

SOUTH EAST SCOTLAND CANCER NETWORK (SCAN) PROSPECTIVE CANCER AUDIT

Acute Leukaemia 2023 - 2024 COMPARATIVE AUDIT REPORT

PATIENTS DIAGNOSED IN BORDERS, FIFE, AND LoTHIAN

Dr Victoria Campbell, Consultant Haematologist, NHS Lothian

Dr Kerri Davidson, Consultant Haematologist, NHS Fife

Dr Charlotte Robertson, Consultant Haematologist, NHS Borders

Lorna Bruce, SCAN Audit Manager

Valerie Findlay, SCAN Cancer Information Analyst

Adam Steenkamp, Audit Facilitator NHS Fife

Report number: SA H01/25W

CONTENTS

Document History	2
Chair Summary	3
Action Points from 2023-24	4
Acute Leukaemia QPI Attainment Summary 2023-24	5
Introduction and Methods.....	5
Quality Assurance.....	8
QPI 1: Complete Diagnostic Panel.....	10
QPI 3: MDT Discussion.....	11
QPI 5i (a) - AML Early Deaths in patients aged 16- 60 years	12
QPI 5i (b) - AML Early Deaths in patients aged > 60 years	12
QPI 5ii (a) Early Deaths ALL 16-60 years	13
QPI 5ii (b) Early Deaths ALL >60 years.....	13
QPI 10 (i) Intensive Chemotherapy in Older Adults	15
Age Distribution	16
SCAN Acute Leukaemia QPI Attainment Summary	18

Document History

Version	Circulation	Date	Comments
Version 1	Lead clinicians sign off meeting	17/03/2025	Comments/actions Agreed
Version 2	SCAN Haematology Group lead clinicians	11/06/2025	Actions points and comments agreed. Chair's summary added.
Version 3	SCAN Haematology Group	03/07/2025	No further comments were received
Final Version	SCAN Group SCAN Governance Framework SCAN Action Plan Board Leads	29/07/2025 & 31/07/2025	Assessed for disclosure and Board breakdowns removed. Redacted version circulated 31/7/25: erroneous actions revised.
Web Version	Published to SCAN Website	January 2026	

Chair Summary

The SCAN Haematology group continued to work to improve the quality of care of patients with Haematological malignancies during 2023-2024.

Seven of nine QPIs were achieved within SCAN which shows an improvement from previous years.

All intensively treated patients had a complete diagnostic panel performed, vital in ensuring accurate diagnosis, aiding prognosis discussions and consequently treatment decisions. This demonstrates a clear understanding of the complexity of the diagnosis and close working relationship with the supporting laboratories.

Whilst the target proportion of patients reviewed by MDT within 8 weeks of diagnosis was met, a minority of patients within SCAN continue to not be reviewed within this timeframe. These cases were reviewed, and MDT discussion would not have impacted care, though teams are reminded to register all cases through the MDT.

Early death is a challenging QPI given the low number of patients diagnosed on a yearly basis; sepsis is a well-recognised complication of leukaemia and its management. Review of the 5-year data provides a reassuring picture on frequency of early treatment deaths. This is supported by early deaths within in AML patients >60years, ALL patients irrespective of age and APML patients irrespective of age all being within target. Moving forward this QPI will be adjusted to include a 3-year timeframe.

None of the Health boards performed tissue typing within seven days, but in all cases tissue typing was performed where appropriate. This would not impact patient care, and the timeframe has been adjusted for the next report.

Reflecting change in practice there is an increase in older patients receiving intensive chemotherapy across all Health boards, the target shall be increased for the next review to reflect the changing landscape.

Finally, there remains an on-going issue with low numbers of patients entering clinical trials. This reflects the changing and ever complex diagnostic subclassification and treatment landscape. Work continues in this area.

Dr Victoria Campbell
SCAN Haematology Lead Clinician
July 2025

Action Points from 2023-24

QPI	Action Required	Person Responsible	Date for update
QP3	Ensure that patients with transformed disease are registered at MDM even when receiving supportive care	Haematology leads in each board	January 2026

Action Points from 2022-23

QPI	Action Required	Person Responsible	Status	Progress
8	Formal Review 2024 – recommend that this QPI is archived. Trials are not available for most patients.	Lorna Bruce	Completed	QPI archived
9	Formal Review 2024- consider extending the target (from diagnosis to tissue typing) to 14 days. This would not affect transplant timing	Lorna Bruce	Completed	Target extended to 28 days
10	Formal Review 2024 –recommend that this QPI is archived. Trials are not available for most patients.	Lorna Bruce	Completed	Specification ii archived. Target changed to 30%, PS criteria removed.
12	Formal Review 2024, consider reducing the target as many patients are frail or have significant comorbidities	Lorna Bruce	Completed	QPI archived

