NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Quality standards

Briefing paper: Ovarian cancer (update)

Quality Standards Advisory Committee meeting: 22 February 2024

Contents

1 Introduction

This briefing paper presents a structured overview of potential quality improvement areas for ovarian cancer (update). It provides the committee with a basis for discussing and prioritising quality improvement areas for development into draft quality statements and measures for public consultation.

This briefing paper includes a brief description of the topic, a summary of each of the suggested quality improvement areas and supporting information.

Recommendations selected from the key development source are included to help the committee in considering potential statements and measures.

1.1 Development source

The key development sources referenced in this briefing paper are:

- Ovarian cancer: recognition and initial management NICE guideline CG122 (2011, last updated 2023).
- Ovarian cancer: identifying and managing familial and genetic risk. NICE guideline in development. Publication expected March 2024.

2 Overview

2.1 Focus of quality standard

This quality standard will cover identifying and managing familial and genetic risk, the recognition and management of ovarian cancer in adults. It will update and replace the existing NICE quality standard for ovarian cancer (QS18).

2.2 Definition

There are several types of ovarian cancer, depending on which parts of the ovary are affected. These include epithelial carcinomas, germ cell ovarian tumours, sex stromal tumours, borderline tumours, fallopian tube cancer and primary peritoneal cancer. Fallopian tube and primary peritoneal cancers are similar to epithelial ovarian cancers, the most prevalent form, and are treated in the same way (Cancer Research UK (CRUK) (2021), Types of ovarian cancer [online]).

Ovarian cancers are staged using the International Federation of Gynaecology and Obstetrics (known as the 'FIGO') system. Ovarian cancer can also be graded on how cells look, relative to normal tissue. Grading can indicate how likely the cancer will spread.

- Grade 1 ('low grade') cells are well differentiated.

- Grade 2 ('moderate' or 'intermediate') tumours look moderately differentiated.
- Grade 3 ('high grade') cells are poorly differentiated or undifferentiated.

Epithelial ovarian cancer accounts for around 90% of cases. There are several types, which can behave and respond differently to treatment. High grade serous carcinoma (sometimes known as high-grade carcinoma) is the most common, accounting for over 6 out of 10 cases of epithelial ovarian cancer (Target Ovarian Cancer (2022), Epithelial ovarian cancer [online]). It is associated with diagnosis at an advanced stage and poor prognosis, with a 5-year survival of only about 30%. It accounts for around 70% to 80% of UK deaths from ovarian cancer (University of Edinburgh (2022), Institute of Cancer Genetics: news item [online]).

Other types of epithelial ovarian cancer (CRUK (2021), Types of ovarian cancer [online]) include:

- Low-grade serous cancer (around 1 in 10 cases). This is normally a slow-growing cancer, for which surgery is the most effective treatment. These are often detected in women who are younger.
- Mucinous tumours (around 3 in 100 cases). They are usually treated with surgery. These may start from the ovary or have sometimes spread from other cancer sites.
- Small cell carcinoma of the ovary hypercalcaemic type.
- Undifferentiated or unclassified tumours, which means they are undeveloped or it is not possible to identify where they stated to grow.

NICE's guideline on ovarian cancer: identifying and managing familial and genetic risk NG241 covers genetic testing for invasive epithelial ovarian cancer, small cell carcinoma of the ovary hypercalcaemic type, Sertoli–Leydig cell, ovarian sex cord tumour with annular tubules, embryonal rhabdomyosarcoma of the ovary and ovarian gynandroblastoma. It is also noted that testing of mucinous epithelial ovarian cancer is already common practice in many services (people with ovarian cancer: rationale & impact section).

2.3 Incidence and prevalence

Ovarian cancer is the sixth most common cancer in females. Annually (2016 to 2018) there are around 7,500 new cases in the UK, accounting for 4% of all new cancer cases.

Age-specific incidence rises from around age 15 to 19 and more steeply around age 40 to 44. Incidence rates are the highest in the age group 75 to 79, accounting for 28% of all new UK cases diagnosed annually. (CRUK (2021), Ovarian cancer incidence statistics and Ovarian Cancer Action's (no date) Equality spotlight report: age (IMPROVE policy report) [online]).

Ovarian cancer is frequently diagnosed at an advanced stage (stages 3 and 4). The national ambition is to diagnose 75% of cancers at stages 1 and 2. The fifth report of the Ovarian Cancer Audit Feasibility Pilot (OCAFP) (2023) shows the proportion of diagnoses by stage for 2015 to 2019 for England:

	Stage 1	Stage 2	Stage 3	Stage 4	Stage unknown
England	27.2%	5.1%	30.0%	18.5%	19.1%

ONS data for 2019, shows that across all stages, almost 45% will survive their cancer for at least 5 years, and 35% for 10 years or more (CRUK (2021), Ovarian cancer survival [online]).

Deprivation is associated with increased mortality for both short- and long-term mortality in England:

- Adjusted mortality rates based on diagnoses 2013 to 2018 showed that people within the most deprived quintile had a 50% higher risk of mortality within 2 months from diagnosis and 40% higher risk of mortality within 2 to 6 months from diagnosis when compared to women in the least deprived quintile (OCAFP 2021, third report).
- More than 4 in 10 (42.4%) diagnosed in the most deprived group survive their disease for 5 years or more, compared with more than 4 in 10 (45.7%) in the least deprived group (2016 to 2020) (CRUK (2021) Ovarian cancer statistics - survival [online]).

Risk factors for ovarian cancer include increasing age, reproductive and hormonal factors. These include conditions increasing the number of ovulatory cycles such as nulliparity, early menstruation and late menopause, use of hormone replacement therapy, non-cancerous medical conditions including endometriosis and diabetes (particularly when diabetes is treated with insulin) and lifestyle factors.

2.4 Genetic and familial risk factors

It is estimated that around 15% of cancers are caused by an inherited genetic variant (Hanson H et al, 2023). Between 340,000 to 440,000 people in the UK carry a pathogenic variant that increases their risk of ovarian cancer. The majority of variants are linked to BRCA1 and BRCA2 genes (NHS England (NHSE, 2022) Genomics for Education Programme – ovarian cancer (public beta website) [online]). BRCA1 and BRCA2 variants are associated with a high lifetime risk of breast and ovarian cancer (Hanson H et al, 2023).

The lifetime risk of developing ovarian cancer is estimated to be between 28% and 44% for women with the BRCA1 gene mutation, and 27% for women with the BRCA2 gene mutation (Clinical Knowledge Summaries (2023), Ovarian Cancer: what are the risk factors? [online]).

Variants in other genes involved in homologous repair syndrome (HRD) are implicated in a small percentage of hereditary ovarian cancers. Ovarian cancer has been associated with genetic syndromes that can also cause other cancers, including Lynch syndrome. (Clinical Knowledge Summaries (2023), Ovarian Cancer: what are the risk factors? [online]).

About 3% of ovarian cancer cases occur in women with a family history of ovarian cancer (CRUK (2018), Ovarian cancer risk [online]). The risk of ovarian cancer risk is between 2.7 and 3.5 times higher in people whose mother or sister has (or has had) ovarian cancer compared with women without this family history. The risk may be higher if the affected relative was diagnosed at a younger age and (NHSE (2022) Genomics for Education Programme – ovarian cancer (public beta website [online]) notes that inherited ovarian cancer is more likely to occur at a younger age.

2.5 Current service delivery and management

People with symptoms of ovarian cancer typically present in primary care where initial tests are carried out (see Appendix 1: Algorithms 1 and 2). Ovarian cancer can be difficult to diagnose early due to the vague nature of these symptoms and the cancer's rarity (Rampes S and Shern-Ping Choy S-P, 2022).

Further investigations used to establish a diagnosis are summarised in Appendix 1: Algorithm 3. NICE's guideline on ovarian cancer: recognition and initial management (CG122) recommends that an ultrasound of the abdomen and pelvis is carried out in secondary care as the first imaging test if this has not already been carried out in primary care; additional ultrasound (transvaginal) scanning may be needed for evaluation. After ultrasound is performed, a malignancy index called an "RMI I" score is calculated based on the ultrasound, CA125 level and menopausal status to predict the likelihood of ovarian cancer. NICE recommends that those with a score of 250 or greater are referred to a specialist gynaecological multidisciplinary team. The third report of the OCAFP (2022) reports that in 2021 there were 40 specialist gynaecology centres in England.

Tissue diagnosis (biopsy) is used to confirm ovarian cancer; these may be obtained during surgery (see Appendix 1: Algorithm 1). If surgery has not been performed other options for obtaining tissue may be used, such as percutaneous image-guided biopsy or laparoscopic biopsy obtained using a type of keyhole surgery, where small cuts are made in the tummy (NHS (2023), Laparoscopy (keyhole surgery) [online]).

The type of tumour and grade affects management of ovarian cancer which includes:

- Surgery: removal of the uterus and cervix (hysterectomy), both ovaries and fallopian tubes (salpingo-oophorectomy) and the sheet of fat which hangs within the tummy (omentum). Lymph nodes in the abdomen are checked to make sure the cancer has not spread. The aim of surgery is to remove all signs of the cancer.
- Chemotherapy.

- Combination of surgery and chemotherapy, according to stage of disease. For stage I disease this is to manage risk of recurrence.

Drugs known as poly-ADP ribose polymerase (PARP) inhibitors are considered after chemotherapy to help reduce the chance of the cancer recurring or delay recurrence.

CG122 (full guideline) highlights information is available around a range of topics, including managing the side effects of the both the disease and treatment. Specific information topics include impact on sexual relationships, hormone treatment and genetics.

Women with a familial risk of ovarian cancer are asked to manage a complex set of health needs. This involves understanding their lifetime risk of ovarian cancer and deciding on interventions that can impact on their fertility, self-image and menopause status (adapted from NICE's guideline on ovarian cancer: identifying and managing familial and genetic risk, evidence review C: configuration of services).

Identifying and managing genetic and familial risk

Preventing inheritable ovarian cancer is a clinical priority, achieved by identifying those at risk and offering interventions that support them to make decisions that can reduce their likelihood of getting ovarian cancer. Current best estimates are that only 3% of pathogenic variant carriers know they are carriers. This proportion will increase with improved availability of genetic testing. Genetic testing also enables markers for targeted treatments to be identified and so has implications for treatment decisions.

The NHS Genomic Medicine Service was launched in Autumn 2018 and supports commitments in the 2019 NHS Long Term Plan to extend access to molecular diagnostics and offer genomic testing routinely to all people with cancer. The supporting National Genomic Test Directory sets out available tests and eligibility for access. It is used for both germline (testing for "constitutional" mutations, which are present at birth and may be passed on) and somatic (tumour) testing for cancer. (NHSE (2022), GeNotes – genomics notes for clinicians: ovarian cancer [online]).

The NHS will be the first national health system to offer whole genome sequencing as part of routine care, building on the 100,000 genomes programme.

The main responsibilities of genetics services are summarised in the NICE familial genetic risk guideline NG241: providing information and support, risk assessment of having pathogenic variant, counselling and testing for people who do not have ovarian cancer, genetic counselling and testing for people diagnosed with non-epithelial ovarian cancer, arranging cascade testing of relatives, if appropriate, assessing the risk of developing ovarian cancer, discussing potential management options and, if appropriate, referral to the familial ovarian cancer multidisciplinary team and other specialist services.

The NICE familial genetic risk guideline NG241 identifies variation in the following areas of care:

- Provision of information and support; some services make use of decision aids.
- Referral routes to genetic specialist services.
- Not all trusts have dedicated familial ovarian cancer multidisciplinary teams, and there is variation in practice.

A visual summary of the guideline is provided in Appendix 1: Visual summary.

2.6 Audit

The OCAFP was run 2019 to 2023 to explore whether it would be possible to undertake meaningful analyses of routinely to monitor collected data, and improve treatment and outcomes for people diagnosed with ovarian cancer in England. 5 reports were published between 2020 and 2023.

OCAFP reports highlight geographical variation in diagnosis and outcomes:

- Incidence rates vary across both sub-ICB and cancer alliances: this may relate to clusters of ethnicities with higher genetic predisposition factors such as BRCA gene mutations.
- Mortality rates (2015 to 2019): age standardised mortality rates vary by sub-ICBs (n=106) from 8.7 to 18.3 per 100,000 person-years.
- Survival rates: 1-year net survival for the 21 cancer alliances varied between 60.9% and 75.8%, 5-year net survival varied between 27.8% and 47.5%. Poor 1-year survival associated with diagnosis at late stage whereas 5-year survival is more likely to reflect the quality of treatment.
- Variation in the stage of diagnosis at sub-ICB level. The proportion of tumours diagnosed at stage 1 ranged from 16.1% to 38.4% across sub-ICBs.

The Healthcare Quality Improvement Partnership (HQIP) announced that a national ovarian cancer audit in 2022 would be established, using findings and intelligence from the OCAFP to inform development. A scoping document published in November 2023 sets out 5 quality improvement goals recommended by the audit team:

- Increase the proportion of parents receiving timely treatment decisions
- Increase the proportion of patients receiving molecular diagnostics
- Increase the proportion on of patients receiving surgery
- Increase the proportion of patients receiving chemotherapy
- Improve rates of survival and reduce variation in survival.

2.7 Resource impact

This is dealt with in the sections relating to the suggested improvement areas.

3 Summary of suggestions

3.1 Responses

In total 16 registered stakeholders responded to the engagement exercise.

- 9 stakeholders suggested areas
- 3 stakeholders had no comments.
- 4 specialist committee members suggested areas

The responses have been summarised in table 1 for further consideration by the committee.

Full details of all the suggestions provided are given in appendix 2 for information.

3.2 Priorities for committee discussion

Table 1 Summary of information available for suggested areas for improvement

Suggested area for improvement	Stakeholder	In scope	Guideline recs	Current practice evidence	Existing QS statement	Priority to discuss?
Recognition and diagnosis (excluding familial & genetic risk)						
• Recognition of symptoms & risk factors	NHSE NCD, OCA, RCOG, SCMs	Yes	Yes	Yes	Yes (18)	**Yes**
• Diagnosis	BSUR, NHSE NCD, OCA, OVAC, SCMs, TOCa	Yes	Yes	Yes	Yes (18)	**Yes**
• Drainage of ascites	SCM	Yes	No	No	No	**No**
Safety netting & referral onto non-specific symptoms pathways	NHSE NCD, TOCa	Yes	Yes	Yes	18; Draft 124	**Yes**
Identifying & managing familial & genetic risk						
• Genetic & tumour testing	NHSE NCD, NHSE GU, OCA, RCOG, SCMs, SCOR, UKCGG	Yes	Yes	Yes	No	**Yes**
• Familial ovarian	RCOG	Yes	Yes	No	No	**Yes**

Suggested area for improvement	Stakeholder	In scope	Guideline recs	Current practice evidence	Existing QS statement	Priority to discuss?
cancer MDT • Surveillance	SCM	Yes	Yes	No	No	**Yes**
Treatment planning & management						
• Specialist MDT	OCA, OVAC	Yes	Yes	Yes	No	**Yes**
• Prerehabilitation	OCA, SCM	Yes	Limited	Yes	No	**Yes**
• Management (excl. recurrent ovarian cancer)	NHSE NCD, OCA, RCOG, SCMs SCOR	Yes	Yes	Yes	No	**Yes**
• PARP inhibitors, second-line & subsequent treatment	SCM, TOCa	Yes	Yes	No	No	**Yes**
Information, support & follow-up						
• Clinical nurse specialist	SCM	Yes	Yes	Yes	Yes (15)	**Yes**
• Information & support	OVAC, SCM	Yes	Yes	Yes	No	**Yes**
• Follow-up after fertility-preserving surgery	BSUR	No	Yes	No	No	**Yes**
Additional areas						
• Improving access to clinical trials	SCM, TOCa	Yes	Yes	N/A	No	**No**
• Maximal cytoreductive surgery	OCA, OVAC	Yes	No	N/A	No	**No**
• New guidance/updated recommendations	BSUR, NHSE NCD	Yes	No	N/A	No	**No**
• Training & development	UKCGG	Yes	No	N/A	No	**No**

Abbreviations:

- BSUR, British Society for Urogenital Radiology
- NHSE GU, NHSE Genomics Unit
- NHSE NCD, NCD - National Cancer Programme
- OCA, Ovarian Cancer Action
- OVAC, Ovacome
- RCOG, Royal College of Obstetricians and Gynaecologist
- SCOR, Society & College of Radiographers.
- TACa, Target Ovarian Cancer
- UKCGG, UK Cancer Genetics Group
- SCM, Specialist Committee Member.
- No comments at this time: Royal Colleges of: GPs; Nursing; Pathologists.

4 Suggested improvement areas

Section 4 presents a summary of the suggested improvement areas, with provisional recommendations that may support statement development and information on current UK practice.

4.1 Recognition and diagnosis (excluding familial and genetic risk)

Recognition of symptoms and risk factors

Stakeholders suggested improving recognition of the signs and symptoms as a priority. Comments focused on primary care but it was noted that a 'significant proportion' of cases are diagnosed through emergency routes in other specialities.

Stakeholders felt that healthcare professionals should be aware of risk factors for ovarian cancer.

Stakeholders also commented that early diagnosis could be supported through greater awareness of the symptoms of ovarian cancer among people who may develop it.

Age was highlighted as a health inequality.

Selected recommendations

NICE's guideline on ovarian cancer: recognition and initial management (CG122):

1.1.1.1 Refer the woman using a suspected cancer pathway referral if physical examination identifies ascites and/or a pelvic or abdominal mass (which is not obviously uterine fibroids).

1.1.1.2 Carry out tests in primary care (see the section on asking the right question – first tests) if a woman (especially if 50 or over) reports having any of the following symptoms on a persistent or frequent basis – particularly more than 12 times per month:

- persistent abdominal distension (women often refer to this as 'bloating')
- feeling full (early satiety) and/or loss of appetite
- pelvic or abdominal pain
- increased urinary urgency and/or frequency.

See also the NICE guideline on suspected cancer: recognition and referral.

Current UK practice

Target Ovarian Cancer's Pathfinder 2022: Faster, further and fairer report (Pathfinder 2022) is a series of reports providing an overview of how diagnosis and treatment of, and support for ovarian cancer, has evolved. The first Pathfinder study was carried out in 2009. The 2022 report is based on the findings of 4 UK surveys carried out between January and May 2022: a survey of women who receive a diagnosis of ovarian cancer during or after 2016 (n=447); a public awareness telephone survey (n=1,002; weighted sample), an online survey of GPs (n=548) and an online survey of clinical nurse specialists (n=33).

The purpose of the GP online survey was to investigate their unprompted knowledge of ovarian cancer. Findings were compared to those from 2009. Key findings include:

- Virtually all (97%) were aware of bloating but a smaller proportion (74%) were aware of abdominal pain as a symptom of ovarian cancer.
- 38% were aware of urinary symptoms and 34% satiety/loss of appetite.
- 46% of GPs agreed with the incorrect statement that symptoms only present in late stage disease, although the proportion had decreased since 2009 (79%).

