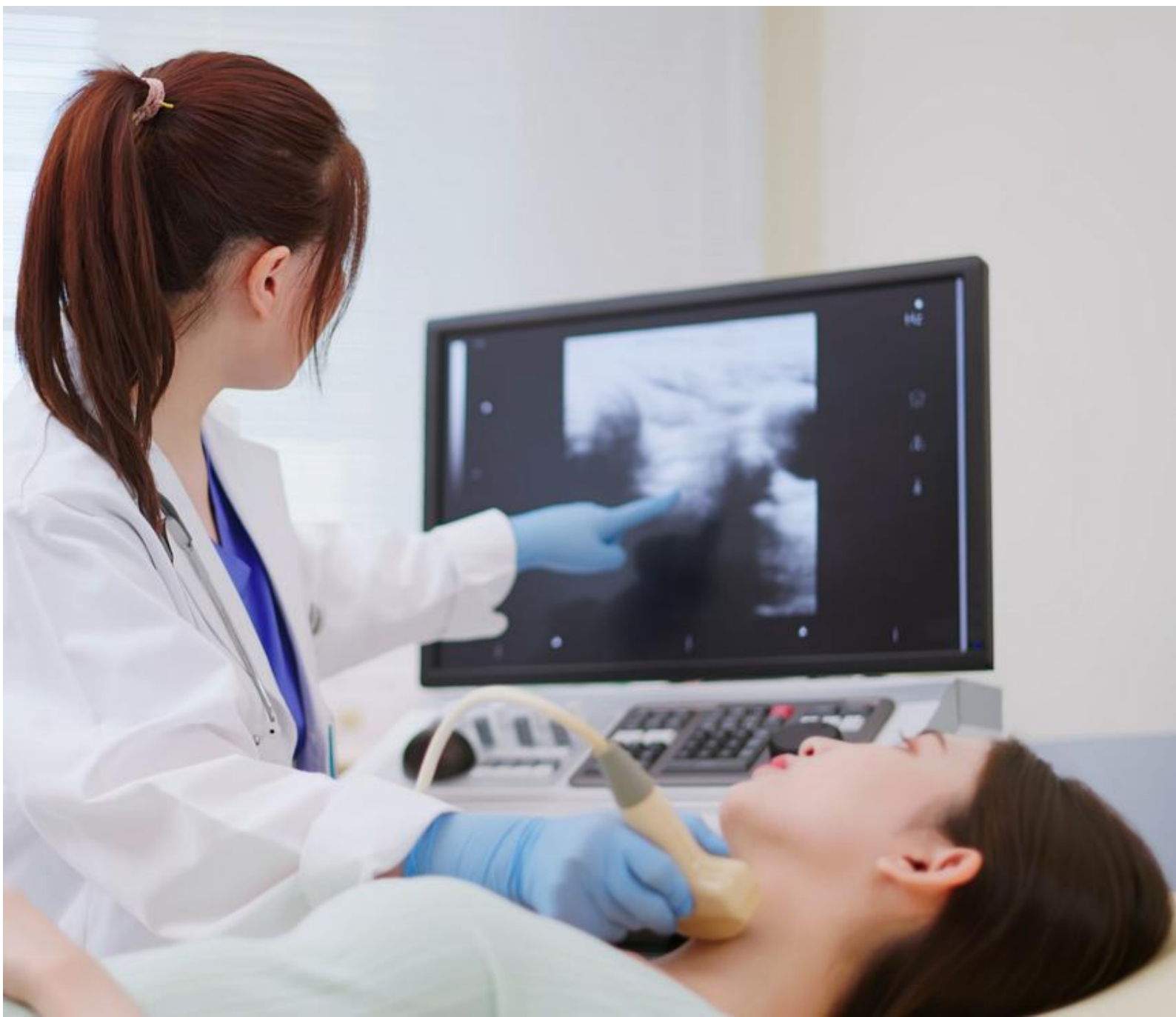


# National Non-Hodgkin Lymphoma Audit State of the Nation Report 2025: Methodology Supplement

An audit of care received by people diagnosed with non-Hodgkin lymphoma between 1 January 2022 and 31 December 2022 in England and 1 January 2023 and 31 December 2023 in Wales.

Published September 2025



**Citation for this document:**

National Non-Hodgkin Lymphoma Audit (NNHLA) State of the Nation Report 2025. London:  
National Cancer Audit Collaborating Centre, Royal College of Surgeons of England, 2025.

This document was prepared by members of the NNHLA project team:

David Cutter, Co-Clinical Lead/Consultant Oncologist  
Cathy Burton, Co-Clinical Lead/Consultant Haematologist  
Kate Walker, Senior Methodologist/Professor of Medical Statistics  
Lu Han, Methodologist  
Ruhi Kanani, Clinical Fellow  
Ella Barber, Data Scientist  
Vikki Hart, Senior Project Manager  
Faine Chan, Project Coordinator

With review and input from:

[NNHLA Clinical Reference Group](#)

[NATCAN Executive Team](#)



**Royal College  
of Surgeons  
of England**

The Royal College of Surgeons of England is an independent professional body committed to enabling surgeons to achieve and maintain the highest standards of surgical practice and patient care. As part of this it supports audit and the evaluation of clinical effectiveness for surgery. Registered Charity no: 212808.



**HQIP**

Healthcare Quality  
Improvement Partnership

The National Cancer Audit Collaborating Centre (NATCAN) is commissioned by the [Healthcare Quality Improvement Partnership \(HQIP\)](#) and funded by NHS England and the Welsh Government as part of the [National Clinical Audit and Patient Outcomes Programme](#) (NCAPOP). NATCAN delivers national audits in bowel, breast (primary and metastatic), kidney, lung, non-Hodgkin lymphoma, oesophago-gastric, ovarian, pancreatic and prostate cancers.



The British Society for Haematology (BSH) is the professional body for haematologists. It is one of the key partners of the Audit. Registered Charity no. 1005735



The Royal College of Radiologists is the professional body for clinical radiologists and clinical oncologists. It is one of the key partners leading the Audit. Registered Charity no: 211540



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



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

© 2025 Healthcare Quality Improvement Partnership (HQIP)

Copyright All rights reserved. No part of this publication may be reproduced in any form (including photocopying or storing it in any medium by electronic means and whether or not transiently or incidentally to some other use of this publication) without the written permission of the copyright owner. Applications for the copyright owner's written permission to reproduce any part of this publication should be addressed to the publisher.