Acute Leukaemia QPI Attainment Summary 2023-24		% Target	SCAN	
QPI 1 Diagnostic Panel		90	N 25 D 25	100%
QPI 3 Proportion of patients discussed at MDT		95	N 59 D 62	95.2%
QPI 5 Patients treated with curative intent who die within 30/35 days of treatment	AML 16-60	<8	N 1 D 10	10.0%
	AML >60 years	<18	N 0 D 11	0.0%
	ALL 16-60 years	<8	N 0 D 2	0.0%
	ALL > 60 years	<20	N 0 D 2	0.0%
QPI 9 Patients treated curatively who have tissue typing performed at diagnosis		90	N 5 D 15	33.3%
QPI 10 Intensive chemotherapy in older adults		30	N 27 D 36	75.0%
QPI 13 Proportion of patients with APML who die within 30 days of diagnosis		<20	N 0 D 2	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 2023 and 30th June 2024. 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 3rd Formal Review of the Acute Leukaemia QPIs was undertaken in June 2024.

¹ QPI documents are available at www.healthcareimprovementscotland.org

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

The following QPIs have been updated:

QPI	Change	Year for reporting
1	Changed the clinical cohort from those undergoing 'treatment with curative intent' to 'undergoing intensive chemotherapy treatment'.	2024-25
5	Changed the clinical cohort from those undergoing 'treatment with curative intent' to 'undergoing intensive chemotherapy treatment'.	2024-25
9	<p>Changed the clinical cohort from those undergoing 'treatment with curative intent' to 'undergoing intensive chemotherapy treatment'.</p> <p>Changed the timeframe from 'at diagnosis' (i.e. 7 days) to within 28 days of diagnosis.</p> <p>An exclusion was added for those patients who decline tissue typing.</p>	2024-25
10	<p>Archived specification (ii)</p> <p>Increased the target from 30% to 40% and removed Performance Status 0-1 criteria</p>	2024-25
13	Reduce the target from <25% to <20% (note- this is a 'less than' target)	2023-24
14	This QPI has now been removed from the individual tumour specific QPI documents. It has been agreed that trials activity measures will be reported via the NHS Research Scotland Central Management Team in due course	NA
New QPI15	Proportion of patients with Acute Myeloid Leukaemia (AML) undergoing intensive chemotherapy treatment who have Next Generation Sequencing (NGS) performed.	2024-25
New QPI16	Proportion of patients with NPM1 mutated normal karyotype Acute Myeloid Leukaemia (AML) undergoing intensive chemotherapy who have NPM1 MRD assessment undertaken after 2 cycles of treatment.	2024-25

The following QPIs have been archived: QPI 7, QPI 8, QPI 10(ii), QPI11, QPI 12

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 Cancer Information Analyst for Haematology, Fife data was collected by Adam Steenkamp, 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 C Robertson	Valerie Findlay
NHS Fife	Queen Margaret Hospital/Victoria Hospital	Dr K Davidson	Adam Steenkamp
SCAN & NHS Lothian	St Johns Hospital Western General Hospital	Dr V Campbell	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 5 year average data from 2018 to 2022. 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	7
AML	54
Total	61

Estimate of case ascertainment:	SCAN
Cases from Audit	62
Cancer Registry 5 year Average	66
Case Ascertainment %	93.9%
Cancer Registry data (2018-22) IR2025-00082	

With the aim of explaining differences between cancer registry data and audit data, Acute Leukaemia registrations 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 14/04/25
- Final report circulated to SCAN Haematology Group and Clinical Governance Groups on 31/07/2025

