Agency for Healthcare Research and Quality
Advancing Excellence in Health Care

NATIONAL GUIDELINE CLEARINGHOUSE

# General

## Guideline Title

Final recommendation statement: ovarian cancer: screening.

## Bibliographic Source(s)

Final recommendation statement: ovarian cancer: screening. [internet]. Rockville (MD): U.S. Preventive Services Task Force (USPSTF); 2018 Feb [6 p]. [26 references]

## Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: U.S. Preventive Services Task Force. Screening for ovarian cancer: U.S. Preventive Services Task Force reaffirmation recommendation statement. Ann Intern Med. 2012 Dec 18;157(12):900-4. [14 references]

This guideline meets NGC's 2013 (revised) inclusion criteria.

# NEATS Assessment

National Guideline Clearinghouse (NGC) has assessed this guideline's adherence to standards of trustworthiness, derived from the Institute of Medicine's report Clinical Practice Guidelines We Can Trust.

= Poor = Fair = Good = Very Good = Excellent

| Assessment | Standard of Trustworthiness |
|---|---|
| YES | Disclosure of Guideline Funding Source |
| | Disclosure and Management of Financial Conflict of Interests |
| | Guideline Development Group Composition |

| | |
|---|---|
| YES | Multidisciplinary Group |
| YES | Methodologist Involvement |
| ▮▮▯▯▯ | Patient and Public Perspectives |
| | **Use of a Systematic Review of Evidence** |
| ▮▮▮▮▮ | Search Strategy |
| ▮▮▮▮▮ | Study Selection |
| ▮▮▮▮▮ | Synthesis of Evidence |
| | **Evidence Foundations for and Rating Strength of Recommendations** |
| ▮▮▮▮▮ | Grading the Quality or Strength of Evidence |
| ▮▮▮▮▮ | Benefits and Harms of Recommendations |
| ▮▮▮▮▮ | Evidence Summary Supporting Recommendations |
| ▮▮▮▮▮ | Rating the Strength of Recommendations |
| ▮▮▮▮▮ | **Specific and Unambiguous Articulation of Recommendations** |
| ▮▮▮▮▯ | **External Review** |
| ▮▮▮▮▮ | **Updating** |

# Recommendations

## Major Recommendations

The U.S. Preventive Services Task Force (USPSTF) grades its recommendations (A, B, C, D, or I) and identifies the levels of certainty regarding net benefit (High, Moderate, and Low). The definitions of these grades can be found at the end of the "Major Recommendations" field.

Recommendation Summary

The USPSTF recommends against screening for ovarian cancer in asymptomatic women (D recommendation).

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 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 syndrome 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. 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 cancer antigen 125 (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, there is a lack of evidence to support this. 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.

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. The National Cancer Institute provides additional information on ovarian cancer risk and hereditary cancer syndromes. 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.

Definitions

What the U.S. Preventive Services Task Force (USPSTF) Grades Mean and Suggestions for Practice

| Grade | Grade Definitions | Suggestions for Practice |
|---|---|---|
| A | The USPSTF recommends the service. There is high certainty that the net benefit is substantial. | Offer or provide this service. |
| B | The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty | Offer or provide this service. |

| Grade | Grade Definitions | Suggestions for Practice |
|---|---|---|
| | that the net benefit is moderate to substantial. | |
| C | The USPSTF recommends selectively offering or providing this service to individual patients based on professional judgement and patient preferences. There is at least moderate certainty that the net benefit is small. | Offer or provide this service for selected patients depending on individual circumstances. |
| D | The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits. | Discourage the use of this service. |
| I Statement | The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined. | Read the "Clinical Considerations" section of the USPSTF Recommendation Statement (see "Major Recommendations" field). If the service is offered, patients should understand the uncertainty about the balance of benefits and harms. |

USPSTF Levels of Certainty Regarding Net Benefit

Definition: The USPSTF defines *certainty* as "likelihood that the USPSTF assessment of the net benefit of a preventive service is correct." The net benefit is defined as benefit minus harm of the preventive service as implemented in a general, primary care population. The USPSTF assigns a certainty level based on the nature of the overall evidence available to assess the net benefit of a preventive service.

