Supplementary Table 1: Characteristics and demographic information for people diagnosed with non-Hodgkin lymphoma in England (2022) and Wales (2023)

	England 2022		Wales 2023	
	Number (N)	Percentage (%)	Number (N)	Percentage (%)
Total	15,433	100	729	100
Age at diagnosis				
Mean (SD*)	69.1 (13.7)		68.9 (13.3)	
18-59	3,373	21.9	165	22.6
60-69	3,464	22.5	163	22.4
70-79	5,125	33.2	241	33.1
80+	3,471	22.5	160	22.0
Sex				
Male	8,866	57.5	344	53.3
Female	6,567	42.6	302	46.8
Missing (% of total)	0 (0)		83 (11.4)	
Ethnicity				
White/White British	12,225	91.2	302	98.1
Asian/Asian British	569	4.3	0	0
Black/Black British	272	2.0	<5**	**
Mixed	80	0.6	0	0
Other	252	1.9	<5**	**
Missing (% of total)	2,035 (13.2)		421 (57.8)	
IMD quintiles* **				
1 - most deprived	2,440	15.8	116	19.4
2	2,631	17.1	119	19.9
3	3,248	21.1	107	17.9
4	3,609	23.4	118	19.7
5 - least deprived	3,505	22.7	139	23.2
Missing (% of total)	0 (0)		130 (17.8)	
Performance Status				
0 (fully active)	3,915	50.5	249	43.5
1	2,511	32.4	183	32.0
2	803	10.4	78	13.6
3-4 ((limited or no selfcare)	526	6.8	62	10.8
Missing (% of total)	7,678 (49.8)		157 (21.5)	
Charlson comorbidity index				
0	4,974	47.4	243	55.0
1	3,011	28.7	122	27.6
2	1,429	13.6	50	11.3
3+	1,075	10.3	27	6.1
Missing (% of total)	4,944 (32.0)		287 (39.4)	

***SD – standard deviation**
****Exact numbers and percentages suppressed to protect patient confidentiality**
***IMD quintiles – index of multiple deprivation quintiles

Supplementary Tables 2-6: Proportion of people diagnosed with non-Hodgkin lymphoma presenting as an emergency diagnosis, categorised by demographic and disease characteristics. Results are shown by:

- **Table 2:** Gender
- **Table 3:** Age group
- **Table 4:** Ethnicity
- **Table 5:** Deprivation (Index of multiple deprivation quintiles)
- **Table 5:** Disease grade and subtype

Supplementary Table 2: Proportion of people diagnosed with non-Hodgkin lymphoma presenting as an emergency diagnosis, categorised by gender

Gender	Number (N)	Percentage (%)
Male	5,263	29.9
Female	3,731	28.6

Supplementary Table 3: Proportion of people diagnosed with non-Hodgkin lymphoma presenting as an emergency diagnosis, categorised by age group

Age group (years)	Number (N)	Percentage (%)
18-59	1,942	28.7
60-69	1,762	26.3
70-79	2,889	28.3
80+	2,401	34.7

Supplementary Table 4: Proportion of people diagnosed with non-Hodgkin lymphoma presenting as an emergency diagnosis, categorised by ethnicity

Ethnicity	Number (N)	Percentage (%)
White/British	7,528	30.0
Asian/British	410	36.0
Black/British	200	35.4
Mixed	44	26.5
Other	174	34.7
Missing	638	20.2

Supplementary Table 5: Proportion of people with non-Hodgkin lymphoma presenting as an emergency diagnosis, categorised by Index of Multiple Deprivation (IMD) score

Deprivation (IMD Quintiles)	Number (N)	Percentage (%)
1 - Most deprived	1,572	33.1
2	1,632	30.8
3	1,854	28.5
4	2,033	28.8
5 - Least deprived	1,903	27.1

Supplementary Table 6: Proportion of people diagnosed with non-Hodgkin lymphoma presenting as an emergency diagnosis, categorised by disease characteristics (grade and subtype)

Disease Characteristics	Number (N)	Percentage (%) of each grouping
GRADE		
All	8,994	29.4
High	6,307	40.9
Low	2,538	16.9
Unknown/Irrelevant	149	62.9
SUBTYPE		
Burkitt Lymphoma	165	70.2
Chronic Lymphocytic Leukaemia	1,154	16.2
Cutaneous T-cell Lymphoma	48	7.3
Follicular Lymphoma	889	19.1
Large B-cell Lymphoma	3,809	45.7
Mantle Cell Lymphoma	338	29.9
Marginal Zone Lymphoma	442	17.6
NHL NOS	887	36.3
Other	673	29.0
Peripheral T-cell Lymphoma	589	48.9

