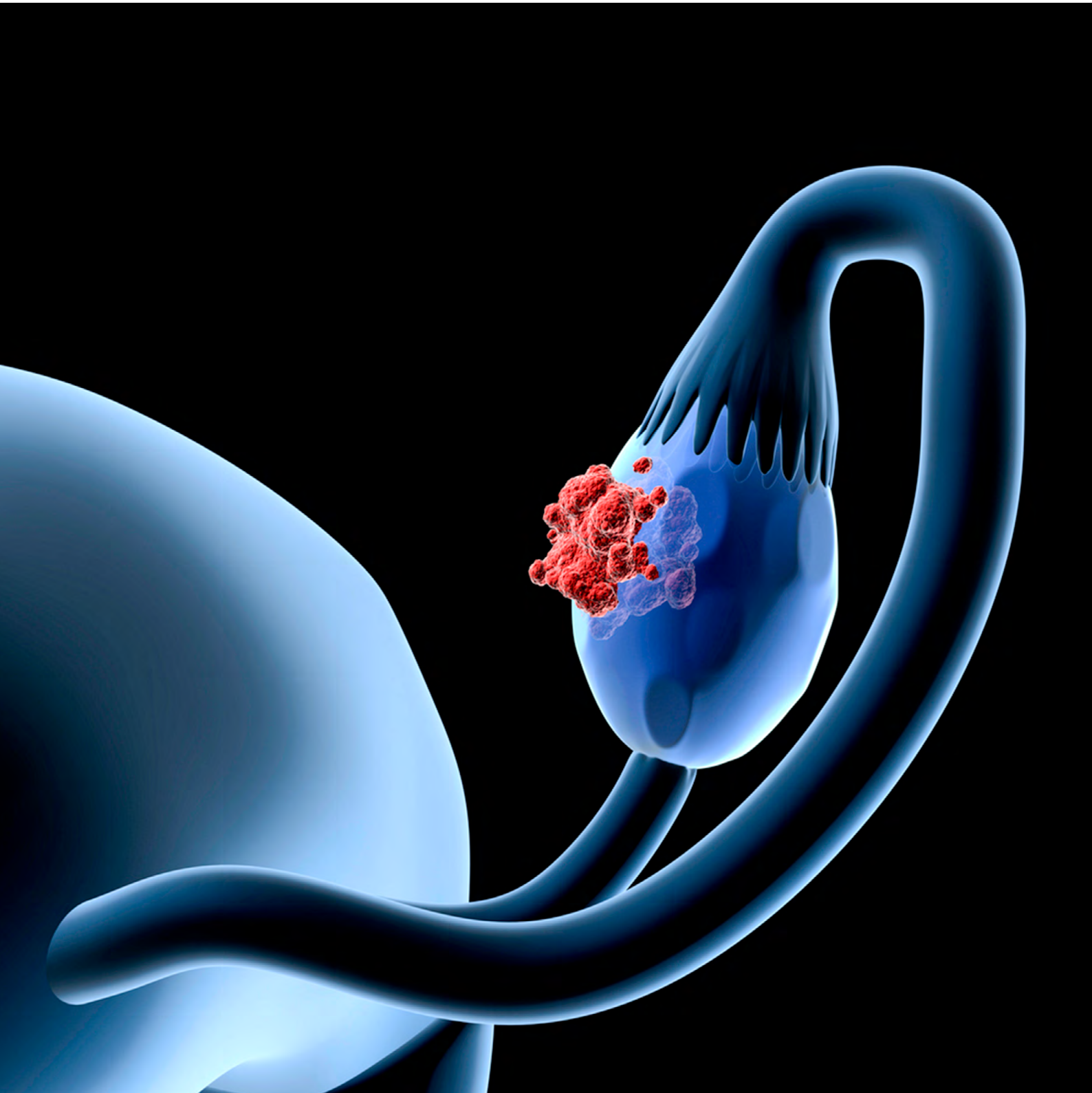

National Ovarian Cancer Audit State of the Nation Report 2024

An audit of care received by women diagnosed with ovarian cancer
in England in 2021 and in Wales in 2022

Published September 2024





NOCA

National Ovarian
Cancer Audit

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Royal College
of Surgeons
of England

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HQIP

Healthcare Quality
Improvement Partnership

The National Cancer Audit Collaborating Centre (NATCAN) is commissioned by the **Healthcare Quality Improvement Partnership (HQIP)** as part of the National Clinical Audit and Patient Outcomes Programme (NCAPOP). NATCAN delivers national cancer audits in non-Hodgkin lymphoma, bowel, breast (primary and metastatic), oesophago-gastric, ovarian, kidney, lung, pancreatic and prostate cancers. HQIP is led by a consortium of the Academy of Medical Royal Colleges and the Royal College of Nursing. Its aim is to promote quality improvement in patient outcomes, and in particular, to increase the impact that clinical audit, outcome review programmes and registries have on healthcare quality in England and Wales. HQIP holds the contract to commission, manage and develop the National Clinical Audit and Patient Outcomes Programme (NCAPOP), comprising around 40 projects covering care provided to people with a wide range of medical, surgical, and mental health conditions. The programme is funded by NHS England, the Welsh Government and, with some individual projects, other devolved administrations and crown dependencies.

