45	17.50	10.47	3.58	3.45	17.50	Colposcopy/Treatment	0.80	N
25-65	HPV-negative	HPV-negative	NILM	0.011	0.01	0.001	0.007	0.013	0.011	0.002	0.008	0.014	5-year follow-up	1.00	Y
25-65	HPV-negative	HPV-negative	ASC-US	0.062	0.039	0.018	0.004	0.074	0.044	0.02	0.005	0.083	3-year follow-up	1.00	Y
25-65	HPV-negative	HPV-negative	LSIL	0.001	0	0	0	0.001	0	0	0	0.001	1-year follow-up	0.82	Y
25-65	HPV-negative	HPV-negative	ASC-H	0.005	0	0.002	0	0.005	0	0.002	0	0.005	Colposcopy	Special Situation	
25-65	HPV-negative	HPV-negative	AGC	0.713	0.398	0.178	0.049	0.747	0.412	0.185	0.049	0.775	Colposcopy	Special Situation	
25-65	HPV-negative	HPV-negative	HSIL+	8.145	3.449	2.396	0	8.145	3.449	2.396	0	8.145	Colposcopy	0.98	Y
25-65	HPV-negative	HPV-negative	ALL	0.012	0.011	0.002	0.009	0.015	0.013	0.002	0.01	0.017	5-year follow-up	1.00	Y
25-65	HPV-negative	HPV-positive	NILM	0.148	0.111	0.032	0.048	0.173	0.126	0.037	0.054	0.199	1-year follow-up	1.00	Y
25-65	HPV-negative	HPV-positive	ASC-US	0.269	0.183	0.062	0.061	0.304	0.202	0.07	0.065	0.339	1-year follow-up	1.00	Y
25-65	HPV-negative	HPV-positive	LSIL	0.181	0.097	0.05	0	0.195	0.103	0.054	0	0.209	1-year follow-up	1.00	Y
25-65	HPV-negative	HPV-positive	ASC-H	1.584	0.802	0.399	0.019	1.584	0.802	0.399	0.019	1.584	Colposcopy	1.00	Y
25-65	HPV-negative	HPV-positive	AGC	6.952	3.896	1.559	0.84	6.952	3.896	1.559	0.84	6.952	Colposcopy	1.00	Y
25-65	HPV-negative	HPV-positive	HSIL+	5.245	3.371	0.956	1.496	5.245	3.371	0.956	1.496	5.245	Colposcopy/Treatment	1.00	Y
25-65	HPV-negative	HPV16+	NILM	1.72	0.96	0.44	0.10	1.82	0.96	0.44	0.10	1.83	Colposcopy	Special Situation	
25-65	HPV-negative	HPV16+	ASC-US	2.43	1.18	0.68	-0.16	2.51	1.18	0.68	-0.16	2.52	Colposcopy	0.84	Y
25-65	HPV-negative	HPV16+	LSIL	2.14	0.89	0.63	-0.35	2.14	0.89	0.63	-0.35	2.14	Colposcopy	0.94	Y
25-65	HPV-negative	HPV16+	High Grade	7.93	3.72	2.15	-0.49	7.93	3.72	2.15	-0.49	7.93	Colposcopy	0.61	N
25-65	HPV-negative	HPV16-, HPV18+	NILM	1.31	0.44	0.44	-0.43	1.31	0.44	0.44	-0.43	1.31	Colposcopy	Special Situation	
25-65	HPV-negative	HPV16-, HPV18+	ASC-US	5.36	2.51	1.46	-0.34	5.36	2.51	1.46	-0.34	5.36	Colposcopy	Special Situation	
25-65	HPV-negative	HPV16-, HPV18+	LSIL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Colposcopy	Special Situation	
25-65	HPV-negative	HPV16-, HPV18+	High Grade	10.13	4.26	2.99	-1.61	10.13	4.26	2.99	-1.61	10.13	Colposcopy	0.81	Y

Get the app...



