NNHLA

National Non-Hodgkin Lymphoma Audit

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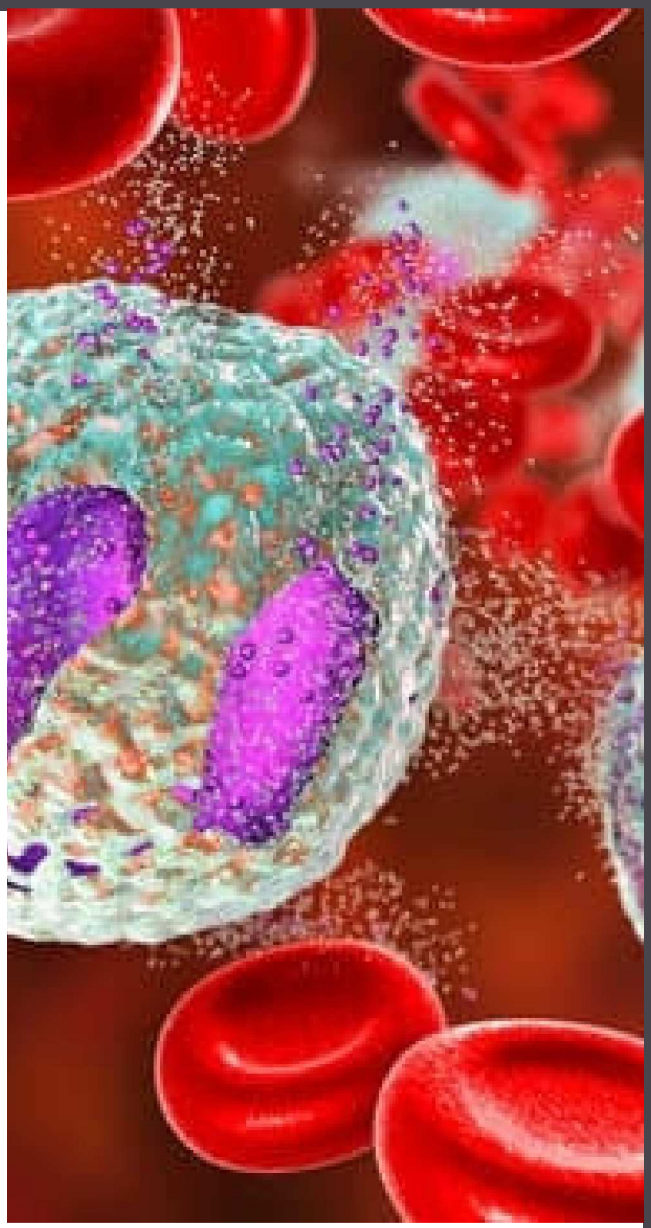
Scoping Document

November 2023



NATCAN

National Cancer Audit Collaborating Centre

Royal College of Surgeons of England

ADVANCING SURGICAL CARE

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

NHS England

HQIP

Healthcare Quality Improvement Partnership

British Society for Haematology

NDRS

NATIONAL DISEASE REGISTRATION SERVICE

The Royal College of Radiologists

GIG CYMRU NHS WALES

Rhwydwaith Canser Cymru

Wales Cancer Network

NNHLA

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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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Executive summary

The National Non-Hodgkin Lymphoma Audit (NNHLA) has been commissioned to evaluate the care received by patients diagnosed with Non-Hodgkin lymphoma at NHS hospitals within England and Wales. It aims 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.

To develop the scope of the audit and identify priority areas for quality improvement, the NNHLA project team started by carrying out a review of the existing literature relevant to Non-Hodgkin Lymphoma care. This informed the *proposed* NNHLA scope and healthcare improvement goals, guided the data request for England and Wales, and helped to identify any potential challenges in the design and delivery of the NNHLA. The NNHLA project team then consulted with stakeholders on the *proposed* NNHLA scope and healthcare improvement goals. Feedback received from stakeholders was used to refine the final scope and healthcare improvement goals that are presented in this document.

Based on this work, the scope of the NNHLA will include all adults diagnosed with NHL who received diagnostic and therapeutic services offered through secondary and tertiary care providers within the National Health Service in England or Wales.

The following healthcare improvement goals were identified:

1. Improving timely diagnosis and treatment
2. Treatment appropriate to the subtype of Non-Hodgkin Lymphoma
3. Improving safety and reducing toxicity of Non-Hodgkin Lymphoma therapy
4. Improving overall survival
5. Reducing variation in Non-Hodgkin Lymphoma management among NHS providers.

These healthcare improvement goals set out priorities that will inform the development of the NNHLA Healthcare Improvement Plan, which is the next phase of work for the NNHLA project team.

The healthcare improvement plan will build on this scoping document to include an outline of the ten key performance indicators (KPI) to be reported by the NNHLA. It will also outline how the KPI map to the healthcare improvement goals and national guidelines. In addition, further detail will be provided on the strategies for reporting and disseminating results from the NNHLA.

1 Aim of audit scope

The aim of the audit scope is to define the following:

1. Patient inclusion criteria: which patients are to be included in the audit.
2. Care pathway coverage: which parts of the care pathway are to be covered by the audit.
3. Healthcare improvement goals: what aspects of care have been identified as priority areas for the audit to support quality improvement.

Given this is the first national audit of non-Hodgkin lymphoma in England and Wales, the scope of the audit is expected to evolve over subsequent years.

2 Background

2.1 Overview the National Cancer Audit Collaborating Centre (NATCAN).

The National Non-Hodgkin Lymphoma Audit (NNHLA) 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 and patient outcomes across the country. It was set up on 1 October 2022 to deliver six new national cancer audits, including the NNHLA. The centre was commissioned by the Healthcare Quality Improvement Partnership (HQIP) on behalf of NHS England and the Welsh Government, with funding for an initial period of three years.

NATCAN is based within the Clinical Effectiveness Unit (CEU), the academic partnership between the Royal College of Surgeons of England (RCS Eng) and the London School of Hygiene & Tropical Medicine (LSHTM). The CEU is recognised as a national centre of expertise in analytic methodology and the development of administrative and logistic infrastructure for collating and handling large-scale data for assessment of health-care performance.

Prior to the launch of NATCAN, the CEU was already the sole provider of national cancer audits in the NHS in England and Wales, incorporating audits in prostate, lung, bowel, and oesophago-gastric cancers, and recently completed an audit of breast cancer in older patients. These audits have helped provide a wider understanding of cancer treatments across England and Wales and have improved services and infrastructure leading to improved outcomes for patients. By consistently placing quality improvement (QI) at the centre of all audits, initiatives which promote QI within NHS cancer services have been developed and areas of best practice identified.

Alongside the NNHLA, NATCAN delivers four other cancer audits, including ovarian, pancreatic and breast (two separate audits in primary and metastatic disease). The aim of these audits is 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.

The audits which the CEU already provided have joined NATCAN (bowel, oesophago-gastric and prostate) or will, in the near future (lung), bringing the number of NATCAN audits to ten. This critical mass of knowledge and expertise enable it to respond to the requirements of the funders and stakeholders.

Further information on the organisational structure of NATCAN and key features of its approach to audit can be found in the appendix (section 8.1 and section 8.3 respectively).

2.2 Overview of the National Non-Hodgkin Lymphoma Audit (NNHLA)

The aim of the NNHLA is to evaluate the care received by patients diagnosed with Non-Hodgkin lymphoma at NHS hospitals within England and Wales.

The NNHLA will consider the following possible reasons for variation in Non-Hodgkin lymphoma care and outcomes:

1. Variations in the uptake of, and inequalities in access to, new technologies and treatment techniques e.g., hospitals participating in clinical trials, geographical location, deprivation, ethnicity.
2. Differences in the nature and extent of disease, notably the distinct tumour subtypes given their distinct patterns of care and prognosis.
3. Differences in patient frailty and prevalence of comorbidities that may contraindicate certain treatment modalities.

Audit development and delivery is the responsibility of the NNHLA Project Team. The Project Team works in partnership to deliver the objectives of the audit and is responsible for the day-to-day running of the audit and producing the deliverables. It will lead on the audit design, data collection, data quality monitoring, data analysis and reporting. Further information on organisation of the NNHLA project team and its membership can be found in the appendix (section 8.1 and section 8.3 respectively).

Clinical leadership of the NNHLA is provided by representatives from the British Society of Haematology and the Royal College of Radiologists.

