Quality Performance Indicators Audit Report

Tumour Area:	Lymphoma
Patients Diagnosed:	October 2017 to September 2018
Published Date:	28th October 2019
Clinical Commentary:	Dominic Culligan, Consultant Haematology

1. Lymphoma in Scotland

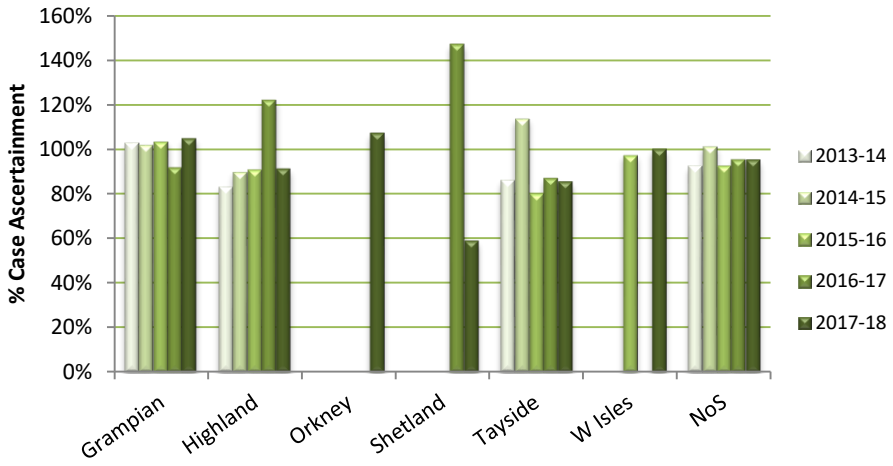
Non-Hodgkin's lymphoma is the seventh most common cancer type in Scotland, while incidence of Hodgkin's disease are much lower. Incidence of Non-Hodgkin's lymphoma have remained fairly constant over the last 10 years, and although immunosuppression has been associated with the development of this disease, much has still to be understood about the causes of Non-Hodgkin's lymphoma[1]. Incidences of lymphoma are predicted to continue to increase over the coming years[2]. Relative survival from lymphoma is also increasing[3]. The table below details the percentage change in 1 and 5 year relative survival for patients diagnosed 1987-1991 to 2007-2011.

Relative age-standardised survival for lymphoma in Scotland at 1 year and 5 years showing percentage change from 1987-1991 to 2007-2011[3].

	Sex	Relative survival at 1 year (%)		Relative survival at 5 years (%)	
		2007-2011	% change	2007-2011	% change
Non-Hodgkin's Lymphoma	Male	76.2%	+ 20.3%	63.7%	+ 27.4%
	Female	78.6%	+ 16.5%	66.9%	+ 24.4%
Hodgkin's Disease	Male	88.0%	+ 10.5%	78.8%	+ 13.9%
	Female	88.0%	+ 7.3%	78.7%	+ 13.2%

2. Patient Numbers and Case Ascertainment in the North of Scotland

A total of 288 cases of lymphoma were recorded through audit as diagnosed in the North of Scotland between 1st October 2017 and 30th September 2018, similar to numbers in 2016-2017 (284 patients). Overall case ascertainment for the North of Scotland was high at 95.1% which indicates good data capture through audit. Case ascertainment figures are provided for guidance and are not an exact measurement of audit completeness as it is not possible to compare the same cohort of patients. Case ascertainment for each Board across the North of Scotland is illustrated below.



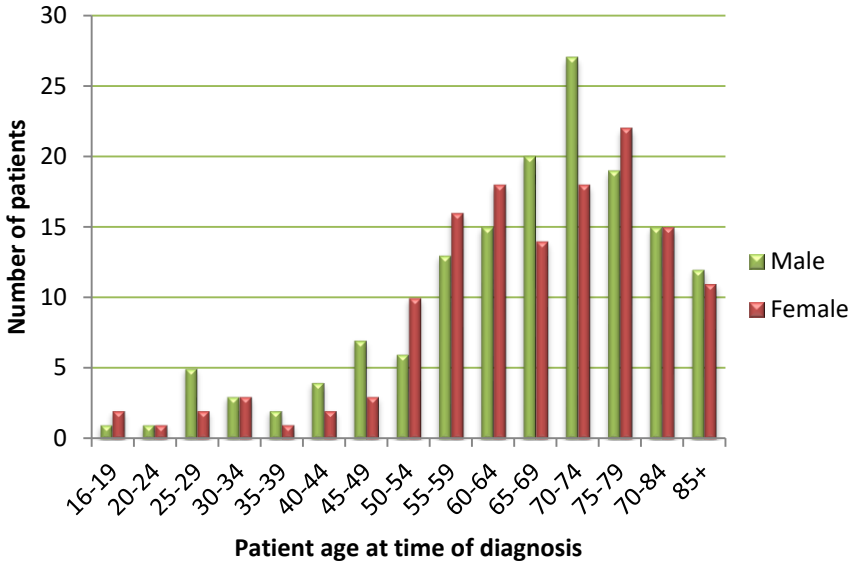
Case ascertainment by NHS Board for patients diagnosed with lymphoma 2013-2014 – 2017-2018 (ISD Cases for ISD-10 codes C81-C85).

	Grampian	Highland	Orkney	Shetland	Tayside	W Isles	NoS
Cases from audit 2017-18	138	60	3	2	82	3	**288**
ISD Cases (2013-2017)	132	66	3	3	96	3	**303**
% Case ascertainment 2017-2018	104.7%	91.2%	107.1%	58.8%	85.4%	100%	**95.1%**

Audit data were considered to be sufficiently complete to allow QPI calculations. The number of instances of data not being recorded was very low, with no notable gaps.

3. Age and Gender Distribution

The figure below shows the age distribution of patients diagnosed with lymphoma in the North of Scotland during 2017-2018 for both men and women. The number of diagnoses peaked in the 70-74 age group for men and 75-79 age group for women.



4. Performance against Quality Performance Indicators (QPIs)

Definitions for the QPIs reported in this section are published by Health Improvement Scotland[4], while further information on datasets and measurability used are available from Information Services Division[5]. Data are presented by Board of diagnosis and for the whole of the North of Scotland except QPI 11, clinical trials and research study access, which is reported by patients NHS Board of residence. Please note that where QPI definitions have been amended, results are not compared with those from previous years.