| Level of Certainty | Description |
|---|---|
| High | The available evidence usually includes consistent results from well-designed, well-conducted studies in representative primary care populations. These studies assess the effects of the preventive service on health outcomes. This conclusion is therefore unlikely to be strongly affected by the results of future studies. |
| Moderate | The available evidence is sufficient to determine the effects of the preventive service on health outcomes, but confidence in the estimate is constrained by factors such as:<br><br>The number, size, or quality of individual studies<br>Inconsistency of findings across individual studies<br>Limited generalizability of findings to routine primary care practice<br>Lack of coherence in the chain of evidence<br><br>As more information becomes available, the magnitude or direction of the observed effect could change, and this change may be large enough to alter the conclusion. |
| Low | The available evidence is insufficient to assess effects on health outcomes. Evidence is insufficient because of:<br><br>The limited number or size of studies<br>Important flaws in study design or methods<br>Inconsistency of findings across individual studies<br>Gaps in the chain of evidence<br>Findings not generalizable to routine primary care practice<br>A lack of information on important health outcomes<br><br>More information may allow an estimation of effects on health outcomes. |

## Clinical Algorithm(s)

None provided

# Scope

## Disease/Condition(s)

## Disease/Condition(s)

Ovarian cancer

## Guideline Category

Prevention

Screening

## Clinical Specialty

Family Practice

Internal Medicine

Obstetrics and Gynecology

Oncology

Preventive Medicine

## Intended Users

Advanced Practice Nurses

Allied Health Personnel

Nurses

Physician Assistants

Physicians

## Guideline Objective(s)

To update the 2012 U.S. Preventive Services Task Force (USPSTF) recommendation on screening for ovarian cancer

Note: Management of a diagnosed hereditary cancer syndrome and prevention of ovarian cancer in these women is beyond the scope of this recommendation statement.

## Target Population

Asymptomatic women who are not known to have a high-risk hereditary cancer syndrome

Note: Women who have a hereditary cancer syndrome that puts them at high risk for ovarian cancer are excluded from this recommendation.

## Interventions and Practices Considered

Screening for ovarian cancer using serum cancer antigen (CA)-125 level, transvaginal ultrasound, or a combination of both

## Major Outcomes Considered

- Key Question 1: Does screening for ovarian cancer in asymptomatic women using single tests or combined algorithms (such as, but not limited to, cancer antigen 125 [CA-125] and ultrasound) reduce all-cause or disease-specific morbidity and mortality?
- Key Question 2: What are the harms of screening for ovarian cancer, including harms of the screening test and of diagnostic evaluation?

# Methodology

## Methods Used to Collect/Select the Evidence

Hand-searches of Published Literature (Primary Sources)

Hand-searches of Published Literature (Secondary Sources)

Searches of Electronic Databases

## Description of Methods Used to Collect/Select the Evidence

Note from the National Guideline Clearinghouse (NGC): A systematic evidence review was prepared by the Kaiser Permanente Research Affiliates Evidence-based Practice Center for the U.S. Preventive Services Task Force (USPSTF) (see the "Availability of Companion Documents" field).

Data Sources and Searches

A search of MEDLINE, PubMed publisher-supplied records, and the Cochrane Collaboration Registry of Controlled Trials for studies published between January 2003 and January 2017 built on a previous search conducted on behalf of the USPSTF (see Appendix A in the systematic review). Studies also were identified from previous reviews, meta-analyses, and reference lists. ClinicalTrials.gov and the World Health Organization International Clinical Trials Registry Platform were searched for ongoing trials. Since January 2017, ongoing surveillance to identify new studies that might affect the review conclusions or interpretation of the evidence was conducted using article alerts and targeted searches of journals with high impact factors. The last surveillance, conducted on November 22, 2017, identified an additional publication reporting secondary analyses of one of the included trials.

Study Selection

Two reviewers independently reviewed titles, abstracts, and full article text to identify studies meeting predetermined review inclusion and exclusion criteria (see Appendix A in the systematic review). Discrepancies were resolved by discussion. Randomized clinical trials of screening compared with no screening or usual care comparisons that enrolled asymptomatic, average-risk women 45 years and older were included. Trials focused on screening explicitly among high-risk populations (e.g., *BRCA* mutation carriers, individuals with first-degree relatives with ovarian cancer), and those addressing only the accuracy of screening or cancer detection rates without reporting morbidity, mortality, or quality-of-life data, were not included.