Supplementary Table 7: Proportion of people diagnosed with non-Hodgkin lymphoma discussed at a multidisciplinary team (MDT) meeting within 8 weeks of diagnosis

NHL Type	Percentage (%)	Variation between NHS Trusts in England 2022
All NHL	85.2%	Range: 57-100% Median (IQR): 87% (80-91%)
High-grade lymphoma	89.0%	Range: 50-100% Median (IQR): 90% (85-96%)
Low-grade lymphoma	81.0%	Range: 25-100% Median (IQR): 82% (74-89%)
Burkitt lymphoma	97.6%	Range: 0-100% Median (IQR): 100% (100-100%)
Chronic lymphocytic leukaemia	80.4%	Range: 0-100% Median (IQR): 82% (72-93%)
Follicular lymphoma	85.4%	Range: 0-100% Median (IQR): 85% (77-93%)
Large B-cell lymphomas	91.7%	Range: 0-100% Median (IQR): 93% (89-100%)
Mantle cell lymphoma	91.9%	Range: 0-100% Median (IQR): 100% (92-100%)
Marginal zone lymphoma	75.9%	Range: 0-100% Median (IQR): 88% (67-100%)
NHL, NOS	82.3%	Range: 0-100% Median (IQR): 90% (75-100%)
Peripheral T-cell lymphomas	85.9%	Range: 0-100% Median (IQR): 100% (75-100%)
Cutaneous T-cell lymphomas	60.2%	Range: 0-100% Median (IQR): 50% (0-100%)
Other	85.6%	Range: 0-100% Median (IQR): 90% (75-100%)

Supplementary Tables 8-12: Tables showing the proportion of people diagnosed with Diffuse Large B-Cell Lymphoma, not otherwise specified (DLBCL, NOS) receiving an acceptable 1st line systemic anti-cancer therapy (SACT) regime, categorised by demographic characteristics in England (2021-2022 combined). Results shown by:

- **Table 8:** Gender
- **Table 9:** Age group
- **Table 10:** Ethnicity
- **Table 11:** Deprivation
- **Table 12:** Performance status

See methodology supplement for guidance on how categorisation of Acceptable/Optimal/Acceptable/Appropriate Adjustment and suboptimal was defined.

Supplementary Table 8: Proportion of people diagnosed with DLBCL, NOS receiving an acceptable* 1st line SACT regime, categorised by gender in England (2021-2022 combined)

Gender	Grouping of regime	Number (N)	Percentage (%)
Female	Acceptable/Optimal	2,120	93.8
	Acceptable/Acceptable/Appropriate Adjustment	90	4
	Suboptimal	50	2.2
Male	Acceptable/Optimal	2,689	92
	Acceptable/Acceptable/Appropriate Adjustment	184	6.3
	Suboptimal	51	1.7

Supplementary Table 9: Proportion of people diagnosed with DLBCL, NOS receiving an acceptable* 1st line SACT regime, categorised by age in England (2021-2022 combined)

Age group	Grouping of Regime	Number (N)	Percentage (%)
80+	Acceptable/Optimal	729	81.5
80+	Acceptable/Acceptable/Appropriate Adjustment	107	12.0
80+	Suboptimal	58	6.5
70-79	Acceptable/Optimal	1,719	92.2
70-79	Acceptable/Appropriate Adjustment	113	6.1
70-79	Suboptimal	33	1.8
60-69	Acceptable/Optimal	1,159	96.3

60-69	Acceptable/Appropriate Adjustment	38	3.2
60-69	Suboptimal	6	0.5
18-59	Acceptable/Optimal	1,202	98.4
18-59	Acceptable/Appropriate Adjustment	10-20	*
18-59	Suboptimal	<5*	*
*Exact numbers and percentages suppressed to protect patient confidentiality			

Supplementary Table 10: Proportion of people diagnosed with DLBCL, NOS receiving an acceptable* 1st line SACT regime, categorised by ethnicity in England (2021-2022 combined)

