

Putting Prevention into Practice

An Evidence-Based Approach

Screening for Ovarian Cancer

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► See related U.S. Preventive Services Task Force Recommendation Statement at <http://www.aafp.org/afp/2013/0515/od1.html>. Access to the statement is free and unrestricted.



This clinical content conforms to AAFP criteria for evidence-based continuing medical education (EB CME). See CME Quiz on page 678.

The case study and answers to the following questions 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 information on this subject is available on the USPSTF website (<http://www.uspreventiveservicestaskforce.org>). The practice recommendations in this activity are available at <http://www.uspreventiveservicestaskforce.org/uspstf/uspsovar.htm>.

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

Case Study

A 55-year-old woman presents for a routine well-woman examination. She states that she is worried about ovarian cancer because one of her friends was recently diagnosed. She has no family history of breast, ovarian, or colon cancer.

Case Study Questions

1. Based on the U.S. Preventive Services Task Force (USPSTF) recommendation on screening for ovarian cancer, what should you tell the patient?

- A. The incidence of ovarian cancer is low, and there are many false-positive results associated with screening.
- B. Ovarian cancer screening is not recommended for any woman.
- C. Ovarian cancer screening is not recommended for asymptomatic women.
- D. There is limited harm in ovarian cancer screening, and all women who choose to should undergo screening.

2. Which one of the following statements regarding ovarian cancer screening is correct?

- A. There is strong evidence that annual screening with transvaginal ultrasonography and testing for the serum tumor marker cancer antigen (CA) 125 reduces the number of ovarian cancer deaths.
- B. An annual bimanual pelvic examination is effective for ovarian cancer screening.
- C. The evaluation of abnormal test results rarely involves removing one or both ovaries.
- D. No randomized trial has assessed the role of the bimanual pelvic examination for cancer screening.

3. According to the USPSTF, which of the following women would benefit from further risk assessment for ovarian cancer?

- A. A woman with a confirmed *BRCA1* genetic mutation.
- B. A woman with multiple family members who have had colon cancer.
- C. A woman whose mother had ovarian cancer and whose sister was recently diagnosed with breast cancer.
- D. An Ashkenazi Jewish woman who has two maternal aunts with breast cancer.

Answers appear on the following page.

Answers

1. **The correct answers are A and C.** Although the mortality rate associated with ovarian cancer is high, the disease is uncommon in the general U.S. population, with an age-adjusted incidence of 13 cases per 100,000 women. As a result, the positive predictive value of screening for ovarian cancer—which directly depends on the prevalence of the disease—is low, and most positive screening results are false-positive. For this reason, the USPSTF recommends against screening for ovarian cancer in women. This recommendation applies to asymptomatic women. Women with known genetic mutations that increase their risk of ovarian cancer are not included in this recommendation. Adequate evidence shows that screening can lead to important harms, including major surgical interventions in women who do not have cancer.

2. **The correct answer is D.** The USPSTF found adequate evidence that annual screening with transvaginal ultrasonography and serum testing for CA 125 does not reduce the number of ovarian cancer deaths. The bimanual pelvic examination is often conducted in part to screen for ovarian cancer, although its effectiveness and harms are not well known. No randomized trial has assessed its role in cancer screening. When a patient receives an abnormal test result, evaluation consists of repeated testing and often removal of one or both ovaries by laparoscopy or laparotomy.

3. **The correct answers are A, B, C, and D.** Women with *BRCA1* and *BRCA2* genetic mutations, Lynch syndrome (hereditary nonpolyposis colon cancer), or a family history of ovarian cancer are at increased risk of ovarian cancer. There are no standardized referral criteria, but women with an increased-risk family history should be considered for genetic counseling to evaluate their risks. “Increased-risk family history” generally includes two or more first- or second-degree relatives with a history of ovarian cancer or a combination of breast and ovarian cancer; for Ashkenazi Jewish women, it includes a first-degree relative (or two second-degree relatives on the same side of the family) with breast or ovarian cancer.

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SOURCES

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