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

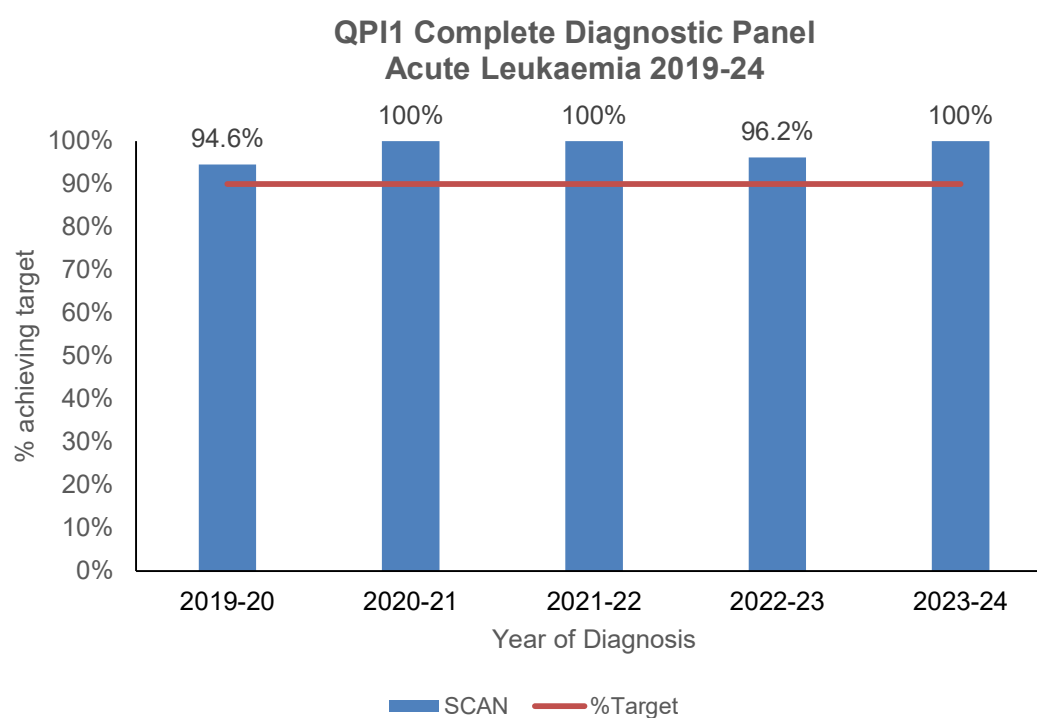
Target=90%

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
2023-24 cohort	62
Ineligible for this QPI – not fit for curative treatment	37
Numerator	25
Not recorded for the numerator	0
Denominator	25
Not recorded for exclusions	0
Not recorded for denominator	0
% Performance	100.0%

Comments The target was met by all eligible healthboards



QPI 3: MDT Discussion

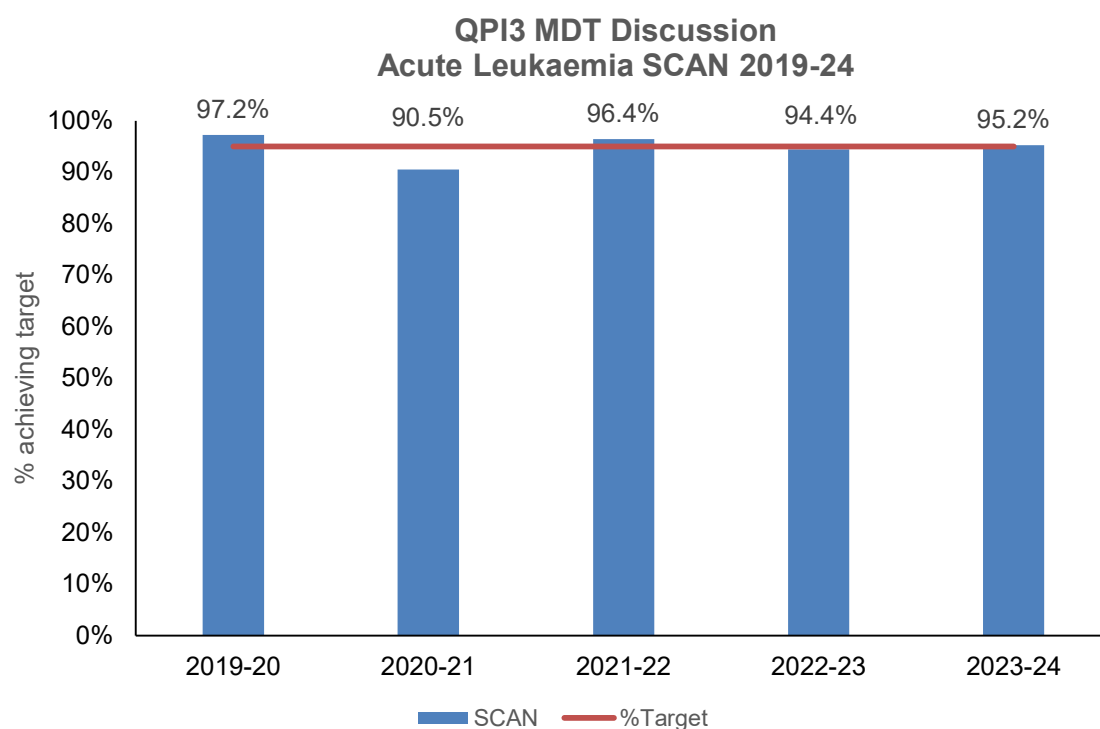
Target=95%

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
2023-24 cohort	62
Ineligible for this QPI	0
Numerator	59
Not recorded for the numerator	0
Denominator	62
Not recorded for exclusions	0
Not recorded for denominator	0
% Performance	95.2%

