

Putting Prevention into Practice

An Evidence-Based Approach

Screening for Ovarian Cancer

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Case Study

A 61-year-old woman presents to your office for a well-woman examination. She had a normal Papanicolaou (Pap) test last year and has no medical problems. She quit smoking 10 years ago, reports a family history significant only for cardiovascular disease, and is sexually active with her husband.

Case Study Questions

1. According to the U.S. Preventive Services Task Force (USPSTF), should this woman be screened for ovarian cancer?

- A. No; the USPSTF recommends screening for ovarian cancer only in asymptomatic women 65 to 79 years of age.
- B. Yes; the USPSTF recommends screening for ovarian cancer with transvaginal ultrasonography in asymptomatic women.
- C. No; the USPSTF recommends against screening for ovarian cancer in asymptomatic women.
- D. Yes; the USPSTF recommends screening for ovarian cancer with serum cancer antigen 125 (CA-125) testing.
- E. Maybe; the USPSTF concluded that the current evidence is insufficient to assess the balance of benefits and harms of screening for ovarian cancer.

2. To which one of the following women does the USPSTF recommendation statement on screening for ovarian cancer apply?

- A. A 45-year-old asymptomatic, nulliparous woman recently diagnosed with hereditary breast and ovarian cancer syndrome.
- B. A 68-year-old woman with a two-year history of lower abdominal pain, bloating, and fatigue.
- C. A 40-year-old asymptomatic woman with a known *BRCA1* deleterious gene mutation.
- D. A 65-year-old woman with no symptoms.
- E. A 60-year-old woman with a recently detected palpable mass in her left lower quadrant.

3. Screening for ovarian cancer results in which of the following harms?

- A. Unnecessary surgery.
- B. Reduced compliance with other well-woman screening recommendations.
- C. Anxiety.
- D. High false-positive rate.

Answers appear on the following page.

See related U.S. Preventive Services Task Force Recommendation Statement at <https://www.aafp.org/afp/2018/0615/od1.html>.

This PPIIP quiz is based on the recommendations of the USPSTF. More information is available in the USPSTF Recommendation Statement and the supporting documents on the USPSTF website (<https://www.uspreventiveservicestaskforce.org>). The practice recommendations in this activity are available at <https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/ovarian-cancer-screening1>.

This series is coordinated by Sumi Sexton, MD, Editor-in-Chief.

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

CME This clinical content conforms to AAFP criteria for continuing medical education (CME). See CME Quiz on page 774.

Author disclosure: No relevant financial affiliations.

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Answers

1. **The correct answer is C.** The USPSTF recommends against screening for ovarian cancer (D recommendation) in asymptomatic women regardless of age or screening methodology. The USPSTF found that the harms of screening outweigh the benefits. Studies showed no benefit in reduced ovarian cancer mortality, while the USPSTF found the harms of screening to be moderate to substantial.¹

2. **The correct answer is D.** The USPSTF recommendation applies to asymptomatic women without a known high-risk hereditary cancer syndrome. Screening for and management of diagnosed hereditary cancer syndromes are beyond the scope of the USPSTF recommendation. Women with a family history of breast or ovarian cancer should discuss their family history with their physician to see if they may be at increased risk of a hereditary cancer syndrome. Women with symptoms of ovarian cancer are excluded from the recommendation and should have their symptoms evaluated and undergo diagnostic testing (not screening), if indicated. The clinical symptoms of ovarian cancer (e.g., abdominal pain or pressure, bloating, constipation, urinary symptoms, back pain, fatigue) are nonspecific and may be present in healthy women and women with late-stage ovarian cancer, making the use of symptoms in risk stratification for the early diagnosis of disease difficult.

3. **The correct answers are A and D.** The USPSTF found adequate evidence that screening for ovarian cancer results in important harms, such as false-positive results, which can lead to unnecessary surgery and the removal of one or both ovaries. Depending on the method and round of screening, false-positive rates (the number of women without cancer who had a positive screening result) range from 9.0% to 44.2%.² Up to 3% of women with false-positive results underwent surgical investigation based on their false-positive test result.² Among these women, up to 15% had major surgical complications, including infection, direct surgical harm, cardiovascular or pulmonary events, and other unspecified adverse events.² However, the USPSTF found inadequate evidence on the psychological harms of screening for ovarian cancer.^{1,2} The USPSTF did not find evidence that screening for ovarian cancer reduces compliance with other well-woman screening recommendations.

The views expressed in this work are those of the authors and do not reflect the official policy or position of the Uniformed Services University of the Health Sciences, the U.S. Air Force, the Department of Defense, or the U.S. government.

References

1. US Preventive Services Task Force. Screening for ovarian cancer: US Preventive Services Task Force recommendation statement. *JAMA*. 2018;319(6):588-594.
2. Henderson JT, Webber EM, Sawaya GF. Screening for ovarian cancer: updated evidence report and systematic review for the US Preventive Services Task Force. *JAMA*. 2018;319(6):595-606. ■

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