The ASCCP Management Guidelines App is Now Available

Streamline navigation of the ASCCP Risk Based Management Consensus Guidelines with the **NEW** ASCCP Management Guidelines App

- Evidence-based management guidelines
- Simple navigation
- Uncomplicated guidance

Ranked #2 in Medical Apps

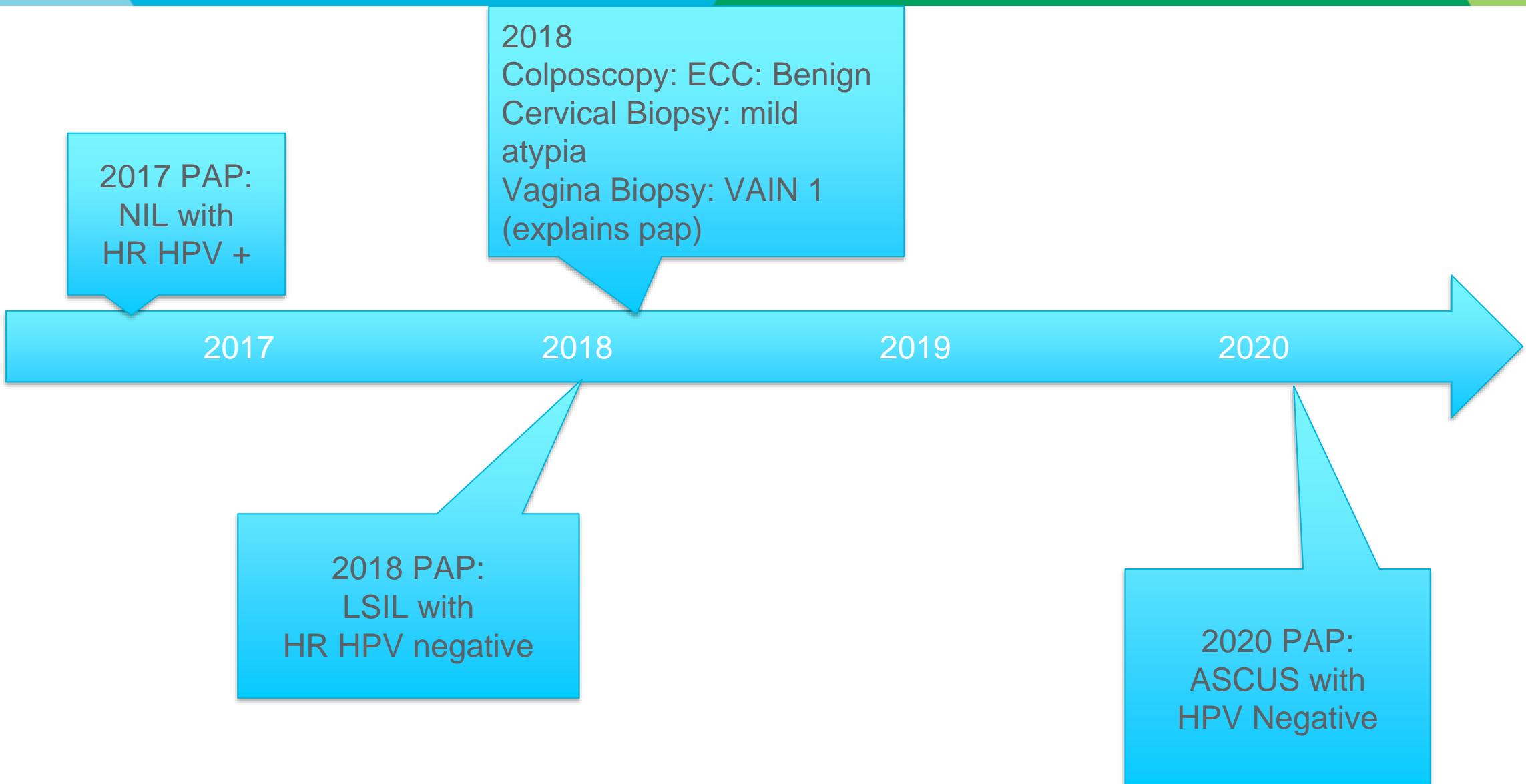
Now Available



Coming Soon - Preorder Today



Case Study: NEW guidelines





Clinical Situation



Testing



Recommendation



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



Management of routine screening results >

Return visit during pre-colposcopy surveillance >

Evaluation of a colposcopic biopsy >

Management of results during post-colposcopy surveillance >

Follow-up after treatment >

Special situation: Rarely screened patients >

Special situation: Symptomatic patients >

Special situation: Immunosuppressed patients >

Next →

Current testing



None



Negative

Positive
(untyped)Positive
(genotyped)

Cytology



None



Normal



ASC-US



LSIL

Does the patient have previous results since colposcopy?



