

**NOGCA** | National Oesophago-Gastric  
Cancer Audit

# National Oesophago- Gastric Cancer Audit

## Scoping Document

November 2023

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**NATCAN**

National Cancer Audit  
Collaborating Centre



Royal College  
of Surgeons  
of England  
ADVANCING SURGICAL CARE

LONDON  
SCHOOL of  
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**GIG**  
CYMRU  
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Canser Cymru  
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**Citation for this document:**

National Oesophago-Gastric Cancer Audit (NOGCA)  
Scoping Document 2023  
London: Royal College of Surgeons of England, 2023.

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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, the Royal College of Nursing, and National Voices. 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>

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# National Oesophago-Gastric Cancer Audit (NOGCA)

As of 1 June 2023, NOGCA moved into the National Cancer Audit Collaborating Centre (NATCAN) at the Clinical Effectiveness Unit (CEU) of the Royal College of Surgeons of England (RCS England). This document summarises the proposed scope of NOGCA within NATCAN.

To inform the development of this project scope, NOGCA hosted a meeting with stakeholders in March 2023. Participants at the meeting included stakeholders representing key clinical specialties, cancer data services in England and Wales, patient organisations, quality improvement experts, NHS England, NHS Wales, NQICAN, NATCAN and HQIP, as well as members of the NOGCA project team.

The pre-meeting briefing document and post-meeting summary are included as appendices to this document, and provide more detail about the work that informed the proposed audit scope.

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[Appendix 1: NOGCA Scoping Meeting pre-meeting briefing document](#)

[Appendix 2: NOGCA Scoping Meeting summary document](#)

## 1. Clinical scope of the audit

### 1.1 NOGCA inclusion criteria

- All NHS patients with a histologically confirmed diagnosis of invasive epithelial cancer of the oesophagus, gastro-oesophageal junction (GOJ) or stomach in England and Wales will continue to be eligible for inclusion in NOGCA. These criteria are the same as those currently used by the audit
- Patients diagnosed with high-grade dysplasia (HGD) of the oesophagus will no longer be included in the audit. This is primarily because the audit will now use existing national data flows and receive data from the National Disease Registration Service (NDRS). Oesophageal HGD falls outside the remit of the NDRS and is not a registerable disease, and therefore will not be captured in the datasets available to NOGCA.

### 1.2 NOGCA coverage of care pathway

- The scope of the current audit has been to evaluate the care from the point of cancer diagnosis to the completion of primary treatment delivered in a hospital setting, and the audit will continue this approach. The audit will cover treatments with curative intent as

well as non-curative therapies. The treatment modalities included in the audit will be: surgery, systemic anti-cancer therapy, radiotherapy and endoscopic therapies (endoscopic mucosal resection, stent insertion, etc). Information on the diagnostic and staging process will include: the route to diagnosis, use of (recommended) staging investigations.

- The audit had used its bespoke dataset to collect information on nutrition support and the use of ERAS for patients who have a surgical resection. Data items on nutrition and ERAS are not currently in the national cancer datasets, and these aspects of care will not be examined at the start of the new audit.

### 1.3 Audit priorities

The audit will continue work to engage with medical associations, patient charities and other stakeholders to identify the health care improvement goals for the audit. Initial scoping work has identified a range of options along the care pathway, which are summarised in this section.

- Providing more information for services to monitor and improve the process of early diagnosis was identified as an area for the audit to explore. In particular, delays to referral from primary care has been raised as an issue for patients with OG cancer. Access to the national cancer datasets (including greater access to primary care information) could allow the audit to evaluate the value of indicators on referral delays, such as the time interval between cancer diagnosis and most recent endoscopy prior to diagnosis. Linkage to primary care data could also allow the audit to determine whether treatment decisions in primary care (such as use of proton-pump inhibitors) contribute to delays.
- Another proposal for development is extending the focus of the audit to look at activity later in the care pathway (after initial treatment is completed). For example, concerns have been raised about variation in post-treatment follow-up/surveillance. The national datasets provide opportunities to produce audit indicators that reflect longer-term outcomes but this might be a medium-term goal because a key outcome in evaluating care will be the date of cancer recurrence. Work is ongoing to improve the capture of this data but completeness is still variable.
- With the evolving options for treatment, the audit will need to ensure its methods for describing how patient characteristics influence the complex pathways and outcomes in OG cancer care are up-to-date. In particular, NOGCA will develop its work:
  - a. To understand the impact of frailty<sup>1</sup>, cognition<sup>2</sup>, and socioeconomic deprivation<sup>3</sup> on patient pathways and outcomes. The audit will also develop its work exploring variations in care and outcomes by ethnicity and other health inequality variables (e.g. rural/urban differences in risk of emergency diagnosis as reported in the 2021 Annual Report).
  - b. To understand how age affects treatment patterns for particular groups (such as advanced stage at diagnosis in younger patients).

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<sup>1</sup> Jauhari Y et al. Construction of the secondary care administrative records frailty (SCARF) index and validation on older women with operable invasive breast cancer in England and Wales: a cohort study. *BMJ Open*. 2020 May 5;10(5):e035395.

