

Quality Performance Indicators Audit Report

Tumour Area:	Acute Leukaemia
Patients Diagnosed:	1 st July 2017 – 30 th June 2018
Published Date:	28 th October 2019
Clinical Commentary:	Dr Sudhir Tauro

1. Acute Leukaemia in Scotland

With 589 new cases of leukaemia diagnosed in Scotland during 2016; leukaemia was the 14th most common cancer, with incidence declining by 17% in the last 10 years¹. Of these, 243 patients were diagnosed with acute leukaemia.

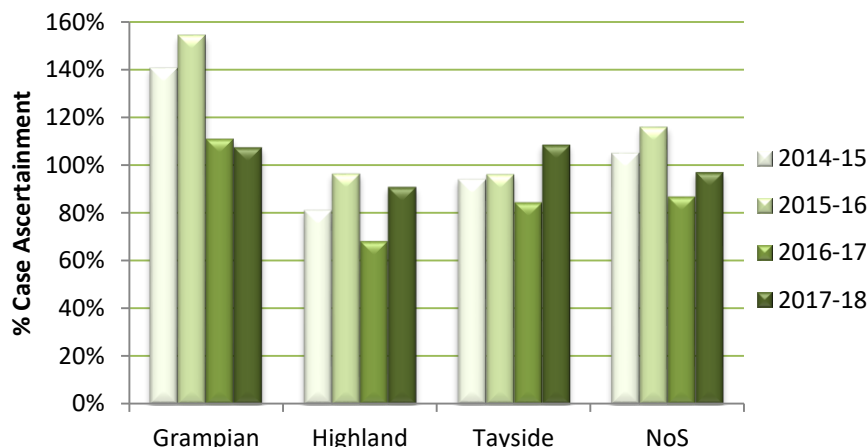
Relative survival from all types of leukaemia in Scotland has increased considerably since 1987-1991². The table below details the percentage change in 1 and 5 year relative survival for patients diagnosed 1987-1991 to 2007-2011.

Relative age-standardised survival for leukaemia in Scotland at 1 year and 5 years showing percentage change from 1987-1991 to 2007-2011².

Relative survival at 1 year (%)		Relative survival at 5 years (%)	
2007-2011	% change	2007-2011	% change
73.3%	+ 17.3%	53.6%	+ 17.2%

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

Between 1st July 2017 and 30th June 2018 a total of 66 cases of acute leukaemia were diagnosed in the North of Scotland and recorded through audit. Case ascertainment for the North of Scotland was high at 97.1%. As such, QPI calculations based on data captured are considered to be representative of patients diagnosed with acute leukaemia during the audit period. For patients included within the audit, data collection was near complete.

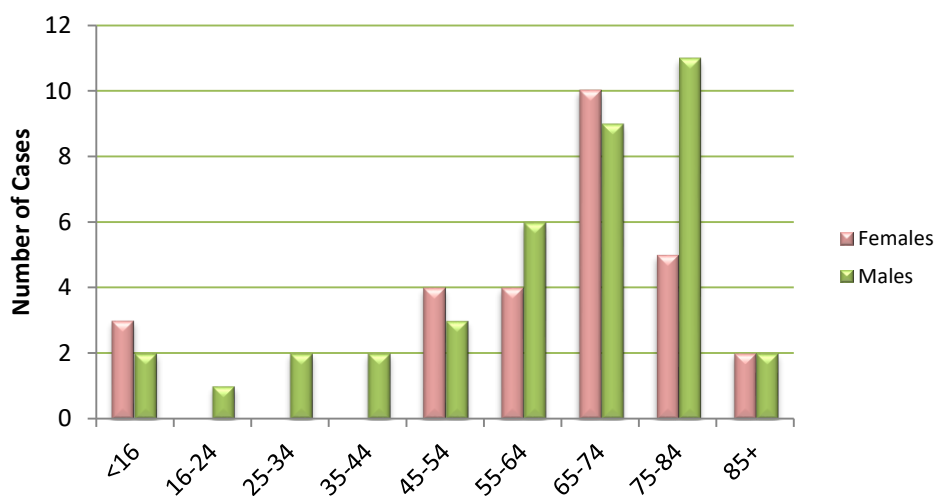


Case ascertainment by NHS Board for patients diagnosed with acute leukaemia in 2014-2018.

