West of Scotland Cancer Network

Haemato-oncology
Managed Clinical Network

Audit Report

Lymphoma
Quality Performance Indicators

Clinical Audit Data:
01 October 2019 to 30 September 2020

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Lymphoma QPI Overview

Patients diagnosed Oct 2019 - Sep 2020

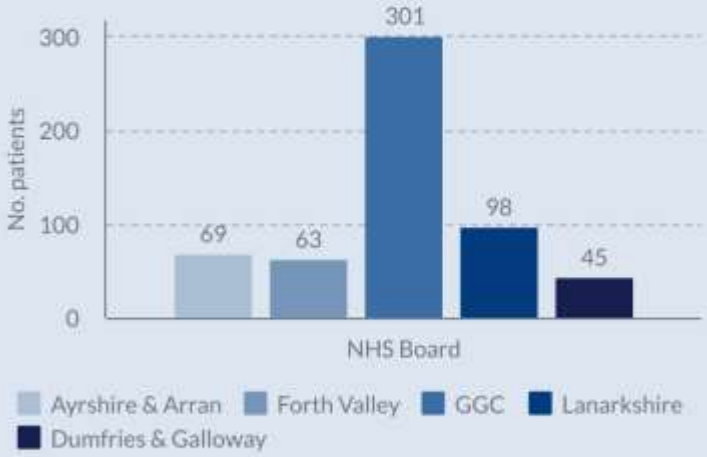
Number of patients	576

Median Age of Patients:	
Hodgkin Lymphoma	51
Non Hodgkin Lymphoma	68

Patient gender:

	Male	Female
Hodgkin Lymphoma	49%	51%
Non Hodgkin Lymphoma	53%	47%

Where are patients diagnosed



Lymphoma subtype

Performance (%)

	Performance 2019-20	Change from 2018-19
QPI 1: Radiological Diagnosis and Staging	93%	
QPI 2: Treatment Response	90%	
QPI 3: PET CT Staging	95%	
QPI 4(i): Cytogenetic Testing	98%	
QPI 5: Lymphoma MDT	87%	
QPI 11: Hepatitis and HIV Status	94%	
QPI 14: Clinical Trials and Research Study Access	4%	

Key Achievements:

- Timely radiological diagnosis and staging of patients
- Cytogenetic testing for patients with DLBCL and Burkitt Lymphoma having curative chemotherapy
- Implementation of systems in Lanarkshire and North Glasgow to prompt clinicians to discuss all patients at the lymphoma MDT

Areas for Improvement:

- Continued communication with clinicians about the importance of prompt MDT discussion for all patients
- Ensuring that all services caring for lymphoma patients are aware of the specific virological testing required for patients prior to receiving SACT

Executive Summary

Introduction

This report contains an assessment of the performance of West of Scotland (WoS) lymphoma services using clinical audit data relating to patients diagnosed with lymphoma between 1st October 2019 and 30th September 2020.

In order to ensure the success of the Cancer QPIs in driving quality improvement in cancer care, QPIs will continue to be assessed for clinical effectiveness and relevance. The initial formal review of the Lymphoma QPIs took place in 2017. With six years of reporting now complete, updated v4.1 QPI definitions were published in June 2021 following a second cycle of review; v4.0 changes will start to be implemented for patients diagnosed from October 2019 although some amendments cannot be implemented for patients diagnosed before October 2020. These clinically led reviews involve key clinicians from each of the Regional Cancer Networks.

Results

A summary of the Lymphoma QPI performance for the 2019/20 audit period is presented below, with a more detailed analysis of the results set out in the main report. Data are analysed by location of diagnosis and illustrate NHS Board performance against each target and overall regional performance for each performance indicator.

Summary of QPI Performance

Key	
	Above Target Result
	Below Target Result
-	Results based on less than 5 patients

Lymphoma		Performance by Board								
QPI	**Target**	**Year**	**WoS**	**A&A**	**FV**	**Lan**	**NG**	**SG**	**Clyde**	**D&G**
QPI 1: Radiological Diagnosis and Staging. Proportion of patients with lymphoma undergoing treatment with curative intent who undergo CT of chest, abdomen and pelvis or PET CT scanning prior to treatment where the report is available within 3 weeks of radiology request.	90%	2019-20	93%	70%	100%	98%	94%	95%	95%	96%
		2018-19	92%	86%	92%	100%	92%	86%	93%	86%
		2017-18	89%	86%	87%	93%	89%	90%	92%	78%
QPI 2: Treatment Response Proportion of patients with DLBCL who are undergoing chemotherapy treatment with curative intent who undergo CT of chest, abdomen and pelvis or PET CT scan at end of chemotherapy treatment.	90%	2019-20	90%	91%	94%	77%	85%	100%	96%	90%
		2018-19	88%	83%	91%	92%	81%	94%	87%	100%
		2017-18	88%	100%	77%	96%	94%	83%	80%	60%
QPI 3: Positron Emission Tomography (PET CT) Staging Proportion of patients with CHL undergoing treatment with curative intent who undergo PET CT scan prior to first treatment, where the report is available within 3 weeks of radiology request.	95%	2019-20	95%	67%	-	93%	100%	100%	100%	-
		2018-19	87%	90%	90%	88%	100%	100%	92%	29%
		2017-18	96%	100%	100%	92%	95%	93%	100%	-
QPI 4(i): Cytogenetic testing Proportion of patients with Burkitt Lymphoma or DLBCL undergoing chemotherapy with curative intent who have MYC testing.	90%	2019-20	98%	95%	100%	97%	97%	100%	100%	100%
		2018-19								
		2017-18								
QPI 5: Lymphoma MDT Proportion of patients with lymphoma who are discussed at MDT meeting within 8 weeks of diagnosis.	90%	2019-20	87%	87%	95%	83%	74%	99%	89%	93%
		2018-19	85%	73%	92%	83%	73%	95%	90%	96%
		2017-18	83%	92%	83%	88%	66%	93%	88%	94%

Lymphoma		Performance by Board								
QPI	**Target**	**Year**	**WoS**	**A&A**	**FV**	**Lan**	**NG**	**SG**	**Clyde**	**D&G**
QPI 11: Hepatitis and HIV Status Proportion of patients with lymphoma undergoing SACT who have hepatitis B [core antibody (anti-HBcAB) and surface antigen (HB-sAG)], hepatitis C and HIV status checked prior to treatment.	95%	2019-20	94%	96%	75%	100%	96%	96%	97%	89%
		2018-19	96%	96%	94%	100%	97%	93%	96%	97%
		2017-18	96%	97%	100%	99%	95%	93%	98%	84%
QPI 14: Clinical Trials & Research Study Access Proportion of patients diagnosed with lymphoma who are consented for a clinical trial / research study.	15%	2020	4%	4%	3%	2%	6%			0%
		2019	8%	9%	2%	4%	11%			6%
		2018	13%	14%	9%	7%	16%			7%

Conclusions and Action Required
The results illustrate that some of the QPI targets set have been challenging for NHS Boards to achieve and there remains room for further service improvement particularly around timely MDT discussion and virological testing. It should also be noted that performance is affected by the small numbers of patients on which some measures are based.

It is encouraging that case ascertainment is of a high standard enabling robust assessment of performance against QPIs. There was excellent performance against the new measure looking at cytogenetic testing in patients undergoing chemotherapy with curative intent (QPI 4(i)), with all sites comfortably meeting the 90% target. Steady improvement has also been noted across the WoS for QPI 1, radiological diagnosis and staging.

Where QPI targets were not met NHS Boards have provided detailed commentary. In the main these indicate valid clinical reasons or that, in some cases, patient choice or co-morbidities have influenced patient management.

NHS Boards are encouraged to continue with this proactive approach of reviewing data and addressing issues as necessary, in order to work towards increasingly advanced performance against targets, and demonstration of overall improvement in quality of the care and service provided to patients.

There are a number of actions required as a consequence of this assessment of performance against the agreed criteria.

Actions required:

- NHS Ayrshire & Arran, NHS Forth Valley and NHS Lanarkshire to review cases with stage not recorded and update the information where possible to ensure complete data is available for future survival analysis and reporting.
- NHS Ayrshire & Arran to develop a system for the recording of the date of radiology requests to enable the reporting of QPI 1.
- NHS Lanarkshire to ensure timely imaging to evaluate treatment response where appropriate through clear communication with radiology services.
- NHS Ayrshire & Arran, NHS Lanarkshire and NHSGGC (North Glasgow and Clyde) to remind clinicians that patients should be discussed promptly at the MDT.
- NHS Forth Valley haematology service to ensure clear communication with other services as to the specific virology testing requirement for patients outwith the care of haematology services and ensure that the correct tests have been undertaken before SACT is prescribed.

NHS Boards are asked to develop local Action/Improvement Plans in response to the findings presented in the report. **Completed Action Plans should be returned to WoSCAN within two months of publication of this report.**

Progress against these plans will be monitored by the MCN Advisory Board and any service or clinical issue which the Advisory Board considers not to have been adequately addressed will be escalated to the NHS Board Territorial Lead Cancer Clinician and Regional Lead Cancer Clinician. Additionally, progress will be reported annually to the Regional Cancer Advisory Group (RCAG) by NHS Board Territorial Lead Cancer Clinicians and MCN Clinical Leads, and nationally on a three-yearly basis to Healthcare Improvement Scotland as part of the governance processes set out in CEL 06 (2012).

1. Introduction

This report presents an assessment of performance of West of Scotland (WoS) Lymphoma Services relating to patients diagnosed in the region between 1st October 2019 and 30th September 2020. These audit data underpin much of the regional development/service improvement work of the Managed Clinical Network (MCN) and regular reporting of activity and performance is a fundamental requirement of an MCN to assure the quality of care delivered across the region.

Data were measured against v4.1 of the Lymphoma Quality Performance Indicators (QPIs)[1] where possible. Amendments to QPIs 2, 4(ii), 5 and 12 cannot be reported until the 2020-21 data are available; v3 definitions are used within this report for QPIs 2 and 5 where amendments to the QPI were minor and v3 definitions considered to still be clinically relevant.