<sup>2</sup> Kuryba AJ et al. Severity of Dementia and Survival in Patients Diagnosed with Colorectal Cancer: A National Cohort Study in England and Wales. *Clin Oncol (R Coll Radiol)*. 2023 Jan;35(1):e67-e76. doi: 10.1016/j.clon.2022.08.035

<sup>3</sup> National Oesophago-Gastric Cancer Audit. Socioeconomic differences in the impact of oesophago-gastric cancer on survival in England (NOGCA Short Report). Under review.

- c. On the care of patients on non-curative treatment pathways. The case-ascertainment rate for these patients within NOGCA was slightly lower than for patients on curative pathways. The move to using cancer registry data should overcome this issue.<sup>4</sup>
- There will be an increasing use of targeted systemic anti-cancer therapies (such as immunotherapy) as research identifies more biomarkers for patients with OG cancer. As this develops, the audit will use genomics data to explore how different sub-types of OG cancer change the use of systemic anti-cancer treatments.
- With more frequent (quarterly) reporting via an indicator dashboard, NOGCA will be able to provide more timely feedback to OG cancer units on their performance and thereby provide greater support for local quality improvement.
  - a. The audit will need to determine how performance indicators can be reported in this format, applying criteria relating to validity, statistical power, technical feasibility (in particular the availability of data on a quarterly or more frequent basis) and fairness.
  - b. Special consideration will be given to how uncertainty in organisational indicator values is represented, given the relatively small numbers of patients and events that will be included on a quarterly basis.
- A challenge for the audit will be to extend the NOGCA [composite indicator](#) to include non-surgical centres. This will require the identification and development of appropriate non-surgical performance indicators, as well as ensuring that outcomes are assigned to the correct organisation (as patients may move between hospitals for different treatments).
- The audit will explore how patient experience data from the National Cancer Patient Experience Survey can be used to help identify priorities for quality improvement. For example, incorporating information about patients' experience of diagnosis, treatment and care planning, side effects of treatment, and post-treatment support to develop healthcare improvement goals.

## 2. Reporting

On moving into NATCAN, the Audit has been commissioned against a revised set of contract deliverables. Some of these deliverables reflect a new perspective on reporting audit findings. The revised deliverables include:

- 10 page annual "State of the Nation" reports
- More frequent reporting of performance indicators via interactive, publicly available dashboards. These will be refreshed at least quarterly

NOGCA will develop the dashboards with input from the Clinical Reference Group and patient panel, and feedback from NHS OG cancer services, to ensure that the presentation of the indicators enables clinical teams to translate the information into actions/improvement plans.

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<sup>4</sup> National Oesophago-Gastric Cancer Audit. Comparison of patients captures by NOGCA and the National Cancer Registration and Analysis Service (NOGCA Short Report). London: Royal College of Surgeons of England, 2020

NOGCA will continue to produce its annual Patient version of the Annual “State of the Nation” Report.

### 3. Data provision

All cancer audits within NATCAN are designed to use existing national data sources instead of their own datasets collected using a bespoke IT system. It is expected that the “State of the Nation” annual reports will use the “gold-standard” cancer registration datasets, and provider dashboards will be updated using rapid cancer registration data (RCRD).

NOGCA will adopt this audit design principle and adopt processes to ensure the period of transition from using the bespoke audit IT system to using only routine cancer data (2023-2024) is as smooth as possible.

The audit will explore various options for bridging the gaps in data availability and data quality. In particular:

- Currently, pathology data for OG cancer patients collected through NDRS systems are much less complete than equivalent items collected through NOGCA’s data collection system. To ensure continued benchmarking using the audit’s pathology indicators, NOGCA will
  - work with relevant professional organisations (AUGIS) to explore whether these data items can be collected/supplemented from alternative sources (while the quality of pathology data in NDRS datasets improves).
  - work with NDRS and hospitals to ensure cancer teams know how to check the completeness of the pathology data being submitted to the national cancer datasets.
- The change in audit design will mean the loss of information about nutritional support received by patients, which is a critical aspect of care for OG cancer. The audit will work with its Clinical Reference Group and relevant professional associations to explore ways to collect and report this information. We will also work with NDRS to explore how data items about nutritional support can be added to future versions of the Cancer Outcomes and Services Dataset (COSD).
- Development work will be needed to understand how the benefits of providing more timely information from RCRD data can be achieved while minimising the impact of the lower case ascertainment and data completeness.
- The data collection system in Wales (CANISC) is being replaced by a new IT system. One aspect of this change is an increase in the proportion of data items shared by the national cancer datasets in England and Wales. The quality of Welsh data may be affected during the transition period but the Welsh Registry team expect to have audit-quality data in the near future.

### 4. Next steps

With the move of NOGCA into NATCAN, the audit team will undertake the following activities:

- Further analysis to explore the strengths and limitations of the national cancer datasets for reporting on OG cancer care and outcomes. Alongside this, NOGCA will begin discussions with the controllers of the national cancer datasets to explore how the requirements of the audit can be met, both in the immediate and longer term.
- Development of a healthcare improvement strategy to identify quality improvement goals, activities and resources.