	Grampian	Highland	Orkney	Shetland	Tayside	W Isles	NoS
No. of Patients 2017-18	32	16	0	0	18	0	66
% of NoS total	48.5%	24.2 %	0%	0%	27.3%	0%	100%
Mean ISD Cases 2012-16	30	18	2	1	17	1	68
% Case ascertainment 2017-18	107.4%	90.9%	0%	0%	108.4%	0%	97.1%

3. Age Distribution

The figure below shows the age distribution of patients diagnosed with acute leukaemia in the North of Scotland in 2017-18, with numbers of patients diagnosed highest in the 65-74 years age bracket for women and 75-84 years age bracket for men.



Age distribution of patients diagnosed with acute leukaemia in the North of Scotland 2017-2018.

4. Performance against Quality Performance Indicators (QPIs)

This document reports the performance of the (NHS Boards in the) North of Scotland against the revised QPI definitions published in 2018 for patients diagnosed between July 2017 and June 2018³, while further information on datasets and measurability used are available from Information Services Division⁴. Data for QPIs are presented by Board of diagnosis. QPI 7 is reported in year in arrears therefore results presented here are for patients diagnosed in 2016-17. Please note that where QPI definitions have been amended, results are not compared with those from previous years.

Due to the small numbers of patients diagnosed with Acute Leukaemia annually, it was agreed by the QPI development group that annual results for the Acute Leukaemia QPIs would be presented at a regional level rather than for individual NHS Boards. However, three yearly cumulative national reports will include information presented by individual NHS Boards.

QPI results presented include only patients aged 16 years and over. It has been agreed at a national level that analysis of patients under the age of 16 years will not be included in published QPI reports, due to the very small numbers of patients involved. However, these data have been analysed and results supplied to clinical staff for consideration, should any obvious areas for improvement in service be identified.

Further information on how QPI data is analysed and reported can be found at https://www.nrhc.scot/uploads/tiny_mce/NCA/Images/Factsheet%20QPIs.pdf

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 risk associated QPIs will be 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.

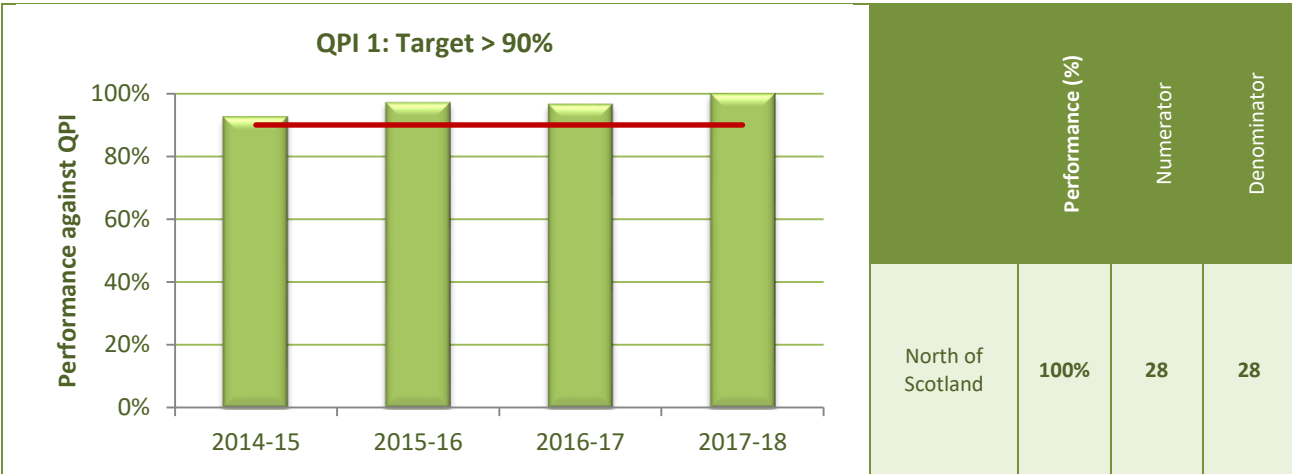
Tolerate - Accept the risk at its current level

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.

