NNHLA
National Non-Hodgkin Lymphoma Audit

NATCAN
National Cancer Audit Collaborating Centre

National Non-Hodgkin Lymphoma Audit
State of the Nation Report 2025

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.

Version 2 - September 2025

NNHLA

National Non-Hodgkin Lymphoma Audit

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This version of the report includes the correction of a small number of hyperlink errors.

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The National Cancer Audit Collaborating Centre (NATCAN) is commissioned by the Healthcare Quality Improvement Partnership (HQIP) and funded by NHS England and 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.

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The Royal College of Radiologists

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

NDRS
NATIONAL DISEASE REGISTRATION SERVICE

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

GIG CYMRU NHS WALES
Rhwydwaith Canser Cymru
Wales Cancer Network

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

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1. Introduction

The National Non-Hodgkin Lymphoma Audit (NNHLA) is one of ten national cancer audits within the National Cancer Audit Collaborating Centre (NATCAN), which is commissioned by the Healthcare Quality Improvement Partnership (HQIP) on behalf of NHS England and the Welsh Government. The aim of NATCAN is to provide regular information on patterns and variation in delivery of cancer care from diagnosis to treatment, using this information to improve access to treatment and facilitate quality improvement initiatives, with a view to optimising outcomes nationally.

The National Non-Hodgkin Lymphoma Audit (NNHLA) evaluates patterns of care and outcomes for people diagnosed with non-Hodgkin lymphoma (NHL) in England and Wales in line with its Quality Improvement Plan. This sets out the scope, care pathway, 5 quality improvement goals and 11 performance indicators that are utilised to measure progress against these goals.

The NNHLA assesses current clinical practice against standards set out in national guidelines. It also reports on performance indicators that have been drawn from extensive reviews of existing literature and of UK-specific guidelines relevant to NHL; produced by National Institute for Health and Care Excellence (NICE), NHS England, as well as the British Society of Haematology (BSH). The work of the audit also aligns itself with the UK Blood Cancer Action Plan which was published in September 2024, which sets out 17 recommendations on workforce, diagnosis, access to care, clinical trials, access to treatments and data to improve survival from blood cancer, including non-Hodgkin lymphoma, in the UK.

This year's report includes people diagnosed with NHL from 1 January 2022 to 31 December 2022 in England, and 1 January 2023 to 31 December 2023 in Wales. It reports on 8 out of the 11 performance indicators for England, and 5 out of the 11 performance indicators for Wales outlined in the NNHLA Quality Improvement Plan (see Table 1). The report provides results on a new accompanying contextualising measure regarding emergency presentations for those diagnosed with NHL in England from January 2021 to December 2022. Although the data presented in this report relates to treatment up to the end of 2022 in England and 2023 in Wales, it is being published in September 2025 to allow sufficient follow-up time for the full care pathway to be captured, including definitive treatment and short-term outcomes. This is particularly important in NHL, where treatment pathways can span many months, and sufficient time is needed to ensure that key quality indicators, such as completion of multi-modality treatment and survival outcomes, are accurately recorded and reported (Timeliness of the National Cancer Registration Dataset (NCRD) - National Cancer Audit Collaborating Centre). To further support quality improvement activities, NNHLA also publishes quarterly reports of a subset of performance indicators (England only), which use more timely Rapid Cancer Registration Data (lag of approximately 6 months from diagnosis to reporting of data), available here.

The Audit derives its indicators using information that is routinely collected by the NHS as part of the care and support given to people diagnosed with non-Hodgkin lymphoma, rather than data collected specifically for the Audit[1]. For people diagnosed or treated in England, the data are collated, maintained and quality assured by NHS England's National Disease Registration Service (NDRS). For people diagnosed or treated in Wales, data are provided by Wales Cancer Network (WCN)[2], using the Cancer Network Information System Cymru (CaNISC) or Cancer Dataset Form (CDF). For full details of the data and methods used within this report, please see the NNHLA Methodology Supplement.

This report describes the national picture and variation between NHS trusts in England/hospitals in Wales. As this is the second State of the Nation report published for the Audit, we are now able to draw on data from previous years. Accordingly, the report will present trends over time for the performance indicators (Longitudinal Analysis), using data from England (2020, 2021 and 2022) and Wales (2022 and 2023). When interpreting the trends, it is important to acknowledge that the data for England begins in 2020, a period that may be considered atypical due to the impact of the COVID-19 pandemic on healthcare delivery, resource allocation and clinical practice.

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

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

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Further development work and/or additional data is required to report on all 11 indicators for both nations, and in future years the NNHLA will work to align the reporting periods for both England and Wales, as well as providing more timely reporting.

The findings of this report have guided the development of 5 recommendations aimed at improving the quality of care for people with NHL (see Recommendations). These are directed at Cancer Alliances, Integrated Care Boards and NHS trusts/health boards, highlighting priorities for enhancing data quality, the treatment pathway, and patient outcomes—specifically, where current practice does not meet established, clinically relevant targets. These are important to address as they can be associated with poorer patient outcomes and increased variability in care delivery. By targeting these indicators, the recommendations focus on opportunities where improvement is most likely to enhance clinical outcomes, promote consistency across services, and reduce unwarranted variation in care.

An outlier process has also been carried out regarding survival outcomes. This process involves identification of providers whose performance, in terms of patient survival, deviates significantly from the national or expected range. This includes both positive and negative outliers based on analysis accounting for different case-mix and confounding factors. Identifying these outliers allows for further local investigation into potential drivers of variation, such as differences in clinical practice, resource availability or data quality. This supports targeted improvement efforts where outcomes are poorer than expected and shared learning of best practice where outcomes are better.

The NNHLA also continues to provide quarterly reports to NHS trusts in England. These are presented in the form of interactive data dashboards that are publicly available. These dashboards provide provider-level data quality and performance indicator reports for England every 3 months. They provide data so that NHS organisations can review their data quality and delivery of care in relation to other NHS trusts, Cancer Alliances and the national average. The aim of the dashboards is to help support NHS trusts track their progress and performance in line with local quality improvement initiatives. They will also be used to provide the basis for national quality improvement initiatives designed and launched by the Audit.

Additional materials that accompany this report include:

- A methodology supplement with details about the Audit's data sources and methods
- An online glossary that explains technical terms used in this report
- Information about the outlier process
- Resources to support local monitoring of practice and quality improvement, such as provider-level results on the Data Dashboard and downloadable reports and a local action plan template.
- A summary of this report for people living with NHL and for the public is available on the Audit's website.

