SCAN
South East Scotland Cancer Network

NHS SCOTLAND

Working regionally to improve cancer services

SOUTH EAST SCOTLAND CANCER NETWORK (SCAN) PROSPECTIVE CANCER AUDIT

Melanoma 2020-2021 Comparative Audit Report

Patients diagnosed 1st July 2020 to 30th June 2021

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Document history

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Version 1	Lead clinicians Sign Off Meeting	01/02/2022	Draft Report circulated to sign off group for meeting on 08/02/2022
Version 2	SCAN Skin Group Lead clinicians sign off group	08/02/2022	For sign off group approval and Lead Clinicians commentary
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Comment by SCAN Skin Group Chair

This report provides a detailed and comprehensive analysis of the 343 patients who presented with a new diagnosis of cutaneous melanoma in South East Scotland between the 1st July 2020 and the 30th June 2021. This report was compiled by the SCAN audit team; we thank them for their diligent work to compile this thorough and high quality data report.

Improvement has been seen in QPI 1 since the previous audit year with all boards now meeting this QPI for diagnostic excision biopsy performed by a skin cancer clinician with a performance of 98.9% for QPI 1(i) and 96.8% for QPI 1(ii) across SCAN.

QPI 2 and 5 measure pathology reporting and have again been met across SCAN. A marked improvement has been seen across SCAN for QPI 2 in this reporting year. Some regional variation is still seen with Dumfries and Galloway remaining below target (3 outliers). For the third year running QPI 5, sentinel node biopsy pathology reporting was met across all boards, this year at 100%. We commend the histopathology team for this consistent high performance.

None of the boards met the QPI 3 target of 95% of patients with cutaneous melanoma being discussed by multidisciplinary team prior to definitive treatment. However, a review of each case (n=47 patients), has confirmed that treatment was correct and appropriate in each instance and that the subsequent MDT discussion was in agreement. The clinical rationale for treating prior to the MDT is to permit patients requiring the most straightforward treatment to complete this pathway swiftly, rather than delay it whilst awaiting MDT discussion. As the largest patient cohort failing this QPI were stage IA melanomas proceeding to wide local excision prior to MDT discussion, this QPI has been altered for year 8 (2022-23 cohort) with a tolerance for stage IA tumours which removes the timeframe for MDT discussion.

Borders and Fife continue their high performance with QPI 4, clinical examination of the draining lymph node basin. Dumfries did not meet this target, due to three outlying patients whose care was shared across different specialties. Lothian continues to perform poorly with a now three-year decline. This multifactoral trend must be turned around and advice has

been sought from the high performing boards and taken on to seek improvement in the next cohort.

The number of patients proceeding with wide local excision after melanoma remains consistent and care of the outliers has been noted to be appropriate on case review (QPI 6). Changes to this QPI for the 2022-2023 cohort should better reflect clinical standards of practice.

Performance against QPI 7 remains of greatest concern across the region. Only 67 and 69% of patients complete a wide local excision within 84 days of a diagnostic biopsy (QPI 7i and 7ii) with wide regional variation, including between the two subsets of QPI 7. Lothian has secured more access to operating time and nuclear medicine facilities showing robust improvement for QPI 7i since the previous report. Now, regional disparities in provision are highlighted by the concomitant, albeit smaller reduction in performance in the other boards for this audit year. Steps have been taken to address this area of the melanoma diagnostic pathway since the last report. As well as the increase in plastics capacity in Fife and Lothian (the latter impacts upon D&G and Borders), there has been recognition that the role of a pathway manager in Lothian would be beneficial and work is ongoing in this area by the service team. Use of external providers in dermatology and pathology continues however in Lothian, Borders and D&G.

Given the small numbers of patients represented in QPI 8, BRAF testing, and QPI 10, systemic therapy for unresectable melanoma, interpretation remains challenging though broadly similar to previous years. We continue to monitor performance by reviewing outlying patients on a case by case basis.

QPI 9, imaging for patients with melanoma of stage IIC and above, has previously been described as unachievable in its current iteration. As such, we look forward to measuring clinical performance in 2021-2022 against a more nuanced QPI standard which starts the clock only once the clinical stage indicates the necessity of a radiological staging to account for patients who are upstaged during the pathway. It is still likely however that some patients will wait an unacceptably long time to complete radiological imaging. It remains the case that more resourcing and optimal management of this area of the patient pathway is required, particularly in Lothian.

Finally and on a most positive note, 37 patients were consented for a clinical trial as new studies have opened up post-pandemic, compared to only one patient in the previous reporting period.

In summary, this audit report does permit a sense of optimism with notable improvements in a number of the QPIs. Performance relating to QPI7 continues to be the most unsatisfactory and QPI 9 performance will need to be watched closely in the coming years. The actions suggested by this report are of vital importance to improve performance across the melanoma diagnosis and treatment pathway and strive towards equity of melanoma care for patients across South-East Scotland.

Shantini Rice
SCAN Lead Clinician
February 2022

Action points from 2020-21

QPI	Action required	Person responsible	Date for update
3	All outliers have been reviewed and were treated appropriately. Lothian to encourage private sector diagnosed patients are being referred to MDM.	Mark Butterworth/Shantini Rice	17/06/2022
4	MDM co-ordinator will email clinicians to request that they add a dated clinical assessment of the draining lymph node basin to the clinical record if this in not complete at the point of MDM discussion The issue of missing documentation will also be flagged to the service team in Lothian.	Kimberley Tippett/All Clinicians	17/06/2022
7	Upgrades to scanners may affect performance in this QPI next year. This work is to be flagged to all affected SCAN teams and their respective service teams, and the likely impact of this work on time to SLNB. Mitigations should be explored, including whether the involvement of service teams in other boards is a possibility.	Mark Butterworth/Shantini Rice	17/06/2022
7 & 9	SR to continue to liaise with management team around defining the role of pathway manager and more cohesive and centralised skin cancer team of co-ordinator, pathway manager and CNS.	Isobel Penman/Shantini Rice	17/06/2022
	Highlight continued insufficient capacity in dermatology, plastics, radiology, nuclear medicine to service management teams and the consequent impact on inequity and standards of patient care (Lothian, BGH, D&G) despite reliance on external providers and locums	Mark Butterworth/Shantini Rice/Lindsay Yeo/Andrew Mackenzie/TG/HM	17/06/2022
	CNS and pathway manager urgently required in BGH; the skin cancer service is particularly precarious given the shortage of senior medical staff	Andrew Mackenzie/TG/HM	17/06/2022
	D&G: Continued difficulties with recruitment of medical and nursing staff for all roles including skin cancer. Consider other existing personnel that may be able to improve patient flow and reduce risk in the service e.g.a pathway manager	Lindsay Yeo	17/06/2022

Action Points from 2019-20

QPI	Action required	Lead	Progress
1	All Boards to provide updated list of clinicians designated for biopsies	Patricia Gordon Lyndsey Yeo Megan Mowbray Mark Butterworth/Shantini Rice	Borders, D&G and Fife have completed this action, which is ongoing for annual review
	Lothian to ensure external providers are included on list of "designated Clinicians" to be shared with audit staff.	Mark Butterworth/Shantini Rice	External providers not working in dermatology since onset of pandemic. Expected to recommence shortly.
2	All pathologists, including external providers should comply with RCPath dataset.	Asok Biswas	D&G changes to process are in place Fife: Dr Mowbray to write to pathology in Fife to present the 2019/2020 results, express thanks, and encourage continued use of a reporting proforma**.** Fife pathology do not use external providers for melanoma and Fife's attainment of this QPI is 100% Borders and Lothian: Pathology will try to avoid outsourcing cases with clinical suspicion of malignant melanoma. For this to happen, such cases should be clearly indicated as such on the biopsy request form
	2 patients had no invasive component to assess after partial excision biopsy, perhaps this should be addressed at the next formal review.	Lorna Bruce	Comment added to template for formal review
4	SR to remind dermatology colleagues and external providers of the importance of nodal examination and documentation of this in the patients' clinical notes and the overprint box on the pathology request form	Shantini Rice	Email 28.2.21
	MB to remind plastics colleagues and external providers of the importance of nodal examination and documentation of this in the patients' clinical notes and the overprint box on the pathology request form	Mark Butterworth	No external providers in plastics. All registrars have been reminded. Note there is no overlay available in plastics Complete and ongoing

QPI	Action required	Lead	Progress
6, 7 & 9	Lothian issues highlight the need for a patient pathway coordinator, suggest pursuing a pathway coordinator post in Lothian	Ewan Brown	Lothian issues highlight the need for a melanoma pathway manager to complement the roles of the MDT co-ordinator and clinical nurse specialists Funding application submitted through 'Cancer Recovery Fund' January 2021
7	Reconsider the business case of external providers	Shantini Rice	Reported back to Clinical Director of Dermatology service
9	Remind staff to consider referral to CT with IIC and above. Audit of these outliers is required,	Ewan Brown	Regularly discussed at melanoma MDT. Achieved and Ongoing
	Note some patients were upstaged after SLNB, which may be a point to consider at next formal review.	Lorna Bruce	Addressed at formal review
10	This QPI has never been useful perhaps more relevant to look at adjuvant Tx. Suggest revision of QPI at next formal review.	Lorna Bruce	Comment added to template for formal review
12	Remind staff to document all margins on all lesions excised; the overprint box on the pathology request form has been designed to serve as an aide memoire and should be completed.	Mark Butterworth Shantini Rice	No external providers in plastics. All registrars have been reminded. Note there is no overlay available in plastics Complete and ongoing. Email to dermatology clinicians 28.2.21
	Lothian audit of all diagnostic errors required	Shantini Rice	January 2021