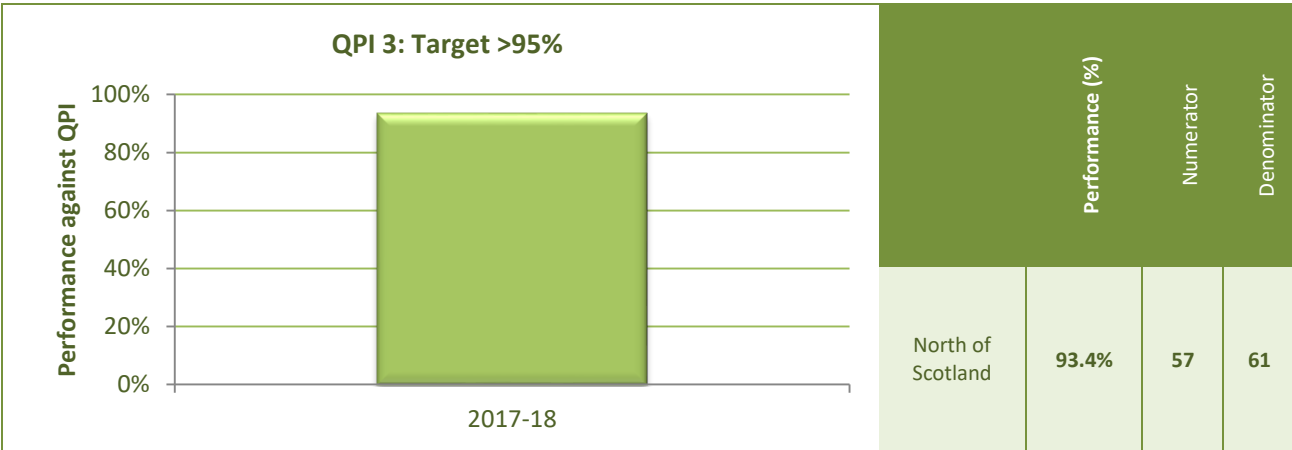
Immediate - Immediate action is required to prevent the risk reoccurring. This risk will have major impact on patient care delivery and the consequences thereafter. Very few risks should occur in this level.

QPI 1	Complete Diagnostic Panel
Proportion of patients with acute leukaemia undergoing treatment with curative intent who have complete diagnostic panel undertaken.	



Clinical Commentary	The region demonstrates a consistently high level of performance with all patients receiving potentially curative treatment having a comprehensive diagnostic work-up.
Actions	No actions required
Risk Status	Tolerate

QPI 3	MDT Discussion
Proportion of patients with acute leukaemia who are discussed at MDT meeting within 8 weeks of diagnosis.	



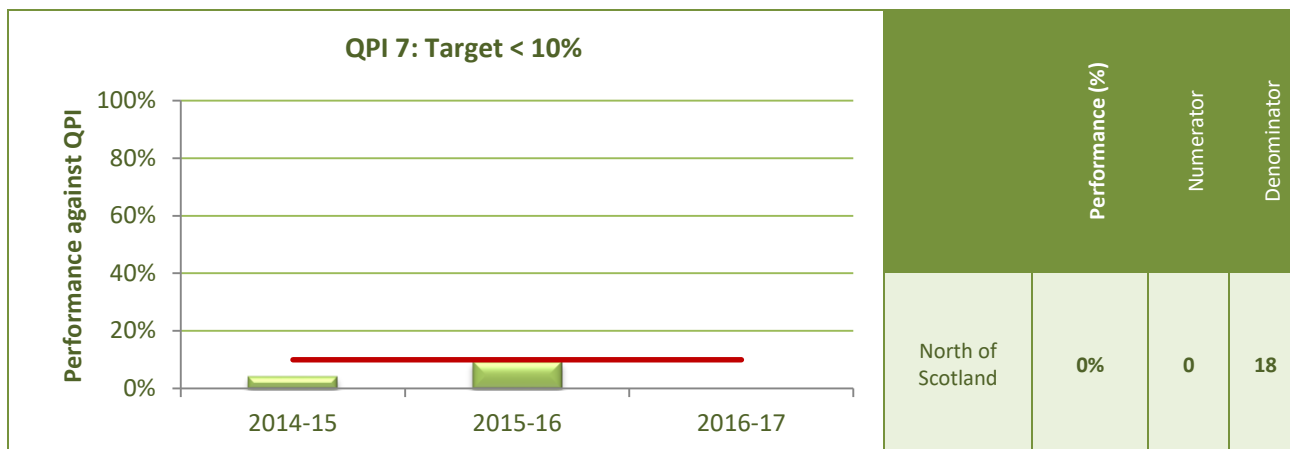
Clinical Commentary	The Performance of the region is almost compliant with the expected standard with the exception of NHS Highland who missed the target. NHS Highland do not have an MDT coordinator to track and list patients to be discussed at MDT.
Actions	<ol style="list-style-type: none"> Boards to consider developing pathways to track a new laboratory diagnosis of acute leukaemia (e.g. from flow-cytometry) to the MDT co-ordinator Explore options in appointing an MDT coordinator in NHS Highland to facilitate the process
Risk Status	Proposed status - Escalate

QPI 5	Early Deaths
Proportion of patients with acute leukaemia being treated with curative intent who die within 30/35 days of treatment.	