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Table 1.* Performance indicators (PIs) and accompanying contextual measure included in this report.		
Performance Indicators and contextualising measure (in order of appearance in report)	**England^**	**Wales#**
New Contextualising measure[1]: Proportion of people diagnosed with NHL presenting as an emergency prior to diagnosis.	Yes (1/1/2021-31/12/2022)	No. In development.
1. Proportion of people diagnosed with NHL discussed at a multi-disciplinary team (MDT) meeting within 4 weeks of diagnosis.	Yes (1/1/2022-31/12/2022)	No. Data not available for Wales.
2. Proportion of people diagnosed with NHL seen by a clinical nurse specialist (CNS).	Yes (1/1/2022-31/12/2022)	Yes (1/1/2023-31/12/2023)
4. Proportion of people with high-grade lymphoma (Burkitt Lymphoma (BL), Diffuse Large B-Cell Lymphoma (DLBCL) or high-grade T-cell) receiving systemic anti-cancer therapy (SACT), who start SACT within 62 days of referral.	Yes (1/1/2022-31/12/2022)	Yes (1/1/2023-31/12/2023)
5. First-line systemic anti-cancer therapy (SACT) regimens received by people with high-grade lymphoma (BL, DLBCL or high-grade T-cell).	Yes (1/1/2021-31/12/2022)	No. In development.
7. Proportion of people with high-grade lymphoma (BL, DLBCL or high-grade T-cell) who start radiotherapy within 8 weeks of end of first-line systemic anti-cancer therapy (SACT).	Yes (1/1/2022-31/12/2022)	No. Regimen-level SACT data not provided
8. Proportion of people with NHL receiving radiotherapy, reported by subtype.	Yes (1/1/2022-31/12/2022)	Yes (1/1/2023-31/12/2023)
9. 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.	Yes (1/1/2021-31/12/2022)	No. Data not available for Wales
11. Overall 2-year survival of people with high-grade lymphoma (BL, DLBCL, mantle cell or high-grade T-cell).	Yes. 1 and 2-year survival reported by sub-type nationally	Yes. 1-year survival reported by sub-type nationally
Further Development work needed		
3. Proportion of people diagnosed with BL or DLBCL undergoing treatment who have MYC testing.	No. In development.	No. In development.
6. Proportion of people diagnosed with NHL with severe acute toxicity after SACT, reported by sub-type.	No. In development.	No. In development.
10. Time to treatment for relapse of follicular lymphoma, other B-cell lymphomas (incl. chronic lymphocytic leukaemia (CLL), marginal zone lymphoma) and T-cell lymphomas which are not high-grade.	No. In development.	No. In development.

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

* See methodology supplement for the exact definitions of each performance indicator

^ England data: National Cancer Registration Dataset (NCRD)

Welsh data: Cancer Network Information System Cymru (CaNISC)

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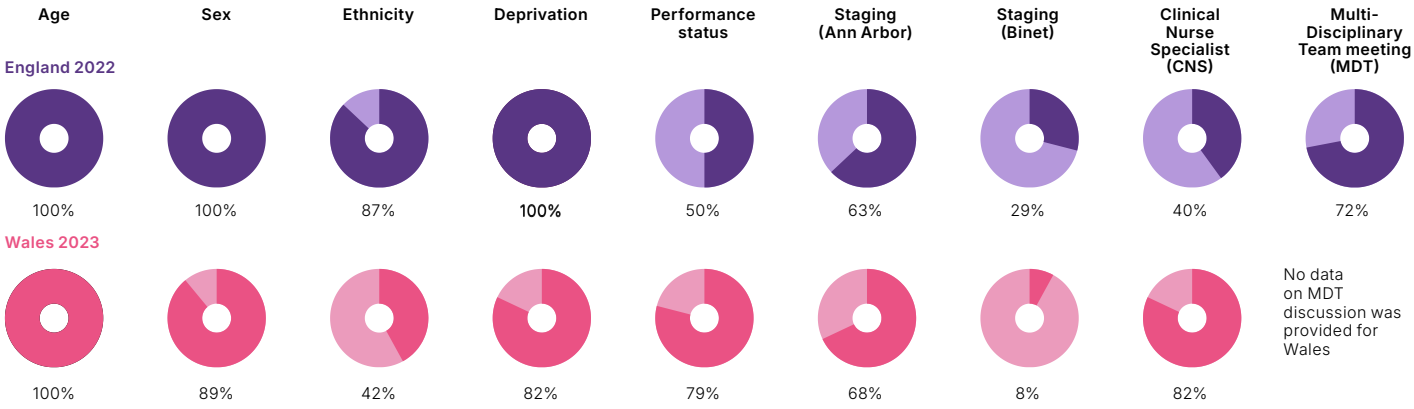
2. Infographic

Summary of results for people diagnosed with Non-Hodgkin Lymphoma (NHL) in England (2022) and Wales (2023).

NNHLA
National Non-Hodgkin Lymphoma Audit

Data completeness



Diagnosis and staging

Diagnoses per year

England
15,433 diagnosed in 2022

Wales
729 diagnosed in 2023

Grade of lymphoma

England 2022
high-grade 50 %, low-grade 49%, not classified 0.8%

Wales 2023
high-grade 50%, low-grade 45%, not classified 5%

MDT discussion within 4 weeks of diagnosis, where recorded

England 2022 - 60.0%, (high-grade 65%, low-grade 54%)

No data on MDT discussion was provided for Wales

69 years **Mean age** at diagnosis for both England & Wales

Emergency presentation

England 2022 - **28%**

Development work underway for Welsh data.

Clinical Nurse Specialist (CNS) seen, where recorded

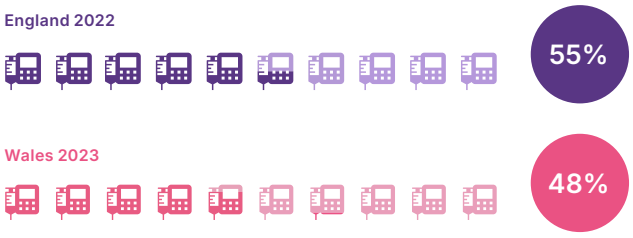
England 2022 83%
Wales 2023 96%

40% data completeness for England 2022

Treatment

Systemic Anti-Cancer Therapy (SACT)

Percentage of people diagnosed with high grade lymphoma, who receive SACT within 62 days of referral



Timing of Radiotherapy delivery

33%

Percentage of people diagnosed with high-grade lymphoma,who received radiotherapy within 8 weeks of end of first line SACT.

England 2022

End date for 1st line chemotherapy was not provided for Wales so this indicator could not be measured.

Trial Participation

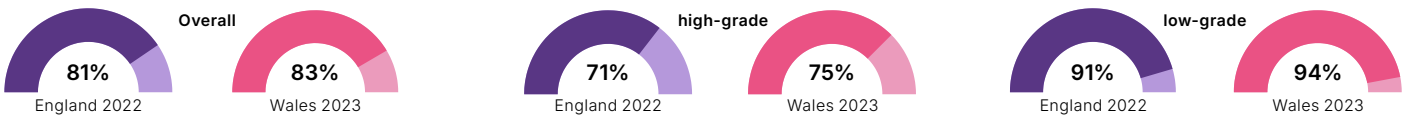
2%

Percentage of people with NHL who are recorded as having received an episode of care that was delivered as part of a clinical trial in **England 2022***

* Note 47% data missing. No data on trial participation for Wales was available

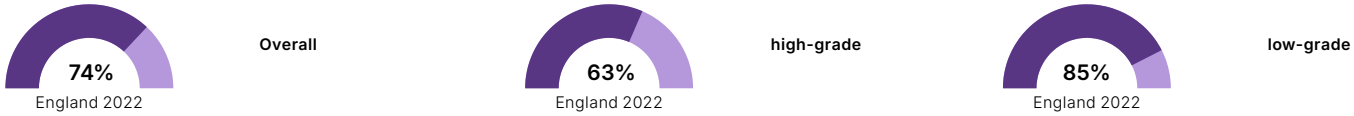
Survival

One-year survival outcomes



Two-year survival outcomes*

Not available for Wales due to insufficient follow up period



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3. Recommendations

Recommendations developed in collaboration with NNHLA Clinical Reference Group and based on key findings in this report.