This is the seventh consecutive year of analysis following the initial Healthcare Improvement Scotland (HIS) publication of Lymphoma QPIs in 2013. In order to ensure the success of the National Cancer QPIs in driving quality improvement in cancer care across NHS Scotland, it is critical that the QPIs continue to be clinically relevant and focus on areas which will result in improvements to the quality of patient care. A programme of formal review of all QPIs was implemented whereby all tumour specific QPIs were reviewed following three years of comparative reporting. Formal review of the Lymphoma QPIs was undertaken in 2017 and 2020, with the revised QPIs (v4.1) published in June 2021.

2. Background

The Haemato-oncology MCN was established in 2002 as a means of delivering equitable, high quality clinical care to all haemato-oncology patients across five NHS Boards; Ayrshire & Arran, Dumfries & Galloway, Forth Valley, Greater Glasgow and Clyde (GGC) and Lanarkshire covering a population of 2.65 million. Membership includes 50 consultant haemato-oncologists, 6 transplant consultants, 1 consultant in young adult and adolescent haematology, 2 clinical oncologists and a number of haemato-pathologists, in addition to other professional groups involved in the multi-disciplinary care of patients with blood cancer (haematological cancer).

The Haemato-oncology MCN continues to support and develop the clinical service for approximately 1300 haemato-oncology patients per annum. The effective management of these patients throughout the region continues to rely on co-ordinated delivery of treatment and care that requires close collaboration of professions from a range of specialties. Currently, there are seven local Multi-disciplinary Team (MDTs) meetings held across the WoS which complement the function of the Regional Haemato-oncology MDT.

MDT	Constituent Hospital
Ayrshire	University Hospital Crosshouse, University Hospital Ayr
Clyde	Royal Alexandra Hospital, Inverclyde Royal Hospital, Vale of Leven Hospital
Dumfries & Galloway	Dumfries and Galloway Royal Infirmary
Forth Valley	Forth Valley Royal Hospital
Lanarkshire	University Hospital Hairmyres, University Hospital Wishaw, University Hospital Monklands
North Glasgow	Beatson West of Scotland Cancer Centre, Transplant Team, Glasgow Royal Infirmary, Stobhill Hospital,
South Glasgow	Queen Elizabeth University Hospital, New Victoria Hospital

2.1 National Context

Non-Hodgkin Lymphoma (NHL) accounts for 3% of all cancers and is the eighth most common cancer type, with approximately 1050 cases diagnosed in Scotland each year. The incidence of NHL has decreased by 10.6% in the past ten years (2009 to 2019). NHL accounts for 4% of all cancer diagnoses in men and was the seventh most commonly diagnosed cancer in males in 2019. It was the eighth most common cancer type in females accounting for 3% of all female cancer diagnoses[2]. Overall mortality rates have decreased by 4% over the past 10 years (2009 to

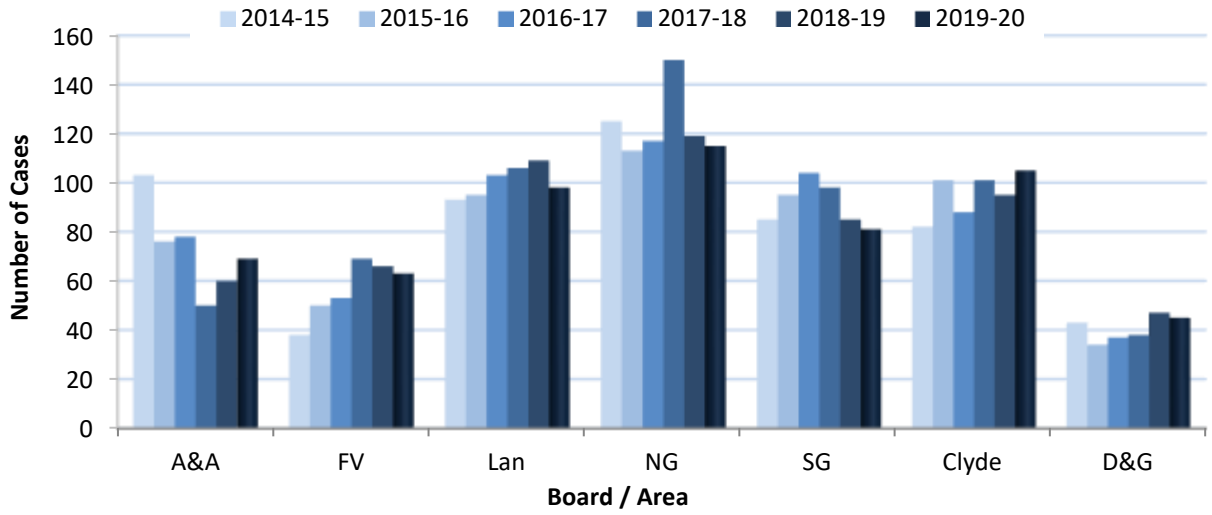
2019). 1-year age-standardised net survival was 80% for men diagnosed in 2013-17 and 82% for women while 5-year survival was 70% for both men and women[3].

Hodgkin Lymphoma (HL) was the 23rd most common cancer in 2019 with approximately 190 new diagnoses in Scotland each year. The overall incidence of HL has increased by 5% over the past 10 years (2009 to 2019)[2].

2.2 West of Scotland Context

A total of 576 new lymphoma cases were recorded through audit as diagnosed in the WoS between 1 October 2019 and 30 September 2020. The number of patients diagnosed within each Board is presented in Figure 1. As the largest WoS Board, 52% of all new cases of lymphoma were diagnosed in NHSGGC which is in line with population estimates for this Board.

Figure 1: Number of patients diagnosed with lymphoma by unit of diagnosis, October 2017 to September 2020



	A&A	FV	Lan	NG	SG	Clyde	D&G	WoS
2014-15	103	38	93	125	85	82	43	569
2015-16	76	50	95	113	95	101	34	564
2016-17	78	53	103	117	104	88	37	580
2017-18	50	69	106	150	98	101	38	612
2018-19	60	66	109	119	85	95	47	581
2019-20	69	63	98	115	81	105	45	576

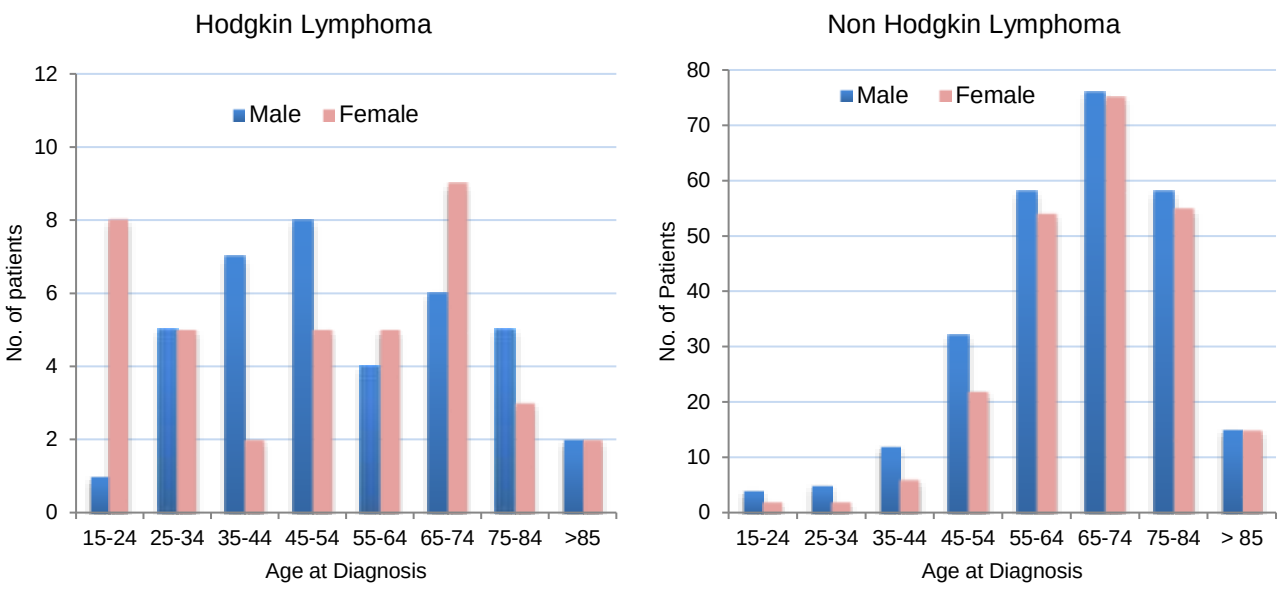
A breakdown by cancer subtype is noted below and illustrates that NHL is the most common type of lymphoma and accounts for 85% of all lymphomas diagnosed in the WoS in this audit period.

- 77 HL (13%)
- 491 NHL (85%)
- 6 Primary Cutaneous Lymphoma (1%)
- 2 Other (< 1%)

Lymphoma Age and Gender Distribution

Figure 2 illustrates the distribution of HL and NHL by age and gender. The median age of HL patients was 51 years and, unlike previous years, the disease was slightly more common in females (51%) than males in 2019-20 (49%). In NHL, the median age of patients at diagnosis was 68 years, with 73% of patients aged 60 years or over. 53% of patients diagnosed with NHL were male and 47% female.

Figure 2: Distribution of Hodgkin lymphoma and non-Hodgkin lymphoma by age and gender in the WoS



Hodgkin Lymphoma

Figure 3 illustrates the pathological subtypes of HL. The distribution of HL by clinical stage is presented in Figure 4, which illustrates that 32% of patients presented with early stage (I, IIA) disease and 65% of patients presented with advanced stage disease (IIB,III,IV).