Ethnicity	Grouping of regime	Number (N)	Percentage (%)
Asian/Asian British	Acceptable/Optimal	241	95.3
	Acceptable/Appropriate Adjustment	5	2
	Suboptimal	7	2.8
Black/Black British	Acceptable/Optimal	103	98.1
	Acceptable/Appropriate Adjustment	<5	*
	Suboptimal	0-10	*
Missing	Acceptable/Optimal	323	95.3
	Acceptable/Appropriate Adjustment	11	3.2
	Suboptimal	5	1.5
Mixed	Acceptable/Optimal	24	100
	Acceptable/Appropriate Adjustment	0	0
	Suboptimal	0	0
Other	Acceptable/Optimal	101	92.7
	Acceptable/Appropriate Adjustment*	<5*	*
	Suboptimal	<5*	*
White/White British	Acceptable/Optimal	4017	92.3
	Acceptable/Appropriate Adjustment	252	5.8
	Suboptimal	85	2

*Exact numbers and percentages suppressed to protect patient confidentiality

Supplementary Table 11: Proportion of people diagnosed with DLBCL, NOS receiving an acceptable* 1st line SACT regime, categorised by deprivation in England (2021-2022 combined)

IMD Deprivation Quintile	Grouping of regime	Number (N)	Percentage (%)
1 - most deprived	Acceptable/Optimal	703	90.7
	Acceptable/Appropriate Adjustment	54	7
	Suboptimal	18	2.3
2	Acceptable/Optimal	916	93.7
	Acceptable/Appropriate Adjustment	46	4.7
	Suboptimal	16	1.6
3	Acceptable/Optimal	999	93.1
	Acceptable/Appropriate Adjustment	52	4.8
	Suboptimal	22	2.1
4	Acceptable/Optimal	1,069	92.6
	Acceptable/Appropriate Adjustment	65	5.6
	Suboptimal	20	1.7
5 - least deprived	Acceptable/Optimal	1,125	93.4
	Acceptable/Appropriate Adjustment	57	4.7
	Suboptimal	23	1.9

Supplementary Table 12: Proportion of people diagnosed with DLBCL, NOS receiving an acceptable 1st line SACT regime, categorised by performance status in England (2021-2022 combined)

Performance Status	Grouping of regime	Number (N)	Percentage (%)
0	Acceptable/Optimal	1,301	96.1
	Acceptable/Appropriate Adjustment	43	3.2
	Suboptimal	10	0.7
1	Acceptable/Optimal	1,599	93.6
	Acceptable/Appropriate Adjustment	91	5.3
	Suboptimal	19	1.1
2	Acceptable/Optimal	475	85.7
	Acceptable/Appropriate Adjustment	52	9.4
	Suboptimal	27	4.9
3	Acceptable/Optimal	165	78.2
	Acceptable/Appropriate Adjustment	26	12.3
	Suboptimal	20	9.5
4	Acceptable/Optimal	53	91.4
	Acceptable/Appropriate Adjustment	0	0
	Suboptimal	5	8.6
Missing or NA	Acceptable/Optimal	1,216	93.7
	Acceptable/Appropriate Adjustment	62	4.8
	Suboptimal	20	1.6

Supplementary Table 13: Proportion of people with high-grade non-Hodgkin lymphoma who receive first-line SACT (and are due to receive radiotherapy) who then receive radiotherapy within 12 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	59.6	Range: 0-100 Median (IQR): 60% (33.3-72.9%)	51.1	Range: 0-100% Median (IQR): 50.0 (33.3-71.4%)
* Variation between NHS trusts in England **Data were impacted by the COVID-19 pandemic and so will be atypical to some degree during 2020-21.				

Supplementary Table 14: Proportion of people diagnosed with non-Hodgkin lymphoma, receiving radiotherapy within one year of diagnosis, categorised by subtype for England 2020-2022 and Wales 2022-2023