5. Governance and Risk

- Governance is defined as the combination of structures and processes at all levels to lead on North quality performance including:

  Ensuring accountability for quality and required standards

- Investigating and taking action on sub-standard performance
- Identifying, sharing and ensuring delivery of best-practice
- Identifying and managing risks to ensure quality of care
- Driving continuous improvement

Our current governance structure provides assurance to the boards that risks associated QPIs are being addressed as an alliance. Clinical risks are discussed at the North Cancer Haematology Pathway Board (NCHPB) and Regional Cancer Clinical Leadership Group (RCCLG). Risk levels are jointly agreed. The RCCLG are presented with all available evidence and actions so they have all the information to define the risk in a collaborative way.

Tolerate - Accept the risk at its current level

Mitigate - Reduce or mitigate the risk, in terms of reducing the likelihood of its occurrence or reducing the severity of impact if it does occur. This can be assessed through the action plans provided or the information provided is appropriate to prevent reoccurrence.

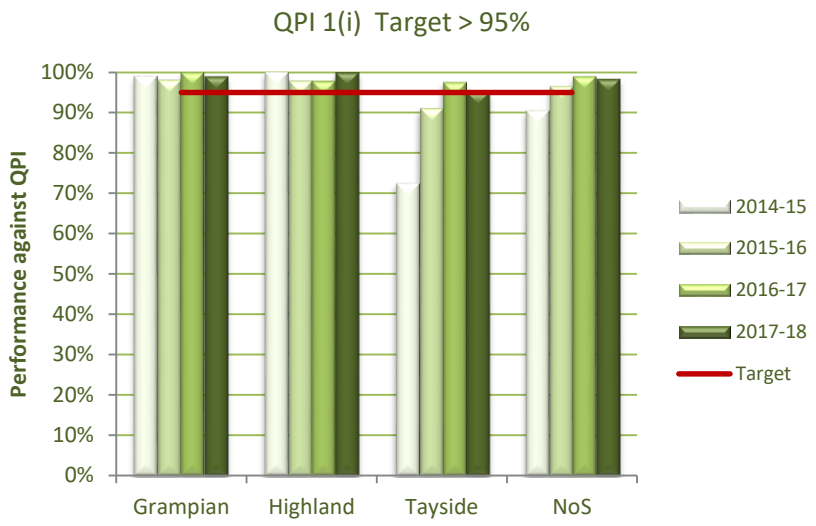
Escalate - Escalate the risk to the appropriate committee and/or take further action as the mitigations were not suitable or there are no actions identified to mitigate the risk. This will be revisited by the RCCLG for further risk discussion.

Immediate - Immediate action is required to prevent the risk reoccurring. This risk will have major impact on patient care delivery and the consequences thereafter. Very few risks should occur in this level.

The full governance document on risk should be referred to in conjunction with this summary, which is available on the NCA website[6].

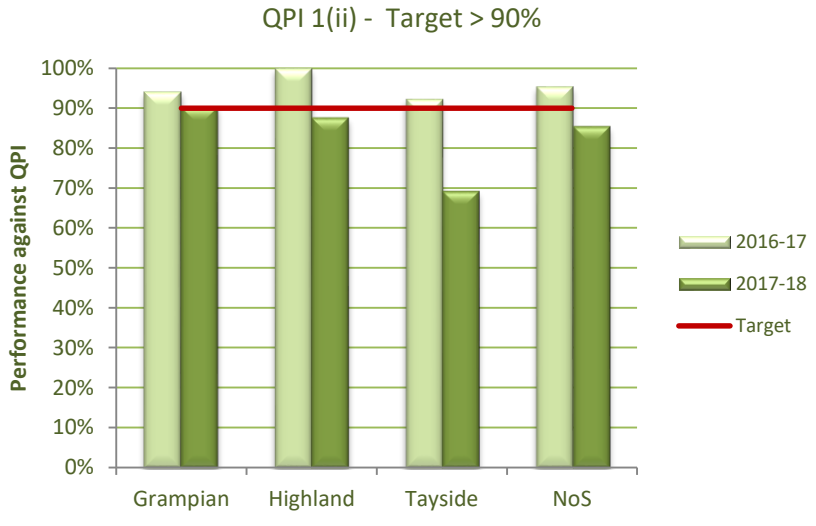
QPI 1	Radiological Staging
Proportion of patients with lymphoma undergoing treatment with curative intent who undergo Computed Tomography (CT) scanning of the chest, abdomen and pelvis or PET CT scanning prior to treatment, within 2 weeks of radiology request, and where the report is available within 3 weeks of radiology request.	

Specification (i) Patients with lymphoma undergoing treatment with curative intent who are evaluated with appropriate imaging.



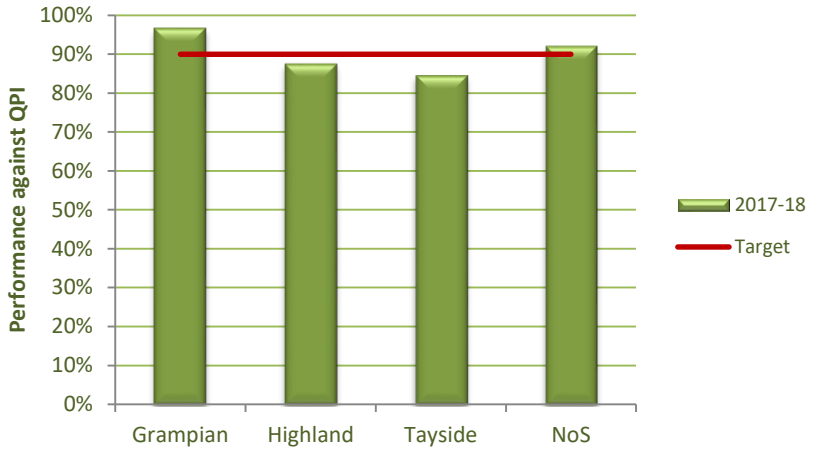
	Performance (%)	Numerator	Denominator
Grampian	**98.9%**	91	92
Highland	**100%**	39	39
Orkney*	-	-	-
Shetland*	-	-	-
Tayside	**95.1%**	39	41
W Isles*	-	-	-
NoS	**98.3%**	**176**	**179**

Specification (ii) Patients with lymphoma undergoing treatment with curative intent who are evaluated with appropriate imaging and within 2 weeks of radiology request.