<https://www.hqip.org.uk/national-programmes>



BRITISH
GYNAECOLOGICAL
CANCER
SOCIETY

The British Gynaecological Cancer Society (BGCS) is the professional home of health providers working and researching the area of gynaecological cancers. The BGCS members consist of medical practitioners, clinical nurse specialists and other allied professionals, including scientists who have an interest in gynaecological cancers. Registered Charity no: 290959.



NDRS

NATIONAL DISEASE REGISTRATION SERVICE

This work uses data that has been provided by patients and collected by the NHS as part of their care and support. For patients diagnosed in England, the data is collated, maintained and quality assured by the National Disease Registration Service (NDRS), which is part of NHS England. Access to the data was facilitated by the NHS England Data Access Request Service.



GIG
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WALES

Rhwydwaith
Canser Cymru
Wales Cancer
Network

NHS Wales is implementing a new cancer informatics system. As a result, the quality and completeness of data from Wales is likely to have been impacted due to implementation of this new system across multiple NHS organisations (Health Boards), which has resulted in data being supplied by both old and new systems. Additionally, and reflecting the uncertainty of data quality, the data submitted to the audit may not have undergone routine clinical validation prior to submission to the Wales Cancer Network (WCN), Public Health Wales.

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1. Introduction

The [National Ovarian Cancer Audit \(NOCA\)](#) aims to evaluate the patterns of care and outcomes for women with ovarian cancer in England and Wales, and to support services to improve the quality of care for these women. Ovarian cancer affects the ovaries. It mostly affects women, but it can affect anyone who has ovaries. This State of the Nation (SotN) report publishes information on the care received by women diagnosed with ovarian cancer in England in 2021 and in Wales in 2022. It is the audit's first annual assessment of NHS services. It aims to share good practice and highlight where care can be improved.

The care for women with ovarian cancer is informed by various national guidelines. [NOCA](#) evaluates care for women with ovarian cancer against standards derived from guidelines for ovarian cancer ([NG12](#) & [CG122](#)) that were published by the National Institute for Health and Clinical Excellence (NICE), which include recommendations for the recognition and referral pathways and the treatment of early (stage 1) and advanced (stage 2 to 4) ovarian cancer. International¹ and national² professional societies have also published recommendations on the management of ovarian cancer. More recently, NICE published interventional procedures guidance ([IPG757](#)) on maximal cytoreductive surgery, which supports the use of this surgery in accredited specialised centres for women with advanced ovarian cancer. Guidelines on managing familial and genetic risk were published in 2024 by [NICE](#) and the [British Gynaecological Cancer Society \(BGCS\)](#).

NICE has also published several technology appraisals on chemotherapy treatment of early and relapsed ovarian cancer and a number of appraisals are [in progress](#). From these, and in consultation with key stakeholders, including women with lived experience of ovarian cancer and NOCA's Clinical Reference Group, we have developed five quality improvement goals and a set of associated performance indicators. These performance indicators align closely with the performance indicators suggested by BGCS using Ovarian Cancer Audit Feasibility Pilot data³. Additional materials that accompany this report are available on the [NOCA](#)

[website](#). These materials include data tables for individual NHS organisations, a description of the audit methods, a glossary of terms and an action plan template to support local quality improvement (QI). Healthcare professionals are encouraged to review the findings of this report, explore the results for their integrated gynaecological cancer system (i.e., 'hub and spoke' configuration) presented in the data tables on the NOCA website, and identify opportunities where the ovarian cancer care that they provide can be improved. A summary of this report for patients and the public will be made available on the audit's webpages.

The audit uses information that is routinely collected by the NHS as part of the service that the NHS provides⁴. For women treated in England, the data are collated, maintained and quality assured by NHS England's National Disease Registration Service ([NDRS](#)). For women treated in Wales, data are provided by Wales Cancer Network ([WCN](#))⁵, using the Cancer Network Information System Cymru (Canisc) electronic patient record system. For full details of the data and methods used within this report, please see the [NOCA Methodology document](#).

The care described for women diagnosed with ovarian cancer in England in 2021 and in Wales in 2022 will reflect the changes introduced because of the COVID-19 pandemic and can be 'atypical' to some degree compared to the usual ovarian cancer care pathway.