- Development of appropriate process and outcome indicators for annual and quarterly reporting.
- Communication of changes to the data flows and audit reporting to all stakeholders, and in particular to the NHS hospitals that submit and use NOGCA data.
- Engagement with different groups of stakeholders, including the audit's Clinical Reference Group and Patient Panel, and relevant organisations such as [UKIOG](#). Over the course of the first year of the new contract, we will be seeking further input from stakeholders on each of the identified areas.

## Appendix 1: NOGCA Scoping Meeting pre-meeting briefing document



# National Oesophago-Gastric Cancer Audit (NOGCA) Scoping Meeting, 29 March 2023

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## 1. Background and purposes of the meeting

### 1.1 Contracting of NOGCA

The current contract for the National Gastrointestinal Cancer Audit Programme (GICAP), which is made up of [NOGCA](#) and the National Bowel Cancer Audit (NBOCA), ends on 31 May 2023. From 1 June 2023, both NOGCA and NBOCA will move into the National Cancer Audit Collaborating Centre (NATCAN) at the Clinical Effectiveness Unit (CEU) of the Royal College of Surgeons of England (RCS England).

### 1.2 The National Cancer Audit Collaborating Centre (NATCAN)

[NATCAN](#) is a new national centre of excellence to strengthen NHS cancer services by looking at treatments and patient outcomes across the country. It was set up on 1 October 2022 to deliver five new national cancer audits. Over time it will deliver all of the national cancer audits in the National Clinical Audit and Patient Outcomes Programme (NCAPOP), and is commissioned by the Healthcare Quality Improvement Partnership (HQIP) on behalf of NHS England and the Welsh Government.

NHS England and the Welsh Government have funded NATCAN for an initial period of three years.

The audits aim to:

1. Provide regular and timely evidence to cancer services of where patterns of care in England and Wales may vary.
2. Support NHS services to increase the consistency of access to treatments and help guide quality improvement initiatives.
3. Stimulate improvements in cancer detection, treatment and outcomes for patients, including survival rates.

### 1.3 Purposes of this scoping meeting

This scoping meeting, run by the NOGCA project team, aims to ensure that the proposed future scope and design of NOGCA within NATCAN considers the needs of stakeholders whilst driving local and national quality improvement in services and outcomes for patients with OG cancer. Specifically, the aims of the meeting are to:

- Discuss the implications of different models of audit
- Review the scope of NOGCA under the new contract
- Identify short- and longer-term priorities for NOGCA.

## 2. Current Scope of NOGCA

NOGCA began in its current form in 2012. The audit aims to:

1. Provide regular and timely evidence to cancer services of where patterns of care in England and Wales may differ.
2. Support NHS services to undertake local quality improvement initiatives.
3. Stimulate improvements in cancer diagnosis, treatment and outcomes for patients that will lead to better survival rates.

The audit evaluates the quality of care in NHS hospitals received by patients diagnosed with oesophageal or stomach cancer in England and Wales, and patients diagnosed with high-grade dysplasia (HGD) of the oesophagus in England. It produces information that gives a clinically detailed representation of the patient pathway from the point of diagnosis to end of primary treatment. Over the past 10 years, the audit has published organisation-level (NHS Trust and local health board) information about OG cancer services, as well as consultant-level outcomes of curative OG cancer surgery.

### 2.1 Organisation of NOGCA

The audit is provided through a partnership that combines clinical leadership, methodological expertise, project management and a secure environment for data collection, storage and analysis, representing the following organisations: Association of Upper Gastrointestinal Surgery of Great Britain and Ireland (AUGIS), Royal College of Radiologists (RCR), British Society of Gastroenterology (BSG), Clinical Effectiveness Unit at the Royal College of Surgeons of England, and NHS England.

The audit team is supported by twice-yearly meetings of stakeholders in its Clinical Reference Group (CRG), which includes clinicians from across the patient pathway, patient representatives, commissioners and funder representatives. NOGCA also has a Patient Panel that meets twice a year, whose members represent several patient organisations.

### 2.2 NOGCA inclusion criteria

All NHS patients with a histologically confirmed diagnosis of invasive epithelial cancer of the oesophagus, gastro-oesophageal junction (GOJ) or stomach in England and Wales are eligible for inclusion in NOGCA. Additionally, patients diagnosed with high-grade dysplasia (HGD) of the oesophagus in England have been included since 2014.

### 2.3 NOGCA reporting

NOGCA drives local quality improvement (QI) by providing information about OG cancer services across several publications and platforms:

- [Annual Reports](#) – describe the national picture of OG cancer care; published alongside several [report tools](#) designed to support local QI.
- [Interactive trust results](#) – enable organisations to interrogate their data and compare with national figures.
- [Composite indicator](#) – summarises performance of OG cancer specialist centres.
- Quarterly Reports – sent directly to hospitals/trusts to support data submission and local QI.
- [Short Reports](#) – in-depth exploration of select topics identified as priorities by stakeholders.

