

SOUTH EAST SCOTLAND CANCER NETWORK (SCAN) PROSPECTIVE CANCER AUDIT

Acute Leukaemia 2021 - 2022 COMPARATIVE AUDIT REPORT

PATIENTS DIAGNOSED IN BORDERS, FIFE, AND LOTHIAN

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Document History

Version	Circulation	Date	Comments
Version 1	Lead clinicians	23/11/2022	Data and comments agreed.
Version 2	SCAN Haematology Group lead clinicians	27/02/2023	Actions points and comments agreed. Chair's summary pending.
Version 3	SCAN Haematology Group	13/03/2023	For final comments.
Final Version	SCAN Group SCAN Governance Framework SCAN Action Plan Board Leads	24/03/2023	Assessed for disclosure and Board breakdowns removed.
Web Version	Published to SCAN Website	May 2024	

Chair Summary

There was a high level of attainment of QPI targets in this year's report. The two QPIs where targets were not achieved were in relation to QP9 Patients treated curatively who have tissue typing performed at diagnosis and QP12 proportion of patients with AML treated with non-curative intent who receive appropriate SACT regimen. For QP12 the proportion of patients was only slightly below target and on individual review of cases there were appropriate clinical reasons why SACT was not given to a number of these patients. In relation to QP9 concerning tissue typing a new system has been introduced in NHS Lothian whereby be samples are booked in at the local blood bank and are sent on for testing to the Glasgow H&I laboratory. This will allow for greater traceability and audit of these sample and should hopefully leave to an improvement in attainment against this target.

Huw Roddie
SCAN Lead for Acute Leukaemia,
March 2023

Action Points from 2021-22

- QPI8 Trial status should be clearly recorded at the regional weekly MDM to allow more accurate reporting.
- QPI9 Tissue Typing samples taken will be recorded on APEX making dates more accessible.

Action Points from 2020-21

- QPI3 Ensure all patients are registered at the MDM even if management will not change.

Acute Leukaemia QPI Attainment Summary 2021-22		% Target	SCAN		
QPI 1 Diagnostic Panel		90	N 26 D 26	100%	
QPI 3 Proportion of patients discussed at MDT		95	N 53 D 55	96.4%	
QPI 5 Patients treated with curative intent who die within 30/35 days of treatment	AML 16-60	<8	N 0 D 9	0.0%	
	AML >60 years	<18	N 0 D 13	0.0%	
	ALL 16-60 years	<8	N 0 D 2	0.0%	
	ALL > 60 years	<20	N 0 D 1	0.0%	
QPI 7 Patients treated with curative intent who die in first complete remission, within 1 year of diagnosis.		<10	N 1 D 17	5.9%	
QPI 8 Patients treated with curative intent , enrolled on a clinical trial (16-60 years)		25	N 3 D 10	30.0%	
QPI 9 Patients treated curatively who have tissue typing performed at diagnosis.		90	N 5 D 12	41.7%	
QPI 10 Intensive chemotherapy in older adults (over 60)	PS 0-1 receiving intensive chemotherapy	30	N 17 D 32	53.1%	
	Receiving intensive chemotherapy and enrolled in a clinical trial	25	N 5 D 18	27.8%	
QPI 12 Proportion of patients with AML treated with non curative intent who receive appropriate SACT regimen		40	N 4 D 11	36.4%	
QPI 13 Proportion of patients with APL who die within 30 days of diagnosis		<25	N 0 D 1	0.0%	

Introduction and Methods

Cohort

This report covers patients newly diagnosed with Acute Leukaemia in Borders, Fife, and Lothian Health Board areas between 1st July 2019 and 30th June 2020. Management and audit of patients with Acute Leukaemia in Dumfries & Galloway is via the West of Scotland Cancer Network. The results contained within this report have been presented by NHS board of diagnosis.

Dataset and Definitions

The QPIs have been developed collaboratively with the three Regional Cancer Networks, Information Services Division (ISD), and Healthcare Improvement Scotland. QPIs will be kept under regular review and be responsive to changes in clinical practice and emerging evidence.

The overarching aim of the cancer quality work programme is to ensure that activity at NHS board level is focused on areas most important in terms of improving survival and patient experience whilst reducing variance and ensuring safe, effective and person-centered cancer care.

