

Screening for Ovarian Cancer: Reaffirmation Recommendation Statement

► See related Putting Prevention into Practice on page 709.

This summary is one in a series excerpted from the Recommendation Statements released by the U.S. Preventive Services Task Force (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 <http://www.uspreventiveservicestaskforce.org>.

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

Summary of Recommendation and Evidence

The U.S. Preventive Services Task Force (USPSTF) recommends against screening for ovarian cancer in women (*Table 1*). **D recommendation.** This recommendation applies to asymptomatic women. Women with known genetic mutations that increase their risk of ovarian cancer (e.g., *BRCA* mutations) are not included in this recommendation.

Rationale

IMPORTANCE

Ovarian cancer has the highest mortality rate of all types of gynecologic cancer and is the fifth-leading cause of cancer death among women.

DETECTION

Although the mortality rate associated with ovarian cancer is high, the disease occurs infrequently 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 women with a positive screening test result will have a false-positive result.

BENEFITS OF DETECTION AND EARLY INTERVENTION AND TREATMENT

The USPSTF found adequate evidence that annual screening with transvaginal ultrasonography and testing for a serum tumor marker, cancer antigen (CA) 125, in women does not reduce the number of ovarian cancer deaths.

HARMS OF DETECTION AND EARLY INTERVENTION AND TREATMENT

Adequate evidence shows that screening for ovarian cancer can lead to important harms,

including major surgical interventions in women who do not have 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

This recommendation applies to asymptomatic women. Women with known genetic mutations that increase their risk of ovarian cancer (e.g., *BRCA* mutations) are not included in this recommendation.

RISK ASSESSMENT

Women with *BRCA1* and *BRCA2* genetic mutations, the Lynch syndrome (hereditary nonpolyposis colon cancer), or a family history of ovarian cancer are at increased risk of ovarian cancer. Although there are no standardized referral criteria, women with an increased-risk family history should be considered for genetic counseling to further evaluate their potential risks. “Increased-risk family history” generally means having two or more first- or second-degree relatives with a history of ovarian cancer or a combination of breast and ovarian cancer; for women of Ashkenazi Jewish descent, it means having a first-degree relative (or two second-degree relatives on the same side of the family) with breast or ovarian cancer.

Women with a family history of ovarian cancer were not excluded from most randomized screening trials. In the only trial reporting ovarian cancer mortality results, women with a family history of ovarian or breast cancer comprised 17 percent of the participants. The overall trial showed no mortality benefit; outcomes were not separately reported for this subgroup. Although

Table 1. Screening for Ovarian Cancer: Clinical Summary of the USPSTF Recommendation

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| Population | Asymptomatic women without known genetic mutations that increase risk of ovarian cancer |
| Recommendation | Do not screen for ovarian cancer. Grade: D |
| Risk assessment | Women with <i>BRCA1</i> and <i>BRCA2</i> genetic mutations, the Lynch syndrome (hereditary nonpolyposis colon cancer), or a family history of ovarian cancer are at increased risk of ovarian cancer. Women with an increased-risk family history should be considered for genetic counseling to further evaluate their potential risks. "Increased-risk family history" generally means having two or more first- or second-degree relatives with a history of ovarian cancer or a combination of breast and ovarian cancer; for women of Ashkenazi Jewish descent, it means having a first-degree relative (or two second-degree relatives on the same side of the family) with breast or ovarian cancer. |
| Screening tests | Transvaginal ultrasonography and serum cancer antigen (CA) 125 testing are the most commonly suggested screening modalities. |
| Treatments | Treatment of ovarian carcinoma includes surgical treatment (debulking) and intraperitoneal or systemic chemotherapy. |
| Balance of benefits and harms | Annual screening with transvaginal ultrasonography and serum CA 125 testing in women does not decrease ovarian cancer mortality. Screening for ovarian cancer can lead to important harms, including major surgical interventions in women who do not have cancer. Therefore, the harms of screening for ovarian cancer outweigh the benefits. |
| Other relevant recommendations from the USPSTF | The USPSTF has made a recommendation on genetic risk assessment and <i>BRCA</i> mutation testing for breast and ovarian cancer susceptibility. This recommendation is available at http://www.uspreventiveservicestaskforce.org . |

NOTE: For the full recommendation statement and supporting documents, go to <http://www.uspreventiveservicestaskforce.org>.

USPSTF = U.S. Preventive Services Task Force.

available evidence does not show with absolute certainty whether the balance of benefits and harms of ovarian cancer screening may differ for women with a family history of ovarian cancer, the USPSTF found no reason to believe that such women would necessarily benefit. A higher incidence of cancer may result in more diagnoses and treatments, but the increase may not be accompanied by a reduction in deaths and may actually lead to more associated harms. An ongoing prospective cohort study, the United Kingdom Familial Ovarian Cancer Screening Study, may help resolve some of these questions.

Factors associated with a reduced risk of ovarian cancer include the use of oral contraceptives, pregnancy and breastfeeding, bilateral tubal ligation, and removal of the ovaries.

SCREENING TESTS

Transvaginal ultrasonography and serum CA 125 testing are readily available procedures and commonly suggested screening methods. The bimanual pelvic examination is often conducted (usually annually) in part to screen for ovarian cancer, although its effectiveness and harms are not well known and were not a focus of this review.

The evaluation of abnormal test results consists of

repeated testing or, commonly, removal of one or both of the ovaries by means of laparoscopy or laparotomy.

TREATMENT

Treatment of ovarian carcinoma includes surgical treatment (debulking) and intraperitoneal or systemic chemotherapy.

USEFUL RESOURCES

In its recommendation on genetic risk assessment and *BRCA* mutation testing for breast and ovarian cancer susceptibility, the USPSTF recommends that women with a family history indicating that they are at risk of a deleterious mutation be referred for genetic counseling and testing. More information on this recommendation can be found at <http://www.uspreventiveservicestaskforce.org>.

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The "Discussion" and "Recommendations of Other Groups" sections of this recommendation statement are available at <http://www.uspreventiveservicestaskforce.org/uspstf/uspsovar.htm>.

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