The SotN report uses National Cancer Registration Data (NCRD) for England, the 'gold standard' registration dataset that draws on a range of data sources and relies on enhanced processing by cancer registration officers and follow-up with NHS trusts. The Rapid Cancer Registration Dataset ([RCRD](#)) is not currently used in SotN. The RCRD includes proxy tumour registrations with associated data. It provides a quicker source of data on cancer registrations but is of lower quality than the NCRD. To further support quality improvement activities, NOCA publishes quarterly reports of data quality metrics based on RCRD and, from October 2024 (England only), will publish a subset

1 [Ledermann J A, Matias-Guiu X, Amant F, Concin N, Davidson B, Fotopoulou C, et al. ESGO-ESMO-ESP consensus conference recommendations on ovarian cancer: pathology and molecular biology and early, advanced and recurrent disease. Ann Oncol. 2024 Mar;35\(3\):248-266.](#)

2 [Moss E, Taylor A, Andreou A, Ang C, Arora R, Attygalle A, et al. British Gynaecological Cancer Society \(BGCS\) ovarian, tubal and primary peritoneal cancer guidelines: Recommendations for practice update 2024. European Journal of Obstetrics & Gynecology and Reproductive Biology. 10.1016/j.ejogrb.2024.06.025.](#)

3 [Sundar S, Nordin A, Morrison J, Wood N, Ghaem-Maghami S, Nieto J, et al. British Gynaecological Cancer Society Recommendations for Evidence Based, Population Data Derived Quality Performance Indicators for Ovarian Cancer. Cancers. 2023;15\(2\):337.](#)

4 The audits in NATCAN do not 'collect' clinical data. The cancer audits utilise the nationally mandated flows of data from hospitals to the National Disease Registration Service (NDRS) in NHSE and the Wales Cancer Network in Public Health Wales, thereby minimising the burden of data collection on provider teams.

5 NHS Wales is part way through a cancer informatics implementation programme which is designed to improve the data capture and reporting capabilities of NHS Wales. This ongoing implementation is impacting the data quality within NHS Wales in the short term with multiple systems being used and different implementation dates across cancer sites and organisations resulting in a complex data landscape. NHS Wales has committed to continue to submit audit data annually until data submissions are sourced exclusively from the new cancer informatics solution. This will be from 2026 onwards that NHS Wales will be able to supply quarterly data using this new integrated, and more accessible digital platform.

of performance indicators using cancer registrations from RCRD. These quarterly reports are work in progress and we anticipate that they will be further developed in the next 12 months. The [NOCA website](#) also provides access to other sources of information about ovarian cancer.

In this first SotN report we present:

- The results of four performance indicators against four quality improvement goals. In NOCA's Quality Improvement Plan more quality improvement goals and performance indicators are mentioned and in future SotN reports the number of performance indicators will increase depending on the completeness and quality of the data available to NOCA (e.g., performance indicators related to molecular diagnostics and cytoreductive surgery). When interpreting differences between England and Wales and between integrated gynaecological cancer hub and spoke systems, one should be aware that these results are not adjusted for potential differences in case-mix (e.g., age, stage, grade, morphology, BRCA status⁶, deprivation status, performance status, and comorbidity).

- The completeness of the recording of data items in national cancer registration systems that are essential for a national audit of ovarian cancer care, including stage, grade, performance status and morphology based on histology or cytology.

NOCA is part of the [National Cancer Audit Collaborating Centre \(NATCAN\)](#), a new national centre of excellence to strengthen NHS cancer services by looking at treatments provided for cancer patients and their outcomes across England and Wales. NATCAN was set up on 1 October 2022 to deliver six new national cancer audits, including kidney, ovarian, pancreatic, breast (two separate audits in primary and metastatic disease) and non-Hodgkin lymphoma. Existing national audits of care for people with [prostate](#), [lung](#), [bowel](#), and [oesophago-gastric](#) cancers moved into NATCAN in 2023. The centre is commissioned by the Healthcare Quality Improvement Partnership (HQIP) on behalf of NHS England and the Welsh Government. More information about the national cancer audits for England and Wales can be found at www.natcan.org.uk and in our [FAQs](#). FAQ #17 provides information on outliers.

6 The presence of specific variants in BRCA genes increases a woman's chance of developing ovarian cancer.

2. Infographic



NOCA

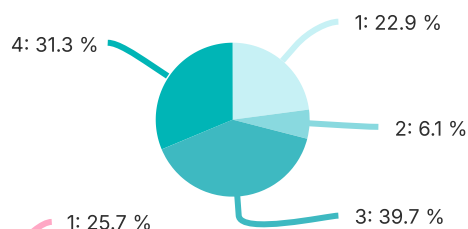
National Ovarian
Cancer Audit

Diagnosis & staging

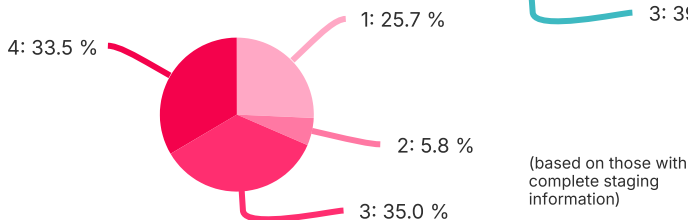
5,735 diagnoses of ovarian cancer in England in 2021

293 diagnoses of ovarian cancer in Wales in 2022
(excluding borderline ovarian tumours)

Stage in England in 2021



Stage in Wales in 2022



Mean age at diagnosis

England in 2021

66.6
years

Wales in 2022

65.8
years

Emergency admissions



Approximately four out of ten women diagnosed with ovarian cancer in England in 2021 and in Wales in 2022 had an emergency admission 28 days prior to diagnosis.