Following a period of development, public engagement and finalisation, each set of QPIs is published by Healthcare Improvement Scotland¹.

Accompanying datasets and measurability criteria for QPIs are published on the ISD website². NHS boards are required to report against QPIs as part of a mandatory, publicly reported, programme at a national level.

The QPI dataset for Acute Leukaemia was implemented from 01/07/2014. As part of the National Cancer Quality Programme a systematic national review process has been developed whereby all tumour specific QPIs published are subject to formal review following 3 years analysis of comparative QPI data. The second Formal Review of the Acute Leukaemia QPIs was undertaken in June 2021.

The following QPIs have been updated:

QPI	Change	Year for reporting
1	Addition of MOLANALYSIS to measurability	2020-21
5	Change to MODE1-4 in dataset to include Remission Inducing SACT and Palliative SACT. Chemotherapy intensive and Chemotherapy low dose removed.	2021-22
8	Change in target to 25%	2020-21
9	Addition of new data field TTSAMPDATE. Exclude APML.	2021-22
10	Replace intensive chemotherapy with remission inducing SACT in measurability. Target reduced in spec ii to 25%	2021-22
12	Change to MODE1-4 in dataset to include Remission Inducing SACT and Palliative SACT. Chemotherapy intensive and Chemotherapy low dose removed . Target reduced to 40%	2021-22

The following QPI has been archived: QPI 11

¹ QPI documents are available at www.healthcareimprovementscotland.org

² Datasets and measurability documents are available at www.PHSscotland.org

The standard QPI format is shown below:

QPI Title:	Short title of Quality Performance Indicator (for use in reports etc.)	
Description:	Full and clear description of the Quality Performance Indicator.	
Rationale and Evidence:	Description of the evidence base and rationale which underpins this indicator.	
Specifications:	Numerator:	Of all the patients included in the denominator those who meet the criteria set out in the indicator.
	Denominator:	All patients to be included in the measurement of this indicator.
	Exclusions:	Patients who should be excluded from measurement of this indicator.
	Not recorded for numerator:	Include in the denominator for measurement against the target. Present as not recorded only if the patient cannot otherwise be identified as having met/not met the target.
	Not recorded for exclusion:	Include in the denominator for measurement against the target unless there is other definitive evidence that the record should be excluded. Present as not recorded only where the record cannot otherwise be definitively identified as an inclusion/exclusion for this standard.
	Not recorded for denominator:	Exclude from the denominator for measurement against the target. Present as not recorded only where the patient cannot otherwise be definitively identified as an inclusion/exclusion for this standard.
Target:	Statement of the level of performance to be achieved.	

Audit Process

Data was analysed by the audit facilitators in each NHS board according to the measurability document provided by PHS Scotland. Lothian and Borders data was collated by Valerie Findlay, SCAN Audit Facilitator for Haematology, Fife data was collected by Sara Allan, Audit Facilitator for Fife.

Data capture is focused round the process for the weekly multidisciplinary meetings ensuring that data covering patient referral, investigation and diagnosis is being picked up through the routine process.

Lothian and Fife have now ceased routine use of case notes with Oncology data obtained either from electronic clinical record systems including downloads from ARIA (within radiotherapy department) or ChemoCare for chemotherapy data.

Each of the 3 health boards provides chemotherapy data but radiotherapy is provided centrally in Edinburgh Cancer Centre. Patients living closer to Dundee may opt to have oncology treatment outwith the SCAN region. Collecting complete audit data for these patients remains a challenge.

The process remains dependent on audit staff for capture and entry of data, and for data quality checking

Data was recorded by all health boards using E-case.

Lead Clinicians and Audit Personnel

SCAN Region	Hospital	Lead Clinician	Audit Support
NHS Borders	Borders General Hospital	Dr J Leong	Valerie Findlay
NHS Fife	Queen Margaret Hospital/Victoria Hospital	Dr K Davidson	Sarah Allan
SCAN & NHS Lothian	St Johns Hospital Western General Hospital	Dr H Roddie	Valerie Findlay

Data Quality

Estimate of Case Ascertainment

An estimate of case ascertainment (the percentage of the population with Acute Leukaemia recorded in the audit) is made by comparison with the Scottish Cancer Registry five year average data from 2016 to 2020. High levels of case ascertainment provide confidence in the completeness of the audit recording and contribute to the reliability of results presented. Levels greater than 100% may be attributable to an increase in incidence. Allowance should be made when reviewing results where numbers are small and variation may be due to chance.