Findings of the public awareness survey showed that despite a general upward trend in improved awareness of persistent bloating as a symptom of ovarian cancer, awareness of urinary symptoms and feeling full/loss of appetite have remained low (below 5%). There has been consistently greatest awareness of pelvic or abdominal pain and awareness of this has also improved between since 2009 (24% to 32%). The report also noted that 40% of women incorrectly believed that cervical screening detects ovarian cancer.

Interactive results for the 2022 Cancer Patient Experience Survey (2022 CPES) show that for the question "patient only spoke to a primary care professional once or twice before the cancer diagnosis", in relation to ovarian cancer:

- 46% (331) agreed that they only spoke once to a primary care professional.
- 20% (147) agreed they spoke twice to a primary care professional.
- 20% (151) stated they spoke to a primary care professional 3 or 4 times and 13% (94), 5 or more times.
- 93 (no percentage) stated that they didn't know or could not remember how many times they had spoken to a primary care professional.

Routes to diagnosis 2018 data collected by the National Data Registration Service for ovarian, fallopian tube and peritoneal cancer (including borderline tumours) show admissions by demographics ('overall') and stage of diagnosis by route (%):

Stage	Suspected cancer referral (2-week wait)	GP referral	Emergency presentation	Other
Overall	34.6%	20.9%	26.6%	Diagnosis by death certificate: 0.2% Unknown: 3%
1	32.8	30.3	10.8	26.1
2	49.6	22.4	12.7	15.3
3	44.0	16.3	26.5	13.1
4	35.0	13.8	40.9	10.4
Unknown	16.2	20.7	40.8	22.4

The data highlights that stage 4 diagnoses are strongly associated with emergency presentation (41%). When diagnosed at stage 4, 16% will survive ovarian cancer for 5 or more years, compared to 94.5% at stage 1 (incidence (2018) and survival data 2016 to 2020, NHSE's Early Diagnosis Hub (2023) Survival and incidence by stage at diagnosis [online]).

Age was highlighted as a health inequality. Ovarian Cancer Action's (no date) Equality spotlight report: age (IMPROVE policy report) [online] highlighted that 28% of women diagnosed with ovarian cancer in their 70s are diagnosed through emergency presentation. Stakeholders also commented on variation in opportunities for diagnosis according to geographic location and in certain populations.

No current UK practice was identified on the recognition of risk factors (excluding genetic and familial risk); this area is based on stakeholder's knowledge and experience.

Diagnosis

Stakeholders suggested developing an overarching statement on implementing NHSE's best practice diagnostic pathway for gynecology to support the 28-day Faster Diagnostic Standard. Aims are to reduce variation, shorten pathways, avoid delays, and improve experience. Other suggestions included:

- Increase use of CA125 testing for the symptomatic population.
- Performing CA125 and ultrasound concurrently. Concerns were raised that CA125 does not always detect ovarian cancers.
- Direct referral onto urgent ovarian cancer pathway for those with elevated CA125 who reach 3% cancer probability threshold (this will also be influenced by age, with higher probability in older age groups).
- Increase use of ultrasound, noting NHSE's 2022 guidance on expanded GP direct access to both ultrasound and CT of the abdomen and pelvis for people who do

not meet the criteria in NICE's guideline on suspected cancer: recognition and referral for referral to a specialist (NG12).
- Considering using CT instead of ultrasound. Stakeholders suggested that postmenopausal women are a key group and commented that the evidence base for use of ultrasound, CT and MRI is evolving.
- Clarifying the role of MRI in characterizing adnexal masses (a mass in the pelvis close to one or other side of the womb) and the associated protocols.
- Minimum standards around delivery and reporting should be referenced in any statements about imaging.
- Optimising pathways to support treatment for rarer forms of ovarian cancer (low grade serous carcinoma and granulosa cell tumour) when diagnosis is confirmed. Inhibin monitoring was mentioned as a strategy for diagnosing granulosa cell tumour.

Stakeholders highlighted age as a health inequalities issue, commenting that older women were less likely to be referred for tests and when referred, experienced significantly longer waiting times.

Selected recommendations

NICE's guideline on ovarian cancer: recognition and initial management (CG122):

1.1.1.3 Consider carrying out tests in primary care (see the section on asking the right question – first tests) if a woman reports unexplained weight loss, fatigue or changes in bowel habit.

1.1.1.5 Carry out appropriate tests for ovarian cancer (see the section on asking the right question – first tests) in any woman of 50 or over who has experienced symptoms within the last 12 months that suggest irritable bowel syndrome (IBS), because IBS rarely presents for the first time in women of this age.

1.1.2.1 Measure serum CA125 in primary care in women with symptoms that suggest ovarian cancer (see the section on awareness of symptoms and signs).

1.1.2.2 If serum CA125 is 35 IU/ml or greater, arrange an ultrasound scan of the abdomen and pelvis.

1.1.2.3 If the ultrasound suggests ovarian cancer, refer the woman for further investigation using a suspected cancer pathway referral.

Royal College of Radiologists (RCR) iRefer 8 (2021):

REDACTED – Log-in required.

Scottish Intercollegiate Guidelines Network (SIGN')s (2013, revised 2018) guideline on management of epithelial ovarian cancer (SIGN135):

4.1.2: CA125 blood serum level should be measured and urgent pelvic ultrasound carried out in women with persistent abdominal distension or feeling full and/or loss of appetite or pelvic or abdominal pain or increased urinary urgency and/or frequency (particularly if occurring more than 12 times per month and especially if she is over 50).

NICE's guideline on ovarian cancer: recognition and initial management (CG122):

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.

1.2.2.1 Calculate a risk of malignancy index I (RMI I) score (after performing an ultrasound; see recommendation 1.2.3.1) and refer all women with an RMI I score of 250 or greater to a specialist multidisciplinary team.

1.2.3.1 Perform 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, perform a CT scan of the pelvis and abdomen to establish the extent of disease. Include the thorax if clinically indicated.

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

RCR iRefer 8 (2021):

REDACTED – Log-in required.

NICE's guideline on diagnostics guideline on tests in secondary care to identify people at high risk of ovarian cancer (DG31):

1.1 There is currently not enough evidence to recommend the routine adoption of the IOTA ADNEX model, Overa (MIA2G), RMI I (at thresholds other than 200 or 250), ROMA or IOTA Simple Rules in secondary care in the NHS to help decide whether to refer people with suspected ovarian cancer to a specialist multidisciplinary team (MDT).

Royal College of Obstetricians & Gynaecologists (RCOG) (2011) Management of suspected ovarian masses in premenopausal women (Green-Top Guideline, GTG 62):

5.2: There are simple ultrasound rules derived from the IOTA Group. The use of specific ultrasound morphological findings without CA-125 has been shown to have high sensitivity, specificity and likelihood ratios.

A new edition of guideline currently in development.

RCOG (2016) Management of ovarian cysts in postmenopausal women (GTG34):

4.4.1:

- On transvaginal scanning, the morphological description and subjective assessment of the ultrasound features should be clearly documented to allow calculation of the risk of malignancy.
- Transvaginal ultrasound scans should be performed using multifrequency probes by trained clinicians with expertise in gynaecological imaging.

Published quality statements

NICE's quality standard on ovarian cancer (QS18):

Statement 1: Women aged 50 years or over reporting one or more symptoms occurring persistently or frequently that suggest ovarian cancer are offered a CA125 test (2012).

Statement 2: Women with raised CA125 have an ultrasound of their abdomen and pelvis within 2 weeks of receiving the CA125 test results (2012).

Statement 4: Women with a risk of malignancy index (RMI I) score of 250 or greater are referred to a specialist gynaecological cancer multidisciplinary team (2012).

Statement 5: Women who are offered staging for ovarian cancer, following ultrasound, are offered CT of the abdomen and pelvis as the initial staging investigation (2012).

Statement 6: Women who have CT for staging of ovarian cancer have the results reported by a radiologist who is a core member of the specialist gynaecological cancer multidisciplinary team (2012).

Statement 7: Women with an indeterminate adnexal mass on ultrasound are offered MRI for further characterisation (2012).

Current UK practice

Optimising pathways

NHSE's (2023) Implementing a timed ovarian cancer diagnostic pathway highlights that:

- In 2018, patients with ovarian cancer had some of the longest intervals between referral and commencement of treatment among all cancers in England.
- This varied by cancer alliance with a range of 59 to 88 median days.

Key aims of Getting it right first time (GIRFT, 2020) Radiology's recommendations are to support increasing demand for radiology while delivering a more patient-focused service, including faster access. Recommendations include:

- Using community diagnostic centres.
- Reporting to be carried out expeditiously, and at a point it has maximum impact on patient.
- Reducing the number of appointments.

NHS Cancer Waiting Times 2023/24, September - final (28-day faster diagnosis - by route and suspected cancer or breast symptomatic - provider data) show that 56% of diagnoses made on a gynaecological cancer pathway met the Faster Diagnosis Standard. NHSE's priorities and operational planning guidance for 2023/24 stipulates that 75% of people referred on a suspected cancer pathway are diagnosed or have cancer ruled out within 28 days. In comparison, suspected lower gastrointestinal cancer (screening and 2-week wait) had the lowest achievement, 52% and 53% respectively. 88% on the urgent suspected cancer pathway for breast cancer had their cancer diagnosed within 28 days.

Initial diagnostic tests

Cranfield BM et al (2023) investigated how often common blood tests are used to support the diagnostic process in patients with cancer. The study used English National Cancer Diagnosis Audit data for 39,752 patients aged 15 and over in whom cancer was diagnosed in 2018. Common and rarer cancers were included, including 874 cases of ovarian cancer. Key findings include:

- The 2 cancers for which blood tests were frequently used were:
  - Ovarian cancer: CA125 was used in 47% (408/874).
  - Prostate cancer: PSA, in 86% (6,420/7,499).
- Overall, blood tests were used less to be used in the following groups: women, people from Black and minority ethnic backgrounds, and younger people. The study highlights that 49% of patients were aged 70 and over and 87% were from a White ethnic background.
- The study did not identify a clear pattern according to deprivation.

The GIRFT (2021) Pathology report identified CA125 tests as a candidate for reducing unwarranted variation among networks (and ultimately, nationally) to support an overarching Clean Framework proposed in the report as way to deliver the "right test, at the right time, with the right answer". Proposed improvements included setting a timescale for delivery of results with interpretation.

The statistical commentary for NHSE's Diagnostic Imaging Dataset data from 2023/24 (October 2022 to September 2023) provides an overall picture of imaging activity. It can be used to assess use of diagnostic imaging that could contribute to early diagnosis of cancer and in particular, GP direct access to this imaging. However, it is not possible to distinguish between use of these tests for other clinical purposes. Key findings include:

- In September 2023, 0.82 million ultrasounds were performed, 0.57 million CT scans and 0.33 million MRIs.
- GPs requested around 26% of all tests that may have been used to diagnose or discount cancer under direct access arrangements.
- The test with the highest proportion of GP referrals was ultrasounds that may have been used to diagnose ovarian cancer; 49% of referrals were requested by GPs.
- The median time to performing abdomen or pelvis (or both) ultrasound ranged between 28 to 35 days for GP direct access requests, which was longer than median overall time (ranged between 19 to 22 days).
- Consistently, 93% of ultrasounds were reported on the same day (ranging between 92% to 94%).
- There was little difference in the time taken for a test report to be issued for a GP direct access ultrasound compared to that for all routes.

Pathfinder 2022 surveys highlight that:

- 26% had 3 or more visits to their GP before being referred for a test.
- 16% waited more than 3 months but less than 6 months for a diagnosis after their first GP appointment.
- 37% reported waiting 8 or more days for a CA125 test.
- 55% reported they waited 8 or more days for an ultrasound, with 11% reporting waiting 32 days or more.
- 15% of GPs were unaware of NICE's recommendations on referral for ovarian cancer for a CA125 blood test and an ultrasound.
- 99% of GPs reported they could request a CA125 test in 2022, an improvement compared to 2009 and 96% reported they could request non-obstetric ultrasound.
- 40% of GPs reported it takes 15 days or more to receive results; of these 8% waited 32 days or more.

Target Ovarian Cancer's 2022 Pathfinder report for Scotland, where stakeholders highlighted that simultaneous CA125 and ultrasound is offered:

- 38% reported they waited 8 or more days for a CA125 test.
- 46% reported they waited 8 days or more to have an ultrasound.
- 59% of GPs reported waiting 15 days or more for results; of these 9% waited 32 days or more.

In relation to health inequalities issues, Ovarian Cancer Action's (no date) Equality spotlight report: age (IMPROVE policy report) [online]) highlighted that older women were less likely to be referred for tests such as ultrasound in primary care. The median time for women aged 75 to 79 to be referred after reporting any symptom of ovarian cancer was 20 weeks, twice the overall average time (10 weeks).

Imaging standards

RCR and the College of Radiographers (COR) (2017)'s Quality standards for imaging (QSI), which is cited by in GIRFT (2020) Radiology. The QSI is described as a foundation for making many of the recommended improvements. MR-808 in the QSI states that pathway and condition-specific protocols specific to the MRI service should be used and this is reiterated in GIRFT (2020) Radiology, which recommends that services should use standardised imaging protocols.

RCR and COR (2017)'s QSI already recommends standards which include inspection of equipment (US-801), pathway-specific and condition-specific (including cancer) protocols for each modality and for interventional radiology (CT-804; MR-808, US-803), image quality (MR-804) and staff training (CT-801, US-802).

Drainage of ascites

Stakeholders commented on uncertainty around which healthcare professional role should be responsible for drainage of malignant ascites (an abnormal accumulation of fluid in the abdominal cavity).

Selected recommendations

No recommendations presented.

NHSE's (2023) Implementing a timed ovarian cancer diagnostic pathway recommends that ascites should be drained where technically possible during biopsy, and within 7 days of the request. This pathway model states that biopsy should be carried out in a local diagnostic centre but does not state who is responsible for the drainage of ascites.

UK current practice

No published studies on current practice were highlighted for this suggested area for quality improvement; this area is based on stakeholder's knowledge and experience.

Resource impact

During development of CG122 there was not expected to be a significant resource impact as a result of implementing these recommendations.

Issues for consideration

For discussion:

- What is the priority for improvement?
    - Has evidence around use of CA125 testing, diagnostic imaging (and related calculation of risk scores) changed, as suggested by stakeholder comments?
    - Current practice does not strongly support use of parallel CA125 and ultrasound. Conflicting current practice data on reporting times for ultrasound requested by GPs.
    - Different systems were suggested for ultrasound reporting. How would this be approached if a statement on ultrasound is progressed?
    - There are existing standards for imaging and turnaround times for reporting. Is a statement needed?
    - No accredited / published recommendations on draining ascites identified.
    - No recommendations on treatment pathways for rarer tumours.
- What is the key action that will lead to improvement?
- Can we develop a specific, measurable statement?

For decision:

- Should this area be prioritised for inclusion in the quality standard?

4.2 Safety netting and referral onto non-specific symptoms pathways

Stakeholders highlighted a range of strategies and benefits around safety netting. It was noted that symptoms of ovarian cancer overlap with symptoms that are not linked to a single cancer site and overlap with more common conditions. They noted the existing quality statement on advice (statement 3) but suggested it should clarify when to reinvestigate. They proposed the following strategies after a normal (35 IU/ml) CA125 result:

- repeat the test; within 6 months was also proposed as a timeframe.
- identify women who had a recent CA125 test and clinically review those with persisting symptoms.

Stakeholders also that the existing statement should be updated to highlight that some of the symptoms listed are associated with a higher risk of cancer and should therefore prompt a referral onto a non-symptom specific suspected cancer pathway to be referred. They also noted additional criteria (GP gut instinct and a range of pre-referral tests) outlined in Annex 1 of NHSE's (2022) Faster Diagnosis Standard Framework.

Selected recommendations

NICE's guideline on ovarian cancer: recognition and initial management (CG122):

1.1.1.4 Advise any woman who is not suspected of having ovarian cancer to return to her GP if her symptoms become more frequent and/or persistent.

1.1.2.4 For any woman who has normal serum CA125 (less than 35 IU/ml), or CA125 of 35 IU/ml or greater but a normal ultrasound:

- assess her carefully for other clinical causes of her symptoms and investigate if appropriate
- if no other clinical cause is apparent, advise her to return to her GP if her symptoms become more frequent and/or persistent.

NICE's (2015) guideline on suspected cancer: recognition and referral (NG12):

1.13.2 For people with unexplained weight loss, which is a symptom of several cancers including colorectal, gastro-oesophageal, lung, prostate, pancreatic and urological cancer:

- carry out an assessment for additional symptoms, signs or findings that may help to clarify which cancer is most likely **and**
- offer urgent investigation or a suspected cancer pathway referral.

1.13.3 For people with unexplained appetite loss, which is a symptom of several cancers including lung, oesophageal, stomach, colorectal, pancreatic,

bladder and renal cancer:

- carry out an assessment for additional symptoms, signs or findings that may help to clarify which cancer is most likely **and**
- offer urgent investigation or a suspected cancer pathway referral.

SIGN's guideline on management of epithelial ovarian cancer (SIGN135):

4.1.2 If symptoms persist or worsen despite a normal CA125 blood serum level and a negative ultrasound scan, refer to secondary care.

Published quality statements

NICE's quality standard on ovarian cancer (QS18):

Statement 3: Women with normal CA125, or raised CA125 but normal ultrasound, with no confirmed diagnosis but continuing symptoms, are reassessed by their GP within 1 month (2012).

Current UK practice

The GIRFT (2021) Pathology report highlighted variation between laboratories, where the same sample returns different readings dependent on the equipment used. This variability means that a patient would be referred if the CA125 level met the threshold when measured in 1 lab but the same sample when measured in a different lab may return a value below 35 UI/ml. This means the patient would not be referred on the basis of a reading below the threshold.

Pathfinder 2022 highlights that of the GPs surveyed 69% of GPs thought that referring all patients in whom there is a suspicion of cancer to a diagnostic cancer clinic would possibly or definitely improve diagnosis of ovarian cancer.

Findings also noted that GPs:

- found it difficult to know when to re-test for a normal or "nominally" elevated CA125.
- were unsure of how to manage postmenopausal women who have symptoms but have a normal or only nominally elevated CA125.

Resource impact

During development of CG122 these recommendations were not expected to have a significant resource impact. During development of NG12 a local template was produced for organisations to assess the resource impact locally.

Issues for consideration

For discussion:

- What is the priority for improvement?
    - Referral onto a non-specific symptoms pathway is covered by the updated draft quality standard on suspected cancer.
    - Is safety netting a quality improvement area?
    - If so, where in the pathway should this take place? Does the existing statement need to be updated?
- What is the key action that will lead to improvement?
- Can we develop a specific, measurable statement?

