

Cervical Cancer Screening



The National Association of Nurse Practitioners in Women's Health (NPWH) supports a concerted effort to continue to improve cervical cancer screening (CCS) rates and timely, appropriate follow-up and treatment when screening results are abnormal. The goal is to reduce cervical cancer incidence, morbidity, and mortality. NPWH supports ongoing research to ensure that screening and treatment guidelines are based on the best evidence available. Furthermore, NPWH supports policies at the local, state, and federal levels that ensure access to CCS services and follow-up as needed.

Background

At one time, cervical cancer was one of the most common causes of cancer death for women in the United States. Over a period of four decades, however, widespread implementation of CCS led to a significant decrease in incidence of and mortality from cervical cancer. In 1975, the cervical cancer incidence rate was 14.8 and the mortality rate was 5.5 per 100,000 women. Forty years later, in 2015, the incidence rate was 6.6 and the mortality rate had dropped to 2.25 per 100,000 women.¹

It is well established that high-risk types of the human papillomavirus (HPV) are the causative agents in more than 90% of cervical cancers.^{2,3} HPV infection, whether caused by a high-risk or a low-risk type, is usually transient, resolving on its own within 24 to 36 months in most women (> 90%).^{4,5} It is persistent infection with high-risk HPV types that can lead to development of pre-cancerous lesions/cervical intraepithelial neoplasia (CIN). Although precancerous lesions, especially those less than CIN grade 3 (CIN3), may regress spontaneously, they may also progress to invasive cervical cancer. Progression of a CIN3 lesion to cervical cancer typically takes more than 10 years.³ The relatively long time period from persistent HPV infection to the development of cervical cancer provides an opportunity to screen for both the presence of high-risk HPV and precancerous lesions.^{2,4,5}

This understanding of the natural history of HPV infection and cervical cancer has been a driving force in the ongoing development of technologic advances and evolving guidelines for CCS and follow-up for abnormal screening results. Yet, even with this progress, the National Cancer Institute estimates that 13,800 new cases of invasive cervical cancer will be diagnosed in the United

States in 2020 and that 4,290 deaths from cervical cancer will occur.¹ Most cases of cervical cancer develop in women who have not been adequately screened or who are lost to follow-up when screening results were abnormal.² It is important to note that the burden of cervical cancer incidence and mortality falls disproportionately on Black and Hispanic women despite screening rates similar to non-Hispanic White women.⁶ Both removing barriers to screening and ensuring access to timely, quality follow-up and treatment when screening results are abnormal must be primary goals.

Populations identified as having lower rates of CCS than the general population include women with lower socioeconomic status, immigrants, women living in rural areas, American Indian/Native Alaskan women, women with physical and/or intellectual disabilities, lesbians, and transgender males.^{6–15} Multiple factors, coexistent in many cases, lead to these disparities. As a result, multifaceted approaches to increasing CCS rates are needed.

Barriers to CCS for these populations entail financial, logistic, linguistic, and cultural factors, as well as misperceptions or lack of knowledge about screening and cancer.^{8–15} In addition, individuals from some of these populations may not seek CCS because of unpleasant encounters and discrimination previously experienced in healthcare settings.^{11–15} These same barriers extend beyond screening to receiving appropriate follow-up and treatment for abnormal findings. Ongoing research is needed to understand these barriers and to explore effective strategies to reach women who are inadequately screened, as well as to address follow-up and treatment concerns.

Recent study data have demonstrated some promising innovations. Women who are under-screened or unscreened because of barriers such as embarrassment, discomfort, inconvenience, or lack of access may be receptive to self-sampling for high-risk HPV.^{15–18} Availability of trained patient navigators to address individual barriers to follow-up and treatment for abnormal findings has also shown favorable results.^{19–22} Use of telecolposcopy has the capacity to provide critical, timely follow-up for women who lack easy access to it because of their location and the cost and time for travel to a distant setting.^{23–25} Nurse practitioners (NPs) providing care for women are in an ideal position to implement and evaluate outcomes for these and other evidence-based strategies.

