NICE National Institute for Health and Care Excellence

NICE guideline

Ovarian cancer: recognition and initial management

Clinical guideline
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www.nice.org.uk/guidance/cg122

Your responsibility

The recommendations in this guideline represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, professionals and practitioners are expected to take this guideline fully into account, alongside the individual needs, preferences and values of their patients or the people using their service. It is not mandatory to apply the recommendations, and the guideline does not override the responsibility to make decisions appropriate to the circumstances of the individual, in consultation with them and their families and carers or guardian.

All problems (adverse events) related to a medicine or medical device used for treatment or in a procedure should be reported to the Medicines and Healthcare products Regulatory Agency using the Yellow Card Scheme.

Local commissioners and providers of healthcare have a responsibility to enable the guideline to be applied when individual professionals and people using services wish to use it. They should do so in the context of local and national priorities for funding and developing services, and in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities. Nothing in this guideline should be interpreted in a way that would be inconsistent with complying with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

Contents

This guideline partially replaces CG61.

This guideline is partially replaced by NG12.

This guideline is the basis of QS18.

Overview

This guideline covers detecting, diagnosing and treating women (aged 18 and over) who have, or are suspected of having, epithelial ovarian cancer, fallopian tube cancer, primary peritoneal cancer or borderline ovarian cancer. It aims to enable earlier detection of ovarian cancer and improve initial treatment.

NICE has also produced a guideline on identifying and managing familial and genetic risk associated with ovarian cancer.

This guideline refers to NHS England commissioning policies. In Wales and Northern Ireland, follow Welsh or Northern Irish commissioning positions if applicable.

Who is it for?

- Healthcare professionals
- Commissioners and providers
- People who provide palliative and hospice care for the NHS
- Women with ovarian cancer, and their families and carers

Recommendations

People have the right to be involved in discussions and make informed decisions about their care, as described in NICE's information on making decisions about your care.

Making decisions using NICE guidelines explains how we use words to show the strength (or certainty) of our recommendations, and has information about prescribing medicines (including off-label use), professional guidelines, standards and laws (including on consent and mental capacity), and safeguarding.

Healthcare professionals should follow our general guidelines for people delivering care:

- Patient experience in adult NHS services
- Shared decision making.

1.1 Detection in primary care

For recommendations on detecting ovarian cancer in primary care, see the section on ovarian cancer in NICE's guideline on suspected cancer: recognition and referral.

1.2 Establishing the diagnosis in secondary care

1.2.1 Tumour markers: which to use?

1.2.1.1 Measure serum CA125 in secondary care in all women with suspected ovarian cancer, if this has not already been done in primary care.

1.2.1.2 In women under 40 with suspected ovarian cancer, measure levels of alpha fetoprotein (AFP) and beta human chorionic gonadotrophin (beta-hCG) as well as

serum CA125, to identify women who may not have epithelial ovarian cancer.

1.2.2 Malignancy indices

1.2.2.1 Calculate a risk of malignancy index I (RMI I) score (after carrying out an ultrasound; see recommendation 1.2.3.1 in the section on imaging in the diagnostic pathway: which procedures?) and refer all women with an RMI I score of 250 or greater to a specialist multidisciplinary team.

See the appendix for details of how to calculate an RMI I score.

1.2.3 Imaging in the diagnostic pathway: which procedures?

1.2.3.1 Carry out an ultrasound of the abdomen and pelvis as the first imaging test in secondary care for women with suspected ovarian cancer, if this has not already been done in primary care.

1.2.3.2 If the ultrasound, serum CA125 and clinical status suggest ovarian cancer, carry out a CT scan of the pelvis and abdomen to establish the extent of the cancer. Include the thorax if clinically indicated.

1.2.3.3 Do not use MRI routinely for assessing women with suspected ovarian cancer.

1.2.4 Tissue diagnosis

Need for tissue diagnosis

1.2.4.1 If offering cytotoxic chemotherapy to women with suspected advanced ovarian cancer, first obtain a confirmed tissue diagnosis by histology (or by cytology if histology is not appropriate) in all but exceptional cases.