Yes

No

Colposcopy

NO CIN

Histologic
LSIL (CIN 1)Histologic
HSIL (CIN 2)

Cytology prior to colposcopy



Normal



ASC-US



LSIL



ASC-H

← Back

Next →



Clinical Situation



Testing



Recommendation

Confirmation

Management of results during post-colposcopy surveillance

Age: Over 65

Current results

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

Colposcopy

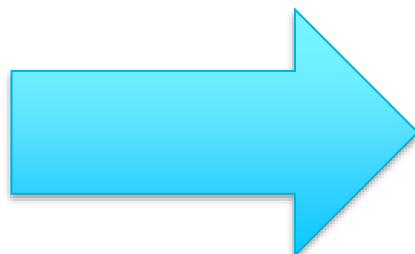
Colposcopy with a biopsy of CIN 1

Cytology prior

LSIL

← Back

Next →



Clinical Situation



Testing



Recommendation

Recommendation

1-year follow-up¹

HPV-based screening at follow-up visit²

Risk

5 year risk of CIN3+ is 0.92%¹

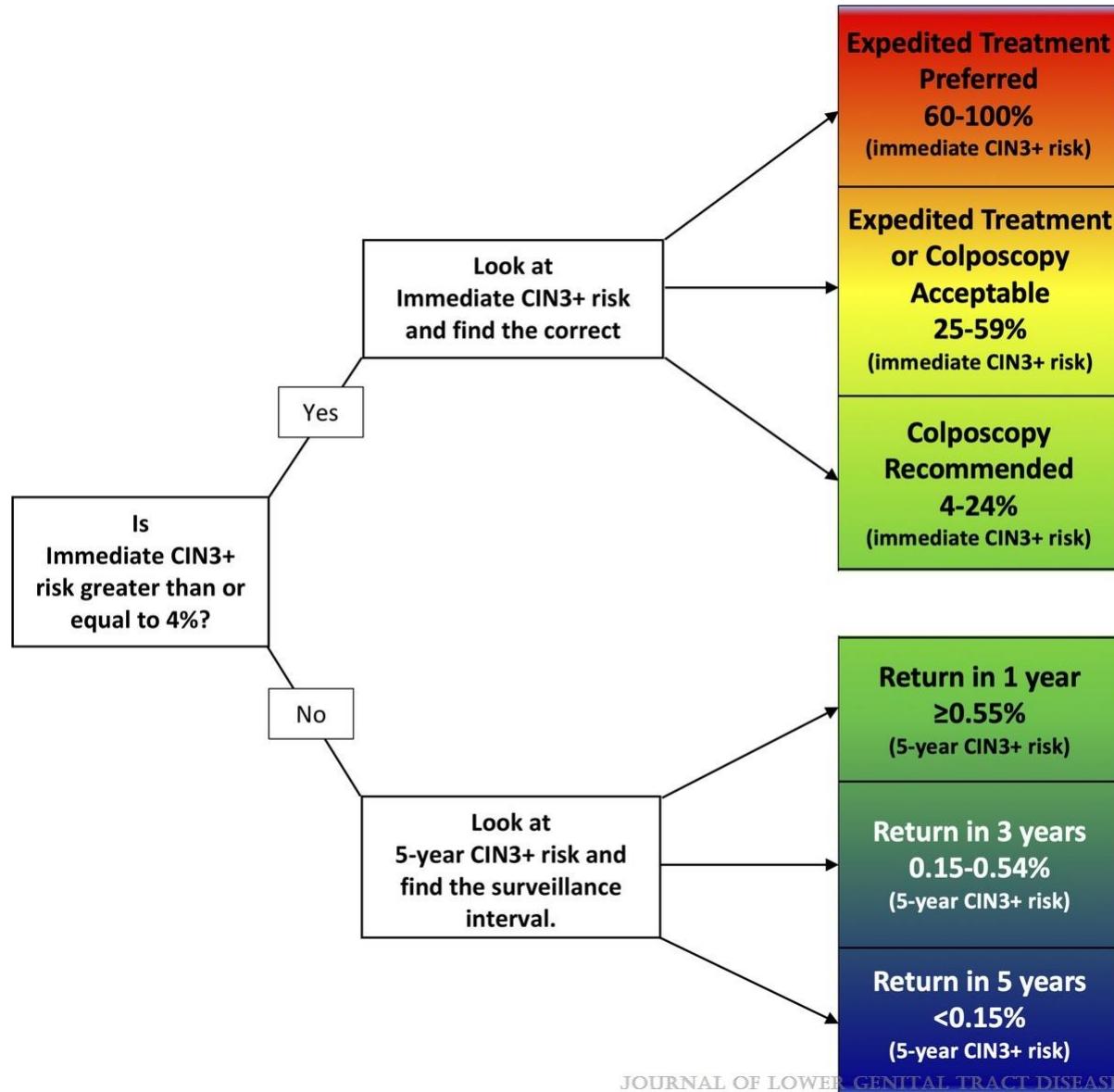


5 year risk of CIN3+ is 0.92%¹

Special populations

Over 65

Risk prediction and Action Thresholds



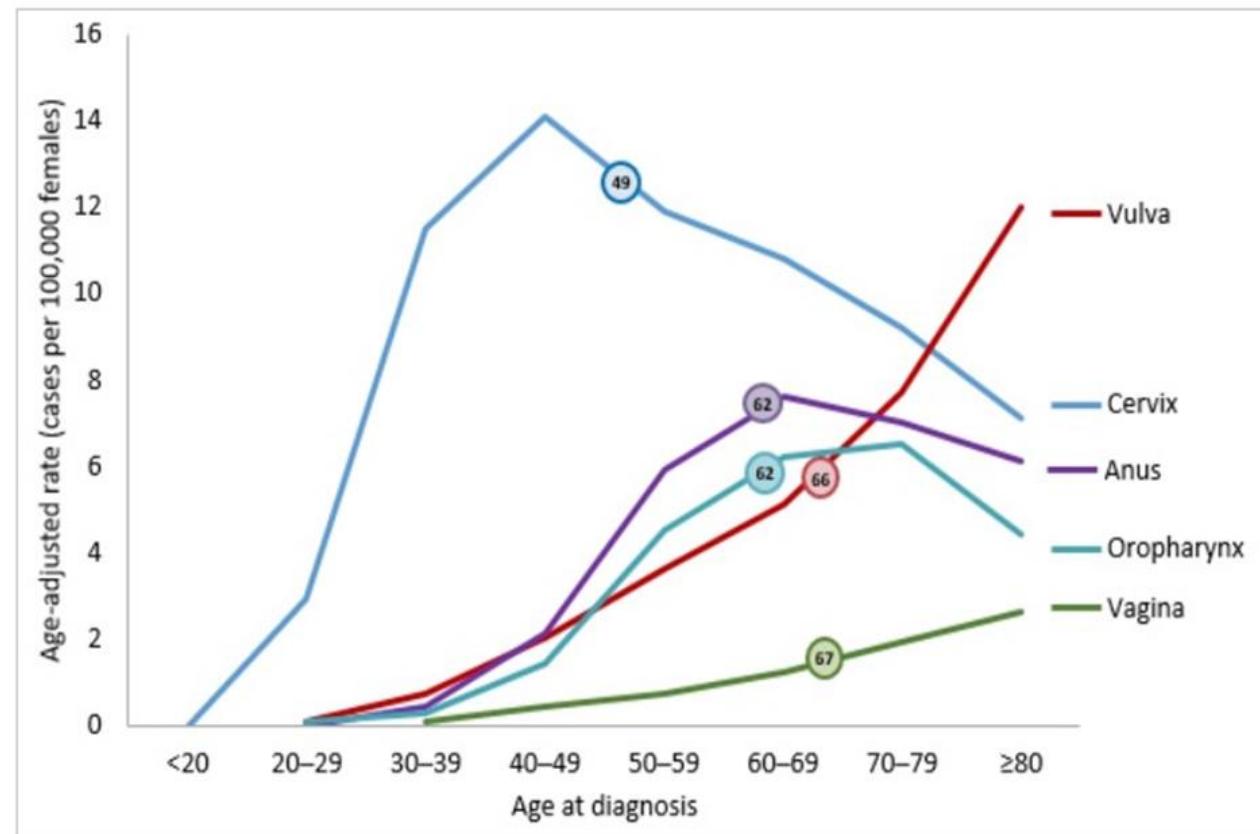
Journal of Lower Genital Tract Disease 24(2):102-131, April 2020.