	Performance (%)	Numerator	Denominator
Grampian	**90.1%**	82	91
Highland	**87.5%**	35	40
Orkney*	-	-	-
Shetland*	-	-	-
Tayside	**69.2%**	27	39
W Isles*	-	-	-
NoS	**85.3%**	**151**	**177**

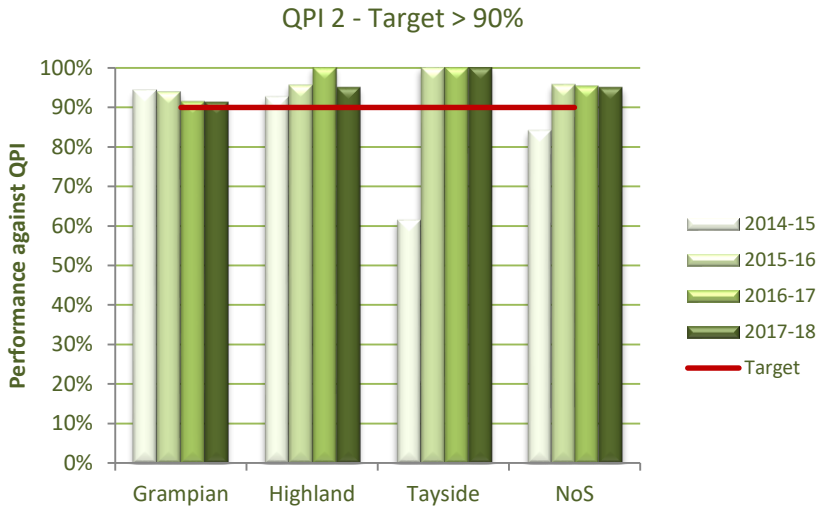
Specification (iii) Patients with lymphoma undergoing treatment with curative intent who are evaluated with appropriate imaging where the report is available within 3 weeks of radiology request.



	Performance (%)	Numerator	Denominator
Grampian	**96.7%**	88	91
Highland	**87.5%**	35	40
Orkney*	-	-	-
Shetland*	-	-	-
Tayside	**84.6%**	33	39
W Isles*	-	-	-
NoS	**92.1%**	**163**	**177**

Clinical Commentary	As predicted in last year's report there has been pressure on this QPI, especially in terms of time to imaging and reporting (QPI 1 (ii) & (iii)). The increase use of PET scanning, not only in lymphoma, but in many other cancers and also in non-malignant indications across medicine has led to increase wait for the scans. The combined work load from Grampian and Highland impacting on a single PET CT scanner may have to be looked at over the coming years. National shortage of radiologists also remains a problem. The need for double reporting of PET scans is demanding of radiology resource and adds delay to the reporting process. Another issue that needs addressing is the government directive that only consultants can order a PET scan. It is a mainstream investigation in lymphoma now, therefore, registrars in training should be authorised to order PET scans within national guidelines. This may help to reduce avoidable delays.
Actions	1. North Cancer Team to support the development of a North Radiology group to provide leadership around workforce issues and sustainability of services 2. NCHPB to escalate staffing issues and the use of one PET CT scanner between NHSH and NHSG 3. NCHPB to investigate the possibilities of registrars being able to order PET scans within national guidelines
Risk Status	Mitigate

QPI 2	Treatment Response
Proportion of patients with DLBCL who are undergoing chemotherapy treatment with curative intent, who have their response to treatment evaluated with CT scan of the chest, abdomen and pelvis or PET CT scan.	

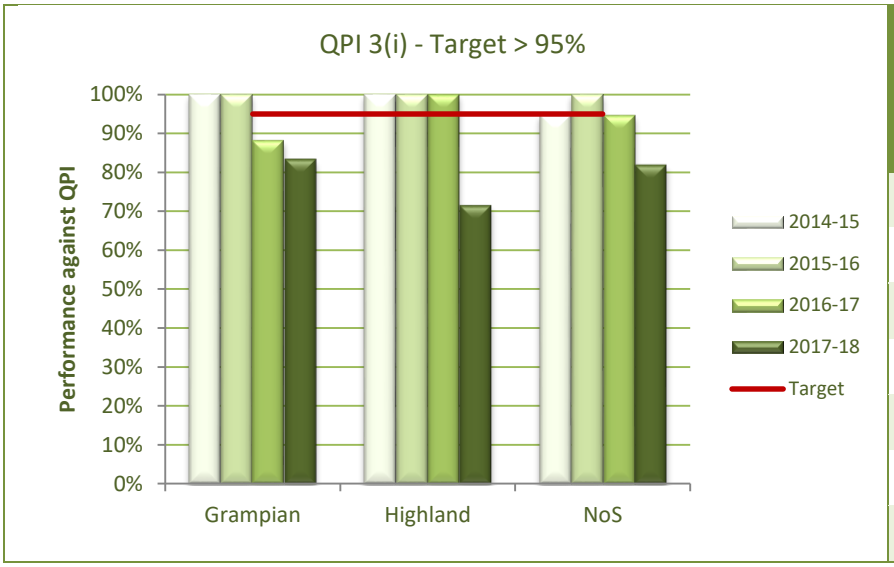


	Performance (%)	Numerator	Denominator
Grampian	**91.2%**	31	34
Highland	**95.0%**	19	20
Orkney*	-	-	-
Shetland	-	0	0
Tayside	**100%**	22	22
W Isles*	-	-	-
NoS	**95.0%**	**76**	**80**

Clinical Commentary	This QPI was met in all health boards, though only just in Grampian. This is due to the same reasons as QPI 1 with pressure on radiology services.
Actions	1. NCHPB to escalate staffing issues and the use of one PET CT scanner between NHSH and NHSG
Risk Status	Tolerate