Number of cases recorded in audit	SCAN
ALL	5
AML	50
Total	55

Estimate of case ascertainment:	SCAN
Cases from Audit	55
Cancer Registry 5 year Average	65
Case Ascertainment %	84.6%
Cancer Registry data (2016-20) IR2022-00747	

With the aim of explaining differences between cancer registry data and audit data, Acute Leukaemia registrations for 2018 were extracted from the ACaDMe Confidential datamart and compared with Audit data from the same period. The main discrepancies are due to differences between incidence and diagnosis date and unconfirmed diagnosis. As numbers are small any discrepancy can disproportionately skew the average figures

Quality Assurance

All hospitals in the region participate in a Quality Assurance (QA) programme provided by the National Services Scotland Information Services Division (ISD). QA of the Acute Leukaemia data was carried out in Jan 2018 and overall accuracy percentage results are shown below.

	Borders	Fife	Lothian	Scotland
Accuracy of data recording (%)	N/A	89.4	98.6	96.1

90 records were assessed throughout mainland Scotland excluding NHS Borders where patient numbers were considered too small. This represented 34% of Acute Leukaemia patients in the QPI cohort who were diagnosed between 1st July 2015 and 30th June 2016 and for which 261 records were submitted to PHS

Overall, the accuracy of recording was high at 96.1% apart from two NHS Boards where the accuracies fell below the ISD recommended minimum standard of 90%. However, it should be noted that only a small sample of five records was assessed from each of these NHS Boards and different interpretation by Cancer Registry Staff mean that the performance is not a true reflection of audit practice in SCAN and around the country.

Clinical Sign-Off

This report compares data from reports prepared for individual hospitals and signed off as accurate following review by the lead clinicians from each service. The collated SCAN results are reviewed jointly by the lead clinicians, to assess variances and provide comments on results:

- Individual health board results were reviewed and signed-off locally.
- Collated results were presented and discussed at the Acute Leukaemia Sign off meeting on 27/02/2023
- Final report circulated to SCAN Haematology Group and Clinical Governance Groups on 13/03/2023
-

Actions for Improvement

After final sign off, the process is for the report to be sent to the Clinical Governance groups with action plans for completion at Health Board level.

The report is placed on the SCAN website with completed action plans once it has been fully signed-off and checked for any disclosive material.