The NNHLA will be supported by twice-yearly meetings of stakeholders in the NNHLA Clinical Reference Group (CRG), which will include clinicians involved with care across the patient pathway, patient representatives, commissioners, and funder representatives. Further information on organisation of the NNHLA CRG and its membership can be found in the appendix (section 8.1 and section 8.4 respectively).

The NNHLA Patient and Public Involvement (PPI) forum will provide advisory support and ensure the voice of patients is central to the direction and delivery of the Audit. A key activity of the PPI Forums will be to actively participate in the production of patient-focussed audit outputs (including patient and public information, patient summaries of reports, infographics and design and function of the NATCAN website), guiding on how to make this information accessible. Further information on organisation of the NNHLA PPI forum can be found in the appendix (section 8.1).

3 Non-Hodgkin lymphoma

3.1 Main issues in non-Hodgkin lymphoma care and outcomes

Non-Hodgkin lymphoma (NHL) is the sixth most common cancer in the UK and accounted for 4% of all new cancer cases between 2016 and 2018.[1] On average, there were 14,200 new cases of NHL each year in the UK between 2016 and 2018.[1] Since the early 1990s, NHL incidence rates have increased by approximately 38% in the UK.[1]

NHL is a heterogeneous disease comprising over 30 subtypes, which are all linked by their origin within the lymphoid tissues but have markedly different clinical courses and requirements for therapy.[2] Personalised medicine is therefore a core principle that underpins the care of NHL patients.

The most common subtypes are diffuse large B cell lymphoma (DLBCL), which is an aggressive or high-grade lymphoma, and follicular lymphoma, which is an indolent (non-aggressive) or low-grade lymphoma.[2]

NHL symptoms can be variable, depending on the subtype and where it is in the body; patients with NHL can therefore seek healthcare for a range of different reasons and the pathway to being diagnosed can vary accordingly. Low grade NHL progresses slowly, can be induced into remission but has a high rate of relapse.[2] In contrast, high grade NHL progresses rapidly but the majority of patients who achieve remission remain cured.[2] Prognosis for NHL patients overall is relatively good, with 55% of people diagnosed with NHL in England surviving their disease for ten years or more.[3] However, side effects of treatment such as toxicity remain a key challenge to quality of life.[2]

As well as being a heterogeneous disease, NHL care is changing rapidly, with new treatments being developed, advances in biomarker and genomic testing, and new technologies on the horizon.

3.2 Diagnostic and therapeutic pathways

NHL is categorised into subtypes according to morphological, molecular and immunophenotypic characteristics. The resulting diagnostic information for each individual patient allows therapeutic pathways to be tailored according to the diagnosed subtype and therefore personalised for each patient.

Within the UK National Health System (NHS), the following treatment modalities are used to manage NHL:

- Systemic anti-cancer therapy – the mainstay of NHL treatment.
- Radiation therapy - can be given alone or in combination with chemotherapy for early-stage disease, as well as for enhanced disease control and palliative purposes for advanced stage disease.
- Stem cell rescue or transplant – may be required following high-dose chemotherapy, as this treatment can deplete the bone marrow.
- Chimeric antigen receptor T-cell (CAR-T) therapy – recently recommended for use within the Cancer Drugs Fund as second line therapy for patients with relapsed/refractory DLBCL.[4] CAR-T

therapy is also commissioned as third line therapy by NHS England for other patients with relapsed DLBCL and some other forms of NHL.[5]

- "Watch and wait" or "active monitoring" approach may be recommended for low grade NHL (e.g., follicular lymphoma).

3.3 Service provision

NHL care is provided through a mix of centralised and decentralised services. Treatment decision-making, imaging, chemotherapy, and radiotherapy are all decentralised services, whereas genomic testing, stem cell therapy and chimeric antigen receptor T-cell therapy are all centralised to specialist centres/laboratories.

4 Process for development of NNHLA scope

The NNHLA carried out a review of existing literature in order to develop the *proposed* NNHLA scope and healthcare improvement goals, as well as to guide the data request for England and Wales, and to identify potential challenges in the design and delivery of the NNHLA.

During the first NNHLA CRG meeting, the NNHLA project team consulted with stakeholders on the *proposed* NNHLA scope and healthcare improvement goals. Following stakeholder consultation, all comments and responses were used to refine the final scope and healthcare improvement goals.

4.1 Review of existing literature

4.1.1 NICE guidelines

The National Institute for Health and Care Excellence (NICE) published guidelines on the diagnosis and management of NHL (NG52) in 2016.[2] These address several areas where there is uncertainty or variation in clinical practice, in relation to diagnosing NHL and management of certain subtypes.[2] Topics include the best type of biopsy for diagnosis, genetic testing, the role of fluorodeoxyglucose positron emission tomography/computerised tomography (FDG-PET-CT) imaging in staging, patient information needs and survivorship.[2] The scope is limited to management of the more common subtypes, specifically follicular lymphoma, mucosal associated lymphoid tissue (MALT) lymphoma, mantle cell lymphoma, diffuse large B-cell lymphoma, Burkitt lymphoma and peripheral T-cell lymphoma.[2]

NICE guidelines on the recognition and referral of suspected cancer in primary care were last updated in 2023 (NG12).[6] For NHL, recommendations are made on which patients should be referred on a suspected cancer pathway referral (for an appointment within 2 weeks).

NICE guidelines on improving outcomes in haematological cancers (NG47), published in 2016, aims to improve care for people with suspected or diagnosed cancer by promoting best practice on the organisation of haematological cancer services.[7] It covers integrated diagnostic reporting for diagnosing haematological cancer, staffing, facilities (levels of care) and multidisciplinary teams needed.

4.1.2 NICE quality standards

NICE quality standards for haematological cancers (QS150), published in 2017, cover diagnostic reporting, the organisation of haematological cancer services, managing haematological cancers and consists of a set of specific and measurable statements.[8]

Topics highlighted in these statements include integrated reporting from a haematological malignancy diagnostic service, PET-CT scanning for certain NHL sub-types, radiotherapy as first-line treatment for certain localised NHL subtypes and an end-of-treatment summary plan to be discussed at treatment completion.[8]

4.1.3 Other relevant literature

The British Society of Haematology (BSH) produces evidence-based guidelines on the diagnosis and treatment of haematological diseases.[9] The BSH haemato-oncology task force has produced several guidelines for specific subtypes of NHL.

Clinical quality performance indicators for lymphoma have been published by Healthcare Improvement Scotland.[10] These will be reviewed as part of future work to develop performance indicators for the NNHLA.

4.2 Data sources

The NNHLA will use information from routine national health care datasets. These capture details on the diagnosis, management and treatment of every patient newly diagnosed with NHL in England and Wales. The following sections provide a summary of data requested and further details on data acquisition can be found in the appendix (section 8.5).

4.2.1 Data requested for England.

For patients with NHL treated in England, the NNHLA will receive data (via a NATCAN data request) from the National Cancer Registration and Analysis Service (NCRAS). NCRAS collects patient-level data from all NHS acute providers on patients with cancer using a range of national data-feeds. The NNHLA will receive Cancer Registry data annually and quarterly extracts of Rapid Cancer Registration Data (RCRD), linked at patient level to items of several routinely collected datasets, including the Cancer Outcomes and Services Dataset (COSD), the Hospital Episode Statistics (HES) data sets, the Radiotherapy Data Set (RTDS), the Systemic Anti-Cancer Treatment (SACT) data set, the Cancer Waiting Times data set, the Office for National Statistics (ONS) data set and data from the National Cancer Patient Experience Survey (CPES). There are limitations with the representativeness of patients captured in CPES because the survey is only carried out during a three-month window each year and is distributed to patients with NHL accessing hospital care who can be anywhere in their care trajectory.

4.2.2 Data requested for Wales.

For patients with NHL treated in Wales, the NNHLA will receive data from the Wales Cancer Network (WCN), Public Health Wales. Welsh cancer registration data is captured through a national system, Cancer Network Information System Cymru (CaNISC), which is in the process of being replaced by a

new Cancer Information System for Wales. As the replacement work is ongoing, it is unclear exactly what data will be available, or how frequent and timely it will be. The Welsh registration records will be linked to records from the Patient Episode Database for Wales (PEDW), which contains data describing all inpatient and day case activity undertaken within the NHS.

