

Contemporary OB/GYN[®] Cervical Cancer Screening: Protecting and Improving Health Outcomes of Women

Key Takeaways

- Screening with the Papanicolaou (Pap) test every 3 years for women aged 21 to 29 years and cotesting with the Pap and human papillomavirus (HPV) tests every 5 years for women aged 30 to 65 years are the preferred screening strategy of the American College of Obstetricians and Gynecologists and other leading societies.¹
- Screening for HPV alone could lead to more missed cases and unnecessary follow-up procedures.
- The disparities in incidence rates of cervical cancer, particularly in Black and Hispanic women and women of low socioeconomic status, highlight the importance of protecting all screening options.

Cervical cancer screening has substantially reduced cervical cancer incidence and mortality over the past few decades. From 1975 to 2017, the age-adjusted rate of new cases decreased from 14.8 to 6.3 per 100,000 persons, and the rate of mortality decreased from 5.5 to 2.2 per 100,000 persons.² Cytology-based screening with the Papanicolaou (Pap) test has been used for several decades and is currently a part of screening programs worldwide. Clinicians also later discovered that carcinogenic variants of the human papillomavirus (HPV) cause a large proportion of cervical cancers, which led to the addition of HPV test-

ing to screen for cervical cancer. Real-world data and health care providers continue to support cotesting as the most effective strategy for diagnosing cervical cancer and precancer in women.³

In an interview with *Contemporary OB/GYN*[®], **Jessica Shepherd, MD, MBA**, an obstetrician/gynecologist (OB/GYN) and minimally invasive surgeon at Baylor University Medical Center in Dallas, Texas, addressed topics related to cervical cancer screening. These included the benefits of cotesting with Pap and HPV tests over other screening strategies, support for cotesting among health care providers who specialize in women's health, the effects of HPV vaccination on rec-

ommendations for cervical cancer screening, current disparities in incidence of and mortality from cervical cancer, and the role of OB/GYNs in protecting their patients' health.

Guidelines for Cervical Cancer Screening

For screening in the general population, The American College of Obstetricians and Gynecologists (ACOG) and other leading societies recommend Pap testing alone every 3 years for women aged 21 to 29 years and cotesting with the Pap and HPV tests every 5 years for women aged 30 to 65 years.^{1,4,5} In 2018, US Preventive Services Task Force (USPSTF) updated their guidelines to state that screening with Pap testing every 3 years, cotesting with the Pap and HPV tests every 5 years, or HPV testing every 5 years were acceptable for average-risk women aged 30 to 65 years.⁵ In 2020, the American Cancer Society (ACS) updated their guidelines to propose shifting toward using HPV testing alone as the primary screening tool, delaying screening initiation for women until aged 25 years and having them undergo primary HPV testing every 5 years through aged 65 years; however, Shepherd stated that this recommendation is not

in line with published data and real-world experience.⁶

“It seems illogical that eliminating screening options would lead to a decrease in cervical cancer,” she said. “Many health care providers as well as advocacy and women’s health organizations have spoken out against these proposed changes to reinforce their support for the proven Pap test. These voices are calling on ACOG to protect the role of the Pap test in cervical cancer screening guidelines.” Following the release of the recent ACS guidelines, ACOG issued a statement affirming support for their existing cervical cancer screening guidelines, which recommend use of the Pap test and cotesting to protect women.⁷

When consulting with patients in her practice, Shepherd said she usually recommends cotesting with the Pap and HPV tests because it can provide more information than HPV testing alone and doesn’t require additional samples from the patient. She added that Pap testing provides further benefits, including the detection of additional infections, gynecologic malignancies, and other asymptomatic cancers that may not be diagnosed otherwise.

Shepherd also pointed out that real-world data that are representative of screening in the United States support cotesting as the optimal strategy to assess disease risk and protect cervical health. Results from the largest and most diverse longitudinal cervical cancer screening study to date affirm that using a Pap test and HPV test together (ie, cotesting) is the most effective strategy for diagnosing cervical cancer and precancer in women. The Quest Diagnostics study showed that HPV testing alone missed twice as many women who developed cervical

cancer compared to cotesting. Additionally, it demonstrated that the type of Pap test matters, with strong performance resulting from the use of image liquid-based cytology.⁸

Shepherd cautioned that using HPV testing alone could lead to missed diagnoses and more recommendations for colposcopies. A 2015 European multinational epidemiologic study showed that 90.4% of usual-type adenocarcinomas were HPV positive, and other less common adenocarcinoma subtypes had relatively low rates of HPV positivity (30.4% for serous, 27.6% for clear cell, and 12.9% for endometrioid subtypes).⁹ Shepherd emphasized that the rate of HPV-negative test results seen in the most common subtype of adenocarcinomas, although numerically small, is clinically meaningful. “A considerable number of invasive cancers, approximately 9% to 10%, test negative for HPV, meaning that HPV-alone testing could lead to a substantial amount of missed cases,” she said.

Shepherd added that countries that have shifted to testing with HPV alone have reported increases in follow-up procedures. A 2018 study estimating the impact of changes to Australia’s National Cervical Screening Program showed that the transition to HPV-alone testing has resulted in substantial overtreatment, with 1 colposcopy clinic in Australia reporting that the volume of referrals has increased 6 fold.¹⁰ “Health care providers fear that HPV-alone testing would result in more missed diagnoses and more recommendations for colposcopies,” Shepherd said.