- [Reports for Public and Patients](#) – key findings of Annual Reports aimed at patients and the public, written in collaboration with the NOGCA Patient Panel.
- [Consultant surgeon-level outcomes](#) – published on the AUGIS website as part of the Clinical Outcomes Publication (COP) programme.
- Organisational and [user surveys](#) – provide information about local services and audit processes to inform audit design and data collection.

In addition to the reports and tools above, NOGCA has published a number of [peer-reviewed papers](#), exploring clinical topics and methodological issues in greater depth.

## 2.4 Quality improvement (QI) and impact

NOGCA has a [Quality Improvement Plan](#), which sets out high-level national improvement goals to improve the quality of care delivered to patients with OG cancer. The QI plan builds on the recommendations and areas for improvement highlighted in the Annual Reports and other audit publications. These include goals in relation to audit participation, diagnosis and clinical staging, time to treatment, surgical management and oncological management. The NOGCA website directs providers to QI tools to support implementation.

Impacts on quality improvement include:

- The proportion of HGD patients whose treatment plan is discussed at a specialist MDT meeting has increased, from 86% in 2012-2014 to 93% in 2018-2020.
- Use of enhanced recovery after surgery (ERAS) protocols among patients undergoing curative surgery for OG cancer has increased, from 50% in 2016/17 to 68% in 2019/20. This has shortened the length of hospital stay among patients that had surgery for OG cancer.
- 90-day postoperative mortality among patients undergoing curative surgery for OG cancer has decreased from 4.7% in 2012/13 to 2.7% in 2019/20.
- Positive circumferential margin rates among patients undergoing curative surgery for oesophageal cancer have decreased from 27.8% in 2012/13 to 19.2% in 2019/20.

## 2.5 Performance indicators

NOGCA reports on various [performance indicators](#), which are mapped to national guidelines and were selected according to their validity, statistical power, technical feasibility, and fairness.

The indicators provide information on:

- The route to diagnosis
- The use of staging investigations
- The proportion of patients who have a curative treatment
- Short-term postoperative outcomes after curative surgery
- Patterns of palliative therapies

Organisation-level indicators of treatment outcomes, adjusted for differences in case-mix across NHS trusts/local health boards, are compared using funnel plots, allowing “[potential outliers](#)” to be identified.

## 2.6 Current data collection process

NOGCA collects its own core set of [data](#) to support the evaluation of particular clinical areas. The core dataset shares some data items with the national cancer registration datasets but some areas (such as pathology outcomes and nutrition support) are not captured well in existing data sources. Hospital staff are able to access and check their own audit data through the Clinical Audit Platform (CAP) system.

To limit the number of NOGCA data items and reduce the burden of data collection, the audit dataset on patients treated in England and Wales is linked annually at patient level to routine hospital data (HES and PEDW). Records for English patients are also linked to datasets provided by the National Disease Registration Service (Cancer Registry, Systemic Anti-Cancer Therapy (SACT), and the Radiotherapy Dataset (RTDS)).

## 3. Future Scope of NOGCA

### 3.1 Organisation of NOGCA

When NOGCA moves into NATCAN, it will retain its own Project Team of methodologists, clinicians and project managers, its Clinical Reference Group (CRG) of stakeholders, and Patient Panel. Governance (in relation to monitoring progress against deliverables and the management of risks) will be at centre level with an overarching Board and Executive Team across NATCAN. NATCAN will also have a Clinical Director, Technical Advisory Group and Quality Improvement team, which will work across NATCAN.

### 3.2 Potential changes to the current clinical scope

#### 3.2.1 Histological diagnosis

Currently, only histologically confirmed cases of epithelial OG cancer are eligible for inclusion in NOGCA. However, some patients may be too unwell to undergo the invasive diagnostic procedures required for histological confirmation. It was estimated that 8% of patients diagnosed with OG cancer in 2012-18 did not have a histological diagnosis.<sup>5</sup> This proportion increased during the COVID-19 pandemic, when clinical guidance about the use of staging investigations was revised to reflect the changed risks and capacity issues in endoscopic services.<sup>6</sup>

An option for the next phase of NOGCA is to review whether non-histologically confirmed cases of OG cancer should be included in the audit to provide a comprehensive picture of OG cancer care and outcomes. An issue related to this is the current exclusion of neuroendocrine tumours, and whether allowing patients with non-histological diagnoses would mean some non-epithelial cancers being included.

#### 3.2.2 HGD

NOGCA has been evaluating the management of patients with oesophageal HGD since 2014, with a focus on evaluating NHS services against recommendations relating to management of Barrett's oesophagus and diagnosis of HGD. The diagnostic process for HGD has improved since 2014, and a stakeholder survey conducted by NOGCA in 2022 identified that the HGD component of the audit needs to evolve to continue providing useful data to clinicians and patients.

An option for the audit is to re-focus this section of the audit on the outcomes of all endoscopic therapy for dysplasia and early cancer (not only HGD) to make data submission easier for hospitals and ensure that outcomes are captured for all patients requiring such treatment.