## Number of Source Documents

See the literature search flow diagram (Appendix A, Figure 1) in the systematic review (see the "Availability of Companion Documents" field) for a summary of evidence search and selection.

Articles included for Key Questions:

Key Question 1: 14 (3 studies)
Key Question 2: 15 (4 studies)

## Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

## Rating Scheme for the Strength of the Evidence

Two reviewers independently assessed the methodological quality of all eligible studies, using criteria outlined by the U.S. Preventive Services Task Force (USPSTF) (see Appendix A in the systematic review [see the "Availability of Companion Documents" field]) and resolved discordant ratings through discussion. The strength of the overall body of evidence for each key question was graded as high, moderate, low, or insufficient based on established methods and addressed the consistency, precision, and limitations of the body of evidence related to each outcome.

## Methods Used to Analyze the Evidence

Review of Published Meta-Analyses

Systematic Review with Evidence Tables

## Description of the Methods Used to Analyze the Evidence

Note from the National Guideline Clearinghouse (NGC): A systematic evidence review was prepared by the Kaiser Permanente Research Affiliates Evidence-based Practice Center for the U.S. Preventive Services Task Force (USPSTF) (see the "Availability of Companion Documents" field).

Data Extraction and Quality Assessment

Two reviewers independently assessed the methodological quality of all eligible studies, using criteria outlined by the USPSTF (see Appendix A in the systematic review) and resolved discordant ratings through discussion. Good-quality randomized clinical trials had adequate randomization procedures and allocation concealment, blinded outcome assessment, reliable outcome measures, similar baseline characteristics between groups, and low attrition. Good-quality trials also used intention-to-screen analysis and reported diagnostic criteria for outcome ascertainment. Fair-quality studies were assessed as not meeting all of the quality criteria but did not have critical limitations that could invalidate study findings. Trials were rated poor quality if attrition was greater than 40% or differed between groups by 20% or if there were other study design or implementation flaws that would seriously undermine internal validity.

Data Synthesis and Analysis

One reviewer abstracted data into standard evidence tables, and the second reviewer checked them for accuracy. Descriptive synthesis was conducted, with results reported and discussed by screening strategy. Meta-analytic pooling of results was not conducted because of the small number of studies and heterogeneity of interventions. Some outcomes were calculated from raw data reported in study publications to adhere to task force priorities or to facilitate comparability across trials and thus may differ from the findings highlighted in the main results of the original publications. As per definitions endorsed by the 2014 World Health Organization and the Fédération Internationale de Gynécologie Obstétrique, ovarian cancer includes ovarian, tubal, and peritoneal cancers. This definition recognizes that the clinical presentation and treatment of peritoneal cancers is not readily distinguished from advanced ovarian or fallopian tube cancers; pathological distinctions are also challenging. Cancer cases were abstracted or calculated using this definition when possible, even if it was not the primary trial outcome reported. Screening false-positive rates were calculated as the percentage of women not diagnosed with ovarian cancer who experienced a positive screening result that led to follow-up testing. False-positive surgery rates were calculated as the percentage of women without an ovarian cancer

diagnosis who were referred to surgery for investigation of suspected ovarian cancer based on positive screening and follow-up test results. Because each definition provides different insights, false-positive rates based on both definitions were calculated for all included studies that reported the pertinent data.

When multiple statistical tests were presented in publications, the prespecified statistical analyses from trial protocols were prioritized, as were complete intention-to-screen analyses and clinically meaningful mortality outcomes for ovarian cancer as defined above. The strength of the overall body of evidence for each key question was graded as high, moderate, low, or insufficient based on established methods and addressed the consistency, precision, and limitations of the body of evidence related to each outcome. For more details on review methods, see the systematic review.

## Methods Used to Formulate the Recommendations

Balance Sheets

Expert Consensus

## Description of Methods Used to Formulate the Recommendations

The U.S. Preventive Services Task Force (USPSTF) systematically reviews the evidence concerning both the benefits and harms of widespread implementation of a preventive service. It then assesses the certainty of the evidence and the magnitude of the benefits and harms. On the basis of this assessment, the USPSTF assigns a letter grade to each preventive service signifying its recommendation about provision of the service (see table below). An important, but often challenging, step is determining the balance between benefits and harms to estimate "net benefit" (that is, benefits minus harms).