Recommendation	Audience	Audit Findings	Quality Improvement Goal	National Guidance/Standards/Resources
Clinical Recommendations				
1. **Reduce the current rate of emergency presentations of NHL by reviewing diagnostic pathways into and within secondary care to improve timely investigation, and examine variation in rates of emergency presentation by geographies and population groups to identify potential causes of this.**	England: NHS England, Primary Care, Cancer Alliances working with NHS trusts Wales: Primary care, health boards	**Proportion of people with NHL presenting with a new diagnosis of NHL via the emergency department or presenting to the emergency department within 28 days prior to diagnosis:** England 2022: Mean: 28.4% (Range*: 0.0-75.0%) Median (IQR**): 27.5% (22.7-33.0%)	Goal #1: Improving timely diagnosis and treatment.	NHS Cancer Programme: Faster Diagnosis Framework 2022 UK Blood Cancer Action Plan 2024 NICE guidance, "Haematological cancers: improving outcomes" (NG47) 2016 Cancer Genomic Improvement Programme 2023 Kane E, Howell D, Smith A, Crouch S, Burton C, Roman E, Patmore R. Emergency admission and survival from aggressive non-Hodgkin lymphoma: a report from the UK's population-based haematological malignancy research network. European journal of cancer. 2017 Smith MJ, Fernandez MA, Belot A, Quartagno M, Bonaventure A, Majano SB, Rachet B, Njagi EN. Investigating the inequalities in route to diagnosis amongst patients with diffuse large B-cell or follicular lymphoma in England. British journal of cancer. 2021 Howell D, Hart R, Smith A, Macleod U, Patmore R, Roman E. 'Unpacking'pathways to lymphoma and myeloma diagnosis: Do experiences align with the Model of Pathways to Treatment? Findings from a UK qualitative study with patients and relatives. BMJ open. 2020
2. **Local review at NHS trust/health board level is needed to identify diagnostic and treatment pathway delays and reduce inter-provider variation in people with high-grade NHL starting SACT within 62 days of referral. This may include examination of delays along the pathway, chemotherapy unit capacity and staffing, and mode of delivery of SACT, in order to understand system-level delays.**	England: Cancer Alliances working with NHS trusts Wales: health boards	**Proportion of people with high grade NHL commencing 1st line SACT within 62 days of referral.** England 2022: 55.0% (Range* 0-100.0%); Median (IQR)**: 54.0% (45.0-64.0%) Wales 2023***: 48.2% (Range* 8.0-91.0%) Median (IQR)**: 43.0% (35.0-56.0%) Note: results for this performance indicator have worsened compared to 2020 and 2021 in England.	Goal #1: Improving timely diagnosis and treatment.	NHS England (2023) Changes to cancer waiting times standards from 1 Oct 2023

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Recommendation	Audience	Audit Findings	Quality Improvement Goal	National Guidance/Standards/Resources
3. **Identify patient and hospital factors contributing to delays in starting radiotherapy after last administered dose of SACT and explore strategies to reduce inter-provider variation across NHS trusts and health boards.** **This may include ensuring specialist representation at MDT meetings, in line with the national requirement for individual scheduled treatment planning MDT meetings to be quorate on 95% or more occasions, earlier identification of appropriate candidates for radiotherapy through an MDT setting with mandated clinical oncology attendance and earlier referral and review by clinical oncology teams to discuss radiotherapy suitability prior to completion of systemic treatment. It may also include review of radiotherapy unit capacity and staffing.**	England: Cancer Alliances working with NHS trusts Wales: health boards	**Proportion of people with NHL receiving radiotherapy within 8 weeks of last administered dose of SACT:** England 2022: 32.5% (Range*: 0.0-100.0%) Median (IQR**): 28.6% (11.1-50.0%) Wales 2023: Not available Note: results for this performance indicator have worsened compared to 2020 and 2021 in England.	Goal #1: Improving timely diagnosis and treatment.	No national guidance set. Recommendation agreed by the NNHLA Clinical Reference Group NHS England (2020) Multi-disciplinary team streamlining guidance
4. **Identify reasons why individuals with non-Hodgkin lymphoma are not enrolled in clinical trials to ensure equitable access to research opportunities, while also strengthening clinical record-keeping practices to support identification and reduction of participation disparities.**	England: Cancer Alliances working with NHS trusts Wales: health boards	**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.** England 2022: 2.0% (Range**** 0-14.55%) Median (IQR**): 0.0% (0.0-0.0%) Wales: Not available	Goal #1: Improving timely diagnosis and treatment.	No national guidance set. Recommendation agreed by the NNHLA Clinical Reference Group

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Recommendation	Audience	Audit Findings	Quality Improvement Goal	National Guidance/Standards/Resources
Data Quality Recommendation				
5. **Ensure there is a designated coordinator or clinician to improve the completeness and quality of data items recorded in the national cancer datasets at each NHS trust/health board (with particular focus on staging in England and Wales and treatment delivery in Wales).** **This will allow better risk adjustment of outcome variables including survival outcomes for people with non-Hodgkin lymphoma and effectively inform outlier identification.** **The launch of the Audit's national quality improvement initiative in October 2025 will further support this effort. NHS trusts/health boards are encouraged to participate in the initiative to enhance data quality.**	England: Integrated Care Boards (ICBs) working with NHS trusts Wales: health boards	**Completeness for staging as follows:** (Binet – chronic lymphocytic leukaemia CLL, Ann Arbor – All other NHL) England 2022: 63.0% (Ann Arbor), 29.1% (Binet) Wales 2023: 67.5% (Ann Arbor), 7.8% (Binet)	N/A	NHS organisations have an obligation to submit accurate and timely data to the English National Disease Registration Service (NDRS) and Wales Cancer Network (WCN). The Cancer Outcome and Services Data set (COSD) has been the national standard for reporting cancer in the NHS in England since January 2013. Feedback reports for the data submitted are available through CancerStats2. COSD is the main source for the rapid cancer registration dataset and improved completeness of this dataset is required to ensure quarterly reporting. The Welsh Health Circular (NHS Wales) mandates high quality data submissions for the national cancer audits.

* Range - across all NHS trusts in England and health boards in Wales
** IQR – interquartile range
*** Results updated using the Patient Episode Database for Wales (PEDW)
**** Range - across all Cancer Alliances in England

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4. Results for England and Wales

4.1 Data Completeness

Key Message: NHS trusts and multi-disciplinary teams should ensure key data items are submitted to cancer registries for all people diagnosed with NHL. Particular attention should be given to documentation of staging, MDT records and CNS involvement in both England and Wales.

It is important to note that data was provided and is presented for different calendar years for England (2022) compared to Wales (2023).

Descriptive Data

Reporting completeness of key data items is vital and important to ensure fair comparisons between NHS trusts/hospitals and when drawing conclusions regarding the process indicators about healthcare delivery and outcomes (see Supplementary Results, Table 1 and Table 2).

In England, data completeness of age, sex and deprivation (index of multiple deprivation (IMD) quintiles) was excellent (100%) (Supplementary Table 1). In Wales, data completeness of age was also 100%. However, levels of data completeness were lower for sex (89.0%) and deprivation (82.2%). Completeness of data for ethnicity was 86.8% in England (2022) and 42.2% in Wales (2023). Completeness of data for performance status was also poor; with 50.2% and 78.5% completeness in England (2022) and Wales (2023) respectively. Completeness of Charlson Comorbidity Index was also low due to incomplete linkage to Hospital Episode Statistics (HES) data in England and Patient Episode Data for Wales; 68.0% in England 2022, and 61.6% in Wales 2023.

There was excellent data completeness for grade of NHL in both England and Wales (see Table 2). In England (2022), Ann Arbor staging was documented for 63.0% of people; Binet staging, pertaining only to people diagnosed with CLL, was recorded for only 29.1% of cases. Staging data in Wales in 2023 was more complete for Ann Arbor staging (67.5%), but less complete for Binet staging (7.8%) (see Table 2). There was poor overall completeness of data for prognostic indices; data completeness for both IPI (International Prognostic Index for DLBCL) and the Follicular Lymphoma International Prognostic Index 2 (FLIPI2)) was 9.7% and 8.6% respectively for England. No data on prognostic indices was available for Wales (see Table 2). Overall, compared to results presented in last year's State of the Nation report, staging and prognostic indices completeness has worsened from 2020 to 2022 in England and 2022 to 2023 in Wales.