Cutaneous Melanoma QPI Attainment 2020-21		Target %	Borders		D&G		Fife		Lothian		SCAN	
QPI 1: Excision Biopsy. patients should have their diagnostic excision biopsy carried out by a skin cancer clinician	Excision biopsy	90	N 29 D 29	100.0%	N 19 D 20	95.0%	N 46 D 47	97.9%	N 173 D 174	99.4%	N 267 D 270	98.9%
	Partial biopsy	90	N 9 D 9	100.0%	N 16 D 16	100.0%	N 12 D 12	100.0%	N 23 D 25	92.0%	N 60 D 62	96.7%
QPI 2: Pathology Reporting. Surgical pathology reports cutaneous melanoma should contain full pathology information		90	N 29 D 29	100.0%	N 17 D 20	85.0%	N 47 D 48	97.9%	N 172 D 176	97.7%	N 265 D 273	97.1%
QPI 3: Multi-Disciplinary Team Meeting (MDT). Patients should be discussed prior to definitive treatment		95	N 34 D 38	89.5%	N 31 D 38	81.6%	N 56 D 60	93.3%	N 172 D 204	84.3%	N 293 D 340	86.2%
QPI 4: Clinical Examination of Draining Lymph Nodes as part of clinical staging		95	N 38 D 38	100.0%	N 36 D 39	92.3%	N 60 D 61	98.4%	N 170 D 205	82.9%	N 304 D 343	88.6%
QPI 5: Sentinel Node Biopsy Pathology. Reports should contain full pathology information		90	N 10 D 10	100.0%	N 10 D 10	100.0%	N 17 D 17	100.0%	N 57 D 57	100.0%	N 94 D 94	100.0%
QPI 6: Wide Local Excisions to reduce the risk of local recurrence		95	N 33 D 38	86.8%	N 32 D 35	91.4%	N 54 D 58	93.1%	N 177 D 198	89.4%	N 296 D 329	90.0%
QPI 7: Time to Wide Local Excision. WLE within 84 days of diagnostic Biopsy	Excision biopsy	95	N 22 D 29	75.9%	N 11 D 19	57.9%	N 29 D 47	61.7%	N 119 D 174	68.4%	N 181 D 269	67.3%
	Partial biopsy	95	N 4 D 9	44.4%	N 15 D 16	93.8%	N 8 D 12	66.7%	N 16 D 25	64.0%	N 43 D 62	69.4%
QPI 8: BRAF Status. Patients with unresectable stage III or IV		75	N 2 D 2	100.0%	N 0 D 0	N/A	N 3 D 3	100.0%	N 14 D 15	93.3%	N 19 D 20	95.0%
QPI 9: Imaging in Advanced Melanoma. CTPET/CT within 35 days of diagnosis (stage IIC, III or IV melanoma)		95	N 2 D 4	50.0%	N 5 D 5	100.0%	N 6 D 14	42.9%	N 7 D 45	15.6%	N 20 D 68	29.4%
QPI 10: Systemic Therapy. Patients with unresectable stage III or IV melanoma should receive SACT		60	N 1 D 2	50.0%	N 0 D 0	N/A	N 0 D 3	0.0%	N 10 D 14	71.4%	N 11 D 19	57.9%
QPI 12: Adequate excision of lesion prior to definitive treatment (with clinical margins of 2mm prior to WLE)		85	N 23 D 33	69.7%	N 12 D 32	37.5%	N 37 D 54	68.5%	N 120 D 181	66.3%	N 192 D 300	64.0%
Clinical trials N= patients consented to a trial on SCRN database (EDGE). D= 5 year average from Cancer Registry		15	N 0 D 38	0.0%	N 0 D 36	0.0%	N 7 D 68	10.3%	N 27 D 185	14.6%	N 34 D 327	10.4%

INTRODUCTION AND METHODS

Cohort

This report covers patients newly diagnosed with Cutaneous Melanoma in SCAN between 01/07/2020 and 30/06/2021. 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, Public Health Scotland (previously known as 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 focussed on areas most important in terms of improving survival and patient experience whilst reducing variance and ensuring safe, effective and person-centred cancer care.

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

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

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.	

QPI Formal review

The revised Melanoma documents are soon to be published on the PHS and Healthcare Improvement Scotland websites, linked here.
http://www.isdscotland.org/Health-Topics/Cancer/Cancer-Audit/

http://www.healthcareimprovementscotland.org/our_work/cancer_care_improvement/cancer_qpis/quality_performance_indicators.aspx

QPI	Summary of Changes to be implemented in year 8 (2021-22 cohort)
1	No changes
2	No changes to QPI Core items updated in line with 2019 RCP Melanoma Dataset
3	QPI split into 2 specifications: Target 95% for both parts i) For stage IA tumours – with no timeframe applied – this is to capture the group who undergo total excision at the outset and therefore would not necessarily be discussed prior to definitive treatment. ii) For stage IB and above discussed prior to definitive treatment. Patients who died before treatment are excluded. Tolerance statement updated for situations where patients may be upstaged from IA to IB (or above) following pathology review for MDT.
4	No changes to QPI
5	No changes to QPI Core items updated in line with 2019 RCP Melanoma Dataset
6	Changes to QPI and report, new data item Exclusion added for patients where it is agreed at MDT that no wide local excision is required. (new data item; WLE) Removed exclusion for patients that died before treatment. Total number and percentage of patients who require no wide local excision as agreed by the MDT (i.e. QPI 6 exclusion) to be reported alongside QPI 6.
7	QPI split into 2 specifications Target 90% for both parts i) Pathology reporting time from date of diagnostic biopsy of primary cutaneous melanoma (21 days). ii) Wide local excision time from pathology reporting of diagnostic biopsy (63 days)
8	QPI amended to account for all stage III and IV melanoma patients who should undergo a BRAF status check. Target increased from 75% to 90%.
9	QPI altered to account for upstaging i.e., pathologically confirmed stage IIC and above. QPI measures timeframe of 35 days of pathology report being issued confirming IIC or above to complete imaging date
10	Specification (i) changed to exclude patients who died before first treatment. Specification (ii) added for resected stage III or IV patients who undergo adjuvant SACT (excluding patients who died before SACT). Target 60%
12	QPI Archived
13	Clinical Trials and Research Study Access – No change
14	New Sentinel Lymph Node Biopsy QPI. Percentage of patients eligible for SLNB who undergo SLNB
15	SACT Mortality – measured using Chemocare data - TBC

Audit Process
Data was analysed by the audit facilitators in each NHS board according to the measurability document provided by PHS. SCAN data was collated by Fiona Gardiner, SCAN Cancer Audit facilitator for Melanoma.

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

Each of the 5 hospitals provides diagnostic and wider surgery but more serious disease requiring skin grafting and/or Lymph Node biopsy is provided by plastic surgery services in St Johns or Western General hospitals for Lothian patients, and Ninewells for Fife patients.

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

Data was recorded on eCase and reported through SSRS the eCase reporting tool..

Lead Clinicians and Audit Personnel

SCAN Region	Hospital	Lead Clinician	Audit Support
NHS Borders	Borders General Hospital	Dr Patricia Gordon	Fiona Gardiner
NHS Dumfries & Galloway	Dumfries & Galloway Royal Infirmary	Dr Lindsay Yeo	Christy Bell
NHS Fife	Queen Margaret Hospital	Dr Megan Mowbray	Jackie Stevenson
NHS Lothian	Lauriston Building and St John's Hospital	Mr Mark Butterworth	Fiona Gardiner
SCAN	Edinburgh Cancer Centre	Dr Shantini Rice	

Data Quality
Estimate of Case Ascertainment
An estimate of case ascertainment (the percentage of the population with Melanoma recorded in the audit) is made by comparison with the Scottish Cancer Registry three year average data (2018-20). 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.

Estimate of case ascertainment: calculated using the average of the most recent available three years of Cancer Registry Data

	Borders	D&G	Fife	Lothian	SCAN
Cases from Audit	38	39	61	205	343
Cancer Registry 3 Year Average	38	34	70	183	325
Case Ascertainment %	100	115	87	112	106

Data extracted from ACaDMe on 10/11/2021

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 SCAN Melanoma Leads Meeting on 8th February 2022.

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 Results pages:

QPI 1(i): Diagnostic Excision biopsy Target = 90%

Patients with cutaneous melanoma should have their diagnostic excision biopsy carried out by a skin cancer clinician*

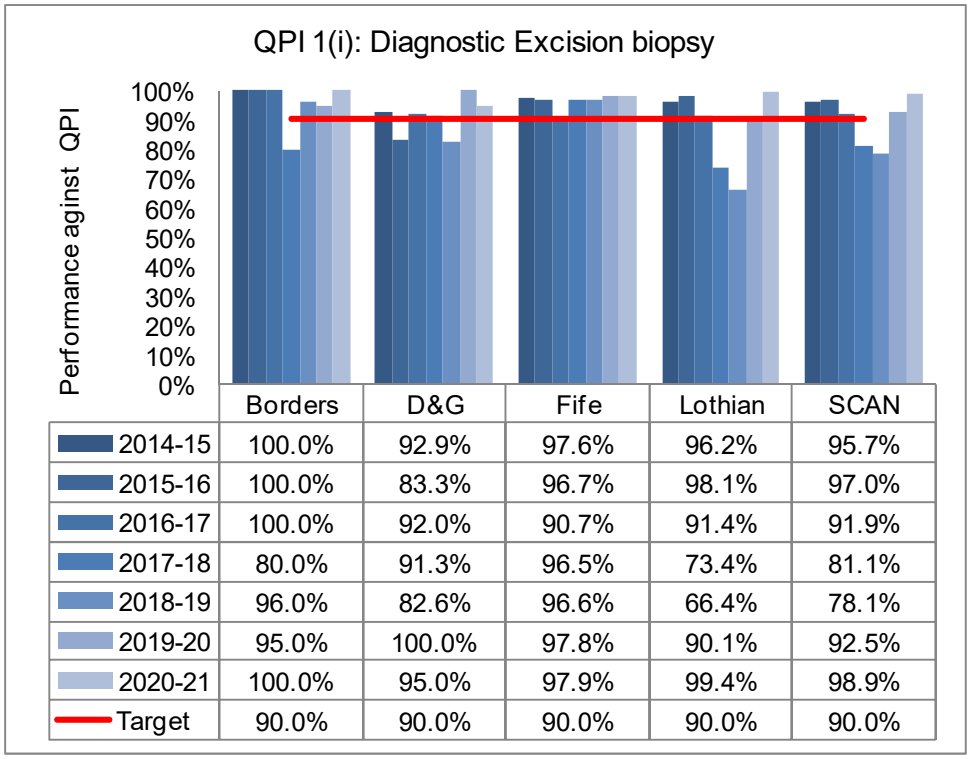
*A skin cancer clinician can be defined as a: Dermatologist, Plastic Surgeon, Oral and Maxillofacial Surgeon, A locally designated clinician with a special interest in skin cancer, who is also a member (or under the supervision of a member) of the melanoma MDT

Numerator = All patients with cutaneous melanoma with diagnostic excision biopsies carried out by skin cancer clinician

Denominator = All patients with cutaneous melanoma undergoing diagnostic excision biopsy (no exclusions)

Target 90%	Borders	D&G	Fife	Lothian	SCAN
2020-21 cohort	38	39	61	205	343
Ineligible for this QPI	9	19	14	31	73
Numerator	29	19	46	173	267
Not recorded for numerator	0	0	0	0	0
Denominator	29	20	47	174	270
Not recorded for denominator	0	0	0	0	0
% Performance	100.0	95.0	97.9	99.4	98.9

The QPI was met in all Health Boards.