For decision:

- Should this area be prioritised for inclusion in the quality standard?

4.3 Identifying and managing familial and genetic risk

Genetic and tumour testing

Stakeholders felt that testing people who may carry and pass on (to their children) a pathogenetic mutation associated with ovarian cancer by:

- Implementing the guideline to support referral from primary care to genetics clinics.
- Stakeholders additionally noted populations identified in the QS topic engagement EHIA to be at risk of ovarian cancer due to a founder genetic mutation.

Stakeholders suggested testing people who were currently having investigations for suspected ovarian cancer by:

- Formally assessing family history, to inform the diagnostic process and enable inherited syndromes to be identified.
- Testing for susceptibility genes for ovarian cancer as these may not be suggested by personal history.

Stakeholders suggested testing in people diagnosed with ovarian cancer, through:

- Assessment of eligibility for all testing for which they are eligible.
- Germline testing for (1) BRCA1 and BRCA2 mutations and (2) somatic testing for HRD to promote equity of access. Stakeholders also commented that:
  - this testing should be done at the time of diagnosis or its confirmation.
  - this testing should be delivered though mainstream gynaecology care.
  - timely access to investigations and results is important.
- Access to mismatch repair immunochemistry (testing for Lynch syndrome) and testing for rarer syndromes and tumour testing for women under 25.
- Whole genome sequencing, with stakeholders commenting on its importance for cases of advanced ovarian cancer but concerns were raised about its quality.

Stakeholders remarked on an analysis of variation in uptake of genetic testing across ethnic groups.

The importance of a national data set to collect information specifically for ovarian cancer genetic testing was highlighted in stakeholder responses.

Selected recommendations

NICE's guideline on ovarian cancer: identifying and managing familial and genetic risk (NG241):

1.1.1 Commissioners and service providers should ensure that there are referral pathways to genetics services and gynaecology oncology multidisciplinary services for people at risk of having a pathogenic variant associated with ovarian cancer. Such pathways can be facilitated by providing, for example:

- clear referral criteria

- an online referral form (to be completed by the referring clinician
- a family history questionnaire (to be completed by the person) that accompanies the referral form
- information and support.

1.1.2 Commissioners and service providers should raise awareness of which groups of people may be at risk of having a pathogenic variant associated with ovarian cancer.

1.1.3 Commissioners and service providers should ensure that there is training and information available for healthcare professionals on equality and inclusiveness issues that could improve access to services, for example, for people who:

- are from under-represented or underserved communities who may need more support to access services (for example, people who are physically disabled, people with neurodevelopmental conditions or a learning disability, people from Black, Asian and ethnic minority backgrounds, and people who are LGBTQ+)
- may not come forward for testing because they do not realise that they may be at risk of having a pathogenic variant associated with ovarian cancer (for example, men, trans women and non-binary people born with male reproductive organs).

1.1.4 Primary care should be responsible for:

- providing information and support
- referral to genetics services and other specialist services

1.2.1 (extract) Healthcare professionals in all settings (primary care, genetics services and specialist multidisciplinary services) should provide ongoing information and support in line with:

- table 1 on information and support about familial ovarian cancer in all settings.

Table 1 (extract) Information and support about familial ovarian cancer in all settings:

- Information about the risk of ovarian cancer from a person's family history
- Information about the risk of ovarian cancer for people from Ashkenazi Jewish, Sephardi Jewish and Greenlander backgrounds.
- Information for men, trans women and non-binary people born with male reproductive organs who may have a genetic risk of having a pathogenic variant associated with ovarian cancer and other cancers.
- The message that if the person's family history alters (for example, if someone in their family develops ovarian cancer), their risk may alter.
- Advice to return to discuss any implications if there is a change in family history or symptoms develop.

1.2.5 Raise awareness that men, trans women and non-binary people born with male reproductive organs can have a genetic risk of having a pathogenic variant associated with ovarian cancer and other cancers.

1.3.1 Healthcare professionals in primary care and secondary care should refer people for genetic counselling and genetic testing if any of the following apply:

- they have a first-degree relative (definition: mother, father, daughter, son, sister or brother) with a diagnosis of ovarian cancer
- they have a maternal or paternal second-degree relative (definition: grandparent, grandchild, aunt, uncle, niece, nephew, half-sister or half-brother) with a diagnosis of ovarian cancer (this includes people with an unaffected intervening blood relative)
- they meet the criteria for genetic testing as set out in the section on criteria for genetic counselling and genetic testing
- they are from an at-risk population
- they have been identified through cascade testing
- they have a diagnosis of ovarian cancer as outlined in recommendation 1.4.6 and have not already had mainstream genetic testing.

1.4.5 (extract) … people from the following populations (with at least one grandparent from the respective population), have a higher risk of having a founder pathogenic variant associated with familial ovarian cancer, so should be offered referral for genetic counselling and genetic testing for this variant, even if the person has no family or personal history of cancer:

- Ashkenazi Jewish
- Sephardi Jewish
- Greenlander.

Also see the NHS Jewish BRCA Testing Programme, which offers BRCA testing to people with Jewish ancestry.

1.4.6 Offer pre-test counselling and germline testing to anyone diagnosed with:

- invasive epithelial ovarian cancer
- ovarian Sertoli–Leydig cell tumour
- small cell carcinoma of the ovary hypercalcaemic type
- ovarian sex cord tumour with annular tubules
- embryonal rhabdomyosarcoma of the ovary
- ovarian gynandroblastoma.

1.5.1 Select a gene panel from the UK national genomic test directory (see the sections on assessing the risk of having a pathogenic variant and criteria for genetic counselling and genetic testing) to test for pathogenic variants.

1.5.2 Decide which gene panel from the UK national genomic test directory to use in relation to each person's family or personal history (for example, ovarian cancer alone, breast and ovarian cancer, or Lynch syndrome).

SIGN's guideline on management of epithelial ovarian cancer (SIGN135)

3.2 (extract) Identifying women at high risk of developing ovarian cancer:

- All women with non-mucinous ovarian or fallopian tube cancer should be offered BRCA1 and BRCA2 mutation testing.

RCOG's guideline on management of ovarian cysts in postmenopausal women (GTG 34):

4.2: A thorough medical history should be taken from the woman, with specific attention to risk factors and symptoms suggestive of ovarian malignancy, and a family history of ovarian, bowel or breast cancer.

NHS England (8 January 2024) National Genomic Test Directory (non-accredited).

Rare and inherited disease which are relevant to ovarian cancer:

- R207: inherited ovarian (without breast cancer)
- R208: inherited ovarian cancer and breast cancer
- R210: inherited MMR deficiency (Lynch syndrome).
- R212: Peutz Jeghers Syndrome – includes testing for sex cord tumours with annual tubules - testing for STK11 genetic variant (not covered by CG122).
- R364: DICER-1-related cancer predisposition – includes testing for Ovarian Sertoli Leydig tumour (not covered by CG122).

Testing of ovarian cancer tumours is detailed in the national genomic test directory for cancer. This includes sex cord stromal tumours.

Current UK practice

At-risk populations

No published current UK practice data was highlighted on take-up of pilot schemes for testing at-risk groups such as the NHS Jewish BRCA testing scheme or referral practices in primary care to genetics services. This area is based on stakeholder's knowledge and experience

Assessment of family history

Pathfinder 2022 noted that of 548 GPs, only 61% reported being aware that family history is relevant on the mother's and the father's side (BRCA1 and BRCA2 gene mutations being passed on).

Take-up of BRCA and HRD testing

Pathfinder 2022 highlighted that of women diagnosed with ovarian cancer during or after 2016 (surveyed in 2022) who stated they would be eligible for testing:

- 86% had BRCA germline testing
- 34% had BRCA somatic testing

- 18% had HRD testing (testing made available across the UK from December 2021).

Demonstration of Improvement for Molecular Ovarian Cancer Testing (DEMO) forms part of a programme of research work to tackle health inequalities for women with ovarian cancer - IMPROVE UK. The project focuses on improving uptake and success rates of testing, especially in people from ethnic minority backgrounds, in 2 contrasting UK regions, Birmingham and Cambridge. A service evaluation of mainstreamed germline testing at the Pan-Birmingham Gynaecological Cancer Centre and Sandwell & West Birmingham Trust conducted 2016 to 2021 highlighted that:

- 51% of patients were tested in 2016; this improved over time to 74% in 2021.
- The implementation rate of germline testing varied across the hospitals in the network; there was a significant difference between the most active and least active centres (84% versus 22%).

The evaluation also noted a trend towards a lower test rate in patients from a Black ethnic background for germline testing. 6.5% (2) of patients from an unspecified ethnic minority background declined genetic referral when a pathological variant was identified. It was also noted that patients from a non-White ethnic background were slightly younger than average (61 years versus 66 years across the whole cohort) and from an area associated with greater deprivation (50% versus 20%).

Whole genome sequencing

The same report highlighted findings from integrating whole genome sequencing of (somatic and germline) performed by the NHS Genomics Medicines Sequencing centre into standard of care following a 3-month run in period of banking fresh-frozen samples. This was performed on 19 patients. The median time from consent to clinical reporting was 48 days.

Familial ovarian cancer MDT

Stakeholders suggested that the team need to be formally established rather than relying on informal arrangements.

Selected recommendations

NICE's guideline on ovarian cancer: identifying and managing familial and genetic risk (NG241):

1.1.7 The familial ovarian cancer multidisciplinary team should be responsible for:

- clinical care pathways and management protocols
- the lifelong care of people at risk of familial ovarian cancer (those with a pathogenic variant or those above a risk threshold)
- providing information and support

- assessing the risk of developing ovarian cancer
- discussing potential management options (for example risk-reducing surgery)
- carrying out surveillance and reviews
- liaising with other services and healthcare professionals (including primary care and specialist services)
- contributing to local and network audits
- facilitating access to clinical trials.

1.1.8 The familial ovarian cancer multidisciplinary team should have a designated lead clinician, and include healthcare professionals with expertise in areas including:

- clinical genetics
- gynaecology
- gynaecological oncology.

1.1.9 The familial ovarian cancer multidisciplinary team should have established relationships with, and agreed referral pathways to, other specialist services such as:

- psychological services
- menopause services
- fertility services
- breast cancer risk management services
- ovarian cancer services
- colorectal cancer services.

Current UK practice

The rationale and impact section of the NICE guideline on ovarian cancer: identifying and managing genetic risk states: not all trusts have dedicated familial ovarian cancer multidisciplinary teams, and there is variation in practice. The committee noted that similar teams already exist for breast cancer and have improved outcomes.

Surveillance

Stakeholders felt that implementing a recall and monitoring system for people who choose to delay risk-reducing surgery and have surveillance instead is a quality improvement area.

Selected recommendations

NICE's guideline on ovarian cancer: identifying and managing familial and genetic risk (NG241):

1.8.18 If a person is at risk of developing ovarian cancer and chooses to delay or not have having risk-reducing surgery, discuss their reasons and explain that:

- they have an increased risk of developing ovarian cancer and that the only way to reduce their risk is to have risk-reducing surgery
- delaying risk-reducing surgery should only be seen as a short-term option
- regular surveillance does not reduce their risk of developing ovarian cancer
- although regular surveillance means that ovarian cancer may be detected earlier, they should not view surveillance as an alternative to risk-reducing surgery (because there is little evidence on whether this leads to improved outcomes and saves lives)
- surveillance will involve them having a blood test every 4 months to check their level of the protein CA125 (cancer antigen 125), with an algorithm to analyse results, and a review at least once a year to discuss the recommendation of having risk-reducing surgery
- there is a possibility of getting a false-positive or false-negative test result.

1.8.20 If carrying out surveillance the familial ovarian cancer multidisciplinary team should:

- carry out serial 4-monthly CA125 longitudinal testing using an algorithm with demonstrated accuracy (for example, the Risk of Ovarian Cancer Algorithm [ROCA Test])
- coordinate, audit and interpret CA125 testing using a call and recall system
- have a review appointment with the person at least once a year to discuss the recommendation of having risk-reducing surgery.

Current UK practice

The rationale and impact section of the NICE guideline on ovarian cancer: identifying and managing genetic risk notes that supporting infrastructure needs to be established and that the CA125 ROCA test is not currently available on the NHS. The ROCA test calculates the probability of a woman having epithelial ovarian cancer or fallopian tube cancer using an algorithm which assesses the rate of change of the tumour marker CA125 (CE marked and owned by Abcodia Ltd (Cambridge, UK) to triage women into different risk categories (Philpott S et al, 2023).

Resource impact

Population level testing for Jewish and Greenlander populations was identified by the committee and stakeholders as an area likely to have a significant resource impact and the eligible population is estimated to be around 270,000 in England, although we note that there is an existing programme to test the Jewish populations.

Another area related to genetic testing is people with no previous or existing cancer who have a relative who has had breast or ovarian cancer but that relative is not available for testing (rec 1.4.1) which is expected to have a significant resource impact.

The committee also discussed the resource impact of surveillance, noting that to be implementable it will need to be based on a well-coordinated call/recall system resulting in additional infrastructure costs. It was suggested that this should be centrally or nationally coordinated system to ensure consistent and effective monitoring across the services.

We should be clear that surveillance may not be any better than no surveillance and may in fact be worse and is certainly worse than risk reducing surgery.

Issues for consideration

For discussion:

- What is the priority for improvement?
    - Implementation challenges for recommendations on testing (due to expansion of criteria of testing unaffected individuals in NICE guideline) and for surveillance.
    - Lack of current UK practice for ovarian cancer genetic and tumour testing.
    - Lack of current UK practice on establishing familial MDTs and surveillance.
- What is the key action that will lead to improvement?
- Could we focus on a specific audience or setting?
- Can we develop a specific, measurable statement?

For decision:

- Should this area be prioritised for inclusion in the quality standard?

4.4 Treatment planning and management

Specialist multidisciplinary team

Stakeholders highlighted that treatment planning is a quality improvement area, commenting that lack of an MDT discussion is linked to variation in access to surgery and chemotherapy.

They further noted that the discussion should be carried out within a specialist multidisciplinary team. They also commented that it was important that all people diagnosed with ovarian cancer are seen by an expert in gynae-oncology.

Stakeholders also suggested that treatment planning needs to be improved for people with recurrent ovarian cancer.

Selected recommendations

SIGN's guideline on management of epithelial ovarian cancer (SIGN135):

5.4.2 With regard to selecting who will benefit from neoadjuvant chemotherapy, treatment should be individualised to the patient taking into account resectability, age, histology, performance status and after ruling out the possibility of other primary tumours, and after full discussion at multidisciplinary team meetings.

Current UK practice

The fifth report for OCAFP (2023) notes regional variation in treatment options for advanced ovarian cancer (stages 2 to 4) and in particular, variation in surgical resection rates. The report notes continued "large" geographic variation in the delivery of surgery (either alone or with chemotherapy) based on data for 2016-2018 and 2019, and that rates of surgery have remained high and low in the same cancer alliances; low in South Yorkshire and Bassetlaw, East Midlands, West Midlands and Wessex and high in London, the north east and Surrey & Sussex. Note: direct comparisons are not possible for some regions due to the reconfiguration of some cancer alliances.

A multi-centre observational study was carried out over 6-weeks during May to June in multidisciplinary team meetings at 5 major UK cancer centres in 2022 (Khassan T et al, 2023) for 870 case discussions, including 145 cases of advanced ovarian cancer. The study found:

- all the MDTs observed had representation from gynaecological oncologists (surgeons); surgical input into discussions however varied.
- duration of meetings ranged from 112 to 190 minutes.
- 30 to 90 cases were discussed per meeting, discussion of cases lasted on average between just under 2 minutes to just over 4 minutes.

- some MDTs only discussed a patient once; others tended to do so on multiple occasions.

The authors concluded that some variation in UK practice correlates with different behaviours within MDTs. They also commented that allowing more time for discussion and encouraging participation from all staff groups may increase the proportion of patients having optimal treatment.

Pathfinder 2022 noted that only 45% of 33 UK clinical nurse specialists who responded to an online survey (February to May 2022) reported cases of recurrent cancer always being discussed at multidisciplinary team meetings. There were 33 respondents, which represents around 10% of the gynaecology clinical nurse specialist workforce.

Prerehabilitation

Stakeholders suggested that prerehabilitation before anticancer treatment is a quality improvement area, commenting that it is not offered at all UK cancer treatment centres. They also highlighted that local data collection would be required.

They noted that a consensus statement is due from the British Society of Gynaecological Cancer to formally recommend introducing prerehabilitation into the pathway in February 2024.

Selected recommendations

NICE's guideline on perioperative care in adults (NG180):

1.2.1 Offer an enhanced recovery programme to people having elective major or complex surgery.

1.2.2 Use an enhanced recovery programme that includes preoperative, intraoperative and postoperative components.

Current UK practice

2 studies reported on aspects of prerehabilitation as part of surveys investigating care for patients with gynaecological cancers and frailty.

A multi-disciplinary questionnaire-based survey (Wan et al, 2022) investigated practice and perspectives on provision of care for patients with frailty presenting with gynaecological cancers in the UK and Ireland. The survey was distributed by the Audit and Research in Gynaecological Oncology (ARGO, 2022) collaborative to healthcare professionals who identified as working with patients with gynaecological malignancies. Responses were collected during January - April 2021. 206 health care professionals working at 19 hospital trusts completed the survey. Surgeons accounted for around 25% of respondents. Anaesthetists, pre-operative nurses and cancer specialist nurses each represented around 15% of respondents. Medical,

clinical oncologists, physiotherapists, occupational therapists and dieticians also responded. Key findings include:

- Overall, 37% reported access to prehabilitation services.
- 67% felt that ovarian cancer patients should be prioritised in terms of resources for pre-operative optimisation and that any frailty care bundle should be resourced to provide input from physiotherapists (65%), occupational therapists (45%) and geriatricians (43%).
- Barriers to implementation included a lack time, funding and patient engagement. Short timelines between referral and initiating treatment, and poor communication about frailty in patient records were also noted.

666 trainees working in obstetrics and gynaecology participated in an online survey in 2020 (Owens GL et al, 2020). Respondents were specialty (ST1-7), subspecialty and GP trainees, non-training grade doctors and foundation year doctors. 13% were in non-training grades or academic posts. 93% (531/571) felt that greater support from a specialist service for frail patients would improve preoperative optimisation.

Management (excluding recurrent ovarian cancer)

Stakeholders commented on regional variation among cancer alliances in survival rates, highlighting the importance of reducing variation in access to surgery and chemotherapy.

Women with advanced ovarian cancer were highlighted as an important group because they are more likely to receive neither surgery or chemotherapy. Age was highlighted as a EHIA issue in relation to treatment; concerns around a lack of any treatment and low rates of surgery among women aged 70 and over were reiterated by stakeholders.