A request for access to data regarding FLIPI1 has been made to NDRS, with aims to include this in future iterations of the State of the Nation reports and the quarterly report dashboards. Completeness of data for prognostic indices should remain a priority for providers, as it will help clinicians and the Audit team to clarify if appropriate care is being delivered and help more accurately prognosticate outcomes for those with NHL.

Record-keeping for MDT discussions within 4 weeks of diagnosis was recorded as 72% in 2022 in England (stable compared to 2020-2021), however it is unclear whether this is due to poor record-keeping or no discussion in an MDT. No data on MDT discussion was provided for Wales. The proportion of people diagnosed with NHL, seen by a clinical nurse specialist was recorded in 40% of cases in England in 2022, and in 82% of cases in Wales in 2023. This marks an improvement in data completeness in both England and Wales compared to last year's report.

With regards to treatment delivery, no data was available on regimen-level SACT and limited data was available on radiotherapy delivery for Wales. No data on trial participation was available for Wales.

4.2 Characteristics of people diagnosed with non-Hodgkin lymphoma (NHL)

'Gold standard' Cancer Registration data (England) identified 15,433 people diagnosed with NHL in 2022, across 135 English NHS trusts. CaNISC data identified 729 people diagnosed with NHL in Wales in 2023 across 17 Welsh hospitals.

In both England and Wales, there was a similar mean age of 69 years at diagnosis, with a diagnosis most likely to be made between the ages of 70 and 79. A higher number of male individuals were diagnosed with NHL (53.3-57.5%). The majority were of White British ethnicity (91.2-98.1%), although more than half of data for ethnicity was not recorded for the Wales cohort. A higher proportion of people diagnosed with NHL lived in the least deprived quintiles in England and Wales. Most people included in the Audit with a recorded performance status, were performance status 0-1 (82.9% people in England (2022), 75.5% in Wales (2023)). More than 75% of people with NHL who had a Charlson comorbidity index available (through linkage to HES or PEDW data) had zero or one comorbidities in England and Wales. However, drawing any conclusions is difficult as 30-40% of data was missing for this data item (Supplementary Table 1).

Overall, the patient characteristics for England in 2022 and Wales 2023 have not changed compared to last year's State of the Nation report 2024 (England 2020-2021 and Wales 2022).

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4.3 Diagnosis and Staging

Key Message: Improved staging should be prioritised as complete staging data will allow risk-adjusted comparisons between groups of people diagnosed with NHL and NHS trusts/ MDTs.

There is highly complete recording of sub-type based on diagnostic and morphology coding (see Methodology Supplement). 15,433 people were diagnosed with NHL in England in 2022, and 729 people were diagnosed in Wales in 2023. This marks an increase of 8-10% of people diagnosed with NHL annually in England (from 2020-2022) and Wales (2022 to 2023). Supplementary Table 1 and Table 2 summarise the characteristics of people with NHL and their cancers separately for England and Wales in 2022 and 2023 respectively.

Table 2. Characteristics of the NHL cancer diagnoses in England in 2022 and Wales 2023.

	England 2022		Wales 2023	
	n	%	n	%
Total	15,433	100	729	100
Ann Arbor staging				
Total	11,792	100	575	100
1	1,192	16.1	56	14.4
2	845	11.4	57	14.7
3	1,457	19.6	92	23.7
4	3,934	53.0	183	47.2
Missing (% of total)	4,364 (37.0)		187 (32.5)	
Binet staging (CLL)[1]				
Total	3,641	100	154	100
A	844	79.8	9	75.0
B	146	13.8	<5*	*
C	68	6.4	*	*
Missing (% of total)	2,583 (70.9)		142 (92.2)	
NHL grade				
High	7,710	50.0	366	50.2
Low	7,608	49.3	327	44.9
Not classified	115	0.8	36	4.9
NHL sub-type				
Mature B-cell neoplasms				
Burkitt lymphoma	114	0.7	<5*	*
Chronic lymphocytic leukaemia	3,641	23.6	154	21.1
Follicular lymphoma	2,345	15.2	115	15.8
Large B-cell lymphomas	4,125	26.7	215	29.5
Mantle cell lymphoma	578	3.8	35	4.8
Marginal zone lymphoma	1,270	8.2	30-40*	*
NHL, NOS[2]	1,262	8.2	50	6.9
Mature T- and NK-cell neoplasms				
Peripheral T-cell lymphomas	585	3.8	27	3.7
Cutaneous T-cell lymphomas	340	2.2	10	1.4
Other	1,173	7.6	88	12.1
IPI[3] for DLBCL[4]				
Total DLBCL	3,945	100	-	-
Recorded	384	9.7	-	-
Missing	3,561	90.3	-	-
FLIPI2[5] for FL[6]				
Total FL	2,345	100	-	-
Recorded	202	8.6	-	-
Missing	2,143	91.4	-	-

Note: Sum of percentages may not equal 100% due to rounding

CLL[1]: Chronic lymphocytic leukaemia; NOS[2]: Not otherwise specified; IPI[3]: International Prognostic Indices; DLBCL[4]: Diffuse Large B-Cell Lymphoma; FLIPI2[5]: Follicular Lymphoma International Prognostic Indices 2; FL[6]: Follicular Lymphoma

*Exact numbers and percentages suppressed to protect patient confidentiality

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The three most common sub-types were large B-cell lymphoma (LBCL), chronic lymphocytic leukaemia (CLL) and follicular lymphoma (Table 2). The incidence of low-grade and high-grade disease was similar across England and Wales (Table 2). People included in the Audit presented at a late stage of diagnosis, with 53.0% and 47.2% presenting with stage 4 disease in England 2022 and Wales 2023 respectively.

With CLL, the pattern suggested that people in all cohorts were more likely to present at an earlier stage, although clear conclusions can't be drawn due to the large volume of missing data (around 70-90%) (Table 2).

Contextualising measure: Proportion of people diagnosed with NHL presenting as an emergency prior to diagnosis.

Key Message: NHS trusts and health boards should prioritise review of primary and secondary care referral pathways to reduce the rate of emergency presentations for those newly diagnosed with NHL in England.

Table 3. Proportion of individuals newly diagnosed with NHL who present as emergency presentations in England

Denominator	**England 2021*** **				**England 2022**			
Route of admission	**Number**	**Total**	**(%)**	**Variation by trusts***	**Number**	**Total**	**(%)**	**Variation by trusts***
Emergency	4,606	15,208	30.3	Range: 0-90% Median (IQR**): 30 (24.5-34.5%)	4,388	15,433	28.4	Range: 0-75% Median (IQR): 27.5 (22.7-33.0%)
Non-Emergency	10,374	15,208	68.2	Range: 10-100% Median (IQR): 68.4 (63.9-73.5%)	10,688	15,433	69.3	Range: 25-100% Median (IQR): 70.1 (65.0-74.4%)
Missing	228	15,208	1.5	Range: 0.0-13.2% Median (IQR): 0.9 (0.0-2.3%)	357	15,433	2.3	Range: 0.0-21.9% Median (IQR): 1.4 (0.0-2.9%)

* Variation between trusts in England.
** Interquartile range (IQR).
*** Data were impacted by the COVID19 pandemic and so will be atypical to some degree during 2020-21.

Table 3 demonstrates the proportion of those diagnosed with NHL in England who present as an emergency presentation via the emergency department, or who present to the emergency department within 28 days of initial diagnosis. This has been collated using a combination of datasets including Hospital Episode Statistics (HES), Rapid Cancer Registration Dataset and the Cancer Registration Gold Dataset.

More than a quarter of people newly diagnosed with NHL present in the emergency setting in England in 2022, with little variation between trusts. Supplementary Tables 2–6 show that a greater proportion of these individuals are from minority ethnic backgrounds, and aged over 80 years. As expected with the more aggressive trajectory of disease, a higher proportion of these presentations are seen in the high-grade sub-types, particularly Burkitt lymphoma, Large B-cell lymphoma and Peripheral T-cell lymphoma.