	Borders	D&G	Fife	Lothian	SCAN
2014-15	100.0%	92.9%	97.6%	96.2%	95.7%
2015-16	100.0%	83.3%	96.7%	98.1%	97.0%
2016-17	100.0%	92.0%	90.7%	91.4%	91.9%
2017-18	80.0%	91.3%	96.5%	73.4%	81.1%
2018-19	96.0%	82.6%	96.6%	66.4%	78.1%
2019-20	95.0%	100.0%	97.8%	90.1%	92.5%
2020-21	100.0%	95.0%	97.9%	99.4%	98.9%
Target	90.0%	90.0%	90.0%	90.0%	90.0%

QPI 1(ii): Diagnostic Partial biopsy Target = 90%

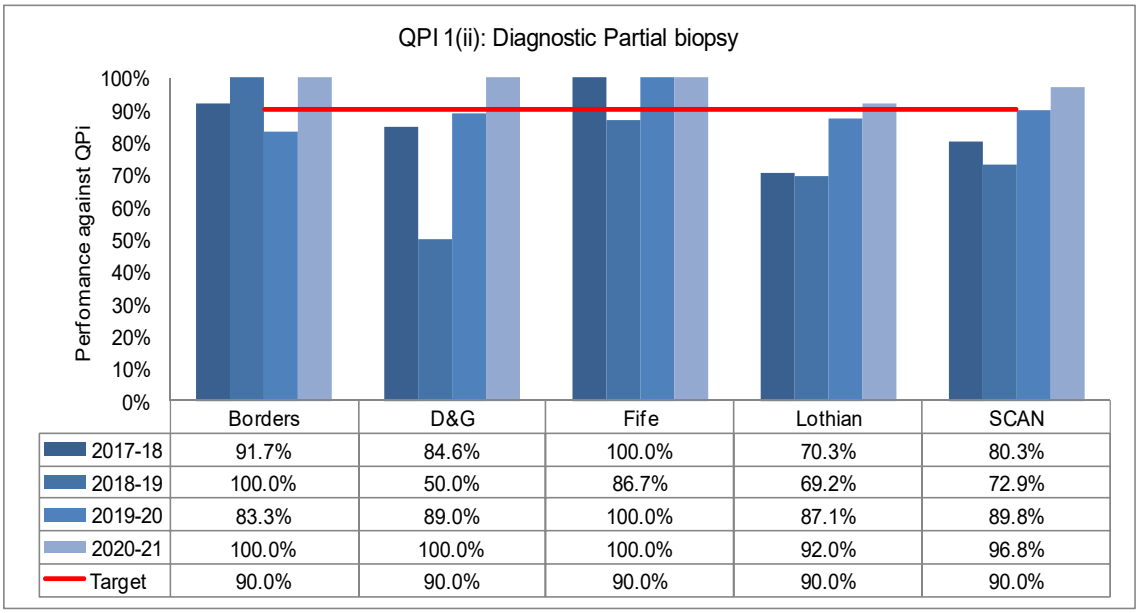
Patients with cutaneous melanoma should have their diagnostic partial biopsy carried out by a skin cancer clinician

Numerator = All patients with cutaneous melanoma with diagnostic partial biopsies carried out by skin cancer clinician

Denominator = All patients with cutaneous melanoma undergoing diagnostic partial biopsy (no exclusions)

Target 90%	**Borders**	**D&G**	**Fife**	**Lothian**	**SCAN**
2020-21 cohort	38	39	61	205	343
Ineligible for this QPI	29	23	49	180	281
Numerator	9	16	12	23	60
Not recorded for numerator	0	0	0	0	0
Denominator	9	16	12	25	62
Not recorded for denominator	0	0	0	0	0
% Performance	100.0	100.0	100.0	92.0	96.8

The QPI was met in all Health Boards.



	Borders	D&G	Fife	Lothian	SCAN
2017-18	91.7%	84.6%	100.0%	70.3%	80.3%
2018-19	100.0%	50.0%	86.7%	69.2%	72.9%
2019-20	83.3%	89.0%	100.0%	87.1%	89.8%
2020-21	100.0%	100.0%	100.0%	92.0%	96.8%
Target	90.0%	90.0%	90.0%	90.0%	90.0%

QPI 2: Pathology reporting Target = 90%

Surgical pathology reports for patients with cutaneous melanoma should contain full pathology information to inform treatment decision making.

Numerator = All patients with cutaneous melanoma undergoing diagnostic excision biopsy where the surgical pathology report contains a full set of data items (as defined by the current Royal College of Pathologists dataset)

Denominator = All patients with cutaneous melanoma undergoing diagnostic excision biopsy (no exclusions)

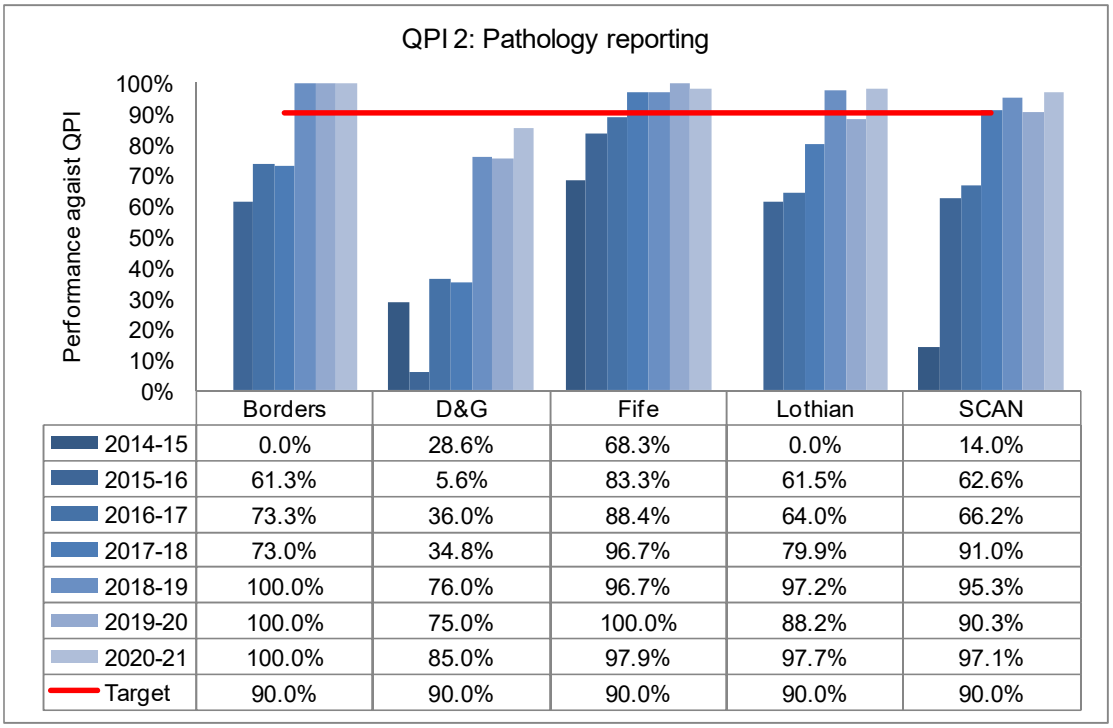
Target 90%	Borders	D&G	Fife	Lothian	SCAN
2020-21 cohort	38	39	61	205	343
Ineligible for this QPI	9	19	13	29	70
Numerator	29	17	47	172	265
Not recorded for numerator	0	0	0	0	0
Denominator	29	20	48	176	273
Not recorded for denominator	0	0	0	0	0
% Performance	100.0	85.0	97.9	97.7	97.1

Comments where QPI was not met

D&G: The target was not met showing a shortfall of 5.0% (3 cases). Of these 3 cases, 1 case was missing the *in-situ* component (reported in Edinburgh), 1 case was missing TNM staging (reported in D&G), and 1 case was missing both TNM staging and *in-situ* component (reported in D&G).

Further comments
All Lothian outlier cases (4) had their pathology reported in the private sector.

Action: No action identified.



	Borders	D&G	Fife	Lothian	SCAN
2014-15	0.0%	28.6%	68.3%	0.0%	14.0%
2015-16	61.3%	5.6%	83.3%	61.5%	62.6%
2016-17	73.3%	36.0%	88.4%	64.0%	66.2%
2017-18	73.0%	34.8%	96.7%	79.9%	91.0%
2018-19	100.0%	76.0%	96.7%	97.2%	95.3%
2019-20	100.0%	75.0%	100.0%	88.2%	90.3%
2020-21	100.0%	85.0%	97.9%	97.7%	97.1%
Target	90.0%	90.0%	90.0%	90.0%	90.0%

QPI 3: Multi-Disciplinary Team Meeting (MDT) Target = 95%
Patients with cutaneous melanoma should be discussed by a multi-disciplinary team prior to definitive treatment

Numerator = All patients with cutaneous melanoma discussed at the MDT before definitive treatment (wide local excision, chemotherapy /SACT, supportive care and radiotherapy).

Denominator = All patients with cutaneous melanoma (excluding patients who died before treatment)

Exclusions = died before treatment

Target 95%	Borders	D&G	Fife	Lothian	SCAN
2020-21 cohort	38	39	61	205	343
Ineligible for this QPI	0	1	1	1	2
Numerator	34	31	56	172	293
Not recorded for numerator	0	0	0	0	0
Denominator	38	38	60	204	340
Not recorded for exclusions	0	0	0	0	0
Not recorded for denominator	0	0	0	0	0
% Performance	89.5	81.6	93.3	84.3	86.2

Comments where QPI was not met

Borders: The target was not met showing a shortfall of 5.5% (4 cases). For 2 of these cases, WLE was performed in house prior to MDT discussion as a surgical slot was available. Both cases were Stage IA. For 1 further case, it was assumed this was a melanoma recurrence; therefore excision was performed with a 1 cm margin. No further treatment was performed on this new primary as margins were deemed sufficient at MDT. For 1 case, WLE was performed in the Borders before MDT so as not to delay the pathway.

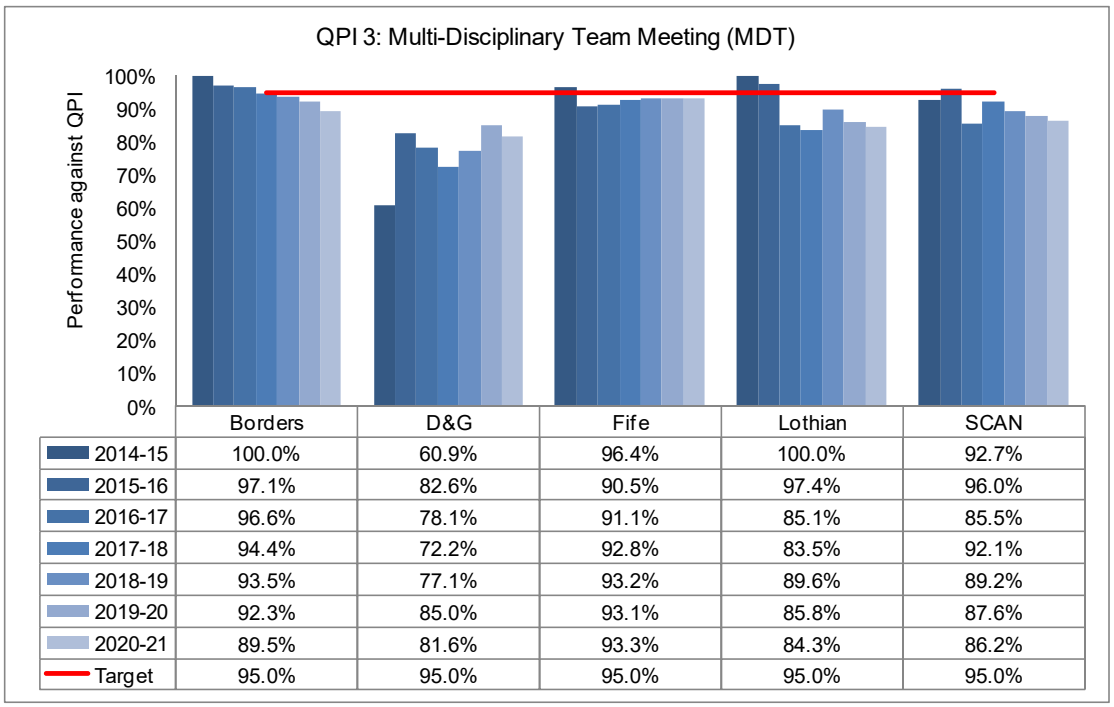
D&G: The target was not met showing a shortfall of 13.4% (7 cases). For these cases all were discussed at MDT after treatment. 5 cases were Stage IA: 4 of which had WLE before MDT and 1 case where initial excision biopsy had removed lesion with near adequate margin and patient declined further WLE. 1 case was Stage IB clinically suspicious at first consultation and after discussion with patient (during COVID), the patient opted for a 1cm WLE, 1 case was Stage IB and the patient had recurrent metastatic lung cancer. MDT felt that first excision biopsy was adequate treatment.

