Putting Prevention into Practice

An Evidence-Based Approach

Screening for Cervical Cancer

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▶ **See related editorial on page 501.**

▶ **See related U.S. Preventive Services Task Force Recommendation Statement on page 555.**

EB CME

This clinical content conforms to AAFP criteria for evidence-based continuing medical education (EB CME). See CME Quiz on page 509.

The case study and answers to the following questions on screening for cervical cancer are based on the recommendations of the U.S. Preventive Services Task Force (USPSTF), an independent panel of experts in primary care and prevention that systematically reviews the evidence of effectiveness and develops recommendations for clinical preventive services. More detailed information on this subject is available in the USPSTF Recommendation Statement and the evidence synthesis on the USPSTF Web site (http://www.uspreventiveservicestaskforce.org). The practice recommendations in this activity are available at http://www.uspreventiveservicestaskforce.org/uspstf/uspscerv.htm.

A collection of Putting Prevention into Practice quizzes published in *AFP* is available at http://www.aafp.org/afp/ppip.

Case Study

J.K., a 45-year-old woman, presents to your office for a routine well-woman examination. She has been married for 20 years, and there is nothing remarkable in her medical history, including no previous abnormal Papanicolaou (Pap) smears. She asks if you would perform her annual Pap smear during the visit. In her medical record, you note that she had a Pap smear in combination with human papillomavirus (HPV) testing two years ago; both test results were negative. She also mentions that her 19-year-old daughter recently became sexually active, and she would like to schedule a Pap smear for her as well.

Case Study Questions

1. According to the U.S. Preventive Services Task Force (USPSTF), how should you respond to J.K.'s requests for her and her daughter?

- ❑ A. You can perform an annual Pap smear for J.K. at this appointment, but her daughter should wait until three years after she began having sex to have a Pap smear.
- ❑ B. J.K. can wait until next year for a Pap smear, but you will schedule one for her daughter for next week.
- ❑ C. You will schedule a Pap smear for J.K. and her daughter for next week.
- ❑ D. J.K. should get an annual Pap smear, but her daughter should wait until she is 21 years of age.
- ❑ E. J.K. should receive her next Pap smear at 48 years of age. Her daughter should have her first Pap smear at 21 years of age.

2. Which one of the following statements about screening for cervical cancer is correct?

- ❑ A. Screening may identify precancerous cervical lesions that will regress spontaneously.
- ❑ B. Liquid-based cytology is considerably more sensitive than conventional cytology.
- ❑ C. Women older than 65 years should never be screened for cervical cancer.
- ❑ D. Women who have been vaccinated against HPV can be screened less often than women who have not been vaccinated.
- ❑ E. Women younger than 30 years should be tested for HPV in combination with a Pap smear.

3. Two weeks later, J.K. contacts your office to let you know that her daughter just had a Pap smear at her university health clinic, and the results were abnormal. Which of the following are potential harms associated with screening for cervical cancer?

- ❑ A. Vaginal bleeding, pain, and infection from colposcopy and cervical biopsy.
- ❑ B. Cervical incompetence and a risk of preterm labor resulting from treatments for precancerous lesions or cancer.
- ❑ C. Increased risk of hysterectomy.
- ❑ D. Short-term increases in anxiety and distress.

Answers appear on the following page.

Answers

1. The correct answer is E. The USPSTF recommends that women between 30 and 65 years of age be screened every three years with cytology alone or every five years with a combination of cytology and HPV testing. Screening with cytology more often than every three years, or screening with cytology and HPV co-testing more often than every five years, confers little additional benefit and large increases in harms, including additional procedures and assessment and treatment of transient lesions. Women choosing co-testing should be aware that positive screening results are more likely with HPV-based strategies and that some women may require prolonged surveillance with additional frequent testing if they have persistently positive HPV test results. Screening women younger than 21 years does not reduce cervical cancer incidence or mortality. Cervical cancer is rare before 21 years of age; screening in this age group, regardless of sexual history, leads to more harms than benefits because abnormal test results are likely to be transient and to resolve on their own.

2. The correct answer is A. There is convincing evidence that many precancerous cervical lesions will regress or are so indolent that they will not become clinically important over a woman's lifetime. There is no clinically important difference between liquid-based and conventional cytology. In general, women older than 65 years should not be screened for cervical cancer, but there may be benefit to screening women in this age group if they have never been screened, if they have a history of high-grade precancerous lesions or cervical cancer, or if they have certain other conditions that would classify them as high risk for cervical cancer, such as in utero exposure to diethylstilbestrol or immunocompromised status. The long-term effects of HPV vaccination on high-grade precancerous and cancerous cervical lesions is not yet known, and current trials do not provide data on long-term efficacy; therefore, the possibility that vaccination might reduce the need for screening is not established. Women who have been vaccinated should still be screened in accordance with current USPSTF recommendations. For women younger than 30 years, the potential harms of screening with HPV testing outweigh the potential benefits.

3. The correct answers are A, B, and D. Cervical cancer screening in women younger than 21 years is likely to lead to more harms than benefits. Many cervical lesions in this age group resolve spontaneously, but lesions identified through screening may be evaluated using procedures such as colposcopy and cervical biopsy. Short-term risks associated with these procedures include vaginal bleeding, pain, and infection. Longer-term risks that may occur after treatment of precancerous or cancerous lesions with procedures such as cold-knife conization and loop excision include cervical incompetence and preterm labor. Abnormal screening test results are associated with mild psychological harms, including short-term increases in anxiety and distress and concern about health. An increased risk of hysterectomy was not found in the evidence the USPSTF considered on cervical cancer screening.

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SOURCES

Screening for cervical cancer: U.S. Preventive Services Task Force recommendation statement. *Ann Intern Med.* 2012;156(12):880-891.

Whitlock EP, Vesco KK, Eder M, Lin JS, Senger CA, Burda BU. Liquid-based cytology and human papillomavirus testing to screen for cervical cancer: a systematic review for the U.S. Preventive Services Task Force [published correction appears in *Ann Intern Med.* 2012;156(1 pt 1):71-72]. *Ann Intern Med.* 2011;155(10):687-697. ■