Trends over time: A similar incidence of emergency presentations was observed in the 2021 England data, indicating this remains an ongoing issue and may partly account for the higher proportion of individuals with NHL presenting at a late stage (Table 3).

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4.4 Diagnosis to Treatment Pathway

PI1: Proportion of people diagnosed with NHL discussed at a multi-disciplinary meeting within 4 weeks of diagnosis.

Key Message: NHS trusts in England must ensure that MDTs conduct timely discussions for every newly diagnosed patient, with particular urgency for those with high-grade NHL. Protocols should be in place to ensure timely discussion, with the appropriate clinical information available, and identify responsible personnel to coordinate and oversee documentation in the MDTs. There should be regular audits to monitor compliance and drive improvement.

Table 4. Proportion* of people with NHL discussed in an MDT[1] within 4 weeks of diagnosis*****

Denominator	England 2020	Variation 2020**	England 2021	Variation 2021**	England 2022	Variation 2022**
All NHL	69.0%	Range: 0-100% Median (IQR***): 70% (57-76%)	63.5%	Range: 0-100% Median (IQR): 65% (51-72%)	**60.0%**	**Range: 0-100%** **Median (IQR): 60% (50-70%)**
High-grade lymphoma	74.5%	Range: 0-100% Median (IQR): 74% (64-83%)	68.6%	Range: 0-100% Median (IQR): 70% (58-79%)	**65.2%**	**Range: 0-100%** **Median (IQR): 65% (50-77%)**
Low-grade lymphoma	61.8%	Range: 0-100% Median (IQR): 63% (47-71%)	57.3%	Range: 0-100% Median (IQR): 57% (47-69%)	**53.9%**	**Range: 0-100%** **Median (IQR): 53% (43-64%)**

* Percentage where information available (72% data completeness for England 2022)
** Variation between trusts in England.
*** Interquartile range (IQR).
**** Data were impacted by the COVID-19 pandemic and so will be atypical to some degree during 2020-21.
MDT[1]: Multi-disciplinary team

Data completeness for MDT discussion of people diagnosed in England in 2022 was 72%. Where data were recorded, 60% of all cases were discussed in an MDT within 4 weeks of diagnosis. People with high-grade lymphoma were more likely to be discussed within this time period, Overall, there is large variation in practice regarding timing of MDT discussions between trusts/hospitals (Table 4). No data was available for this performance indicator for Wales.

However, further analysis demonstrated that over 80% of all cases were discussed within 8 weeks of diagnosis, with almost 90% of high-grade cases discussed within this time (Supplementary Table 7).

Trends over time: When comparing the data for England 2022 to data collected in England 2020-2021, there has been a decline in the proportion of individuals with NHL being discussed in an MDT within 4 weeks of diagnosis. This may reflect pressures on resources and a reduction in service capacity in the post COVID-19 period.

PI 2: Proportion of people diagnosed with NHL seen by a clinical nurse specialist (CNS).

Key Message: Ongoing improvement is needed at NHS trust level regarding record of, and involvement of CNS teams in England to ensure people with NHL receive the appropriate support during treatment.

Where CNS information was recorded, over 95% of people with NHL were seen by a CNS in Wales, whereas only 83% were seen by a CNS in England (Table 5). CNS contact was higher in the high-grade cases for both England and Wales, with some variation seen between NHS trusts/health boards. Given that there was 40% data completeness for this item in England and 82% data completeness in Wales, it is difficult to draw definitive conclusions about support provided by CNSs to people diagnosed with NHL.

Trends over time: The overall proportion of people with NHL in England and Wales who had contact with their CNS has remained stable since last year's State of the Nation report.

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Table 5. Percentage* of people diagnosed with NHL seen by CNS1 in England (2020-2022) and Wales (2022-2023)****

Denominator	England 2020	Variation 2020**	England 2021	England 2022	Variation 2022**	Wales 2022	Variation** 2022	Wales 2023	Variation 2023**
All NHL	81.5%	Range: 0-100% Median (IQR***): 92% (78-100%)	82.2%	83.0%	Range: 0-100% Median (IQR): 93% (77-100%)	96.0%	Range: 60-100% Median (IQR***): 99% (86-100%)	96.0%	Range: 0-100% Median (IQR): 95% (89-100%)
High-grade lymphoma	85.8%	Range: 0-100% Median (IQR): 96% (82-100%)	86.6%	86.4%	Range: 0-100% Median (IQR): 96% (82-100%)	98.2%	Range: 82-100% Median (IQR): 100% (100-100%)	96.8%	Range: 0-100% Median (IQR): 100% (92-100%)
Low-grade lymphoma	76.0%	Range: 0-100% Median (IQR): 92% (68-100%)	77.2%	79.4%	Range: 7-100% Median (IQR): 93% (71-100%)	93.9%	Range: 33-100% Median (IQR): 100% (78-100%)	95.0%	Range: 0-100% Median (IQR): 50% (3-97%)

* Percentage where information available (40% data completeness for England 2022)
** Variation between NHS trusts in England/hospitals in Wales
*** Interquartile range (IQR).
**** Data were impacted by the COVID-19 pandemic and so will be atypical to some degree during 2020-21.
CNS[1]: Clinical Nurse Specialist

PI4: Proportion of people with high-grade lymphoma (Burkitt lymphoma (BL), DLBCL (Diffuse Large B-Cell Lymphoma) or high-grade T-cell) receiving SACT, who start SACT within 62 days of referral.

Key Message: 55% of people with high-grade NHL in England receiving SACT (2022) and 48% of people with high-grade NHL in Wales receiving SACT (2023), start SACT within 62 days of referral.

Around half of people with high-grade NHL in England receiving SACT do not start first-line SACT within the target of 62 days across both Engalnd and Wales (Table 6). There is noticeable variation across hospitals and NHS trusts, indicating possible challenges in the referral process, access to specialist services, and resource distribution that warrant further investigation and improvement locally.

Trends over time: In England (2020-2022) and Wales (2022-2023) there is a reduction in people with NHL starting SACT within 62 days of referral, highlighting the need for health boards (Wales) and Cancer Alliances (working closely with NHS trusts in England) to improve the treatment pathway and consequent outcomes for those with NHL, in keeping with the cancer waiting times target set out by NHS England.

Table 6. Proportion of people with high-grade lymphoma and receive SACT, who start SACT within 62 days of referral in England 2020-2022**** and Wales 2022-2023.

Denominator	England 2020	Variation 2020*	England 2021	Variation 2021*	England 2022	Variation 2022**	Wales 2022	Variation 2022*	Wales 2023	Variation 2023**
High-grade lymphoma	66.1%	Range: 0-100% Median (IQR***: 65% (54-76%)	62.0%	Range: 0-100% Median (IQR): 63% (53-71%)	55.0%	Range: 0-100% Median (IQR): 54% (45-64%)	51.2%	Range: 0-100% Median (IQR***): 50% (26-67%)	48.2%	Range: 8-91% Median (IQR): 43% (36-56%)

* Variation between NHS trusts in England.
** Variation between hospitals in Wales. Results updated using Wales Admitted Patient Care Dataset (APC).
*** Interquartile range (IQR).
**** Data were impacted by the COVID-19 pandemic and so will be atypical to some degree during 2020-21.

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4.5 Treatment

PI5: First-line SACT treatment regimens received by people with high-grade lymphoma (BL, DLBCL or high-grade T-cell).

Key Message: Over 90% of high-grade lymphoma cases are receiving an acceptable first-line SACT treatment regimen, or appropriate alternative in England (2021-2022).