1.2.4.2 Offer cytotoxic chemotherapy for suspected advanced ovarian cancer without a tissue diagnosis (histology or cytology) only:

- in exceptional cases, after discussion with the multidisciplinary team, **and**
- after discussing with the woman the possible benefits and risks of starting chemotherapy without a tissue diagnosis.

Methods of tissue diagnosis other than laparotomy

1.2.4.3 If surgery has not been carried out, use histology rather than cytology to obtain a tissue diagnosis. To obtain tissue for histology:

- use percutaneous image-guided biopsy if this is feasible
- consider laparoscopic biopsy if percutaneous image-guided biopsy is not feasible or has not produced an adequate sample.

  Use cytology if histology is not appropriate.

1.3 Information and support for women with newly diagnosed ovarian cancer

1.3.1.1 Offer women with newly diagnosed ovarian cancer information about their condition, including psychosocial and psychosexual issues, that:

- is available at the time they want it
- includes the amount of detail that they want and are able to deal with
- is in a suitable format, including written information.

1.3.1.2 Ensure that information is available about:

- the stage, treatment options and prognosis
- how to manage the side effects of both the condition and its treatments to maximise wellbeing
- sexuality and sexual activity

- fertility and hormone treatment
- symptoms and signs of cancer recurrence
- genetics, including the chances of family members developing ovarian cancer (see NICE's guideline on ovarian cancer: identifying and managing familial and genetic risk)
- self-help strategies to optimise independence and coping
- where to go for support, including support groups
- how to deal with emotions such as sadness, depression, anxiety and a feeling of a lack of control over the outcome of the cancer and treatment.

1.4 Managing suspected early (stage 1) ovarian cancer

1.4.1 The role of systematic retroperitoneal lymphadenectomy

1.4.1.1 Carry out retroperitoneal lymph node assessment as part of optimal surgical staging in women with suspected ovarian cancer whose cancer appears to be confined to the ovaries (that is, who appear to have stage 1 ovarian cancer).

Lymph node assessment involves sampling of retroperitoneal lymphatic tissue from the para-aortic area and pelvic side walls if there is a palpable abnormality, or random sampling if there is no palpable abnormality.

Optimal surgical staging constitutes:

- midline laparotomy to allow thorough assessment of the abdomen and pelvis
- a total abdominal hysterectomy, bilateral salpingo-oophorectomy and infracolic omentectomy
- biopsies of any peritoneal deposits

- random biopsies of the pelvic and abdominal peritoneum
- retroperitoneal lymph node assessment.

1.4.1.2 Do not include systematic retroperitoneal lymphadenectomy (block dissection of lymph nodes from the pelvic side walls to the level of the renal veins) as part of standard surgical treatment in women with suspected ovarian cancer whose cancer appears to be confined to the ovaries (that is, who appear to have stage 1 ovarian cancer).

1.4.2 Adjuvant systemic chemotherapy for stage 1 ovarian cancer

1.4.2.1 Do not offer adjuvant chemotherapy to women who have had optimal surgical staging and have low-risk stage 1 ovarian cancer (grade 1 or 2, stage 1a or 1b).

1.4.2.2 Offer women with high-risk stage 1 ovarian cancer (grade 3 or stage 1c) adjuvant chemotherapy consisting of 6 cycles of carboplatin.

1.4.2.3 Discuss the possible benefits and side effects of adjuvant chemotherapy with women who have had suboptimal surgical staging and appear to have stage 1 ovarian cancer (see recommendation 1.4.1.1).

1.5 Managing advanced (stage 2 to 4) ovarian cancer

1.5.1 Primary surgery

1.5.1.1 If carrying out surgery for ovarian cancer, whether before chemotherapy or after neoadjuvant chemotherapy, the objective should be complete resection of all macroscopic disease.