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<sup>5</sup> National Oesophago-Gastric Cancer Audit. Comparison of patients captures by NOGCA and the National Cancer Registration and Analysis Service (NOGCA Short Report). London: Royal College of Surgeons of England, 2020

<sup>6</sup> National Oesophago-Gastric Cancer Audit. 2022 Annual Report. London: The Royal College of Surgeons of England, 12 January 2023.

### 3.3 NOGCA reporting

All national clinical audits are being commissioned against a revised set of contracted deliverables. This will apply to NOGCA when it moves into NATCAN. The main deliverables are:

- 10 page annual “State-of-the-Nation” reports with maximum 10 performance indicators – these reports will be responsive to arising clinical issues and areas identified in the QI initiatives of the audit.
- More frequent, more timely reporting – current quarterly reports to be replaced by publicly available dashboards, refreshed at least quarterly, to provide more timely information
- No reporting of individual consultant outcomes
- No short reports – in-depth exploration of topics will continue in the form of peer-reviewed papers
- No organisational audits (surveys of organisational structure / facilities)

### 3.4 Quality improvement (QI)

Building on NOGCA’s ongoing QI work, the move into NATCAN will provide opportunities for cross-audit innovations and shared learning. This includes:

1. The use of rapid cancer registration data that allow timely and frequent reporting to cancer services, alongside annual “State-of-the-Nation” reports.
2. Development of data visualisations in interactive dashboards to allow continuous monitoring of provider performance over time and allowing more bespoke reporting.
3. QI projects that aim to “close the audit cycle”. These will be designed with support from NATCAN’s QI Team, and external experts from the University of Leeds (Professor Robbie Foy and Dr Sarah Alderson) who have extensive experience in methods to change professional and organisational behaviour.

NOGCA will review its QI programme and improvement goals as part of this work, in consultation with key stakeholders.

### 3.5 Performance indicators

#### 3.5.1 Complex patients, complex pathways

In order to provide relevant, accurate risk-adjusted performance indicators, greater understanding is required of the complex patients and complex pathways in OG cancer care. By identifying patient factors that influence care and outcomes, we can better understand patterns of treatment variation and ensure that indicators are appropriately risk-adjusted. In particular, NOGCA will develop its work to understand the impact of frailty<sup>7</sup>, cognition<sup>8</sup>, and socioeconomic deprivation<sup>9</sup> on patient pathways and outcomes. To provide a comprehensive picture of OG cancer care, more work is required to ensure patients on all care pathways are included in the audit, in particular those on a non-curative treatment pathway who are typically less likely to be included in NOGCA.<sup>10</sup>

#### 3.5.2 Timely feedback

With more frequent reporting via dashboards, NOGCA will be able to provide more timely feedback of performance indicators to further drive local quality improvement. The audit will need to

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<sup>7</sup> Jauhari Y et al. Construction of the secondary care administrative records frailty (SCARF) index and validation on older women with operable invasive breast cancer in England and Wales: a cohort study. *BMJ Open*. 2020 May 5;10(5):e035395.

<sup>8</sup> Kuryba AJ et al. Severity of Dementia and Survival in Patients Diagnosed with Colorectal Cancer: A National Cohort Study in England and Wales. *Clin Oncol (R Coll Radiol)*. 2023 Jan;35(1):e67-e76. doi: 10.1016/j.clon.2022.08.035

<sup>9</sup> National Oesophago-Gastric Cancer Audit. Socioeconomic differences in the impact of oesophago-gastric cancer on survival in England (NOGCA Short Report). Under review.

<sup>10</sup> National Oesophago-Gastric Cancer Audit. Comparison of patients captures by NOGCA and the National Cancer Registration and Analysis Service (NOGCA Short Report). London: Royal College of Surgeons of England, 2020

determine which performance indicators can be reported in this format, applying its criteria relating to validity, statistical power, technical feasibility (in particular the availability of data on a quarterly or more frequent basis) and fairness. Given the relatively small numbers of patients and events that will be included on a quarterly basis, special consideration will need to be given to how uncertainty in indicator values is represented.

### 3.5.3 Composite indicators

A challenge for the audit will be to extend the NOGCA [composite indicator](#) to include non-surgical centres. This will require the identification and development of appropriate non-surgical performance indicators, e.g. complications of oncological treatments, and summary measures, as well as ensuring that outcomes are assigned to the correct organisation (as patients may move between hospitals for different treatments).

## 3.6 Data provision

All new cancer audits within NATCAN will be designed to use existing data only, rather than collecting their own data items. This model has been used successfully by the National Prostate Cancer Audit, the National Lung Cancer Audit and the National Audit of Breast Cancer in Older Patients. Among the cancer audits, only NOGCA and NBOCA are still using their own core datasets. There is an expectation for NOGCA and NBOCA to adopt the “routine cancer datasets” audit design.

Adopting this approach would mean a change to NOGCA’s current model, which requires hospitals to submit data to the audit via the CAP system, which has been maintained by NHS Digital (now NHS England).

The implications of the different models of data collection/provision are outlined below.