Table 7. Proportions of people diagnosed with high-grade subtypes of NHL receiving acceptable first-line treatment SACT regimens for England 2021-2022.**

NHL High-grade subtype	Cohort *	Acceptable[1] (%)	Variation **
DLBCL, NOS* **	**England 2021**	98.0%	Range: 83.3-100% Median (IQR): 100% (97.3-100%)
	England 2022	98.1%	Range: 50-100% Median (IQR): 100% (100-100%)
Burkitt lymphoma	**England 2021**	96.4%	Range: 0-100% Median (IQR): 100% (100-100%)
	England 2022	90.9%	Range: 0-100% Median (IQR): 100% (100-100%)
Peripheral T-cell lymphoma, NOS	**England 2021**	95.9%	Range: 0-100% Median (IQR): 100% (100-100%)
	England 2022	98.1%	Range: 66.7-100% Median (IQR): 100% (100-100%)
Cutaneous T-cell lymphoma	**England 2021**	Too low to report	
	England 2022	Too low to report	

* Data were impacted by the COVID-19 pandemic and so will be atypical to some degree during 2020-21.

** Variation between NHS trusts in England.

*** NOS: Not otherwise specified.

[1] Acceptable regimen were defined as recommended first-line regime as per NICE guidelines or an appropriate adjustment such as anthracycline replacement (see Methodology Supplement for more details).

Separate analysis of SACT regimens using the SACT dataset were used for DLBCL Not Otherwise Specified (NOS), Burkitt Lymphoma, Peripheral T-cell lymphoma (NOS) and Cutaneous T-cell cases for England (Table 7) to establish the proportion of people with each sub-type receiving an acceptable first-line regimens. "Acceptable" regimens were defined as recommended first-line regimens as per NICE guidelines or an appropriate adjustment such as anthracycline replacement (see Methodology Supplement for more details). Suboptimal regimes were defined as not meeting criteria as acceptable regimens; they may be clinically appropriate for the individual but deemed to be less effective than the "acceptable" regimens. Excluded regimens were regimens in the dataset that were incorrectly coded or not used in the first-line setting.

All people with DLBCL (NOS) cases who started SACT within 3 months of diagnosis were included with around 6,000 cases noted between 2021 and 2022 in England. In 2021 and 2022, 54 and 58 variations in the recorded first-line regimens were noted respectively, with around 98% of people with valid first-line SACT records (after exclusions) receiving regimens considered acceptable first-line regimens for this subtype.

All people with Burkitt lymphoma who started SACT within 3 months of diagnosis were included with around 200 cases noted between 2021 and 2022 in England. In 2021 and 2022, 17 and 20 variations in first-line regimens were noted respectively, with around 94% of people with valid first-line SACT records (after exclusions) receiving regimens considered acceptable first-line regimens for this subtype.

All people with Peripheral T-cell lymphoma (NOS) who started SACT within 3 months of diagnosis were included with around 200 cases noted between 2021 and 2022 in England. In 2021 and 2022, 17 and 19 variations in first-line regimens were noted, with around 97% of people with valid first-line SACT records (after exclusions) receiving regimens considered acceptable first-line regimens for this subtype.

An analysis of regimes was carried out for Cutaneous T-cell lymphoma cases during the same time period but due to the small numbers recorded, further details on this have therefore not been included in this report.

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Further analysis of optimal, adjusted and suboptimal treatment regimens by patient characteristics is presented in the Supplementary Tables 8-12. Due to low overall numbers, meaningful trends can only be observed within the DLBCL (NOS) cohort. In this group, increasing age and poorer performance status were associated with a higher likelihood of receiving adjusted or suboptimal regimens; likely reflecting clinical decisions to avoid more intensive first-line therapies in more frail patients. However, this pattern did not hold for patients with performance status 4, who may have presented with aggressive disease and required immediate administration of optimal therapy without adjustment.

The wide variation in regimens delivered across subtypes highlights the need for more consistent treatment guidelines to reduce variability in care. Reassuringly, over 90% of patients were still considered to have received an acceptable first-line regimen. Improved data completeness on performance status and comorbidities would support further analysis to better understand the rationale for adjusted or suboptimal treatments in different NHL subtypes.

PI 7: Proportion of people with high-grade lymphoma (BL, DLBCL or high-grade T-cell) who start radiotherapy within 8 weeks of end of first-line SACT.

Key Message: Less than 40% of people with high-grade lymphoma due to receive radiotherapy start their radiotherapy within 8 weeks of the end of first-line SACT, with wide variation between trusts. This demonstrates a worsening delay in radiotherapy delivery compared to last year's State of the Nation report.

Table 8. Proportion of people with high-grade NHL who receive first-line SACT (and are due to receive radiotherapy) who then receive radiotherapy within 8 weeks of last administered dose of SACT in England (2022).

Denominator	England 2021 **		England 2022	
	Percentage (%)	Variation 2021 *	Percentage (%)	Variation 2022 *
People with high-grade lymphoma who started SACT within 6 months of diagnosis and received radiotherapy within 6 months of last dose of SACT	36.0%	Range: 0-100% Median (IQR):31.0 (0.0-50.0%)	32.5%	Range: 0-100% Median (IQR): 28.6 (11.1-50.0%)

* Variation between trusts in England

** Data were impacted by the COVID-19 pandemic and so will be atypical to some degree during 2020-21.

For this report, no data was provided on SACT regimens in Wales, so it was not possible to report radiotherapy delivery following SACT.

In England, the results have been recalculated for 2021 with an adjustment to the denominator (see Methodology Supplement); this has been applied to results for England 2022. The denominator was all those who started SACT within 6 months of diagnosis, who then went on to receive radiotherapy within 6 months of last administered dose of SACT (Table 8).

Around a third of people in this Audit in England commenced radiotherapy within 8 weeks of completing first-line SACT, with wide variation between NHS trusts/hospitals. This increased to around 50% by 12 weeks (Supplementary Table 13). Radiotherapy delivery within 8 weeks is considered optimal, with delivery within 12 weeks regarded as an acceptable timeframe. There is considerable variation across NHS trusts, warranting further investigation to understand the underlying causes and to determine whether any geographic patterns are present.

Trends over time: Comparison between results for England 2022 and England 2021 demonstrate a reduction in timely delivery of radiotherapy after first-line SACT, which warrants review by NHS trusts of their assessment and referral pathway for radiotherapy.

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PI 8: Proportion of people with NHL receiving radiotherapy, reported by subtype.

Key Message: Further analysis of variation in care across NHS hospitals is required to understand the use and delivery of radiotherapy for varying sub-types.

The most common sub-types receiving radiotherapy were large B-cell lymphoma, follicular lymphoma, marginal zone lymphoma and cutaneous T-cell lymphoma in England, with a similar pattern seen in Wales (Table 9). There were consistent rates in radiotherapy delivery by sub-type within 1 year and 2 years of diagnosis in England. Due to current difficulties in radiotherapy capture with existing databases in Wales, only limited conclusions can be drawn from the current data provided for Wales; this may explain lower proportions of radiotherapy delivery in Wales compared to England. Further analysis on indications for radiotherapy delivery and future analyses exploring variations in radiotherapy delivery at an NHS trust and hospital level, as well as the structure of radiotherapy referral pathways/tertiary referral centres services, will increase our understanding of differences in care delivery across England and Wales.

Trends over time: There has been no significant change in radiotherapy delivery over time by sub-type (England 2020-2022 and Wales 2022-2023) (Supplementary Table 14).

Table 9. Proportion of people with NHL who received radiotherapy by sub-type within 1 year and 2 years of diagnosis for England (2022) and with 1 year of diagnosis for Wales (2023).