# Contents

1.	Introduction.....	4
2.	Sources of Data.....	4
3.	Inclusion and Exclusion Criteria.....	4
3.1	Non-Hodgkin lymphoma subtypes .....	5
3.2	Classification of high-grade vs. low-grade NHL.....	6
4.	Key Data Items.....	7
5.	Indicator Definitions.....	8
5.1	Contextual measure: Proportion of adults diagnosed with NHL presenting as an emergency prior to diagnosis.....	9
5.2	Performance Indicator: Proportion of adults diagnosed with NHL discussed at a lymphoma/haematology multidisciplinary team (MDT) meeting within 4 weeks of diagnosis. ....	10
5.3	Performance Indicator: Proportion of adults diagnosed with NHL seen by a clinical nurse specialist (CNS).11	
5.4	Performance Indicator: Proportion of adults diagnosed with high-grade lymphoma (Burkitt Lymphoma (BL), Diffuse Large B Cell Lymphoma (DLBCL) or high-grade T-cell) who start chemotherapy within 62 days of referral.12	
5.5	Performance Indicator: First-line chemotherapy treatment regimens received by adults diagnosed with high-grade lymphoma (BL, DLBCL or high-grade T-cell). ....	13
5.6	Performance Indicator: Proportion of adults diagnosed with high-grade lymphoma (BL, DLBCL or high-grade T-cell) who start radiotherapy within 8 weeks of end of first line chemotherapy. ....	14
5.7	Performance Indicator: Proportion of adults diagnosed with NHL receiving radiotherapy, reported by subtype.....	15
5.8	Performance Indicator: Proportion of adults diagnosed with NHL who are recorded as having received an episode of care that was delivered as part of a clinical trial, reported by sub-type.....	16
5.9	Performance Indicator: Overall one-year survival of adults diagnosed with high-grade lymphoma (BL, DLBCL, mantle cell or high-grade T-cell).....	17
5.10	Performance Indicator: Overall two-year survival of adults diagnosed with high-grade lymphoma (BL, DLBCL, mantle cell or high-grade T-cell).....	18
6.	NHS organisations .....	18
7.	Statistical Analysis .....	18
7.1	Suppression.....	18
7.2	Risk-adjustment of indicators .....	19
7.3	Handling of missing data.....	19
8.	Outlier Process .....	20
9.	Appendices.....	21
9.1	Appendix 1: Routine data sources .....	21
9.2	Appendix 2: ICD codes used to classify patients as diagnosed with non-Hodgkin lymphoma .....	22
9.3	Appendix 3: ICD codes used to classify non-Hodgkin lymphoma subtype.....	22
9.4	Appendix 2: High-grade and low-grade classification of NHL subtypes using ICD-10 codes .....	23
9.5	Appendix 3: Charlson Comorbidity Index .....	27



# 1. Introduction

This document provides supporting material to the 2025 State of the Nation (SotN) Report for the National Audit of non-Hodgkin lymphoma Cancer (NNHLA) and its data tables and data viewer. The document describes the data used in the report with details on sources of data, criteria for inclusion and how data completeness, patient characteristics and performance indicators are derived and reported.

## 2. Sources of Data

The audit uses information from routine national health care datasets in England and Wales. These datasets capture details on the diagnosis, management, treatment and outcome of every patient newly diagnosed with cancer in the NHS in England and Wales. England and Wales data were managed and analysed separately.

For England, the audit received information from the National Disease Registration Service (NDRS) at a tumour level for this State of the Nation report. The information held in the NCRD is compiled from a variety of sources including the Cancer Outcomes and Services Dataset (COSD), Hospital Episode Statistics admitted patient care (HES APC) records, the Systemic Anti-Cancer Therapy dataset (SACT), RTDS and data submitted by pathology laboratories. The audit also received linked information from COSD (linked at tumour level), HES APC, HES Outpatients data (HES OP), SACT and RTDS (all linked at patient level) and the National Cancer Waiting Times Monitoring Dataset (CWT) (linked at patient level). Section 9.1 provides more detail on the data sources listed below and the information they contain.

The English data received by the National Cancer Audit Collaborating Centre (NATCAN) included data on patients registered with cancer up to 31/12/2022.

As with cancer registries in other countries, cancer registrations in England can take up to 5 years after the end of a given calendar year to reach approximately 100% completeness and stability. NDRS uses an active system of gathering information on cancer diagnoses from multiple sources across the patient pathway. Completeness varies by tumour type because different patient pathways provide different opportunities for data flows into NDRS. The 'Gold standard' cancer registration dataset that is used in cancer statistics bulletins and available for analysis outside of NDRS contains over 98% of all the people that will eventually be found by the registration process, and the completeness for a calendar year of data increases over time. More information about the cancer registration process can be found [here](#).

For Wales, the audit was provided with a registration dataset at patient level for patients diagnosed with cancer in 2023. Welsh cancer registration data is captured through a national system, Cancer Information System for Wales (CaNISC) and the new Welsh Clinical Portal. The audit also received linked datasets of records from the Patient Episode Database for Wales (PEDW) containing information on inpatient and day case activity, Welsh Radiotherapy data (RTH), Welsh Systemic Anti-Cancer Therapy dataset (SACT) and mortality data from the Office for National Statistics (ONS).

## 3. Inclusion and Exclusion Criteria

The data submitted by NDRS and WCN is checked and filtered for eligible participants. Table 1 and Table 2 explain the process in defining the final cohort to be used in the audit.

People were included for analysis within the SotN Report if they met the following inclusion and not the exclusion criteria:

Table 1: Audit Inclusion Criteria	
<u>Inclusion Criteria</u>	<u>Details</u>
Type of cancer	Newly diagnosed with NHL, as classified by any of the ICD-10 codes or ICD-O3 codes listed in the appendix (see section 9.2).
Adults	Age >=18 years old
Valid Diagnosis Date	England: 1 January 2022 and 31 December 2022 Wales: 1 January 2023 and 31 December 2023
First Diagnosis	1. Earliest diagnosis (diagnosisdatebest) was included in the cohort if dates of diagnosis differed. If dates of earliest diagnosis were the same then exclude from analysis cohort

Table 2: Audit Exclusion Criteria	
<u>Exclusion Criteria</u>	<u>Details</u>
Reported by death certificate only or date of diagnosis corresponds to date of death	<b>For English data:</b> Using NCRD: basisofdiagnosis = 0 (Death certificate) and/or dco = Y (tumour registered from a death certificate only) and/or diagnosisdatebest = deathdatebest  <b>For Welsh data:</b> DIAGNOSIS_DATE (Cohort data) = date of death and/or PerformanceStatus = 05 (Dead)
Diagnosed and treated outside of an NHS organisation in England or Wales.	Trust code starting with "R" is in England Trust of diagnosis was a Welsh health board (code starting with 7)

### 3.1 Non-Hodgkin lymphoma subtypes

NHL is classified into various subtypes, according to the types of cells from which the cancer originates and rate of disease progression. This section describes how we used the International Classification of Diseases (ICD) codes to differentiate NHL subtypes.

The International Classification of Diseases for Oncology, 3rd Edition (ICD-O-3) is used in tumour or cancer registries to code the site (topography) and the histology (morphology) of neoplasms, therefore providing greater detail than ICD-10 and enabling greater granularity of NHL subtypes to be reported by the NNHLA. Relevant ICD-O3 codes for NHL subtypes included in the NNHLA were identified with guidance from the Haematological Malignancy Research Network (HMRN) and are listed in the appendix (see section 9.3).

We classified people diagnosed with NHL as belonging to one of the subtypes included in the NNHLA if:

- EITHER they were assigned one of the corresponding ICD-O-3 codes listed in the appendix (see section 9.3)

- OR, where the ICD-O3 code was missing, they were assigned an ICD-10 code, as detailed in the appendix (see section 9.3)

If NEITHER of these two criteria were met, we classified people diagnosed with NHL as “NHL, other”.

### 3.2 Classification of high-grade vs. low-grade NHL

NHL subtypes can be classified according to their rate of disease progression, which influences the choice of treatment approach and subsequent prognosis.

Low-grade or indolent NHL subtypes are characterised by slow disease progression, do not always require immediate treatment, but are harder to completely cure than high-grade NHL.

High-grade or aggressive NHL subtypes are characterised by rapid disease progression, require immediate treatment, but respond better to treatment than low-grade NHL and can often be cured.

High-grade and low-grade classification of NHL subtypes included in the NNHLA were determined with advice from the NNHLA clinical experts. Further details are outlined in the Appendix (see section 9.4).