Special populations

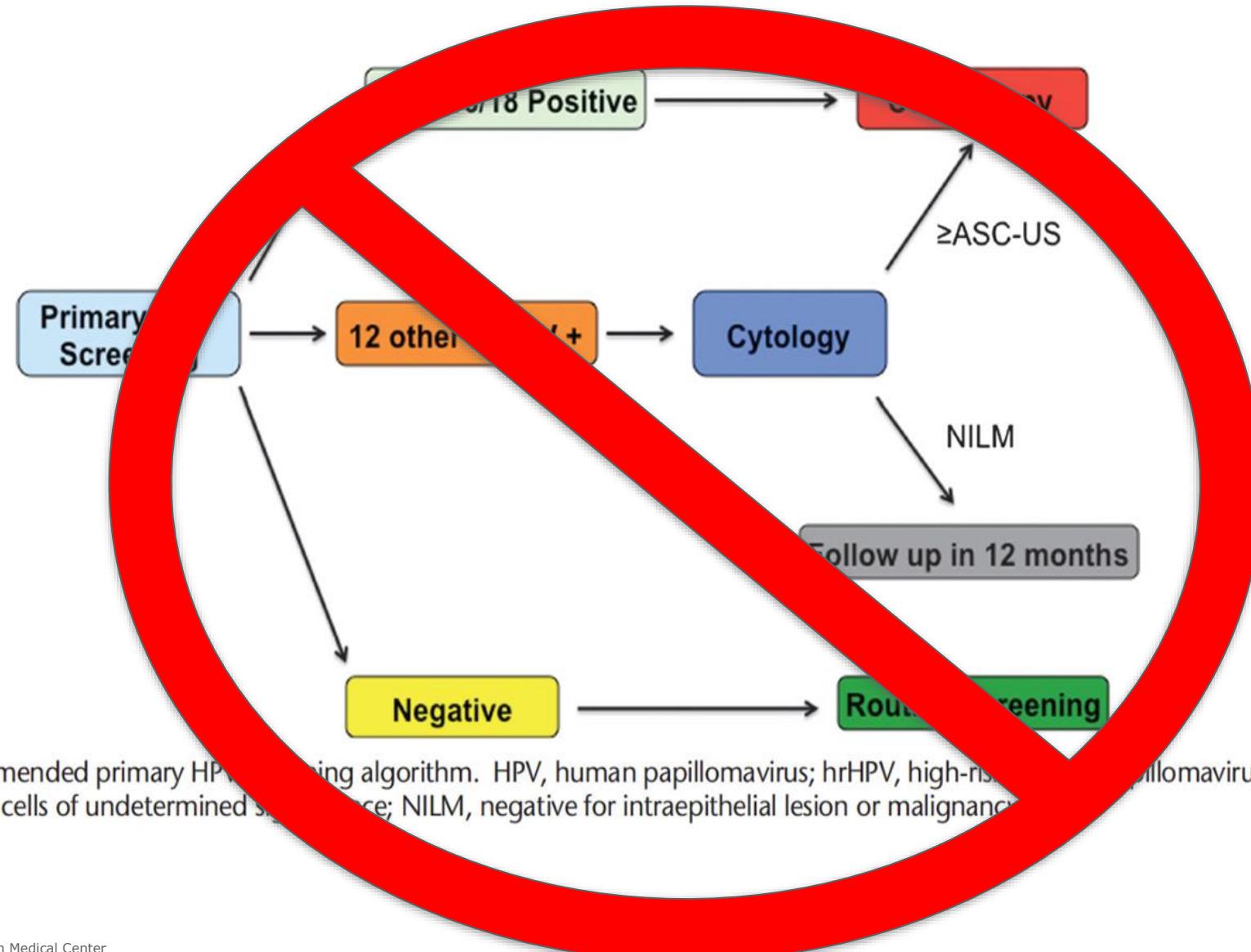
- Rarely screened patients
- Symptomatic patients
 - Abnormal bleeding, visibly or palpably abnormal cervix
 - REQUIRES a **DIAGNOSTIC TEST and physical examination**
 - Consider referral to gynecology or gynecologic oncology
- Immunosuppressed patients
 - Baseline higher risk for CIN 3+ exists
 - Earlier treatment and quicker follow up can be recommended
 - Consider referral to gynecology or gynecologic oncology
- Age greater than 65

High risk women should get a pap after age 65

Rates of HPV-Associated Cancers and Age at Diagnosis Among Women in the United States per Year, 2011–2015



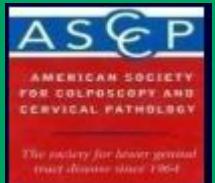
Primary HPV screening Algorithm



“All positive primary HPV testing... should have additional triage testing performed from the same lab system.” (Thin prep at VM)

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.