Receipt of any treatment (surgery and/or chemotherapy)

Approximately one out of four women diagnosed with stage 2 to 4 or unstaged ovarian cancer in England in 2021 and in Wales in 2022 did not have any treatment recorded.



Platinum-based chemotherapy

Approximately one out of three women diagnosed in England in 2021 with stage 2 to 4 or unstaged epithelial ovarian cancer did not have any platinum-based chemotherapy recorded.



One-year survival

England in 2021



Approximately seven out of ten women diagnosed with ovarian cancer survived at least one year after diagnosis.

Wales in 2022



Approximately three out of four women diagnosed with ovarian cancer survived at least one year after diagnosis.

(based on crude estimates and it does not account for differences in case-mix)

3. Recommendations

Recommendation	Audience	Audit findings	Quality Improvement Goal	National guidance/standards/resources
<p>1. Reduce the current rate of emergency admissions by:</p> <p>(i) Improving efforts to increase symptom awareness amongst women and primary care professionals.</p> <p>(ii) Reviewing diagnostic pathways to improve timely testing.</p>	<p>England: NHS England, Cancer Alliances working with integrated gynaecological cancer systems⁷ and trusts.</p> <p>Wales: Health Boards working with integrated gynaecological cancer systems.</p>	<p>Performance indicator 1: 41.4% of women diagnosed in England in 2021 and 40.6% diagnosed in Wales in 2022 had an emergency admission within 28 days prior to diagnosis.</p>	<p>Goal #1: Increase the proportion of patients receiving timely diagnosis and treatment decisions.</p>	<p>Women can be diagnosed late with advanced disease due to delays in presenting for medical care, difficulties in access to care, delays in primary care, or delays in secondary care⁸. The short-term mortality report from the Ovarian Cancer Audit Feasibility Pilot (OCAFP) showed that women diagnosed via an emergency presentation were four times more likely to die within two months of diagnosis than those diagnosed via the urgent suspected cancer referral system.</p> <p>Our data show that approximately 40% of women with ovarian cancer have an emergency admission 28 days prior to diagnosis which implies that there is considerable scope to improve outcomes by enhancing symptom awareness, increasing access to primary care and increasing the number of women diagnosed through rapid access pathways. Symptom triggered testing and fast track pathways are associated with low volume disease and early-stage diagnosis⁹. Promoting awareness amongst women and health care professionals in primary care through collaboration with cancer alliances and cancer charities will facilitate this.</p>
<p>2. Review the percentage of women with stage 2 to 4, or unstaged ovarian cancer who receive treatment (any type), explore and address some of the reasons behind the variation across integrated gynaecological cancer systems.</p>	<p>England: Cancer Alliances working with integrated gynaecological cancer systems.</p> <p>Wales: Health Boards working with integrated gynaecological cancer systems.</p>	<p>Performance indicator 2: 72.7% of women diagnosed in England in 2021 and 76.7% in Wales in 2022 had any treatment (i.e., surgery and/or chemotherapy) recorded between one month prior and nine months following diagnosis.</p>	<p>Goal #3: Increase the proportion of patients receiving surgery.</p> <p>Goal #4: Increase the proportion of patients receiving chemotherapy.</p>	<p>Surgery and platinum-based chemotherapy is the standard of care for these women. The short-term mortality report from the OCAFP showed that 22.2% of all women with ovarian cancer, regardless of stage, did not have any treatment recorded between one month prior and nine months following diagnosis. Those women were also more likely to die within 2 months following diagnosis (56.9%) than women who received treatment.</p>

7 The main organisational unit for audit reporting is the integrated gynaecological cancer system. This was recommended as a level for reporting performance indicators in the British Gynaecological Cancer Society's recommendations for evidence-based, population data derived quality performance indicators for ovarian cancer. This choice of unit acknowledges that decisions about ovarian cancer care are not always attributable to an individual NHS Trust such as the trust or hospital where a woman is diagnosed. It also avoids the problem of reporting indicators for individual trusts or hospitals that may diagnose a small number of patients each year.

8 [Abel GA, Mendonca SC, McPhail S, Zhou Y, Ellis-Brookes L, Lyratzopoulos G. Emergency diagnosis of cancer and previous general practice consultations: insights from linked patient survey data. Br J Gen Pract. 2017 Jun;67\(659\):e377-e387.](#)

9 [Kwong FLA, Kristunas C, Davenport C, Deeks J, Mallett S, Agarwal R, et al. Symptom-triggered testing detects early stage and low volume resectable advanced stage ovarian cancer. International Journal of Gynecological Cancer Published Online First: 13 August 2024. doi: 10.1136/ijgc-2024-005371.](#)