Stakeholders also felt that management of stage 1 ovarian cancer is a quality improvement area, also noting that this would be supported by greater awareness of the NICE guideline CG122.

Selected recommendations

NICE's guideline on ovarian cancer: recognition and initial management (CG122):

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

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; and retroperitoneal lymph node assessment (Winter-Roach et al. [2009]).

1.3.1.2 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 disease appears to be confined to the ovaries (that is, who appear to have stage I disease).

1.3.2.1 Do not offer adjuvant chemotherapy to women who have had optimal surgical staging and have low-risk stage I disease (grade 1 or 2, stage Ia or Ib).

1.3.2.2 Offer women with high-risk stage I disease (grade 3 or stage Ic) adjuvant chemotherapy consisting of 6 cycles of carboplatin.

1.3.2.3 Discuss the possible benefits and side effects of adjuvant chemotherapy with women who have had suboptimal surgical staging and appear to have stage I disease.

1.4.1.1 If performing surgery for women with ovarian cancer, whether before chemotherapy or after neoadjuvant chemotherapy, the objective should be complete resection of all macroscopic disease.

Use of paclitaxel in the treatment of ovarian cancer (TA55).

1.1 Paclitaxel in combination with a platinum-based compound or platinum-based therapy alone (cisplatin or carboplatin) are offered as alternatives for first-line chemotherapy (usually following surgery) in the treatment of ovarian cancer.

Bevacizumab in combination with paclitaxel and carboplatin for first-line treatment of advanced ovarian cancer (TA284).

1.1 Bevacizumab in combination with paclitaxel and carboplatin is not recommended for first-line treatment of advanced ovarian cancer.

Also see TAs in selected recommendations section for second-line and subsequent treatment.

Current UK practice

The fifth report (2023) for the OCAFP presents an analysis of treatment delivery covering tumours diagnosed 2015 to 2019. Key findings are summarised from that report unless indicated otherwise, and include:

- 22.2% (n=1,288) across the cohort received no treatment (neither surgery or chemotherapy):
    - 27.6% (n=352) of stage 4 tumours received no treatment, versus 3.3% (35) of stage 1 ovarian cancers.

- The probability of receiving primary surgery with chemotherapy, versus chemotherapy before interval debulking surgery was 49.6% (based on analysis of stage 2 to 4 tumours).
- There was marked geographical variation among cancer alliances, regarding:
  - rates of resection itself (based on analysis of stage 2 to 4 tumours).
  - trend of higher short-term mortality rates (for between 2 to 6 months, following adjustment) in patients diagnosed in an NHS secondary care trust that did not house a specialist gynaecological cancer centre compared to trusts that did.

Stakeholders commented that a range of factors could influence variation in treatment, including extent, surgeries attempted and comorbidities. They also commented on geographical variation in survival outcomes. Analysis for the 2019 data is summarised below:

Treatment

- Primary surgery without chemotherapy was the most frequently delivered treatment for stage 1 tumours (56.9%, n=598) compared to 8.5% (179) for stage 2-3 tumours and 2.7% (34) of stage 4 tumours.
- Chemotherapy without surgery was the most frequently used treatment method delivered for stage 4 disease (33.7%, n=430).
- An increased comorbidity burden at diagnosis was associated with an increased likelihood of not receiving any treatment, increasing from 18.5% (n=897) in women with no comorbidities recorded, to 54.3% (n=120) in women with more than 2. 59.2% of women (n=49) who had no treatment did not have a recorded comorbidity score. The report also suggests that the extent of comorbidities is underreported in the data.
- Serous ovarian carcinomas represent over half the tumours in the cohort, 13.5% of which did not receive any treatment.
- 48.2% (n=670) of cancers without valid staging information, which may include those diagnosed at an advanced stage or where the patient was too unwell for treatment, did not receive any treatment. This had improved since the previous report, which noted that 60.7% of such tumours diagnosed during 2016 to 2018 were not treated.
- Miscellaneous or unspecified tumours and tumours of non-specific site were most often not treated (77.6% and 70.6% respectively) and 41.7% of ‘other malignant epithelial’ tumours were not treated. There had been improvement compared to 2016 to 2018 for miscellaneous or unspecified tumours (89.1%). It was noted these are likely to reflect diagnoses of women too unwell to undergo all diagnostic and staging investigations.

Outcome

- 1-year net survival (tumours diagnosed 2015 to 2019) for the 21 cancer alliances varied between 60.9% and 75.8%. This is an indicator of late presentation. Other

data highlighted that 30.0%, 18.5% and 19.1% of tumours were diagnosed at stages 3, 4 and an unknown stage, respectively, which impacts survival.
- 5-year net survival (tumours diagnosed 2015 to 2019), described as a measure for assessing efficacy of treatment, varied between 27.8% and 47.5% for the 21 cancer alliances.
- The 2021 project summary report for the OCAFP noted the greatest variation for women who died within 2 months of diagnosis; 21.0% of women with stage 4 disease and 30.6% within an unknown stage died within 2 months; women with an unknown stage of disease were 9.5 times more likely to die within 2 months compared to women diagnosed at stages 1 to 3.
- Based on data from 2013 to 2018, women diagnosed via emergency presentation were 4.3 times more likely to die within 2 months than women diagnosed via a suspected cancer pathway (at that time, the 2-week wait); this followed adjustment for confounding factors. The lowest mortality rate was associated with suspected cancer pathway and generally, a higher rate with non-urgent GP referral.

Age

- Women aged over 79 years at diagnosis were the least likely to receive any treatment, with 58.0% (n=618) receiving neither chemotherapy nor surgery. This compared to 22.2% in women aged 70 to 79 and lower rates in younger age groups (ranged between 6.8% to 12.7%).
- Use of chemotherapy without surgery increased with age: 21.9% (n=233) in patients aged over 79 compared to 6.2% (n=10) in patients aged under 30.
- The likelihood of older age cohorts receiving surgery was lower, even after accounting for stage and morphology.
- The third report (2021) noted that 34.8% of patients aged 80 years and over died within 2 months of diagnosis, compared to only 0.7% of women aged 0-29 years.

PARP inhibitors, second-line and subsequent treatment

Stakeholders suggested PARP inhibitors, with or without bevacizumab, for maintenance treatment, noting that ovarian cancer often recurs.

They suggested that use of maintenance treatments may affect 5-year net survival and the rate varies between cancer alliances.

Select recommendations

Recommended for routine use in the NHS:

Olaparib with bevacizumab for maintenance treatment of advanced high-grade epithelial ovarian, fallopian tube or primary peritoneal cancer (TA946):

1.1 Olaparib with bevacizumab is recommended, within its marketing authorisation, for maintenance treatment of high-grade epithelial ovarian, fallopian tube or primary peritoneal cancer in adults whose cancer:

- has completely or partially responded after first-line platinum-based chemotherapy with bevacizumab
- is advanced (International Federation of Gynecology and Obstetrics [FIGO] stages 3 and 4) and
- is homologous recombination deficiency (HRD) positive (defined as having either a BRCA1 or BRCA2 mutation, or genomic instability).

Olaparib for maintenance treatment of relapsed, platinum-sensitive ovarian, fallopian tube or peritoneal cancer after 2 or more courses of platinum-based chemotherapy (TA908):

1.1 Olaparib is recommended as an option for the maintenance treatment of relapsed, platinum-sensitive, high-grade epithelial ovarian, fallopian tube, or primary peritoneal cancer in adults whose cancer has responded to platinum-based chemotherapy, only if:

- they have a BRCA1 or BRCA2 mutation
- they have had 2 or more courses of platinum-based chemotherapy
- the company provides olaparib according to the commercial arrangement.

Niraparib for maintenance treatment of relapsed, platinum-sensitive ovarian, fallopian tube and peritoneal cancer (TA784)

1.1 Niraparib is recommended as an option for treating relapsed, platinum-sensitive high-grade serous epithelial ovarian, fallopian tube or primary peritoneal cancer that has responded to the most recent course of platinum-based chemotherapy in adults. It is recommended only 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, and
- the company provides it according to the commercial arrangement.

Topotecan, pegylated liposomal doxorubicin hydrochloride, paclitaxel, trabectedin and gemcitabine for treating recurrent ovarian cancer (TA389)

1.1 Paclitaxel in combination with platinum or as monotherapy is recommended within its marketing authorisation as an option for treating recurrent ovarian cancer.

1.2 Pegylated liposomal doxorubicin hydrochloride (PLDH) as monotherapy is recommended within its marketing authorisation as an option for treating recurrent ovarian cancer.

1.3 PLDH in combination with platinum is recommended as an option for treating recurrent ovarian cancer.[1][2]

Notes:

1 At the time of publication (April 2016), PLDH (Caelyx) in combination with platinum did not have a UK marketing authorisation for this indication.

2 The use of PLDH (Caelyx) in combination with platinum is outside the terms of the marketing authorisation for Caelyx. Consequently the statutory funding requirement does not apply to this recommendation.

1.4 The following are not recommended within their marketing authorisations for treating the first recurrence of platinum-sensitive ovarian cancer:

- gemcitabine in combination with carboplatin
- trabectedin in combination with PLDH
- topotecan.

The appraisal committee was unable to make recommendations on the use of these technologies for treating platinum-sensitive ovarian cancer beyond the first recurrence.

1.5 Topotecan is not recommended within its marketing authorisation for treating recurrent platinum-resistant or platinum-refractory ovarian cancer.

1.6 People whose treatment with gemcitabine in combination with carboplatin, trabectedin in combination with PLDH, or topotecan is not recommended in this NICE guidance, but was started within the NHS before this guidance was published, should be able to continue treatment until they and their NHS clinician consider it appropriate to stop.

Recommended for use as part of the Cancer Drugs Fund:

Niraparib for maintenance treatment of advanced ovarian, fallopian tube and peritoneal cancer after response to first-line platinum-based chemotherapy (TA673).

Rucaparib for maintenance treatment of relapsed platinum-sensitive ovarian, fallopian tube or peritoneal cancer (TA611).

Olaparib for maintenance treatment of BRCA mutation-positive advanced ovarian, fallopian tube or peritoneal cancer after response to first-line platinum-based chemotherapy (TA598). Update following review expected to publish March 2024.

Not recommended:

Bevacizumab in combination with gemcitabine and carboplatin for treating the first recurrence of platinum-sensitive advanced ovarian cancer (TA285)

Bevacizumab in combination with paclitaxel and carboplatin for first-line treatment of advanced ovarian cancer (TA284)

In development (publication tbc):

Rucaparib for maintenance treatment of advanced ovarian, fallopian tube and peritoneal cancer after response to first-line platinum-based chemotherapy [ID5100].

Current UK practice

No published studies on current practice were highlighted for this suggested area for quality improvement; this area is based on stakeholder's knowledge and experience.

Resource impact

Areas covered by TAs are unlikely to have any resource impact as we expect that the recommendations of TAs are already being followed due to the funding mandate of TA guidance.

Issues for consideration

For discussion:

- What is the priority for improvement?
    - How important is prerehabilitation for this population; will it improve access to surgery and help improve outcomes? What elements are specific to people with ovarian cancer? Note that current practice focused on those with frailty.
    - Lack of current practice data on post-first line treatments.
      If prioritised a statement on PARP inhibitors is dependent on genetic testing. Note that one is dependent on use of a treatment which is not recommended by NICE and that some are not available for routine use in the NHS.
- What is the key action that will lead to improvement?
- Could we focus on a specific audience or setting?
- Can we develop a specific, measurable statement?

For decision:

- Should this area be prioritised for inclusion in the quality standard?

4.5 Information, support and follow-up

Clinical nurse specialist

Stakeholders felt that it was important for a clinical nurse specialist to be provided throughout the diagnostic and treatment journey.

Stakeholders suggested that people with recurrent ovarian cancer received less support than they did during first-line treatment. They highlighted:

- lack of access to a clinical nurse specialist.
- clinical nurse specialist not being present at diagnosis of recurrence.
- lack of written information about recurrent ovarian cancer.

Selected recommendations

NICE's guideline on ovarian cancer: recognition and initial management (CG122):

1.5.1.2 (extract) Ensure that information is available about:

- the stage of the disease, treatment options and prognosis.

SIGN's guideline on management of epithelial ovarian cancer (SIGN135):

2.2 Diagnosis: Throughout their care pathway patients with ovarian cancer should have access to a clinical nurse specialist who should be an integral member of the gynaecological cancer team.

9.1 Checklist for provision of information (diagnosis):

Ensure the patient is aware of the support role of the clinical nurse specialist.

9.1 Checklist for provision of information (follow up):

Mention and discuss the fear of recurrence and advise the patient that recurrent symptoms should be reported.

British Gynaecological Cancer Society (non-accredited 2020) recommendations and guidance on patient- initiated follow-up (PIFU):

Table 3 Low risk (<10%ROR, stage 1A/B fully staged) from end of treatment (surgery ± chemotherapy). Excluding fertility sparing surgery:

- Clinic-based follow-up can be added if declines PIFU for 2 years from end of treatment; Telephone follow-up ± blood test can be offered if declines PIFU for 2 years from end of treatment; PIFU: Offer from end of treatment (after holistic needs assessment at 3 months)

FIGO stages 1C–4:

- Clinic-based follow-up can be added if declines PIFU for 2 years from end of treatment; Telephone follow-up ± blood test can be offered for years 4-5 from end of treatment; PIFU: not suitable.

Published quality statements

NICE's quality standard on patient experience in adult NHS services:

Statement 2: People using adult NHS services understand the roles of healthcare professionals involved in their care and know how to contact them about their ongoing healthcare needs. [2012, updated 2019]

Current UK practice

The interactive 2022 CPES results indicated that

- 93% of people aged 16 and over with ovarian cancer who received cancer-related treatment were given the name of a main contact person within the care team (such as a clinical nurse specialist) who would support them through their treatment.
  - 87% reported that this was a clinical nurse specialist.
  - 5% reported that it was another member of the team.
  - 7% reported they did not have a main contact person.
  - 23 (percentage not stated) did not know or could not remember.
- 84% found it very or fairly easy to contact them. 7% indicated that this was quite or very difficult. 42 (percentage not stated) reported that they had not tried to contact this person.
- The results also highlighted that 94% found the advice the person gave to be helpful or quite helpful. 36 (no percentage) stated they did not need to ask for advice.

The Pathfinder 2022 survey of 33 UK clinical nurse specialists highlights that only 33% reported they are always able to take the time to discuss the signs and symptoms of recurrent ovarian cancer before discharge. The report also highlighted that women with a recurrence of ovarian cancer felt that they had a very different experience of care, compared to that for their first-line treatment. When told their ovarian cancer had returned:

- 37% said they had no clinical nurse specialist present when recurrence was diagnosed.
- 51% were not given written information about recurrent ovarian cancer.
- 19% reported having no access to a clinical nurse specialist since their cancer had returned.

Information and support

Stakeholders suggested that providing information to patients about diagnostic investigations is a priority when referred onto a suspected cancer pathway.

Stakeholders also felt that emotional needs should be discussed at each appointment.

A further suggestion was to improve signposting to psychological support. Stakeholders also noted the importance of services following-up on referrals and informing patients that the referral has been made.

Selected recommendations

NICE's guideline on ovarian cancer: identifying and managing familial and genetic risk (NG241):

Information and support about familial ovarian cancer in all settings

1.2.4 At each appointment:

- ask the person about their emotional health.
- ask about any psychological or emotional issues that could affect decision making, such as anxiety
- provide information and support (see table 1 on information and support about familial ovarian cancer in all settings)
- discuss referral to genetic counselling or psychological services, as appropriate.

Table 1 Information and support about familial ovarian cancer in all settings:

- Information and support about referral to a different service, what the service does and why the person is being referred.
- Information and support about psychological factors such as anxiety, and psychological support services.
- Information about sources of support and information, for example, local and national support groups and networks, patient organisations and specialist services.

1.8.3 When discussing risk-reducing surgery, take into account psychological factors (such as anxiety) that could influence decision making. Discuss psychological support services available and, if needed, refer the person for psychological support before surgery.

NICE's guideline on ovarian cancer: recognition and initial management (CG122):

1.5.1.1 (extract) Offer all women with newly diagnosed ovarian cancer information about their disease, including psychosocial and psychosexual issues, that:

- is available at the time they want it

1.5.1.2 (extract) Ensure that information is available about:

- how to deal with emotions such as sadness, depression, anxiety and a feeling of a lack of control over the outcome of the disease and treatment.

NICE's guideline on suspected cancer: recognition and referral (NG12):

1.14.3 Explain to people who are being referred with suspected cancer that they are being referred to a cancer service. Reassure them, as appropriate, that most people referred will not have a diagnosis of cancer, and discuss alternative diagnoses with them.

1.14.5 The information given to people with suspected cancer and their families and/or carers should cover, among other issues:

- where the person is being referred to
- how long they will have to wait for the appointment
- how to obtain further information about the type of cancer suspected or help before the specialist appointment
- what to expect from the service the person will be attending
- what type of tests may be carried out, and what will happen during diagnostic procedure
- how long it will take to get a diagnosis or test results
- who to contact if they do not receive confirmation of an appointment.
- other sources of support.

1.14.10 When referring a person with suspected cancer to a specialist service, assess their need for continuing support while waiting for their referral appointment. This should include inviting the person to contact their healthcare professional again if they have more concerns or questions before they see a specialist.

SIGN's guideline on management of epithelial ovarian cancer (SIGN135):

9.1 Checklist for provision of information:

Diagnosis:
Ensure the patient is aware of the support role of the clinical nurse specialist.

Follow-up:

- Mention and discuss the fear of recurrence and advise the patient that recurrent symptoms should be reported.
- The following issues should be discussed with the patient:
  - (extract) coping, depression, anxiety and fatigue.

Current UK practice

Regarding provision of information about diagnostic investigations, the 2022 CPES highlights that of the respondents who had tests during the last 12 months that helped to diagnose their cancer (86% of people who completed the survey). Of respondents diagnosed with ovarian cancer:

- 89% reported that they had received all the information they needed before tests were carried out. This was lower than the national average (92%).
- They were least likely to agree they had received all the information they needed: if they had blindness or partial sight (75%), a mental health condition (79%) or a learning disability (80%). It should be noted that response sizes at this level of breakdown were small.

Regarding discussion of emotional needs:

- The 2022 CPES reported that 73% who received treatment for ovarian cancer 'definitely' receive the right amount of overall support with health and wellbeing from hospital staff. 4% reported they did not, and 5 people (no percentage given) stated they did not know or that the question was not applicable.
- The Pathfinder 2022 report highlighted that 60% of respondents with a diagnosis of ovarian cancer reported it had a negative impact on their mental health. 54% reported not being asked about the impact of the treatment on their mental health.