QPI 1: Complete Diagnostic Panel

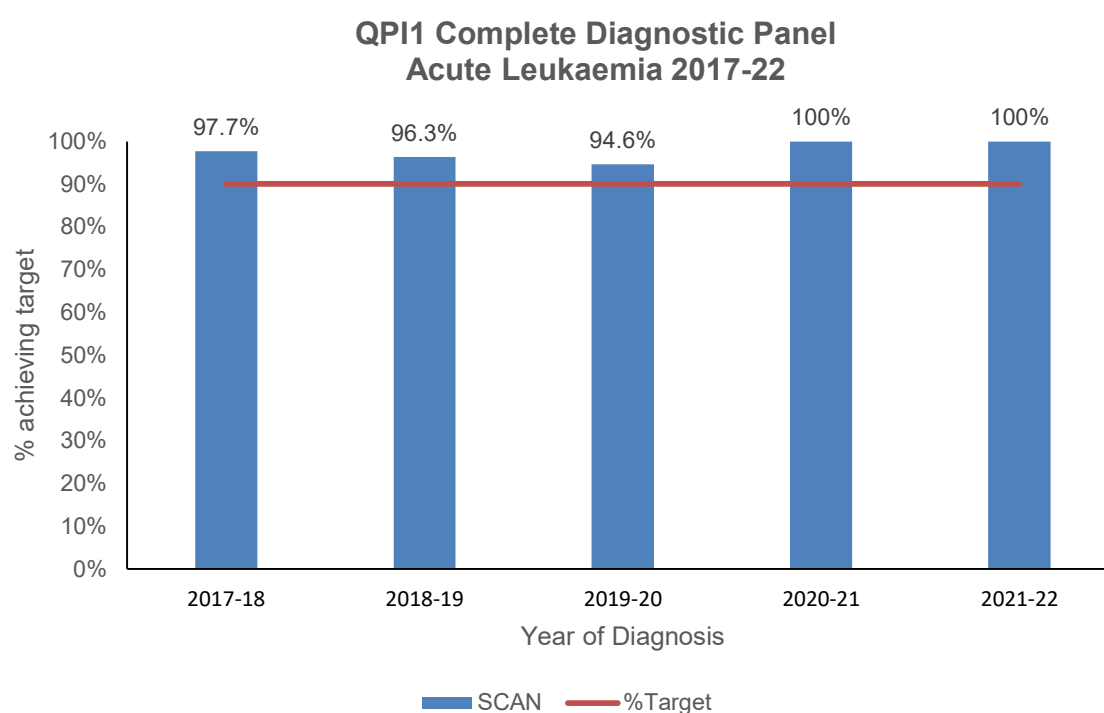
Target=90%

Numerator = Number of patients with acute leukaemia undergoing treatment with curative intent where complete diagnostic panel is undertaken.

Denominator = All patients with acute leukaemia undergoing treatment with curative intent (no exclusions).

Target 90%	SCAN
2021-22 cohort	55
Ineligible for this QPI – not fit for curative treatment	29
Numerator	26
Not recorded for the numerator	0
Denominator	26
Not recorded for exclusions	0
Not recorded for denominator	0
% Performance	100%

Comments The target was met by all healthboards



QPI 3: MDT Discussion

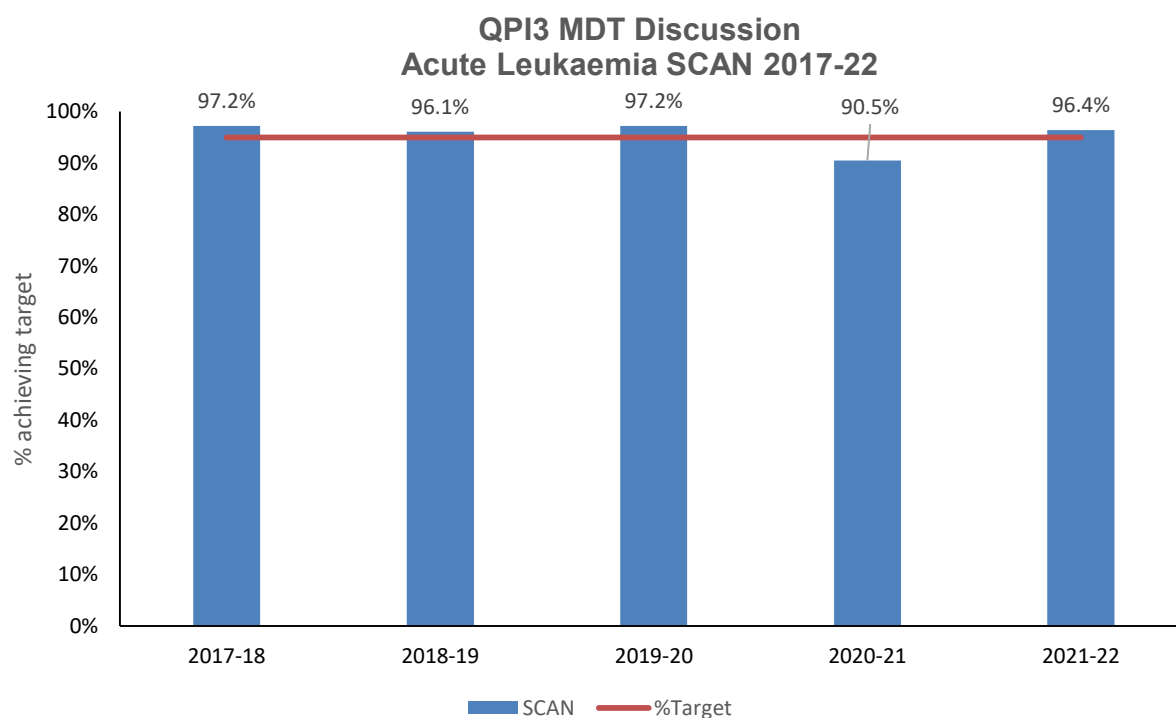
Target=95%

Numerator = Number of patients with acute leukaemia discussed at the MDT meeting within 8 weeks of diagnosis.