Denominator	**England 2022**				**Wales 2023**	
NHL sub-type	**1 year (%)**	**Variation 2022***	**2 years (%)****	**Variation 2022***	**1 year (%)**	**Variation 2023*****
ALL	11.9	Range: 0-100% Median (IQR): 10.9% (8.1-14.4%)	13.2	Range: 0-100% Median (IQR): 12.2 (9.1-15.5%)	8.8	Range: 0-25% Median (IQR): 9% (6-9%)
Burkitt lymphoma	9.6	Range: 0-100% Median (IQR): 0% (0-0%)	9.6	Range: 0-100% Median (IQR): 0% (0-0%)	0.0	Range: 0-0% Median (IQR): 0% (0-0%)
Chronic lymphocytic leukaemia	0.4	Range: 0-5.9% Median (IQR): 0% (0-0%)	0.5	Range: 0-6.2% Median (IQR): 0% (0-0%)	0.0	Range: 0-0% Median (IQR): 0% (0-0%)
Follicular lymphoma	17.3	Range: 0-100% Median (IQR): 16.2% (9.1-22.7%)	19.3	Range: 0-100% Median (IQR): 17.4% (10.0-26.7%)	17.4	Range: 0-50% Median (IQR): 18% (11-25%)
Large B-cell lymphoma	21.0	Range: 0-100% Median (IQR): 20.1% (14.1-28.2%)	22.8	Range: 0-100% Median (IQR): 22.2% (14.8-30.0%)	9.8	Range: 0-33% Median (IQR): 10% (0-17%)
Mantle cell lymphoma	4.3	Range: 0-100% Median (IQR): 0% (0-0%)	5.9	Range: 0-100% Median (IQR): 0% (0-8.2%)	11.4	Range: 0-100% Median (IQR): 0% (0-17%)
Marginal zone lymphoma	19.2	Range: 0-100% Median (IQR): 14.3% (0.0-26.4%)	21.0	Range: 0-100% Median (IQR): 16% (0.0-29.5%)	18.8	Range: 0-50% Median (IQR): 0% (0-33%)
NHL, Not otherwise specified	8.1	Range: 0-100% Median (IQR): 0% (0.0-13.4%)	8.6	Range: 0-100% Median (IQR): 0% (0.0-16.7%)	12.0	Range: 0-33% Median (IQR): 0% (0-13%)
Peripheral T-cell lymphoma	9.4	Range: 0-100% Median (IQR): 0% (0-12.5%)	11.3	Range: 0-100% Median (IQR): 0% (0.0-15.4%)	7.4	Range: 0-100% Median (IQR): 0% (0-0%)
Cutaneous T-cell lymphoma	20.6	Range: 0-100% Median (IQR): 0% (0.0-33.3%)	23.8	Range: 0-100% Median (IQR): 0% (0.0-38.4%)	20.0	Range: 0-100% Median (IQR): 0% (0-100%)
Other	3.8	Range: 0-100% Median (IQR): 0% (0-0.8%)	4.5	Range: 0-100% Median (IQR): 0% (0.0-6.8%)	3.4	Range: 0-12% Median (IQR): 0% (0-0%)

* Variation between NHS trusts in England

** RTDS data complete to July 2024; 2-year follow-up may be incomplete for 2022 diagnoses.

*** Variation between hospitals in Wales

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PI 9: Proportion of people diagnosed with NHL who were recorded as having received an episode of care that was delivered as part of a clinical trial, reported by sub-type.

Key Message: 2.0% all individuals diagnosed with NHL in England in 2022 were recorded as having received an episode of care that was delivered as part of a clinical trial, reported by sub-type.

Table 10. Proportion of people diagnosed with NHL who were recorded as having received an episode of care that was delivered as part of a clinical trial, reported by sub-type in England 2021 and 2022.**

NHL sub-type	England 2021 (%)	Variation in England 2021*	England 2022 (%)	Variation in England 2022*
All NHL	1.6	Range:0.26 – 3.85% Median (IQR): 1.43 (0.64 – 2.34) %	2.0	Range: 0.00 – 6.81% Median (IQR): 1.86 (0.99 – 2.46) %
High-grade lymphoma	1.9	Range: 0.00 – 4.93% Median (IQR): 1.56 (0.70 – 2.29) %	3.0	Range: 0.00 – 9.77% Median (IQR): 2.21 (1.22 – 4.25) %
Low-grade lymphoma	1.3	Range: 0.00 – 4.42% Median (IQR): 0.88 (0.00 – 2.22) %	0.9	Range: 0.00 – 4.35% Median (IQR): 0.67 (0.00 – 1.21) %
Burkitt lymphoma	0.0		0.0	
Chronic lymphocytic leukaemia	0.5		0.4	
Cutaneous T-cell lymphoma	1.2		0.0	
Follicular lymphoma	2.8		1.9	
Large B-cell lymphoma	1.9		3.7	
Mantle cell lymphoma	3.7		2.2	
Marginal zone lymphoma	0.0		0.3	
NHL, Not otherwise specified	1.0		0.3	
Other	2.6		2.0	
Peripheral T-cell lymphoma	2.1		2.3	

* Variation between Cancer Alliances in England
** Data were impacted by the COVID-19 pandemic and so will be atypical to some degree during 2020-21.
Ranges and further variation data are not provided for subtypes of non-Hodgkin lymphoma (NHL) due to small sample sizes

Two per cent of all NHL individuals had a record of having received an episode of care that was delivered as part of a clinical trial in England 2022; this is slightly higher in high-grade cases (3%) compared to low-grade cases (0.9%) (Table 10). No data on trial participation was available for Wales. Record-keeping for trial participation also needs to be improved, with data completeness approximately 47%, varying between 21.1-71.1% when reviewed by sub-type. LBCL was the most common sub-type among those who had a record of trial participation (England 2022), while the lowest recorded rates were observed in cases of Burkitt lymphoma and Cutaneous T-cell lymphoma.

Although this performance indicator is reported at the Cancer Alliance level due to the small number of trial participants, the overall consistency in low rates suggests that limited record of trial participation is a widespread issue across England.

Trends over time: Overall proportion of people with NHL with recorded clinical trial participation increased from 1.6% to 2.0% from 2021 to 2022 in England. This trend may reflect the reduction in research resources during the COVID-19 pandemic, with the increase observed in 2022 potentially attributable to the resumption of research trials in the post-pandemic period.

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4.6 Outcomes

PI 11: Overall 2-year survival of people with high-grade lymphoma (BL, DLBCL, mantle cell or high-grade T-cell).

Key Message: Overall 1-year survival for all NHL cases was approximately 80% in England and Wales; around 70% for high-grade cases and 90% for low-grade cases.

Overall 2-year survival was around 70% for all NHL cases in England; reducing to around 60% for high-grade cases and around 84% for low-grade cases in England.

Due to the follow-up period required for reporting of overall survival, 1-year survival has been provided for cases in England in 2020, 2021 and 2022 as well as Wales in 2022 and 2023. 2-year survival is therefore only available for NHL cases in England in 2020 and 2021. Survival data for this year's report has also undergone risk adjustment for a number of patient and tumour characteristics including age, sex, sub-type, staging (Ann Arbor and Binet separately), performance status, Charlson comorbidity index, diagnosis route and diagnosis year.

Overall, 1-year survival for all NHL cases was slightly higher in Wales compared to England. A similar pattern was noted for high-grade cases, however, 95% confidence intervals suggest no significant difference across years or country (Table 11 and 12). 2-year survival was noted to be slightly higher in 2021 in England for high-grade cases NHL, compared to 2020 (Table 12).

