

# Practice Guidelines

## ACS Releases Updated Guidelines on Cancer Screening

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**Evidence rating system used?** No

**Literature search described?** No

**Guideline developed by participants without relevant financial ties to industry?** Yes

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The American Cancer Society (ACS) has released its annual update of guidelines for cancer screening, with recommendations covering cancers of the breast, cervix, colon and rectum, and prostate. For each cancer site, the guidelines address the affected population, associated tests or procedures, and the appropriate frequency of screening for average-risk, asymptomatic persons.

### Breast Cancer

Early detection of breast cancer in average-risk women includes a combination of regular clinical breast examination and counseling, and mammography. Women between 20 and 39 years of age should undergo clinical breast examination every three years, and then annually beginning at 40 years of age. During clinical breast examination, physicians should discuss with patients the importance of recognizing breast changes. This is also an opportunity to emphasize an awareness of any family history of breast or ovarian cancers in first- and second-degree relatives. Physicians should discuss breast self-examination with patients, and explain the potential benefits, limitations, and harms associated with it. Breast self-examination may be performed regularly, occasionally, or not at all. If women choose to perform breast self-examination, physicians should instruct them on the proper technique.

Annual mammography should begin at 40 years of age in average-risk women. Physicians should inform patients about the benefits of detecting breast cancer before symptoms develop, and that the balance of benefits to harms supports regular mammography. Benefits include a reduction in the risk of dying from breast cancer and, if cancer is detected early, less aggressive surgery (i.e., lumpectomy versus mastectomy), less aggressive adjuvant therapy, and more treatment options. The limitations of mammography include the inability to detect all cancers and that some cancers detected will have a poor prognosis. Possible harms from breast cancer screening include false-positive results, the need for biopsy, and the detection of cancer that is not progressive (i.e., the cancer would not have been detected in the patient's lifetime). Mammography should be continued as long as the patient is in good health and would be a candidate for breast cancer treatment. The decision to stop screening should be based on the individual patient; there is no definite upper age at which mammography should be discontinued.

### Cervical Cancer

Screening for cervical cancer depends on a woman's age, screening history, risk factors, and choice of screening tests. Women at average risk should begin screening by 21 years of age or approximately three years after first vaginal intercourse, regardless of whether they have received the human papillomavirus (HPV) vaccination. Annual screening with conventional cytology or biennial screening with liquid-based cytology is recommended until 30 years of age. Women older than 30 years who have had three consecutive normal screening test results may choose to be screened every two to three years with conventional or liquid-based cytology, or to be screened every three years with combination HPV DNA testing and conventional or liquid-based cytology. Physicians should explain to patients who undergo HPV DNA testing that HPV infection usually is not detectable or harmful; infection is common in most persons who have had sexual intercourse; a positive result does not indicate the presence of cancer; and many women with HPV infection will not develop advanced cervical neoplasia. ►

## Practice Guidelines

Screening should continue in women with an intact cervix until 70 years of age, but may be stopped if test results have been normal in the previous 10 years, and if there is documentation of three consecutive normal Papanicolaou test results.

### Colorectal Cancer

Average-risk adults should undergo colorectal cancer screening beginning at 50 years of age using one of the following options: (1) annual high-sensitivity guaiac fecal occult blood testing (FOBT) or fecal immunochemical testing, (2) testing stool for exfoliated cell DNA (screening interval is uncertain), (3) flexible sigmoidoscopy every five years, (4) colonoscopy every 10 years, (5) double-contrast barium enema every five years, or (6) computed tomography colonography every five years. The first two screening options detect cancer, whereas the other four options detect cancer and advanced adenomas. Another acceptable option is annual testing with guaiac FOBT or fecal immunochemical testing with flexible sigmoidoscopy every five years. In-office single-panel guaiac FOBT using a stool sample collected during digital rectal examination is not recommended because of its low sensitivity for advanced adenomas and cancer. The newer, high-sensitivity guaiac FOBT (e.g., Hemoccult SENSA) or fecal immunochemical testing should replace older, lower-sensitivity versions of the guaiac test (e.g., Hemoccult II). Physicians should emphasize that at-home testing with guaiac FOBT or fecal immunochemical testing requires a commitment to following the manufacturer's instructions for specimen collection. When performed correctly, these methods can reduce the risk of developing and dying from colorectal cancer, with effectiveness similar to colonoscopy.