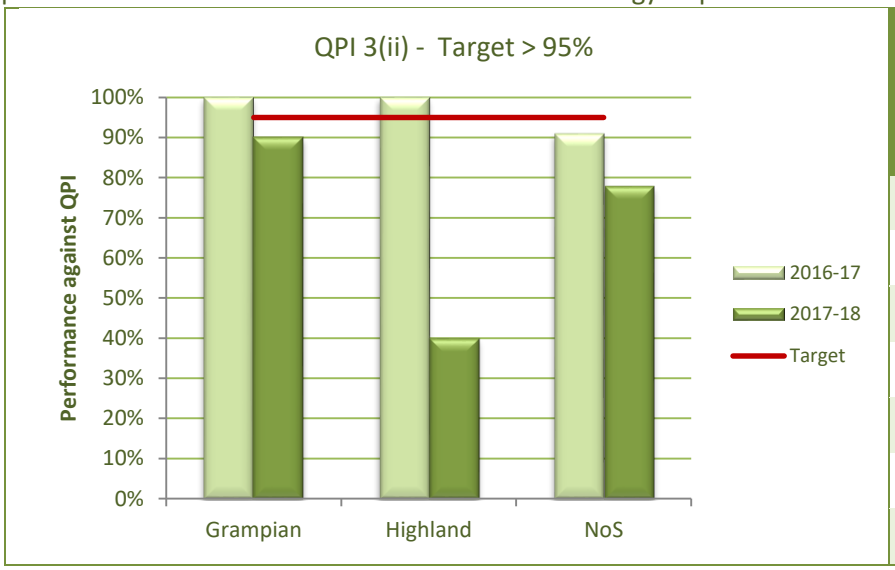
QPI 3	Positron Emission Tomography (PET CT) Staging
Proportion of patients with Classical Hodgkin Lymphoma (CHL) undergoing treatment with curative intent who undergo PET CT scan prior to first treatment and within 2 weeks of radiology request.	

Specification (i) Patients with CHL undergoing treatment with curative intent who undergo PET CT scan prior to first treatment.



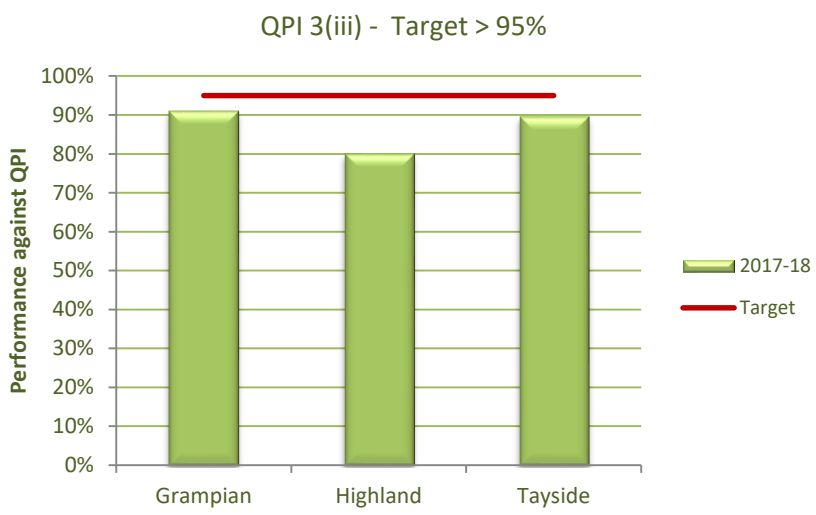
	Performance (%)	Numerator	Denominator
Grampian	**83.3%**	10	12
Highland	**71.4%**	5	7
Orkney	-	0	0
Shetland	-	0	0
Tayside*	-	-	-
W Isles	-	**0**	**0**
NoS	**81.8%**	**18**	**22**

Specification (ii) Patients with CHL undergoing treatment with curative intent who undergo PET CT scan prior to first treatment and within 2 weeks of radiology request



	Performance (%)	Numerator	Denominator
Grampian	**90.0%**	9	10
Highland	**40.0%**	2	5
Orkney	-	0	0
Shetland	-	0	0
Tayside*	-	-	-
W Isles	-	**0**	**0**
NoS	**77.8%**	**14**	**18**

Specification (iii) 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.

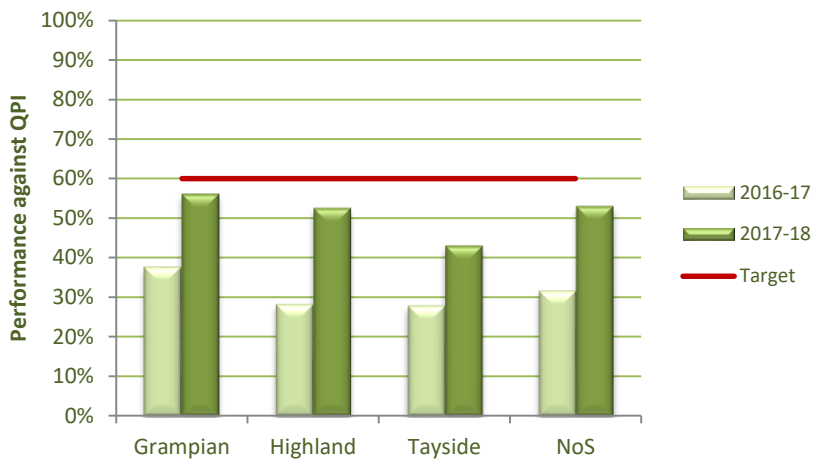


	Performance (%)	Numerator	Denominator
Grampian	**90.9%**	10	11
Highland	**80.0%**	4	5
Orkney	-	0	0
Shetland	-	0	0
Tayside*	-	-	-
W Isles	-	**0**	**0**
NoS	**89.5%**	**17**	**19**