U.S. Preventive Services Task Force Recommendation Grid*

| Certainty of Net Benefit | Magnitude of Net Benefit | | | |
|---|---|---|---|---|
| | **Substantial** | **Moderate** | **Small** | **Zero/Negative** |
| High | A | B | C | D |
| Moderate | B | B | C | D |
| Low | Insufficient | | | |

**A*, *B*, *C*, *D*, and *I (Insufficient)* represent the letter grades of recommendation or statement of insufficient evidence assigned by the USPSTF after assessing certainty and magnitude of net benefit of the service (see the "Rating Scheme for the Strength of the Recommendations" field).

The overarching question that the USPSTF seeks to answer for every preventive service is whether evidence suggests that provision of the service would improve health outcomes if implemented in a general primary care population. For screening topics, this standard could be met by a large randomized controlled trial (RCT) in a representative asymptomatic population with follow-up of all members of both the group "invited for screening" and the group "not invited for screening."

Direct RCT evidence about screening is often unavailable, so the USPSTF considers indirect evidence. To guide its selection of indirect evidence, the Task Force constructs a "chain of evidence" within an analytic framework. For each key question, the body of pertinent literature is critically appraised, focusing on the following 6 questions:

Do the studies have the appropriate research design to answer the key question(s)?
To what extent are the existing studies of high quality? (i.e., what is the internal validity?)
To what extent are the results of the studies generalizable to the general U.S. primary care population and situation? (i.e., what is the external validity?)
How many studies have been conducted that address the key question(s)? How large are the studies? (i.e., what is the precision of the evidence?)

How consistent are the results of the studies?
Are there additional factors that assist the USPSTF in drawing conclusions (e.g., presence or absence of dose–response effects, fit within a biologic model)?

The next step in the USPSTF process is to use the evidence from the key questions to assess whether there would be net benefit if the service were implemented. In 2001, the USPSTF published an article that documented its systematic processes of evidence evaluation and recommendation development. At that time, the USPSTF's overall assessment of evidence was described as good, fair, or poor. The USPSTF realized that this rating seemed to apply only to how well studies were conducted and did not fully capture all of the issues that go into an overall assessment of the evidence about net benefit. To avoid confusion, the USPSTF has changed its terminology. Whereas individual study quality will continue to be characterized as good, fair, or poor, the term *certainty* will now be used to describe the USPSTF's assessment of the overall body of evidence about net benefit of a preventive service and the likelihood that the assessment is correct. Certainty will be determined by considering all 6 questions listed above; the judgment about certainty will be described as high, moderate, or low.

In making its assessment of certainty about net benefit, the evaluation of the evidence from each key question plays a primary role. It is important to note that the USPSTF makes recommendations for real-world medical practice in the United States and must determine to what extent the evidence for each key question—even evidence from screening RCTs or treatment RCTs—can be applied to the general primary care population. Frequently, studies are conducted in highly selected populations under special conditions. The USPSTF must consider differences between the general primary care population and the populations studied in RCTs and make judgments about the likelihood of observing the same effect in actual practice.

It is also important to note that one of the key questions in the analytic framework refers to the potential harms of the preventive service. The USPSTF considers the evidence about the benefits and harms of preventive services separately and equally. Data about harms are often obtained from observational studies because harms observed in RCTs may not be representative of those found in usual practice and because some harms are not completely measured and reported in RCTs.

Putting the body of evidence for all key questions together as a chain, the USPSTF assesses the certainty of net benefit of a preventive service by asking the 6 major questions listed above. The USPSTF would rate a body of convincing evidence about the benefits of a service that, for example, derives from several RCTs of screening in which the estimate of benefits can be generalized to the general primary care population as "high" certainty (see the "Rating Scheme for the Strength of Recommendations" field). The USPSTF would rate a body of evidence that was not clearly applicable to general practice or has other defects in quality, research design, or consistency of studies as "moderate" certainty. Certainty is "low" when, for example, there are gaps in the evidence linking parts of the analytic framework, when evidence to determine the harms of treatment is unavailable, or when evidence about the benefits of treatment is insufficient. Table 4 in the methodology document listed below (see the "Availability of Companion Documents" field) summarizes the current terminology used by the USPSTF to describe the critical assessment of evidence at all 3 levels: individual studies, key questions, and overall certainty of net benefit of the preventive service.