### Prostate Cancer

Screening for prostate cancer should not be performed without an informed decision-making process. Men who have at least a 10-year life expectancy should have a discussion with their physician about the benefits, risks, and uncertainties of prostate cancer screening with digital rectal examination and prostate-specific antigen (PSA) testing. Men at average risk should be informed about their screening options beginning at 50 years of age, whereas men at higher risk (e.g., blacks, men with a family history of prostate cancer before 65 years of age) should be informed beginning at 45 years of age. Men with multiple family members diagnosed with prostate cancer before 65 years of age should be informed beginning at 40 years of age. If a patient cannot decide whether to be tested, the physician can make the decision based on his or her knowledge of the patient's preferences and values. Prostate cancer screening should not be offered

to asymptomatic men who have a life expectancy of less than 10 years based on age and health status.

For men who choose to be screened, PSA testing is recommended, with or without a digital rectal examination. Men with a PSA level less than 2.5 ng per mL (2.5 mcg per L) may be screened every two years, whereas men with a PSA level of 2.5 ng per mL or greater should be screened annually. A PSA level of 4.0 ng per mL (4.0 mcg per L) or greater has been used to refer patients for further evaluation or biopsy, which is reasonable in men at average risk of prostate cancer. In patients with a PSA level between 2.5 and 4.0 ng per mL, physicians should use an individualized risk assessment to determine the next step.

### Endometrial, Lung, and Ovarian Cancers

There is insufficient evidence to recommend screening for endometrial cancer in women at average risk. At the time of menopause, women at average risk should be informed about the risks and symptoms (e.g., unexpected bleeding and spotting). Women who experience these symptoms should be encouraged to report them to their physician.

Several organizations are in the process of reviewing evidence to determine the potential benefits and harms of screening for lung cancer with low-dose computed tomography.

There is insufficient evidence to indicate whether screening for early ovarian cancer detection is effective using any of the following methods: pelvic examination, cancer antigen 125 as a tumor marker, transvaginal ultrasonography, or multimarker panels and bioinformatics analysis of proteomic patterns.

### Cancer-Related Checkup

In men and women 20 years and older, a preventive health examination provides an opportunity for physicians to screen for cancers of the thyroid, testicles, ovaries, lymph nodes, oral cavity, and skin. This is also an opportunity for physicians to educate patients about self-examination techniques or increased awareness of the signs and symptoms of skin, breast, and testicular cancers. Additional counseling may be given on smoking cessation, sun exposure, diet and nutrition, physical activity, sexual practices, and environmental and occupational exposures. ■

**EDITOR'S NOTE:** Although this Practice Guidelines summary accurately reflects the content of the source guideline, the American Cancer Society (ACS) subsequently updated its guidance on screening for cervical cancer in conjunction with the American Society for Colposcopy and Cervical Pathology and the American Society for Clinical Pathology.<sup>1</sup> The updated ACS recommendations are consistent with those from the U.S. Preventive Services Task Force (USPSTF), which were also published in this issue of *AFP*, in advising that cervical cancer screening begin at 21 years of age, regardless of the age of onset of sexual intercourse; that screening occur every three years for women 21 to 29

years of age; and that women 30 to 65 years of age be provided the option of co-testing with cytology and human papillomavirus testing every five years, rather than cytology alone every three years. An editorial in this issue reviews and compares the 2012 guidelines of the ACS and USPSTF.— KENNETH W. LIN, MD, Associate Deputy Editor for *AFP* Online and JAY SIWEK, MD, Editor.

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**REFERENCES**

1. Saslow D, Solomon D, Lawson HW, et al. American Cancer Society, American Society for Colposcopy and Cervical Pathology, and American Society for Clinical Pathology screening guidelines for the prevention and early detection of cervical cancer. *CA Cancer J Clin*. 2012;62(3):147-172.

**Answers to This Issue's CME Quiz**

<b>Q1.</b> C	<b>Q5.</b> A, B, C	<b>Q10.</b> B, C, D
<b>Q2.</b> D	<b>Q6.</b> A, B, C	<b>Q11.</b> A, B, D
<b>Q3.</b> A, D	<b>Q7.</b> A	<b>Q12.</b> A
<b>Q4.</b> D	<b>Q8.</b> A, B, C, D	<b>Q13.</b> A, B, D
<b>Q9.</b> B, C		