## 4. Key Data Items

Details of the variables and datasets used to compile the data completeness are shown below in Table 3

Table 3: Data Completeness Variables				
<u>Data Item</u>	<u>Source</u>			
	England		Wales	
	<u>Data field</u>	<u>Dataset</u>	<u>Data field</u>	<u>Dataset</u>
Date of Diagnosis	diagnosisdatebest	Cancer registration	diagnosisdate	Cancer registration
Age at diagnosis	age	Cancer registration	ageatdiag	Cancer registration
Ethnicity	ethnicity	Cancer registration	ethnicgroupcategory	Wales PEDW
Ann Arbor staging	stage_best	Cancer registration	stagegroup; stageother	Cancer registration
Binet staging	stage_best	Cancer registration	stagegroup; stageother	Cancer registration
Disease grade	histology_coded; site_icd10	Cancer registration	primarysite; histology	Cancer registration
NHL subtype	histology_coded; site_icd10	Cancer registration	primarysite; histology	Cancer registration
Performance status	performancestatus	COSD	performancestatus	Cancer registration
International Prognostic Index	ipiindexfordlbclscore	COSD	Not available for Wales	
Follicular Lymphoma International Prognostic Index 2	flipiindexscore	COSD	Not available for Wales	
MDT meeting recorded	firstmdtmeetingdate	COSD	Not available for Wales	
Clinical nurse specialist recorded	clinicalnursespecialist	COSD	specialistnurseseen	Cancer registration



Details of the variables and datasets used to compile the patient characteristics are shown below in Table 4.

Table 4: Patient Characteristics Variables				
<u>Data Item</u>	<u>Source</u>			
	England		Wales	
	<u>Data field</u>	<u>Dataset</u>	<u>Data field</u>	<u>Dataset</u>
Age at diagnosis	age	Cancer registration	ageatdiag	Cancer registration
Gender	gender	Cancer registration	sex	Wales PEDW
Ethnicity	ethnicity	Cancer registration	ethnicgroupcategory	Wales PEDW
Index of multiple deprivation	<i>imd19_quintile_Isoas</i>	Cancer registration	<i>deprivationquintile; quintilegroup</i>	Wales PEDW; Wales LSOA
Performance status	performancestatus	COSD	performancestatus	Cancer registration
Charlson Comorbidity Index	admidate; disdate;epistart;epiend; diag_01-20	HES APC	admissiondate; dischargedate; episodestartdate; episodeenddate; diagnosis01-14	Wales PEDW
Ann Arbor staging	stage_best	Cancer registration	stage_group; stage_other	Cancer registration
Binet staging	stage_best	Cancer registration	stage_group; stage_other	Cancer registration
Disease grade	histology_coded; site_icd10	Cancer registration	primarysite; histology	Cancer registration
NHL subtype	histology_coded; site_icd10	Cancer registration	primarysite; histology	Cancer registration
International Prognostic Index	ipiindexfordlbclscore	COSD	Not available for Wales	
Follicular Lymphoma International Prognostic Index 2	flipiindexscore	COSD	Not available for Wales	

## 5. Indicator Definitions

The audit uses key indicators to monitor progress against its healthcare improvement goals. These indicators align with national guidelines and standards. Definitions of how the indicators included in the SotN report were derived from data for England and Wales are described below.

Some indicators are further focused on subgroups of patients as defined by sex and stage of the disease, as these factors are important determinants of whether particular treatments are suitable for patients.

## 5.1 Contextual measure: Proportion of adults diagnosed with NHL presenting as an emergency prior to diagnosis.

This is a contextual measure, which is defined within a specific clinical setting or population; in this case, it refers to emergency presentations occurring prior to or at non-Hodgkin lymphoma (NHL) diagnosis.

Table 5: Proportion of adults diagnosed with NHL presenting as an emergency prior to diagnosis.		
	<u>England</u>	<u>Wales</u>
<b>Dates of diagnosis / treatment:</b>	1/1/2021-31/12/2022	NA
<b>Numerator:</b> <i>Number of adults diagnosed with NHL presenting as an emergency at diagnosis or to the emergency department within the 28 days prior to diagnosis</i>	<i>Final_route (Cancer Registration, Rapid Registration) Admimeth (HES)</i>	NA
<b>Denominator:</b> <i>Number of adults diagnosed with NHL</i>	<i>Final cohort as described in patient inclusion / exclusion. Final_route (Cancer Registration, Rapid Registration) Admimeth (HES)</i>	NA
<b>Construction notes</b>		NA
<b>Country reporting:</b>	<i>Only reported for England in 2025 SotN report. Further development work needed for Wales.</i>	
<b>Organisational Reporting level:</b>	<i>National; cancer alliance; NHS trust</i>	NA
<b>Subgroup Reporting:</b>	<i>Further sub-analysis by Disease grade; NHL subtype; gender, age, ethnicity, deprivation</i>	NA
<b>Risk adjusted:</b>	No	NA
<b>Outlier reporting:</b>	No	NA

## 5.2 Performance Indicator: Proportion of adults diagnosed with NHL discussed at a multidisciplinary team (MDT) meeting within 4 weeks of diagnosis.

Table 6: Proportion of adults diagnosed with NHL discussed at a multidisciplinary team (MDT) meeting within 4 weeks of diagnosis.		
	<u>England</u>	<u>Wales</u>
<b>Dates of diagnosis / treatment:</b>	1/1/2022-31/12/2022	NA
<b>Numerator:</b> <i>Number of adults diagnosed with NHL discussed at a lymphoma/haematology multidisciplinary team (MDT) meeting within 4 weeks of diagnosis</i>	<i>firstmdtmeetingdate (COSD)</i>	NA
<b>Denominator:</b> <i>Number of adults diagnosed with NHL, where date of diagnosis and date of MDT meeting are completed</i>	<i>Final cohort as described in patient inclusion / exclusion. firstmdtmeetingdate (COSD)</i>	NA
<b>Construction notes</b>		NA
<b>Country reporting:</b>	<i>Only reported for England in 2025 SotN report. Data not available for Wales.</i>	
<b>Organisational Reporting level:</b>	<i>National; cancer alliance; NHS trust</i>	NA
<b>Subgroup Reporting:</b>	<i>Disease grade; NHL subtype</i>	NA
<b>Risk adjusted:</b>	<i>No</i>	NA
<b>Outlier reporting:</b>	<i>No</i>	NA

### 5.3 Performance Indicator: Proportion of adults diagnosed with NHL seen by a clinical nurse specialist (CNS).

Table 7: Proportion of adults diagnosed with NHL seen by a clinical nurse specialist (CNS).		
	<u>England</u>	<u>Wales</u>
<b>Dates of diagnosis / treatment:</b>	1/1/2022-31/12/2022	1/1/2023-31/12/2023
<b>Numerator:</b> <i>Number of adults diagnosed with NHL seen by a clinical nurse specialist (CNS).</i>	<i>Cancer registration; COSD clinicalnursespecialist (COSD)</i>	<i>specialistnurseseen (cancer registration)</i>
<b>Denominator:</b> <i>Number of adults diagnosed with NHL, who had a record of the status of clinical nurse specialist.</i>	<i>Final cohort as described in patient inclusion / exclusion. clinicalnursespecialist (COSD)</i>	<i>Final cohort as described in patient inclusion / exclusion. specialistnurseseen (cancer Registration)</i>
<b>Construction notes</b>		
<b>Country reporting:</b>	<i>Separately reported</i>	
<b>Organisational Reporting level:</b>	<i>National; cancer alliance; NHS trust</i>	<i>National; health board; hospital</i>
<b>Subgroup Reporting:</b>	<i>Disease grade</i>	<i>Disease grade</i>
<b>Risk adjusted:</b>	<i>No</i>	<i>No</i>
<b>Outlier reporting:</b>	<i>No</i>	<i>No</i>

5.4 Performance Indicator: Proportion of adults diagnosed with high-grade lymphoma (Burkitt Lymphoma (BL), Diffuse Large B Cell Lymphoma (DLBCL) or high-grade T-cell) who start chemotherapy within 62 days of referral.