Fife: The target was not met showing a shortfall of 1.7% (4 cases). For these cases, 1 patient declined further (definitive) treatment (stage IIA), 1 case was diagnosed by WLE (stage IA), 1 case had no further treatment due to co-morbidities (stage IA), and 1 patient experienced rapid progression and died, with excision only performed (stage IV).

Lothian: The target was not met showing a shortfall of 10.7% (32 cases). For these cases, 14 had a WLE performed in house and prior to MDT (13 stage IA cases and 1 stage IB case), 8 were deemed to have been excised with sufficient margin at MDT and did not require a WLE. For a further 3 cases WLE was performed prior to MDT due to advanced disease (2 stage IV and 1 stage III). 2 cases were not discussed at MDT (excisions performed privately). 3 cases proceeded to WLE directly due to clinical suspicion and frailty/comorbidities. For 1 case the patient had another cancer,

no WLE was performed as treatment of this second cancer was the priority. For one case WLE was not performed as the MDT recommendation was for observation/immunotherapy due to prior melanomas.
Outliers have been reviewed and there are no concerns regarding patient management.

Action: All outliers have been reviewed and were treated appropriately. Private sector diagnosed patients to be referred to MDM.



	Borders	D&G	Fife	Lothian	SCAN
2014-15	100.0%	60.9%	96.4%	100.0%	92.7%
2015-16	97.1%	82.6%	90.5%	97.4%	96.0%
2016-17	96.6%	78.1%	91.1%	85.1%	85.5%
2017-18	94.4%	72.2%	92.8%	83.5%	92.1%
2018-19	93.5%	77.1%	93.2%	89.6%	89.2%
2019-20	92.3%	85.0%	93.1%	85.8%	87.6%
2020-21	89.5%	81.6%	93.3%	84.3%	86.2%
Target	95.0%	95.0%	95.0%	95.0%	95.0%

QPI 4: Clinical Examination of Draining Lymph Node Basin Target = 95%

Patients with cutaneous melanoma should undergo clinical examination of relevant draining lymph node basins as part of clinical staging.

Numerator = All patients with cutaneous melanoma who undergo clinical examination of relevant draining lymph node basins as part of clinical staging

Denominator = All patients with cutaneous melanoma (no exclusions)

Target 95%	Borders	D&G	Fife	Lothian	SCAN
2020-21 cohort	38	39	61	205	34
Ineligible for this QPI	0	0	0	0	0
Numerator	38	36	60	170	304
Not recorded for numerator	0	0	1	19	20
Denominator	38	39	61	205	343
Not recorded for denominator	0	0	0	0	0
% Performance	100.0	92.3	98.4	82.9	88.6

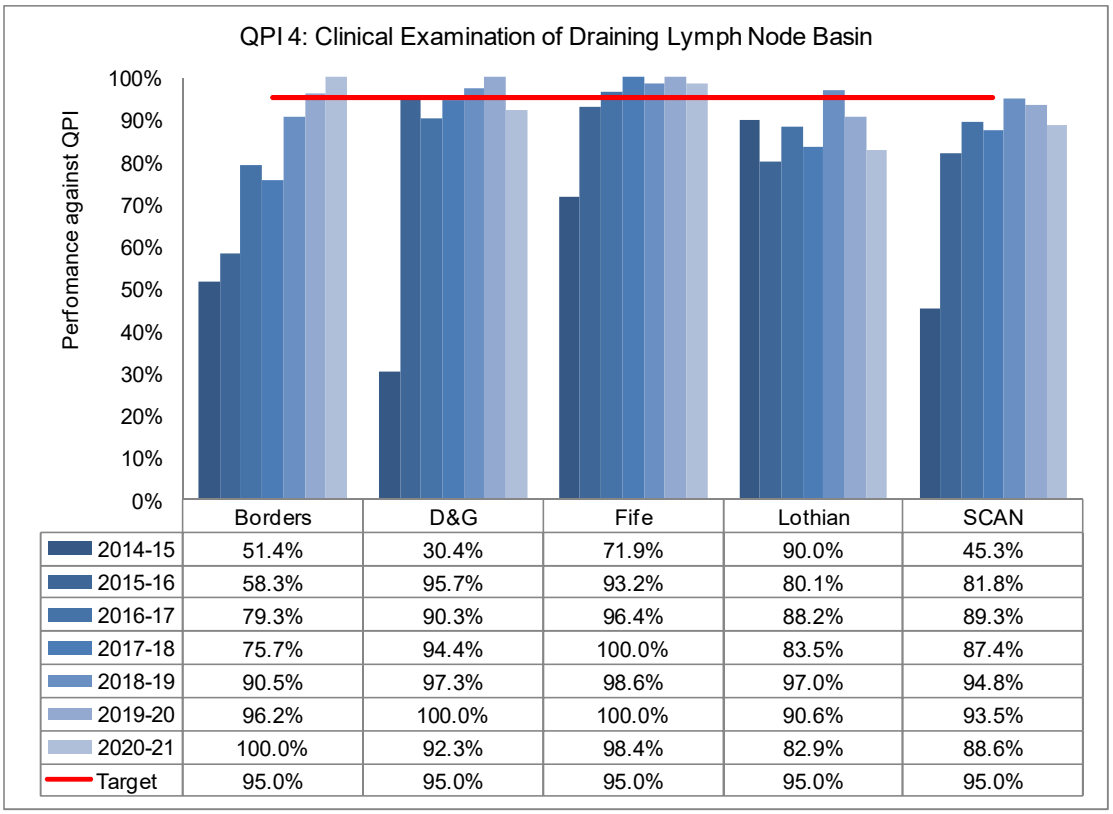
Comments where QPI was not met

D&G: The target was not met showing a shortfall of 2.7% (3 cases). For these 3 cases, 1 case came through respiratory team route as it was initially thought to be primary lung cancer with metastasis. Patient not seen in skin clinic but referred straight on to Oncology and by that time, there was little that could be done. 1 case referred straight to MaxFax for formal excision with lymph node assessment formally recorded when reviewed back in clinic in July 2021. 1 case referred through surgical team who excised melanoma deposits in bowel. CT scans have not shown any enlarged lymph nodes in palpable areas.

Lothian: The target was not met showing a shortfall of 12.1% (35 cases). For 19 of these cases examination was performed but the exact date of examination was not recorded. For a further 16 cases there was no evidence recorded that draining lymph node basins had been examined as part of staging.

A number of patients will have missed nodal checks due to undergoing telephone consults during the coronavirus pandemic. An issue with the documentation of checks is also noted in Lothian, and for 4 cases clinical notes seem to be missing in Lothian.

Action: MDM co-ordinator to email clinicians to request that they add a dated clinical assessment of the draining lymph node basin to the clinical record if this in not complete at the point of MDM discussion. The issue of missing documentation will also be flagged to the service team in Lothian.



	Borders	D&G	Fife	Lothian	SCAN
2014-15	51.4%	30.4%	71.9%	90.0%	45.3%
2015-16	58.3%	95.7%	93.2%	80.1%	81.8%
2016-17	79.3%	90.3%	96.4%	88.2%	89.3%
2017-18	75.7%	94.4%	100.0%	83.5%	87.4%
2018-19	90.5%	97.3%	98.6%	97.0%	94.8%
2019-20	96.2%	100.0%	100.0%	90.6%	93.5%
2020-21	100.0%	92.3%	98.4%	82.9%	88.6%
Target	95.0%	95.0%	95.0%	95.0%	95.0%

QPI 5: Sentinel Node Biopsy Pathology Target = 90%

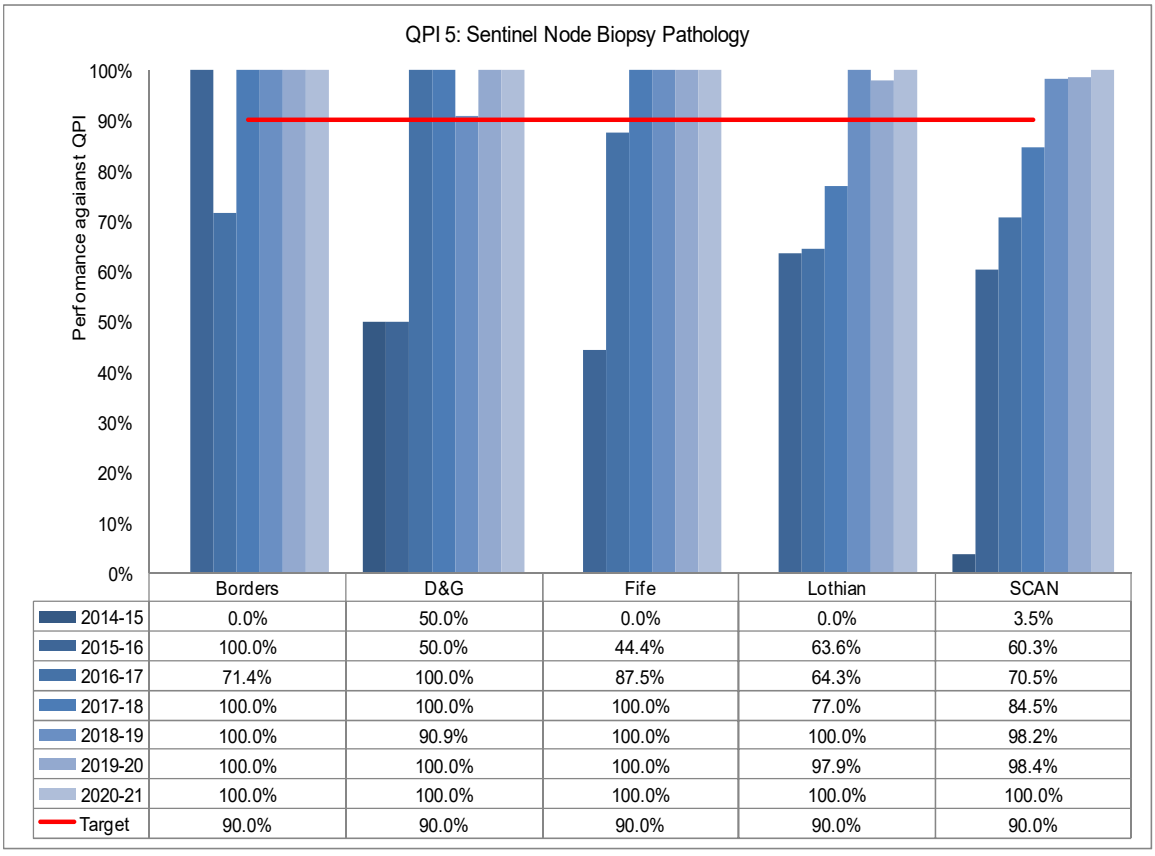
Sentinel node biopsy (SNB) reports for patients with cutaneous melanoma should contain full pathology information to inform treatment decision making

Numerator = All patients with cutaneous melanoma who undergo SLNB where the SNB report contains a full set of data (as defined by the current Royal College of Pathologists dataset)

Denominator = All patients with cutaneous melanoma who undergo SLNB (No exclusions)

Target 90%	Borders	D&G	Fife	Lothian	SCAN
2020-21 cohort	38	39	61	205	343
Ineligible for this QPI	28	29	44	14	249
Numerator	10	10	17	57	94
Not recorded for numerator	0	0	0	0	0
Denominator	10	10	17	57	94
Not recorded for denominator	0	0	0	0	0
% Performance	100.0	100.0	100.0	100.0	100.0

The target was met in all Boards



	Borders	D&G	Fife	Lothian	SCAN
2014-15	0.0%	50.0%	0.0%	0.0%	3.5%
2015-16	100.0%	50.0%	44.4%	63.6%	60.3%
2016-17	71.4%	100.0%	87.5%	64.3%	70.5%
2017-18	100.0%	100.0%	100.0%	77.0%	84.5%
2018-19	100.0%	90.9%	100.0%	100.0%	98.2%
2019-20	100.0%	100.0%	100.0%	97.9%	98.4%
2020-21	100.0%	100.0%	100.0%	100.0%	100.0%
Target	90.0%	90.0%	90.0%	90.0%	90.0%

QPI 6: Wide Local Excisions Target = 95%

Patients with cutaneous melanoma should undergo a wide local excision of the initial diagnostic excision or partial biopsy site to reduce the risk of local recurrence.