Type of NHL	England 2020*		England 2021*		England 2022		Wales 2022		Wales 2023	
	Percentage (%)	Variation**	Percentage (%)	Variation**	Percentage (%)	Variation**	Percentage (%)	Variation***	Percentage (%)	Variation***
All NHL	14.0	Range: 0-62% Median (IQR): 13% (10-18%)	13.2	Range: 0-75% Median (IQR): 12% (8-17%)	11.9	Range: 0-100% Median (IQR): 10.9 % (8.1-14.4%	6.0	Range: 0-50% Median (IQR): 6% (4-8%)	8.8	Range: 0-25% Median (IQR): 9% (6-9%)
Burkitt lymphoma	12.2	Range: 0-100% Median (IQR): 0% (0-0%)	12.4	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%)	0.0	Range: 0-0% Median (IQR): 0% (0-0%)
Chronic lymphocytic leukaemia	0.5	Range: 0-14% Median (IQR): 0% (0-0%)	0.4	Range: 0-8% Median (IQR): 0% (0-0%)	0.4	Range: 0-5.9% Median (IQR): 0% (0-0%)	0.0	Range: 0-0% Median (IQR): 0% (0-0%)	0	Range: 0-0% Median (IQR): 0% (0-0%)
Follicular lymphoma	18.6	Range: 0-70% Median (IQR): 17% (9-25%)	18.1	Range: 0-100% Median (IQR): 18% (9-24%)	17.3	Range: 0-100% Median (IQR): 16.2% (9.1-22.7%)	4.3	Range: 0-17% Median (IQR): 0% (0-5%)	17.4	Range: 0-50% Median (IQR): 18% (11-25%)

Type of NHL	England 2020*		England 2021*		England 2022		Wales 2022		Wales 2023	
	Percentage (%)	Variation**	Percentage (%)	Variation**	Percentage (%)	Variation**	Percentage (%)	Variation***	Percentage (%)	Variation***
Large B-cell lymphomas	24.0	Range: 0-100% Median (IQR): 24% (16-32%)	22.7	Range: 0-100% Median (IQR): 23% (14-31%)	21.0	Range: 0-100% Median (IQR): 20.1% (14.1-28.2%)	9.0	Range: 0-50% Median (IQR): 11% (3-15%)	9.8	Range: 0-33% Median (IQR): 10% (0-17%)
Mantle cell lymphoma	5.6	Range: 0-100% Median (IQR): 0% (0-0%)	8.4	Range: 0-100% Median (IQR): 0% (0-14%)	4.3	Range: 0-100% Median (IQR): 0% (0-0%)	3.7	Range: 0-25% Median (IQR): 0% (0-0%)	11.4	Range: 0-100% Median (IQR): 0% (0-17%)
Marginal zone lymphoma	19.7	Range: 0-100% Median (IQR): 17% (0-33%)	20.0	Range: 0-100% Median (IQR): 17% (0-29%)	19.2	Range: 0-100% Median (IQR): 14.3% (0-26.4%)	0.0	Range: 0-0% Median (IQR): 0% (0-0%)	18.8	Range: 0-50% Median (IQR): 0% (0-33%)
NHL, NOS	9.8	Range: 0-51% Median (IQR): 0% (0-12%)	9.0	Range: 0-50% Median (IQR): 0% (0-14%)	8.1	Range: 0-100% Median (IQR): 0% (0-13.4%)	9.1	Range: 0-50% Median (IQR): 0% (0-8%)	12.0	Range: 0-33.3% Median (IQR): 0% (0-13%)
Peripheral T-cell lymphomas	12.0	Range: 0-100% Median (IQR):	12.5	Range: 0-100% Median (IQR):	9.4	Range: 0-100% Median (IQR): 0% (0-12.5%)	11.1	Range: 0-100% Median (IQR): 0% (0-0%)	7.4	Range: 0-100% Median (IQR): 0% (0-0%)

Type of NHL	England 2020* Percentage (%)	England 2020* Variation**	England 2021* Percentage (%)	England 2021* Variation**	England 2022 Percentage (%)	England 2022 Variation**	Wales 2022 Percentage (%)	Wales 2022 Variation***	Wales 2023 Percentage (%)	Wales 2023 Variation***
		0% (0-20%)		0% (0-20%)						
Cutaneous T-cell lymphomas	22.8	Range: 0-100% Median (IQR): 0% (0-41%)	22.5	Range: 0-100% Median (IQR): 0% (0-38%)	20.6	Range: 0-100% Median (IQR): 0(0.0-33.3%)	13.3	Range: 0-33% Median (IQR): 0% (0-13%)	20.0	Range: 0-100% Median (IQR): 0% (0-100%)
Other	3.8	Range: 0-100% Median (IQR): 0% (0-2%)	3.4	Range: 0-67% Median (IQR): 0% (0-0%)	3.8	Range: 0-100% Median (IQR): 0% (0-0.8%)	18.8	Range: 0-100% Median (IQR): 0% (0-25%)	3.4	Range: 0-12% Median (IQR): 0% (0-0%)

* Variation between NHS trusts in England
**2020-2021 data may be impacted by the COVID-19 pandemic
*** Variation between hospitals in Wales

Supplementary Table 15: Longitudinal Analysis