Sawaya GF, Guirguis-Blake J, LeFevre M, Harris R, Petitti D; U.S. Preventive Services Task Force. Update on the methods of the U.S. Preventive Services Task Force: estimating certainty and magnitude of net benefit. Ann Intern Med. 2007;147:871-875. [5 references].

## Rating Scheme for the Strength of the Recommendations

What the U.S. Preventive Services Task Force (USPSTF) Grades Mean and Suggestions for Practice

| Grade | Grade Definitions | Suggestions for Practice |
|---|---|---|
| A | The USPSTF recommends the service. There | Offer or provide this service. |

| Grade | Grade Definitions | Suggestions for Practice |
|---|---|---|
| | is high certainty that the net benefit is substantial. | |
| B | The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial. | Offer or provide this service. |
| C | The USPSTF recommends selectively offering or providing this service to individual patients based on professional judgement and patient preferences. There is at least moderate certainty that the net benefit is small. | Offer or provide this service for selected patients depending on individual circumstances. |
| D | The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits. | Discourage the use of this service. |
| I Statement | The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined. | Read the "Clinical Considerations" section of the USPSTF Recommendation Statement (see "Major Recommendations" field). If the service is offered, patients should understand the uncertainty about the balance of benefits and harms. |

USPSTF Levels of Certainty Regarding Net Benefit

Definition: The USPSTF defines *certainty* as "likelihood that the USPSTF assessment of the net benefit of a preventive service is correct." The net benefit is defined as benefit minus harm of the preventive service as implemented in a general, primary care population. The USPSTF assigns a certainty level based on the nature of the overall evidence available to assess the net benefit of a preventive service.

| Level of Certainty | Description |
|---|---|
| High | The available evidence usually includes consistent results from well-designed, well-conducted studies in representative primary care populations. These studies assess the effects of the preventive service on health outcomes. This conclusion is therefore unlikely to be strongly affected by the results of future studies. |
| Moderate | The available evidence is sufficient to determine the effects of the preventive service on health outcomes, but confidence in the estimate is constrained by factors such as:<br><br>The number, size, or quality of individual studies<br>Inconsistency of findings across individual studies<br>Limited generalizability of findings to routine primary care practice<br>Lack of coherence in the chain of evidence<br><br>As more information becomes available, the magnitude or direction of the observed effect could change, and this change may be large enough to alter the conclusion. |
| Low | The available evidence is insufficient to assess effects on health outcomes. Evidence is insufficient because of:<br><br>The limited number or size of studies<br>Important flaws in study design or methods<br>Inconsistency of findings across individual studies<br>Gaps in the chain of evidence<br>Findings not generalizable to routine primary care practice<br>A lack of information on important health outcomes<br><br>More information may allow an estimation of effects on health outcomes. |

## Cost Analysis

The U.S. Preventive Services Task Force (USPSTF) does not consider the costs of providing a service in

this assessment.

## Method of Guideline Validation

Comparison with Guidelines from Other Groups

External Peer Review

Internal Peer Review

## Description of Method of Guideline Validation

Peer Review

Before the U.S. Preventive Services Task Force (USPSTF) makes its final determinations about recommendations on a given preventive service, the Evidence-based Practice Center (EPC) and the Agency for Healthcare Research and Quality (AHRQ) send the draft evidence review to 4 to 6 external experts and to Federal agencies and professional and disease-based health organizations with interests in the topic. The experts are asked to examine the review critically for accuracy and completeness and to respond to a series of specific questions about the document. The draft evidence review is also posted on the USPSTF Web site for public comment. After assembling these external review comments and documenting the proposed response to key comments, the topic team presents this information to the USPSTF in memo form. In this way, the USPSTF can consider these external comments before it votes on its recommendations about the service. Draft recommendation statements are then circulated for comment among reviewers representing professional societies, voluntary organizations, and Federal agencies, as well as posted on the USPSTF Web site for public comment. These comments are discussed before the final recommendations are confirmed.

