

U.S. Preventive Services Task Force

Screening for Ovarian Cancer: Recommendation Statement

Summary of Recommendation and Evidence

The USPSTF recommends against screening for ovarian cancer in asymptomatic women (*Table 1*).

D recommendation.

This recommendation applies to asymptomatic women who are not known to have a high-risk hereditary cancer syndrome.

Rationale

IMPORTANCE

The age-adjusted incidence of ovarian cancer from 2010 to 2014 was 11.4 cases per 100,000 women per year.¹ Ovarian cancer is the fifth most common cause of cancer death among U.S. women and the leading cause of death from gynecologic cancer, despite its low incidence.¹ Approximately 14,000 women die of ovarian cancer each year in the United States. More than 95% of ovarian cancer deaths occur among women 45 years and older.²

DETECTION

The positive predictive value of screening tests for ovarian cancer is low, and most women with a positive screening test result do not have ovarian cancer (i.e., many women without ovarian cancer will have a false-positive result on screening tests).

BENEFITS OF SCREENING

The USPSTF found adequate evidence that screening with transvaginal ultrasound, testing

for the serum tumor marker cancer antigen 125 (CA-125), or a combination of both does not reduce ovarian cancer mortality.

HARMS OF SCREENING

The USPSTF found adequate evidence that screening for ovarian cancer can result in important harms, including many false-positive results, which can lead to unnecessary surgical interventions in women who do not have cancer. Depending on the type of screening test used, the magnitude of harm ranges from moderate to substantial and reflects the risk for unnecessary diagnostic surgery. The USPSTF found inadequate evidence on the psychological harms of screening for ovarian cancer.

USPSTF ASSESSMENT

The USPSTF concludes that there is at least moderate certainty that the harms of screening for ovarian cancer outweigh the benefits.

Clinical Considerations

PATIENT POPULATION UNDER CONSIDERATION

This recommendation applies to asymptomatic women who are not known to have a high-risk hereditary cancer syndrome. A hereditary cancer syndrome occurs when a genetic mutation is passed from parent to child that increases risk for developing cancers or can cause earlier onset of cancers. Women who have a hereditary cancer

See related Putting Prevention into Practice on page 813.

As published by the U.S. Preventive Services Task Force.

This summary is one in a series excerpted from the Recommendation Statements released by the USPSTF. These statements address preventive health services for use in primary care clinical settings, including screening tests, counseling, and preventive medications.

The complete version of this statement, including supporting scientific evidence, evidence tables, grading system, members of the USPSTF at the time this recommendation was finalized, and references, is available on the USPSTF website at <https://www.uspreventiveservicestaskforce.org/>.

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

A collection of USPSTF recommendation statements published in *AFP* is available at <https://www.aafp.org/afp/uspstf>.

TABLE 1

Screening for Ovarian Cancer: Clinical Summary of the USPSTF Recommendation

Population	Asymptomatic women without a known high-risk hereditary cancer syndrome
Recommendation	Do not screen for ovarian cancer in asymptomatic women. Grade: D
Risk assessment	Women with certain hereditary cancer syndromes are at high risk for ovarian cancer. Women with a family history of ovarian or breast cancer may be at risk for a hereditary cancer syndrome and should discuss their family history with their health care professional. The clinical symptoms of ovarian cancer (e.g., abdominal pain or pressure, bloating, constipation, urinary symptoms, back pain, or fatigue) are nonspecific and may be present in both healthy women and women with late-stage ovarian cancer; therefore, use of clinical symptoms for risk stratification for the early detection of disease is difficult.
Screening tests	The USPSTF does not recommend routine screening for ovarian cancer using any method. Transvaginal ultrasound and serum cancer antigen 125 testing are readily available procedures that are commonly used to evaluate women with signs or symptoms of ovarian cancer and have been evaluated in screening studies. Pelvic examination is also commonly performed to evaluate women with lower abdominal symptoms.
Treatments	Treatment of ovarian cancer typically includes surgical treatment (staging or debulking) and intraperitoneal, intravenous, or combined chemotherapy.
Other relevant USPSTF recommendations	The USPSTF recommends that women with a family history indicating they are at risk for a deleterious gene mutation (<i>BRCA1</i> or <i>BRCA2</i>) be referred for genetic counseling and, if indicated, genetic testing. The USPSTF concluded that the current evidence is insufficient to assess the balance of benefits and harms of screening with pelvic examination to detect a range of gynecologic conditions in asymptomatic, nonpregnant women.