Numerator = All patients with cutaneous melanoma undergoing diagnostic excision or partial biopsy who undergo a wide local excision

Denominator = All patients with cutaneous melanoma who undergo diagnostic biopsy

Exclusions = died before treatment

Target 95%	Borders	D&G	Fife	Lothian	SCAN
2020-21 cohort	38	39	61	205	343
Ineligible for this QPI	0	4	2	6	13
Exclusions	0	0	1	1	2
Numerator	33	32	54	177	296
Not recorded for numerator	0	0	0	0	0
Denominator	38	35	58	198	329
Not recorded for exclusions	0	0	0	0	0
Not recorded for denominator	0	0	0	0	0
% Performance	86.8	91.4	93.1	89.4	90.0

Reasons for not meeting the QPI	Borders	D&G	Fife	Lothian	SCAN
Excision margins deemed acceptable	0	2	0	8	10
Disease progression	0	0	1	0	1
Co-morbidities	0	0	1	3	4
Delicate area/watch and wait	0	0	0	0	0
Declined further treatment	4	0	1	5	10
Other/awaiting treatment	1	1	1	5	8
Totals	5	3	4	21	33

Comments where QPI was not met

Borders: The target was not met showing a shortfall of 8.2% (5 cases). In 4 of these cases the patient declined the WLE, and a further 1 case had sufficient margin on biopsy.

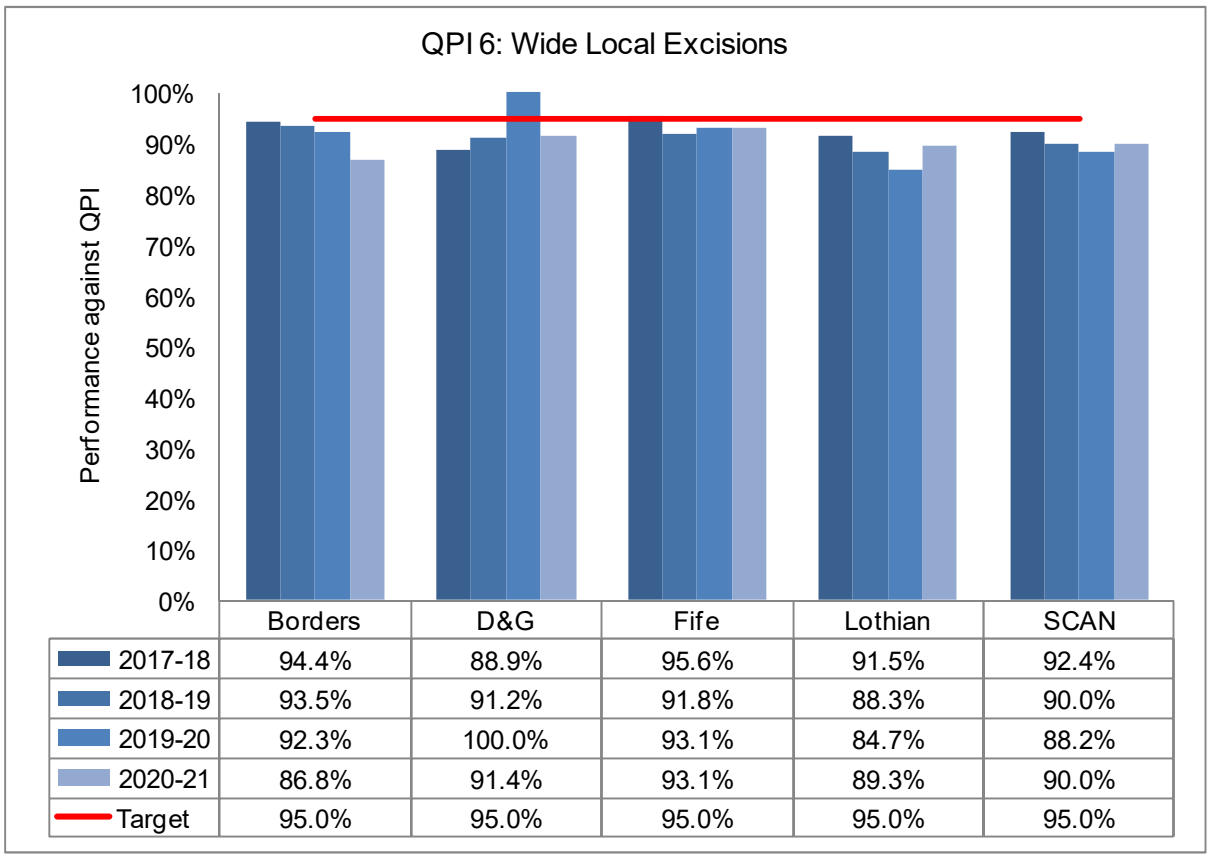
D&G: The target was not met showing a shortfall of 3.6% (3 cases). 2 cases had sufficient margins on biopsy, and 1 case was due WLE but procedure cancelled due to Covid second wave, disease then progressed.

Fife: The target was not met showing a shortfall of 1.9% (4 cases). For 1 of these cases WLE was not performed due to disease progression, 1 case identified metastatic disease by CT and WLE was no longer appropriate, 1 patient had significant co-morbidities, and 1 patient declined further treatment.

Lothian: The target was not met showing a shortfall of 5.6% (21 cases). 8 cases had sufficient margins on biopsy, and in 5 cases the patient declined WLE. In 4 cases the patients had extensive disease and were to be treated with SACT instead of WLE (1 patient died prior to SACT). In a further 3 cases patients were unsuitable for WLE due to co-morbidities. In 1 case metastasis occurred following biopsy causing a delay in further surgery as CT was repeated. WLE had not been performed at the time of data signoff for this report.

A number of patients made an informed choice not to undergo further surgery within these outliers. Additionally in those with extensive/distant disease further surgical intervention was not indicated.

Action: It is likely that the QPI changes following formal review will address improve performance in this QPI. No action Identified.



	Borders	D&G	Fife	Lothian	SCAN
2017-18	94.4%	88.9%	95.6%	91.5%	92.4%
2018-19	93.5%	91.2%	91.8%	88.3%	90.0%
2019-20	92.3%	100.0%	93.1%	84.7%	88.2%
2020-21	86.8%	91.4%	93.1%	89.3%	90.0%
Target	95.0%	95.0%	95.0%	95.0%	95.0%

QPI 7(i): Wide Local Excision within 84 days (Excision biopsy) Target = 95%

Patients with cutaneous melanoma should have their wide local excision within 84 days of their diagnostic excision biopsy

Numerator = All patients undergoing wide local excision within 84 days of their diagnostic excision biopsy

Denominator = All patients with cutaneous melanoma undergoing diagnostic excision biopsy

Target 95%	Borders	D&G	Fife	Lothian	SCAN
2020-21 cohort	38	39	61	205	343
Ineligible for this QPI	9	20	14	42	85
Numerator	22	11	29	119	181
Not recorded for numerator	0	0	0	0	0
Denominator	29	19	47	174	269
Not recorded for denominator	0	0	0	0	0
% Performance	75.9	57.9	61.7	68.4	67.3

Comments where QPI was not met

Borders: The target was not met showing a shortfall of 19.1% (7 cases). For 4 cases excision was performed in Borders, and WLE in Lothian (referred to Plastics) For 3 of these 4 cases there was a delay after referral to Plastics (49, 55 and 92 days from referral to WLE). For a further 2 cases WLE was not performed (patient declined, and initial excision performed with a 10mm margin due to suspicion of recurrence (sufficient margin)). For one case another physical condition delayed the WLE and SLNB.

D&G: The target was not met showing a shortfall of 37.1% (8 cases). For 4 cases patients were referred to Lothian for WLE and SLNB with delays due to COVID impact. For 3 cases no WLE was performed (1 case with adequate biopsy margins (additional recurrent metastatic lung cancer), 1 case where patient declined WLE (near adequate margins), 1 case with WLE cancelled due to COVID, followed by disease progression and patient declined further surgery). 1 case was delayed due to patient feeling unwell, and appointment was subsequently impacted by COVID.

Fife: The target was not met showing a shortfall of 33.3% (18 cases). For these 18 cases, 4 were patient induced delays, 2 had no WLE performed, 2 had both admin errors by both Pathology and Dermatology and issues with plastics capacity, 2 had a delay in Dermatology referral to plastics, 2 had issues with Plastics capacity, 2 were complex cases, with the first requiring a pathology 2nd opinion and the second with co-morbidities causing surgical delay, 1 case had both an issue with Plastics capacity and patient induced delay, 1 case had a plastics delay in listing for MDM, 1 delay in referral to MDM and issues with Plastics capacity, and 1 case had a Pathology delay.

Lothian: The target was not met showing a shortfall of 26.6% (55 cases). For 20 cases no WLE was performed (10 patients had sufficient margins, 4 patients declined WLE, 2 patients proceeded directly to SACT, 2 patients had significant co-morbidities, 1 patient missed a number of Dermatology appointments and subsequently died (stage IV)) and for 1 case the patient was awaiting WLE and it had not been performed at the time of data signoff for this report.