Specification (i) Patients with Acute Myeloid Leukaemia (AML) treated with curative intent who die within 30 days of treatment.				Specification (ii) Patients with Acute Lymphoblastic Leukaemia (ALL) treated with curative intent who die within 35 days of treatment.				
	Target	Performance (%)	Numerator	Denominator	Target	Performance (%)	Numerator	Denominator
Patients aged 16 to 60 years	< 8%	0%	0	11	< 8%	-	-	-
Patients aged over 60 years	< 18%	10.0%	1	10	< 20%	-	-	-

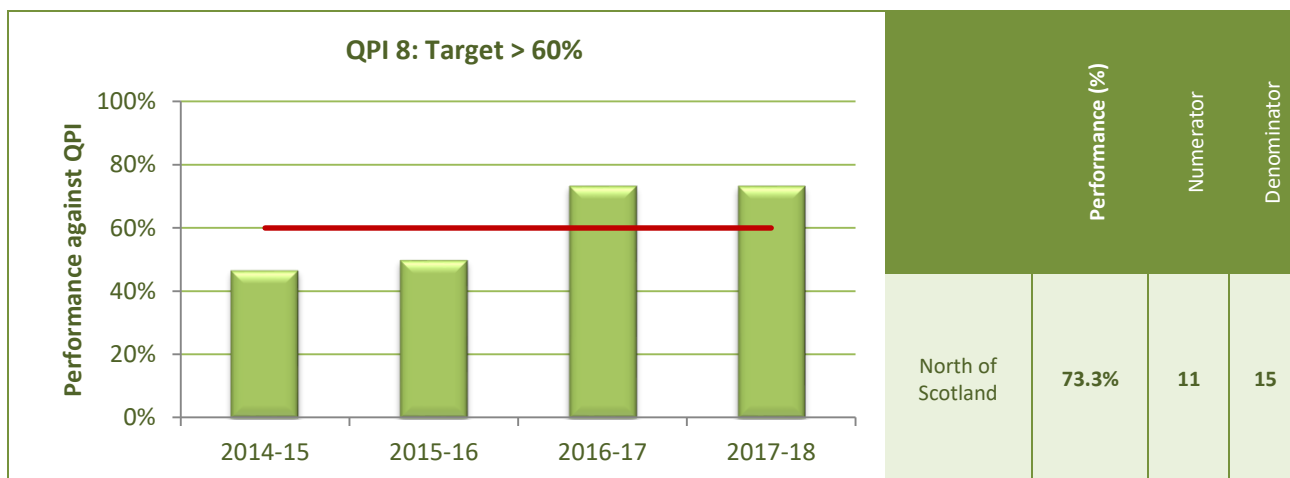
Clinical Commentary	The performance of the region is compliant with the expected standard.
Actions	No actions identified
Risk Status	Tolerate

QPI 7	Deaths in Remission
Proportion of patients with acute leukaemia undergoing treatment with curative intent who die in first complete remission (CR), within 1 year of diagnosis. This QPI is reported 1 year in arrears so data presented is for patients diagnosed in 2016-17.	



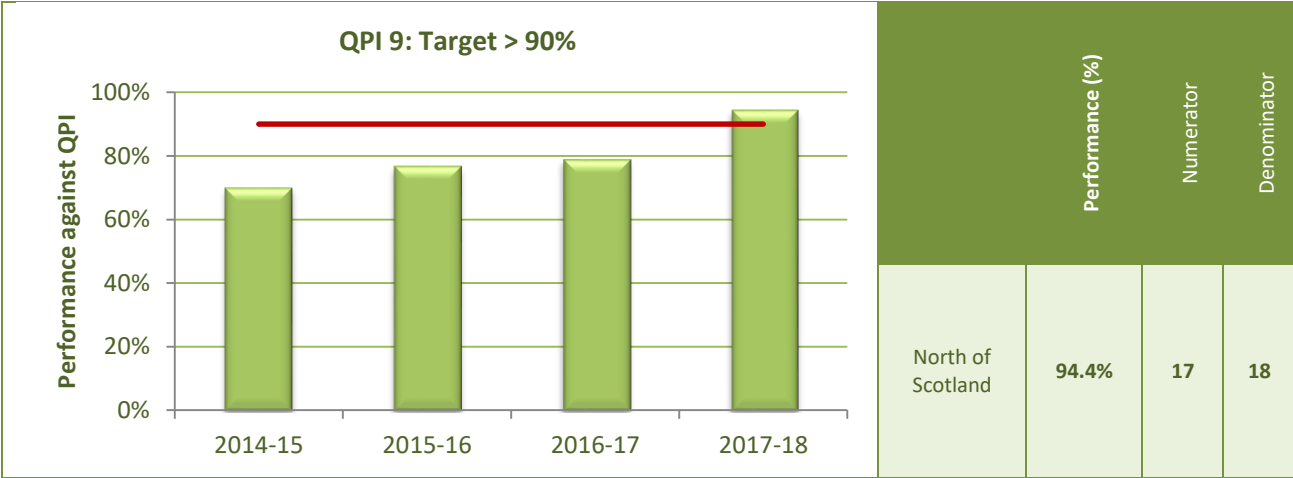
Clinical Commentary	The performance of the region is compliant with the expected standard.
Actions	No actions identified
Risk Status	Tolerate