Response to Public Comment

A draft version of this recommendation statement was posted for public comment on the USPSTF website from July 18, 2017, to August 14, 2017. Many comments voiced concern that given the aggressive nature of ovarian cancer and that symptoms often only appear at later stages, any screening test that can detect ovarian cancer early should be recommended. The USPSTF agrees that screening tests are needed that can accurately detect ovarian cancer earlier to prevent deaths from ovarian cancer; however, the evidence shows that currently available tests are not able to do so and can lead to harm by causing healthy women to undergo surgical removal of their ovaries when no cancer is present. The USPSTF issued its recommendation against screening based on this evidence, not on the costs of screening. Additional comments sought clarification on which women are at high risk for ovarian cancer and to whom the recommendation applies. The USPSTF revised the recommendation statement to clarify the role of family history in ovarian cancer risk and to describe symptoms of ovarian cancer. Women with a family history of ovarian or breast cancer or symptoms should discuss this with their health care provider. The USPSTF also provided more information on how it considered evidence from specific studies. The USPSTF considered study results that included cases of primary peritoneal cancer in the ascertainment of ovarian cancer because clinically, both types of cancer are diagnosed and treated as 1 disease. Similarly, the USPSTF considered study results that included reporting of both prevalent and incident cases of ovarian cancer, because screening would detect both.

Comparison with Guidelines from Other Groups

There is consensus among major medical and public health organizations that screening for ovarian cancer in the general population is not recommended. Recommendations for screening for ovarian cancer were considered from the following groups: the American College of Obstetricians and Gynecologists, the American Cancer Society, the American College of Radiology, the American Academy of Family Physicians.

# Evidence Supporting the Recommendations

## Type of Evidence Supporting the Recommendations

The type of evidence supporting the recommendations is not specifically stated.

# Benefits/Harms of Implementing the Guideline Recommendations

## Potential Benefits

Benefits of Screening

The U.S. Preventive Services Task Force (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.

## Potential Harms

Harms of Screening

The U.S. Preventive Services Task Force (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.

# Qualifying Statements

## Qualifying Statements

- The U.S. Preventive Services Task Force (USPSTF) makes recommendations about the effectiveness of specific clinical preventive services for patients without obvious related signs or symptoms.
- It bases its recommendations on the evidence of both the benefits and harms of the service and an assessment of the balance. The USPSTF does not consider the costs of providing a service in this assessment.
- The USPSTF recognizes that clinical decisions involve more considerations than evidence alone. Clinicians should understand the evidence but individualize decision making to the specific patient or situation. Similarly, the USPSTF notes that policy and coverage decisions involve considerations in addition to the evidence of clinical benefits and harms.
- Recommendations made by the USPSTF are independent of the U.S. government. They should not be construed as an official position of the Agency for Healthcare Research and Quality or the U.S. Department of Health and Human Services.

# Implementation of the Guideline

## Description of Implementation Strategy

## Description of Implementation Strategy

The experiences of the first and second U.S. Preventive Services Task Force (USPSTF), as well as that of other evidence-based guideline efforts, have highlighted the importance of identifying effective ways to implement clinical recommendations. Practice guidelines are relatively weak tools for changing clinical practice when used in isolation. To effect change, guidelines must be coupled with strategies to improve their acceptance and feasibility. Such strategies include enlisting the support of local opinion leaders, using reminder systems for clinicians and patients, adopting standing orders, and audit and feedback of information to clinicians about their compliance with recommended practice.

In the case of preventive services guidelines, implementation needs to go beyond traditional dissemination and promotion efforts to recognize the added patient and clinician barriers that affect preventive care. These include clinicians' ambivalence about whether preventive medicine is part of their job, the psychological and practical challenges that patients face in changing behaviors, lack of access to health care or of insurance coverage for preventive services for some patients, competing pressures within the context of shorter office visits, and the lack of organized systems in most practices to ensure the delivery of recommended preventive care.

Dissemination strategies have changed dramatically in this age of electronic information. While recognizing the continuing value of journals and other print formats for dissemination, the USPSTF will make all its products available through its Web site . The combination of electronic access and extensive material in the public domain should make it easier for a broad audience of users to access USPSTF materials and adapt them for their local needs. Online access to USPSTF products also opens up new possibilities for the appearance of the annual, pocket-size *Guide to Clinical Preventive Services.*

To be successful, approaches for implementing prevention have to be tailored to the local level and deal with the specific barriers at a given site, typically requiring the redesign of systems of care. Such a systems approach to prevention has had notable success in established staff-model health maintenance organizations, by addressing organization of care, emphasizing a philosophy of prevention, and altering the training and incentives for clinicians. Staff-model plans also benefit from integrated information systems that can track the use of needed services and generate automatic reminders aimed at patients and clinicians, some of the most consistently successful interventions. Information systems remain a major challenge for individual clinicians' offices, however, as well as for looser affiliations of practices in network-model managed care and independent practice associations, where data on patient visits, referrals, and test results are not always centralized.