4.3 Data limitations

Performance indicators need to be accurate and reliable at the chosen level of reporting (e.g., hospital, trust / local health board, or region / Cancer Alliance). For accurate and timely benchmarking, it is essential that NCRAS and Welsh cancer data that is being used by NNHLA:

1. Includes all the data items required to measure and risk-adjust performance indicators.
2. Is timely.
3. Has a high-level of case-ascertainment.
4. Has high levels of data completeness.
5. Is accurate.

4.3.1 Rapid vs. gold standard cancer registration datasets

For patients treated in England, the NNHLA will be provided with data from the Rapid Cancer Registration Dataset (RCRD) for quarterly reporting. This dataset is compiled mainly from COSD records and is made available more quickly than gold standard cancer registration datasets. The RCRD will be linked to other national health care datasets. The speed of production means that case ascertainment and data completeness are lower, and the range of data items in the RCRD is limited. This may restrict the extent to which risk adjustment can be applied to performance indicators used for quarterly reporting.

A particular issue for the NNHLA is that, in the RCRD, ICD-03 codes are unavailable and the ICD-10 codes only have three characters. This is likely to mean that some patients in the RCRD with NHL may not be included or that they may shift between diagnostic sub-types/categories when the gold standard cancer registration data becomes available. The extent to which this is an issue will be investigated by comparing patients identified using gold standard cancer registry data and RCRD.

4.4 Stakeholder consultation

The first CRG meeting took place on 7th September 2023 and was designated as a stakeholder consultation meeting. The aim of this meeting was to collect the views of key stakeholders on the *proposed* scope of the NNHLA and to identify potential challenges in its design and delivery. Written feedback was invited from CRG members unable to attend this meeting.

Key topics raised by stakeholders as important for the NNHLA included:

1. Routes to, and delays in, diagnosis.
2. Palliative care and end of life care.
3. Health inequalities, such as by ethnicity and deprivation.
4. NHL subtypes.
5. Treatment toxicity.

6. Patient age.
7. Relapsed/recurrent disease.
8. Clinical trial participation.
9. Dissemination of audit results.

Following stakeholder consultation, the *proposed* scope and healthcare improvement goals were revised in light of feedback received.

CRG membership is outlined in section 8.4.

5 The NNHLA scope

5.1 Patient inclusion criteria

The NNHLA will include all patients aged 18 years and over who meet the following proposed inclusion criteria:

1. Have a diagnosis of NHL, as documented by International Classification of Diseases codes (ICD-10 or ICD-O3 codes, as listed in section 8.6 and 8.7 respectively).
2. Have received care provided by the National Health Service in England or Wales.

The ICD-10 codes proposed to be used to include patients with NHL were identified through the review of existing literature and align with those reported by NICE guidance[2], Public Health Scotland[11], and the Office for National Statistics.[12] ICD-O3 codes will be used to increase the granularity of NHL subtypes.

It was recognised that some diagnoses of potential interest exist within the chronic lymphocytic leukaemia (CLL) spectrum, where the lymphoma variant is known as small lymphocytic lymphoma (SLL). Patients diagnosed with SLL are often treated in a similar way to low grade NHL and by the same clinicians, therefore we propose to include patients with SLL in the scope of the NNHLA.

5.2 Care pathway coverage

The NNHLA scope will include diagnostic and therapeutic services offered through secondary and tertiary care providers within the National Health Service.

5.3 Healthcare improvement goals

Table 1 summarises the healthcare improvement goals for the NNHLA.

5.4 Topics for future consideration

The following topics were discussed during stakeholder consultation and identified as important areas for future consideration but outside of the current audit scope. Working with the data sources outlined in section 4.2, the NNHLA is not currently positioned to measure performance indicators related to these aspects of NHL care. However, given this is the first national audit of non-Hodgkin lymphoma in England and Wales, the scope of the audit is expected to evolve over subsequent years.

1. **Disease recurrence**: stakeholders discussed whether it would be possible to include patients with recurrent/relapsed disease. At present, the data sources outlined in section 4.2 do not capture these patients reliably and so they remain outside of the current audit scope. However, methods to identify such patients in routine datasets is an active area of research.
2. **Primary care**: stakeholders discussed that patients with NHL can attend primary care providers several times before referral to secondary/tertiary care and a diagnosis is subsequently made. Expanding future audit scope to cover primary care services would enable these early stages of the NHL care pathway to be captured, however lack of a nationally comprehensive primary care data set that can be linked to the national cancer data is a current limitation.
3. **Palliative care**: stakeholders discussed the importance of palliative care but acknowledged that end of life care is often provided in the community and by third sector providers (e.g., hospices), which are not captured in data sources available to the audit and therefore outside of the current audit scope. However, end of life care provided within secondary and tertiary care is within audit scope.
4. **Patients aged <18 years old**: stakeholders discussed that services for teenagers and young adults (TYA) can span those aged 16-25 years old. However, current information governance limits the audit scope to evaluating care for patients aged 18 years and over. Expanding the age range of patients included in the audit could enable more comprehensive coverage of TYA services.

Table 1: Healthcare improvement goals for the National Non-Hodgkin Lymphoma Audit

Healthcare Improvement Goal	Alignment with NICE guidance
1. Improving timely diagnosis and treatment.	The NHS long-term plan aims to improve cancer survival through earlier cancer diagnosis and sets a target for 75% of cancers to be diagnosed at stages one and two by 2028.[13]
2. Treatment appropriate to the subtype of NHL.	Aligns with the NICE quality standard for haematological cancer (QS150).[8] Reflects recommendations in the NICE guideline for the diagnosis and management of NHL (NG52).[2]
3. Improving safety and reducing toxicity of NHL therapy.	Aligns with the NICE quality standard for haematological cancer (QS150).[8]
4. Improving overall survival.	Aligns with the NICE quality standard for haematological cancer (QS150).[8]
5. Reducing variation in NHL management among NHS providers.	Aligns with the NICE guideline for the diagnosis and management of NHL (NG52).[2]

Abbreviations: NHL: non-Hodgkin lymphoma

6 Next steps

6.1 Development of performance indicators

Following publication of the NNHLA scope, the next step will be to develop ten performance indicators and map these to the NNHLA healthcare improvement goals. These key performance indicators will be used to support the audit's objectives and to monitor progress towards its healthcare improvement goals. This work will begin once NATCAN has received the requested datasets outlined in section 4.2; at this point, the feasibility of deriving each performance indicator from the available data will be evaluated.

6.2 Healthcare improvement plan

The healthcare improvement plan will build on this scoping document to include an outline of the ten key performance indicators to be reported by the NNHLA and how they map to the healthcare improvement goals and national guidelines. In addition, further detail will be provided on the strategies for reporting and disseminating results from the NNHLA.

The two principal strategies for reporting NNHLA results include:

1. A short (ten-page) "state of the nation" report for NHS Trusts/Health Boards within England and Wales.
    - These reports will focus on reporting the ten key performance indicators (outlined in the healthcare improvement plan) and highlight where services should focus quality improvement activities.
    - The PPI Forum will actively participate in the production of a patient summary of the "state of the nation" reports, guiding on how to make this information accessible.
2. An indicator dashboard on the NNHLA website containing NHS organisational-level results.
    - These dashboard indicators will facilitate benchmarking and timely monitoring of performance at regular intervals so improvements in performance can be tracked.
    - The dashboard will also present a broader range of indicators, as required, to provide further context for interpreting the ten key performance indicators outlined in the healthcare improvement plan.

These outputs will be accompanied by a range of healthcare improvement tools that will support their use by national, regional, and local stakeholders. Details of healthcare improvement tools, methods and activities will be outlined in the healthcare improvement plan.

7 References

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8 Appendices

8.1 Organisational structure of NATCAN

Centre Board

NATCAN has a multi-layered organisational structure. NATCAN's Board provides top-level governance and oversees all aspects of the delivery of the contract, ensuring that all audit deliverables are produced on time and within budget and meet the required quality criteria. The Board also provides the escalation route for key risks and issues. It will also consider NATCAN's strategic direction. The Board will meet at 6-monthly intervals and will receive regular strategic updates, programme plans, and progress reports for sign-off. Risks and issues will be reported to the NATCAN Board for discussion and advice.