QPI 8	Clinical Trials with Curative Intent
Proportion of patients with acute leukaemia being treated with curative intent who are enrolled in a clinical trial.	



Clinical Commentary	Despite small patient numbers, the region appears to be performing at a level that is consistently higher than the expected standard.
Actions	No actions required
Risk Status	Tolerate

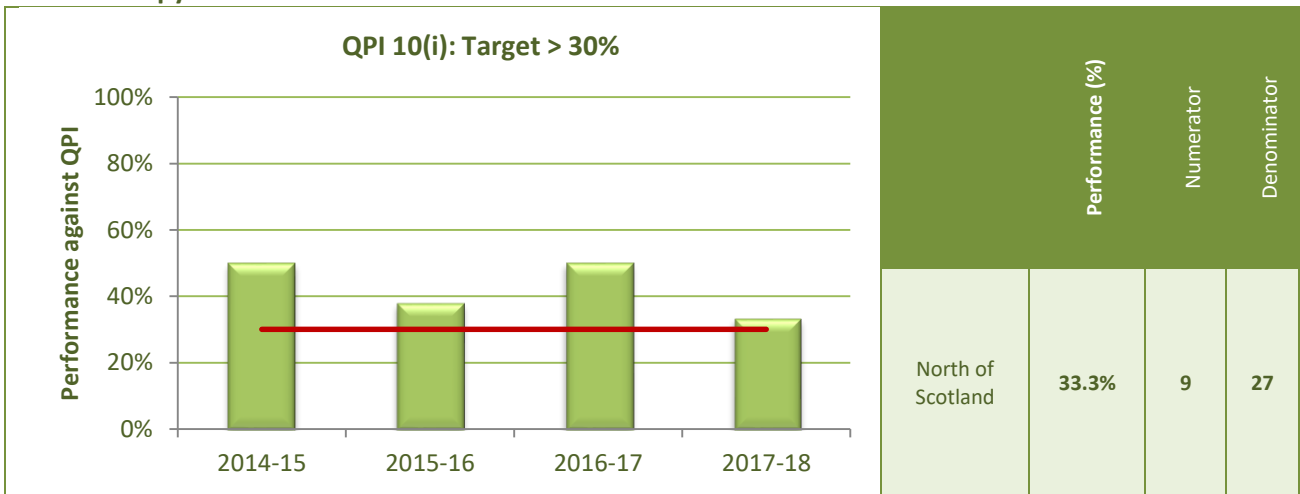
QPI 9	Tissue Typing for Transplant
Proportion of patients with acute leukaemia eligible for transplant (i.e. over 16 years of age and under 65 years of age) being treated with curative intent should have a specimen sent to the lab for tissue typing at diagnosis.	