Recommendation	Audience	Audit findings	Quality Improvement Goal	National guidance/standards/resources
3. Review the use of platinum-based chemotherapy in women with epithelial ovarian cancer (stage 2 to 4, or unstaged), explore and address some of the reasons behind the variation across integrated gynaecological cancer systems.	England: Cancer Alliances working with integrated gynaecological cancer systems.	Performance indicator 3: 65.7% of women diagnosed in England in 2021 with epithelial ovarian cancer were recorded as receiving platinum-based chemotherapy one month prior to three months following diagnosis (IQR across integrated gynaecological cancer systems 60.5% to 70.4% ¹⁰).	Goal #4: Increase the proportion of patients receiving chemotherapy.	First-line chemotherapy treatment in ovarian cancer should include a platinum-based compound either in combination or as a single agent.
4. Review one-year survival in women diagnosed with ovarian cancer, explore and address some of the reasons behind the variation across integrated gynaecological cancer systems.	England: Cancer Alliances working with integrated gynaecological cancer systems. Wales: Health Boards working with integrated gynaecological cancer systems.	Performance indicator 4: 69.4% of women diagnosed in England in 2021 and 74.4% in Wales in 2022 were alive one year after diagnosis (IQR across integrated gynaecological cancer systems 64.2% to 72.5% in England; minimum 63.0% and maximum 85.6% across three integrated gynaecological cancer systems in Wales).	Goal #5: Improve rates of survival and reduce variation in survival.	One-year net survival according to the profile and treatment report from the OCAFP in women diagnosed between 2015 and 2019 in England was 68.4%. An international study has demonstrated similar results and has reported that one-year net survival in women diagnosed between 2010 and 2014 in the UK was 70.3% which lags behind countries with similar health systems ¹¹ , i.e., Australia 78.5%, Canada 72.6%, Denmark 77.4%, New Zealand 71.5%, and Norway 77.5%.
5. Improve the completeness and quality of data items recorded in the national cancer datasets (e.g. percentage of women with recorded diagnosis based on histology or cytology in the national cancer registration data and percentage of women with recorded staging information).	England: Integrated gynaecological cancer systems and trusts. Wales: Integrated gynaecological cancer systems and Health Boards.	Data completeness: 12.0% of women with ovarian cancer in England in 2021 and 11.0% in Wales in 2022 did not have histology or cytology recorded in the national cancer registration data and 28.5% women in England and 12.3% in Wales did not have staging information recorded.	Goal #1-5	NHS organisations have an obligation to submit accurate and timely data to the English National Disease Registration Service (NDRS) and Wales Cancer Network (WCN). The Cancer Outcome and Services Data set (COSD) has been the national standard for reporting cancer in the NHS in England since January 2013. Feedback reports for the data submitted are available through the CancerStats website. COSD is the main source for the rapid cancer registration dataset. Improved completeness of this dataset is required to ensure quarterly reporting. The Welsh Health Circular (NHS Wales) mandates high quality data submissions for the national cancer audits.

¹⁰ This performance indicator was not available for Wales due to absence of data for chemotherapy regimens.

¹¹ [Arnold M, Rutherford MJ, Bardot A, Ferlay J, Andersson TM, Myklebust TÅ, et al. Progress in cancer survival, mortality, and incidence in seven high-income countries 1995-2014 \(ICBP SURVMARK-2\): a population-based study. Lancet Oncol. 2019 Nov;20\(11\):1493-1505.](#)

4. Data completeness and patient characteristics

4.1 Data collection

In this report, we evaluate the care provided to women with ovarian cancer diagnosed in England in 2021 and in Wales in 2022. 7,385 women aged 18 years and older with newly diagnosed ovarian cancer¹² in the NHS (n=7,039 in England in 2021 and n=346 diagnosed in Wales in 2022) were eligible to be included. Of these women, 848 (12.0%) in England and 38 (11.0%) in Wales had a diagnosis not based on histology or cytology. In England, 2,008 (28.5%) women did not have their cancer stage at diagnosis recorded. In Wales, 52 (15.0%) women did not have their cancer stage reported.

We report on the care provided to 6,028 women with ovarian cancer (n=5,735 in England, n= 293 in Wales) after excluding women with borderline tumours¹³ or whose ovarian cancer diagnosis was based on death certificate only (n=1,304 in England, n=53 in Wales).

4.2 Data completeness

Key messages: For a considerable number of women with ovarian cancer, information regarding stage, grade and performance status was not recorded in national datasets.

Treatment options for women are influenced by the characteristics of their cancer (stage and grade at diagnosis), their general health and fitness. The recording of this information in national cancer datasets is vital to understand patterns of care. Levels of completeness were excellent for age but were lower for other data items (see Table 1), particularly stage, grade and performance status.

Table 1. Data completeness for women with newly diagnosed ovarian cancer in England in 2021 and Wales in 2022.

Item	Completeness	
	England 2021 (n=5,735)	Wales 2022 (n=293)
Age	100%	100%
Ethnicity	93.9%	46.1%
Stage	74.9%	87.7%
Grade	67.8%	n/a
Performance status	61.4%	80.9%

Data were impacted by the COVID-19 pandemic and can be atypical to some degree during 2020-2021, n/a = not available.