Figure 3: Hodgkin lymphoma by pathological subtype

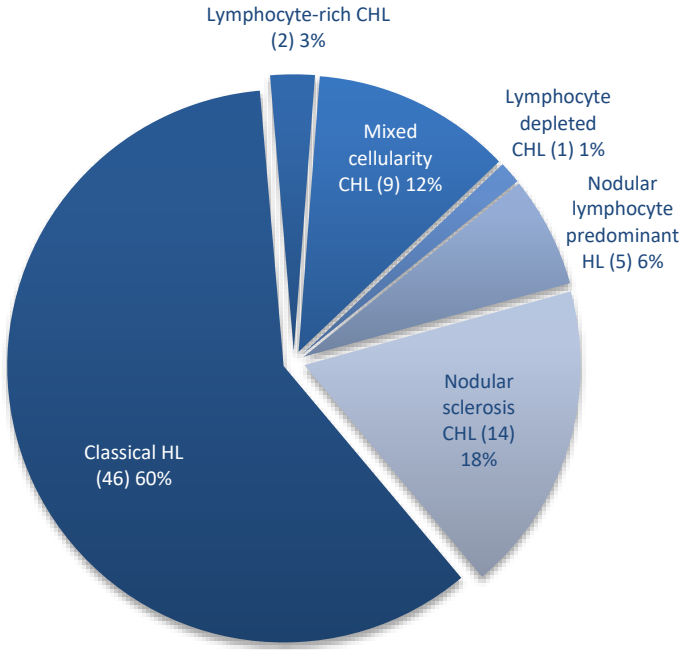
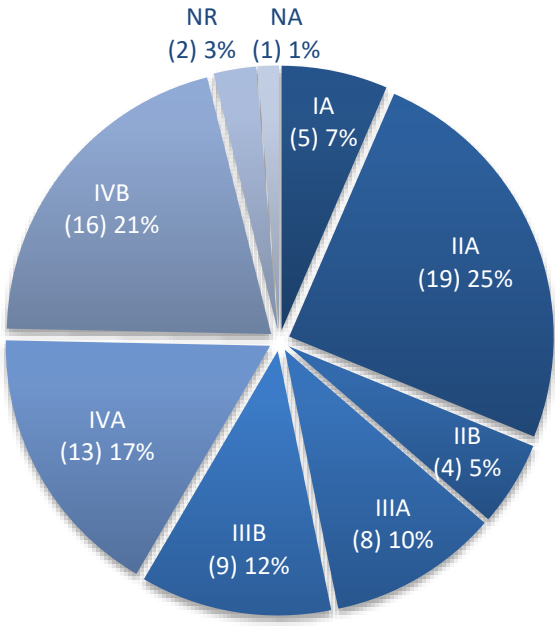


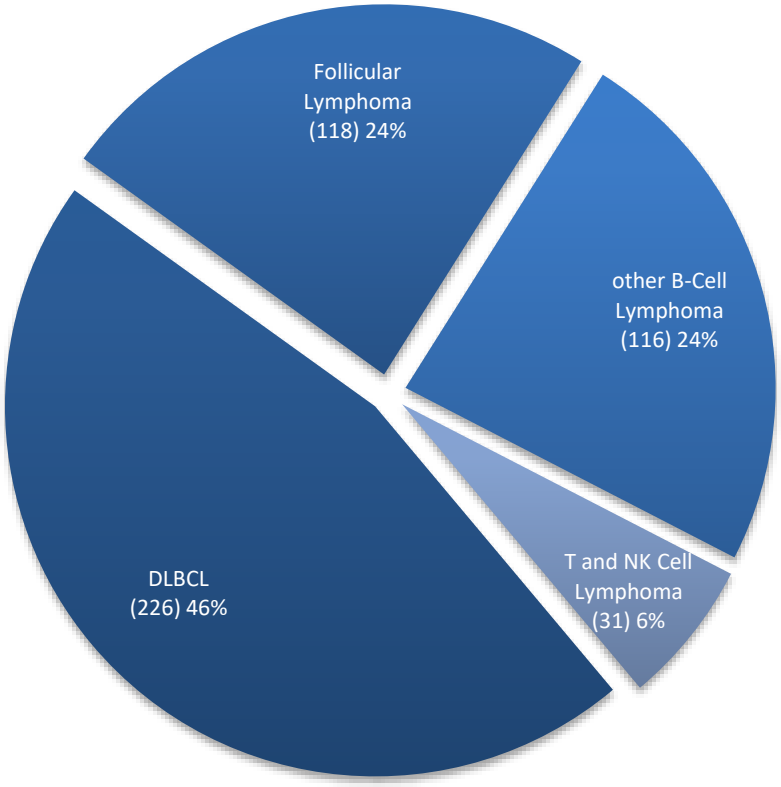
Figure 4: Hodgkin lymphoma by clinical stage



Non-Hodgkin Lymphoma

Of the 491 cases of NHL diagnosed, DLBCL accounted for 46% of the cases, with follicular and other B-Cell lymphoma each accounting for 24% of the cases, as seen in Figure 5.

Figure 5: Distribution of Non-Hodgkin lymphoma in the WoS



Figures 6 and 7 display the clinical stage breakdown for both DLBCL and follicular lymphoma.

The distribution of DLBCL by clinical stage is presented in Figure 6, which illustrates that 16% of patients presented with stage I disease and 63% of patients presented with stage II – IV disease. Stage was not recorded in 44 of the 226 patients (19%), which is higher than the 16% figure reported for 2018-19 and 11% reported for 2017-18.

Figure 6: DLBCL by clinical stage

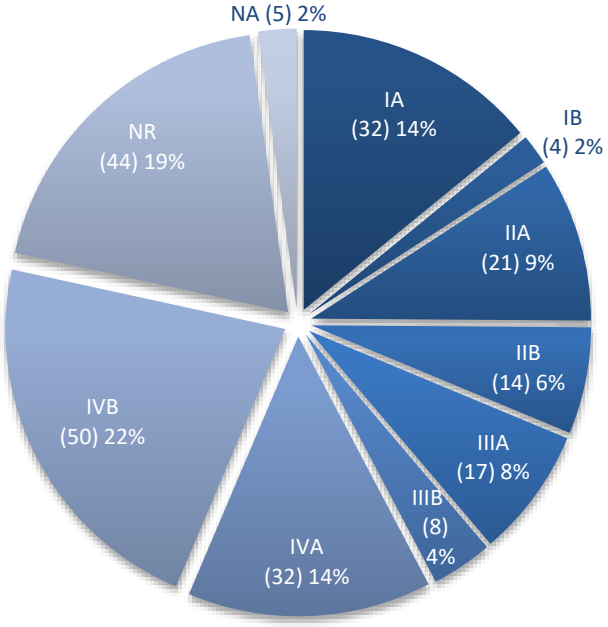


Figure 7: Follicular lymphoma by clinical stage

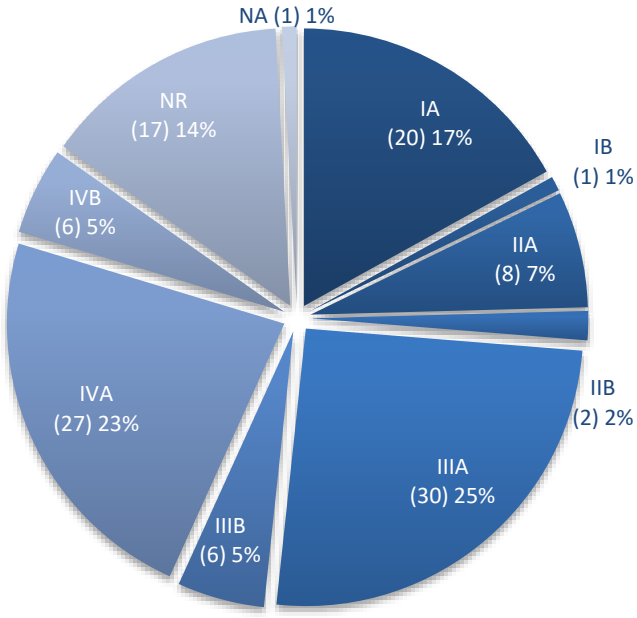


Figure 7 illustrates the distribution of follicular lymphoma by clinical stage at presentation. Localised disease may be suitable for involved field radiotherapy (stage I/ some stage II). More

advanced disease will be observed or treated with chemotherapy depending on symptoms. 14% of cases did not have clinical stage recorded which is higher than the previous year's analysis (8 %). Following the publication of last year's report a number of actions were identified to improve recording of stage for lymphoma patients; the impact of these changes will be able to be assessed in the next reporting cycle.

Action Required:

- NHS Ayrshire & Arran, NHS Forth Valley and NHS Lanarkshire to review cases with stage not recorded and update the information where possible to ensure complete data is available for future survival analysis and reporting.

Patient Profile

Figures 8 and 9 present the Scottish Index of Multiple Deprivation (SIMD) 20 quintiles for patients diagnosed with lymphoma; with 1 equating to the most deprived postcodes and 5 equating to the least deprived. Figures 10 and 11 show the WHO Performance Status (PS) of patients diagnosed with lymphoma.