Denominator = All patients with acute leukaemia (no exclusions).

Target 95%	SCAN
2021-22 cohort	55
Ineligible for this QPI	0
Numerator	53
Not recorded for the numerator	0
Denominator	55
Not recorded for exclusions	0
Not recorded for denominator	0
% Performance	96.4%

Comments SCAN met the target



QPI 5i (a) - AML Early Deaths in patients aged 16- 60 years

Target <8%

Numerator = Proportion of patients with Acute Myeloid Leukaemia being treated with curative intent who die within 30 days of treatment

Denominator = All patients with Acute Myeloid Leukaemia being treated with curative intent (no exclusions)

Target <8%	SCAN
2021-22 cohort	55
Ineligible for this QPI	46
Numerator	0
Not recorded for the numerator	0
Denominator	9
Not recorded for exclusions	0
Not recorded for denominator	0
% Performance	0.0%

Comment: SCAN met the target

QPI 5i (b) - AML Early Deaths in patients aged > 60 years

Target <18%

Numerator = Proportion of patients with Acute Myeloid Leukaemia being treated with curative intent who die within 30 days of treatment.

Denominator = All patients with Acute Myeloid Leukaemia over 60 years of age being treated with curative intent (no exclusions).

Target <18%	SCAN
2021-22 cohort	55
Ineligible for this QPI	42
Numerator	0
Not recorded for the numerator	0
Denominator	13
Not recorded for exclusions	0
Not recorded for denominator	0
% Performance	0.0%

Comment The target was changed following Formal Review in April 2021. This is the first year of reporting since changes were made at Formal Review in 2021.

SCAN met the target.

QPI 5ii (a) Early Deaths ALL 16-60 years

Target <8%

Numerator = proportion of patients with Acute Lymphoblastic Leukaemia being treated with curative intent who die within 35 days of treatment.

Denominator = All patients with ALL 16-60 years being treated with curative intent (no exclusions).

Target <8%	SCAN
2021-22 cohort	55
Ineligible for this QPI	53
Numerator	0
Not recorded for the numerator	0
Denominator	2
Not recorded for exclusions	0
Not recorded for denominator	0
% Performance	0.0%

Comments: SCAN met the target

QPI 5ii (b) Early Deaths ALL >60 years

Target <20%

Numerator = Proportion of patients with Acute Lymphoblastic Leukaemia being treated with curative intent who die within 35 days

Denominator = All patients with ALL >60 years being treated with curative intent (no exclusions)

Target <20%	SCAN
2018-19 cohort	55
Ineligible for this QPI	53
Numerator	0
Not recorded for the numerator	0
Denominator	1
Not recorded for exclusions	0
Not recorded for denominator	0
% Performance	0.0%

Comments: SCAN met the target

QPI 5 was updated following the second Formal Review in 2021 and is reported here for the first time.

QPI 7 Deaths in Remission

Target <10%

Numerator = Number of patients with acute leukaemia undergoing treatment with curative intent who achieve first complete remission (CR) and die within 1 year of diagnosis, whilst in CR.

Denominator = All patients with acute leukaemia undergoing treatment with curative intent who achieve first CR.

Exclusions = Patients undergoing bone marrow /stem cell transplant

Target <10%	SCAN
2021-22 cohort	74
Ineligible for this QPI	57
Numerator	1
Not recorded for the numerator	0
Denominator	17
Not recorded for exclusions	0
Not recorded for denominator	0
% Performance	5.9%

Comments: This QPI is reported 1 year in arrears using data collected during 2020-2021

SCAN met the target.

% Performance in previous years	SCAN
2014-15	0.0%
2015-16	0.0%
2016-17	0.0%
2017-18	7.7%
2018-19	0.0%
2019-20	0.0%
2020-21	0.0%

QPI 8 Clinical Trials with Curative Intent

Target 25%

Numerator = Number of patients with acute leukaemia who are treated with curative intent enrolled in a clinical trial.

Denominator = All patients with acute leukaemia who are treated with curative intent

Exclusions = Patients who refuse entry into a clinical trial, patients over 60 years of age.