Executive Team

NATCAN's Executive Team is chaired by the Director of Operations (Dr Julie Nossiter) and includes the Clinical Director (Dr Ajay Aggarwal), the Director of the CEU (Prof David Cromwell), the Senior Statistician (Dr Kate Walker), and the Senior Clinical Epidemiologist (Prof Jan van der Meulen) with support provided by NATCAN's project manager (Ms Verity Walker). This Executive Team is responsible for developing and implementing NATCAN's strategic direction, overseeing its day-to-day running, and coordinating all activities within each of cancer audits. This group meets monthly. The Executive Team will provide 6-monthly updates to NATCAN's Board.

Advisory groups

The Executive Team will be supported by two external groups. First, the Technical Advisory Group including external senior data scientists, statisticians, and epidemiologists as well as representatives of the data providers (NDRS, NHSD and WCN, PHW), co-chaired by NATCAN's Senior Statistician and Senior Epidemiologist, will advise on national cancer data collection, statistical methodology, development of relevant and robust performance indicators to stimulate QI, and communication to practitioners and lay audiences.

Second, the Quality Improvement Team includes national and international experts who have extensive experience in QI and implementation research. This team will provide guidance on the optimal approaches to change professional and organisational behaviour. It will be chaired by NATCAN's Clinical Director and managed by the Director of Operations.

This set up will provide a transparent and responsive management structure allowing each audit to cater for the individual attributes of the different cancer types, while also providing an integrated and consistent approach across the NATCAN audits. The integrated approach will result in efficient production of results through sharing of skills and methods, a common "family" feel for users of audit outputs, and a shared framework for policy decisions and, project management.

Audit Project Teams

Audit development and delivery is the responsibility of each Project Team. The Project Team works in partnership to deliver the objectives of the audit and is responsible for the day-to-day running of the audit and producing the deliverables. It will lead on the audit design, data collection, data quality monitoring, data analysis and reporting.

Each cancer audit Project Team is jointly led by two Clinical Leads representing the most relevant professional organisations, and senior academics with a track record in health services research, statistics, data science and clinical epidemiology, affiliated to the London School of Hygiene and Tropical Medicine. In addition, each audit will have a clinical fellow, who contributes to all aspects of the audits, reinforcing the audits' clinical orientation and contributing to capacity building.

The delivery of the audit is coordinated by an audit manager who is supported by NATCAN's wider infrastructure. Data scientists with experience in data management and statistics and methodologists with experience in performance assessment and QI work across audits.

Audit Clinical Reference Groups

Each audit has a Clinical Reference Group representing a wide range of stakeholders. This group will act as a consultative group to the Project Team on clinical issues related to setting audit priorities, study methodology, interpretation of audit results, reporting, QI, and implementation of recommendations.

Effective collaboration within the centre and across audits facilitates the sharing of expertise and skills in all aspects of the delivery process, notably: designing the audits, meeting information governance requirements, managing and analysing complex national cancer data to produce web-based indicator dashboards / state of the nation reports, and supporting quality improvement.

This organisation creates "critical mass" and audit capacity that is able to respond to the requirements of the funders (NHS England and Welsh Government) and the wider stakeholder "family".

Audit PPI Forums

Patients and patient charities are involved in all aspects of the delivery of the cancer audits. Each audit will also have a standalone Patient and Public Involvement (PPI) Forum to provide insight from a patient perspective on strategic aims and specific audit priorities. This will include shaping the development of each audit's quality improvement initiatives by ensuring this work is relevant from a patient perspective. A key activity of the PPI Forums will be to actively participate in the production of patient-focussed audit outputs (including patient and public information, patient summaries of reports, infographics and design and function of the NATCAN website), guiding on how to make this information accessible.

8.2 Key features of NATCAN's audit approach

The design and delivery of the audits in NATCAN has been informed by the CEU's experience delivering national audits, built up since its inception in 1998. Key features of all audit projects within the CEU include:

- Close clinical-methodological collaboration
- Use of national existing linked datasets as much as possible
- Close collaboration with data providers in England (National Disease Registration Service [NDRS], NHS Digital [NHSD]) and Wales (Wales Cancer Network [WCN], Public Health Wales [PHW])
- A clinical epidemiological approach, informing quality improvement activities.
- "Audit" informed by "research".

All these features will support NATCAN's focus on the three "Rs", ensuring that all its activities are clinically relevant, methodologically robust, and technically rigorous.

8.3 NNHLA project team membership

1. David Cutter - Clinical Lead (Oncology) representing the Royal College of Radiologists; MBBChir DPhil MRCP FRCR, Consultant Clinical Oncologist, Oxford University Hospitals and Associate Professor, University of Oxford
2. Cathy Burton - Clinical Lead (Haematology) representing the British Society of Haematology; MBBChir MA MD FRCP FRCPath Consultant Haematologist, St James's University Hospital, Leeds.
3. Kate Walker - Senior Methodologist, Royal College of Surgeons of England, London.
4. Ella Barber - Data scientist, Royal College of Surgeons of England, London.
5. Vikki Hart - Audit Manager, Royal College of Surgeons of England, London.

8.4 NNHLA clinical reference group membership (as of 29 September 2023)

1. NHS England
2. NHS Wales
3. UK Lymphoma Radiotherapy Group
4. National Cancer Registration & Analysis Service (NCRAS)
5. National Disease Registration Service (NDRS)
6. National Cancer Research Institute (NCRI) - Lymphoma Group
7. Haematological Malignancy Research Network
8. British Society for Haematology
9. Oxford University Hospitals NHS Foundation Trust
10. Blood Cancer UK
11. Lymphoma Action
12. Healthcare Quality Improvement Partnership (HQIP)
13. British Society for Blood & Marrow Transplantation
14. Royal College of Radiologists

Specialities which are represented within the clinical reference group include: haematology, radiology, pathology, palliative care and primary care.

8.5 Data acquisition

The NATCAN Executive Team is working closely with data providers in England (National Disease Registry Service, NHSE) and in Wales (Wales Cancer Network, PHW) to establish efficient "common data channels" for timely and frequent access to datasets, combining data needs for all cancers into a

single request in each Nation and only using routinely collected data, thereby minimising the burden of data collection on provider teams.

Annual and quarterly data

NATCAN will utilise two types of routinely collected data in England. First, an annual "gold-standard" cancer registration dataset, released on an annual basis with a considerable delay between the last recorded episode and the data being available for analysis, and second, a "rapid" cancer registration dataset (RCRD), released at least quarterly with much shorter delays (3 months following diagnosis). The CEU's recent experience with English rapid cancer registration data, in response to the COVID pandemic has demonstrated the latter's huge potential,[14] despite a slightly lower case ascertainment and less complete staging information.

NATCAN will utilise these data across all cancers linked to administrative hospital data (Hospital Episode Statistics/Systemic Anti-Cancer Therapy/Radiotherapy Data Set/Office National Statistics among other routinely collected datasets, see Figure 1) for describing diagnostic pathway patterns, treatments received and clinical outcomes.

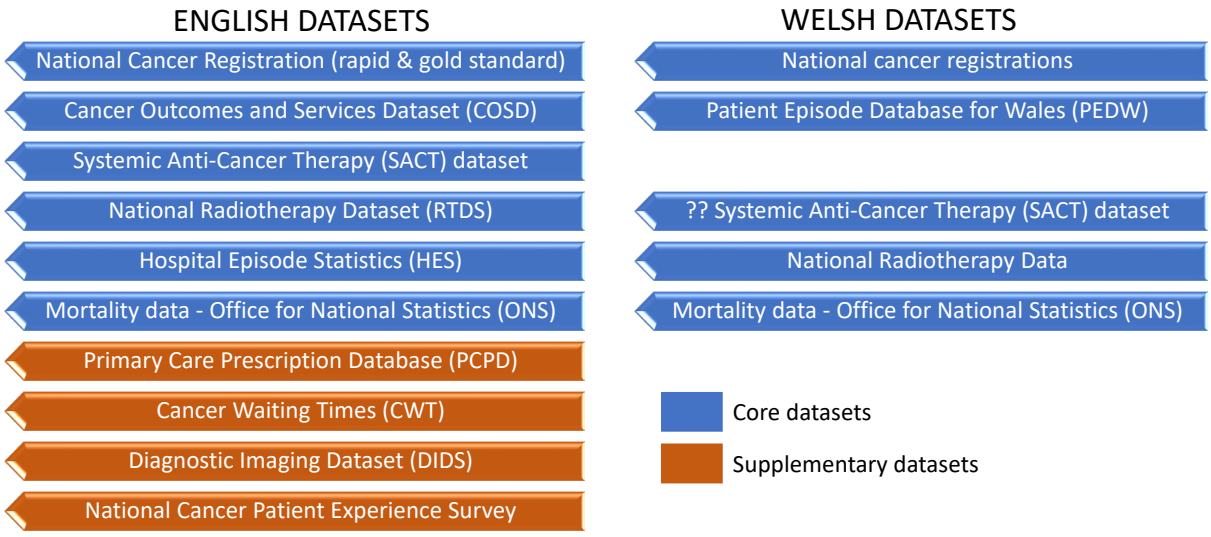

Figure 1: National datasets available to NATCAN.