Recommendations regarding which test should be used for primary screening (eg, Pap test alone, HPV test alone, cotesting), which sampling methods are optimal, and how services are best delivered will likely continue to evolve as technology advances and more data become available. What is certain is that CCS performed on a regular basis, with access to follow-up and early treatment, reduces cervical cancer morbidity and mortality.

CCS guidelines by age group are listed in the *Table*.^{26–29} Of note, these guidelines are intended for women at average risk for developing cervical cancer. Women with certain additional risk factors may require a different screening schedule than that recommended for the general population. Women at higher than average risk include those infected with HIV or who are otherwise immunocompromised, those who were exposed to diethylstilbestrol in utero, and those previously treated for CIN

grade 2 or higher. The same CCS recommendations apply to any individual with a cervix, regardless of gender identity.^{26–29}

Implications for women's healthcare and NP practice

Identifying populations within one's own community that are facing barriers to cervical cancer screening and follow-up is essential as a first step. Use of a variety of evidence-based strategies can reduce barriers and facilitate preventive healthcare for these populations. NPs can participate in community-based approaches to reach vulnerable populations with culturally appropriate education focused on addressing misperceptions and lack of knowledge about screening and cervical cancer.

Women may be uncertain about the appropriate screening frequency and type of test for their age group as recommen-

Table. Cervical cancer screening guidelines for women at average risk^{26–29}

Age range (years)	ACOG and ASCCP*	USPSTF	ACS
< 21	Screening not recommended	Same as ACOG/ASCCP	Same as ACOG/ASCCP
21–29	Cytology alone every 3 years	Same as ACOG/ASCCP	Start screening at age 25; primary HPV test** every 5 years (preferred) or cytology and HPV cotesting every 5 years (acceptable) or cytology alone every 3 years (acceptable)
30–64	Cytology and HPV cotesting (preferred) every 5 years (preferred) or cytology alone every 3 years (acceptable)	Cytology and HPV cotesting or primary HPV testing alone every 5 years or cytology alone every 3 years	Primary HPV test every 5 years (preferred) or cytology and HPV cotesting every 5 years (acceptable) or cytology alone every 3 years (acceptable)
> 65	Stop screening if adequate prior negative screening results, which is defined as 3 consecutive negative cytology results or 2 consecutive cotesting results within previous 10 years and most recent test within past 5 years***	Same as ACOG/ASCCP	Same as ACOG/ASCCP
Any age with total hysterectomy (cervix removed)	No further screening necessary***	Same as ACOG/ASCCP	Same as ACOG/ASCCP

ACOG, American College of Obstetricians and Gynecologists; ACS, American Cancer Society; ASCCP, American Society for Colposcopy and Cervical Pathology; CIN, cervical intraepithelial neoplasia; HPV, human papillomavirus; USPSTF, US Preventive Services Task Force.

*In 2015, ASCCP and Society for Gynecologic Oncology provided interim guidance for clinicians choosing to use HPV testing alone as a primary screen.³³ This guidance applies to individuals age 25–64 years.

**Only HPV tests approved for primary cervical cancer screening should be used.

***Continued surveillance is recommended for at least 25 years after treatment for histologic high-grade squamous intraepithelial lesion (HSIL), CIN2, CIN3, or adenocarcinoma in situ or high-grade cytology or persistent atypical squamous cells cannot exclude HSIL even if this is beyond age 65 years.³⁴

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Box. Useful resources

- 2019 ASCCP Risk-Based Management Consensus Guidelines [asccp.org/mobile-app](https://www.asccp.org/mobile-app)^A
App and web application of the risk-based management consensus guidelines provide accessible guidance for management of abnormal cancer screening tests.
- National Breast and Cervical Cancer Early Detection Program (NBCCEDP) [cdc.gov/cancer/nbccedp/index.htm](https://www.cdc.gov/cancer/nbccedp/index.htm)^B
The program helps low-income, uninsured, and underinsured women gain access to breast and cervical cancer screening, diagnostic testing, and treatment services.
- *Increasing Population-based Breast and Cervical Cancer Screenings: An Action Guide to Facilitate Evidence-based Strategies*. [wypca.org/wp-content/uploads/breastcanceractionguide.pdf](https://www.wypca.org/wp-content/uploads/breastcanceractionguide.pdf)^C
This guide was developed by the CDC's Division of Cancer Prevention and Control.
- NPWH Well-Woman Visit App [npwh.org](https://www.npwh.org)^D
This mobile app compiles the most commonly used clinical guidelines for well-woman visits including age-based recommendations for preventive health screenings.
- National HPV Vaccination Roundtable [hpvroundtable.org](https://www.hpvroundtable.org)^E
The HPV Vaccination Roundtable is a national coalition created by the American Cancer Society, with funding from the CDC, to be a trusted source of information on HPV vaccination.