1.5.2 Intraperitoneal chemotherapy

1.5.2.1 Do not offer intraperitoneal chemotherapy for ovarian cancer, except as part of a

clinical trial. See also NICE's HealthTech guidance on cytoreduction surgery with hyperthermic intraoperative peritoneal chemotherapy for peritoneal carcinomatosis, which recommends that this procedure should only be used with special arrangements for clinical governance, consent, and audit or research.

1.5.3 First-line systemic anticancer therapy

1.5.3.1 Paclitaxel with a platinum-based compound or with platinum-based therapy alone (cisplatin or carboplatin) are recommended as options for first-line chemotherapy for treating ovarian cancer. For full details, see NICE's technology appraisal guidance on paclitaxel (TA55, 2005).

1.5.3.2 Bevacizumab with paclitaxel and carboplatin is not recommended for the first-line treatment of advanced ovarian cancer. For full details, see NICE's technology appraisal guidance on bevacizumab (TA284, 2013). However, NHS England recommends bevacizumab with paclitaxel and carboplatin as an option for first-line induction treatment for advanced (stage 3 and 4) ovarian cancer at a dose of 7.5 mg/kg or 15 mg/kg. For more information, see the NHS England Cancer Drugs Fund list.

In April 2025, a dose of 7.5 mg/kg was an off-label use of bevacizumab. See NICE's information on prescribing medicines.

1.5.4 Systemic anticancer therapy for maintenance treatment

1.5.4.1 Niraparib for maintenance treatment is recommended as an option for advanced (stage 3 and 4) high-grade epithelial ovarian cancer in adults after response to first-line platinum-based chemotherapy only if they did not have or could not tolerate bevacizumab as part of first-line induction chemotherapy. For full details, see NICE's technology appraisal guidance on niraparib (TA1129, 2026).

1.5.4.2 Rucaparib for maintenance treatment is recommended as an option for BRCA mutation-negative, homologous recombination deficiency positive, advanced (stage 3 and 4), high-grade epithelial ovarian cancer after complete or partial response to first-line platinum-based chemotherapy. For full details, see NICE's

technology appraisal guidance on rucaparib (TA1055, 2025).

1.5.4.3 Rucaparib for maintenance treatment is recommended as an option for BRCA mutation-negative, advanced (stage 3 and 4), high-grade epithelial ovarian cancer, when homologous recombination deficiency status is negative or unknown and bevacizumab is not a treatment option, after complete or partial response to first-line platinum-based chemotherapy. For full details, see NICE's technology appraisal guidance on rucaparib (TA1055, 2025).

1.5.4.4 Olaparib for maintenance treatment is recommended as an option for BRCA mutation-positive advanced (stage 3 and 4) high-grade epithelial ovarian cancer after response to first-line platinum-based chemotherapy. For full details, see NICE's technology appraisal guidance on olaparib (TA962, 2024).

1.5.4.5 Olaparib with bevacizumab for maintenance treatment is recommended as an option for homologous recombination deficiency positive, advanced (stage 3 and 4), high-grade epithelial ovarian cancer after complete or partial response to first-line platinum-based chemotherapy with bevacizumab. For full details, see NICE's technology appraisal guidance on olaparib with bevacizumab (TA946, 2024).

1.5.4.6 Bevacizumab for maintenance treatment is recommended as an option by NHS England for advanced (stage 3 and 4) ovarian cancer previously treated with a 7.5 mg/kg dose of bevacizumab in combination with carboplatin and paclitaxel. See the NHS England Cancer Drugs Fund list.

In April 2025, this was an off-label use of bevacizumab. See NICE's information on prescribing medicines.