Clinical Commentary	This QPI was not met in Grampian, Highland or Tayside and so across the North of Scotland. This specific QPI highlights the issues with PET scanning resource as outlined in QPI 1 and 2. This reinforces the need to look at resource in terms of PET scanning capacity across the North and radiology reporting capacity, especially in terms of the double reporting needed for PET scanning. The considerable delays in patients from NHS Highland getting imaging (specification (ii)) reflects the pressure on delivering the service to Highland from Aberdeen. However, it should be recognised that the small numbers reported here have an impact. The two patients failing from Grampian were a patient whose request occurred when the scanner was broken and subsequently moved elsewhere for treatment. The other patients was not likely to benefit from PET scanning because treatment escalation was not an option given his performance status. In Highland one patient was too unwell to travel to Aberdeen. The lack of rapid access to the Grampian PET scanner for the second patient, who needed urgent treatment, meant that a baseline PET scan had to be foregone. Both cases highlight the increase difficulty in accessing the Grampian PET Scanner with the growing workload across all areas of PET scanning and the need to strongly support radiology services.
	1. NCHPB to escalate staffing issues and the use of one PET CT scanner between NHSH and NHSG
Risk Status	Tolerate

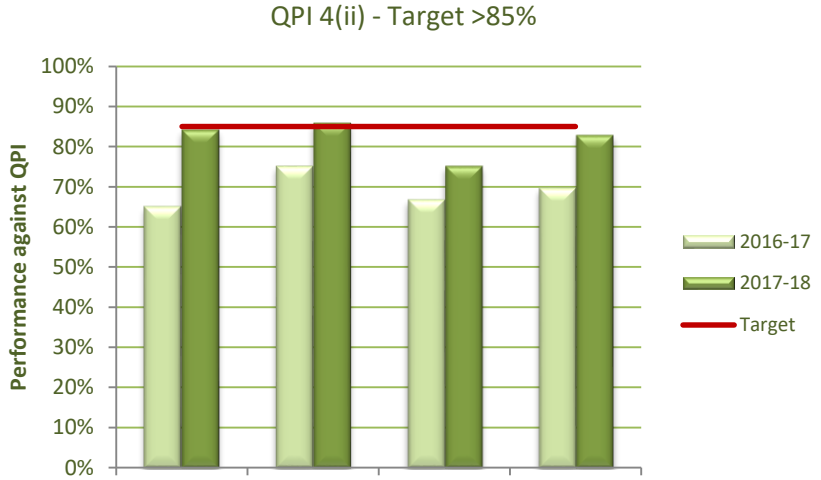
QPI 4	Cytogenetic Testing
Proportion of patients with Burkitt Lymphoma and DLBCL undergoing chemotherapy treatment with curative intent who have MYC testing as part of diagnostic process.	

Specification (i) Patients with Burkitt Lymphoma and DLBCL undergoing chemotherapy treatment with curative intent who have MYC results reported prior to first treatment.



	Performance (%)	Numerator	Denominator
Grampian	**56.0%**	28	50
Highland	**52.4%**	11	21
Orkney*	-	-	-
Shetland*	-	-	-
Tayside	**42.9%**	12	28
W Isles*	-	-	-
NoS	**52.9%**	**55**	**104**

Specification (ii) Proportion of patients who have MYC results reported within 3 weeks of commencing treatment.

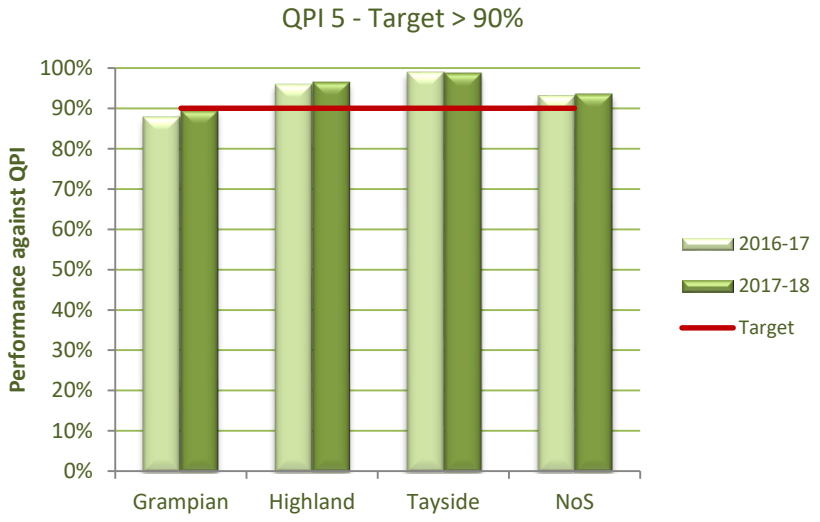


	Performance (%)	Numerator	Denominator
Grampian	**84.0%**	42	50
Highland	**85.7%**	18	21
Orkney*	-	-	-
Shetland*	-	-	-
Tayside	**75.0%**	21	28
W Isles*	-	-	-
NoS	**82.7%**	**86**	**104**

Clinical Commentary	The performance in this QPI is better than previous years but still below target and a little worse than elsewhere in Scotland. The three week window has improved the situation. This QPI remains controversial, whilst it is essential for the diagnosis of Burkitt lymphoma, only 4-6% of patients with DLBL have molecularly defined double or triple hit. Furthermore, treatment escalation of these patients, whilst commonly carried out, has not been convincingly proven to improve outcomes. We, therefore, test a lot of negative patients. All boards again highlight the fact that patients with these aggressive

	lymphomas cannot wait for a result and that lack of resource is the main challenge to timely MYC testing and reporting. Molecular haematology services have seen an increase in work load across haematological malignancy with the introduction of new tests applied to more patients. They have not had appropriately matched increase in resource. It is vital that laboratory diagnostic services are recognised as crucial to the cancer pathway. This has not been the case historically with ongoing pressure for efficiency savings across the board in laboratories. Persistent failure of this QPI is at least in part contributed to by this approach to laboratory funding. Grampian has a senior scientist who now attends our MDT so tracking of the cases is better. Each board highlighted individual cases in whom technical difficulties led to failure to get a MYC result and this will always be an issue with some cases because of poor quality sample or technical failure, hence the relatively low target. We still need the development of the integrated pathology report as discussed in previous years. We see no progress on this and as such the North and perhaps Scotland as a whole has fallen behind developments in England.
Actions	1. All boards to support laboratory funding and resource issues. This should be part of recognition of the diagnostic process as an equally important component of the cancer pathway when compared with the radiological and clinical components. 2. Submit proposal to change definition of this QPI at the next formal review
Risk Status	Mitigate