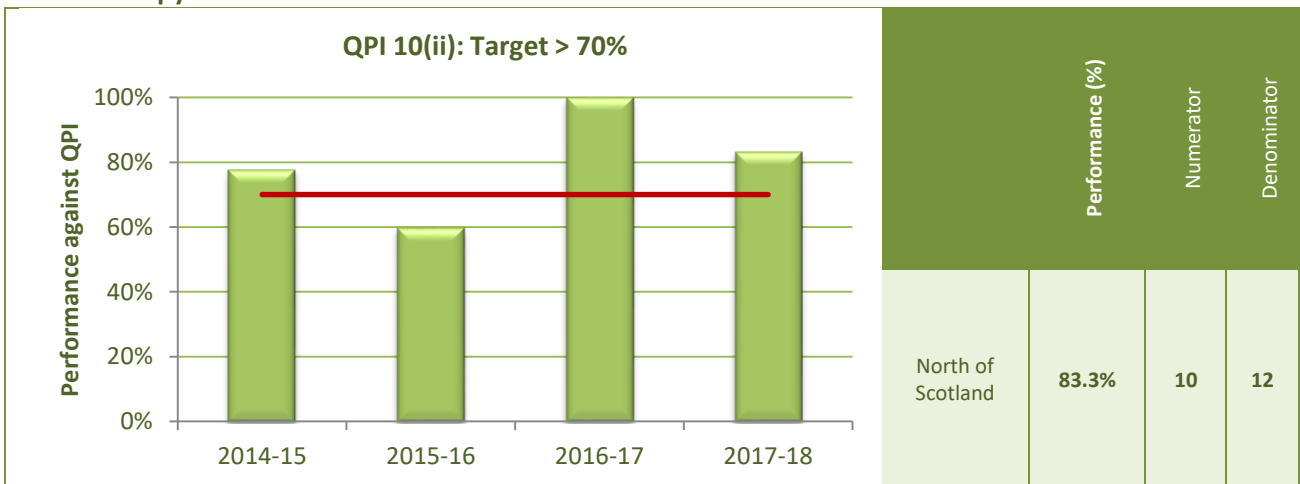
Clinical Commentary	There has been a clear, incremental improvement in performance over the last few years and the region now achieves the expected standard of performance
Actions	No actions required
Risk Status	Tolerate

QPI 10	Intensive Chemotherapy in Older Adults
Proportion of patients with acute leukaemia over 60 years of age with performance status (PS) 0-1 who receive intensive chemotherapy.	

Specification (i) Patients with acute leukaemia 60 years of age and over who receive intensive chemotherapy.

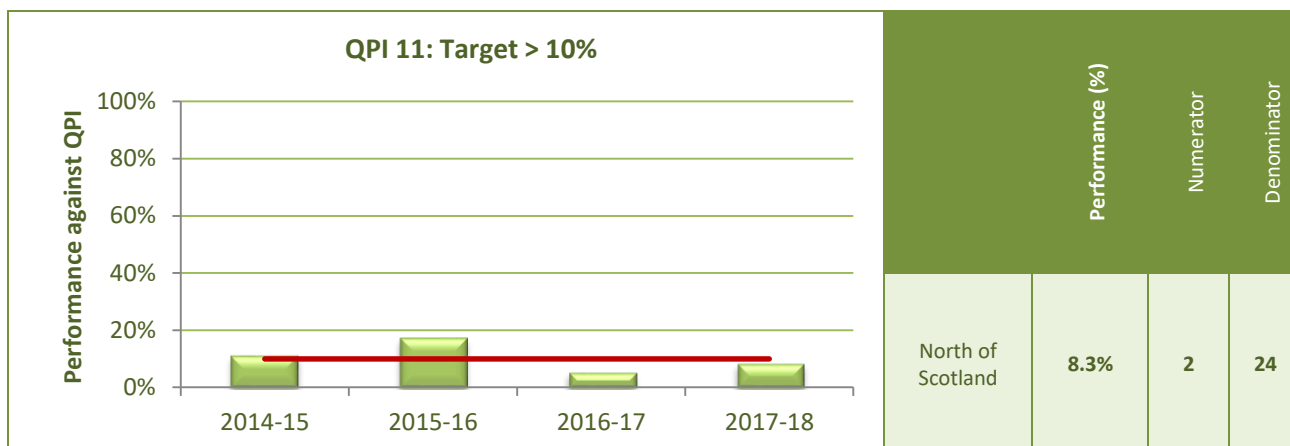


Specification (ii) Patients with acute leukaemia 60 years of age and over who receive intensive chemotherapy who are treated within a clinical trial.