Table 8: Proportion of adults diagnosed with high-grade lymphoma (Burkitt Lymphoma (BL), Diffuse Large B Cell Lymphoma (DLBCL) or high-grade T-cell) who start chemotherapy within 62 days of referral.		
	England	Wales
Dates of diagnosis / treatment:	1/1/2022-31/12/2022	1/1/2023-31/12/2023
<b>Numerator:</b> Number of adults with high-grade lymphoma (Burkitt Lymphoma (BL), Diffuse Large B Cell Lymphoma (DLBCL) or high-grade T-cell) who start chemotherapy within 62 days of referral.	crtp_date (CWT) Start_date_of_regimen; primary_diagnosis; morphology_clean (SACT)	Referralreceiptdate; firstprocdate; firstproctype; chemostarted (cancer registration) appt_date (Wales SACT) admissiondate; operation01-12 (Wales PEDW)
<b>Denominator:</b> Number of adults with high-grade lymphoma (Burkitt Lymphoma (BL), Diffuse Large B Cell Lymphoma (DLBCL) or high-grade T-cell), where date of starting chemotherapy and date of referral are complete.	Final high-grade lymphoma cohort as described in patient inclusion / exclusion. crtp_date (CWT) Start_date_of_regimen; primary_diagnosis; morphology_clean (SACT)	Final high-grade lymphoma cohort as described in patient inclusion / exclusion. Referralreceiptdate; firstprocdate; firstproctype; chemostarted (cancer registration) appt_date (Wales SACT) admissiondate; operation01-12 (Wales PEDW)
Construction notes		
Country reporting:	Separately reported	
Organisational Reporting level:	National; cancer alliance; NHS trust	National; health board; hospital
Subgroup Reporting:	None (restricted to high grade disease)	None (restricted to high grade disease)
Risk adjusted:	No	No
Outlier reporting:	No	No

## 5.5 Performance Indicator: First-line chemotherapy treatment regimens received by adults diagnosed with high-grade lymphoma (BL, DLBCL or high-grade T-cell).

Table 9: First-line chemotherapy treatment regimens received by adults diagnosed with high-grade lymphoma (BL, DLBCL or high-grade T-cell).		
	<u>England</u>	<u>Wales</u>
<b>Dates of diagnosis / treatment:</b>	1/1/2021-31/12/2022	NA
<b>Numerator:</b> <i>Number of adults with high grade lymphoma (DLBCL (NOS, ICD-O-3 9680/3)), Burkitt, Peripheral T-cell (NOS, ICD-O-3 9702/3)) and Cutaneous T-cell lymphoma) who receive an acceptable first line chemotherapy regimen within three months of diagnosis. This includes gold standard first line option and or an appropriate adjustment as deemed by the clinical leads (see section 9.6 for details)</i>	<i>Start_date_of_regimen (SACT)</i> <i>Benchmark_regimen (SACT)</i>	NA
<b>Denominator:</b> <i>Number of adults with high grade lymphoma (DLBCL (NOS, ICD-O-3 9680/3)), Burkitt, Peripheral T-cell (NOS, ICD-O-3 9702/3)) who receive a first line chemotherapy regimen within three months of diagnosis</i>	<i>Final high-grade lymphoma cohort as described in patient inclusion / exclusion.</i>  <i>Start_date_of_regimen (SACT)</i> <i>Benchmark_regimen (SACT)</i>	NA
<b>Construction notes</b>		NA
<b>Country reporting:</b>	<i>Only reported for England in 2025 SotN report. Further development work needed for Wales.</i>	
<b>Organisational Reporting level:</b>	<i>National; cancer alliance; NHS trust</i>	NA
<b>Subgroup Reporting:</b>	<i>Restricted to NHL high grade sub-types listed above; further sub-analysis by gender, age, ethnicity, performance status and deprivation</i>	
<b>Risk adjusted:</b>	No	No
<b>Outlier reporting:</b>	No	NA

5.6 Performance Indicator: Proportion of adults diagnosed with high-grade lymphoma (BL, DLBCL or high-grade T-cell) who start radiotherapy within 8 weeks of end of first line chemotherapy.

Table 10: Proportion of adults diagnosed with high-grade lymphoma (BL, DLBCL or high-grade T-cell) who start radiotherapy within 8 weeks of end of first line chemotherapy.		
	<u>England</u>	<u>Wales</u>
<b>Dates of diagnosis / treatment:</b>	1/1/2022-31/12/2022	NA
<b>Numerator:</b> Number of adults with high-grade lymphoma (which includes BL, DLBCL or high-grade T-cell) who start radiotherapy within 8 weeks of last administered dose of first line chemotherapy. Only includes those who receive chemotherapy within 6 months of diagnosis	Cancer registration, SACT, RTDS  start_date_of_regimen; start_date_of_cycle; administration_date (SACT) Treatmentstartdate (RTDS)	NA
<b>Denominator:</b> Number of adults with high-grade lymphoma (which includes BL, DLBCL or high-grade T-cell), who started radiotherapy within six months of last administered dose of first line chemotherapy. Only includes those who receive chemotherapy within 6 months of diagnosis	Start_date_of_regimen; start_date_of_cycle; administration_date (SACT) Treatmentstartdate (RTDS)  Final high-grade lymphoma cohort as described in patient inclusion / exclusion.	NA
<b>Construction notes</b>		NA
<b>Country reporting:</b>	Only reported for England in 2025 SotN report. Regimen-level chemotherapy data not provided for Wales	
<b>Organisational Reporting level:</b>	NHS Trust; Cancer alliance	NA
<b>Subgroup Reporting:</b>	None (restricted to high grade disease)	NA
<b>Risk adjusted:</b>	No	No
<b>Outlier reporting:</b>	No	NA

## 5.7 Performance Indicator: Proportion of adults diagnosed with NHL receiving radiotherapy, reported by subtype.

Table 11: Proportion of adults diagnosed with NHL receiving radiotherapy, reported by subtype.		
	<u>England</u>	<u>Wales</u>
<b>Dates of diagnosis / treatment:</b>	1/1/2022-31/12/2022	1/1/2023-31/12/2023
<i>Numerator: Number of adults diagnosed with NHL, who received radiotherapy within one year of diagnosis and two years of diagnosis</i>	<i>Cancer registration, RTDS Treatmentstartdate(RTDS)</i>	<i>firstprocdate; firstproctype; rtstart (cancer registration) rtstartdate (Wales RTH)</i>
<b>Denominator:</b> <i>Number of adults diagnosed with NHL.</i>	<i>Final cohort as described in patient inclusion / exclusion. Treatmentstartdate(RTDS)</i>	<i>Final cohort as described in patient inclusion / exclusion.</i>
<b>Construction notes</b>		
<b>Country reporting:</b>	<i>Separately reported</i>	
<b>Organisational Reporting level:</b>	<i>National; cancer alliance; NHS trust</i>	<i>National; health board; hospital</i>
<b>Subgroup Reporting:</b>	<i>By subtype</i>	<i>By subtype</i>
<b>Risk adjusted:</b>	<i>No</i>	<i>No</i>
<b>Outlier reporting:</b>	<i>No</i>	<i>No</i>



## 5.8 Performance Indicator: Proportion of adults diagnosed with NHL who are recorded as having received an episode of care that was delivered as part of a clinical trial, reported by sub-type.