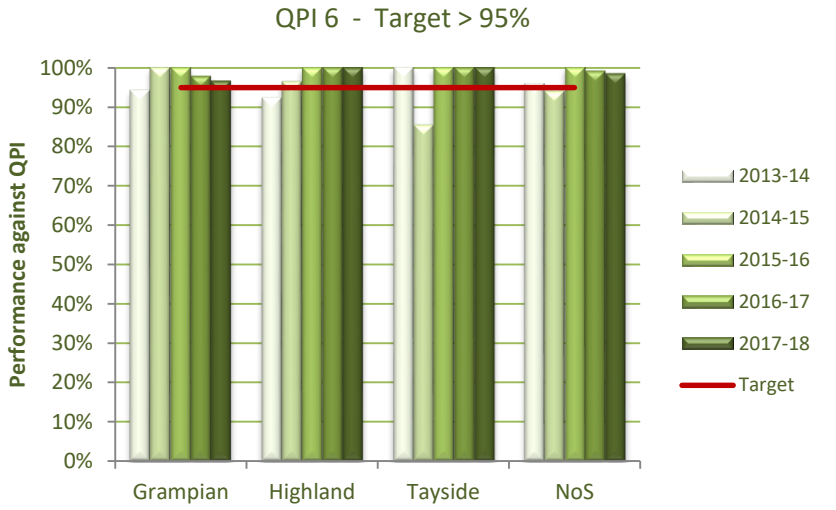
QPI 5	Lymphoma MDT
Proportion of patients with lymphoma who are discussed at MDT meeting within 8 weeks of diagnosis.	



	Performance (%)	Numerator	Denominator
Grampian	**89.4%**	110	123
Highland	**96.5%**	55	57
Orkney*	-	-	-
Shetland*	-	-	-
Tayside	**98.7%**	77	78
W Isles*	-	-	-
NoS	**93.6%**	**249**	**266**

Clinical Commentary	This QPI was met by all boards. There has been better support of the MDT by pathology in Grampian this year, resulting in less delays in MDT discussions. Only two patients were missed from Highland, one for clinical reasons and one for logistic reasons (Christmas). However, staffing issues, especially in haematological pathology and including appropriate succession planning is crucial if timely MDT discussion is to be maintained. The most senior lymphoma pathologist in Grampian is likely to retire in the next 2-3 years and must be replaced in a timely manner.
Actions	1. NCHPB to highlight Grampian's pathology resource issue so that forward planning can commence to ensure optimum service quality
Risk Status	Tolerate

QPI 6	Treatment for Follicular Lymphoma and Diffuse Large B-Cell Lymphoma
Proportion of patients with follicular lymphoma and DLBCL undergoing treatment with chemotherapy who receive anti-B cell monoclonal antibody therapy.	



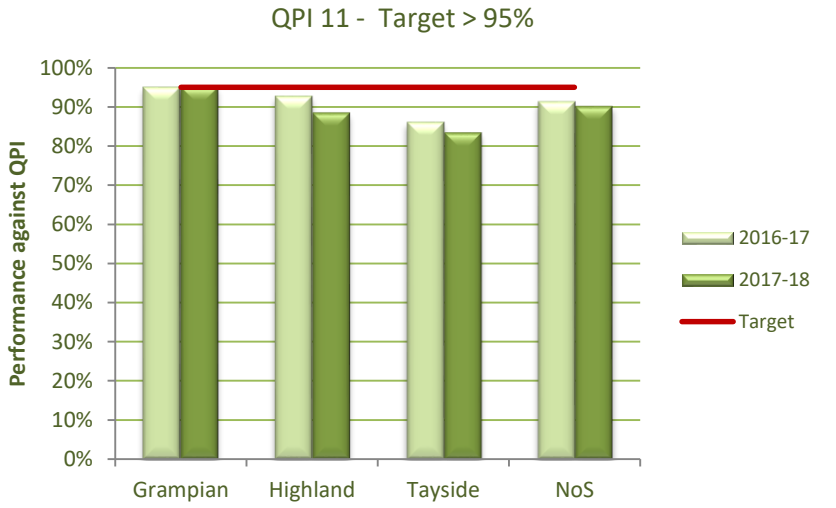
	Performance (%)	Numerator	Denominator
Grampian	**96.6%**	56	58
Highland	**100%**	26	26
Orkney*	-	-	-
Shetland*	-	-	-
Tayside	**100%**	39	39
W Isles*	-	-	-
NoS	**98.4%**	**127**	**129**

Clinical Commentary	Once again this QPI was achieved in all boards. This is not a useful QPI given that immuno-chemotherapy has been the backbone of B-cell lymphoma treatment for nearly two decades now and is firmly entrenched in practice.
Actions	1. Consider proposing to drop this QPI at the next formal review
Risk Status	Tolerate

QPI 10	Primary Cutaneous Lymphoma
Proportion of patients with primary cutaneous lymphoma who are discussed at a specialist MDT meeting which includes representation from pathology, dermatology, oncology ± haemato-oncology.	

Clinical Commentary	Due to small numbers data are not presented at NHS Board level and it is not possible to compare results between NHS Boards in the North of Scotland. None of the four patients diagnosed with primary cutaneous lymphoma met this QPI. At 0% this is considerably lower than the QPI target of 95%. Most cases in Grampian are discussed at the dermatology MDT as these are primarily managed by dermatologists. Highland use the Regional MDT in Glasgow for advanced and progressive cases, however they discuss early cases in-house. There is need to clarify the discussion pathway of these patients within the NoS to ensure patient cases are being discussed by the appropriate team.
Actions	1. NCHPB to ensure each cancer centre in NoS have a clear discussion pathway for these patients ensuring that there is representation from pathology, dermatology, oncology ± haemato-oncology present. 2. Explore the possibilities of a regional MDT for this patient group 3. Submit proposal to change the definition of this QPI at the next formal review
Risk Status	Mitigate

QPI 11	Hepatitis and HIV Status
Proportion of patients with lymphoma undergoing SACT who have hepatitis B, hepatitis C and HIV status checked prior to treatment.	