1.6 Systemic anticancer therapy for recurrent or relapsed ovarian cancer

1.6.1 Systemic anticancer therapy options

1.6.1.1 For medicines recommended as options for treating recurrent ovarian cancer, see

NICE's technology appraisal guidance on:

- paclitaxel in combination with platinum or as monotherapy (TA389, 2016)
- pegylated liposomal doxorubicin hydrochloride (PLDH) as monotherapy (TA389, 2016)
- PLDH in combination with platinum (TA389, 2016).

1.6.1.2 For medicines not recommended for treating the first recurrence of platinum-sensitive ovarian cancer, see NICE's technology appraisal guidance on:

- gemcitabine in combination with carboplatin (TA389, 2016)
- trabectedin in combination with PLDH (TA389, 2016)
- topotecan (TA389, 2016)
- bevacizumab in combination with gemcitabine and carboplatin (TA285, 2013).

1.6.1.3 Topotecan is not recommended for treating recurrent platinum-resistant or platinum-refractory ovarian cancer. For full details, see NICE's technology appraisal guidance on topotecan (TA389, 2016).

1.6.1.4 Trametinib is recommended as an option by NHS England for treating serous low-grade ovarian or peritoneal cancer that has recurred or progressed following at least 1 platinum-based chemotherapy. See the NHS England Cancer Drugs Fund list.

In April 2025, this was an off-label use of trametinib. See NICE's information on prescribing medicines.

1.6.2 Systemic anticancer therapy for maintenance treatment

1.6.2.1 Rucaparib for maintenance treatment is recommended as an option for relapsed platinum-sensitive high-grade epithelial ovarian cancer that has completely or partially responded to platinum-based chemotherapy. For full details, see NICE's technology appraisal guidance on rucaparib (TA1007, 2024).

1.6.2.2 Olaparib for maintenance treatment is recommended as an option for BRCA mutation-positive relapsed, platinum-sensitive, high-grade epithelial ovarian cancer after 2 or more courses of platinum-based chemotherapy. For full details, see NICE's technology appraisal guidance on olaparib (TA908, 2023).

1.6.2.3 Niraparib for maintenance treatment is recommended as an option for treating relapsed, platinum-sensitive, high-grade serous epithelial ovarian cancer in adults that has responded to the most recent course of platinum-based chemotherapy if:

- they have a BRCA mutation and have had 2 courses of platinum-based chemotherapy, or
- they do not have a BRCA mutation and have had 2 or more courses of platinum-based chemotherapy.

For full details, see NICE's technology appraisal guidance on niraparib (TA784, 2022).

1.6.3 Neurotrophic tyrosine receptor kinase (NTRK) fusion-positive solid tumours

1.6.3.1 Larotrectinib is recommended as an option through the Cancer Drugs Fund for treating locally advanced or metastatic NTRK fusion-positive solid tumours when there are no other satisfactory treatment options. For full details, see NICE's technology appraisal guidance on larotrectinib (TA630, May 2020).

Recommendations for research

The committee has made the following recommendations for research, based on its review of evidence, to improve NICE guidance and patient care in the future.

1 Relationship between duration of symptoms of ovarian cancer and stage at diagnosis

Further research should be undertaken on the relationship between the duration and frequency of symptoms in ovarian cancer before diagnosis, the stage of disease at diagnosis and subsequent survival.

Why this is important

Most women presenting with ovarian cancer have advanced disease and have had symptoms for months. Greater awareness among both women and healthcare professionals, might result in earlier presentation with less advanced disease, leading to better outcomes. There is insufficient understanding of the factors that influence earlier diagnosis in women with ovarian cancer, especially the relationship between duration of symptoms and stage at diagnosis. Data demonstrating benefits from earlier presentation will justify investment in raising awareness among women and healthcare professionals. This is likely to be a population-based study that records both the duration and frequency of symptoms.

2 Imaging in the diagnostic pathway for women with ovarian cancer

Large multicentre case–control studies should be conducted to compare the accuracy of CT versus MRI for staging and for predicting optimal cytoreduction in women with ovarian cancer.