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
2023-24 cohort	62
Ineligible for this QPI	52
Numerator	1
Not recorded for the numerator	0
Denominator	10
Not recorded for exclusions	0
Not recorded for denominator	0
% Performance	10.0%

Comment: This QPI was updated at the 3rd Formal Review and will be reported in 2026 employing the new measurability which replaces 'curative intent' with 'treated with intensive chemotherapy'. The case not meeting the target was reviewed by a Haematology consultant and given appropriate clinical care.

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
2023-24 cohort	62
Ineligible for this QPI	51
Numerator	0
Not recorded for the numerator	0
Denominator	11
Not recorded for exclusions	0
Not recorded for denominator	0
% Performance	0.0%

Comment 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
2023-24 cohort	62
Ineligible for this QPI	60
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
2023-24 cohort	62
Ineligible for this QPI	60
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 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
2023-24 cohort	62
Ineligible for this QPI	47
Numerator	5
Not recorded for the numerator	0
Denominator	15
Not recorded for exclusions	0
Not recorded for denominator	0
% Performance	33.3%

Comment: Action point from the SCAN 2022-23 report recommended that the time frame from diagnosis to sending a specimen to the lab for tissue typing should be extended from 7days to 14 days, however at the 3rd Formal Review (FR) the timeframe was extended further to 28 days. Revision of QPI 9 also includes a change from patients treated with 'curative intent' to 'patients treated with intensive chemotherapy'. This update requires a change in the National measurability documents and will be reported in 2026

SCAN did not meet the 7day target in 2023-24. For interest the table below shows the results using the revised 3rd FR 28day timeframe, however this will not be reported nationally until 2026.

Target 90%	SCAN
2023-24 cohort	62
Ineligible for this QPI	47
Numerator	13
Not recorded for the numerator	0
Denominator	15
Not recorded for exclusions	0
Not recorded for denominator	0
% Performance	86.7%

QPI 10 (i) Intensive Chemotherapy in Older Adults

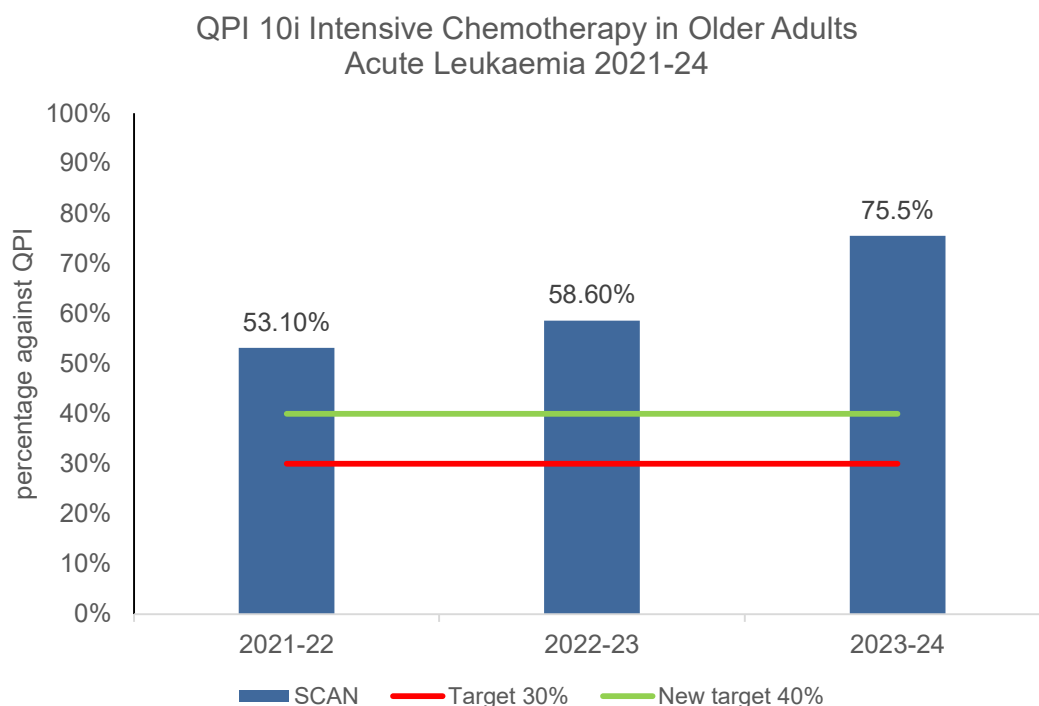
Target 30%

Numerator = Number of patients with acute leukaemia 60 years of age and over who receive remission inducing SACT