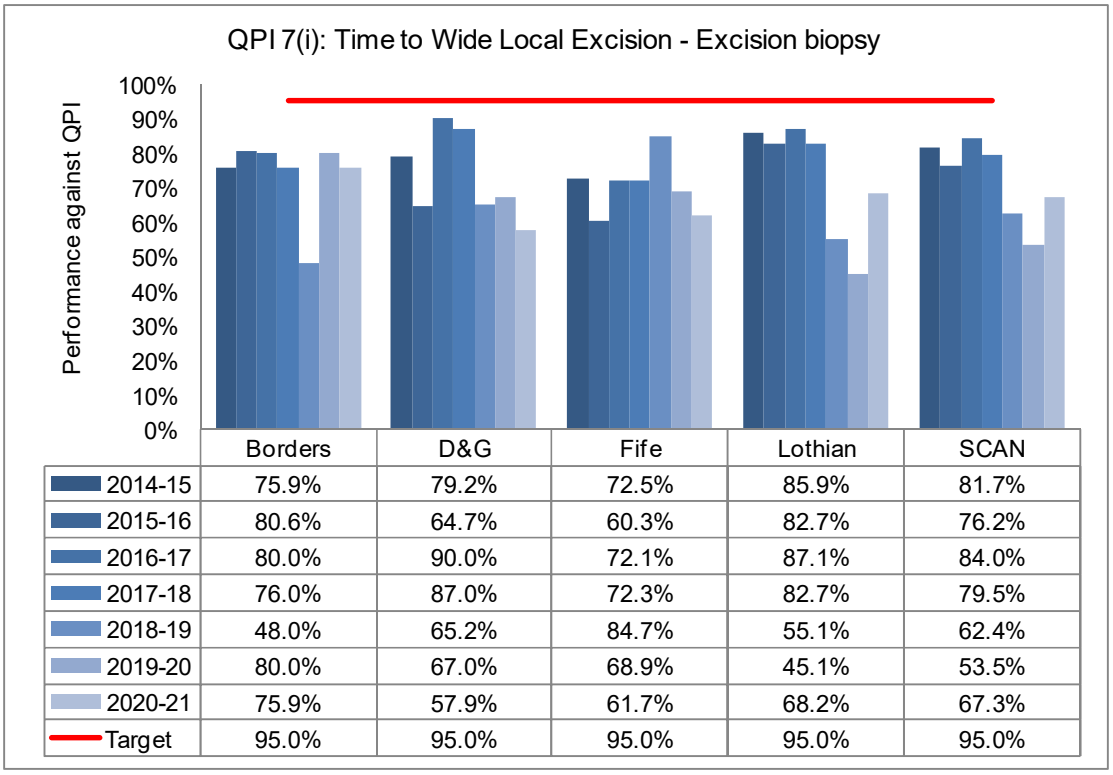
For the further 35 cases, 20 cases had issues with plastics capacity, 4 cases had pathology reporting delays (1 with an additional plastics capacity issue delay), 5 cases had WLE was performed in house (1 with a significant delay in referral to MDT), 1 case had a delay in referral to Plastics, 1 case had a patient induced delay, 1 case had a significant delay in referral to MDT, and 1 case had an earlier plastics appointment cancelled (unknown reason) 1 case where pathology was re-reviewed after MDT, and an amended report issued. 1 case had no delays noted.

Further comments:

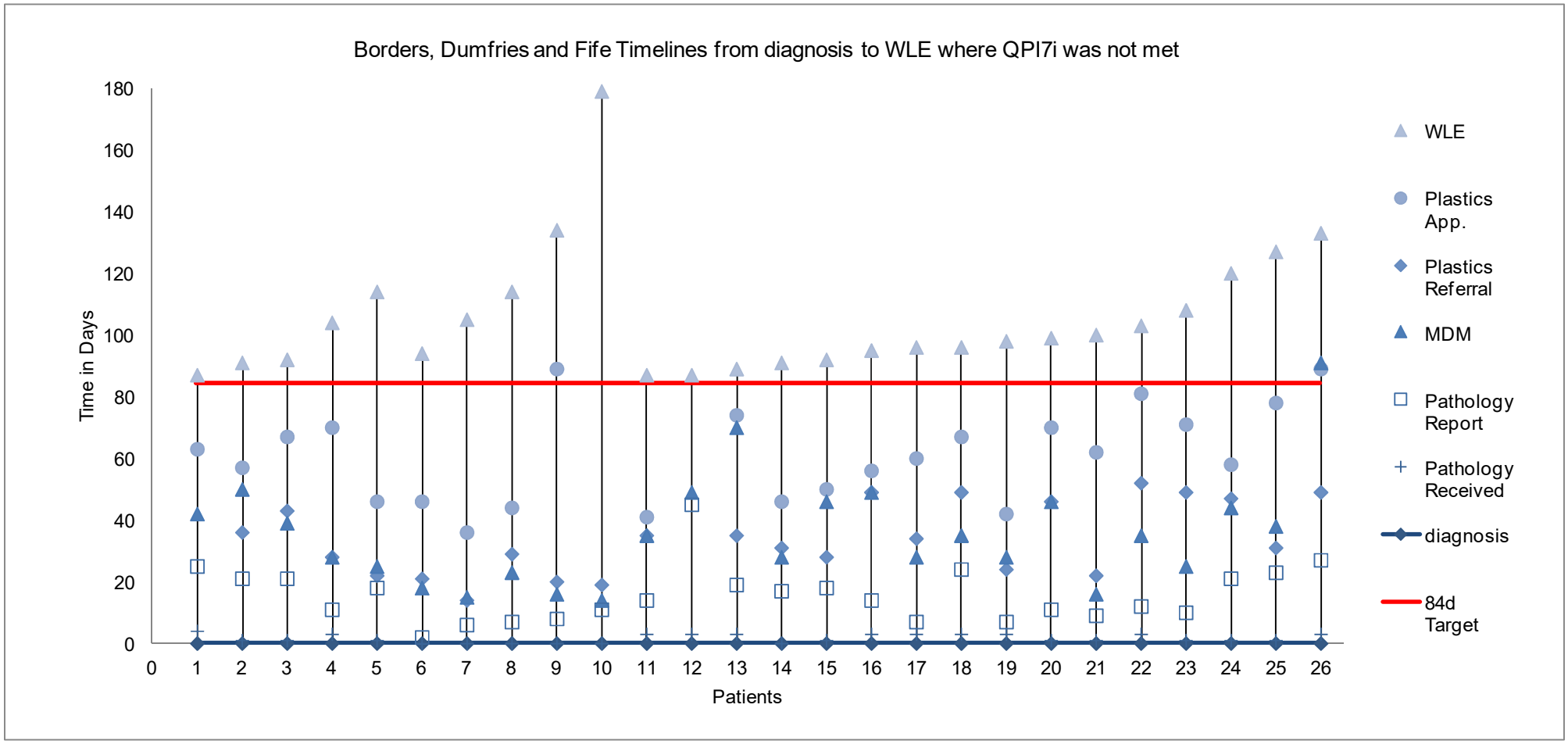
It is noted in Lothian that improvements in performance in this QPI should be made. Access to scanners is an issue in Lothian. Scanner improvements are taking place in Lothian this year, so it is noted that next year's performance may be affected by this, due to decreased availability of the scanners. It is also recognised that more dedicated melanoma plastics capacity is needed. Conversion of a general plastics surgery clinic to melanoma this year is expected to improve Lothian's performance in this QPI.

Obtaining surgical slots in a timely manner was a challenge in Fife this year. Fife outliers and timelines will be reviewed in detail.

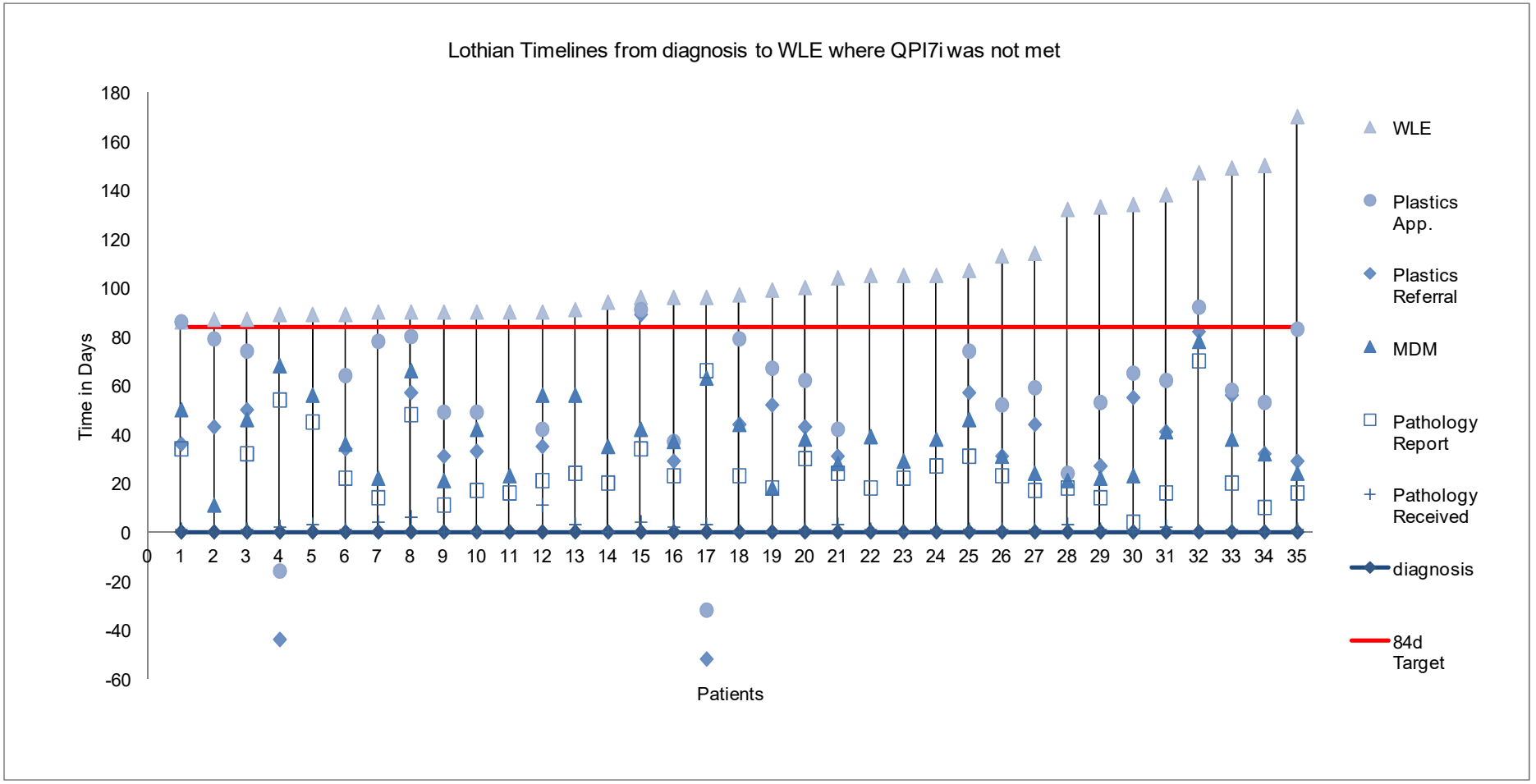
Action: Upgrades to scanners may affect performance in this QPI next year. This work is to be flagged to all affected SCAN teams and their respective service teams and the likely impact of this work on time to SLNB. Mitigations should be explored, including whether the involvement of service teams in other boards is a possibility.



	Borders	D&G	Fife	Lothian	SCAN
2014-15	75.9%	79.2%	72.5%	85.9%	81.7%
2015-16	80.6%	64.7%	60.3%	82.7%	76.2%
2016-17	80.0%	90.0%	72.1%	87.1%	84.0%
2017-18	76.0%	87.0%	72.3%	82.7%	79.5%
2018-19	48.0%	65.2%	84.7%	55.1%	62.4%
2019-20	80.0%	67.0%	68.9%	45.1%	53.5%
2020-21	75.9%	57.9%	61.7%	68.2%	67.3%
Target	95.0%	95.0%	95.0%	95.0%	95.0%



Patients 1-5 are Borders patients, Patients 6-10 are Dumfries & Galloway patients, Patients 11-26 are Fife patients
See Appendix for detailed breakdown (Patients who did not have a WLE are not included on this graph).