1. NOGCA’s current model: collecting its own dataset and linking to existing data sources. This approach enables the evaluation of several clinical areas that are not captured well in existing data sources. In particular, pathology outcomes and nutrition data. The data items are designed to capture key information across all stages of diverse patient pathways. This approach also enables the collection of data about HGD, which is not well captured in hospital data.<sup>11</sup> The main disadvantage of this model is the additional burden of data collection on frontline clinical staff.
2. NATCAN model: using existing cancer data only. The “state of the nation” annual reports will use the “gold-standard” cancer registration datasets, and provider dashboards will be updated using rapid cancer registration data (RCRD). This approach will be adopted by the other national cancer audits within NATCAN, and has the benefit of being efficient and supporting national data collections. In areas where data quality is poor, the reporting of data can act as a stimulus for providers to improve the completeness and accuracy of routine data. Development work will be needed to balance the timeliness of RCRD data against the lower case ascertainment and data completeness.

Initial work to assess the feasibility of using existing data only (Cancer Registration datasets) is summarised below. Further in-depth validation work will be required for all sources of English and Welsh data, including the Rapid Cancer Registration Dataset.

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<sup>11</sup> Chadwick G et al. Coding of Barrett's oesophagus with high-grade dysplasia in national administrative databases: a population-based cohort study. *BMJ Open*. 2017 Jun 9;7(6):e014281. doi: 10.1136/bmjopen-2016-014281.

### 3.6.1 Data items

A comparison of data items available in NOGCA and NCRAS datasets is included in the Appendix. In summary, many of the data items in NOGCA are available or can be derived from the NCRAS datasets, but items relating to the following clinical areas are not available in existing data:

- Nutrition support
- Enhanced recovery after surgery (ERAS)

### 3.6.2 Timeliness versus case-ascertainment and data completeness

Gold standard cancer registration data is considered to have 100% case ascertainment but has a lag of around 20-22 months from diagnosis to release of the data. NOGCA data has an estimated case ascertainment of 87% and a lag of 12-14 months. Rapid cancer registration data (RCRD) is much more timely (6 months lag) but it is not as complete in its case ascertainment and has fewer data items than the gold standard dataset.

### 3.6.3 Data completeness

Data completeness of a selection of key data items in the gold standard cancer registry data compared to NOGCA in patients diagnosed April 2019 to March 2021.

Data item	Data completeness %	
	NOGCA	Cancer Registry
Pre-treatment stage 1-4*	84%	84%**
Nodes examined OG cancer surgical patients (curative)	90%	41%
Nodes involved OG cancer surgical patients (curative)	90%	41%

\* Cancer registry staging is "Stage best"; \*\*field is 100% complete, 16% coded "unstageable"

### 3.6.4 Data quality

Agreement between NOGCA and the gold standard cancer registry data is reported for a selection of key data items in patients diagnosed April 2019 to March 2021.

Data item	Agreement %
Diagnosis date within 7 days	67%
Histology	84%
Pre-treatment stage	63%
Tumour site (oesophagus/ GOJ/ stomach)	82%

## Appendix

### Mapping of NOGCA variables to comparable fields in NCRAS

#### Datasets considered in mapping:

- COSD – Core, Upper GI, and Pathology

#### Data sources via NCRAS:

- Cancer Registry
- Cancer Pathway
- SACT
- RTDS
- HES (admitted patient care, outpatient, A&E)
- Cancer Waiting Times
- Diagnostic Imaging Dataset – *not mapped at this stage, TBD if useful for NOGCA*
- Cancer Patient Experience Survey – *not mapped at this stage, TBD if useful for NOGCA*

NOTE: The table below compares data items available in NOGCA with those in COSD and NCRAS datasets. Some NCRAS/COSD data items were not available for initial assessment of completeness and quality.

NOGCA variable	Comparable NCRAS variable		
	Exact	Proxy <sup>12</sup>	None
Age at diagnosis	X		
Source of referral		X	
Priority of GP referral		X	
Date of first referral to local OG team	X		
Date of diagnosis	X		
Local cancer unit where cancer was diagnosed	X		
Diagnosis site	X		
Diagnosis histology	X		
Staging investigations		X	
Pre-treatment TNM	X		
Pre-treatment stage	X		
ECOG performance status	X		
Comorbidities		X	
Date final care plan agreed	X		
Treatment intent	X		
Curative modality		X	
Palliative modality		X	

<sup>12</sup> Proxy: means either an NCRAS variable which covers the same topic as the NOGCA variable but with some variation in options for values, or variable needs to be derived from NCRAS variables



NOGCA variable	Comparable NCRAS variable		
	Exact	Proxy <sup>12</sup>	None
Reasons for palliative treatment			X <sup>13</sup>
Dietetic involvement between dx & tx			X
Anthropometrics at dx or first assessment	X		
Hospital name	X		
Date of admission	X		
Date of operation	X		
Pre-operative intent of surgery	X		
Fitness for surgery (ASA grade)	X		
Smoking	X		
Pre-operative TNM & stage (after neoadjuvant tx)			X
Procedure – oesophageal		X	
Procedure - gastric		X	
# surgeons involved in original operation			X
Surgical access (thoracic)		X	
Surgical access (abdominal)		X	
Nodal dissection			X
Postoperative complications	X		
Unplanned return to theatre	X		
Death in hospital		X	
Date of discharge or death		X	
Surgical pathway patient followed			X
Patient completed ERAS pathway?			X
Prehabilitation before surgery			X
Postoperative nutritional management – during admission			X
Dietetic involvement following resection			X
Postoperative nutritional management - discharge			X
Site of tumour	X		
Histology	X		
Proximal resection margin involved	X		
Distal resection margin involved	X		
Circumferential margin involved	X		
# lymph nodes examined	X		
# lymph nodes positive	X		
Patient had neoadjuvant therapy before surgery	X		