An equivalent data request will be made to the Wales Cancer Network (WCN)/Public Health Wales (PHW).

Information governance

NATCAN will comply with legislation and good practice principles to ensure data security and patient confidentiality. The patient-level information received and managed by NATCAN is treated as confidential. When analysing data to produce information on patient care and outcomes, NATCAN audit teams use de-identified data and so individual patients are not identifiable.

HQIP and NHSE are joint data controller for the linked de-identified dataset that is supplied to NATCAN for analysis.

8.6 ICD-10 codes for defining non-Hodgkin lymphoma.

Table 2: ICD-10 codes for defining non-Hodgkin lymphoma[15]

ICD-10 code	Cancer types / Description
C82	Follicular lymphoma
C83	Non-follicular lymphoma
C84	Mature T/NK-cell lymphomas
C85	Other and unspecified types of non-Hodgkin lymphoma
C86	Other specified types of T/NK-cell lymphoma
C88	Malignant immunoproliferative diseases
C91.1	Chronic lymphocytic leukaemia of B-cell type

C82 Follicular lymphoma

Incl.:

1. Follicular lymphoma with or without diffuse areas

Excl.:

1. Mature T/NK-cell lymphoma (C84.-)

Table 3: ICD-10 codes for Follicular lymphoma[15]

ICD-10	Description
C82.0	Follicular lymphoma grade I
C82.1	Follicular lymphoma grade II
C82.2	Follicular lymphoma grade III, unspecified
C82.3	Follicular lymphoma grade IIIa
C82.4	Follicular lymphoma grade IIIb

ICD-10	Description
C82.5	Diffuse follicle centre lymphoma
C82.6	Cutaneous follicle centre lymphoma
C82.7	Other types of follicular lymphoma
C82.9	Follicular lymphoma, unspecified Nodular lymphoma NOS

C83 Non-follicular lymphoma

Table 4: ICD-10 codes for non-follicular lymphoma[15]

ICD-10	Description
C83.0	Small cell B-cell lymphoma: 1. Lymphoplasmacytic lymphoma 2. Nodal marginal zone lymphoma 3. Non-leukaemic variant of B-CLL 4. Splenic marginal zone lymphoma Excl.: 1. Chronic lymphocytic leukaemia (C91.1) 2. Waldenström macroglobulinaemia (C88.0) 3. Mature T/NK-cell lymphomas (C84.-)
C83.1	Mantle cell lymphoma 1. Centrocytic lymphoma 2. Malignant lymphomatous polyposis
C83.3	Diffuse large B-cell lymphoma 1. Anaplastic 2. CD30-positive 3. Centroblastic 4. Plasmablastic 5. Immunoblastic 6. Subtype not specified

ICD-10	Description
	7. T-cell rich Excl.: 1. Mediastinal (thymic) large B-cell lymphoma (C85.2) 2. Mature T/NK-cell lymphomas (C84.-)
C83.5	Lymphoblastic (diffuse) lymphoma 1. B-cell precursor lymphoma 2. Lymphoblastic B-cell lymphoma 3. Lymphoblastic lymphoma NOS 4. Lymphoblastic T-cell lymphoma 5. T-cell precursor lymphoma
C83.7	Burkitt lymphoma 1. Atypical Burkitt lymphoma 2. "Burkitt-like" lymphoma Excl.: 1. Mature B-cell leukaemia Burkitt-type (C91.8)
C83.8	Other non-follicular lymphoma 1. Primary effusion B-cell lymphoma 2. Intravascular large B-cell lymphoma 3. Lymphoid granulomatosis Excl.: 1. Mediastinal (thymic) large B-cell lymphoma (C85.2) 2. T-cell rich B-cell lymphoma (C83.3)
C83.9	Non-follicular (diffuse) lymphoma, unspecified

C84 Mature T/NK-cell lymphomas

Table 5: ICD-10 codes for mature T/NK-cell lymphomas[15]

ICD-10	Description

C84.0	Mycosis fungoides
C84.1	Sézary disease
C84.4	Peripheral T-cell lymphoma, not elsewhere classified 1. Lennert's lymphoma 2. Lymphoepithelioid lymphoma
C84.5	Other mature T/NK-cell lymphomas Note: If T-cell lineage or involvement is mentioned in conjunction with a specific lymphoma, code to the more specific description. Excl.: 1. Angioimmunoblastic T-cell lymphoma (C86.5) 2. Blastic NK-cell lymphoma (C86.4) 3. Enteropathy-type T-cell lymphoma (C86.2) 4. Extranodal NK-cell lymphoma, nasal type (C86.0) 5. Hepatosplenic T-cell lymphoma (C86.1) 6. Primary cutaneous CD30-positive T-cell proliferations (C86.6) 7. Subcutaneous panniculitis-like T-cell lymphoma (C86.3) 8. T-cell leukaemia (C91.-)
C84.6	Anaplastic large cell lymphoma, ALK-positive 1. Anaplastic large cell lymphoma, CD30-positive
C84.7	Anaplastic large cell lymphoma, ALK-negative Excl.: 1. Primary cutaneous CD30-positive T-cell proliferations (C86.6)
C84.8	Cutaneous T-cell lymphoma, unspecified
C84.9	Mature T/NK-cell lymphoma, unspecified 1. NK/T cell lymphoma NOS Excl.: 1. Mature T-cell lymphoma, not elsewhere classified (C84.4)

C85 Other and unspecified types of non-Hodgkin lymphoma

Table 6: ICD-10 codes for other and unspecified types of non-Hodgkin lymphoma[15]

ICD-10	Description
C85.1	B-cell lymphoma, unspecified Note: If B-cell lineage or involvement is mentioned in conjunction with a specific lymphoma, code to the more specific description.
C85.2	Mediastinal (thymic) large B-cell lymphoma
C85.7	Other specified types of non-Hodgkin lymphoma
C85.9	Non-Hodgkin lymphoma, unspecified 1. Lymphoma NOS 2. Malignant lymphoma NOS 3. Non-Hodgkin lymphoma NOS

C86 Other specified types of T/NK-cell lymphoma

Excl.:

1. Anaplastic large cell lymphoma, ALK negative (C84.7)
2. Anaplastic large cell lymphoma, ALK positive (C84.6)

Table 7: ICD-10 codes for other specified types of T/NK-cell lymphoma[15]

ICD-10	Description
C86.0	Extranodal NK/T-cell lymphoma, nasal type
C86.1	Hepatosplenic T-cell lymphoma 1. Alpha-beta and gamma-delta types
C86.2	Enteropathy-type (intestinal) T-cell lymphoma 1. Enteropathy associated T-cell lymphoma
C86.3	Subcutaneous panniculitis-like T-cell lymphoma

ICD-10	Description
C86.4	Blastic NK-cell lymphoma
C86.5	Angioimmunoblastic T-cell lymphoma 1. Angioimmunoblastic lymphadenopathy with dysproteinaemia [AILD]
C86.6	Primary cutaneous CD30-positive T-cell proliferations 1. Lymphomatoid papulosis 2. Primary cutaneous anaplastic large-cell lymphoma 3. Primary cutaneous CD30-positive large T-cell lymphoma

C88 Malignant immunoproliferative diseases

Table 8: ICD-10 codes for malignant immunoproliferative diseases[15]

ICD-10	Description
C88.0	Waldenström macroglobulinaemia 1. Lymphoplasmacytic lymphoma with IgM-production 2. Macroglobulinaemia (primary)(idiopathic) Excl.: 1. Small cell B-cell lymphoma (C83.0)
C88.2	Other heavy chain disease 1. Franklin disease 2. Gamma heavy chain disease 3. Mu (μ) heavy chain disease
C88.3	Immunoproliferative small intestinal disease 1. Alpha heavy chain disease 2. Mediterranean lymphoma
C88.4	Extranodal marginal zone B-cell lymphoma of mucosa-associated lymphoid tissue [MALT-lymphoma] Note: Use additional code (C83.3) if desired, to specify transition to high malignant (diffuse large cell) lymphoma

ICD-10	Description
	1. Lymphoma of skin-associated lymphoid tissue (SALT-lymphoma) 2. Lymphoma of bronchial-associated lymphoid tissue (BALT-lymphoma)
C88.7	Other malignant immunoproliferative diseases
C88.9	Malignant immunoproliferative disease, unspecified 1. Immunoproliferative disease NOS

C91.1 Chronic lymphocytic leukaemia of B-cell type

Note: C91 Lymphoid leukaemia

Table 9: ICD-10 code for chronic lymphocytic leukaemia of B-cell type[15]

ICD-10	Description
C91.1	Chronic lymphocytic leukaemia of B-cell type 1. Lymphoplasmacytic leukaemia 2. Richter syndrome Excl.: 1. lymphoplasmacytic lymphoma (C83.0)

8.7 ICD-O3 codes for defining non-Hodgkin lymphoma.

Table 10: ICD-O3.2 codes for defining non-Hodgkin lymphoma.