The proportion of adults diagnosed with NHL who are recorded as having received an episode of care that was delivered as part of a clinical trial was derived by linking the cancer waiting times dataset with the cancer registration dataset.

Table 12: Proportion of people diagnosed with NHL who are recorded as having received an episode of care that was delivered as part of a clinical trial, reported by sub-type.		
	England	Wales
Dates of diagnosis / treatment:	1/1/2021-31/12/2022	NA
<b>Numerator:</b> Number of adults diagnosed with NHL, who received an episode of care delivered as part of a clinical trial	Number of adults, diagnosed with NHL, with a record in the cancer waiting times dataset (CWT), where the CWT data item "clin_trial" is completed and coded as 01 (episode of care is being delivered to a patient as part of a clinical trial). Identification of adults diagnosed with NHL diagnosis described in patient inclusion / exclusion criteria (see section 3).	NA
<b>Denominator:</b> Number of adults diagnosed with NHL, with a complete record for trial participation in cancer waiting times dataset	Number of adults, diagnosed with NHL, with a record in the cancer waiting times (CWT) dataset and the CWT data item "clin_trial" is completed (i.e. coded as either 01 [episode of care was delivered to a patient as part of a clinical trial] or 02 [episode of care WAS NOT delivered to a patient as part of a clinical trial]). Identification of adults diagnosed with NHL diagnosis described in patient inclusion / exclusion criteria (see section 3).	NA
Construction notes		NA
Country reporting:	Only reported for England in 2025 SotN report. Data not available for Wales.	
Organisational Reporting level:	National; cancer alliance	NA
Subgroup Reporting:	Disease grade; NHL subtype	
Risk adjusted:	No	NA
Outlier reporting:	No	No

## 5.9 Performance Indicator: Overall one-year survival of adults diagnosed with high-grade lymphoma (BL, DLBCL, mantle cell or high-grade T-cell).

Table 13: Overall one-year survival of adults diagnosed with high-grade lymphoma (BL, DLBCL, mantle cell or high-grade T-cell).		
	<u>England</u>	<u>Wales</u>
<b>Dates of diagnosis / treatment:</b>	1/1/2021 - 31/12/2022	1/1/2022 - 31/12/2023
<b>Numerator:</b> <i>Number of adults diagnosed with high-grade lymphoma (BL, DLBCL, mantle cell or high-grade T-cell), who survived at least one year after diagnosis.</i>	<i>deathdatebest (cancer registration)</i>	<i>deathdate (cancer registration) date_of_death (ONS)</i>
<b>Denominator:</b> <i>Number of adults diagnosed with high-grade lymphoma (BL, DLBCL, mantle cell or high-grade T-cell).</i>	<i>Final cohort as described in patient inclusion / exclusion.</i>	<i>Final cohort as described in patient inclusion / exclusion.</i>
<b>Construction notes</b>		
<b>Country reporting:</b>	<i>Combined</i>	
<b>Organisational Reporting level:</b>	<i>National; cancer alliance; NHS trust</i>	<i>National; health board; hospital</i>
<b>Subgroup Reporting:</b>	<i>Disease grade</i>	<i>Disease grade</i>
<b>Risk adjusted:</b>	<i>Yes - Indicator adjusted for age, sex, subtype, staging, performance status, Charlson comorbidities index, diagnosis route, diagnosis year.</i>	<i>Yes - Indicator adjusted for age, sex, subtype, staging, performance status, Charlson comorbidities index, diagnosis route, diagnosis year.</i>
<b>Outlier reporting:</b>	<i>Yes</i>	<i>Yes</i>

## 5.10 Performance Indicator: Overall two-year survival of adults diagnosed with high-grade lymphoma (BL, DLBCL, mantle cell or high-grade T-cell).

Table 14: Overall two-year survival of adults diagnosed with high-grade lymphoma (BL, DLBCL, mantle cell or high-grade T-cell).		
	<u>England</u>	<u>Wales</u>
<b>Dates of diagnosis / treatment:</b>	1/1/2020 - 31/12/2021	NA
<b>Numerator:</b> <i>Number of adults diagnosed with high-grade lymphoma (BL, DLBCL, mantle cell or high-grade T-cell), who survived at least two years after diagnosis.</i>	<i>deathdatebest (cancer registration)</i>	NA
<b>Denominator:</b> <i>Number of adults diagnosed with high-grade lymphoma (BL, DLBCL, mantle cell or high-grade T-cell).</i>	<i>Final cohort as described in patient inclusion / exclusion.</i>	NA
<b>Construction notes</b>		NA
<b>Country reporting:</b>	<i>England only</i>	
<b>Organisational Reporting level:</b>	<i>National; cancer alliance; NHS trust</i>	NA
<b>Subgroup Reporting:</b>	<i>Disease grade</i>	NA
<b>Risk adjusted:</b>	<i>Yes - Indicator adjusted for age, sex, subtype, staging, performance status, Charlson comorbidities index, diagnosis route, diagnosis year.</i>	NA
<b>Outlier reporting:</b>	<i>Yes</i>	<i>Yes</i>

## 6. NHS organisations

The audit presents organisation-level findings by the NHS organisation of diagnosis. This is because this is the organisation where diagnosis and care decisions are likely to be made.

## 7. Statistical Analysis

All statistical analyses were conducted using *Stata (version 17.0)* or *R (version 4.3.1 and version 4.4.1)*.

Most results in the SotN Report are descriptive. The results of categorical data items are reported as percentages (%). Results are typically provided as an overall figure and broken down by NHS organisation (see NHS organisations section). Note that within tables in the SotN Report, the total percentage may not equal 100%, due to rounding.

### 7.1 Suppression

Data quality and completeness results with denominator values less than ten have been suppressed.

Indicator percentage and denominator were suppressed as follows:

- If denominator < 10 (0 excluded), suppressed and/or

- If numerator < 5 (0 excluded), suppressed.

## 7.2 Risk-adjustment of indicators

The tables of performance indicators state whether risk adjustment has been performed.

Table 15 below provides details on the datasets and variables used to compile the variable used for risk adjustment

Table 15: Risk Adjustment Variables		
Data Item	Source	
	England	Wales
Age at diagnosis	age (cancer registration) categorised into 10 year groups	ageatdiag (cancer registration) categorised into 10 year groups
Sex	gender (cancer registration)	Sex (Wales PEDW)
Performance status	Performancestatus (COSD)	performancestatus (cancer registration)
Charlson comorbidity index	<p>The CCI is a commonly used scoring system for medical comorbidities, consisting of a grouped score calculated based on the absence (0) and presence (<math>\geq 1</math>) of 14 pre-specified medical conditions (see section 9.5 for further details).</p> <p>The CCI was calculated using information on secondary diagnoses (ICD-10 codes) recorded in HES APC (England) / PEDW (Wales) within the 24-month period prior to a patient's diagnosis.</p> <p>For the purpose of analysis, the CCI is grouped into three categories:</p> <ul style="list-style-type: none"> <li>• <b>0</b> none of the 14 pre-specified comorbidities.</li> <li>• <b>1</b> only 1 of the 14 pre-specified comorbidities.</li> <li>• <b>2+</b> 2 or more of the 14 pre-specified comorbidities</li> </ul>	
NHL subtype	Classification of people diagnosed with NHL into NHL subtypes is described in section 0	
Staging	Binet staging (cancer registration) used for patients diagnosed with CLL. Ann Arbor staging (cancer registration) used for all other NHL patients.	
Diagnosis route	final_route (rapid registration)	Not available
Diagnosis year	Year extracted from diagnosisdatebest (NCRD)	Year extracted from diagnosisdate (cancer registration)

## 7.3 Handling of missing data

For the risk-adjustment, missing values were imputed using multiple imputation with chained equations to create estimated values to ensure all included people contributed to the statistical models. 40 imputations were created considering the high level of missingness, particularly presented in performance status, Charlson comorbidities and staging. The imputation model used patient and cancer characteristics including age, sex, ethnicity, deprivation, subtype, staging, performance status, Charlson comorbidities index, diagnosis route, diagnosis year, and survival outcomes.