She added that the vast majority of OB/GYNs and other health care providers support cotesting for frontline cervical cancer screening. A 2020 survey from the National Association of

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Nurse Practitioners in Women’s Health and HealthyWomen of 751 health care providers that specialize in women’s health, family, or other specialties such as pediatrics, adult medicine, and gerontology, as identified by self-report (251 OB/GYNs, 250 nurse practitioners, and 250 primary care providers) showed that more than 90% of those surveyed stated that Pap testing was valuable and effective. Sixty-one percent stated that eliminating the Pap test from frontline screening for cervical cancer would have a negative effect on women’s health.¹¹ In addition, approximately 90% of all health care providers, including 91% of OB/GYNs, agreed that cotesting with HPV and Pap tests is valuable for managing patient health in women aged 30 to 65 years. Further, 81% of all OB/GYNs said that cotesting is the way they screen for cervical cancer in women aged 30 to 65 years. Fewer than 1 percent of health care providers said they screen using

HPV alone.¹¹ The survey also included an online survey of a nationally representative sample of 1000 women aged 25 to 65 years; 90% of respondents agreed that Pap testing is important for the management of their overall health and well-being, and 68% agreed that eliminating the Pap test would negatively affect women's health.¹¹

"These findings demonstrate the growing reliance on cotesting with the Pap test and HPV test together as the gold standard for preventing cervical cancer," Shepherd said.

Although Shepherd said that HPV vaccination is important for disease prevention (of cervical cancer and HPV), she noted that rates of vaccination among adolescents are too low to move toward HPV-alone testing. In an analysis of data from the 2018 National Immunization Survey—Teen, published in *Morbidity and Mortality Weekly Report*, investigators estimated that 51.1% of adolescents aged 13 to 17 years were up-to-date with the HPV vaccine series, an increase from 48.6% in 2017 (increases were only observed among males). However, adherence is still not strong enough to support changing or limiting screening options,¹² according to Shepherd.

"Additionally, a substantial number of women in their 40s and 50s never received any HPV vaccination when they were younger," she said.

Shepherd added that there are "troubling disparities" in rates of cervical cancer among certain racial or ethnic groups. According to a CDC data analysis from 2008 to 2012 from population-based cancer registries that participate in the agency's National Program of Cancer Registries (NPCR) and the National Cancer Institute's SEER program, rates of HPV-associated cervical cancer were higher in Blacks than in Whites (9.2 vs 7.1 per 100,000 per-

sons) and higher in Hispanics than in non-Hispanics (9.7 vs 7.1 per 100,000 persons).¹³ Further, data from United States Cancer Statistics showed that the 5-year relative survival rate was lower in Black women than in White women (58.4% vs 68.8%), based on estimates of cases reported by the NPCR from 2001 through the end of 2016.¹⁴

Low socioeconomic status has also been associated with an increased incidence of and mortality related to cervical cancer. A 2017 analysis of data from the national mortality database, the 1979-2011 National Longitudinal Mortality Study, and the SEER cancer registry database showed that the risk of cervical cancer was 2.7 times higher among women living in the most deprived neighborhoods compared with those living in the most affluent neighborhoods. Additionally, women in the most-deprived group had a 76% higher disease-related mortality rate than those in the most-advantaged group between 2009 and 2013.¹⁵ According to Shepherd, reducing barriers to screening is important to reduce this gap. The 2018 USPSTF guidelines state that loss to follow-up and disparities in treatment may also contribute to cervical cancer morbidity and mortality in underserved populations. The guidelines also emphasize the importance of implementing systems to ensure follow-up of abnormal results, appropriate treatment of pathology, and support for patients throughout their treatment.⁴

"Improving insurance coverage and access to care is a crucial step to overcome cost concerns that cause some women to delay screening," said Shepherd. "Rather than limiting screening options and putting these women at even greater risk, it is more important than ever to ensure we protect all proven screening options."

Shepherd said that supporting the health of patients is a key role of OB/GYNs and added that women should prioritize wellness visits starting at aged 21 years. They should be able to talk with their OB/GYN openly about screening for cervical cancer as well as other women's health issues, such as the prevention of breast cancer and screening for sexually transmitted infections.

"As OB/GYNs, the role that we play in protecting women's health, in addition to cervical cancer screening, is providing a strong relationship between a woman and her OB/GYN, which is crucial to preventing cervical cancer and other diseases," she explained. "Shared decision-making between OB/GYNs and women builds trust and represents the best way to protect cervical health."

Shepherd added that OB/GYNs should play a major role in informing future updates to guidelines for cervical cancer screening because they are able to observe the importance of screening firsthand and are familiar with common concerns from patients. "Any future evolution to screening guidelines and practices should account for the real-world experience of OB/GYNs and other women's health providers to ensure proper compliance, screening effectiveness and, ultimately, the best protection for women's health," she said.

She concluded that with the challenges in providing preventive health care brought about by the coronavirus disease 2019 pandemic, protecting all screening options for cervical cancer is particularly important. "We call on ACOG to listen to OB/GYNs who are speaking out in favor of retaining the Pap test and cotesting in screening guidelines," she said.

Expert Interview

With Jessica Shepherd, MD, MBA



Shepherd discusses the benefits of cotesting with Papanicolaou and human papillomavirus (HPV) tests over other screening strategies, support for cotesting among health care providers specializing in women's health, effects of HPV vaccination on recommendations for cervical cancer screening, current disparities in incidence of and mortality from cervical cancer, and the role of OB/GYNs in protecting their patients' health.

To see the full video with Shepherd, scan the code.



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