<sup>13</sup> As an example, NOGCA options for this variable are: patient declined treatment; unfit, because of advanced stage cancer; unfit, because significant comorbidity; unfit, because poor performance status; not known; whereas the COSD Upper GI variable “Palliative treatment reason” has the options: 1-Extensive intrahepatic disease; 2-Widespread disease; 3-Both extensive intrahepatic and widespread disease; 4-Biliary obstruction; 5-Gastric outlet obstruction; 6-Pain

NOGCA variable	Comparable NCRAS variable		
	Exact	Proxy <sup>12</sup>	None
Postoperative TNM & stage	X		
Lymphatic/vascular invasion	X		
Perineural invasion			X
Hosp where treatment took place	X		
Treatment intent	X		
Adjunctive therapy	X		
Intended treatment modality		X	
Chemotherapy – date first cycle started	X		
Radiotherapy – date first fraction started	X		
Immunotherapy – date first treatment started	X		
Outcome of treatment	X		
Reason if incomplete	X		
Patient proceeded to planned curative surgery after neoadjuvant chemotherapy		X	
Hosp name	X		
Date of procedure	X		
Type of procedure	X		
Procedure part of planned course of multiple interventions			X
Method of stent placement			X
Immediate complications following stent insertion	X		

## Appendix 2: NOGCA Scoping Meeting summary document

# National Oesophago-Gastric Cancer Audit (NOGCA) Scoping Meeting, 29 March 2023

## SUMMARY DOCUMENT

From 1 June 2023, NOGCA will move into the National Cancer Audit Collaborating Centre (NATCAN) at the Clinical Effectiveness Unit (CEU) of the Royal College of Surgeons of England (RCS England).

On 29<sup>th</sup> March 2023, NOGCA hosted a meeting with stakeholders to discuss the proposed future scope and design of the audit within NATCAN. Specifically, the aims of the meeting were to:

- Discuss the implications of different models of audit
- Review the scope of NOGCA under the new contract
- Identify short- and longer-term priorities for NOGCA.

In attendance at the meeting were stakeholders representing key clinical specialties, cancer data services in England and Wales, patient organisations, quality improvement experts, NHS England, NHS Wales, NQICAN, NATCAN and HQIP, as well as members of the NOGCA project team.

This document summarises the topics discussed during the meeting.

### 1. Commentary from NOGCA patient panel

The patient panel identified a number of areas in which the audit could develop in how it operates within the Centre and engages with patients:

- Closer collaboration with patient panels across other cancer audits within NATCAN, for example via a patient panel coordinator who brings together the chairs of each patient panel to discuss and reach consensus on standards, goals, communication strategies etc.
- Further consideration of how audit findings are communicated, to ensure recommendations are incorporated into local improvement plans, e.g. via a network of clinicians.
- Getting information to patients and the general public early, to raise awareness of and signpost to information produced by the audits that may be of interest to them.

### 2. Clinical scope of the audit

#### 2.1 Should non-histologically confirmed cases of OG cancer be included in the audit?

The view of stakeholders was that histological diagnosis is feasible in the majority of patients with OG cancer, therefore there is no need to change the inclusion criteria. It would be reasonable for the audit to continue including only histologically confirmed cases.

## 2.2 With a move to using routine data, the audit won't be able to include patients with oesophageal HGD – is this problematic?

It was noted by clinicians that endoscopic treatment of HGD and OG cancer has changed considerably over the last decade, with endoscopic therapies accounting for an increasing proportion of practice, so it would be useful to study it. In particular, endoscopic treatment is the recommended first line treatment for HGD and early cancer but outcomes of this procedure have not been routinely reported/scrutinised. The National Endoscopy Database (NED) may provide an alternative source of information in the future, but currently it does not contain histology or patient identifiers that would enable linkage to other datasets.

## 2.3 How might OG cancer care change in the near future?

- Changes to oncological treatment and increasing role of immunotherapy.
- Biomarkers: recognition of different sub-types of disease and implications of these for outcomes, which can inform management decisions. It was noted that NDRS receives data from genetic labs across England. There are also national conversations taking place about the pressure on pathology services due to increased biomarker testing and more complex genomic testing, which can lead to delays in treatment; implications for waiting times and delays in care pathway.