## 8. Outlier Process

The National Non-Hodgkin Lymphoma Audit (NNHLA) publishes risk-adjusted performance indicators of the quality of care received by people diagnosed with non-Hodgkin lymphoma. If the performance of a provider for a selected indicator falls outside a pre-specified defined range it will be flagged as an outlier.

The outlier process can be found in the separate audit outlier policy.

The [NATCAN Outlier Policy 2025](#) is adapted from [updated guidance](#) by the Healthcare Quality Improvement Partnership Ltd (HQIP), published 21.02.2024

## 9. Appendices

### 9.1 Appendix 1: Routine data sources

**Table 16: Overview of the data sources used for the SotN Report.**

Country	Data source	Content
England	Cancer registry (NCRD and RCRD)	Data on all aspects of the cancer registration including information from hospital pathology systems.
England	COSD	Cancer Outcomes and Services dataset (COSD) items are submitted routinely by service providers via multidisciplinary team (MDT) electronic data collection systems to the National Cancer Data Repository (NCDR) on a monthly basis.
England	SACT	Systemic Anti-Cancer Therapy (SACT) data contains information on chemotherapy dates, regimen(s) and dose(s).
England	RTDS	Radiotherapy dataset (RTDS) contains information on radiotherapy treatment including dates, prescription region and dose.
England	HES	Hospital Episode Statistics (HES) is the administrative database of all NHS hospital admissions in England; records were supplied by NHS Digital to NCRAS.
England	CWT	Cancer Waiting Times (CWT) data are used to monitor cancer waiting times targets. Data on referrals, treatments and diagnosis are derived from local care records as patients move through the care pathway.
Wales	CaNISC	Cancer Network Information System Cymru (Canisc) contains data on all aspects of the cancer registration including investigations. (OLD SYSTEM)
Wales	CDF	Clinical Dataset Form (CDF) contains data on all aspects of the cancer registration including investigations (NEW SYSTEM)
Wales	PEDW	Patient Episode Database for Wales (PEDW) is the administrative database of all NHS hospital admissions in Wales.
Wales	RTH	Radiotherapy data (RTH) contains information on radiotherapy treatment.
Wales	SACT	Systemic Anti-Cancer Therapy data contains information on chemotherapy treatment
England & Wales	ONS	Office for National Statistics (ONS) death data including date of death and cause of death.

## 9.2 Appendix 2: ICD codes used to classify patients as diagnosed with non-Hodgkin lymphoma

**Table 17: ICD-10 codes used to classify patients as diagnosed with non-Hodgkin lymphoma.**

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

**Table 18: ICD-O3 codes for defining Non-Hodgkin Lymphoma.**

ICD-O-3	NHL sub-type
9687/3	Burkitt lymphoma
9823/3	Chronic lymphocytic leukaemia
9597/3, 9690/3, 9695/3, 9698/3	Follicular lymphoma
9679/3, 9680/3, 9688/3, 9698/3, 9712/3, 9735/3	Large B-cell lymphomas
9673/3	Mantle cell lymphoma
9689/3, 9699/3	Marginal zone lymphoma
9591/3	NHL, not otherwise specified
9700/3, 9701/3, 9709/3, 9718/3, 9726/3	Cutaneous T-cell lymphomas
9702/3, 9705/3, 9714/3, 9716/3, 9717/3, 9719/3, 9827/3	Peripheral T-cell lymphomas

## 9.3 Appendix 3: ICD codes used to classify non-Hodgkin lymphoma subtype.

**Table 19: ICD-O3 codes used to classify non-Hodgkin lymphoma subtype.**

NHL subtype	ICD-O-3 code	ICD-10 code
MATURE B-CELL NEOPLASMS		
<i>Burkitt lymphoma</i>	9687/3	C83.7
<i>Chronic lymphocytic leukaemia</i>	9823/3	C91.1
<i>Follicular lymphoma</i>	9597/3, 9690/3, 9695/3, 9698/3	C82
<i>Large B-cell lymphomas</i>	9679/3, 9680/3, 9688/3, 9698/3, 9712/3, 9735/3	C83.3
<i>Mantle cell lymphoma</i>	9673/3	C83.1
<i>Marginal zone lymphoma</i>	9689/3, 9699/3	
<i>NHL, not otherwise specified</i>	9591/3	
MATURE T- AND NK-CELL NEOPLASMS		
Cutaneous T-cell lymphomas	9700/3, 9701/3, 9709/3, 9718/3, 9726/3	C84.8; C86.6
Peripheral T-cell lymphomas	9702/3, 9705/3, 9714/3, 9716/3, 9717/3, 9719/3, 9827/3	C84.4

## 9.4 Appendix 2: High-grade and low-grade classification of NHL subtypes using ICD-10 codes

High-grade and low-grade classification of NHL subtypes were determined with advice from the NNHLA clinical experts.

**Table 20: High-grade and low-grade classification of NHL subtypes using ICD-10 codes.**

ICD-10 code	Description	Grade (high/low)
C82.0	Follicular lymphoma grade I	Low grade
C82.1	Follicular lymphoma grade II	Low grade
C82.2	Follicular lymphoma grade III, unspecified	Low grade
C82.3	Follicular lymphoma grade IIIa	Low grade
C82.4	Follicular lymphoma grade IIIb	High grade
C82.5	Diffuse follicle centre lymphoma	Low grade
C82.6	Cutaneous follicle centre lymphoma	Low grade
C82.7	Other types of follicular lymphoma	Low grade
C82.9	Follicular lymphoma, unspecified Nodular lymphoma NOS	Low grade
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.-)	Low grade
C83.1	Mantle cell lymphoma 1. Centrocytic lymphoma 2. Malignant lymphomatous polyposis	High grade
C83.3	Diffuse large B-cell lymphoma 1. Anaplastic 2. CD30-positive 3. Centroblastic 4. Plasmablastic 5. Immunoblastic 6. Subtype not specified 7. T-cell rich Excl.: 1. Mediastinal (thymic) large B-cell lymphoma (C85.2) 2. Mature T/NK-cell lymphomas (C84.-)	High grade



ICD-10 code	Description	Grade (high/low)
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	High grade
C83.7	Burkitt lymphoma 1. Atypical Burkitt lymphoma 2. "Burkitt-like" lymphoma Excl.: 1. Mature B-cell leukaemia Burkitt-type (C91.8)	High grade
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)	High grade
C83.9	Non-follicular (diffuse) lymphoma, unspecified	High grade
C84.0	Mycosis fungoides	Low grade
C84.1	Sézary disease 1. Lennert's lymphoma 2. Lymphoepithelioid lymphoma	High grade
C84.4	Peripheral T-cell lymphoma, not elsewhere classified	High grade
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.-)	High grade
C84.6	Anaplastic large cell lymphoma, ALK-positive 1. Anaplastic large cell lymphoma, CD30-positive	High grade
C84.7	Anaplastic large cell lymphoma, ALK-negative Excl.: 1. Primary cutaneous CD30-positive T-cell proliferations (C86.6)	High grade
C84.8	Cutaneous T-cell lymphoma, unspecified	Low grade