Regarding signposting to sources of psychological support:

- The 2022 CPES reported that 88% received information about support, self-help groups, events or resources for people with cancer from hospital staff; 12% said they did not but would have liked this information. 123 said they didn't need the information and 33 said they didn't know or couldn't remember (no percentages given).
- The Pathfinder 2022 report highlighted that 48% reported they were not signposted to a charity or patient support organisation

Regarding referral for psychological support, the Pathfinder 2022 report highlighted that of those experiencing mental ill health, only 30% reported they were referred. Of those referred, some reported that the right support was not always available.

Follow-up after fertility-preserving surgery

Stakeholders suggested that follow-up for people who have had fertility-preserving surgery is a priority area, although they noted a lack of guidance in this area. Fertility-preserving (or conserving) surgery for ovarian cancer is defined as that preserving ovarian tissue and the uterus (Canlorbe G, Chabbert-Buffet N and Uzan C (2021)) rather than bilateral salpingo-oophorectomy (removal of both ovaries) and hysterectomy (removal of the uterus).

Selected recommendations

SIGN's guideline on management of epithelial ovarian cancer (SIGN135):

5.3.4 In women with stage Ia, grade 1 or grade 2 disease, fertility conserving surgery is an option as long as the contralateral ovary appears normal and there is no evidence of omental or peritoneal disease. Optimal surgical staging should be done and should include biopsies of suspicious looking peritoneal nodules, infracolic omentectomy, and iliac and peri-aortic lymph node sampling.

9.1 Checklist for provision of information (follow up):

- Advise the patient that they will receive a physical examination and be asked about signs and symptoms.
- Advise the patient that they should report any concerns they have following treatment.
- Mention and discuss the fear of recurrence and advise the patient that recurrent symptoms should be reported.

Current UK practice

No published studies on current practice were highlighted for this suggested area for quality improvement; this area is based on stakeholder's knowledge and experience.

Resource impact

The selected NICE recommendations were not expected to have a significant impact on NHS resource use.

Issues for consideration

For discussion:

- Which are should be prioritised?
    - Potential overlap with a draft statement in the updated quality standard on suspected cancer (publication paused) on information and support at the point of an urgent suspected cancer referral.
    - An offer of referral to psychological services is supported by the NICE familial and genetic risk guideline.
    - Lack of recommendations on follow-up for those who had fertility-conserving surgery.
- What is the key action that will lead to improvement?
- Could we focus on a specific audience or setting?
- Can we develop a specific, measurable statement?

For decision:

- Should this area be prioritised for inclusion in the quality standard?

4.6 Additional areas

Summary of suggestions

The improvement areas below were suggested as part of the stakeholder engagement exercise. However, they were felt to be either unsuitable for development as quality statements, outside the remit of this particular quality standard referral or need further discussion by the committee to establish potential for statement development.

There will be an opportunity for the committee to discuss these areas at the end of the Advisory Committee meeting.

Table 2 Summary of information available for additional areas

Suggested area for improvement	Within remit of NICE QS	In scope	Guideline recs	Relevant existing QS
Improving access to clinical trials	No	Yes	Yes	No
Maximal cytoreductive surgery	No	Yes	No	No
New guidance / updated recommendations	No	Yes	No	No
Training & development	No	Yes	No	No

Improving access to clinical trials

This suggestion has not been progressed. Increasing the opportunities for patients and the public to participate in research is within the remit of the National Institute for Health Research.

Maximal cytoreductive surgery

Stakeholders felt that a statement on maximal cytoreductive surgery for advanced ovarian cancer should be included the quality standard, highlighting NICE's (2023) interventional procedures guidance on maximal cytoreductive surgery for advanced ovarian cancer (IPG757). Interventional procedures guidance recommendations differ from guideline recommendations as they only review what interventions are safe and effective, rather than their clinical and cost-effectiveness, in line with guideline recommendations. As such they are not used as an evidence source for quality statements.

This area has not been progressed because although there enough evidence for doctors to consider this procedure as an option, doctors do not have to offer this procedure to patients.

New guidance / updated recommendations

Stakeholders suggested that new guidance is needed in a range of areas:

- Guidance specific to recurrent ovarian cancer.
- More detailed guidance on follow-up after fertility-preserving surgery.
- Age-stratified thresholds for CA125 in primary care for people with symptoms suggestive of ovarian cancer.
- Direct referral onto urgent ovarian cancer pathway for those with elevated CA125 who reach 3% cancer probability threshold.
- For people with a CA125 of 35 IU/ml or greater and in whom ovarian cancer has been ruled out, consider referral onto non-specific symptoms pathway.

These areas have not been progressed because additional guidance and the updating of recommendations in NICE guidance are outside of the remit of quality standards. Suggestions for additional and updated guidance will be passed on to the NICE centre for guidelines.

Training and development

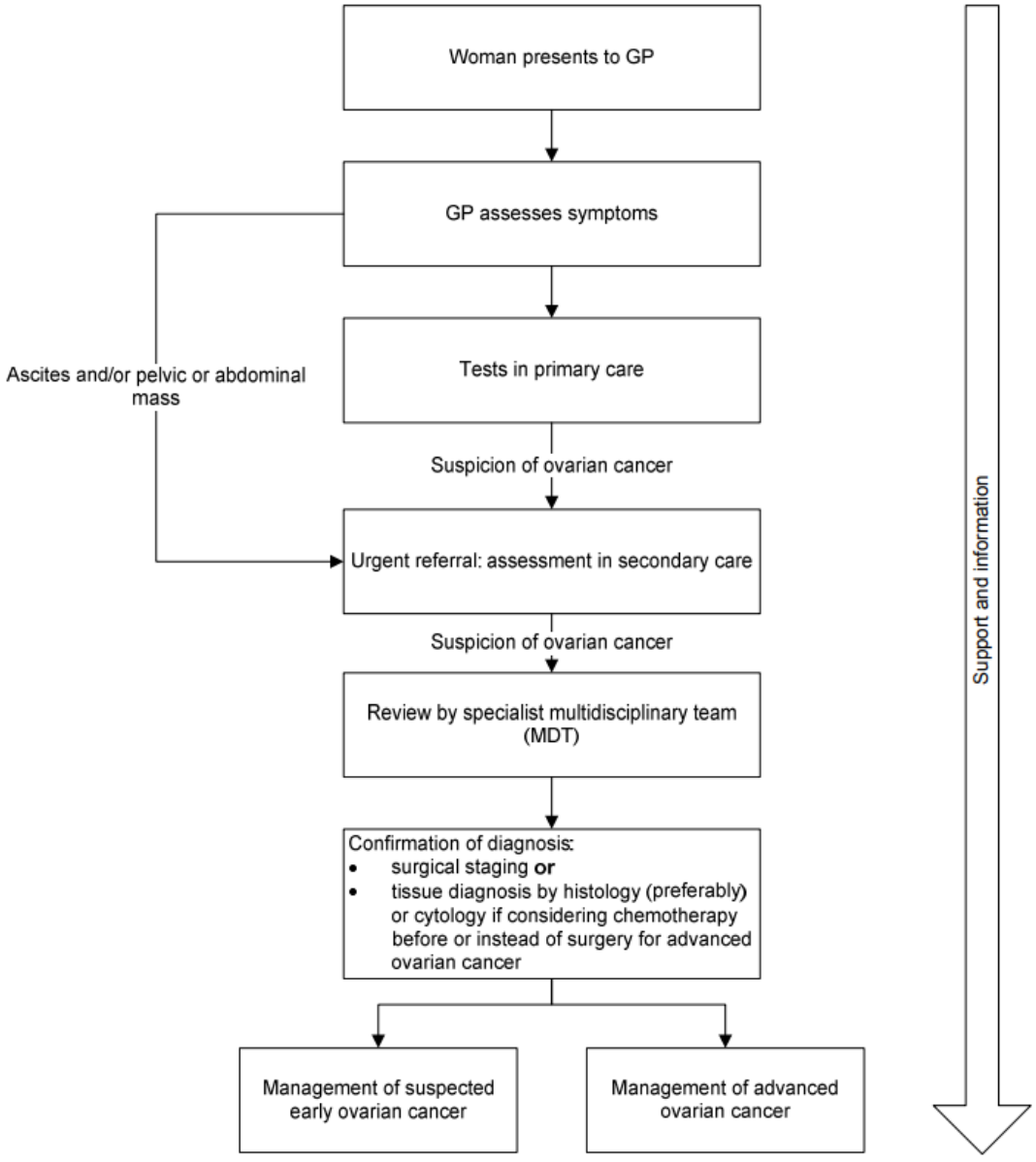
Stakeholders felt that healthcare professional awareness and knowledge is important, highlighting the need to raise awareness of:

- guideline ovarian cancer: identifying and managing familial and genetic risk, in primary care.
- lack of knowledge of genomic testing for women under 25 with a solid tumour, and the potential for rarer inherited syndromes, such a STK11 or DICER1 was noted.

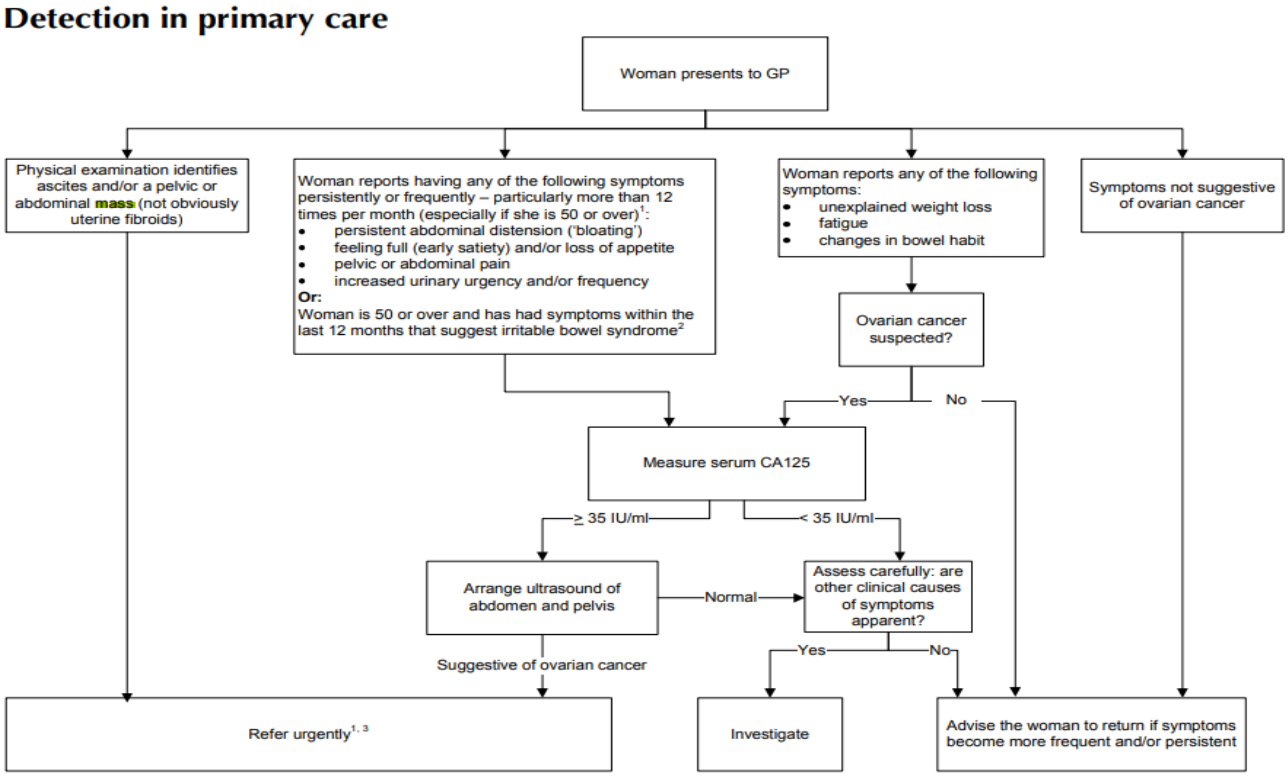
This suggestion has not been progressed. Quality statements focus on actions that demonstrate high quality care or support, not the training that enables the actions to take place. The committee should consider which parts of care and support would be improved by increased training. Training may be referred to in the audience descriptors.

Appendix 1: Additional information

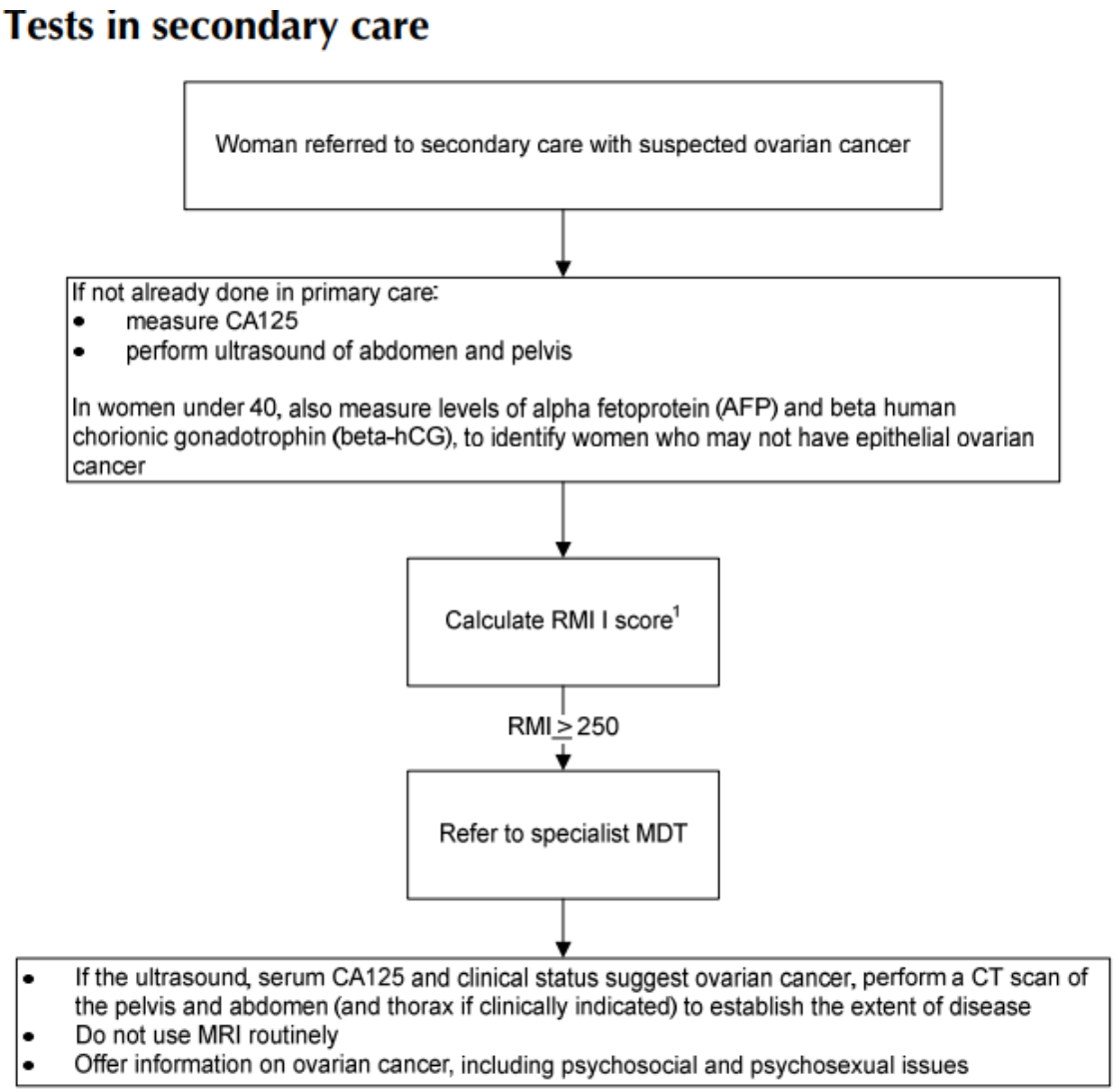
Algorithm 1: Overview of care pathway for NICE's guideline on recognition and initial management of ovarian cancer



Algorithm 2: Detection in primary care

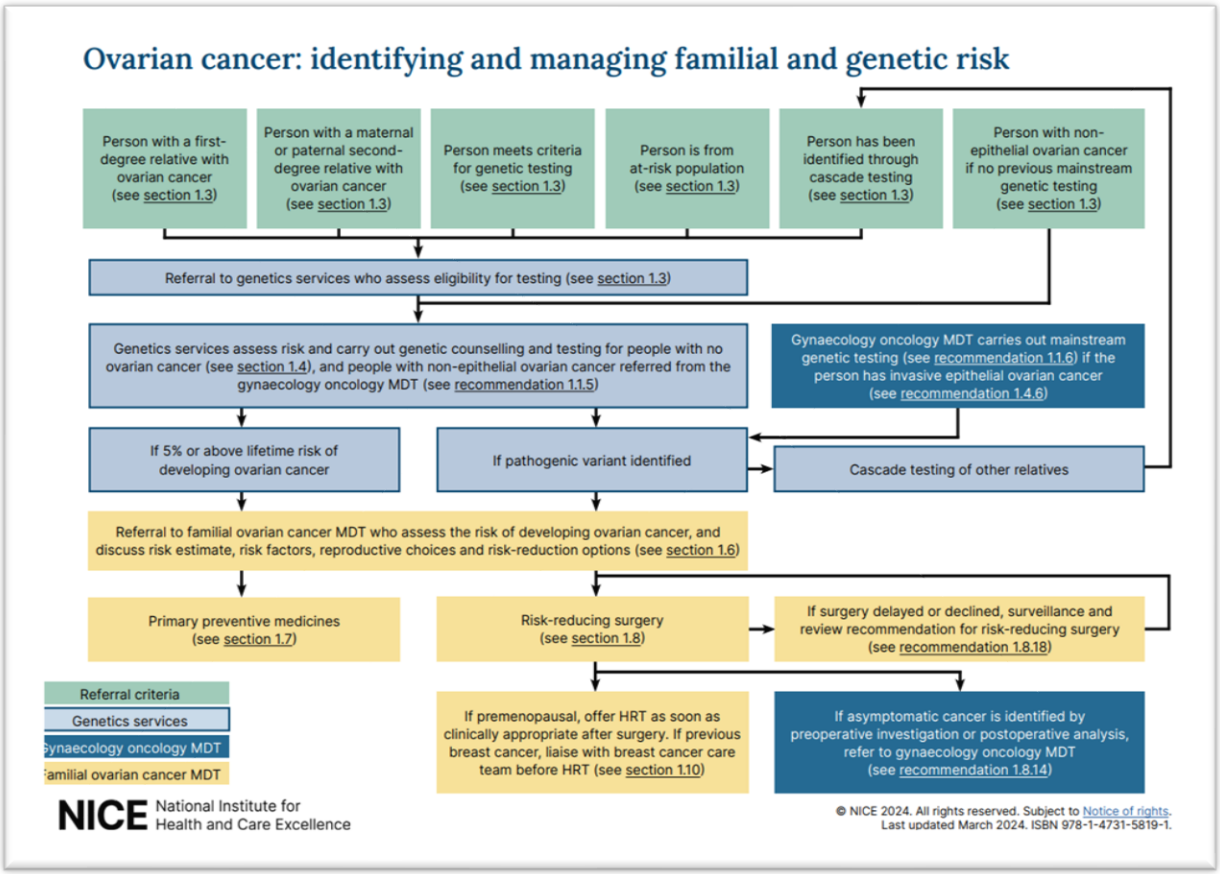


Algorithm 3: Tests in secondary care



Visual summary: identification and management of familial and genetic risk

The following is the visual summary of the care pathway in ovarian cancer: identifying and managing familial and genetic risk



Appendix 2: Suggestions from registered stakeholders

ID	Stakeholder	Suggested key area for quality improvement	Why is this a key area for quality improvement?	Data sources	Supporting information
1	NCD - National Cancer Programme	**General comment** More than 7,000 women in the UK are diagnosed with ovarian cancer every year,1 and it is the 6th most common cause of cancer death among women. Diagnosing individuals at an earlier stage should translate into an increased range of treatment options, improved long-term survival and improved quality of life. 1.2 The NHS Cancer Programme is working to deliver the NHS Long Term Plan's ambition to diagnose 75% of cancers at stage 1 and 2 by 2028. If we are to achieve this ambition, we must make progress in diagnosing more high volume, late stage cancers more quickly, of which ovarian cancer is one. When diagnosed at its earliest stage, more than 9 in 10 (93%) people with ovarian cancer will survive their disease for five years or more, compared with just over 1 in 10 (13%) people when the disease is diagnosed at the latest stage.2			1 NDRS (2020), Cancer incidence and mortality, CancerData. Available from: https://www.cancerdata.nhs.uk/incidence_and_mortality 2 Cancer Research UK, Early Diagnosis Data Hub. Available from: https://crukcancerintelligence.shinyapps.io/EarlyDiagnosis/ 3 National Cancer Registration and Analysis Service (2023), Rapid Cancer Registration Dataset. Available from: http://www.ncin.org.uk/collecting_and_using_data/rcrd 4 Rosenthal AN et al. (2017). Evidence of stage shift in women diagnosed with ovarian cancer during phase II of the United Kingdom Familial Ovarian Cancer Screening Study. J Clin Oncol. 2017;35:1411–20.