ICD-O3.2	Level	Term
959	3	Malignant lymphomas, NOS or diffuse
9590/3	Preferred	Malignant lymphoma, NOS
9590/3	Synonym	Lymphoma, NOS
9590/3	Synonym	Microglioma
9591/1	Preferred	Monoclonal B-cell lymphocytosis, NOS
9591/1	Related	Monoclonal B-cell lymphocytosis, non-CLL type
9591/3	Preferred	Malignant lymphoma, non-Hodgkin, NOS
9591/3	Synonym	Non-Hodgkin lymphoma, NOS
9591/3	Related	B-cell lymphoma, NOS
9591/3	Related	Lymphosarcoma, NOS
9591/3	Synonym	Lymphosarcoma, diffuse
9591/3	Related	Malignant lymphoma, diffuse, NOS
9591/3	Related	Malignant lymphoma, non-cleaved cell, NOS
9591/3	Related	Reticulum cell sarcoma, NOS
9591/3	Synonym	Reticulosarcoma, NOS
9591/3	Synonym	Reticulum cell sarcoma, diffuse

ICD-O3.2	Level	Term
9591/3	Synonym	Reticulosarcoma, diffuse
9591/3	Related	Hairy cell leukemia variant
9591/3	Related	Malignant lymphoma, lymphocytic, intermediate differentiation, nodular
9591/3	Related	Malignant lymphoma, lymphocytic, poorly differentiated, diffuse
9591/3	Synonym	Malignant lymphoma, cleaved cell, NOS
9591/3	Synonym	Malignant lymphoma, small cleaved cell, NOS
9591/3	Related	Malignant lymphoma, small cell, noncleaved, diffuse
9591/3	Synonym	Malignant lymphoma, undifferentiated cell type, NOS
9591/3	Synonym	Malignant lymphoma, undifferentiated cell, non-Burkitt
9591/3	Related	Malignant lymphoma, small cleaved cell, diffuse
9591/3	Related	Splenic B-cell lymphoma/leukemia, unclassifiable
9591/3	Related	Splenic diffuse red pulp small B-cell lymphoma
9596/3	Preferred	Composite Hodgkin and non-Hodgkin lymphoma
9596/3	Related	B-cell lymphoma, unclassifiable, with features intermediate between diffuse large B-cell lymphoma and classical Hodgkin lymphoma
9597/3	Preferred	Primary cutaneous follicle center lymphoma
967-969	3	Mature B-cell lymphomas
9671/3	Preferred	Lymphoplasmacytic lymphoma

ICD-O3.2	Level	Term
9671/3	Synonym	Malignant lymphoma, lymphoplasmacytoid
9671/3	Related	Immunocytoma
9671/3	Related	Malignant lymphoma, plasmacytoid
9671/3	Related	Plasmacytic lymphoma
9673/1	Preferred	In situ mantle cell neoplasia
9673/1	Synonym	In situ mantle cell lymphoma
9673/3	Preferred	Mantle cell lymphoma
9673/3	Synonym	Malignant lymphoma, centrocytic
9673/3	Synonym	Malignant lymphoma, lymphocytic, intermediate differentiation, diffuse
9673/3	Synonym	Malignant lymphomatous polyposis
9673/3	Synonym	Mantle zone lymphoma
9675/3	Preferred	Malignant lymphoma, mixed small and large cell, diffuse
9675/3	Synonym	Malignant lymphoma, centroblastic-centrocytic, NOS
9675/3	Synonym	Malignant lymphoma, centroblastic-centrocytic, diffuse
9675/3	Synonym	Malignant lymphoma, mixed cell type, diffuse
9675/3	Synonym	Malignant lymphoma, mixed lymphocytic-histiocytic, diffuse
9678/3	Preferred	Primary effusion lymphoma

ICD-O3.2	Level	Term
9679/3	Preferred	Mediastinal large B-cell lymphoma
9679/3	Synonym	Thymic large B-cell lymphoma
9680/1	Preferred	EBV positive mucocutaneous ulcer
9680/3	Preferred	Diffuse large B-cell lymphoma, NOS
9680/3	Synonym	Malignant lymphoma, large B-cell, diffuse, NOS
9680/3	Synonym	Malignant lymphoma, histiocytic, NOS
9680/3	Synonym	Malignant lymphoma, large B-cell, NOS
9680/3	Synonym	Malignant lymphoma, large B-cell, diffuse, centroblastic, NOS
9680/3	Synonym	Malignant lymphoma, large cell, NOS
9680/3	Synonym	Malignant lymphoma, large cell, cleaved, NOS
9680/3	Synonym	Malignant lymphoma, large cell, diffuse, NOS
9680/3	Synonym	Malignant lymphoma, large cell, noncleaved, NOS
9680/3	Synonym	Malignant lymphoma, noncleaved, NOS
9680/3	Synonym	Malignant lymphoma, noncleaved, diffuse, NOS
9680/3	Synonym	Malignant lymphoma, histiocytic, diffuse
9680/3	Synonym	Malignant lymphoma, large cell, cleaved and noncleaved
9680/3	Synonym	Malignant lymphoma, large cell, cleaved, diffuse

ICD-O3.2	Level	Term
9680/3	Synonym	Malignant lymphoma, large cell, noncleaved, diffuse
9680/3	Related	Malignant lymphoma, centroblastic, NOS
9680/3	Related	Diffuse large B-cell lymphoma, germinal center B-cell subtype
9680/3	Related	Diffuse large B-cell lymphoma, activated B-cell subtype
9680/3	Related	Malignant lymphoma, centroblastic, diffuse
9680/3	Related	Anaplastic large B-cell lymphoma
9680/3	Related	B-cell lymphoma, unclassifiable, with features intermediate between diffuse large B-cell lymphoma and Burkitt lymphoma
9680/3	Related	Diffuse large B-cell lymphoma associated with chronic inflammation
9680/3	Related	EBV positive diffuse large B-cell lymphoma
9680/3	Related	Primary cutaneous diffuse large B-cell lymphoma, leg type
9680/3	Related	Primary diffuse large B-cell lymphoma of CNS
9680/3	Related	High grade B-cell lymphoma, NOS
9680/3	Related	High grade B-cell lymphoma with MYC and BCL2 and/or BCL6 rearrangements
9680/3	Related	Vitreoretinal lymphoma
9684/3	Preferred	Malignant lymphoma, large B-cell, diffuse, immunoblastic, NOS
9684/3	Synonym	Malignant lymphoma, immunoblastic, NOS

ICD-O3.2	Level	Term
9684/3	Synonym	Immunoblastic sarcoma
9684/3	Synonym	Malignant lymphoma, large cell, immunoblastic
9687/3	Preferred	Burkitt lymphoma, NOS
9687/3	Synonym	Burkitt tumor
9687/3	Synonym	Malignant lymphoma, small noncleaved, Burkitt type
9687/3	Synonym	Malignant lymphoma, undifferentiated, Burkitt type
9687/3	Related	Burkitt-like lymphoma, NOS
9687/3	Related	Burkitt-like lymphoma with 11q aberration
9687/3	Synonym	Burkitt cell leukemia
9687/3	Synonym	Acute leukemia, Burkitt type
9687/3	Synonym	Acute lymphoblastic leukemia, mature B-cell type
9687/3	Synonym	B-ALL
9687/3	Synonym	FAB L3
9688/3	Preferred	T-cell/histiocyte rich large B-cell lymphoma
9688/3	Synonym	T-cell rich large B-cell lymphoma
9688/3	Synonym	Histiocyte-rich large B-cell lymphoma
9689/3	Preferred	Splenic marginal zone B-cell lymphoma