ICD-10 code	Description	Grade (high/low)
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)	High grade
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	High grade
C85.2	Mediastinal (thymic) large B-cell lymphoma	High grade
C85.7	Other specified types of non-Hodgkin lymphoma	High grade
C85.9	Non-Hodgkin lymphoma, unspecified 1. Lymphoma NOS 2. Malignant lymphoma NOS 3. Non-Hodgkin lymphoma NOS	High grade
C86.0	Extranodal NK/T-cell lymphoma, nasal type	High grade
C86.1	Hepatosplenic T-cell lymphoma 1. Alpha-beta and gamma-delta types	High grade
C86.2	Enteropathy-type (intestinal) T-cell lymphoma 1. Enteropathy associated T-cell lymphoma	High grade
C86.3	Subcutaneous panniculitis-like T-cell lymphoma	High grade
C86.4	Blastic NK-cell lymphoma	High grade
C86.5	Angioimmunoblastic T-cell lymphoma 1. Angioimmunoblastic lymphadenopathy with dysproteinemia [AILD]	High grade
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	Low grade
C88.0	Waldenström macroglobulinaemia 1. Lymphoplasmacytic lymphoma with IgM-production 2. Macroglobulinaemia (primary)(idiopathic) Excl.: 1. Small cell B-cell lymphoma (C83.0)	Low grade
C88.2	Other heavy chain disease 1. Franklin disease 2. Gamma heavy chain disease 3. Mu (μ) heavy chain disease	Outside scope of NNHLA
C88.3	Immunoproliferative small intestinal disease 1. Alpha heavy chain disease 2. Mediterranean lymphoma	Outside scope of NNHLA
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 1. Lymphoma of skin-associated lymphoid tissue (SALT-lymphoma)	Low grade

ICD-10 code	Description	Grade (high/low)
	2. Lymphoma of bronchial-associated lymphoid tissue (BALT-lymphoma)	
C88.7	Other malignant immunoproliferative diseases	Outside scope of NNHLA
C88.9	Malignant immunoproliferative disease, unspecified 1. Immunoproliferative disease NOS	Outside scope of NNHLA
C91.1	Chronic lymphocytic leukaemia of B-cell type 1. Lymphoplasmacytic leukaemia 2. Richter syndrome Excl.: 1. lymphoplasmacytic lymphoma (C83.0)	Low grade

## 9.5 Appendix 3: Charlson Comorbidity Index

### Reference:

Armitage JN, van der Meulen JH. Identifying co-morbidity in surgical patients using administrative data with the Royal College of Surgeons Charlson Score. *Br J Surg* 2010;97:772-81. doi <https://doi.org/10.1002/bjs.6930>

**Table 21: Pre-specified conditions included in the assignment of Charlson Comorbidity Index (CCI).**

CCI Conditions
Myocardial infarction
Dementia
Diabetes mellitus
Metastatic solid tumour
Congestive cardiac failure
Chronic pulmonary disease
Hemiplegia or paraplegia
AIDS/HIV infection <sup>1</sup>
Peripheral vascular disease
Rheumatological disease
Renal disease
Cerebrovascular disease
Liver disease
Any malignancy

<sup>1</sup> AIDS/HIV diagnoses cannot be identified in HES APC data because of legal requirements for NHS trusts to remove patient identifiers from [legally restricted records](#), including those containing diagnoses of HIV/AIDS. These diagnoses are also not found in linked PEDW data.

## 9.6 Appendix 4: First line Chemotherapy regime groupings

**Table 22: First line Chemotherapy regime groupings**

Sub-type	Regime	Grouping for analysis
DLBCL (NOS)	<ul style="list-style-type: none"> <li>CYCLOPHOSPHAMIDE + CYTARABINE + DOXORUBICIN + ETOPOSIDE + IFOSFAMIDE + METHOTREXATE + RITUXIMAB + VINCRISTINE</li> <li>CYCLOPHOSPHAMIDE + CYTARABINE + DOXORUBICIN + ETOPOSIDE + IFOSFAMIDE + RITUXIMAB + VINCRISTINE</li> <li>CYCLOPHOSPHAMIDE + CYTARABINE + DOXORUBICIN + IFOSFAMIDE + ETOPOSIDE + METHOTREXATE + VINCRISTINE</li> <li>CYCLOPHOSPHAMIDE + CYTARABINE + DOXORUBICIN + METHOTREXATE + RITUXIMAB + VINCRISTINE</li> <li>CYCLOPHOSPHAMIDE + CYTARABINE + DOXORUBICIN + RITUXIMAB + VINCRISTINE</li> <li>CYCLOPHOSPHAMIDE + DOXORUBICIN + ETOPOSIDE + METHOTREXATE + RITUXIMAB + VINCRISTINE</li> <li>CYCLOPHOSPHAMIDE + DOXORUBICIN + ETOPOSIDE + RITUXIMAB + VINCRISTINE</li> <li>CYCLOPHOSPHAMIDE + DOXORUBICIN + METHOTREXATE + RITUXIMAB + VINCRISTINE</li> <li>CYCLOPHOSPHAMIDE + DOXORUBICIN + OBINUTUZUMAB + VINCRISTINE</li> <li>CYCLOPHOSPHAMIDE + DOXORUBICIN + POLATUZUMAB + RITUXIMAB</li> <li>CYCLOPHOSPHAMIDE + DOXORUBICIN + RITUXIMAB + VINCRISTINE</li> <li>CYCLOPHOSPHAMIDE + DOXORUBICIN + VINCRISTINE (<b>assumed rituximab not included in coding in error as per clinical leads</b>)</li> <li>REMODL-A TRIAL</li> </ul>	Acceptable first line regime
	<ul style="list-style-type: none"> <li>CYCLOPHOSPHAMIDE + ETOPOSIDE + RITUXIMAB + VINCRISTINE</li> <li>CYCLOPHOSPHAMIDE + GEMCITABINE + RITUXIMAB + VINCRISTINE</li> </ul>	Acceptable first line regime (with acceptable adjustment)
	<ul style="list-style-type: none"> <li>CYCLOPHOSPHAMIDE + DOXORUBICIN + RITUXIMAB</li> <li>CYCLOPHOSPHAMIDE + OBINUTUZUMAB + VINCRISTINE</li> <li>CYCLOPHOSPHAMIDE + RITUXIMAB + VINCRISTINE</li> </ul>	Suboptimal regime
	<ul style="list-style-type: none"> <li>BENDAMUSTINE + POLATUZUMAB + VEDOTIN + RITUXIMAB</li> <li>BENDAMUSTINE + RITUXIMAB</li> <li>BLEOMYCIN + DACARBAZINE + DOXORUBICIN + VINBLASTINE</li> <li>BRENTUXIMAB</li> <li>CARBOPLATIN + ETOPOSIDE + IFOSFAMIDE</li> <li>CARBOPLATIN + ETOPOSIDE + IFOSFAMIDE + RITUXIMAB</li> <li>CISPLATIN + CYCLOPHOSPHAMIDE + CYTARABINE + DOXORUBICIN + RITUXIMAB</li> <li>CISPLATIN + GEMCITABINE + RITUXIMAB</li> <li>CYCLOPHOSPHAMIDE</li> </ul>	Excluded