See Appendix for detailed breakdown (20 patients who did not have a WLE are not included on this graph).

QPI 7(ii): Wide Local Excision within 84 days (partial biopsy) Target = 95%

Patients with cutaneous melanoma should have their wide local excision within 84 days of their partial biopsy

Numerator = All patients with cutaneous melanoma undergoing wide local excision within 84 days of their diagnostic partial biopsy

Denominator = All patients with cutaneous melanoma who undergo diagnostic partial biopsy (No Exclusions)

Target 95%	Borders	D&G	Fife	Lothian	SCAN
2020-21 cohort	38	39	61	205	343
Ineligible for this QPI	29	23	49	180	281
Numerator	4	15	8	16	43
Not recorded for numerator	0	0	0	0	0
Denominator	9	16	12	25	62
Not recorded for denominator	0	0	0	0	0
% Performance	44.4	93.8	66.7	64.0	69.4

Comments where QPI was not met

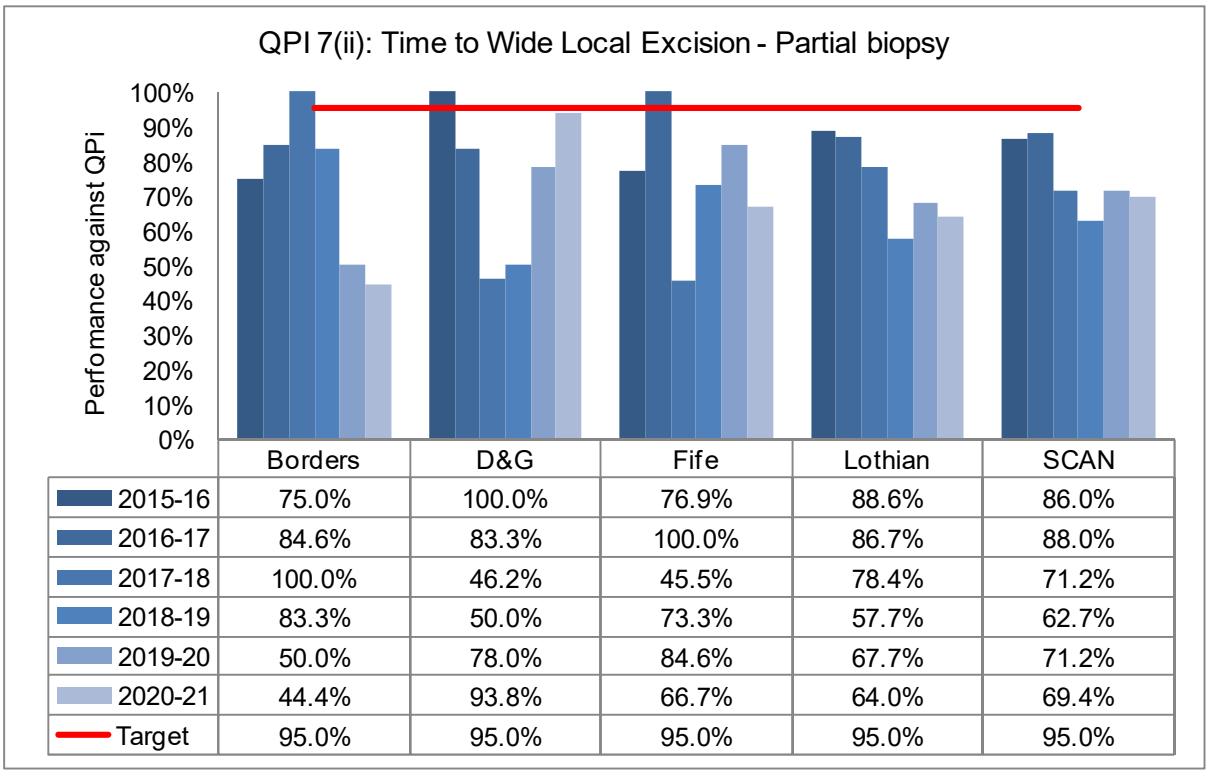
Borders: The target was not met showing a shortfall of 50.6% (5 cases). For 3 cases patients had no WLE performed as patients declined, for 1 case there was a delay in referral to Lothian Plastics (10 days after MDM, and for 1 patient WLE was delayed due to COVID infection.

D&G: The target was not met showing a shortfall of 1.2% (1 case). Case referred to Lothian for WLE & SLNB (87 days between diagnostic partial biopsy and WLE).

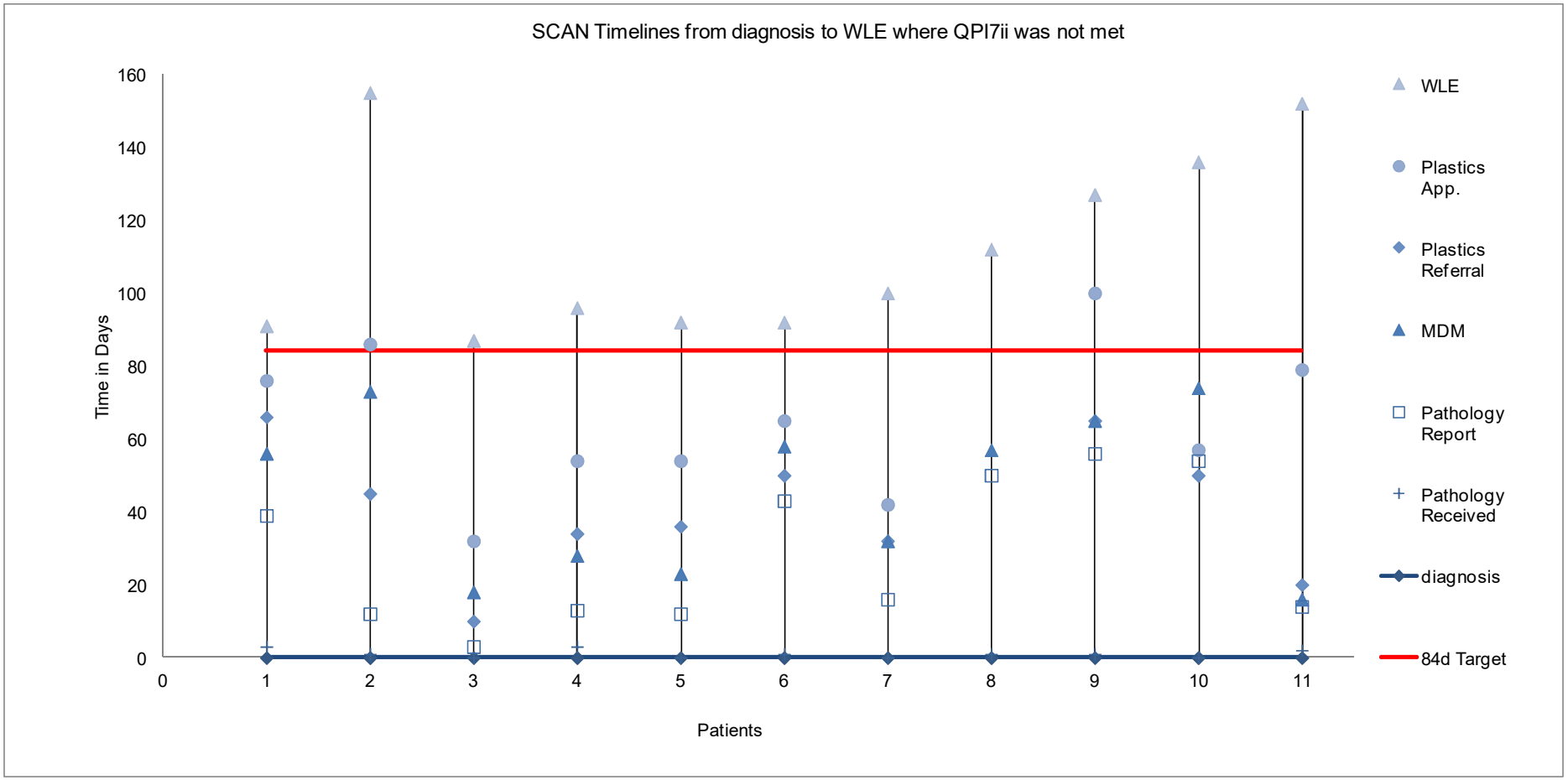
Fife: The target was not met showing a shortfall of 28.3% (4 cases). For 3 cases patients had no WLE performed, and for 1 case there was a patient induced delay.

Lothian: The target was not met showing a shortfall of 31.0% (9 cases). For 3 cases there was a delay after referral to Plastics (56, 68, 132 days from referral to WLE – patient induce delay attributed to the longest delay). For 2 cases there was both a delay after referral to Plastics (62 and 86 days) and a delay in pathology reporting (55 and 54 days). For 2 cases no WLE was performed (1 patient suffered a stroke and subsequently died, and 1 patient declined WLE). For 1 case metastasis was noted and an FNA performed which delayed the pathway. 1 case had a pathology reporting delay (42 days) and following a partial biopsy, attended for a planned excision, but due to site (elbow) this was rebooked as WLE and SLNB causing delay.

Action: The further discussion section in QPI 7i is also relevant to this QPI. No action identified.



	Borders	D&G	Fife	Lothian	SCAN
2015-16	75.0%	100.0%	76.9%	88.6%	86.0%
2016-17	84.6%	83.3%	100.0%	86.7%	88.0%
2017-18	100.0%	46.2%	45.5%	78.4%	71.2%
2018-19	83.3%	50.0%	73.3%	57.7%	62.7%
2019-20	50.0%	78.0%	84.6%	67.7%	71.2%
2020-21	44.4%	93.8%	66.7%	64.0%	69.4%
Target	95.0%	95.0%	95.0%	95.0%	95.0%



Patients 1 and 2 are Borders patients, Patient 3 is a Dumfries & Galloway patient, Patient 4 is a Fife patient, Patients 5-11 are Lothian patients. See appendix for detailed breakdown (Patients who did not have a WLE are not included on graphs).