## 2.4 Are there other areas the audit should focus on?

- Earlier stages of the care pathway, such as access to diagnostics, access to staging investigations, rates of referral, interval between most recent endoscopy and diagnosis, duration of use of proton-pump inhibitors – this is an area that could improve rates of early diagnosis and lead to improved outcomes. The audit should cover all parts of the pathway, from the point of suspicion to diagnosis, decision to treat and first treatment.
- Potential roll out of capsule sponge tests (e.g. Cytosponge) – currently used in management of Barrett's oesophagus, but likely to be a while before it is used more widely for Barrett's oesophagus screening. Capsule sponge tests are recordable using SNOMED CT [SCTID: 1202027002] and thus could already be collectable within COSD.
- Effectiveness of surveillance for Barrett's oesophagus and gastric atrophy/intestinal metaplasia (IM).
- Variation in the availability and outcomes of prehabilitation before surgery and oncological treatments (chemotherapy, radiotherapy).

## 3. Reporting

When NOGCA moves into NATCAN it will be commissioned against a revised set of contracted deliverables, including:

- 10 page annual "State-of-the-Nation" reports with maximum 10 performance indicators
- More frequent, timely reporting via dashboards, refreshed at least quarterly

There was positive feedback about this new format from some stakeholders, who said they would welcome the shorter report format and quarterly reporting.

However, concerns were expressed that dashboards often lack accompanying interpretation or narrative to enable translation of the information into actions/improvement plans – this is something for the audit to consider in the development of its reports. Lessons could be learnt from

other audits; some have produced supplementary material to accompany the “State-of-the-Nation” reports that provides more detail and interpretation.

Patient representatives would like the audit’s Patient Report to continue being produced.

### Engagement with reports

It was noted that NDRS produce monthly reports that are sent to senior managers at Trusts, with reference to key metrics such as stage and performance status. These reports have led to an improvement in data quality among poorer reporting Trusts.

## 4. Data provision

All new cancer audits within NATCAN will be designed to use existing data only, rather than collecting their own data items. There is an expectation for NOGCA to adopt this audit design.

Concerns raised by the stakeholders about the new model of data provision included:

- Routine datasets are not designed to capture detailed surgical data. Currently, pathology data are not of sufficient quality for benchmarking and this will undermine the audit’s ability to formulate QI strategies.
- Concerns were expressed about the loss of information about nutritional support, which is a critical aspect of OG cancer care (unlike many other cancers) and a priority for patients. There are currently no items on nutritional support in national cancer datasets.
- It was asked whether there was any scope for audit-specific data collection to continue.

*[Post-meeting update from HQIP: using routine data is the aim for all national cancer audits. If an audit’s agreed QI plan cannot be delivered using routine data because required data items are absent, a different approach may be considered on a case-by-case basis. However, if the issue is with data quality/completeness rather than absence of data items, routine data should be used, as history has shown us this is how it will improve.]*

### COSD

One possible way to address the loss of key data items is to work with NCRAS towards adding fields to COSD. This would be a medium term solution, which would first require an understanding of the core requirements of the audit and engagement with NHS trusts to ensure good completion of existing data items, and then identifying new items which could be included in version 11 of the dataset (due to be released in two years).

There was a discussion about the difficulties of collecting pathology data. In some hospitals, pathology reports are mostly free text and the required information on stage and margin status is difficult to extract; there is currently insufficient resource to implement structured records / reports for data collection. However, the required data does exist within the reports – the audit and data services will need to work together to find a way to access this information.

### Data collection in Wales

CANISC is being replaced by a new data collection system in Wales. Data quality may be affected during the transition period but teams expect to have audit-quality data in the near future.

There was a discussion about the linkage of CANISC data to other national datasets. One option is linkage with the Patient Episode Database for Wales (PEDW). It was noted that PEDW is not

equivalent to Hospital Episode Statistics (HES) used in England because PEDW does not have the additional levels of validation applied in HES, and contains slightly fewer fields for capturing data on conditions and procedures. It is worth noting this and some of the other subtle differences between NHS Wales and NHS England datasets.

## 5. Next steps

This scoping exercise has identified several priorities and areas of development for NOGCA. As the audit moves into NATCAN, work will be undertaken in the following areas:

- Further analysis to explore the strengths and limitations of the national cancer datasets for reporting on OG cancer care and outcomes, and work to develop appropriate indicators for annual and quarterly reporting. Alongside this, NOGCA will begin discussions with data providers to explore how the requirements of the audit can be met, both in the immediate and longer term.
- Development of the scope of the audit to reflect recent and likely future changes in OG cancer care (endoscopic therapy, immunotherapy, biomarker and genomic testing, capsule sponge tests and surveillance, prehabilitation), alongside considerations about data availability.
- Design and development of new audit outputs, including dashboards, state-of-the-nation report format and supporting materials.
- Development of a healthcare improvement strategy to identify improvement goals, activities and resources.
- The audit will need to ensure that changes to data provision and audit reporting are communicated clearly to all stakeholders, and in particular to the hospitals that submit and use NOGCA data.

The activities outlined above will require engagement with different groups of stakeholders. Over the course of the first year of the new contract, we will be seeking further consultation and input from stakeholders on each of these areas, and engage with multi-professional groups such as the United Kingdom and Ireland Oesophagogastric Cancer Group (UKIOG).

## Acknowledgements

We would like to thank all our stakeholders for their contributions to the meeting and continued support of the audit.