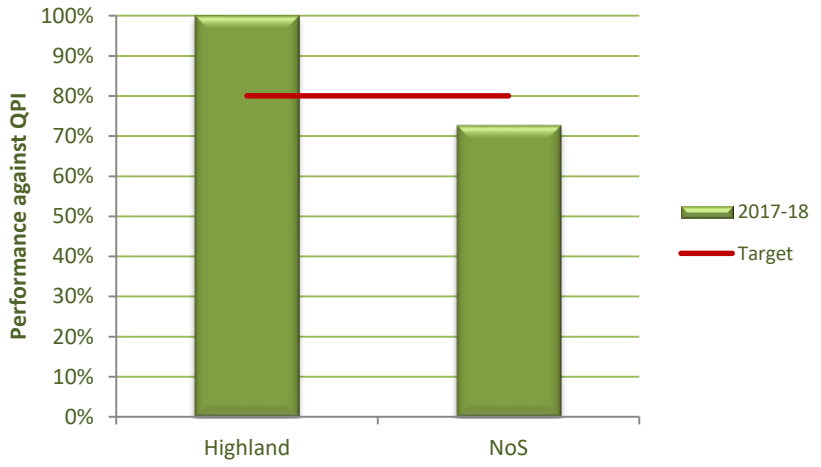


	Performance (%)	Numerator	Denominator
Grampian	**94.9%**	94	99
Highland	**88.4%**	38	43
Orkney*	-	-	-
Shetland*	-	-	-
Tayside	**83.3%**	50	60
W Isles*	-	-	-
NoS	**90.0%**	**188**	**209**

Clinical Commentary	This QPI was not met by Grampian, Highland or Tayside. Tayside accept that this is a disappointing result. Hepatitis testing has been configured as an automatic request item for lymphoma patients in Tayside and further education will be initiated. Grampian are approaching this in the same way from the point of view of a 'lymphoma test bundle' and also looking to see if Chemocare can be developed to prevent rituximab being authorised without a hepatitis result. In Highland, one case was missed and a couple of cases had their tests partly completed. This is an important QPI and there are no system failures to excuse this, it is predominantly down to robust clinical stewardship backed up by automated checks and balances where possible.
Actions	1. All three cancer centres in NoS to focus on ongoing education regarding the importance of hepatitis and HIV testing. 2. NCHPB to explore ways of the possibility of a safeguard within Chemocare for patients receiving rituximab.
Risk Status	Mitigate

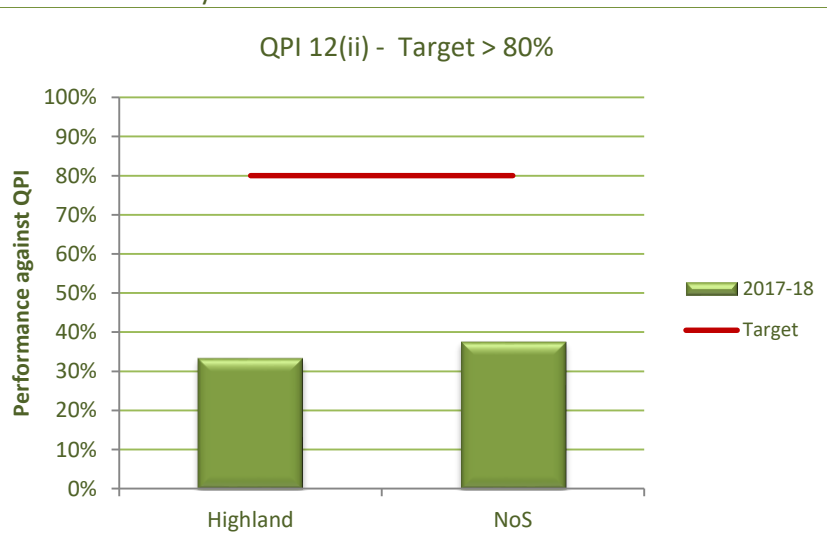
QPI 12	Treatment Response in Hodgkin Lymphoma
Proportion of patients with advanced Hodgkin Lymphoma (stage 2B and above) who receive ABVD chemotherapy treatment, that have their treatment evaluated with PET CT scan after 2 cycles of chemotherapy, and where the report is available within 3 days.	

Specification (i): Patients with advanced Hodgkin Lymphoma (stage 2B and above) who receive ABVD chemotherapy treatment that undergo PET CT scan after 2 cycles of chemotherapy.



	Performance (%)	Numerator	Denominator
Grampian*	-	-	-
Highland	**100%**	6	6
Orkney	-	0	0
Shetland	-	0	0
Tayside*	-	-	-
W Isles	-	0	0
NoS	**72.7%**	**8**	**11**

Specification (ii): Patients with advanced Hodgkin Lymphoma (stage 2B and above) who receive ABVD chemotherapy treatment that undergo PET CT scan after 2 cycles of chemotherapy where the report is available within 3 days.

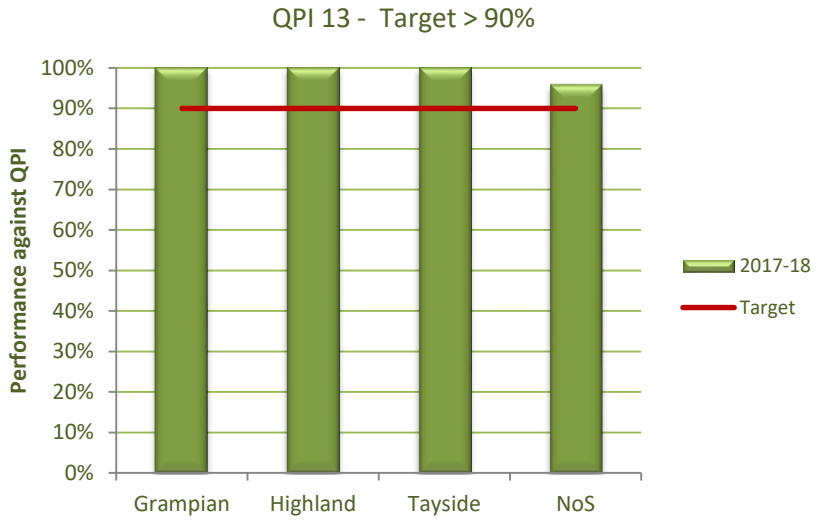


	Performance (%)	Numerator	Denominator
Grampian*	-	-	-
Highland	**33.3%**	2	6
Orkney	-	0	0
Shetland	-	0	0
Tayside	-	0	0
W Isles	-	**0**	**0**
NoS	**37.5%**	**3**	**8**