Table 11. Overall 1-year survival for all NHL cases in England 2020-2022 and Wales 2022-2023. **

Denominator	England 2020	Variation 2020 ***	England 2021	Variation 2021 ***	England 2022	Variation 2022 ***	Wales 2022	Variation 2022 ****	Wales 2023	Variation 2023 ****
All NHL	78.9%	95% CI*: 78.2-80.0%	80.5%	95% CI: 79.8-81.1%	80.8%	95% CI: 80.2-81.4%	82.7%	95% CI*: 79.5-85.6%	83.1%	95% CI: 80.2-85.8%
High-grade lymphoma	69.0%	95% CI: 67.9-70.0%	71.2%	95% CI: 70.2-72.2%	71.0%	95% CI: 70.0-72.1%	72.3%	95% CI: 66.9-77.2%	74.9%	95% CI: 70.1-79.2%
Low-grade lymphoma	90.2%	95% CI: 89.5-90.9%	90.8%	95% CI: 90.1-91.4%	91.0%	95% CI: 90.3-91.6%	92.7%	95% CI: 89.2-95.3%	93.6%	95% CI: 90.4-96.0%

* confidence interval (CI)
** Data were impacted by the COVID-19 pandemic and so will be atypical to some degree during 2020-21.
*** Variation between NHS trusts in England
**** Variation between hospitals in Wales

Table 12. Overall 2-year survival for all NHL cases in England 2020-2021.**

Denominator	England 2020	Variation 2020 ***	England 2021	Variation 2021 ***
All NHL	71.7%	95% CI *: 71.0-72.5%	73.6%	95% CI: 72.9-74.3%
High-grade lymphoma	60.8%	95% CI: 59.6-61.9%	63.2%	95% CI: 62.1-64.3%
Low-grade lymphoma	84.1%	95% CI: 83.2-85.0%	84.8%	95% CI: 84.0-85.6%

* confidence interval (CI)
** Data were impacted by the COVID-19 pandemic and so will be atypical to some degree during 2020-21.
*** Variation between NHS trusts in England

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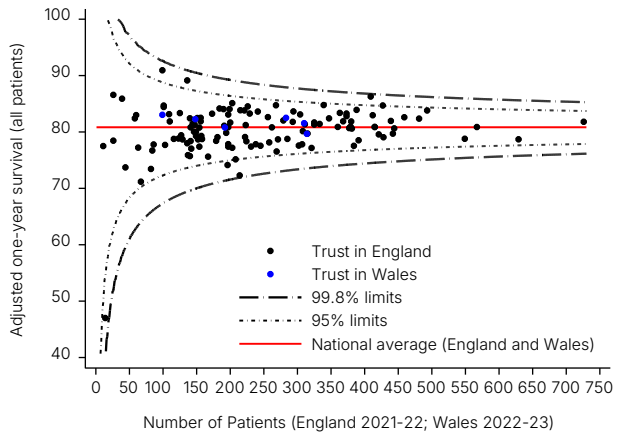
Outlier Analysis:

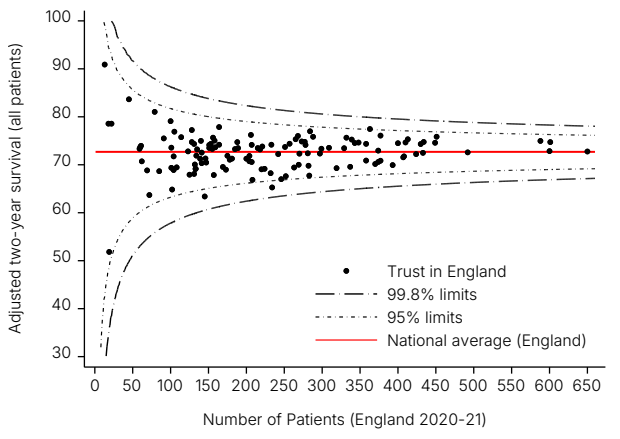
As part of this year's report, an outlier analysis has been carried out for 1-year survival in both England and Wales and 2-year survival in England (Funnel plots 1 and 2). The funnel plots demonstrate that there is 1 NHS trust in England considered more than 3 standard deviations from the national average in a positive direction. There are no negatively alarm-level outlying NHS trusts noted for 1-year or 2-year survival. There are some trusts in funnel plots 1 and 2 that are considered more than 2 standard deviations from the national average in a negative direction. This will be monitored and in line with our outlier policy, if these trusts remain within this range for two consecutive years, will be considered an alarm. As this is the first year of reporting, trusts will be monitored for a further year before any action is taken. The funnel plots demonstrate variation between NHS trusts/hospitals in both England and Wales.

Funnel Plot 1. 1-year survival for all people diagnosed with NHL in England* (2021-2022) and Wales (2022-2023).



* Data were impacted by the COVID-19 pandemic and so will be atypical to some degree during 2020-21.

Funnel Plot 2. 2-year survival for all people diagnosed with NHL in England* (2021-2022).



* Data were impacted by the COVID-19 pandemic and so will be atypical to some degree during 2020-21.

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5. Commentary

This is the second State of the Nation report produced by the National Non-Hodgkin Lymphoma Audit (NNHLA), providing a comprehensive overview of the patterns of care for individuals diagnosed with non-Hodgkin lymphoma in England and Wales during 2022 and 2023 respectively. The report not only presents the most recent data but also offers a commentary on trends observed since the publication of the inaugural State of the Nation report (2024). A longitudinal analysis for all performance indicators (PIs) is included in Supplementary documents, and detailed results by individual NHS trust are also provided on our webpages.

Data Considerations:

- Direct comparisons between England and Wales remain challenging due to differences in data collection periods, especially in the context of the post-COVID-19 pandemic recovery period. These differences may partly explain poorer outcomes in England for some performance indicators.
- Data quality remains a critical concern. This has implications for identifying outliers, adjusting survival estimates and analysing variations in treatment. A forthcoming quality improvement (QI) initiative launched by the NNHLA will aim to help address these challenges in more depth.
- While improvements of the IT infrastructure in Wales are underway, current limitations have affected the completeness of performance indicator reporting for Welsh providers.

Process and Outcome Observations:

A decline in several key performance indicators over recent years across England and Wales, highlights the urgent need for targeted quality improvement at a local level. Of particular concern is the variation in 1-year and 2-year survival outcomes between providers—which reflects inequity in care and requires immediate attention, also highlighted in our outlier process.

Poor performance against the 62-day target for initiating SACT is a major contributor to these outcomes, particularly for patients with high-grade disease.

Timely MDT discussions and timely use of consolidation radiotherapy are also important components of the care pathway. Addressing these areas alongside treatment initiation may contribute to improved outcomes. An action plan template for NHS trusts/health boards will be made available on our website to support this work.

The incidence of emergency presentations remains significant from the data collected. There are multi-factorial reasons which will be further interrogated during the course of the Audit further highlighting the importance of earlier diagnosis and streamlined pathway coordination.

Next Steps:

The development and dissemination of interactive quarterly data dashboards will provide more timely insights, with data available with a six-month lag to each NHS trust. This will enable NHS trusts to monitor their performance relative to other NHS trusts and their Cancer Alliance, assess changes over time, and track improvements in response to local quality improvement (QI) initiatives.

The NNHLA will launch an upcoming National QI initiative in October 2025, with the focus on improving data quality across NHS trusts/health boards and Cancer Alliances, in England and Wales. This will be done in collaboration with the NDRS data liaison teams and aligns with our first quality improvement goal of improving timely diagnosis and treatment. While improvements in data quality have historically been observed in more established audits over time, our aim is to accelerate this process through direct engagement with individual NHS trusts and the provision of supportive materials. Enhancing data quality is essential for drawing more definitive conclusions, gaining deeper insights into the underlying factors influencing process outcomes, and improving the accuracy of survival analyses and outlier reporting. This will not only provide a more accurate and nuanced representation of current non-Hodgkin lymphoma care across England and Wales but also support NHS trusts in understanding their own delivery of care and identifying opportunities for improvement.

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