4.3 Patient characteristics

Key messages: Approximately three out of four women were diagnosed with stage 2 to 4 ovarian cancer in England and in Wales.

NOCA included 6,028 women diagnosed with ovarian cancer in England in 2021 (n=5,735) and Wales in 2022 (n=293) and a summary of their characteristics is given in Table 2. Please note that women with borderline tumours were not included. Mean age at diagnosis was 66.6 years (IQR: 57-77) in England and 65.8 years (IQR: 57-76) in Wales. Of the women who had their performance status recorded, 1,866 out of 3,521 in England (53.0%) and 72 out of 237 in Wales (30.5%) were reported as “fully active”.

In England, 77.1% of women had stage 2 to 4 ovarian cancer and the corresponding percentage was 74.3% of women in Wales. In England, 79.9% of women had a high-grade ovarian cancer. The majority of women had epithelial ovarian cancer (82.7% in England and 80.3% in Wales).

12 Women with ovarian cancer (ICD-10: C56), fallopian tube cancer (C57), primary peritoneal carcinoma (C48) or neoplasms of the ovary of uncertain or unknown behaviour (D39.1), excluding women with a borderline tumour derived from morphology data.

13 Borderline malignant (“borderline”) ovarian tumours have historically been recorded as ovarian cancers, though their malignant potential is now understood to be lower than the rest of the group.

Table 2. Characteristics of women diagnosed with ovarian cancer in England in 2021 and Wales in 2022.

	England 2021	Wales 2022
Number of women		
	5,735	293
Age at diagnosis (years)		
18-29	1.5%	1.4%
30-39	3.0%	3.8%
40-49	7.4%	9.6%
50-59	17.8%	15.4%
60-69	22.8%	23.9%
70-79	28.8%	32.4%
>79	18.8%	13.7%
Index of multiple deprivation quintile		
1 (most deprived)	17.0%	13.9%
2	18.3%	18.0%
3	20.7%	25.8%
4	21.9%	19.5%
5 (least deprived)	22.1%	22.9%
Not recorded (E=0, W=26)		
Performance status (reported E=3,521, W=237)		
0 ("fully active")	53.0%	30.4%
1	29.0%	45.2%
2	10.3%	13.1%
3	5.9%	10.1%
4 ("bedbound")	1.8%	1.3%
Not recorded (E=2,214, W=56)		
Stage at diagnosis (reported E=4,293, W=257)		
Stage 1	22.9%	25.7%
Stage 2	6.1%	5.8%
Stage 3	39.7%	35.0%
Stage 4	31.3%	33.5%
Not recorded (E= 1,442, W= 36)		
Grade (reported E=3,886, W=n/a)		
Low	13.5%	n/a
Moderate	6.6%	n/a
High	79.9%	n/a
Not recorded (E=1,849, W=n/a)		
Morphology		
Malignant epithelial	82.7%	80.3%
Clear cell carcinoma	4.3%	5.5%
Endometrioid carcinoma	6.0%	5.5%
Mucinous carcinoma	5.6%	7.2%
Other malignant epithelial	12.5%	14.0%
Serous carcinoma	54.3%	48.1%
Miscellaneous & unspecified	9.6%	8.2%
Non-specific site	2.7%	8.2%
Sex cord-stromal & germ cell	5.0%	3.4%
Percentages calculated from known values. Data were impacted by the COVID-19 pandemic and can be atypical to some degree during 2020-2021. E = England, W = Wales, n/a = not available.		

5. Performance indicators

5.1 Performance indicator 1: Emergency admission prior to diagnosis

Key messages: Approximately four out of ten women in England and in Wales had an emergency admission 28 days prior to diagnosis.

Of the 5,735 women with ovarian cancer diagnosed in England in 2021, 2,375 (41.4%) had an emergency admission within 28 days prior to diagnosis. Of 293 women diagnosed in Wales in 2022, 119 (40.6%) had an emergency admission. These data indicate that their symptoms immediately before diagnosis were so severe or that there were difficulties in access to care, delays in primary care, or delays in secondary care¹⁴ which made access to acute care necessary. This percentage varied across integrated gynaecological cancer systems (IQR 37.5% to 44.8% across the 40 integrated gynaecological cancer systems in England; lowest percentage 32.3% and highest 45.9% across the three integrated gynaecological cancer systems in Wales).

5.2 Performance indicator 2: Receipt of any treatment (surgery and/or chemotherapy)

Key messages: Approximately one out of four women newly diagnosed in England or in Wales with stage 2 to 4 or with unstaged ovarian cancer did not have any treatment recorded.

For women with stage 2 to 4 or unstaged ovarian cancer, 3,454 of 4,751 (72.7%) in England in 2021, and 174 of 227 (76.7%) in Wales in 2022 received any type of treatment (surgery and/or chemotherapy) between one month before and nine months after the recorded date of diagnosis. This percentage varied across integrated gynaecological cancer systems (IQR 70.0% to 77.0% across the 40 integrated gynaecological cancer systems in England; lowest percentage 65.9% and highest 79.5% across the three integrated gynaecological cancer systems in Wales).