Why this is important

Currently most women with ovarian cancer will have a CT scan before surgery to assess

the extent and resectability of disease. CT and MRI are complementary in their abilities to detect disease, but no adequate studies have been performed that compare their effectiveness in women with suspected ovarian cancer. No comparative studies have been undertaken evaluating surgical outcome. A prospective study in women having primary surgery would be feasible.

3 The value of primary surgery for women with advanced ovarian cancer

Research should be undertaken to determine the effectiveness of primary surgery for women with advanced ovarian cancer whose tumour cannot be fully excised.

Why this is important

Most women with advanced ovarian cancer have surgery at some point. Previous studies have shown that surgery after the completion of chemotherapy has no therapeutic value. Studies are being performed to investigate whether the timing of surgery during primary chemotherapy influences outcome. No studies have evaluated whether primary surgery itself has any therapeutic value when compared with chemotherapy alone. The potential advantages of surgery have to be offset against the morbidity, occasional mortality and undoubted costs associated with it. This would be a prospective randomised clinical trial recruiting women who have biopsy-proven advanced ovarian cancer and who are fit enough to receive surgery and chemotherapy. They would be randomised to either chemotherapy and surgery (conventional arm) or chemotherapy alone (experimental arm). Primary outcome measures would be survival at 1 and 5 years.

Appendix: Risk of malignancy index (RMI I)

RMI I combines 3 pre-surgical features: serum CA125 (CA125), menopausal status (M) and ultrasound score (U). The RMI is a product of the ultrasound scan score, the menopausal status and the serum CA125 level (IU/ml).

RMI = U x M x CA125

- The ultrasound result is scored 1 point for each of the following characteristics: multilocular cysts, solid areas, metastases, ascites and bilateral lesions. U = 0 (for an ultrasound score of 0), U = 1 (for an ultrasound score of 1), U = 3 (for an ultrasound score of 2 to 5).
- The menopausal status is scored as 1 = pre-menopausal and 3 = post-menopausal.
- The classification of 'post-menopausal' is a woman who has had no period for more than 1 year or a woman over 50 who has had a hysterectomy.
- Serum CA125 is measured in IU/ml and can vary between 0 and hundreds or even thousands of units.

Finding more information and committee details

To find NICE guidance on related topics, including guidance in development, see the NICE topic page on ovarian cancer.

For full details of the evidence and the guideline committee's discussions, see the full guideline and evidence reviews. You can also find information about how the guideline was developed, including details of the committee.

NICE has produced tools and resources to help you put this guideline into practice. For general help and advice on putting our guidelines into practice, see resources to help you put NICE guidance into practice.

Update information

April 2026: Recommendations in section 1.1 on the detection of ovarian cancer in primary care have been removed from this guideline because they have been updated in section 1.5 of the NICE guideline on suspected cancer (April 2026).

We also added links to relevant technology appraisal guidance in the section on managing advanced (stage 2 to 4) ovarian cancer and simplified the guideline by removing recommendations on general principles of care that are covered in other NICE guidelines.

Minor changes since publication

January 2026: We removed the link to NICE's technology appraisal guidance on entrectinib for treating NTRK fusion-positive solid tumours from the section on systemic anticancer therapy for recurrent or relapsed ovarian cancer because the guidance has been withdrawn.

August 2025: We added links to relevant technology appraisal guidance on NTRK inhibitors in the section on systemic anticancer therapy for recurrent or relapsed ovarian cancer.

April 2025: We added links to relevant technology appraisal guidance in the section on managing advanced (stage 2 to 4) ovarian cancer and a new section on systemic anticancer therapy for recurrent or relapsed ovarian cancer.

January 2025: We added a link to NICE's HealthTech guidance on cytoreduction surgery with hyperthermic intraoperative peritoneal chemotherapy for peritoneal carcinomatosis (HTG569) to the section on intraperitoneal chemotherapy.

December 2017: Two out of date recommendations for research have been removed.

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