Sub-type	Regime	Grouping for analysis
	<ul style="list-style-type: none"> <li>• CYCLOPHOSPHAMIDE + DACARBAZINE + GEMCITABINE + VINCRISTINE</li> <li>• CYCLOPHOSPHAMIDE + ETOPOSIDE</li> <li>• CYCLOPHOSPHAMIDE + ETOPOSIDE + LOMUSTINE</li> <li>• CYCLOPHOSPHAMIDE + ETOPOSIDE + PROCARBAZINE</li> <li>• CYCLOPHOSPHAMIDE + ETOPOSIDE + RITUXIMAB</li> <li>• CYCLOPHOSPHAMIDE + VINCRISTINE</li> <li>• CYTARABINE</li> <li>• CYTARABINE + ETOPOSIDE + IFOSFAMIDE + RITUXIMAB</li> <li>• CYTARABINE + METHOTREXATE</li> <li>• CYTARABINE + METHOTREXATE + RITUXIMAB</li> <li>• CYTARABINE + METHOTREXATE + RITUXIMAB + THIOTEPA</li> <li>• DOXORUBICIN</li> <li>• EPIRUBICIN + VINCRISTINE</li> <li>• ETOPOSIDE</li> <li>• GEMCITABINE</li> <li>• GEMCITABINE + RITUXIMAB</li> <li>• HORMONES</li> <li>• IBRUTINIB</li> <li>• MATRIX LYMPHOMA TRIAL</li> <li>• METHOTREXATE</li> <li>• METHOTREXATE + PROCARBAZINE + RITUXIMAB</li> <li>• METHOTREXATE + RITUXIMAB</li> <li>• METHOTREXATE + VINCRISTINE</li> <li>• NOT CHEMO</li> <li>• OBINUTUZUMAB + VENETOCLAX</li> <li>• RITUXIMAB</li> <li>• TRIAL UNSPECIFIED</li> <li>• TRIPLE INTRATHECAL</li> <li>• UKALL14- PH 1 INDUCTION</li> <li>• VINBLASTINE</li> <li>• VINCRISTINE</li> <li>• ZOLEDRONIC ACID</li> <li>• BRENTUXIMAB VEDOTIN + CYCLOPHOSPHAMIDE + DOXORUBICIN</li> <li>• CHLORAMBUCIL + ETOPOSIDE</li> <li>• IBRUTINIB + RITUXIMAB</li> <li>• METHOTREXATE + PROCARBAZINE + VINCRISTINE</li> <li>• PAMIDRONATE</li> <li>• TEMOZOLOMIDE</li> <li>• UKALL60+</li> </ul>	
Burkitt Lymphoma	<ul style="list-style-type: none"> <li>• CYCLOPHOSPHAMIDE + CYTARABINE + DOXORUBICIN + ETOPOSIDE + IFOSFAMIDE + METHOTREXATE + RITUXIMAB + VINCRISTINE</li> <li>• CYCLOPHOSPHAMIDE + CYTARABINE + DOXORUBICIN + METHOTREXATE + RITUXIMAB + VINCRISTINE</li> <li>• CYCLOPHOSPHAMIDE + DOXORUBICIN + METHOTREXATE + RITUXIMAB + VINCRISTINE</li> </ul>	Acceptable first line regime

Sub-type	Regime	Grouping for analysis
	<ul style="list-style-type: none"> <li>• CYCLOPHOSPHAMIDE + CYTARABINE + DOXORUBICIN + METHOTREXATE + VINCRISTINE</li> <li>• CYCLOPHOSPHAMIDE + DOXORUBICIN + ETOPOSIDE + RITUXIMAB + VINCRISTINE</li> <li>• CYCLOPHOSPHAMIDE + DOXORUBICIN + RITUXIMAB + VINCRISTINE</li> <li>• CYCLOPHOSPHAMIDE + ETOPOSIDE + RITUXIMAB + VINCRISTINE</li> <li>• CYTARABINE + ETOPOSIDE + IFOSFAMIDE + RITUXIMAB</li> <li>• CYTARABINE + ETOPOSIDE + IFOSFAMIDE + METHOTREXATE</li> </ul>	Acceptable first line regime (with acceptable adjustment)
	<ul style="list-style-type: none"> <li>• CYCLOPHOSPHAMIDE + RITUXIMAB + VINCRISTINE</li> <li>• CYCLOPHOSPHAMIDE + DOXORUBICIN + VINCRISTINE</li> </ul>	Suboptimal regime
	<ul style="list-style-type: none"> <li>• ALL UKALL2011 IND B</li> <li>• CISPLATIN + GEMCITABINE + RITUXIMAB</li> <li>• CYCLOPHOSPHAMIDE</li> <li>• CYTARABINE</li> <li>• DAUNORUBICIN + PEGASPARAGINASE + VINCRISTINE</li> <li>• IDARUBICIN + MERCAPTOPURINE + METHOTREXATE + VINCRISTINE</li> <li>• IMATINIB</li> <li>• METHOTREXATE</li> <li>• NOT CHEMO</li> <li>• PONATINIB</li> <li>• RITUXIMAB</li> <li>• UKALL 14 TRIAL</li> <li>• UKALL14- PH 1 INDUCTION</li> <li>• UKALL60+</li> <li>• VINCRISTINE</li> </ul>	Excluded
Peripheral T-cell Lymphoma (NOS)	<ul style="list-style-type: none"> <li>• BRENTUXIMAB VEDOTIN + CYCLOPHOSPHAMIDE + DOXORUBICIN</li> <li>• CYCLOPHOSPHAMIDE + DOXORUBICIN + ETOPOSIDE + RITUXIMAB + VINCRISTINE</li> <li>• CYCLOPHOSPHAMIDE + DOXORUBICIN + ETOPOSIDE + VINCRISTINE</li> <li>• CYCLOPHOSPHAMIDE + DOXORUBICIN + VINCRISTINE</li> <li>• CYCLOPHOSPHAMIDE + ETOPOSIDE + PROCARBAZINE</li> </ul>	Acceptable first line regime
	<ul style="list-style-type: none"> <li>• CYCLOPHOSPHAMIDE + GEMCITABINE + RITUXIMAB + VINCRISTINE</li> <li>• CYCLOPHOSPHAMIDE + GEMCITABINE + VINCRISTINE</li> </ul>	Acceptable first line regime (with acceptable adjustment)

Sub-type	Regime	Grouping for analysis
	<ul style="list-style-type: none"> <li>• CYCLOPHOSPHAMIDE + VINCRISTINE</li> <li>• CYCLOPHOSPHAMIDE + ETOPOSIDE + VINCRISTINE</li> </ul>	Suboptimal regime
	<ul style="list-style-type: none"> <li>• BRENTUXIMAB</li> <li>• CISPLATIN + CYCLOPHOSPHAMIDE + CYTARABINE + DOXORUBICIN + RITUXIMAB + VINCRISTINE</li> <li>• CISPLATIN + GEMCITABINE</li> <li>• CISPLATIN + GEMCITABINE + PEGASPARAGINASE</li> <li>• GEMCITABINE</li> <li>• GEMCITABINE + OXALIPLATIN</li> <li>• MATRIX LYMPHOMA TRIAL</li> <li>• METHOTREXATE</li> <li>• RITUXIMAB</li> <li>• TRIAL UNSPECIFIED</li> <li>• CHLORAMBUCIL + RITUXIMAB</li> <li>• CISPLATIN + CYTARABINE + ETOPOSIDE</li> <li>• CYCLOPHOSPHAMIDE</li> <li>• CYTARABINE + METHOTREXATE + RITUXIMAB + THIOTEPA</li> <li>• EPIRUBICIN + ETOPOSIDE + IFOSFAMIDE</li> <li>• GEMCITABINE + VINORELBINE</li> <li>• PEG INTERFERON</li> </ul>	Excluded