Figure 8: SIMD percentile for Hodgkin Lymphoma patients

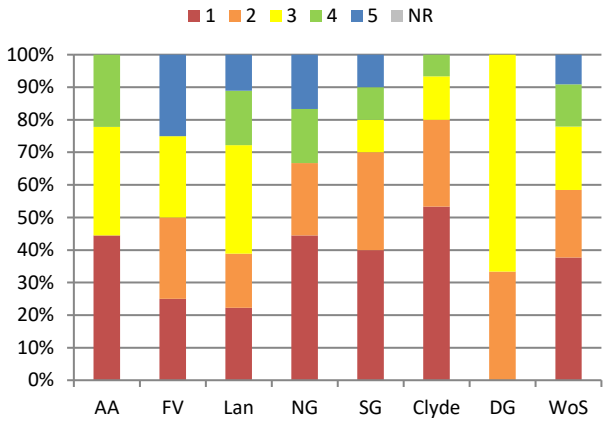


Figure 9: SIMD percentile for Non Hodgkin Lymphoma patients

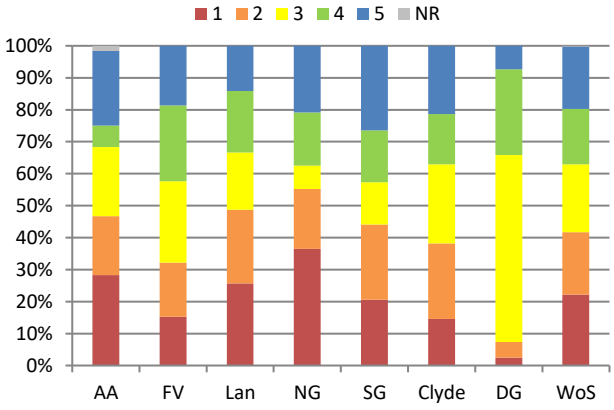


Figure 10: WHO PS for Hodgkin Lymphoma patients

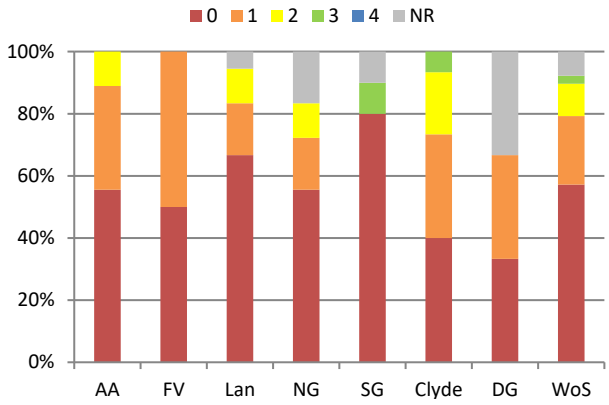
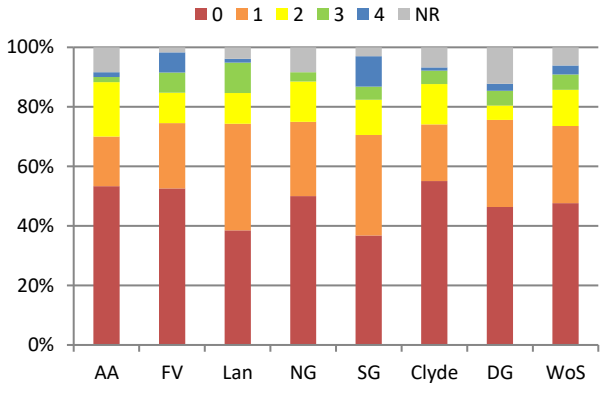


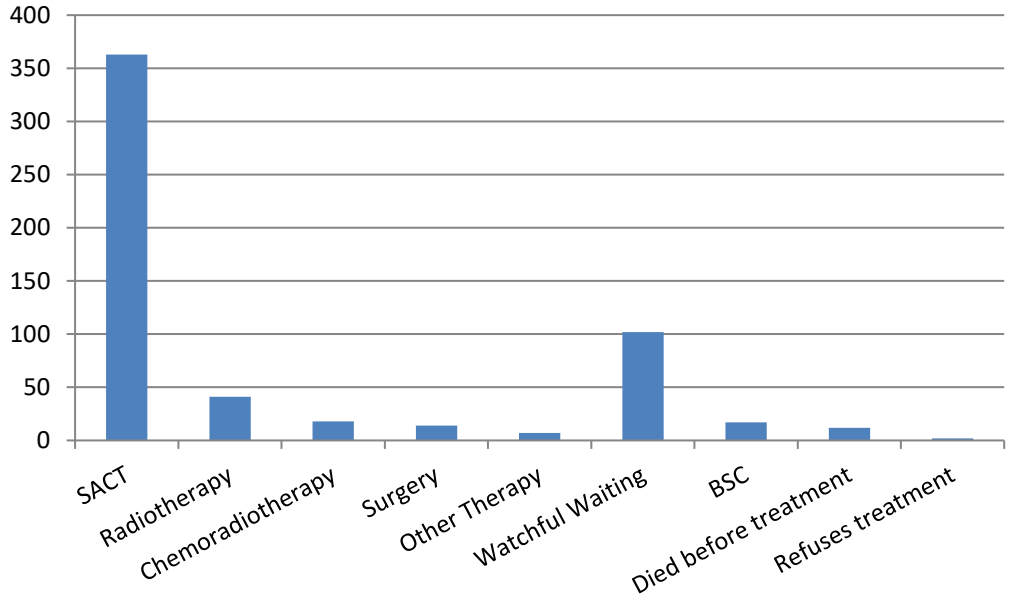
Figure 11: WHO PS for Non Hodgkin Lymphoma patients



Lymphoma Treatment

Figure 12 shows the type of first treatment that lymphoma patients receive across the WoSCAN Boards. The majority of patients received SACT as first treatment.

Figure 12: Type of first treatment for patient diagnosed with lymphoma in WoSCAN.



3. Methodology

Further detail on the audit and analysis methodology and data quality is available in the meta data within appendix 1.

4. Results and Action Required

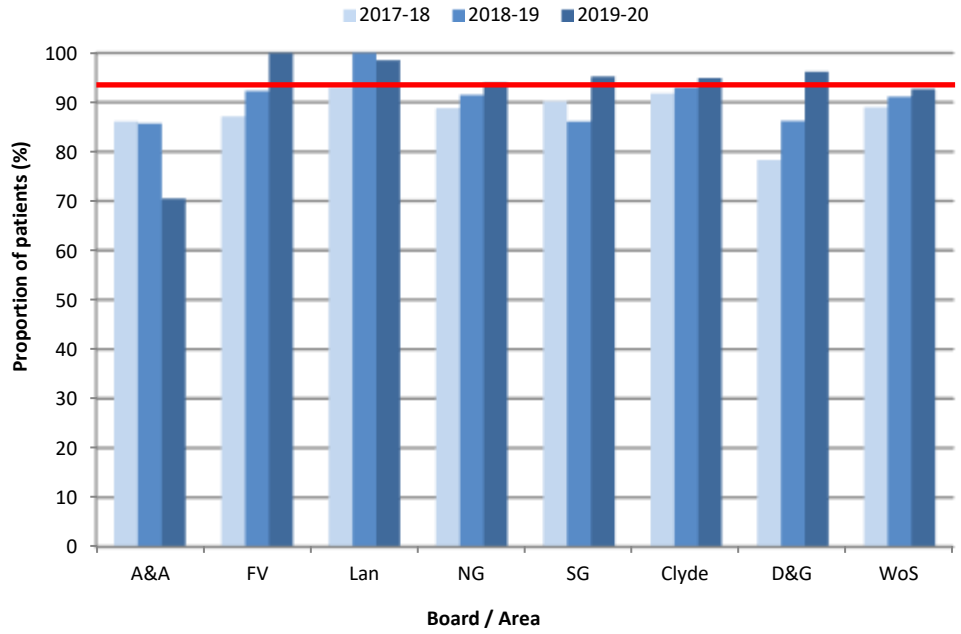
Results for each QPI are shown in detail in the following sections. Data are presented by location of diagnosis and illustrate NHS Board or performance against each target and overall regional performance for each performance indicator.

Where the number of cases meeting the denominator criteria for any indicator is between one and four, the percentage calculation has not been shown on any associated charts or tables. This is to avoid any unwarranted variation associated with small numbers and to minimise the risk of disclosure. Any charts or tables impacted by this are denoted with a dash (-). Any commentary provided by NHS Boards relating to the impacted indicators will however be included as a record of continuous improvement.

Specific regional and NHS Board actions have been identified to address issues highlighted through the data analysis.

QPI 1: Radiological Staging

Title:	Patients with lymphoma should be evaluated with appropriate imaging to detect the extent of disease, with timely reports available to guide treatment decision making
Numerator:	Number of patients with lymphoma undergoing treatment with curative intent who undergo CT of chest, abdomen and pelvis or PET CT scanning prior to treatment where the report is available within 3 weeks of radiology request.
Denominator:	All patients with lymphoma undergoing treatment with curative intent who undergo CT of chest, abdomen and pelvis or PET CT scanning prior to treatment.
Exclusions:	None
Target:	90%



Board / Area	Performance (%)	Numerator	Denominator
AA	70.5%	31	44
FV	100%	26	26
Lan	98.5%	65	66
NG	93.9%	62	66
SG	95.2%	40	42
Clyde	94.9%	56	59
D&G	96.2%	25	26
WoS	**92.7%**	**305**	**329**

Overall in the WoS, 92.7% of patients had their radiology results reported within 3 weeks of the radiology request, meeting the target for this specification. The target was met in all NHS Boards with the exception of NHS Ayrshire & Arran where there were difficulties in identifying the date of the radiology requests from the information available to audit staff. Of the patients not meeting the QPI, the majority had CT scans requested as inpatients and had their results reported within 3 weeks, although the exact number of days for the scan to be reported could not be calculated due to the absence of information on the request date. New audit staff have been recruited within NHS Ayrshire & Arran and it is anticipated that they will work with clinical staff to find a solution to this issue to ensure that this QPI can be fully recorded in future years.

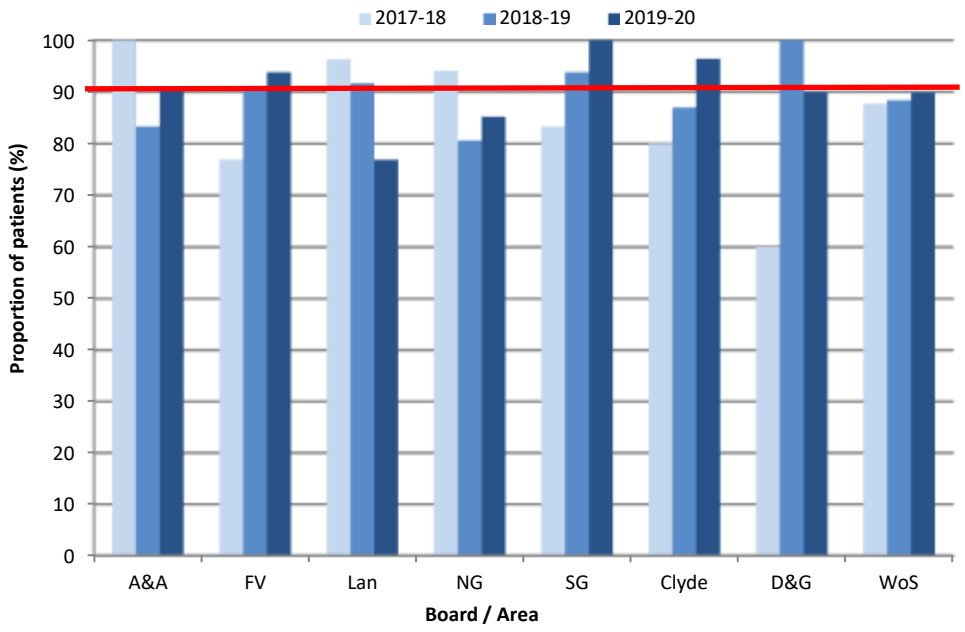
Action required:

- NHS Ayrshire & Arran to develop a system for the recording of the date of radiology requests to enable the reporting of QPI 1.