ID	Stakeholder	Suggested key area for quality improvement	Why is this a key area for quality improvement?	Data sources	Supporting information
		1.3 However, around 60% of all ovarian cancers are diagnosed at a late stage (stage 3 or 4).3 Ovarian cancer can be challenging to diagnose early due to non-specific symptoms that can be attributed to more common conditions and due to the prevalence of an aggressive subtype, which accounts for most late-stage diagnoses and mortality. 1.4 For some ovarian cancers, early diagnosis may not be as directly correlated to improved survival. Previous screening trials have demonstrated a stage shift in ovarian cancer diagnoses without improvement in survival outcomes.4,5 This indicates that the cancers shifted to an earlier stage had an intrinsically poor prognosis, which was not altered by earlier detection nor the available treatments for early stage disease. However, this highlights the importance of work to optimise treatments, and earlier diagnosis remains important for the individual patient. 1.5 More than a third (36%) of patients with ovarian cancer have more than three primary care			5 Menon U et al (2021), Ovarian cancer population screening and mortality after long-term follow-up in the UK Collaborative Trial of Ovarian Cancer Screening (UKCTOCS): a randomised controlled trial. Lancet. 2021 Jun 5;397(10290):2182-2193. 6 Mendonca SC et al (2016), Pre-referral GP consultations in patients subsequently diagnosed with rarer cancers: a study of patient-reported data. British Journal of General Practice 66, e171–e181. 7 Swann R et al (2018), Diagnosing cancer in primary care: results from the National Cancer Diagnosis Audit Br J Gen Pract. 2018 Jan; 68(666): e63–e72. 8 Arnold M et al (2019), Progress in cancer survival, mortality, and incidence in seven high-income countries 1995–2014 (ICBP SURVMARK-2): a population-

ID	Stakeholder	Suggested key area for quality improvement	Why is this a key area for quality improvement?	Data sources	Supporting information
		consultations before being referred onto an urgent suspected cancer pathway, compared to 23% for all cancers.6 The National Cancer Diagnosis Audit (NCDA) dataset highlighted longer delays for ovarian cancer compared to other patients with cancer, with a median primary care interval of 13 days (all cancers 5 days) and a median diagnostic interval of 55 days (all cancers 40 days).7 1.6 The International Cancer Benchmarking Partnership (ICBP) explored variation in cancer outcomes across six countries. Across the ICBP countries, the UK has lower 5-year survival estimates for ovarian cancer (37%) compared to Norway, Australia and Canada (40-46%). In countries with higher survival, surgeons were more likely to operate before giving any chemotherapy and were more likely to use more extensive/radical procedures.8 1.7 The NHS Cancer Programme has identified a number of priority areas where making improvements has the potential to improve early			based study. Lancet Oncol. 2019; 20:1493–1505. 9 NHS England, Faster Diagnosis Framework and the Faster Diagnostic Standard. Available from: https://www.england.nhs.uk/cancer/faster-diagnosis/#fds 10 NHS England (2023), Faster diagnostic pathways: Implementing a timed gynaecology cancer diagnostic pathway, Guidance for local health and care systems. Available from: https://www.england.nhs.uk/wp-content/uploads/2018/04/B1122-gynaecology-cancer-implementing-a-timed-diagnostic-pathway.pdf

ID	Stakeholder	Suggested key area for quality improvement	Why is this a key area for quality improvement?	Data sources	Supporting information
		diagnosis rates and survival for ovarian cancer. This includes: 3 a) Increased use of CA125 tests, supported by a change in NG12 referral guidance on referral thresholds, including by age. b) Increased GP Direct Access to diagnostic imaging c) Supporting systems to achieve the Faster Diagnosis Standard (FDS),9 including by implementing a timed gynaecology cancer diagnostic pathway10 d) Safety netting and clearer links to Non-Specific Symptoms (NSS) pathways, whose population cohort has a significant overlap with people presenting with ovarian cancer symptoms e) Increased genetic testing for ovarian cancer susceptibility genes f) Addressing variation in ovarian cancer treatment. 1.8 Although outside of the remit of QS18, the NHS Cancer Programme would like to see an update to NG12 and interrelated products to help improve recognition and early detection of ovarian cancer. Annex 1 provides a list of initial of			

ID	Stakeholder	Suggested key area for quality improvement	Why is this a key area for quality improvement?	Data sources	Supporting information
		areas of interest with supporting evidence.			
2	Ovarian Cancer Action	**General comment** Age – We (OCA) did a wider analysis on the evidence available for age inequalities in ovarian cancer which includes more sources than the ovarian cancer audit feasibility pilot – you can see the report here - https://ovarian.org.uk/documents/269/Ovarian_Cancer_Action_Equality_Spotlight_Report_Age.pdf			
3	Society & College of Radiographers	**General comment** Race (e.g. higher risk profile for Ashkenazi Jewish people) Deprivation – socio-economic impact on morbidity Regional Variation of service delivery These are all clearly identified in the Topic Engagement template so no concerns this stage.			
4	British Society of Urogenital Radiology	**Section 4.1** Supporting measures to enable faster diagnosis in line with GIRFT			

ID	Stakeholder	Suggested key area for quality improvement	Why is this a key area for quality improvement?	Data sources	Supporting information
		principles: Wider access to US imaging and skilled sonographer/radiologist workforce			
5	British Society of Urogenital Radiology	**Section 4.1** Supporting measures to enable faster diagnosis in line with GIRFT principles: US reports to use a common language and minimum reporting standard - we would advise O-RADS for US (preferred) or IOTA reporting lexicon - to enable the next most appropriate test/management/follow up to be arranged after US			
6	British Society of Urogenital Radiology	**Section 4.1** Supporting measures to enable faster diagnosis in line with GIRFT principles: Consider straight to CT if post menopausal and significantly raised Ca 125 - levels to be defined			
7	British Society of Urogenital Radiology	**Section 4.1** Supporting measures to enable faster diagnosis in line with GIRFT			

ID	Stakeholder	Suggested key area for quality improvement	Why is this a key area for quality improvement?	Data sources	Supporting information
		principles: Consider if straight to CT if postmenopausal presenting with non-specific abdo pain/bloating/CIBH			
8	British Society of Urogenital Radiology	**Section 4.1** Supporting measures to enable faster diagnosis in line with GIRFT principles: To reduce geographic/population based variation in opportunities for diagnosis			
9	British Society of Urogenital Radiology	**Section 4.1** Supporting measures to enable faster diagnosis in line with GIRFT principles: Define when to use MRI for adnexal mass characterisation and what protocols to use			
10	NCD – National Cancer Programme	**Section 4.1** Annex 1: Areas of interest for potential NG12 updates Direct referral onto urgent ovarian cancer pathway for those with elevated CA125 who reach 3% cancer probability threshold.			NICE guidance for CA125 is based on estimation that 0.81% of symptomatic primary care women with a CA125 ≥35 U/ml would have ovarian cancer (CG122). In a study evaluating the

ID	Stakeholder	Suggested key area for quality improvement	Why is this a key area for quality improvement?	Data sources	Supporting information
					performance of CA125 in primary care in England, the PPV was found to be more than 12 times higher than this estimate, with a CA125 level of ≥35 U/ml having a PPV of 10.1% for ovarian cancer. In addition, a CA125 level of 53 U/ml equated to an overall ovarian cancer probability of 3%—the threshold at which the NICE advocates urgent referral. Marked variation was noted between women of different ages. The CA125 level required to reach the 3% ovarian cancer probability threshold fell from 104 U/ml in 40-year-old women to 32 U/ml in 70-year-old women. Funston G, Hamilton W, Abel G, Crosbie EJ, Rous B, et al. (2020) The diagnostic performance of CA125 for the detection of ovarian and non-ovarian cancer in primary care: A population-based cohort study.

ID	Stakeholder	Suggested key area for quality improvement	Why is this a key area for quality improvement?	Data sources	Supporting information
					PLOS Medicine 17(10): e1003295.
11	NCD - National Cancer Programme	**Section 4.1** CA125 testing Recommendation: The NHS Cancer Programme would like to see a quality statement that supports increased use of CA125 in symptomatic women to identify women who may have ovarian cancer earlier and to improve patient experience. To support improved referral practice in primary care, we recommend NICE consider updating NG12 and interrelated products to reflect the most recent evidence base on use of CA125 and referral thresholds, including by age (see Annex 1).	2.1 Women with ovarian cancer usually develop symptoms and report them to primary care, sometimes months before diagnosis.11 One third of women present to primary care with relevant symptoms three or more times before specialist referral.12 There is a positive correlation between national survival and the readiness of primary care practitioners to investigate or refer women with symptoms of possible ovarian cancer, with UK GPs having a lower readiness to refer patients on to specialists compared to other countries.13 Improving adherence to guidelines for use of CA125 in symptomatic women would support identification of patients who may have ovarian cancer earlier and would improve patient experience. 2.2 NG12 and interrelated		11 Hamilton W et al (2009). Risk of ovarian cancer in women with symptoms in primary care: population based case-control study. BMJ. 2009; 339: b2998. 12 Lyratzopoulos G et al (2012), Variation in number of general practitioner consultations before hospital referral for cancer: findings from the 2010 National Cancer Patient Experience Survey in England. Lancet Oncol. 2012 Apr;13(4):353-65. 13 Rose PW et al (2015), Explaining variation in cancer survival between 11 jurisdictions in the International Cancer Benchmarking Partnership: a primary care vignette survey. BMJ Open. 2015; 5:e007212. 14 Funston G, Hamilton W, Abel G, Crosbie EJ, Rous B, et al (2020), The diagnostic performance of CA125 for the detection of ovarian and non-ovarian cancer in primary care: A

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			NICE guidance currently has a single CA125 of 35 U/ml or above cut off for referral for further investigation. However, recent evidence14 suggests that the CA125 test is more effective at identifying women at high risk of having ovarian cancer than previously estimated. The positive predictive value of CA125 has been found to be more than 12 times higher (10.1% vs 0.81%) than the estimate used to develop NG12. The predictive value of CA125 also varies significantly by age. For example, among women under the age of 50 with a CA125 level above 35 U/ml, 3.4% had ovarian cancer. For women aged 50 and over with a CA125 level above 35 U/ml, the proportion of women with ovarian cancer rises to 15.2%. This suggests that different referral cut offs may be needed for different age groups.		population-based cohort study. PLOS Medicine 17(10): e1003295.
12	NCD - National	**Section 4.1**	3.1 Around one in five		15 NDRS (2020), Routes to

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	Cancer Programme	Increased GP Direct Access to diagnostic imaging tests Recommendation: To support the expanded GP direct access scheme, we would like NICE to consider including a quality statement on GP direct access to CT abdomen & pelvis and ultrasound abdomen & pelvis to more quickly confirm or rule out a diagnosis of ovarian cancer among a lower risk cohort of people. Primary care should consider GP direct access to imaging tests where a CA125 test comes negative.	ovarian cancer cases are detected after routine testing,15 meaning some people can wait much longer for a diagnosis. In November 2022, NHS England announced it was expanding GP direct access to diagnostic imaging tests for low risk people who do not currently meet the criteria for an urgent referral to a specialist, as defined by NG12. This scheme is intended to address variation across the country in terms of which imaging tests GPs can order directly and encourage GPs to test for cancer sooner, helping to cut waiting times and speed up cancer diagnosis.		Diagnosis, CancerData. Available from: https://www.cancerdata.nhs.uk/routestodiagnosis
13	NCD - National Cancer Programme	**Section 4.1** Faster Diagnosis Standard and timed gynaecology cancer diagnostic pathways Recommendation: 4.5 We recommend the inclusion of a quality statement on meeting the FDS and implementing the timed	4.1 The Faster Diagnosis Standard (FDS) is fundamental to achieving the Long Term Plan ambitions for cancer and aims for patients to have cancer diagnosed or ruled out within a maximum of 28 days from referral. In August 2023, NHS England announced the removal of		16 NHS England (2023), Faster diagnostic pathways: Implementing a timed gynaecology cancer diagnostic pathway, Guidance for local health and care systems. Available from: https://www.england.nhs.uk/wp-content/uploads/2018/04/B1122-gynaecology-cancer-implementing-a-timed-

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		gynaecology cancer diagnostic pathway guidance. Updated quality statements on ultrasound, CT and MRI should refer to minimum quality of ultrasound to avoid repeat procedure, specify 5 that they be carried out by a specialist practitioner and be based on IOTA/RCOG standards.	the 2-week-wait standard. QS18 must ensure references to the previous 2WW standard are updated in line with FDS, particularly, for example Quality Statement 2. 4.2 Delivery of the FDS is underpinned by timed pathways that support the ongoing improvement effort to shorten diagnosis pathways, reduce variation, and improve people's experience of care. These have been developed by expert clinical task and finish groups to help meet the FDS by identifying specific clinical events and tests for patients referred with certain symptoms. 4.3 In March 2023, NHS England published guidance for local health and care systems on implementing a timed gynaecology cancer diagnostic pathway.16 The guidance was developed by the Gynaecology Task and		diagnostic-pathway.pdf

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			Finish Group clinical leaders from local and specialist services across England. 4.4 The guidance also provides an audit tool that can be used to undertake a baseline audit of services being delivered and assess whether sufficient capacity is in place to routinely deliver. 4.6 Similarly, any quality statements on improving access to urgent interventional radiology procedures, CT and MRI should reference a minimum quality in terms of who carries it out, a minimum timeframe and quality for performing and reporting, and should specify the quality of equipment and standards that should be followed.		
14	NCD - National Cancer Programme	**Section 4.1** Annex 1: Areas of interest for potential NG12 updates			CA125 is only raised in approximately 50% of stage I epithelial ovarian cancers and in 75% to 90% of patients

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		Concurrent testing of CA125 and ultrasound			with advanced disease. Dual testing of CA125 and ultrasound (with referral on abnormality in either, already occurs in Scotland and some ICBs (for example, the Pan-London cancer referral guidelines). While this would increase ultrasound demand, we expect an increase in capacity for ultrasound tests through the Community Diagnostic Centres. In addition, the recent GP Direct Access guidance flagging GP access to CT abdo / pelvis may also help give GPs an alternative test option. Jacobs I, Bast RC., Jr CA 125 tumour-associated antigen: a review of the literature. Hum Reprod. 1989;4:1–12. Woolas RP, Xu FJ, Jacobs IJ, et al. Elevation of multiple serum markers in patients with stage I ovarian cancer. J Natl Cancer Inst. 1993;85:1748–1751. Fritsche HA, Bast RC. CA 125

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					in ovarian cancer: advances and controversy. Clin Chem. 1998;44:1379–1380
15	NCD - National Cancer Programme	**Section 4.1** Annex 1: Areas of interest for potential NG12 updates Age thresholds for CA125 in primary care for people with symptoms suggestive of ovarian cancer			CA125 positive predictive value varies significantly by age. In a study evaluating the performance of CA125 in primary care in England, of women with CA125 levels above the current abnormal cut-off (35 U/ml), 3.4% aged <50 years and 15.2% aged ≥50 years had ovarian cancer. Funston G, Hamilton W, Abel G, Crosbie EJ, Rous B, et al. (2020) The diagnostic performance of CA125 for the detection of ovarian and non-ovarian cancer in primary care: A population-based cohort study. PLOS Medicine 17(10): e1003295
16	Ovacome	**Section 4.1** Key area for quality improvement 1	Clearer, faster treatment pathways for those with rarer forms of ovarian cancer (including granulosa cell, low grade serous ovarian cancer)	Ovacome survey regarding inhibin monitoring for granulosa cell patients available on request.	NICE guideline: Ovarian cancer: recognition and initial management (CG122) Rec. 1.2 [to establish diagnosis]

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17	Ovarian Cancer Action	**Section 4.1** Key area for quality improvement 5 Symptoms and CA-125	Late diagnosis is still a major issue in ovarian cancer, and the Ovarian Cancer Audit Feasibility Pilot showed regional variation across Cancer Alliances. This was a quality standard in the previous iteration of QS18 and while there has been increased GP education over this period, it remains an important priority for improving outcomes.	The National Ovarian Cancer Audit intends to collect "proportion of patients with ovarian cancer presenting as emergency admissions" as one of its QPIs – however as of Sep 23 it was unclear if this would be possible. Routes to diagnosis and stage data is collected through the NDRS "Get Data Out" programme. https://www.cancerdata.nhs.uk/getdataout/ovary The General Practice Data for Planning and Research dataset could potentially include this data in the future. Local data would be most directly relevant to measuring this area.	Nice Guideline CG122
18	Royal College of Obstetricians & Gynaecologists	**Section 4.1**	Awareness of symptoms and signs.	Despite all efforts the diagnosis is frequently made at a late stage. Little progress has been made.	