Clinical Commentary	Numbers were small this year. One Grampian patient had a PET after three cycles rather than two for logistic reasons. The risk adaptive therapy for advanced stage HL based largely on the RATHL study is a well-accepted and implemented approach to care of this patient group. There are some modifications on a case by case basis. The failure of this QPI is the result of the issues mentioned in multiple of the QPIs in this report relating to PET scanning, namely radiology resources and especially the

	need to double report PET scans which makes the three day target very challenging. The service to Highland from the Grampian PET Centre is again highlighted as an issue in meeting this QPI.
Actions	1. NCHPB to escalate staffing issues and the use of one PET CT scanner between NHSH and NHSG 2. NCHPB to investigate the possibilities of registrars being able to order PET scans within national guidelines
Risk Status	Tolerate

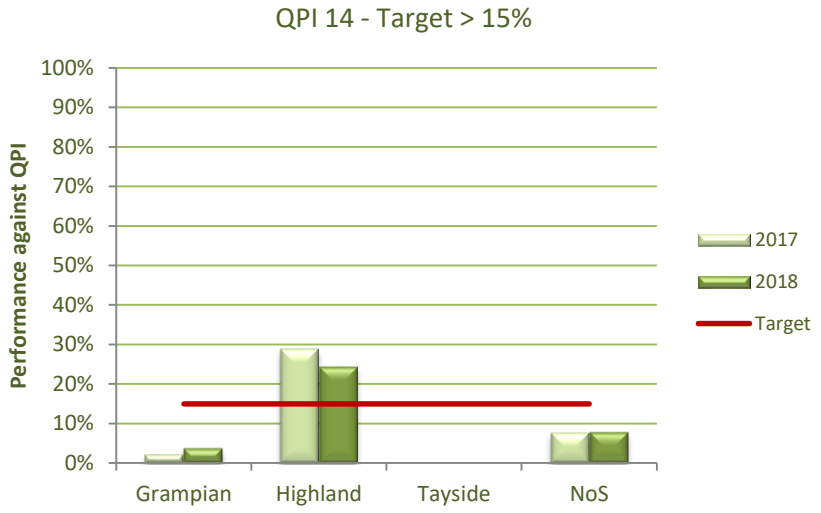
QPI 13	Maintenance Therapy for Follicular Lymphoma
Proportion of patients with follicular lymphoma undergoing treatment with R-Chemotherapy who receive maintenance treatment with anti-B cell monoclonal antibody therapy.	



	Performance (%)	Numerator	Denominator
Grampian	**100%**	10	10
Highland	**100%**	5	5
Orkney*	-	-	-
Shetland	-	0	0
Tayside	**100%**	8	8
W Isles	-	**0**	**0**
NoS	**95.8%**	**23**	**24**

Clinical Commentary	This QPI was met by all Boards in NoS.
Actions	No actions required
Risk Status	Tolerate

QPI 14	Clinical Trials and Research Study Access
Proportion of patients diagnosed with lymphoma who are consented for a clinical trial / research study. Data reported for patients enrolled in trials in 2018.	



	Performance (%)	Numerator	Denominator
Grampian	**3.8%**	5	132
Highland	**24.3%**	16	66
Orkney*	-	-	-
Shetland*	-	-	-
Tayside	**0%**	0	96
W Isles*	-	-	-
NoS	**7.9%**	**24**	**303**

Clinical Commentary	There have been relatively few large national trials open for the main lymphoma subsets during the last couple of years. This is about to improve. Tayside highlights the lack of administrative staff from trials and this is very important to correct.
Actions	1. All clinicians should consider opening relevant clinical trials in their tumour areas. When this is not possible patient referrals to other sites for access to clinical trials should be considered. 2. *NCHPB to explore ways to improve local administration support for participation*
Risk Status	Tolerate

6. References

1. Information Services Division. Cancer in Scotland (2018). Available at: https://www.isdscotland.org/Health-Topics/Cancer/Publications/2018-10-30/Cancer_in_Scotland_summary_m.pdf

2. Information Services Division. Cancer Incidence Projections for Scotland 2013-2027. August 2015. Available at: http://www.isdscotland.scot.nhs.uk/Health-Topics/Cancer/Cancer-Statistics/Incidence-Projections/

3. ISD, NHS National Services Scotland. Cancer Survival in Scotland, 1987-2011. 2015. https://isdscotland.scot.nhs.uk/Health-Topics/Cancer/Publications/2015-03-03/2015-03-03-CancerSurvival-Report.pdf

4. Scottish Cancer Taskforce, 2017. Lymphoma Clinical Performance Indicators, Version 3.0. Health Improvement Scotland. Available at http://www.healthcareimprovementscotland.org/our_work/cancer_care_improvement/programme_resources/cancer_qpis.aspx

5. http://www.isdscotland.org/Health-Topics/Cancer/Cancer-Audit/

6. https://www.nrhcc.scot/uploads/tinymce/NCA/NCA%20Governance/NCA-GOV-QPI-Process-Explained.pdf

Appendix 1: Clinical trials for lymphoma open in the North of Scotland in 2018.

Trial	Principle Investigator	Patients Consented
Biomarkers and classical Hodgkin lymphoma (BACH)	Peter Forsyth (Highland) Dominic Culligan (Grampian)	y
CANDEL	Kim Ah-See (Grampian)	y
ENRICH: Ibrutinib for untreated mantle cell lymphoma	Peter Forsyth (Highland) Dominic Culligan (Grampian)	y
EuroNet PHL-LP1 Hodgkin's	Hugh Bishop (Grampian)	y
HORIZONS	Chrissie Lane (Highland)	y
MaPLe: Molecular profiling for lymphoma	Peter Forsyth (Highland)	y
TIER	Dominic Culligan (Grampian)	y
MCL Biobank Observational Study	Julie Gillies (Highland)	n