QPI 2: Treatment response

CT scanning is recommended as the most appropriate method of response assessment following chemotherapy for DLBCL as treatment response may not be clinically obvious[1]. The target for this QPI has been set at 90% and the tolerance within the target is designed to account for the fact that some patients will have a good clinical response to chemotherapy and will therefore not require an end of treatment scan. It also accounts for those patients who may not complete chemotherapy due to factors of fitness.

QPI Title:	Patients with DLBCL who are treated with curative intent should have their response to treatment evaluated with appropriate imaging.
Numerator:	Number of patients with DLBCL who are undergoing chemotherapy treatment with curative intent who undergo CT of chest, abdomen and pelvis or PET CT scan at end of chemotherapy treatment.
Denominator:	All patients with DLBCL who are undergoing chemotherapy treatment with curative intent.
Exclusions:	Patients that died during treatment.
Target:	90%



Board / Area	Performance (%)	Numerator	Denominator
AA	90.9%	20	22
FV	93.8%	15	16
Lan	76.9%	20	26
NG	85.2%	23	27
SG	100%	19	19
Clyde	96.4%	27	28
D&G	90.0%	18	20
WoS	**89.9%**	**142**	**158**

Minor changes to the way this QPI is measured cannot be implemented during this audit period as the required data is not available; as such v3 measurability has been used to report these data.

Of the 158 patients with DLBCL undergoing chemotherapy treatment with curative intent, 142 had their response to treatment evaluated with CT scan of the chest, abdomen and pelvis or PET CT scan. Five of the seven units met the 90% target resulting in an overall performance of 89.9% across the WoS.

Patients not meeting this QPI have been reviewed and valid clinical reasons provided such as patients having progressive disease or complete resolution. For some patients in North Glasgow it was noted that clinical decisions on whether, or when, patients should have imaging was impacted by the risk of COVID-19 during 2020, which affected performance against this QPI. Some patients not meeting the QPI did have imaging but outwith the required timescale of within 6 weeks of SACT or 3 months of radiotherapy.

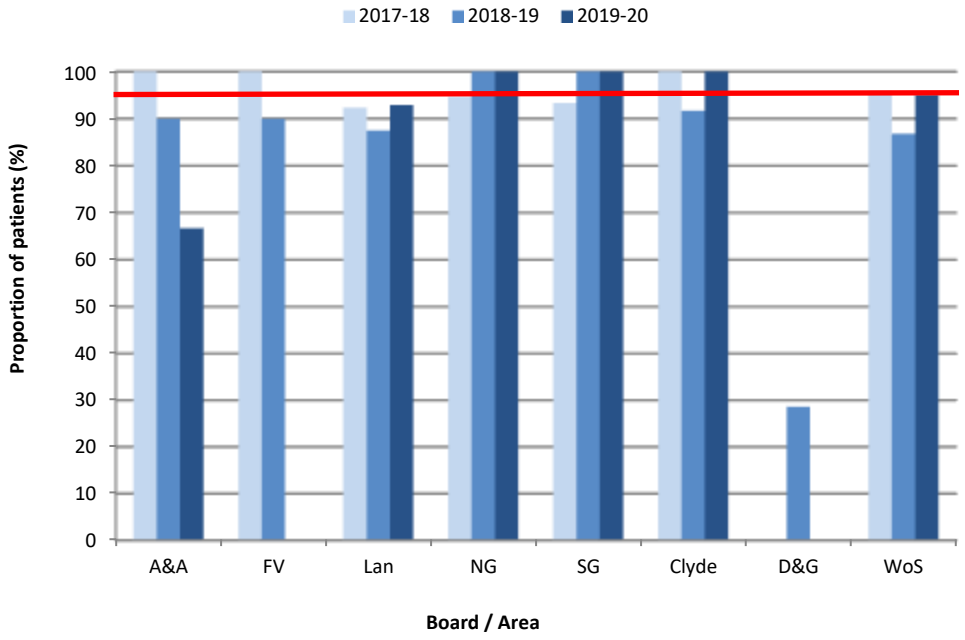
Action required:

- NHS Lanarkshire to ensure timely imaging to evaluate treatment response where appropriate through clear communication with radiology services.

QPI 3: Positron Emission Tomography (PET CT) Staging

Patients with Classical Hodgkin Lymphoma (CHL) should be evaluated with PET CT scanning to detect the extent of disease and guide treatment decision making[3]. The target for this QPI is 95% and the tolerance within this target is designed to account for situations where patients are not fit enough to undergo all investigations prior to commencing treatment.

QPI Title:	Patients with CHL should be evaluated with PET CT scanning to detect the extent of disease, with timely reports available to guide treatment decision making
Numerator:	Patients with CHL undergoing treatment with curative intent who undergo PET CT prior to first treatment where the report is available within 3 weeks of radiology request.
Denominator:	All patients with CHL undergoing treatment with curative intent who undergo PET CT prior to first treatment.
Exclusions:	None
Target:	95%



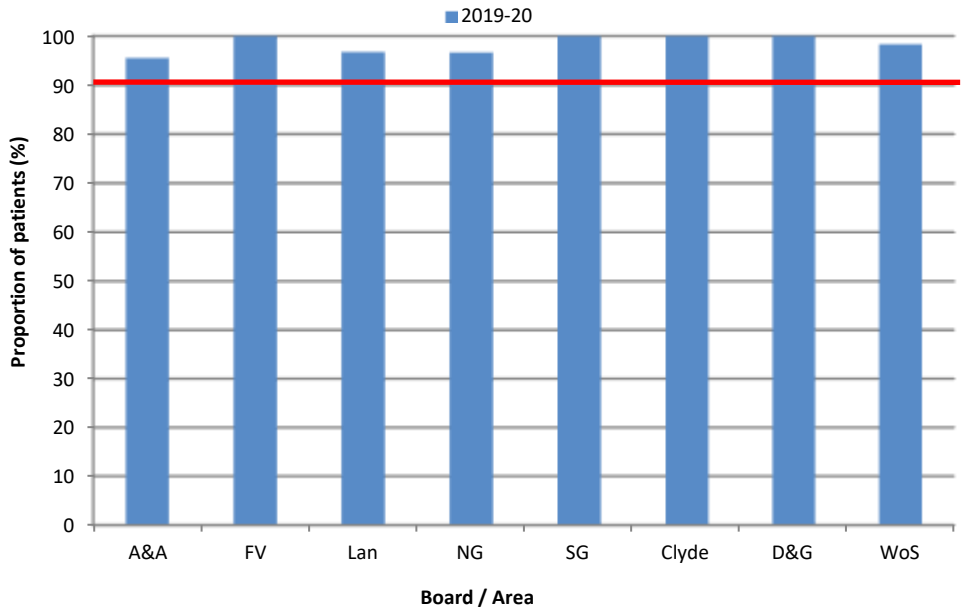
Board / Area	Performance (%)	Numerator	Denominator
AA	66.7%	4	6
FV	-	-	-
Lan	92.9%	13	14
NG	100%	15	15
SG	100%	8	8
Clyde	100%	12	12
D&G	-	-	-
WoS	**95.1%**	**58**	**61**

Of the 61 patients with CHL undergoing PET CT scan prior to first treatment, 58 had the report available within 3 weeks of radiology request resulting in an overall WoS performance of 95.1%; meeting the 95% QPI target. Of the patients who did not meet the QPI, all had a PET CT scan and while results were not reported within three weeks of the radiology request they were all reported within 4 weeks. It should be noted that, due to small numbers, any comparison of performance between NHS Boards should be made with caution. Within NHS Dumfries & Galloway and NHS Forth Valley performance could not be reported in 2019-20 due to small numbers however the performance over the three year period (2017-2020) was 92% in NHS Forth Valley and 64% in NHS Dumfries & Galloway; performance in NHS Dumfries & Galloway was impacted by data collection issues for patients diagnosed in 2018-19 which have now been resolved and all patients within the Board met this QPI in 2019-20.

QPI 4: Cytogenetic Testing

Classical cytogenetic or Fluorescence in Situ Hybridization (FISH) analysis is essential for the diagnosis of Burkitt lymphoma. Rearrangements of MYC in DLBCL are a strong prognostic factor and will guide treatment options and provide important information to help inform patients and carers about the nature of the disease and prognosis[1].

QPI Title:	Patients with Burkitt lymphoma and DLBCL should have MYC testing (and BCL2/BCL6 testing where appropriate) (i)
Numerator:	Number of patients with Burkitt Lymphoma or DLBCL undergoing chemotherapy treatment with curative intent who have MYC testing.
Denominator:	All patients with Burkitt lymphoma or DLBCL undergoing chemotherapy treatment with curative intent.
Exclusions:	No exclusions
Target:	90%



Board / Area	Performance (%)	Numerator	Denominator
AA	95.5%	21	22
FV	100%	20	20
Lan	96.7%	29	30
NG	96.6%	28	29
SG	100%	23	23
Clyde	100%	33	33
D&G	100%	20	20
WoS	**98.3%**	**174**	**177**

Note that results for this specification cannot be compared with those from previous years due to changes in the definition at Formal Review. 98.3% of patients diagnosed with Burkitt lymphoma or DLBCL in WoS and undergoing chemotherapy treatment with curative intent had MYC testing; well above the 90% target. All NHS Boards in the WoS met this specification.