## Implementation Tools

Mobile Device Resources

Patient Resources

Pocket Guide/Reference Cards

Staff Training/Competency Material

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

# Institute of Medicine (IOM) National Healthcare Quality Report Categories

## IOM Care Need

Staying Healthy

## IOM Domain

Effectiveness

Patient-centeredness

# Identifying Information and Availability

## Bibliographic Source(s)

Final recommendation statement: ovarian cancer: screening. [internet]. Rockville (MD): U.S. Preventive Services Task Force (USPSTF); 2018 Feb [6 p]. [26 references]

## Adaptation

Not applicable: The guideline was not adapted from another source.

## Date Released

2018 Feb

## Guideline Developer(s)

U.S. Preventive Services Task Force - Independent Expert Panel

## Guideline Developer Comment

The U.S. Preventive Services Task Force (USPSTF) is a federally-appointed panel of independent experts. Conclusions of the USPSTF do not necessarily reflect policy of the U.S. Department of Health and Human Services (DHHS) or its agencies.

## Source(s) of Funding

The U.S. Preventive Services Task Force (USPSTF) is an independent, voluntary body. The U.S. Congress mandates that the Agency for Healthcare Research and Quality (AHRQ) support the operations of the USPSTF.

## Guideline Committee

U.S. Preventive Services Task Force (USPSTF)

## Composition of Group That Authored the Guideline

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*Members of the USPSTF at the time this recommendation was finalized. For a list of current Task Force members, go to http://www.uspreventiveservicestaskforce.org/Page/Name/our-members .

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Disclosures

All authors have completed and submitted the International Committee of Medical Journal Editors (ICMJE) Form for Disclosure of Potential Conflicts of Interest and none were reported. Authors followed the policy regarding conflicts of interest described at https://www.uspreventiveservicestaskforce.org/Page/Name/conflict-of-interest-disclosures . All members of the USPSTF receive travel reimbursement and an honorarium for participating in USPSTF meetings.

## Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: U.S. Preventive Services Task Force. Screening for ovarian cancer: U.S. Preventive Services Task Force reaffirmation recommendation statement. Ann Intern Med. 2012 Dec 18;157(12):900-4. [14 references]

This guideline meets NGC's 2013 (revised) inclusion criteria.

## Guideline Availability

Available from the U.S. Preventive Services Task Force (USPSTF) Web site .

## Availability of Companion Documents

The following are available:

Evidence Reviews:

Henderson JT, Webber EM, Sawaya GF. Screening for ovarian cancer: updated evidence report and systematic review for the U.S. Preventive Services Task Force. JAMA. 2018 Feb 13;319(6):595-606.

Henderson JT, Webber EM, Sawaya GF. Screening for ovarian cancer: an updated evidence review for the U.S. Preventive Services Task Force. Evidence Synthesis No. 157. Publication No. 17-05231-EF-1. Rockville (MD): Agency for Healthcare Research and Quality; 201 Feb. 71 p.

Available from the U.S. Preventive Services Task Force (USPSTF) Web site .

The following is also available:

Screening for ovarian cancer: clinical summary. Rockville (MD): U.S. Preventive Services Task Force; 2018 Feb. 1 p. Available from the USPSTF Web site .

The Electronic Preventive Services Selector (ePSS) is an application designed to provide primary care clinicians and health care teams timely decision support regarding appropriate screening, counseling and preventive services for their patients. It is based on the current, evidence-based recommendations of the USPSTF and can be searched by specific patient characteristics such as age, sex, and selected behavioral risk factors.

## Patient Resources

Myhealthfinder is a new tool that provides personalized recommendations for clinical preventive services specific to the user's age, gender, and pregnancy status. It features evidence-based recommendations from the USPSTF and is available at www.healthfinder.gov .

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

## NGC Status

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