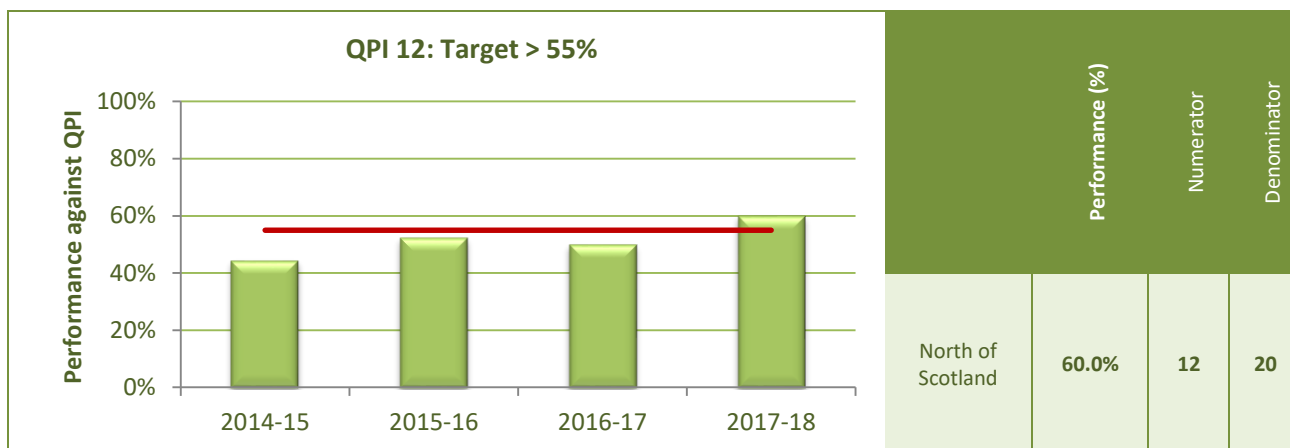
Clinical Commentary	All boards in the North of Scotland met this target with the exception of NHS Highland who marginally missed the target. The therapy of patients over 60 years of age with acute leukaemia remains challenging with performance status not always reflective of frailty. Small patient numbers and emerging data on the potential superiority of non-intensive approaches over intensive chemotherapy in older patients with specific molecular sub-types of AML mean that it would be appropriate to tolerate these results which indicate satisfactory standard of performance in the region.
Actions	1. Continue to identify patients suitable for intensive chemotherapy and offer trial participation
Risk Status	Tolerate

QPI 11	Clinical Trials with Non Curative Intent
Proportion of patients with acute leukaemia being treated with non curative intent who are enrolled in a clinical trial.	



Clinical Commentary	<p>NHS Tayside did not meet this QPI target due to the limited clinical trials available. There are not many suitable trials for this group of patients; some studies expect a performance status of 0-2, and most deliver hospital-based treatment. The recruitment rates in the existing Phase 2 national trial (LI-1) have declined and no improvement in outcomes have been demonstrated, with an increase in mortality evident in some experimental arms in the trial. With the futility of conventional chemotherapy-based approaches being recognised in certain AML sub-types, it may be more appropriate to offer patients alternative treatments (e.g. hypomethylating agents) outwith a trial. It is therefore not surprising that the QPI target has not been achieved for the region, and it is likely that these results will mirror those in other regions.</p> <p>The QPI performance relates to the trials that are currently open and since the availability and suitability of trails will vary over time, recruitment to trials and performance against this QPI can be expected to be variable. With the LI-1 trial due to close to recruitment later on this year, there will be a hiatus before the successor trial is open.</p> <p>Results from pharmaceutical industry-led studies are encouraging and will possibly identify effective therapies targeted to disease sub-types. The AGILE trial has been opened in NHS Tayside and patients have been screened, but low incidence of <i>IDH1</i> mutant AML means that only a few patients will be eligible for the study. NHS Tayside plans to open the successor study to LI-1, based on proposed changes and will therefore be in a position to offer additional options to patients</p>
Actions	1. All boards to consider opening the successor trial to LI-1
Risk Status	Proposed risk status - Mitigate

QPI 12	Palliative Treatment
Proportion of patients with AML who are suitable only for treatment with non-curative intent who receive an appropriate palliative chemotherapy regimen.	