dations change and vary. Women who have received HPV vaccination may have the misconception that they have ensured themselves lifelong immunity to HPV infection and that they can forgo regular CCS. It is crucial for NPs to provide women with evidence-based information in a way that is meaningful to them. This facilitates client-centered care and shared decision making in promoting health and preventing disease.

For women age 65 years and older, careful review of their health histories is needed to confirm that they meet certain criteria before discontinuing CCS. A large study showed that most cervical cancers in this age group occurred among those who had not met criteria for stopping screening.³⁰ An analysis of 2013 and 2015 National Health Interview Surveys data indicated that 12.1% of women age 41 to 45 years and 18.4% of women age 61 to 65 years had never had CCS or that their most recent screening was more than 5 years ago.³¹ NPs should not make assumptions that a woman has undergone recommended screenings prior to age 65.

Effective reminder and follow-up systems are crucial. NPs who provide women's healthcare must be innovative in designing and implementing reminder systems that reach all patients and engage them to return for both routine screening and any additional follow-up needed. NPs who provide women's healthcare are also in an opportune position to participate in surveillance to track outcomes of screening and

follow-up strategies. The data obtained can drive informed decision making about what works to improve CCS and to improve service delivery.³²

Improving CCS rates and HPV vaccination rates go hand in hand to reduce the incidence of cervical cancer. NPs must also take steps in their clinical practice to identify patients who need HPV vaccination, strongly recommend this vaccination, provide vaccination on the same day that the need is identified, and use reminder systems to ensure patients return to the office to complete the vaccination series. Useful resources are available in the Box.

Recommendations

NPs who provide healthcare for women age 21 years and older should:

- Identify those populations in the community they serve who are at risk for not receiving regular CCS and follow-up.
- Advocate for culturally appropriate outreach to populations in the community they serve at risk for not receiving regular CCS and follow-up.
- Create healthcare environments that are welcoming and nonjudgmental and that promote a comfortable, affirming CCS experience.
- Follow current CCS guidelines.
- Educate patients about current CCS guidelines.
- Utilize effective reminder and follow-up systems.
- Establish resources for referral and treatment.
- Confirm the status of every patient age 65 years and older to determine whether the criteria are met to discontinue CCS.
- Advocate for accessible and affordable CCS services.
- Participate in surveillance programs to track outcomes of CCS and follow-up strategies.
- Recommend and provide HPV vaccination when indicated.

NPWH will provide leadership and resources to ensure that:

- Continuing education programs are available for NPs to learn about evidence-based strategies to improve CCS rates as well as timely follow-up and treatment.
- NPs have resources to develop and/or implement community-based approaches to reach vulnerable populations for cervical cancer awareness, screening, and follow-up.
- Timely updates are provided on CCS guidelines.
- NPs have an opportunity to participate in surveillance programs to obtain data on what works to improve CCS rates.

- Research moves forward in all aspects of cervical cancer prevention, screening, and treatment to improve healthcare outcomes.
- Policies support equitable access to CCS, appropriate follow-up, and treatment when needed. ■

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Web resources

- A. [asccp.org/mobile-app](https://www.asccp.org/mobile-app)
- B. [cdc.gov/cancer/nbccedp/index.htm](https://www.cdc.gov/cancer/nbccedp/index.htm)
- C. [wypca.org/wp-content/uploads/breastcanceractionguide.pdf](https://www.wypca.org/wp-content/uploads/breastcanceractionguide.pdf)
- D. [npwh.org](https://www.npwh.org)
- E. [hpvroundtable.org](https://www.hpvroundtable.org)

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