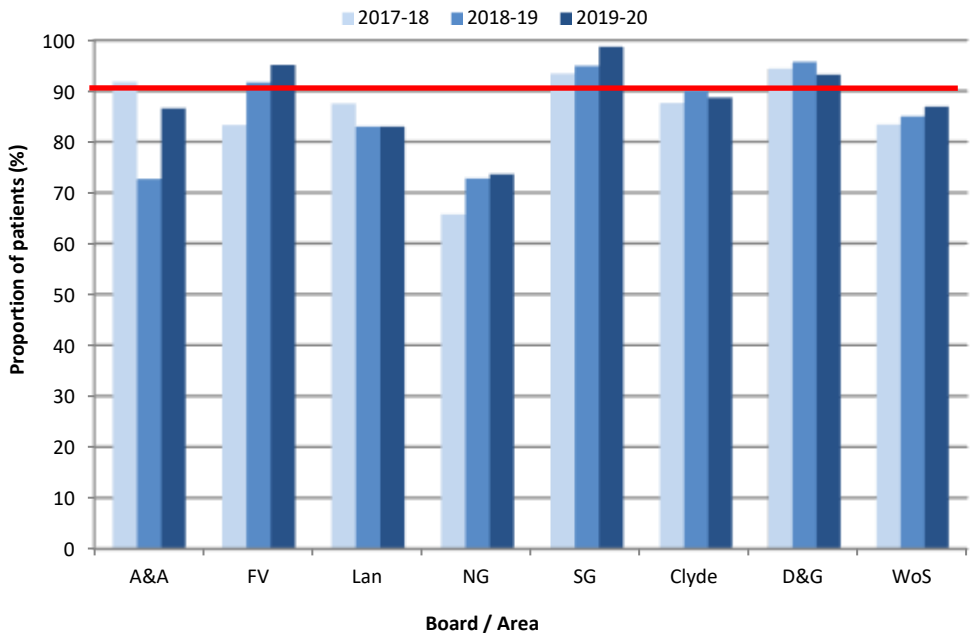
QPI Title:	Patients with Burkitt lymphoma and DLBCL should have MYC testing (and BCL2/BCL6 testing where appropriate) (ii)
Numerator:	Number of patients with DLBCL MYC rearrangement identified on FISH analysis undergoing chemotherapy treatment with curative intent who have BCL2/BCL6 testing with results reported within 3 weeks of commencing treatment.
Denominator:	All patients with DLBCL MYC rearrangement identified on FISH analysis undergoing chemotherapy treatment with curative intent.
Exclusions:	No exclusions
Target:	90%

Data are not available for the 2019-20 audit period to enable reporting of this revised specification. Performance against this measure will be reported for patients diagnosed from October 2020.

QPI 5: Lymphoma MDT

Effective MDT working is considered integral to provision of high quality cancer care, facilitating a cohesive treatment-planning function and ensuring treatment and care provision is individualised to patient needs. National guidance states that all patients should have a treatment plan discussed at a MDT meeting[1].

QPI Title:	Patients with lymphoma should be discussed by a MDT following diagnosis.
Numerator:	Number of patients with lymphoma discussed at the MDT within 8 weeks of diagnosis.
Denominator:	All patients with lymphoma.
Exclusions:	Patients who died before first treatment. Patients with primary cutaneous lymphoma.
Target:	90%



Board / Area	Performance (%)	Numerator	Denominator
AA	86.6%	58	67
FV	95.1%	58	61
Lan	83.0%	78	94
NG	73.6%	81	110
SG	98.7%	74	75
Clyde	88.7%	86	97
D&G	93.2%	41	44
WoS	**86.9%**	**476**	**548**

This QPI measures the time from when the patient had their biopsy to MDT discussion. There may be some time before treating clinicians are aware that the patient has a diagnosis of lymphoma. Therefore, at the recent formal review, it was agreed that this QPI should be measured from the time when the pathology report was issued rather than when the biopsy was taken. The revised definition, however, cannot be implemented during this audit period as the required data is not available; as such v3 measurability has been used to report these data. Performance against the v4.1 definition will be reported for patients diagnosed from October 2020.

The 90% target for MDT discussion was not achieved in the WoS with 86.9% of patients being discussed at the MDT within 8 weeks of diagnosis. Four of the seven units did not meet target, however there have been improvements in performance against this QPI over the last 3 years.

	% Patients discussed at MDT (no time constraint)			% Patient undergoing active first treatment discussed within 8 weeks of diagnosis			% Patient undergoing watchful waiting or best supportive care as first treatment discussed within 8 weeks of diagnosis		
Board / Area	**Performance (%)**	**Numerator**	**Denominator**	**Performance (%)**	**Numerator**	**Denominator**	**Performance (%)**	**Numerator**	**Denominator**
AA	**100%**	67	67	**89.1%**	49	55	**75.0%**	9	12
FV	**100%**	61	61	**95.8%**	46	48	**92.3%**	12	13
Lan	**97.9%**	92	94	**86.8%**	66	76	**66.7%**	12	18
NG	**93.6%**	103	110	**81.8%**	72	88	**40.9%**	9	22
SG	**98.7%**	74	75	**98.1%**	53	54	**100%**	21	21
Clyde	**94.8%**	92	97	**93.3%**	70	75	**72.7%**	16	22
D&G	**97.7%**	43	44	**93.9%**	31	33	**90.9%**	10	11
WoS	**97.1%**	**532**	**548**	**90.2%**	**387**	**429**	**74.8%**	**89**	**119**

Additional information is provided above which shows the proportion of patients being discussed at MDT, irrespective of timing, and also comparing performance against this QPI for patients receiving active treatment to those on best supportive care and watchful waiting. Although the majority of patients were discussed at MDT (97.1%), this was not always within the 8 week timeframe. In some cases these patients were receiving supportive care or watchful waiting and therefore the timeframe for MDT discussion was clinically appropriate. The QPI target was met for patients having active treatment (90.2%).

Patient not being discussed at the MDT within 8 weeks of diagnosis were reviewed. It is not always possible for patients to be discussed within the 8 week timeframe, and the majority of patients not meeting this QPI had a fragmented diagnostic pathway and required multiple investigations prior to discussion. Nevertheless there are areas for improvement, with delays in discussion (or lack of discussion) of patients diagnosed outwith haematology services noted in Clyde and North Glasgow.

Since the time of reporting, NHS Lanarkshire has implemented a procedure where all new cases diagnosed with lymphoma are flagged to the MDT co-ordinator to ensure they are discussed at the local MDT within 8 weeks of being diagnosed while North Glasgow has developed a process where the MDT co-ordinator sends reminders to clinicians whose patients have not been discussed at MDT; both actions are expected to result in improved performance in future years.

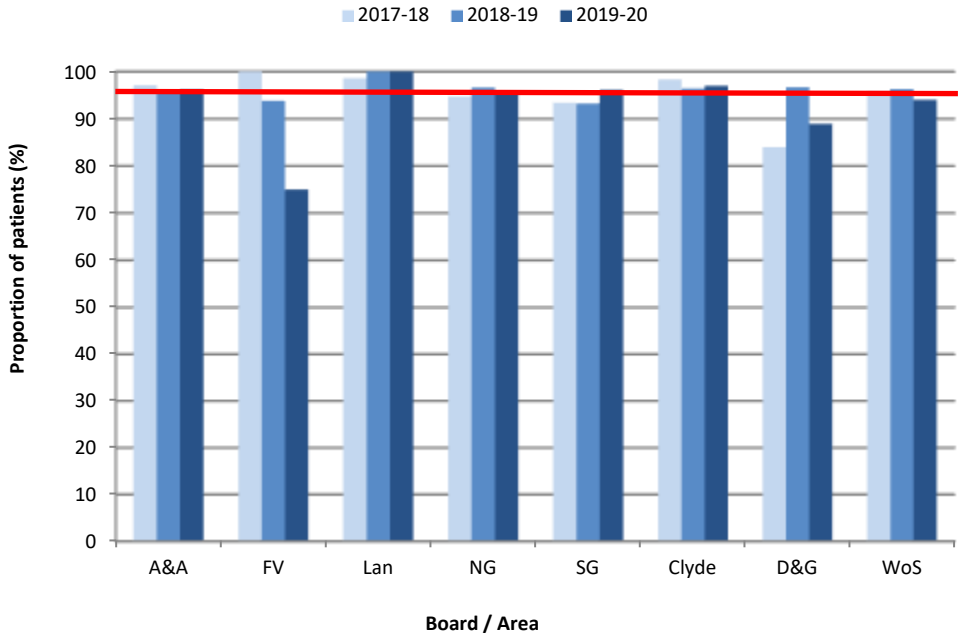
Action Required:

- NHS Ayrshire & Arran, NHS Lanarkshire and NHSGGC (North Glasgow and Clyde) to remind clinicians that patients should be discussed promptly at the MDT.

QPI 11: Hepatitis and HIV Status

Clinical assessment and virological testing for Human Immunodeficiency Virus (HIV), hepatitis B and C should be undertaken for all patients as part of the diagnostic process and in all patients considered at risk of virus reactivation[1].

QPI Title:	Virological testing for HIV, hepatitis B and C should be undertaken for patients undergoing SACT.
Numerator:	Number of patients with lymphoma undergoing SACT who have hepatitis B [core antibody (anti-HBcAB) and surface antigen (HB-sAG)], C and HIV status checked prior to treatment.
Denominator:	All patients with lymphoma undergoing SACT.
Exclusions:	No exclusions.
Target:	95%



Board / Area	Performance (%)	Numerator	Denominator
AA	96.2%	50	52
FV	75.0%	33	44
Lan	100%	69	69
NG	95.8%	69	72
SG	96.1%	49	51
Clyde	97.0%	64	66
D&G	88.9%	24	27
WoS	**94.0%**	**358**	**381**

In the WoS, 94.0% of patients with lymphoma undergoing SACT had hepatitis B, C and HIV checked prior to treatment, below the 95% target; five of the seven units achieved the 95% target.

The main reason for patients not meeting the QPI was incomplete virology testing rather than no virology testing being performed. NHS Forth Valley noted that during the COVID-19 pandemic more lymphoma patients were diagnosed as inpatients under other inpatient services, and while virological testing was undertaken the correct tests were not always requested, especially for hepatitis B. This is because other specialities do not have access to the standard ordercomm sets identified for haematology services.

Action Required:

- NHS Forth Valley haematology service to ensure clear communication with other services as to the specific virology testing requirement for patients outwith the care of haematology services and ensure that the correct tests have been undertaken before SACT is prescribed.