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



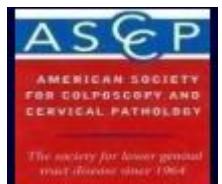
Who are the Rarely and Never Screened

Descriptions

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

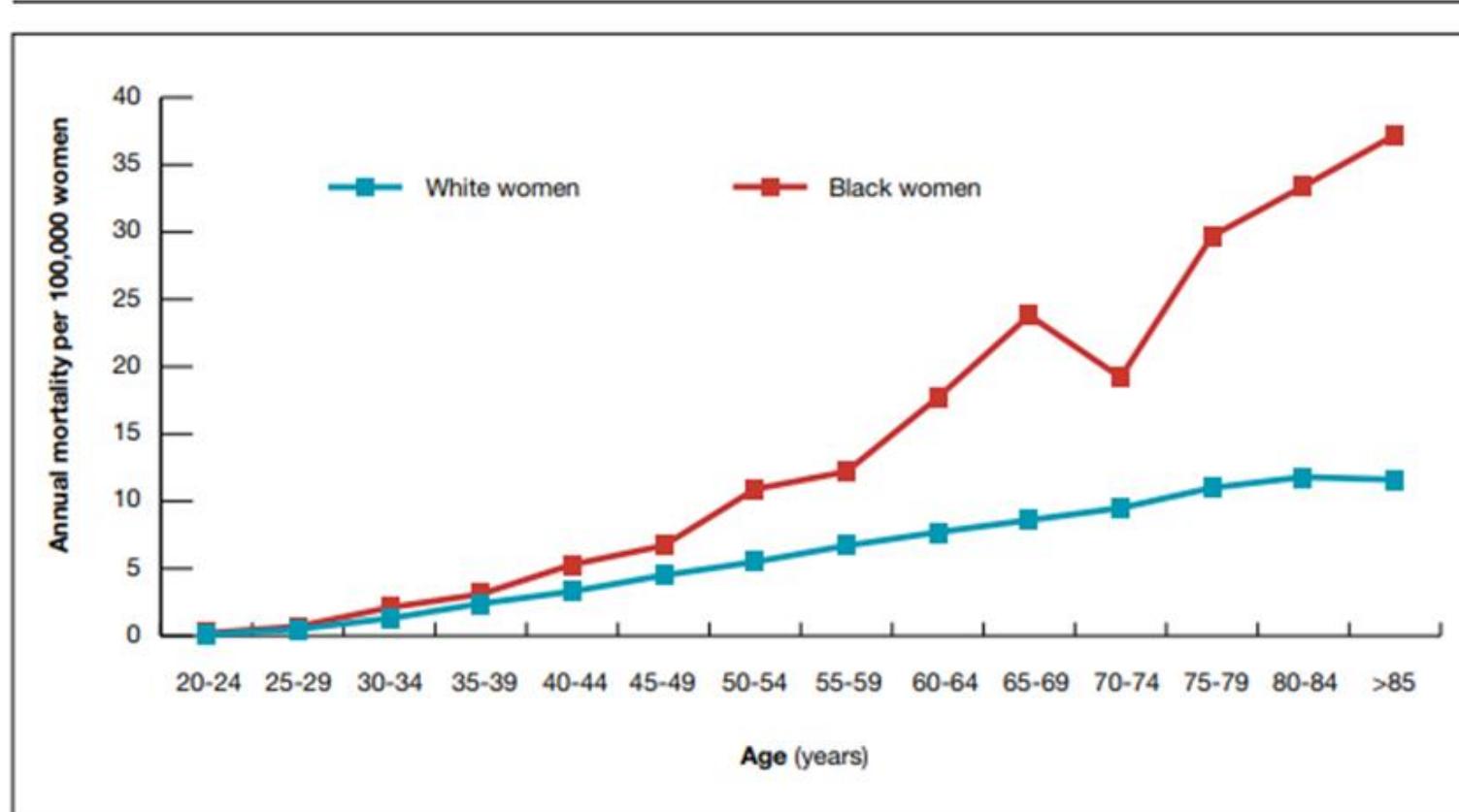
Where are the data?

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



Race affects cancer mortality.

FIGURE Age-specific, hysterectomy-corrected cervical cancer mortality rates in white and black US women²





Race is a health care determinate.

Race is a health care determinate.

- Race affects access to care and public health.
 - Education
 - Screening
 - Vaccination
 - Treatment
- Race affects **how and what treatment is given.**
- Race affects **survival of cancer.**
- **Non-Scientist elected officials** fund the CDC and State Health Department which researches and promotes public health.
- We must use our voices to change the **race based inequalities** that our system perpetuates.
- **Vote.**

Thank you.