Target 25%	SCAN
2021-22 cohort	55
Ineligible for this QPI	46
Numerator	3
Not recorded for the numerator	0
Denominator	10
Not recorded for exclusions	0
Not recorded for denominator	0
% Performance	30.0%

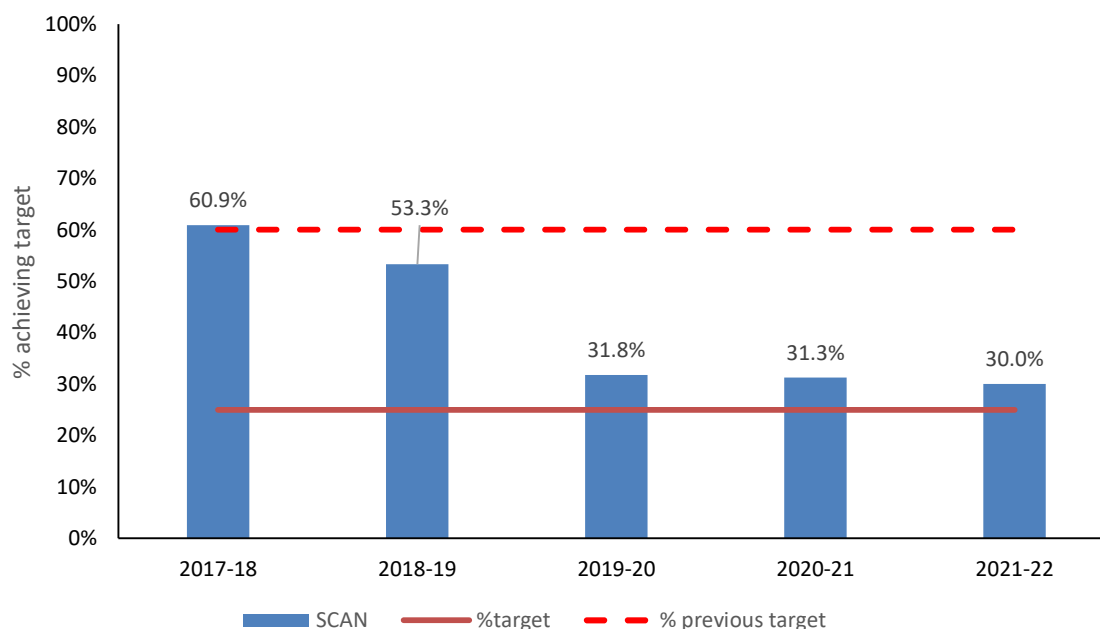
Comments: Target reduced to 25% following 2nd Formal Review in 2021 (previously 60%)

This is the first year of reporting since the formal review

All healthboards met the target.

Action point:

**QPI8 Clinical Trials with Curative Intent
Acute Leukaemia 2017-22**



QPI 9 Tissue Typing for Transplant

Target 90%

Numerator = Proportion of acute leukaemia patients with acute leukaemia between 16 and 65 treated with curative intent with a specimen sent to the lab for tissue typing at diagnosis

Denominator = All patients with acute leukaemia between 16 and 65 being treated with curative intent.

Exclusions: Patients with Acute Promyelocytic Leukaemia (APL)

Target 90%	SCAN
2020-21 cohort	55
Ineligible for this QPI	43
Numerator	5
Not recorded for the numerator	0
Denominator	12
Not recorded for exclusions	0
Not recorded for denominator	0
% Performance	41.7%

Comment: QPI 9 was updated following the second QPI Formal Review in 2021 and is reported here for the first time.

One healthboard did not have any eligible patients, one met the target and one healthboard fell short by 60%. Those cases not meeting target have been consultant reviewed and all causes of delay considered clinically relevant.

Action Point: The local blood sciences lab will register all samples being forwarded to the H&I laboratory in Glasgow. Sent samples will now be visible on APEX

QPI 10 (i) Intensive Chemotherapy in Older Adults

Target 30%

Numerator = Number of patients with acute leukaemia 60 years of age and over with PS 0-1 who receive intensive chemotherapy

Denominator = All patients with acute leukaemia 60 years of age and over with PS 0-1 (no exclusions).