ICD-O3.2	Level	Term
9689/3	Synonym	Splenic marginal zone lymphoma, NOS
9689/3	Synonym	Splenic lymphoma with villous lymphocytes
9690/3	Preferred	Follicular lymphoma, NOS
9690/3	Synonym	Malignant lymphoma, follicle center, NOS
9690/3	Synonym	Malignant lymphoma, follicular, NOS
9690/3	Synonym	Malignant lymphoma, lymphocytic, nodular, NOS
9690/3	Synonym	Malignant lymphoma, nodular, NOS
9690/3	Synonym	Malignant lymphoma, centroblastic-centrocytic, follicular
9690/3	Synonym	Malignant lymphoma, follicle center, follicular
9690/3	Related	Follicular lymphoma, pediatric type
9691/3	Preferred	Follicular lymphoma, grade 2
9691/3	Synonym	Malignant lymphoma, mixed cell type, follicular
9691/3	Synonym	Malignant lymphoma, mixed cell type, nodular
9691/3	Synonym	Malignant lymphoma, mixed lymphocytic-histiocytic, nodular
9691/3	Synonym	Malignant lymphoma, mixed small cleaved and large cell, follicular
9695/1	Preferred	In situ follicular neoplasia
9695/1	Synonym	In situ follicular lymphoma

ICD-O3.2	Level	Term
9695/3	Preferred	Follicular lymphoma, grade 1
9695/3	Synonym	Follicular lymphoma, small cleaved cell
9695/3	Synonym	Malignant lymphoma, lymphocytic, poorly differentiated, nodular
9695/3	Synonym	Malignant lymphoma, small cleaved cell, follicular
9695/3	Related	Follicular lymphoma, duodenal type
9698/3	Preferred	Follicular lymphoma, grade 3
9698/3	Synonym	Malignant lymphoma, large cell, follicular, NOS
9698/3	Synonym	Malignant lymphoma, noncleaved cell, follicular, NOS
9698/3	Synonym	Follicular lymphoma, grade 3A
9698/3	Synonym	Follicular lymphoma, grade 3B
9698/3	Synonym	Malignant lymphoma, centroblastic, follicular
9698/3	Synonym	Malignant lymphoma, histiocytic, nodular
9698/3	Synonym	Malignant lymphoma, large cell, noncleaved, follicular
9698/3	Synonym	Malignant lymphoma, large cleaved cell, follicular
9698/3	Synonym	Malignant lymphoma, lymphocytic, well differentiated, nodular
9698/3	Related	Large B-cell lymphoma with IRF4 rearrangement
9699/3	Preferred	Marginal zone B-cell lymphoma, NOS

ICD-O3.2	Level	Term
9699/3	Synonym	Marginal zone lymphoma, NOS
9699/3	Synonym	BALT lymphoma
9699/3	Synonym	Bronchus-associated lymphoid tissue lymphoma
9699/3	Synonym	MALT lymphoma
9699/3	Synonym	Monocytoid B-cell lymphoma
9699/3	Synonym	Mucosa-associated lymphoid tissue lymphoma
9699/3	Synonym	Nodal marginal zone lymphoma
9699/3	Synonym	SALT lymphoma
9699/3	Synonym	Skin-associated lymphoid tissue lymphoma
9699/3	Related	Extranodal marginal zone lymphoma of mucosa-associated lymphoid tissue
9699/3	Related	Primary choroidal lymphoma
970-971	3	Mature T- and NK-cell lymphomas
9700/3	Preferred	Mycosis fungoides
9700/3	Synonym	Pagetoid reticulosis
9700/3	Related	Granulomatous slack skin
9701/3	Preferred	Sezary syndrome
9701/3	Synonym	Sezary disease

ICD-O3.2	Level	Term
9702/1	Preferred	Indolent T-cell lymphoproliferative disorder of gastrointestinal tract
9702/3	Preferred	Mature T-cell lymphoma, NOS
9702/3	Synonym	Peripheral T-cell lymphoma, NOS
9702/3	Synonym	T-cell lymphoma, NOS
9702/3	Synonym	Peripheral T-cell lymphoma, large cell
9702/3	Synonym	Peripheral T-cell lymphoma, pleomorphic medium and large cell
9702/3	Synonym	Peripheral T-cell lymphoma, pleomorphic small cell
9702/3	Synonym	T-zone lymphoma
9702/3	Related	Lymphoepithelioid lymphoma
9702/3	Synonym	Lennert lymphoma
9702/3	Related	Follicular T-cell lymphoma
9702/3	Related	Nodal peripheral T-cell lymphoma with T follicular helper phenotype
9705/3	Preferred	Angioimmunoblastic T-cell lymphoma
9705/3	Synonym	Angioimmunoblastic lymphoma
9705/3	Synonym	Peripheral T-cell lymphoma, AILD (Angioimmunoblastic Lymphadenopathy with Dysproteinemia)
9708/3	Preferred	Subcutaneous panniculitis-like T-cell lymphoma

ICD-O3.2	Level	Term
9709/1	Preferred	Primary cutaneous CD4 positive small/medium T-cell lymphoproliferative disorder
9709/1	Related	Primary cutaneous CD4 positive small/medium T-cell lymphoma
9709/3	Preferred	Cutaneous T-cell lymphoma, NOS
9709/3	Synonym	Cutaneous lymphoma, NOS
9709/3	Related	Primary cutaneous CD8 positive aggressive epidermotropic cytotoxic T-cell lymphoma
9709/3	Related	Primary cutaneous acral CD8 positive T-cell lymphoma
9712/3	Preferred	Intravascular large B-cell lymphoma
9712/3	Synonym	Intravascular B-cell lymphoma
9712/3	Synonym	Angioendotheliomatosis
9712/3	Synonym	Angiotropic lymphoma
9714/3	Preferred	Anaplastic large cell lymphoma, T-cell and Null-cell type
9714/3	Synonym	Large cell (Ki-1 positive) lymphoma
9714/3	Related	Anaplastic large cell lymphoma, NOS
9714/3	Synonym	Anaplastic large cell lymphoma, CD30 positive
9714/3	Related	Anaplastic large cell lymphoma, ALK positive
9715/3	Preferred	Anaplastic large cell lymphoma, ALK negative

ICD-O3.2	Level	Term
9715/3	Related	Breast implant-associated anaplastic large cell lymphoma
9716/3	Preferred	Hepatosplenic T-cell lymphoma
9716/3	Synonym	Hepatosplenic gamma-delta cell lymphoma
9717/3	Preferred	Intestinal T-cell lymphoma
9717/3	Synonym	Enteropathy-associated T-cell lymphoma
9717/3	Synonym	Enteropathy type intestinal T-cell lymphoma
9717/3	Related	Monomorphic epitheliotropic intestinal T-cell lymphoma
9718/1	Preferred	Primary cutaneous CD30 positive T-cell lymphoproliferative disorder
9718/1	Synonym	Lymphomatoid papulosis
9718/3	Preferred	Primary cutaneous anaplastic large cell lymphoma
9718/3	Synonym	Primary cutaneous CD30 positive large T-cell lymphoma
9719/3	Preferred	NK/T-cell lymphoma, nasal and nasal type
9719/3	Synonym	Malignant reticulosis, NOS
9719/3	Synonym	Angiocentric T-cell lymphoma
9719/3	Synonym	Extranodal NK/T-cell lymphoma, nasal type
9719/3	Synonym	Malignant midline reticulosis
9719/3	Synonym	Polymorphic reticulosis

ICD-O3.2	Level	Term
9719/3	Synonym	T/NK-cell lymphoma
972	3	Precursor cell lymphoblastic lymphomas
9724/3	Preferred	Systemic EBV positive T-cell lymphoproliferative disease of childhood
9725/1	Preferred	Hydroa vacciniforme-like lymphoproliferative disorder
9725/1	Synonym	Hydroa vacciniforme-like lymphoma
9726/3	Preferred	Primary cutaneous gamma-delta T-cell lymphoma
9727/3	Preferred	Precursor cell lymphoblastic lymphoma, NOS
9727/3	Synonym	Malignant lymphoma, lymphoblastic, NOS
9727/3	Synonym	Lymphoblastoma
9727/3	Synonym	Malignant lymphoma, convoluted cell
9727/3	Related	Blastic NK-cell lymphoma
9727/3	Related	Blastic plasmacytoid dendritic cell neoplasm
976	2	Immunoproliferative diseases
9760/3	Preferred	Immunoproliferative disease, NOS
9761/1	Preferred	IgM monoclonal gammopathy of undetermined significance
9761/3	Preferred	Waldenstrom macroglobulinemia
9762/3	Preferred	Heavy chain disease, NOS