QPI 12: Treatment Response in Hodgkin Lymphoma

PET CT demonstrates a higher level of accuracy compared with contrast CT scan and is therefore the most appropriate method of response assessment following chemotherapy in lymphoma patients. Interim PET CT is recommended for patients with advanced Hodgkin Lymphoma undergoing treatment with ABVD chemotherapy or escalated BEACOPP/BEACOPDac chemotherapy. It is important that the PET CT is reported in a timely manner to ensure there is no treatment delay and therapy is changed appropriately if response is suboptimal[1].

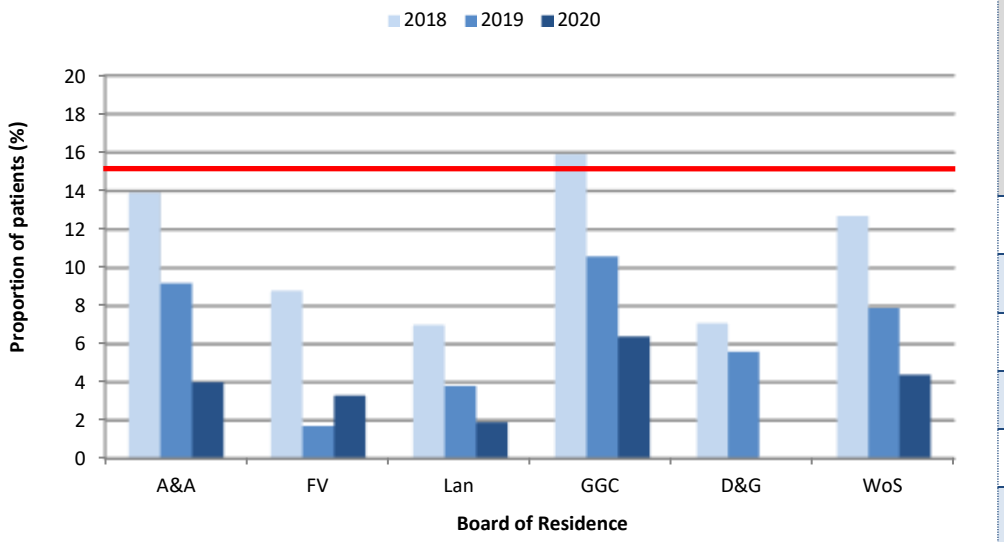
QPI Title:	Patients with advanced Hodgkin Lymphoma who receive treatment with ABVD, BEACOPP or BEACOPDac chemotherapy should have early assessment of response by appropriate imaging.
Specification (i)	
Numerator:	Number of patients with advanced Hodgkin Lymphoma (stage 2B and above) who receive ABVD, BEACOPP or BEACOPDac chemotherapy treatment that undergo PET CT scan after 2 cycles of chemotherapy.
Denominator:	All patients with advanced Hodgkin Lymphoma (stage 2B and above) who receive ABVD, BEACOPP or BEACOPDac chemotherapy treatment.
Exclusions:	Patients who die during treatment.
Target:	80%

QPI Title:	Patients with advanced Hodgkin Lymphoma who receive treatment with ABVD, BEACOPP or BEACOPDac chemotherapy should have early assessment of response by appropriate imaging.
Specification (ii)	
Numerator:	Number of patients with advanced Hodgkin Lymphoma (stage 2B and above) who receive ABVD, BEACOPP or BEACOPDac chemotherapy treatment that undergo PET CT scan after 2 cycles of chemotherapy where the report is available within 3 working days.
Denominator:	All patients with advanced Hodgkin Lymphoma (stage 2B and above) who receive ABVD, BEACOPP or BEACOPDac chemotherapy treatment that undergo PET CT scan after 2 cycles of chemotherapy.
Exclusions:	No exclusions.
Target:	80%

This QPI was amended significantly at Formal Review due to advances in treatment. Data are not available for the 2019-20 audit period to enable reporting of the revised specifications, therefore performance against these measures will be reported for patients diagnosed from October 2020.

QPI 14: Clinical Trial and Research Study Access

QPI Title:	All patients should be considered for participation in available clinical trials / research studies wherever eligible.
Numerator:	Number of patients diagnosed with lymphoma consented for a clinical trial / research study.
Denominator:	All patients with diagnosed with lymphoma.
Exclusions:	No exclusions.
Target:	15%



Board / Area	Performance (%)	Numerator	Denominator
AA	4.0%	3	75
FV	3.3%	2	61
Lan	1.9%	2	107
GGC	6.4%	18	283
D&G	0%	0	40
WoS	**4.4%**	**25**	**566**

This QPI reports all patients living in the WoS with a diagnosis of lymphoma who were consented for a clinical trial or research study in 2020 and is not restricted to patients diagnosed within the audit period. The denominator used in the measurement of this QPI is the 5 year average of Public Health Scotland incidence data for all lymphomas in WoS (2015 -2019).

There are a number of clinical trials (interventional and non-interventional) open in the WoS for lymphoma, however performance against this QPI has fallen in recent years because there are very few first-line clinical trials available for lymphoma. It should be noted that lymphoma is a very heterogeneous disease and most of the clinical trials are subtype specific.

Performance against this QPI was further affected by the COVID-19 pandemic in 2020. Individual trial sponsors advised that recruitment should be suspended due to the COVID-19 pandemic and all trial activity was stopped on the 13th March 2020. As the year progressed, Principal Investigators of the trials worked with the senior trials management group to undertake a risk assessment for each individual trial and get updated approval before being able to re-open to recruitment. Many suspended clinical trials were re-opened between June and October 2020. However some patients were reluctant to attend hospital during the lockdown period, further impacting on recruitment once trials were reopened. Additionally, no new clinical trials were considered at the Clinical Trial Executive Committee during the lockdown period in 2020.

The Haemato-oncology MCN Clinical Trials Subgroup continues to strengthen and support clinical trial activity across the region. Disease-specific clinical trials maps of open clinical trials in WoS are updated regularly and the group engages in regional discussion to review patient recruitment, highlight gaps in the trials portfolio and identify areas of priority and major forthcoming trials to facilitate early set-up of studies.

List of clinical trials and the number of patients with lymphoma consented/entered into each clinical trial in 2020. (N.B. Figures below are restricted to patients resident within WoS).

Project Title	No. Patients Consented	No. Patients Recruited
3185/0004 Follicular Lymphoma Nordic Nanovector AS	0	0
ANIMATE	7	7
ARGO	2	1
AVENuE	3	3
AVAIL-T - Avelumab in relapsed/refractory T-cell Lymphoma	0	0
BGB-3111-214-A Phase 2 OLE Study of BGB-3111 in patients with MZL	0	0
Cardiac CARE	5	5
Efficacy and Safety of ADCT-301 in Relapsed or Refractory HL	0	0
ENRICH Ibrutinib for untreated mantle cell lymphoma	1	1
MaPLe: Molecular profiling for lymphoma	0	0
NCRN - 3245 - Betalutin radioimmunotherapy for treatment of relapsed CD37+ NHL	0	0
PETReA	5	5
Phase I/II study - AUTO4 in patients with T cell non-Hodgkin Lymphoma	1	1
Phase 2 Study of Intermittent Dosing Schedules of Duvelisib in iNHL	0	0
PORT	1	0
RiVa	1	0
Study of Cobomarsen(MRG-106) vs Active Comparator in Mycosis Fungoides	0	0
Treatment with CD19/CD22 CAR redirected T cells for DLBCL-ALEXANDER	2	2
Total	**28**	**25**

5. Next Steps

The MCN will actively take forward regional actions identified and NHS Boards are asked to develop local Action/Improvement Plans in response to the findings presented in the report. A summary of actions for each NHS Board has been included within the Action Plan templates in Appendix 3.

Acknowledgement

This report has been prepared using clinical audit data provided by the following NHS Boards in the WoSCAN area:

NHS Ayrshire & Arran
NHS Forth Valley
NHS Greater Glasgow and Clyde
NHS Lanarkshire
NHS Dumfries & Galloway

We would like to thank all members and active participants in the cancer network for their continued support of the MCN, and the many hospitals that are committed to making the audit succeed. We also acknowledge the efforts of the clinical effectiveness staff, nurses, and other service users for their work in ensuring the data are available to enable analysis to take place each year. Without their considerable efforts this level of progress would not be possible.

Abbreviations

CAP	Chest, Abdominal, Pelvis
CHL	Classical Hodgkin Lymphoma
CNS	Central Nervous System
CSO	Chief Scientist Office
CT	Computed Tomography
DLBCL	Diffuse Large B Cell Lymphoma
eCASE	Electronic Cancer Audit Support Environment
HIS	Healthcare Improvement Scotland
HIV	Human Immunodeficiency Virus
HL	Hodgkin Lymphoma
ISD	Information Services Division
MCN	Managed Clinical Network
MDT	Multidisciplinary Team
NCQSG	National Cancer Quality Steering Group
NCRI	National Cancer Research Institute
NHL	Non Hodgkin Lymphoma
NHSGGC	NHS Greater Glasgow and Clyde
NOS	Not Otherwise Specified
PET	Positron Emission Tomography
QPI	Quality Performance Indicator
RCAG	Regional Cancer Advisory Group
SCRN	Scottish Cancer Research Network
WoS	West of Scotland
WoSCAN	West of Scotland Cancer Network

References

1. Lymphoma Quality Performance Indicators v4.1, June 2021. http://www.healthcareimprovementscotland.org/our_work/cancer_care_improvement/cancer_qpis/quality_performance_indicators.aspx

2. Cancer incidence in Scotland - Cancer incidence and prevalence in Scotland to December 2019 - Public Health Scotland, May 2021.

3. Cancer Survival Statistics – People diagnosed with cancer between 2013 and 2017. Public Health Scotland, January 2021. https://www.publichealthscotland.scot/publications/cancer-survival-statistics/cancer-survival-statistics-people-diagnosed-with-cancer-between-2013-and-2017/

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Appendix 1: Meta Data

<table>
<tr><td>Report Title</td><td>Cancer Audit Report: Lymphoma Quality Performance Indicators</td></tr>
<tr><td>Time Period</td><td>Patients diagnosed between 01 October 2019 to 30 September 2020</td></tr>
<tr><td>Data Source</td><td>Electronic Cancer Audit Support Environment (eCASE). A secure centralised web-based database which holds cancer audit information in Scotland.</td></tr>
<tr><td>Data extraction date</td><td>2200 hrs on 14 July 2021</td></tr>
<tr><td>Methodology</td><td>Analysis was performed centrally for the region by the WoSCAN Information Team. The timescales agreed took into account the patient pathway to ensure that a complete treatment record was available for the majority of patients.