Target 30%	SCAN
2021-22 cohort	55
Ineligible for this QPI	22
Numerator	17
Not recorded for the numerator	0
Denominator	32
Not recorded for exclusions	0
Not recorded for denominator	3
% Performance	53.1%

Comment The target was met in SCAN

QPI 10 has been updated following the second Formal Review in 2021 and is reported for the first time in the 2021-22

QPI 10(ii) Intensive Chemotherapy in Older Adults

Target 25%

Numerator = Number of patients with acute leukaemia 60 years of age and over who receive intensive chemotherapy enrolled in a clinical trial.

Denominator = All patients with acute leukaemia 60 years of age and over who receive remission inducing SACT (no exclusions)

Target 70%	SCAN
2021-22 cohort	55
Ineligible for this QPI	37
Numerator	5
Not recorded for the numerator	3
Denominator	18
Not recorded for exclusions	0
Not recorded for denominator	0
% Performance	27.8%

Comment QPI 10 has been updated following the second Formal Review in 2021 and is reported here for the first time in the 2021-22.

One healthboard did not meet the target because trial status was not recorded at MDM

Action: Ensure trial status is discussed and recorded at MDM

QPI 12 Palliative Treatment Target 55%

Numerator: Number of patients with acute myeloid leukaemia who are suitable only for treatment with non curative intent who receive palliative chemotherapy with either low dose cytarabine or azacytidine.

Denominator: All patients with acute myeloid leukaemia who are suitable only for treatment with non-curative intent.

Exclusions: Patients who refuse chemotherapy treatment, patients with adverse cytogenetics.

Target 55%	SCAN
2021-22 cohort	55
Ineligible for this QPI	44
Numerator	4
Not recorded for the numerator	0
Denominator	11
Not recorded for exclusions	0
Not recorded for denominator	0
% Performance	36.4%

Comments: QPI 12 has been updated following the second Formal Review in 2021 and is reported here for the first time

2 healthboards met the target, 1 healthboard did not meet the target with a shortfall of 40%. Patients not meeting target were considered too unwell to receive palliative SACT and were treated appropriately with best supportive care.

QPI 13 Early Deaths in Patients with Acute Promyelocytic Leukaemia (APL)

Target <25%

Numerator = Number of patients with APL who die within 30 days of diagnosis

Denominator = All patients with APL (no exclusions)

Target <25%	SCAN
2021-22 cohort	55
Ineligible for this QPI	48
Numerator	0
Not recorded for the numerator	0
Denominator	1
Not recorded for exclusions	0
Not recorded for denominator	0
% Performance	0.0%

Comments: As numbers are small, results will become more meaningful with further years of data collection. The target was met in healthboards with eligible patients.

% Performance in previous years	SCAN
2017-18	33.3%
2018-19	No eligible patients
2019-20	25.0%
2020-21	0.0%

Age Distribution

Age Range	SCAN
2021-22 cohort	55
<50 years	6
50-59 years	6
60- 69 years	13
70-79 years	19
>80 years	11

Summary of Sex and Age Distribution - Acute Leukaemia 2021- 2022

Age in years	Gender	SCAN
16-19	M	0
	F	1
20-24	M	1
	F	0
25-29	M	1
	F	1
30-34	M	1
	F	0
35-39	M	0
	F	0
40-44	M	1
	F	0
45-49	M	0
	F	0
50-54	M	2
	F	3
55-59	M	1
	F	0
60-64	M	0
	F	1
65-69	M	9
	F	3
70-74	M	5
	F	6
75-79	M	2
	F	6
80-84	M	4
	F	4
>85	M	3
	F	0
Total		55

Appendix

Acute Leukaemia QPI Attainment Summary 2020-21		% Target	SCAN		
QPI 1 Diagnostic Panel	90	N 34 D 34	100%		
QPI 3 Proportion of patients discussed at MDT	95	N 67 D 74	90.5%		
QPI 7 Patients treated with curative intent who die in first complete remission, within 1 year of diagnosis.	<10	N 0 D 18	0.0%		
QPI 8 Patients treated with curative intent , enrolled on a clinical trial (16-60 years)	25	N 5 D 16	31.3%		
QPI 13 Proportion of patients with APL who die within 30 days of diagnosis	<25	N 0 D 2	0.0%		
QPI 14 Clinical Trial and Research Study Access (N = All AL patients consented for trials/research D = 5 year average in Cancer Registry	15	N 2 D 64	3.1%		