5.3 Performance indicator 3: Receipt of platinum-based chemotherapy

Key messages: Approximately one out of three women newly diagnosed in England with stage 2 to 4 or unstaged epithelial ovarian cancer did not receive platinum-based chemotherapy.

With respect to women with stage 2 to 4 or unstaged epithelial ovarian cancer, 2,590 of 3,943 (65.7%) received platinum-based chemotherapy in England in 2021, between one month before and three months after the recorded date of diagnosis. Information about type of chemotherapy was not available for Wales. This percentage varied across integrated gynaecological cancer systems (IQR 61.0% to 70.4% across the 40 integrated gynaecological cancer systems in England).

5.4 Performance indicator 4: One-year survival

Key messages: Approximately seven out of ten women diagnosed with ovarian cancer survived at least one year after diagnosis in England and three out of four in Wales.

Of the 5,735 women diagnosed with ovarian cancer in England in 2021, 3,979 (69.4%) survived at least one year after diagnosis and of the 293 women diagnosed in Wales in 2022, 218 (74.4%) survived at least one year after diagnosis. Overall one-year survival varied across integrated gynaecological cancer systems (IQR 64.9% to 73.3% across the 40 integrated gynaecological cancer systems in England; lowest percentage 63.0% and highest 85.6% across the three integrated gynaecological cancer systems in Wales). It is important to note that these system-specific results are not adjusted for differences in case-mix (e.g., age, stage, grade, morphology, BRCA status, deprivation status, performance status, and comorbidity), which may account for some of the differences in survival between England and Wales and between the integrated gynaecological cancer systems.

14 [Abel GA, Mendonca SC, McPhail S, Zhou Y, Elliss-Brookes L, Lyratzopoulos G. Emergency diagnosis of cancer and previous general practice consultations: insights from linked patient survey data. Br J Gen Pract. 2017 Jun;67\(659\):e377-e387.](#)

Table 3. Performance indicators of women diagnosed with ovarian cancer in England in 2021 and Wales in 2022

		England 2021		Wales 2022	
		Number	Percentage	Number	Percentage
Performance indicator 1: Women diagnosed with ovarian cancer who had an emergency admission within 28 days prior to diagnosis.	Denominator: Women diagnosed with ovarian cancer (excluding borderline tumours).	2,375/5,735	41.4%	119/293	40.6%
			IQR: 37.5% to 44.8%		Lowest: 32.3% Highest: 45.9%
Performance indicator 2: Women diagnosed with stage 2 to 4 or unstaged ovarian cancer who receive any type of treatment (surgery and/or chemotherapy) one month prior to nine months following diagnosis.	Denominator: Women diagnosed with stage 2 to 4 or unstaged ovarian cancer (excluding borderline tumours).	3,454/4,751	72.7%	174/227	76.7%
			IQR: 70.0% to 77.0%		Lowest: 65.9% Highest: 79.5%
Performance indicator 3: Women diagnosed with stage 2 to 4 or unstaged epithelial ovarian cancer who receive platinum-based chemotherapy one month prior to three months following diagnosis.	Denominator: Women diagnosed with stage 2 to 4 or unstaged epithelial ovarian cancer (excluding borderline tumours).	2,590/3,943	65.7%	n/a	n/a
			IQR: 61.0% to 70.4%		n/a
Performance indicator 4: Women diagnosed with ovarian cancer who are alive one year following the diagnosis.	Denominator: Women diagnosed with ovarian cancer (excluding borderline tumours).	3,979/5,735	69.4%	218/293	74.4%
			IQR: 64.9% to 73.3%		Lowest: 63.0% Highest: 85.6%
<p>Borderline: Borderline malignant ("borderline") ovarian tumours have historically been recorded as ovarian cancers, though their malignant potential is now understood to be lower than the rest of the group, IQR: interquartile range.</p> <p>Difference between England and Wales should be interpreted with caution as these results are not adjusted for differences in case-mix and confidence intervals are expected to be wide due to the small number of patients in Wales.</p> <p>Data were impacted by the COVID-19 pandemic and can be atypical to some degree during 2020-2021.</p>					

6. Commentary

In the first NOCA SotN report, we provide a summary of our analysis of four performance indicators covering four quality improvement goals in women newly diagnosed with ovarian cancer in England in 2021 and in Wales in 2022 (Table 3). These results reflect both NOCA's ambition captured in its Quality Improvement Plan and the limitations of the availability and completeness of the national registration data. We expect that both the Quality Improvement Plan and the completeness of the data available to us will change over time so that the clinical relevance of our SotN report will become stronger in the future.

With respect to data completeness, we found that the recording of stage, grade and performance status was missing for a considerable number of women. We will work with the NDRS in England and WCN in Wales in order to improve the completeness of these data items, especially stage and morphology based on histology or cytology, which are essential for the evaluation of ovarian cancer care.

Cancer care providers should aim to identify areas for improvement in data completeness. For example, it would be helpful if clinicians involved in the care of women with ovarian cancer ensure that the data reported on their behalf are both complete and accurate.