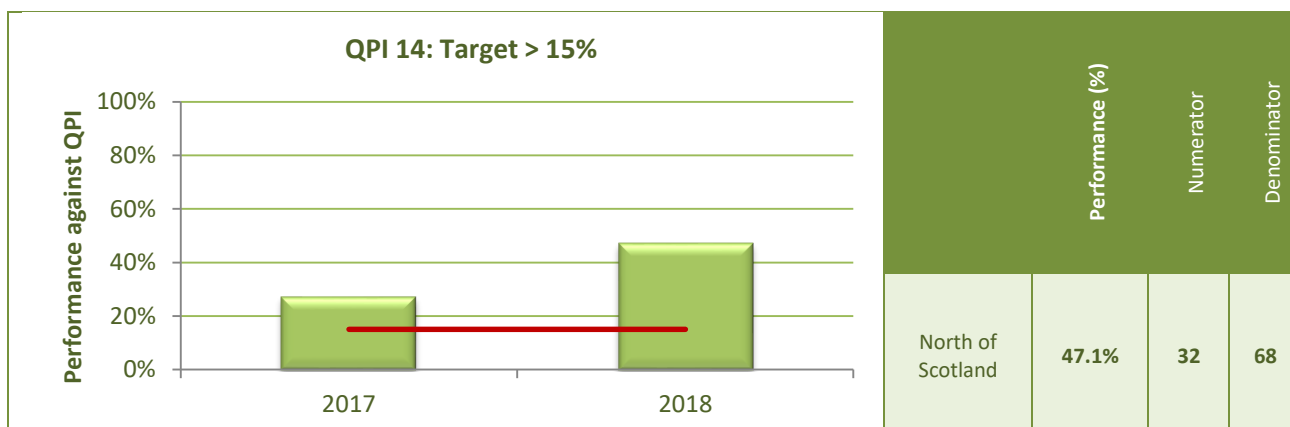


Clinical Commentary	The management of these patients can be extremely challenging on account of age, co-morbidity, frailty and absence of effective treatments that can be easily administered to patients. Despite these challenges, the region has performed admirably and achieved the revised realistic QPI target for the first time since QPI data capture.
Actions	1. NoS NHS boards to consider developing care pathways that could facilitate delivery of home-based therapy
Risk Status	Tolerate

QPI 13	Early Deaths in Patients with Acute Promyelocytic Leukaemia
Proportion of patients with APL who die within 30 days of diagnosis. Target <25%	

Clinical Commentary	Only 1 patient was diagnosed with acute promyelocytic leukaemia in the region between 2017 and 2018 and did not experience early death. Based on this single patient, it is not possible to measure the performance of the region against this QPI.
Actions	No actions identified
Risk Status	Tolerate

QPI 14	Clinical Trials and Research Study Access
Proportion of patients diagnosed with Acute Leukaemia who are consented for a clinical trial / research study.	



Clinical Commentary	The data highlights an excellent level of performance in the region.
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, although, transfer to care to a different site and nature of the disease will pose challenges to patients, particularly those who are older and frailer.
Risk Status	Tolerate

References

1. Information Services Division. Cancer in Scotland, April 2018. http://www.isdscotland.org/Health-Topics/Cancer/Publications/2018-04-24/Cancer_in_Scotland_summary_m.pdf
2. 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>
3. Scottish Cancer Taskforce, 2018. Acute Leukaemia Clinical Performance Indicators, Version 3.0. Health Improvement Scotland. <http://www.healthcareimprovementscotland.org/his/idoc.ashx?docid=62bcc4fd-d9a6-45d3-aa86-d9ca14297884&version=-1>
4. <http://www.isdscotland.org/Health-Topics/Cancer/Cancer-Audit/>

Appendix 1: Clinical Trials for patient with Acute Leukaemia open for recruitment in the North of Scotland in 2018

Trial	Principle Investigator	Patients consented in 2018
AGILE	Sudhir Tauro (NHS Tayside)	Y
AML18	Sudhir Tauro (NHS Tayside) Caroline Duncan (NHS Highland) Dominic Culligan (NHS Grampian)	Y
AML19	Sudhir Tauro (NHS Tayside) Caroline Duncan (NHS Highland) Dominic Culligan (NHS Grampian)	Y
ELASTIC	Dominic Culligan (NHS Grampian)	Y
LI-1	Caroline Duncan (NHS Highland) Dominic Culligan (NHS Grampian)	Y
UKALL 14	Sudhir Tauro (NHS Tayside) Dominic Culligan (NHS Grampian)	Y
UKALL 2011	Sudhir Tauro (NHS Tayside) Gordon Taylor (NHS Grampian)	Y
FIGARO	Dominic Culligan (NHS Grampian)	N
MyeChild 01	Gordon Taylor (NHS Grampian)	N
Phase I/II study of gene-modified WT1 TCR therapy in MDS & AML patients	Dominic Culligan (NHS Grampian)	N
Phase1b study for patients with relapsed / Refractory AML	Sudhir Tauro (NHS Tayside)	N
UKALL60+	Sudhir Tauro (NHS Tayside) Caroline Duncan (NHS Highland)	N
Understanding and managing the coagulopathy of APL (Pilot Study)	Joanne Craig (NHS Highland)	N