ICD-O3.2	Level	Term
9762/3	Related	Alpha heavy chain disease
9762/3	Related	Gamma heavy chain disease
9762/3	Synonym	Franklin disease
9762/3	Related	Mu heavy chain disease
9764/3	Preferred	Immunoproliferative small intestinal disease
9764/3	Synonym	Mediterranean lymphoma
9765/1	Preferred	Monoclonal gammopathy of undetermined significance, NOS
9765/1	Synonym	MGUS
9765/1	Synonym	Monoclonal gammopathy, NOS
9766/1	Preferred	Angiocentric immunoproliferative lesion
9766/1	Related	Lymphomatoid granulomatosis, NOS
9766/1	Related	Lymphomatoid granulomatosis, grade 1
9766/1	Related	Lymphomatoid granulomatosis, grade 2
9766/3	Preferred	Lymphomatoid granulomatosis, grade 3
9767/1	Preferred	Angioimmunoblastic lymphadenopathy (AIL)
9767/1	Synonym	Immunoblastic lymphadenopathy (IBL)
9768/1	Preferred	T-gamma lymphoproliferative disease

ICD-O3.2	Level	Term
9769/1	Preferred	Immunoglobulin deposition disease
9769/1	Synonym	Primary amyloidosis
9769/1	Synonym	Systemic light chain disease
981-983	3	Lymphoid leukemias
9811/3	Preferred	B lymphoblastic leukemia/lymphoma, NOS
9811/3	Synonym	c-ALL
9811/3	Synonym	Common ALL
9811/3	Synonym	Common precursor B ALL
9811/3	Synonym	Pre-B ALL
9811/3	Synonym	Pre-pre-B ALL
9811/3	Synonym	Pro-B ALL
9811/3	Synonym	Precursor B-cell lymphoblastic lymphoma
9811/3	Synonym	Precursor B-cell lymphoblastic leukemia
9811/3	Related	B lymphoblastic leukemia/lymphoma with iAMP21
9812/3	Preferred	B lymphoblastic leukemia/lymphoma with t(9;22)(q34;q11.2); BCR-ABL1
9813/3	Preferred	B lymphoblastic leukemia/lymphoma with t(v;11q23); MLL rearranged
9814/3	Preferred	B lymphoblastic leukemia/lymphoma with t(12;21)(p13;q22); TEL-AML1 (ETV6-RUNX1)

ICD-O3.2	Level	Term
9815/3	Preferred	B lymphoblastic leukemia/lymphoma with hyperdiploidy
9816/3	Preferred	B lymphoblastic leukemia/lymphoma with hypodiploidy (Hypodiploid ALL)
9817/3	Preferred	B lymphoblastic leukemia/lymphoma with t(5;14)(q31;q32); IL3-IGH
9818/3	Preferred	B lymphoblastic leukemia/lymphoma with t(1;19)(q23;p13.3); E2A-PBX1 (TCF3-PBX1)
9819/3	Preferred	B lymphoblastic leukemia/lymphoma, BCR-ABL1-like
9820/3	Preferred	Lymphoid leukemia, NOS
9820/3	Related	Lymphatic leukemia, NOS
9820/3	Related	Lymphocytic leukemia, NOS
9820/3	Related	Aleukemic lymphoid leukemia
9820/3	Synonym	Aleukemic lymphatic leukemia
9820/3	Synonym	Aleukemic lymphocytic leukemia
9820/3	Related	Lymphosarcoma cell leukemia
9820/3	Related	Subacute lymphoid leukemia
9820/3	Synonym	Subacute lymphatic leukemia
9820/3	Synonym	Subacute lymphocytic leukemia
9823/1	Preferred	Monoclonal B-cell lymphocytosis, CLL type
9823/3	Preferred	B-cell chronic lymphocytic leukemia/small lymphocytic lymphoma

ICD-O3.2	Level	Term
9823/3	Synonym	Chronic lymphatic leukemia
9823/3	Synonym	Chronic lymphocytic leukemia
9823/3	Synonym	Chronic lymphocytic leukemia, B-cell type
9823/3	Synonym	Chronic lymphoid leukemia
9823/3	Synonym	Malignant lymphoma, small B lymphocytic, NOS
9823/3	Synonym	Malignant lymphoma, lymphocytic, NOS
9823/3	Synonym	Malignant lymphoma, lymphocytic, diffuse, NOS
9823/3	Synonym	Malignant lymphoma, small cell, NOS
9823/3	Synonym	Malignant lymphoma, small lymphocytic, NOS
9823/3	Synonym	Malignant lymphoma, lymphocytic, well differentiated, diffuse
9823/3	Synonym	Malignant lymphoma, small cell diffuse
9823/3	Synonym	Malignant lymphoma, small lymphocytic, diffuse
9827/3	Preferred	Adult T-cell leukemia/lymphoma (HTLV-1 positive)
9827/3	Synonym	Adult T-cell leukemia
9827/3	Synonym	Adult T-cell lymphoma
9827/3	Synonym	Adult T-cell lymphoma/leukemia
9831/3	Preferred	T-cell large granular lymphocytic leukemia

ICD-O3.2	Level	Term
9831/3	Synonym	Large granular lymphocytosis, NOS
9831/3	Synonym	NK-cell large granular lymphocytic leukemia
9831/3	Synonym	T-cell large granular lymphocytosis
9831/3	Related	Chronic lymphoproliferative disorder of NK cells
9832/3	Preferred	Prolymphocytic leukemia, NOS
9833/3	Preferred	Prolymphocytic leukemia, B-cell type
9834/3	Preferred	Prolymphocytic leukemia, T-cell type
9835/3	Preferred	Precursor cell lymphoblastic leukemia, NOS
9835/3	Synonym	Acute lymphoblastic leukemia, NOS
9835/3	Synonym	Acute lymphoblastic leukemia, L2 type, NOS
9835/3	Synonym	Acute lymphoblastic leukemia-lymphoma, NOS
9835/3	Synonym	Lymphoblastic leukemia, NOS
9835/3	Synonym	Acute lymphatic leukemia
9835/3	Synonym	Acute lymphocytic leukemia
9835/3	Synonym	Acute lymphoid leukemia
9835/3	Synonym	FAB L1
9835/3	Synonym	FAB L2

ICD-O3.2	Level	Term
9835/3	Synonym	Precursor cell lymphoblastic leukemia, not phenotyped
9835/3	Synonym	Acute lymphoblastic leukemia, precursor-cell type
9837/3	Preferred	Precursor T-cell lymphoblastic leukemia
9837/3	Synonym	Cortical T ALL
9837/3	Synonym	Mature T ALL
9837/3	Synonym	Pre-T ALL
9837/3	Synonym	Pro-T ALL
9837/3	Synonym	Precursor T-cell lymphoblastic lymphoma
9837/3	Related	T lymphoblastic leukemia/lymphoma
9837/3	Related	Early T-cell precursor acute lymphoblastic leukemia

8.8 NICE quality standards for haematological cancers

Quality statements:

1. People with haematological cancer have an integrated report produced by a specialist integrated haematological malignancy diagnostic service (SIHMDS) that is shared with the haemato-oncology multidisciplinary team (MDT).[8]
2. Young people and adults with specific subtypes of non-Hodgkin lymphoma have staging using fluorodeoxyglucose-positron emission tomography-CT (FDG-PET-CT).[8]
3. Young people and adults with localised stage IIA follicular lymphoma have local radiotherapy as first-line treatment.[8]
4. Young people and adults who have completed their treatment for non-Hodgkin lymphoma have a discussion about their end-of-treatment summary plan.[8]

This quality standard is expected to contribute to improvements in the following outcomes:

1. Overall survival of haematological cancers.[8]
2. Treatment-related morbidity of haematological cancers.[8]
3. Quality of life of people with haematological cancers.[8]
4. Patient management of haematological cancers.[8]