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				Though this is aimed at G.P.s, a significant proportion of women with ovarian cancer are admitted as emergency to other specialities. Awareness of this part of the NICE guidance needs to be flagged more widely. Overview | Ovarian cancer: recognition and initial management | Guidance | NICE	
19	SCM1	**Section 4.1** Key area for quality improvement 4	Designated referral guidelines for drainage of malignant ascities (whose role is it ?)		
20	SCM2	**Section 4.1** Key area for quality improvement 2	Delay in accessing diagnostic tests. (There are delays in women accessing their GP but also – despite national guidelines being in place - there are delays in getting initial tests done/referral for these in primary care (CA125 and TVUS))	National statistics Local clinical audits TOC Pathfinder Reports	Target Ovarian Cancer (TOC) Pathfinder Report 2022 (page 9)
21	SCM2	**Section 4.1**	Increase awareness of symptoms of Ovarian Cancer, risk factors	National audit TOC	Target Ovarian Cancer (TOC) Pathfinder Report 2022 (pages 8 & 12)

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		Key area for quality improvement 4	(inherited & otherwise) and awareness that all people could carry (& transmit) a genetic mutation associated with OC (TOC Pathfinder Report found only 3% of women confident in identifying all the symptoms. 46% of GP's thought that symptoms only present in late-stage disease (this is wrong). Only 61% of GP's reported being aware that family history is relevant on both the mother's and father's side)	Pathfinder Reports	
22	SCM3	**Section 4.1** Key area for quality improvement 1	Late stage of disease at diagnosis in UK	Ovarian Cancer Audit – 31.8% stage III; 18.4% St IV and 16.5% stage unknown – associated with poor 1 year survival and significant regional variation NHS Long term plan to have 75% cancers diagnosed at Stage I or II by 2028 (only 33% in OCA)	Ovarian Cancer Audit
23	SCM4	**Section 4.1**	Target Ovarian cancer audit data shows that there	Target ovarian cancer's audit:	

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		Key area for quality improvement 1 Improve time to diagnosis of ovarian cancer	continues to be significant delay in the time to diagnose ovarian cancer in primary and secondary care. There are variations depending upon patient age and ethnicity. The faster the diagnosis is made then the more likely treatment will be able to be given. Many patients still present acutely to the Emergency department, often with high stage disease. 2020: The British Gynaecological Cancer Society, Ovarian Cancer Action and Target Ovarian Cancer, in partnership with the National Cancer Registration and Analysis Service (NCRAS), funded a joint project: the ovarian cancer audit feasibility pilot. This showed: • Four in ten women with ovarian cancer across England didn't receive surgery. This is despite surgery being the treatment which offers the best long-term prognosis	Pathfinder 2022: Faster, further, and fairer, NCRAS 2020: Ovarian Cancer Audit Feasibility Pilot: Outputs Disease Profile in England: Incidence, mortality, stage and survival for ovary, fallopian tube and primary peritoneal carcinomas NHS England: Faster Diagnosis Framework - a strategic approach to speed up cancer diagnosis and improve patient experience. Non-specific symptoms pathways for patients who do not fit clearly into a single 'urgent cancer' referral pathway. BPTPs (best practice timed pathways) will be published for	

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			for women with the disease. • One in five women diagnosed received no ovarian cancer treatment at all. Pathfinder 2022: Faster, further, and fairer	gynaecology, (and other tumour sites) by the end of 2023/24.	
24	SCM4	**Section 4.1** Key area for quality improvement 3 Consider whether CT vs ultrasound should be used as the primary imaging diagnostic tool	The Refining Ovarian Cancer Test Accuracy Scores (ROCkeTS) study, a large prospective study in the UK evaluating a range of diagnostic tests and algorithms for ovarian cancer in secondary care. Results are awaited and may provide insight into the most appropriate post-CA125 testing strategy i.e. US vs CT. Computed tomography (CT) may detect multiple other types of cancer known to cause elevation of CA125 - including ovarian, lung, and pancreatic cancer. CT is currently utilised in several countries to investigate symptomatic women with	Refining Ovarian Cancer Test accuracy Scores (ROCkeTS): protocol for a prospective longitudinal test accuracy study to validate new risk scores in women with symptoms of suspected ovarian cancer Sudha Sundar et al The diagnostic performance of CA125 for the detection of ovarian and non-ovarian cancer in primary care: A population-based cohort study Funston G, Hamilton W, Abel G, Crosbie EJ, Rous B, et al.	

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			elevated CA125 levels. Previous studies comparing the performance of US, CT and MRI in this situation are outdated.	(2020) The diagnostic performance of CA125 for the detection of ovarian and non-ovarian cancer in primary care: A population-based cohort study. PLOS Medicine 17(10): e1003295. https://doi.org/10.1371/journal.pmed.1003295	
25	SCM4	**Section 4.1** Key area for quality improvement 2 Re-evaluate CA125 measurement	CA125 testing is recommended by NICE for women with symptoms suggestive of ovarian cancer. What is less well understood by clinicians is that the predictive power of CA125 is age-related and that a raised CA125 may suggest non-ovarian cancers, specifically uterine carcinoma. Guidelines should highlight the importance of age-related cut off points reflecting a 3% probability of cancer and we should encourage repeat testing in individuals who are symptomatic with borderline results.	Article Source: The diagnostic performance of CA125 for the detection of ovarian and non-ovarian cancer in primary care: A population-based cohort study Funston G, Hamilton W, Abel G, Crosbie EJ, Rous B, et al. (2020) The diagnostic performance of CA125 for the detection of ovarian and non-ovarian cancer in primary care: A population-based cohort study. PLOS Medicine 17(10): e1003295. https://doi.or	

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				g/10.1371/journal.pmed.1003295	
26	Target Ovarian Cancer	**Section 4.1** Key area for quality improvement 1- A shorter Diagnostic Pathway	Ultrasound and CA125 should be undertaken at the same time in line with best practice in Scotland. • Having concurrent tests limits the possibility of an earlier diagnosis. The CA125 protein is elevated in 80 per cent of women with advanced disease, but no more than 50 per cent of women diagnosed with stage I ovarian cancer will have a raised CA125. Those who do not have a raised CA125 may then not be able to access ultrasound until the disease has progressed • Target Ovarian Cancer has found that patients are waiting for tests and GPs are waiting for results 37 per cent of women who have been diagnosed with ovarian cancer say they waited 8 days or more to have	Target Ovarian Cancer Pathfinder: faster, further and fairer.https://targetovariancancer.org.uk/sites/default/files/2023-09/Updated%20March%202023%20-%20FINAL%20Pathfinder%20report%20-%20digital%20with%20new%20logo.pdf SIGN Guideline on the management of epithelial ovarian cancer. Management of epithelial ovarian cancer (sign.ac.uk)	

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			a CA125 blood test and 55 per cent say that waited 8 days or more to have an ultrasound. More than 1 in 10 women (11 per cent) reported waiting 32 days or more for an ultrasound. • This is compounded by delays reported by GPs in how long it takes on average to get the results of an urgent non-obstetric ultrasound for suspected ovarian cancer 40 per cent of GPs report it 15 days or more to receive results and 8 per cent report waits of over 32 days or more. Given the time taken to both undertake the tests and get the CA125 blood test and urgent non-obstetric ultrasound in primary care, there is an urgent need to shorten the ovarian cancer diagnostic pathway with the CA125 blood test and ultrasound undertaken at		

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			the same time.		
27	NCD - National Cancer Programme	**Section 4.2** Safety netting and Non-Specific Symptom (NSS) pathways Recommendation: We recommend a quality statement with greater detail on safety netting for GPs, including clearer guidance on when to reinvestigate, greater access to advice and guidance services from secondary care, and guidance on use of NSS pathways to consider the risk of alternative cancers, particularly when ovarian cancer has been excluded. This statement should be supported by an update to NG12 and interrelated products.	Safety netting and Non-Specific Symptom (NSS) pathways 5.1 The current quality standard includes a quality statement related to safety netting (quality statement 3) but does not highlight the overlap between this patient cohort and those that may need to be referred on to NSS pathways. Among women with a CA125 level over 35 U/ml, 12.3% have non-ovarian cancers. This rises to 20% among women over the age of 50 with elevated CA125 levels. Over a third of patients diagnosed with a lower GI cancer had CA125 levels above 35 U/ml.17 This suggests that women with elevated CA125 levels but with a normal ultrasound should be referred on an NSS pathway if they have non-specific symptoms relevant to the NSS pathway (see section 5.2 below) and filter function		17 Funston G et al (2020), The diagnostic performance of CA125 for the detection of ovarian and non-ovarian cancer in primary care: A population-based cohort study. PLoS Med. 2020 Oct 28;17(10):e1003295.

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			tests are inconclusive. NSS pathways enable investigations to be carried out for multiple cancers simultaneously. Doing so could facilitate earlier cancer diagnosis, particularly where ovarian cancer has been ruled out. 5.2 NSS pathways are intended to cover the cohort of patients who do not fit clearly into a single 'urgent cancer' referral pathway but who are nonetheless at high risk of being diagnosed with cancer. 'Non-specific' symptoms include unexplained weight loss, fatigue, vague abdominal pain; and/or a GP 'gut feeling' about cancer. There is often a significant overlap between this cohort of patients and those presenting with symptoms of ovarian cancer.		
28	NCD - National Cancer Programme	**Section 4.2** Annex 1: Areas of interest for potential NG12 updates			A high incidence (12.3%) of non-ovarian cancers were found in women with elevated CA125 levels. This risk varied by age with a PPV of 20.4% for women

ID	Stakeholder	Suggested key area for quality improvement	Why is this a key area for quality improvement?	Data sources	Supporting information
		For people with a CA125 of 35 IU/ml or greater and has ovarian cancer ruled out, consider referral to non-specific symptom pathway			aged ≥50 years with a CA125 ≥35 U/ml. Funston G, Hamilton W, Abel G, Crosbie EJ, Rous B, et al. (2020) The diagnostic performance of CA125 for the detection of ovarian and non-ovarian cancer in primary care: A population-based cohort study. PLOS Medicine 17(10): e1003295.
29	NCD - National Cancer Programme	**Section 4.2** Areas of interest for potential NG12 update (Annex 1) Safety netting strategies e.g. follow up with repeat test in 6 months for those with normal CA125			NICE guidelines do not specify a safety netting protocol including guidance on the follow-up or investigation of women with 'normal' (<35 U/ml) CA125 levels. In a study comparing women with normal (<35 U/ml) and abnormal (≥35 U/ml) CA125 levels prior to ovarian cancer diagnosis using England primary care records: • Women with normal CA125 experience longer test-to-diagnosis intervals compared to abnormal (64 days [IQR 42–

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					127] v 35 days [IQR 21–53]). However, those with normal initial CA125 results still tend to be diagnosed at an early stage. • Health professionals appear to repeat tests in only 9% of women • In 73% of repeat tests (of those who go on to be diagnosed with ovarian cancer) there was an increase in CA125 levels. In 27%, this increase was sufficient to reach the 35 U/ml threshold Funston G, Mounce LT, Price S, Rous B, Crosbie EJ, Hamilton W, Walter FM. CA125 test result, test-to-diagnosis interval, and stage in ovarian cancer at diagnosis: a retrospective cohort study using electronic health records. Br J Gen Pract. 2021 May 27;71(707):e465-e472. A survey of GPs found that they find it difficult to know when to re-test following

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					a normal or nominally elevated CA125. Some are unsure how to manage postmenopausal women who are displaying symptoms but have a normal or nominally elevated CA125. Target Ovarian Cancer. Pathfinder 2022: Faster, further, and fairer. Target Ovarian Cancer Pathfinder2022.pdf
30	Target Ovarian Cancer	**Section 4.2** Key area for quality improvement 2 – Inclusion of safety netting guidance	Safety netting is vital to ensuing that those who have unremarkable test results and persistent symptoms are followed up. 25 per cent of those who had been diagnosed surveyed by target ovarian cancer reported visiting their GP three or more times with symptoms before accessing tests Target Ovarian Cancer has worked with Pennine Lancashire Cancer Alliance to develop an approach safety netting by searching through the GP practice system to identify patients	Target Ovarian Cancer - Identifying and breaking down barriers to early diagnosis phase 1 Identifying and breaking down barriers to early diagnosis of ovarian cancer.pdf (targetovariancancer.org.uk) Target Ovarian Cancer - Identifying and breaking down barriers to early diagnosis phase 2 report – Interventions and Learnings Identifying and breaking	

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			with a recent normal CA125 blood test result. CA125 is the initial diagnostic test for ovarian cancer. These patients can then be clinically reviewed and contacted if required to discuss if symptoms have persisted. This search was carried out by four PCNs in Pennine Lancashire. 402 women were identified. 365 were contacted and given advice about persistent symptoms and returning to their GP. 100 per cent of respondents found the normal CA125 monitoring a worthwhile exercise for them and their patients. 100 per cent of respondents felt this helped to provide an effective safety netting system for women. The workload was generally reported as positive and manageable. The safety netting protocol was evaluated positively, and no challenges were	down barriers to early diagnosis phase 2 report. FINAL (1).pdf (targetovariancancer.org.uk) Target Ovarian Cancer Pathfinder: faster, further and fairer. https://targetovariancancer.org.uk/sites/default/files/2023-09/Updated%20March%202023%20-%20FINAL%20Pathfinder%20report%20-%20digital%20with%20new%20logo.pdf	

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			identified. This indicates that a review of safety netting practice would be a straightforward task for any PCN or Cancer Alliance looking to improve earlier diagnosis and should be part of the quality standard.		
31	NCD - National Cancer Programme	**Section 4.3** Increased genetic testing for ovarian cancer susceptibility genes and for women diagnosed with ovarian cancer We recommend a new quality statement on genetic testing, supported by the new NICE guideline being developed on identifying and managing familial and genetic risk.	6.1 Between 340,000 and 440,000 women in the UK carry a pathogenic variant that increases their risk of ovarian cancer.18 This includes pathogenic variants in BRCA1, BRCA2, RAD51C, RAD51D, BRIP1, PALB2, MLH1, MSH2 and MSH6 genes. Most women who carry a pathogenic variant for ovarian cancer do not have a family history suggestive of a genetic risk. Current best estimates are that only 3% of pathogenic variant carriers know they are carriers. 6.2 Testing for ovarian cancer susceptibility genes is now part of clinical practice, and somatic (tumour) and germline		18 NICE Guideline scope. Ovarian cancer: identifying and managing familial and genetic risk. Available from: https://www.nice.org.uk/guidance/gid-ng10225/documents/final-scope-2 19 NICE, Prospective guidelines GID-NG10225, Ovarian cancer: identifying and managing familial and genetic risk. Available from: https://www.nice.org.uk/guidance/indevelopment/gid-ng10225

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			testing are available, depending on the cancer and/or patient history. However, ovarian cancer charities have flagged concerns with equity of access to the National Test Directory offer. Charity stakeholders have suggested R207 genetic testing for hereditary ovarian cancer is not being offered to all those in England who are eligible, which is having an impact on patient access to more personalised treatment (e.g. PARPi) and opportunities for prevention and early diagnosis of cancer through appropriate familial cascade testing. 6.3 In addition to testing women with genetic or familial risk of ovarian cancer, all women with high grade non-mucinous epithelial ovarian cancer should be offered genetic testing in line with recommendations in the National Genomics Test		

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			Directory, which includes testing for the BRCA1 and BRCA 2 genes. This should be delivered through a mainstreaming model as set out in the new NICE guidance on identifying and managing familial and genetic risk.19		
32	NHS England – Genomics Unit	**Section 4.3** Key area for quality improvement 1 Any patient who meets ovarian cancer eligibility criteria as defined in the NHS England National Genomic Test Directory for genetic testing, either somatic or germline, is given the opportunity for this testing.	To promote equity of access.	Data sources to measure against this standard would be eligible population (sourced by NICE) compared with actual testing activity. We have been unable to identify a data source to monitor the actual testing activity. In the future this may be available by the Genomics Unit Patient Level Contract Monitoring data set and/or by the National Disease Registration Service. Therefore, we would suggest that this proposed QS is only included after a national	

ID	Stakeholder	Suggested key area for quality improvement	Why is this a key area for quality improvement?	Data sources	Supporting information
				data set has been developed that can be used to collect information specifically on ovarian cancer genetic testing. At this time no such data set exists.	
33	Ovarian Cancer Action	**Section 4.3** Key area for quality improvement 3 Tumour and germline testing at diagnosis	Tumour testing is now a vital part of the ovarian cancer treatment pathway thanks to the introduction of PARP inhibitors – especially Olaparib which is only available for patients with HRD positive or BRCA mutated tumours. Niraparib, one of the other alternative PARP inhibitors approved by NICE is available for those who do not have a mutation or positive HRD status – however testing is still required as part of the NICE approval. Clinical trial data has shown overall and progression free survival benefit for patients who can access PARP inhibitors.	We were not able to collect this data through the Ovarian Cancer Audit Feasibility Pilot. It was not made available until the Pilot had already started. Somatic data is now available through the Somatic Molecular Testing worksheet published by NCRAS. Germline data is planned to be added to this dataset in the near future. The National Ovarian Cancer Audit is collecting data on proportion of patients tested for BRCA 1/2.	Ovarian cancer: genetic and familial risk. NICE guideline in development (publication expected March 2024).