Initial results were provided to Boards to check for inaccuracies, inconsistencies or obvious gaps and a subsequent download taken upon which final analysis was carried out.

The final data analysis was disseminated for NHS Board verification in line with the regional audit governance process to ensure that the data was an accurate representation of service in each area. Please see info graphic in appendix 2 for a more detailed look at the reporting process.</td></tr>
<tr><td>Data Quality</td><td>Audit data completeness can be assessed by estimating the proportion of expected patients that have been identified through audit compared to the number reported by the National Cancer registry (provided by ISD, National Services Division), this is known as case ascertainment. Figures should only be used as a guide as it is not possible to compare the same exact cohort from each data source. Note that a 5 year average is taken for cancer registry cases to take account of annual fluctuations in incidence within NHS Boards.

<table>
<tr><th>Health Board of diagnosis</th><th>2019-20 Audit Data</th><th>Cases from Cancer registry (2015-2019)</th><th>Case Ascertainment</th></tr>
<tr><td>Ayrshire & Arran</td><td>69</td><td>75</td><td>92.0%</td></tr>
<tr><td>GGC</td><td>301</td><td>283</td><td>106.4%</td></tr>
<tr><td>Forth Valley</td><td>63</td><td>61</td><td>103.3%</td></tr>
<tr><td>Lanarkshire</td><td>98</td><td>107</td><td>91.6%</td></tr>
<tr><td>Dumfries & Galloway</td><td>45</td><td>40</td><td>112.5%</td></tr>
<tr><td>WoS Total</td><td>576</td><td>566</td><td>101.8%</td></tr>
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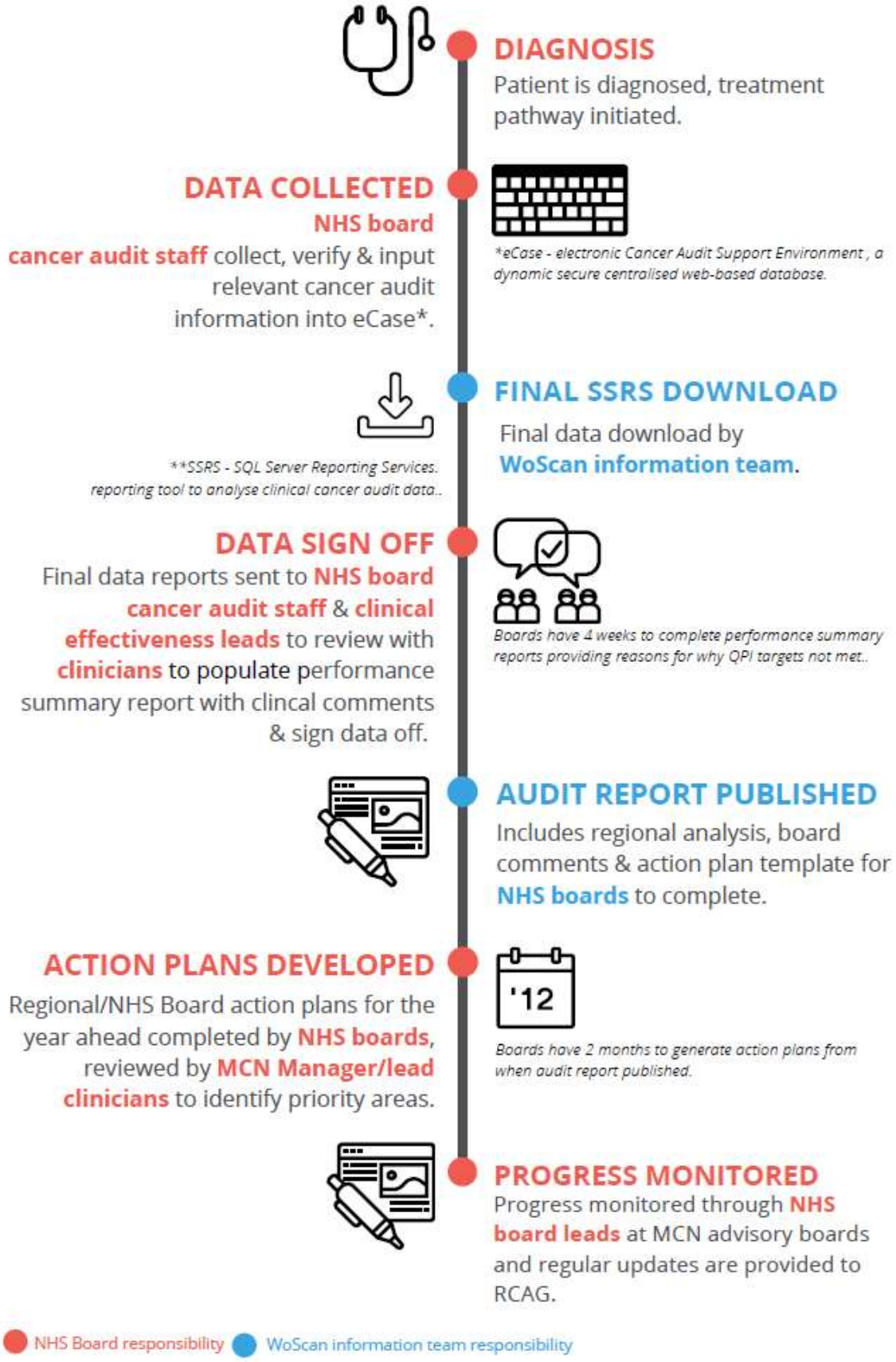
Appendix 2: **WoSCAN QPI Reporting Process**



Appendix 3: NHS Board Action Plans

A summary of actions for each NHS Board has been included within the Action Plan templates in Appendix 3. Completed Action Plans should be returned to WoSCAN within two months of publication of this report.

Lymphoma Action / Improvement Plan

Health Board:	NHS Ayrshire & Arran
Action Plan Lead:	
Date:	

KEY (Status)	
1	Action fully implemented
2	Action agreed but not yet implemented
3	No action taken (please state reason)

No	Action Required	Health Board Action Taken	Timescales		Lead	Progress/Action Status	Status (see key)
			Start	End			
	Action	*Detail specific actions that will be taken by the NHS Board.*	*Insert date*	*Insert date*	*Insert name of responsible lead for each specific action.*	*Provide detail of action in progress, change in practices, problems encountered or reasons why no action taken.*	*Insert No. from key above*
-	NHS Ayrshire & Arran, NHS Forth Valley and NHS Lanarkshire to review cases with stage not recorded and update the information where possible to ensure complete data is available for future survival analysis and reporting (Data Capture)						
1	NHS Ayrshire & Arran to develop a system for the recording of the date of radiology requests to enable the reporting of QPI 1 (Data Capture)						
5	NHS Ayrshire & Arran, NHS Lanarkshire and NHSGGC (North Glasgow and Clyde) to remind clinicians that patients should be discussed promptly at the MDT (MDT)						

Lymphoma Action / Improvement Plan

Health Board:	NHS Forth Valley
Action Plan Lead:	
Date:	

KEY (Status)	
1	Action fully implemented
2	Action agreed but not yet implemented
3	No action taken (please state reason)

No	**Action Required**	**Health Board Action Taken**	**Timescales**		**Lead**	**Progress/Action Status**	**Status (see key)**
			Start	**End**			
	Action	*Detail specific actions that will be taken by the NHS Board.*	*Insert date*	*Insert date*	*Insert name of responsible lead for each specific action.*	*Provide detail of action in progress, change in practices, problems encountered or reasons why no action taken.*	*Insert No. from key above*
-	NHS Ayrshire & Arran, NHS Forth Valley and NHS Lanarkshire to review cases with stage not recorded and update the information where possible to ensure complete data is available for future survival analysis and reporting (Data Capture)						
11	NHS Forth Valley haematology service to ensure clear communication with other services as to the specific virology testing requirement for patients outwith the care of haematology services and ensure that the correct tests have been undertaken before SACT is prescribed (Other Diagnostic)						

Lymphoma Action / Improvement Plan

Health Board:	NHS Lanarkshire
Action Plan Lead:	
Date:	

KEY (Status)	
1	Action fully implemented
2	Action agreed but not yet implemented
3	No action taken (please state reason)

No	**Action Required**	**Health Board Action Taken**	**Timescales**		**Lead**	**Progress/Action Status**	**Status (see key)**
			Start	**End**			
	Action	*Detail specific actions that will be taken by the NHS Board.*	*Insert date*	*Insert date*	*Insert name of responsible lead for each specific action.*	*Provide detail of action in progress, change in practices, problems encountered or reasons why no action taken.*	*Insert No. from key above*
-	NHS Ayrshire & Arran, NHS Forth Valley and NHS Lanarkshire to review cases with stage not recorded and update the information where possible to ensure complete data is available for future survival analysis and reporting (Data Capture)						
2	NHS Lanarkshire to ensure timely imaging to evaluate treatment response where appropriate through clear communication with radiology services (Radiology)						
5	NHS Ayrshire & Arran, NHS Lanarkshire and NHSGGC (North Glasgow and Clyde) to remind clinicians that patients should be discussed promptly at the MDT (MDT)						

Lymphoma Action / Improvement Plan

Health Board:	NHSGGC
Action Plan Lead:	
Date:	

KEY (Status)	
1	Action fully implemented
2	Action agreed but not yet implemented
3	No action taken (please state reason)

No	**Action Required**	**Health Board Action Taken**	**Timescales**		**Lead**	**Progress/Action Status**	**Status (see key)**
			Start	**End**			
	Action	*Detail specific actions that will be taken by the NHS Board.*	*Insert date*	*Insert date*	*Insert name of responsible lead for each specific action.*	*Provide detail of action in progress, change in practices, problems encountered or reasons why no action taken.*	*Insert No. from key above*
5	NHS Ayrshire & Arran, NHS Lanarkshire and NHSGGC (North Glasgow and Clyde) to remind clinicians that patients should be discussed promptly at the MDT (MDT)						