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

Target 30%	SCAN
2023-24 cohort	62
Ineligible for this QPI	28
Numerator	27
Not recorded for the numerator	0
Denominator	36
Not recorded for exclusions	0
Not recorded for denominator	5
% Performance	75.0%

Comment: SCAN met the target. This QPI was updated at the 3rd Formal Review where the target was increased to 40%, it will be reported in its new format in 2026.



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

Target <20%

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

Denominator = All patients with APL (no exclusions)

Target <20%	SCAN
2023-24 cohort	62
Ineligible for this QPI	60
Numerator	0
Not recorded for the numerator	0
Denominator	2
Not recorded for exclusions	0
Not recorded for denominator	0
% Performance	0.0%

Comments: This QPI was updated at the 3rd Formal Review the target has been reduced to <20%. SCAN met the target.(previous target <25%)

Target <20%	SCAN
2023-24 cohort	455
7 years cumulative 2017-2024	430
Numerator	3
Not recorded for the numerator	0
Denominator	15
Not recorded for exclusions	0
Not recorded for denominator	0
% Performance	20.0%

Following the 3rd Formal Review, 2 new QPIs have been added to the Acute Leukaemia suite. QPI15 and QPI16 (details on p6) both require new data fields and will be included in the 2024-25 comparative report

Age Distribution

Age Range	SCAN
2023-24 cohort	62
<50 years	9
50-59 years	3
60- 69 years	19
70-79 years	23
>80 years	8

Summary of Sex and Age Distribution - Acute Leukaemia 2023- 2024

Age in years	Gender	SCAN
16-19	M	1
	F	0
20-24	M	0
	F	1
25-29	M	0
	F	2
30-34	M	0
	F	1
35-39	M	1
	F	1
40-44	M	1
	F	1
45-49	M	0
	F	0
50-54	M	1
	F	1
55-59	M	0
	F	1
60-64	M	3
	F	5
65-69	M	6
	F	5
70-74	M	3
	F	8
75-79	M	8
	F	4
80-84	M	0
	F	4
>85	M	1
	F	3
Total		62

SCAN Acute Leukaemia QPI Attainment Summary		% Target	2020-21	2021-22	2022-23
QPI 1 Diagnostic Panel		90	N 34 100% D 34	N 26 100% D 26	N 25 96.2% D 26
QPI 3 Proportion of patients discussed at MDT		95	N 67 90.5% D 74	N 53 96.4% D 55	N 67 94.4% D 71
QPI 5 Patients treated with curative intent who die within 30/35 days of treatment	AML 16-60	<8	N/A	N 0 0.0% D 9	N 3 21.4% D 14
	AML >60 years	<18	N/A	N 0 0.0% D 13	N 0 0.0% D 7
	ALL 16-60 years	<8	N/A	N 0 0.0% D 2	N 0 0.0% D 7
	ALL > 60 years	<20	N/A	N 0 0.0% D 1	N 0 0.0% D 0
QPI 7 Patients treated with curative intent who die in first complete remission, within 1 year of diagnosis.		<10	N 0 0.0% D 18	N 1 5.9% D 17	N 0 0.0% D 18
QPI 8 Patients treated with curative intent, enrolled on a clinical trial (16-60 years)		25	N 5 31.3% D 16	N 3 30.0% D 10	N 0 0.0% D 19
QPI 9 Patients treated curatively who have tissue typing performed at diagnosis.		90	N/A	N 5 41.7% D 12	N 10 47.6% D 21
QPI 10 Intensive chemotherapy in older adults (over 60)	PS 0-1 receiving intensive chemotherapy	30	N/A	N 17 53.1% D 32	N 17 58.6% D 29
	Receiving intensive chemotherapy and enrolled in a clinical trial	25	N/A	N 5 27.8% D 18	N 1 6.3% D 16
QPI 12 Proportion of patients with AML treated with non-curative intent who receive appropriate SACT regimen		40	N/A	N 4 36.4% D 11	N 6 23.1% D 26
QPI 13 Proportion of patients with APL who die within 30 days of diagnosis		<25	N 0 0.0% D 2	N 0 0.0% D 1	N 1 33.3% D 3