Our SotN report demonstrates that:

- Four out of ten women in England and in Wales had an emergency admission in the 28 days prior to their ovarian cancer diagnosis. Women admitted as an emergency have worse cancer outcomes than women diagnosed via non-emergency routes. This highlights the urgency to review and where possible improve the timeliness of the diagnostic and referral pathways of ovarian cancer within the Cancer Alliances and Welsh Health Boards and increase symptom awareness amongst patients and primary care professionals.
- One out of four women newly diagnosed in England or in Wales with stage 2 to 4 or with unstaged ovarian cancer did not have any treatment recorded. Some women might not receive treatment because of their advanced cancer stage or poor clinical condition. However, there may also be women whose cancer is potentially undertreated. Therefore, further investigations are required to understand better to what extent and how the percentage of women not receiving treatment can be reduced.

- One out of three women newly diagnosed in England with stage 2 to 4 or unstaged epithelial ovarian cancer did not receive platinum-based chemotherapy. These data were not available for Wales. This highlights that the NICE guidance for chemotherapy in ovarian cancer, recommending platinum-based chemotherapy for all these women is not always followed. Possible explanations could be that some women are in a very poor clinical condition or could be related to potential undertreatment.
- Seven out of ten women diagnosed with ovarian cancer survived at least one year after diagnosis in England and three out of four in Wales. The difference between England and Wales should be interpreted with caution as these results are not adjusted for differences in case-mix (especially stage, grade, performance status, comorbidity, deprivation and germline BRCA status). Also, the reported variation in survival outcomes across the integrated gynaecological cancer systems does not take into account potential differences in case-mix. Specifically, the use of poly-ADP ribose polymerase inhibitors, known as PARP inhibitors, in women with BRCA mutations appears to provide long-term enduring responses. A key priority for NOCA is therefore the development of a risk model that supports the production of audit outcomes adjusted for differences in case-mix.

The COVID-19 pandemic will have affected the care that women with newly diagnosed ovarian cancer received in England in 2021 and in Wales in 2022. This could both have affected the percentage of women admitted as an emergency prior to diagnosis as well as the care they received. Future SotN reports as well as the quarterly reports will help to get a more precise and accurate picture of impact of the COVID-19 pandemic.

Despite issues with data completeness, we are confident that the four clinical indicators published in this first SotN report are clinically relevant and methodologically robust. Therefore, we encourage ovarian cancer care providers to respond to our four clinical recommendations. NOCA envisages that these indicators can also be used by patient charities and support groups when they have conversations with cancer care providers about how ovarian cancer care can be further improved. Also, women, their families and wider support networks may want to consider our findings when they discuss their treatment options with their clinicians.

Our finding that approximately 40% of women with ovarian cancer had an emergency admission immediately before their diagnosis suggest that outcomes can be improved by changes in the diagnostic pathways in England and Wales. Due to the complexity of accurately measuring the emergency presentation as the route to diagnosis, NOCA decided to report the percentage of emergency admissions as the proportion of women with a diagnosis of ovarian cancer who had an emergency admission in 28 days before the recorded date of diagnosis. Women who had an emergency admission are known to have poor outcomes with [one in three women likely to die within 2 months following the diagnosis](#). Reducing this percentage will require concerted and coordinated efforts across Integrated Care Boards and Cancer Alliances in England and Health Boards in Wales as well as reaching out to communities and primary care providers.

Due to issues with the data completeness related to the grade of the epithelial ovarian cancer, NOCA decided to report the percentage of women with epithelial ovarian cancer (stage 2 to 4, or unstaged) receiving platinum-based chemotherapy.

Improving the proportion of women who undergo definitive treatment (i.e., a combination of surgery and platinum-based chemotherapy) will need several aspects of the therapeutic pathway to be addressed. This may include more frequent use of prehabilitation¹⁵, a wider specialist involvement in multidisciplinary team meetings recommending treatment options, and better access to appropriate genetic testing, which have all been identified as initiatives that can potentially improve outcomes.

In this first SotN report, we did not report on three performance indicators highlighted in NOCA's Quality Improvement Plan. These indicators relate to germline panel and homologous recombination deficiency testing as well as cytoreductive surgery. NOCA expects to be able to report on these three indicators in forthcoming reports when data pertaining to these indicators will become available for analysis.

Whilst we have reported national figures in this report, [supplementary tables](#) provide more information about how integrated gynaecological cancer systems variation for our four indicators.

Going forward, NOCA will further develop its SotN report alongside the quarterly reports. The content and layout of these reports will be continuously updated so that it can inform and guide quality improvement initiatives for ovarian cancer care in England and Wales. We also envisage that we will rely more and more on rapid registration data which will increase the timeliness of reporting. That will also enable NOCA to demonstrate how integrated gynaecological cancer systems respond to specific national quality improvement initiatives, in other words "closing the audit cycle" which is likely to happen for the first time in 2025.

¹⁵ Process of improving functional capability prior to treatment by promoting healthy behaviours.