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			Germline testing is key for enabling prevention opportunities for relatives of patients who may carry a mutation that increases their risk of ovarian cancer. Aside from the clear health benefits for the individuals, there is demonstrated cost benefit to the NHS for these relatives to prevent ovarian and other cancers from developing.		
34	Ovarian Cancer Action	**Section 4.3** Race – One of our IMPROVE UK QI projects, the DEMO project, looked at racial inequality in accessing genetic testing. Dr Elaine Leung did some analysis within the West Midlands cancer alliance and showed a significant variation in uptake in genetic testing across different ethnic groups. I don't believe this has been published, but I saw it presented at one of our IMPROVE UK meetings, and I can ask her to pull together the data if useful. Another one of our funded OCA researchers Dr Jon Krell also published on variation in attitudes towards genetic testing across			

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		ethnic groups late last year, and his paper is here https://www.nature.com/articles/s10038-023-01199-1			
35	Royal College of Obstetricians & Gynaecologists	**Section 4.3** Key area for quality improvement 3	Appropriate risk identification and referral from Primary Care to genetic clinics	Changes outlined in the draft guidance may not be understood in Primary care https://www.nice.org.uk/guidance/indevelopment/gid-ng10225	
36	Royal College of Obstetricians & Gynaecologists	**Section 4.3** Key area for quality improvement 4	Establishment of the familial ovarian cancer multidisciplinary team.	Whilst informal arrangements may be widespread, the need for a formal team is important. https://www.nice.org.uk/guidance/indevelopment/gid-ng10225	
37	SCM2	**Section 4.3** Key area for quality improvement 1	All women with a diagnosis of ovarian cancer should be offered genetic testing after confirmation of diagnosis. (This is now recommended standard practice. What are the statistics on this? Not always happening)	National statistics Local audit	NICE Ovarian cancer: identifying and managing familial and genetic risk (GID-NG10225) 1.4.5
38	SCM2	**Section 4.3**	Implementation of an effective recall and	National audit Local audit	NICE Ovarian cancer: identifying and managing

ID	Stakeholder	Suggested key area for quality improvement	Why is this a key area for quality improvement?	Data sources	Supporting information
		Key area for quality improvement 6	monitoring system for people who choose to delay risk-reducing surgery		familial and genetic risk (GID-NG10225) page 21
39	SCM3	**Section 4.3** Key area for quality improvement 4	Variation in access to standard of care tumour testing for BRCA mutations and HRD	Leading to variations in maintenance treatments offers which will impact survival	BGCS/BCAP guidelines
40	SCM3	**Section 4.3** Key area for quality improvement 5	Variation in access to standard of care germline pathological variant testing	Leading to variations in maintenance treatments offers which will impact survival and in prevention of ovarian cancer by testing of at risk unaffected relatives who could subsequently undergo risk reducing surgery where appropriate	BGCS/BCAP guidelines
41	SCM4	**Section 4.3** Key area for quality improvement 4 Perform whole genome sequencing in all patients diagnosed with high grade ovarian carcinoma	Precision medicine for women with high-grade serous carcinoma has been significantly impeded by the extreme complexity of the ovarian cancer genome. The whole genome sequencing is now approved on the test directory within NHS England for all high-grade ovarian cancers. Uptake of this testing has been low owing to significant	BGCS 2023 abstract: Comparison of clinical HRD testing to WGS – based HRD assays from the NHS sequencing of high grade ovarian cancer patients G. Funingana et al.	As of January 2023, Addenbrooke has a fully diagnostic WGS pathway, with clinical interpretation of results in a weekly GTAB meeting and reports released into EPIC. ESMO 2023 abstract: Integration of whole genome sequencing (WGS) into NHS pathways for high-grade ovarian cancer (HGOC): a single-centre prospective experience Authors: Ionut-Gabriel

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			challenges around the biopsy pathway and the requirement for non-fixed tumour tissue. Work carried out on the NHS improvement DEMO project now provides strong recommendations for multi-pass omental biopsy under ultrasound guidance, thus improving appropriate sample collection. Ongoing work is evaluating the use of ascites cell pellets and the use of molecular preservatives (e.g. RNAlater) to allow easy collection without the need for snap freezing samples. It is important to note that existing panel-based gene sequencing tests underestimate the true prevalence of BRCA1 and BRCA2 mutated germline and somatic cases. In addition, the prevalence of actionable mutations from cancer panels is very low (less than 10%) and only whole genome sequencing can reliably identify other targetable structural		Funingana1,2,3,4*, Jamie Trotman2,5, John Ambrose6, Thomas Roberts2,5, James Watkins2,5, Magdalena Ridley2,3, Bethany Gilson, Sue Freeman2,3, Merche Jimenez-Linan2,3, Alona Sosinsky6,7, John Tadross2,5, Patrick Tarpey2,5, James D. Brenton1,2,3,4

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			variants in patient samples. Significant quality improvement needs to occur for routine whole genome sequencing as part of the diagnostic pathway for patients suspected of having advanced high-grade ovarian carcinoma.		
42	SCM1	**Section 4.3** Key area for quality improvement 2	Offer for molecular testing for people undergoing diagnostic work-up for potential ovarian malignancy		
43	UK Cancer Genetics Group	**Section 4.3** All women with ovarian cancer should have their eligibility for genomic and molecular testing assessed using the National Genomic test Directories (both Cancer and Rare Disease) and the British Society of Gynaecology/British Association of Gynaecological Pathologist Guidelines and offered any relevant investigations in a timely manner	Despite nationally published guidelines for genomic and molecular testing in women with ovarian cancer to identify molecular targets for treatment and inherited risk, not all women have a comprehensive assessment of all testing they are entitled to with timely access to the appropriate investigations and results. There is still variability and inequity in timely access to BRCA testing (both somatic and germline) and homologous recombination	National audit Educational resources such as GeNotes: Ovarian cancer — Knowledge Hub (hee.nhs.uk) can be used as a benchmark for how to take a relevant family history and consideration of possible inherited risk	Links to new NICE guidelines: Project information | Ovarian cancer: identifying and managing familial and genetic risk | Guidance | NICE

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			repair deficiency testing (HRD). Particularly there are significant gaps in access to mismatch repair immunohistochemistry for women, as well as a lack of knowledge of genomic testing for women under 25 with a solid tumour, and women with potential for rarer inherited syndromes, such a STK11 or DICER1. More awareness is required of assessment to the cancer and rare and inherited disease test directories and the national guidelines published by British Society of Gynaecology/British Association of Gynaecological Pathologists		
44	UK Cancer Genetics Group	**Section 4.3** Formal documented family history assessment for all women being investigated for possible ovarian cancer.	All women being investigated for possible ovarian cancer should have a family history assessment documented and considered as part of the assessment for ovarian cancer investigations. There	National audit Educational resources such as GeNotes: Ovarian cancer — Knowledge Hub (hee.nhs.uk) can be used as a benchmark	Links to new NICE guidelines: Project information | Ovarian cancer: identifying and managing familial and genetic risk | Guidance | NICE

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			should be referral for more detailed family history assessment if >1 case of ovarian cancer in family and/or personal or family history suggestive of an inherited cancer syndrome (for example Lynch Syndrome). The presence of a family history of ovarian cancer or other cancers which can be related through inherited cancer syndromes will firstly alter the a priori likelihood that the woman will have ovarian cancer as her underlying diagnosis, and secondly is an opportunity to offer appropriate genomic investigations to the woman or family members which can improve early diagnosis. Family history documentation is currently extremely variable in these pathways. Many women do not have their family history appropriately assessed or documented during this initial process. This is also	for how to take a relevant family history and consideration of possible inherited risk	

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			vital for the implementation of the Familial Ovarian Cancer guidelines which have recently been drafted by NICE. It can also be used in risk calculator tools such as CanRisk to give personalised lifetime ovarian cancer risk assessments to unaffected women.		
45	NCD - National Cancer Programme	**Section 4.4** Addressing variation in treatment Recommendation: We would welcome the inclusion of future quality statements that seek to address variation in treatment identified through the National Ovarian Cancer Audit.	7.1 Results from the National Ovarian Cancer Audit feasibility pilot (OCAFP) show that 1 in 4 women with advanced ovarian cancer do not receive any anticancer treatment and only 51% receive standard of care treatment, i.e. the combination of surgery and chemotherapy. The audit also demonstrated variation across the country in the proportion of women receiving anticancer treatment for advanced ovarian cancer. 7.2 In October 2022, the NHS Cancer Programme commissioned The Royal		

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			College of Surgeons to begin work on five new clinical audits, including on ovarian cancer. The National Ovarian Cancer Audit (NOCA) will help to identify areas of variation where improvement is needed. The five quality improvement goals the audit will examine are: • The proportion of patients receiving timely treatment decisions • The proportion of patients receiving molecular diagnostics • The proportion of patients receiving surgery • The proportion of patients receiving chemotherapy • Rates of survival and variation in survival 7.3 The NOCA will help to inform NHS England where treatment variation exists and where further action is needed. We can provide NICE with advanced sight of the audit results from July 2024 to help inform quality statements on treatment of		

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			ovarian cancer.		
46	Ovacome	**Section 4.4** Key area for quality improvement 3	All people diagnosed with ovarian cancer to be seen by an expert in gynae-oncology.	British Gynaecological Cancer Society (BGCS) Epithelial Ovarian / Fallopian Tube / Primary Peritoneal Cancer Guidelines: Recommendations for Practice 2017 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9856668/	NICE guideline: Ovarian cancer: recognition and initial management (CG122) Rec. 1.2-1.4
47	Ovarian Cancer Action	**Section 4.4** Key area for quality improvement 2 Discussion at diagnosis at a specialist MDT prior to a decision for treatment	Evidence shows that patients discussed at MDTs have better outcomes. This has been established as a BGCS QPI with a target of 95%. MDT decision making is currently the best system of decision making for the patient from diagnosis to treatment decisions to palliation. This should prevent patient decisions being made by individual clinicians, where individual views on appropriate management can determine outcomes– in spite of best practice - e.g whether a patient should receive	The National Ovarian Cancer Audit.	

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			surgery. There is currently significant variation across Cancer Alliances in the proportion of patients who receive any treatment, and this is hypothesised to be linked to decisions being made without multi disciplinary discussion. Culture within an MDT may also play a role, but this key area for quality improvement 1 should be the first step as it reduces the risk that the other quality indicators of management of ovarian cancer patients will not be met, as expertise across an MDT is more likely to reflect best practice than an individual.		
48	Ovarian Cancer Action	**Section 4.4** Key area for quality improvement 4 Prehabilitation before anti-cancer treatment	There is currently significant variation across Cancer Alliances in the proportion of patients who receive any treatment. Prehabilitation can improve the health of patients to be	Prehabilitation is not currently captured in any national datasets. Data determining whether a Centre offers prehabilitation as part of its pathway would need to be captured locally.	

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			able to better withstand anti-cancer treatments. It is currently offered to ovarian cancer in a small number of Centres around the UK, but still very few. After 3 successful QI pilots demonstrated feasibility and effectiveness of introducing prehabilitation into the ovarian cancer pathway, The BGCS is holding a prehabilitation consensus statement meeting in February 2024 to formally recommend introducing prehabilitation into the pathway.		
49	Royal College of Obstetricians & Gynaecologists	**Section 4.4** Treatment Key area for quality improvement 5	Management of suspected stage 1 ovarian cancer	It is important that all gynaecologists are aware of this. Overview | Ovarian cancer: recognition and initial management | Guidance | NICE	
50	Royal College of Obstetricians & Gynaecologists	**Section 4.4** Treatment Key area for quality improvement 1	Equality of treatment, both surgery and chemotherapy both regionally and by age.	NDRS Ovarian cancer Audit Feasibility pilot. May 2023. Found significant treatment variability both geographically and by age, which could not be	

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				explained by chance or demographics. https://digital.nhs.uk/ndrs/data/data-outputs/ovarian-cancer-audit-feasibility-pilot-ocafp---profile-and-treatment-report---diagnosis-2015-2019	
51	SCM3	**Section 4.4** Key area for quality improvement 2	Regional variation by Cancer Alliance in 1 year net survival ranges – overall UK survival improved but behind other European countries	? differing surgery/ extent, age, co-morbidities, chemo attempted	OCA
52	SCM3	**Section 4.4** Key area for quality improvement 3	Regional variation by Cancer Alliance in 5 year net survival ranges (28.6 to 49.6%) overall UK survival improved but behind other European countries	? differing extent at surgery and secondary surgery, chemotherapy and maintenance treatment plus access to clinical trials	OCA
53	SCM1	**Section 4.4** Key area for quality improvement 5	Pre- habilatation standard required.		
54	SCM2	**Section 4.4** Key area for quality improvement 3	Maintenance treatment of PARP inhibitors +/- Avastin should be offered to all patients who meet the criteria, following genetic testing and completion of	National Statistics Local audit	Current clinical guidance (but this is not in any NICE guideline yet, as is a fairly new development, since 2017)

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			initial, first-line treatment		
55	Target Ovarian Cancer	**Section 4.4** Key area for quality improvement 3- Recurrent ovarian cancer	The majority of those diagnosed with ovarian cancer will experience a recurrence. There is currently little guidance on recurrence and there has been a wholesale change in treatments for recurrence over the last few years with new treatments in the form of maintenance PARP inhibitors. Those who have a recurrence do not get the same level of support as they did during their first line treatment. Target Ovarian Cancer's research has found: • 37 per cent said they had no Clinical Nurse Specialist present when diagnosed with a recurrence • 51 per cent were not given written information about recurrent ovarian cancer. • In addition, 19 per cent reported having no	Overview | Niraparib for maintenance treatment of relapsed, platinum-sensitive ovarian, fallopian tube and peritoneal cancer | Guidance | NICE Overview | Rucaparib for maintenance treatment of relapsed platinum-sensitive ovarian, fallopian tube or peritoneal cancer | Guidance | NICE Overview | Olaparib for maintenance treatment of relapsed, platinum-sensitive ovarian, fallopian tube or peritoneal cancer after 2 or more courses of platinum-based chemotherapy | Guidance | NICE Target Ovarian Cancer Pathfinder: faster, further and fairer.https://targetovari	

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			access to a specialist cancer nurse since the cancer returned. Of the care that they received following their recurrence, 22 per cent said the support they received was not as good as during their first line treatment. In addition, only 45 per cent of Clinical Nurse Specialists surveyed reported that cases of recurrent ovarian cancer are always discussed at Multidisciplinary Team meetings. This is concerning, as the same standards for diagnosis and support should be applied for a first diagnosis and a recurrence. The quality standard should set standards for the treatment and support of recurrent ovarian cancer.	ancancer.org.uk/sites/default/files/2023-09/Updated%20March%202023%20-%20FINAL%20Pathfinder%20report%20-%20digital%20with%20new%20logo.pdf	
56	British Society of Urogenital Radiology	**Section 4.5** Also, it would be helpful to have guidelines on how to follow up			

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		patients who have had fertility preserving cancer surgery.			
57	Ovacome	**Section 4.5** Quality improvement area 2	Improvement in signposting to psychological support and in following up on referrals that have been made or informing patients that referrals have been made.	PATRON study demonstrated a discrepancy in clinician and patient reported experiences of this. (Publication pending)	NICE guideline: Ovarian cancer: recognition and initial management (CG122) Rec. 1.5
58	SCM1	**Section 4.5** Key area for quality improvement 3	Provision of a Cancer Nurse Specialist throughout diagnostic and treatment journey		
59	SCM1	**Section 4.5** Key area for quality improvement 1	Information Provision of Diagnostic Work Up (PIL) for patients referred in by GP on current 2ww		
60	SCM2	**Section 4.5** Key area for quality improvement 5	Discussion of emotional health at each contact with health professionals. (TOC Pathfinder Report found that there was a lot of unmet need as the impact of diagnosis on mental/emotional health was not being discussed and therefore no signposting or support was	Local audit TOC Pathfinder Report	TOC Pathfinder Report 2022 (page 21) NICE Ovarian cancer: identifying and managing familial and genetic risk (GID-NG10225) 1.2.4

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			given)		
61	Ovacome	**Section 4.6 (Additional area)** Key area for quality improvement 4	An additional development source for this standard could include NICE's IP: Maximal cytoreductive surgery for advanced ovarian cancer	Interventional procedures guidance [IPG757] Published: 05 April 2023	NICE guideline: Ovarian cancer: recognition and initial management (CG122) Rec.1.4
62	Ovarian Cancer Action	**Section 4.6 (Additional area)** Key area for quality improvement 1 Maximal cytoreductive surgery for advanced ovarian cancer (previously known as ultra-radical surgery)	The Ovarian Cancer Audit Feasibility Pilot found that the rates of surgery varied significantly across the cancer alliances. Alliances with the highest rates of surgery also had the highest 5yr survival rates – supporting the global consensus that surgery is the most important treatment option for ovarian cancer. UK survival rates trail other developed countries in large part because of our variation in the provision of high quality surgery. Surgery alone is not enough, for the vast majority of cases, maximal cytoreductive surgery	The Ovarian Cancer Audit Feasibility Pilot demonstrates rates of surgery across the Cancer Alliances in England in Report 2 and 5. The Ovarian Cancer Audit Feasibility pilot attempted but was unable to measure radicality of surgery because of poor data completeness. The BGCS is conducting a survey on surgical culture and practice across its membership in 2024. A recent, unpublished	NICE Interventional procedures guidance IPG757 https://www.nice.org.uk/guidance/ipg757 BGCS recommendations for QPIs for ovarian cancer (QPI 3). NICE Guidelines CG122

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			should be performed. Access to this specialist surgery in the country is far too limited. Universal access would significantly increase survival rates across the UK. It is not a coincidence that the Centres that offer maximal cytoreductive surgery (Hammersmith Hospital NW London), Birmingham etc) have the highest 5yr survival rates.	multi-centre audit conducted in Wales. The National Ovarian Cancer Audit is collecting data on proportion of patients receiving surgery.	
63	Target Ovarian Cancer	**Section 4.6 (Additional area)** Key area for quality improvement 4- Access to treatment and Clinical trials	The quality standard should include a focus on ensuring equal access to treatment and clinical trials. Surgery is the treatment that offers the best long-term outcomes for ovarian cancer. However, the ovarian cancer audit feasibility pilot found significant differences in access to surgery in England, with four in ten women not having any surgery and one in five women receiving no treatment at all. Clinical trials offer women	Ovarian Cancer Audit Feasibility Pilot Ovarian Cancer Audit Feasibility Pilot (ncin.org.uk) Target Ovarian Cancer Pathfinder: faster, further and fairer.https://targetovariancancer.org.uk/sites/default/files/2023-09/Updated%20March%202023%20-%20FINAL%20Pathfinder%20report%20-%20digital%20with%20new%20logo.pdf	

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			the opportunity to access experimental cancer drugs, improve understanding of the disease and treatment options, and access the highest quality care. They are also often the only way of accessing new treatment for those who have a rarer ovarian cancer tumour or those who have become resistant to the standard treatment regimen. There is significant disparity in access to clinical trials with Target Ovarian Cancer finding that between 2016 and 2022 23 percent of those diagnosed with ovarian cancer were asked if they would like to join a clinical trial. This is down from 33 per cent when Target Ovarian Cancer last conducted this research in 2016 However, we found clear desire for greater access to clinical trials, with 60 per cent of those that have not yet taken part in clinical		

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			trials telling us they would like to, and 63 per cent prepared to travel to another hospital to take part in a clinical trial. However, patients reported not knowing where to access information about trials, and concerns about how and when trials were raised with them.		
64	Royal College of General Practitioners	No comments at this time			
65	Royal College of Nursing	No comments at this time			
66	Royal College of Pathologists	The consultation appears to be most relevant to clinical management of the patient. There is not much pathology in the guideline. And the pathology aspect is accurate. I have nothing to add.			