Note: For a summary of the evidence systematically reviewed in making this recommendation, the full recommendation statement, and supporting documents, go to <https://www.uspreventiveservicestaskforce.org/>.

USPSTF = U.S. Preventive Services Task Force.

syndrome that puts them at high risk for ovarian cancer are excluded from this recommendation.

RISK ASSESSMENT

Women with certain hereditary cancer syndromes are at high risk for ovarian cancer. For example, women with *BRCA1* or *BRCA2* genetic mutations associated with hereditary breast and ovarian cancer are at high risk for ovarian cancer. Numerous genetic mutations and hereditary cancer syndromes may be associated with ovarian cancer, each with a different constellation of associated cancers and family history pattern.³⁻⁵ Women with a family history of ovarian or breast cancer may be at risk for a hereditary cancer syndrome and should discuss their family history with their health care professional. Management of a diagnosed hereditary cancer syndrome and prevention of ovarian cancer in these women is beyond the scope of this recommendation statement.

The clinical symptoms of ovarian cancer (e.g., abdominal pain or pressure, bloating, constipation, urinary symptoms, back pain, or fatigue) are

nonspecific and may be present in both healthy women and women with late-stage ovarian cancer; therefore, use of clinical symptoms for risk stratification for the early detection of disease is difficult.

SCREENING TESTS

The USPSTF does not recommend routine screening for ovarian cancer using any method. Transvaginal ultrasound and serum CA-125 testing are readily available procedures that are commonly used to evaluate women with signs or symptoms of ovarian cancer, and both have been evaluated in screening studies. Pelvic examination is also commonly performed to evaluate women with lower abdominal symptoms, and although many clinicians perceive that pelvic examination with bimanual palpation of the ovaries is useful for screening for ovarian cancer,⁶ there is a lack of evidence to support this.⁷ Furthermore, the Prostate, Lung, Colorectal, and Ovarian (PLCO) Cancer Screening Trial included bimanual palpation of the ovaries in its initial screening protocol, but

this screening component was discontinued 5 years into the study because no cases of ovarian cancer were detected solely with bimanual palpation of the ovaries.^{8,9}

The evaluation of abnormal test results consists of repeat testing with the same or a different test and often surgical removal (by laparoscopy or laparotomy) of 1 or both of the ovaries and fallopian tubes to determine whether a woman has ovarian cancer. Diagnostic guidelines recommend surgical removal of the complete ovary or ovaries, rather than tissue biopsy, to determine whether ovarian cancer is present.

TREATMENT

Treatment of ovarian cancer typically includes surgical treatment (staging or debulking) and intraperitoneal, intravenous, or combined chemotherapy.

USEFUL RESOURCES

In a separate recommendation statement, the USPSTF recommends that women with a family history indicating they are at risk for a deleterious gene mutation (*BRCA1* or *BRCA2*) be referred for genetic counseling and, if indicated, genetic testing.¹⁰ The National Cancer Institute provides additional information on ovarian cancer risk and hereditary cancer syndromes.¹¹ The USPSTF also concluded in a separate recommendation statement that the current evidence was insufficient to assess the balance of benefits and harms of screening with pelvic examination to detect a range of gynecologic conditions in asymptomatic, nonpregnant women.⁷

This recommendation statement was first published in *JAMA*. 2018;319(6):588-594.

The "Other Considerations," "Discussion," "Update of Previous USPSTF Recommendation," and "Recommendations of Others" sections of this recommendation statement are available at <https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/ovarian-cancer-screening1>.

The USPSTF recommendations are independent of the U.S. government. They do not represent the views of the Agency for Healthcare Research and Quality, the U.S. Department of Health and Human Services, or the U.S. Public Health Service.

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