QPI 8: B-RAF Status Target = 75%

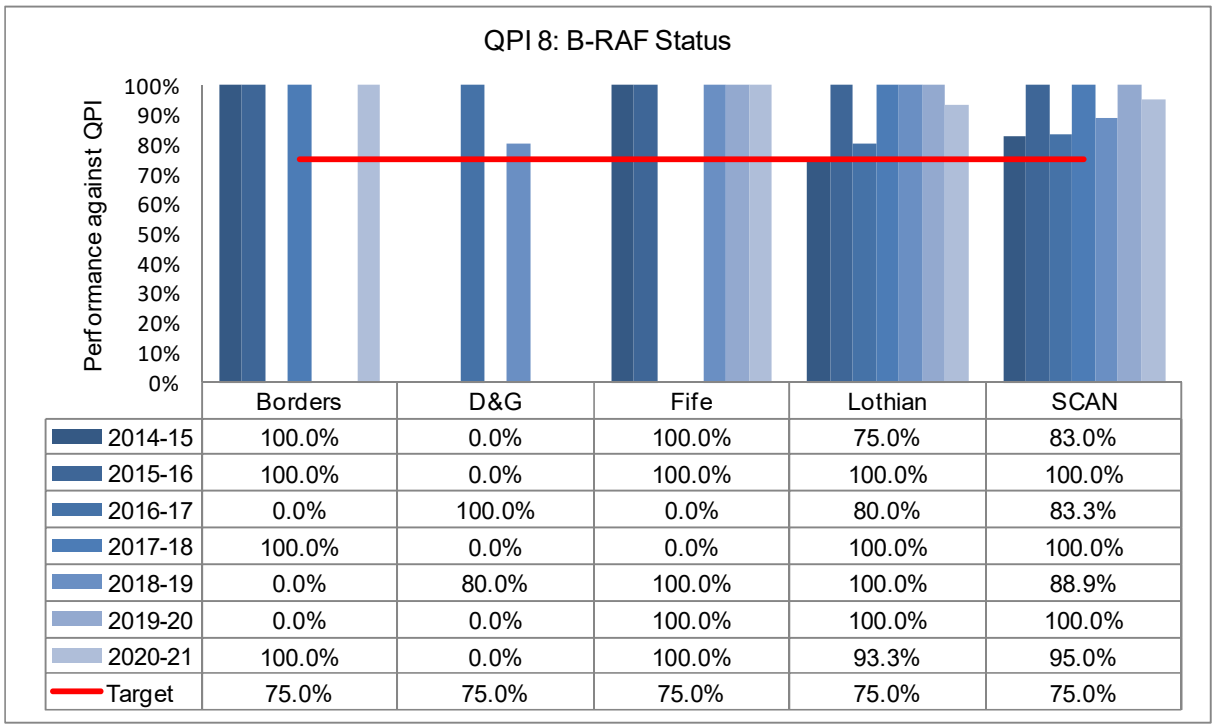
Patients with unresectable stage III or IV cutaneous melanoma should have their BRAF status checked.

Numerator = All patients with unresectable stage III or IV cutaneous melanoma who have their BRAF status checked

Denominator = All patients with unresectable stage III or IV cutaneous melanoma (No exclusions)

Target 75%	Borders	D&G	Fife	Lothian	SCAN
2020-21 cohort	38	39	61	205	343
Ineligible for this QPI	36	39	57	190	322
Numerator	2	0	3	14	19
Not recorded for numerator	0	0	0	0	0
Denominator	2	0	3	15	20
Not recorded for denominator	0	0	1	0	0
% Performance	100.0	N/A	100.0	93.3	95.0

The target was met in all Boards. There were no eligible patients in D&G.



	Borders	D&G	Fife	Lothian	SCAN
2014-15	100.0%	0.0%	100.0%	75.0%	83.0%
2015-16	100.0%	0.0%	100.0%	100.0%	100.0%
2016-17	0.0%	100.0%	0.0%	80.0%	83.3%
2017-18	100.0%	0.0%	0.0%	100.0%	100.0%
2018-19	0.0%	80.0%	100.0%	100.0%	88.9%
2019-20	0.0%	0.0%	100.0%	100.0%	100.0%
2020-21	100.0%	0.0%	100.0%	93.3%	95.0%
Target	75.0%	75.0%	75.0%	75.0%	75.0%

QPI 9: Imaging for Patients with Advanced Melanoma Target = 95%

Patients with stage IIC, III or IV cutaneous melanoma should be evaluated with appropriate imaging within 35 days of diagnosis to guide treatment decision making

Numerator = All patients with stage IIC and above who undergo CT or PET CT within 35 days of diagnosis.

Denominator = All patients with stage IIC or above (No exclusions).

Target 95%	Borders	D&G	Fife	Lothian	SCAN
2020-21 cohort	38	39	61	205	343
Ineligible for this QPI	34	34	46	160	274
Numerator	2	5	6	7	20
Not recorded for numerator	0	0	0	0	0
Denominator	4	5	14	45	68
Not recorded for denominator	0	3	1	4	8
% Performance	50.0	100.0	42.9	15.6	29.4

Comments where QPI was not met

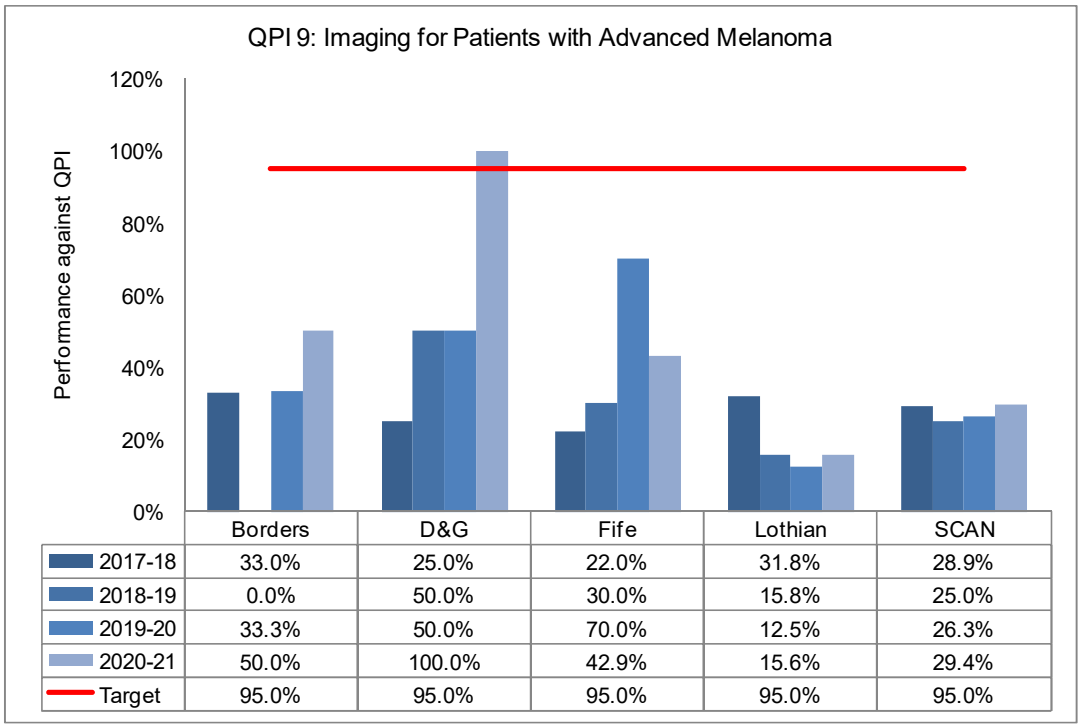
Borders: The target was not met showing a shortfall of 45.0% (2 cases). Of these cases both were upstaged (1 case upstaged by CT, scans not available at initial MDT, rediscussed. 1 case upstaged by positive SLNB).

Fife: The target was not met showing a shortfall of 52.1% (8 cases). For these 8 cases, 3 patients were upstaged following a positive SLNB, for 3 cases no reason for the delay was identified, 1 patient had initial CT request rejected as an eGFR was required, and 1 patient had an unusual pathway with CT prior to diagnosis.

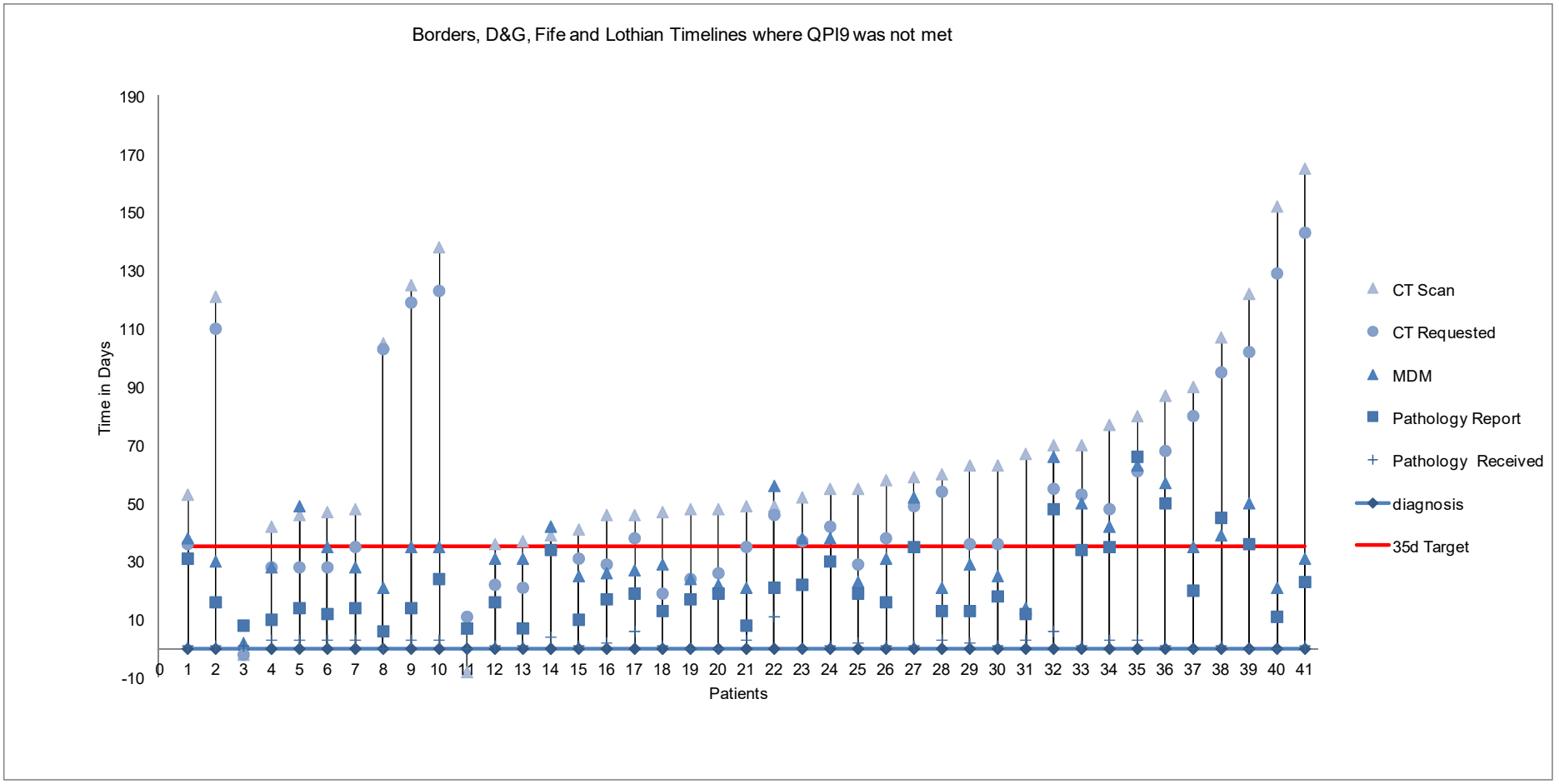
Lothian: The target was not met showing a shortfall of 79.4% (38 cases). For 16 cases patients were upstaged (8 cases upstaged by SLNB, 5 cases upstaged by CT, 1 case upstaged by nodal FNA, 1 case by pathology noting LVI and 1 case by pathology noting metastasis). A further 6 cases had pathology reporting delays (19, 22, 29, 30, 33, and 42 days), 3 cases had delays in CT being performed (24, 26, 55 days from request), 3 cases were diagnosed privately (stage III, IIC and IIC), 3 cases had no CT performed (stage IV, IIC and IIC, due to patient suffering a stroke and subsequent death, patient declining treatment, and frailty respectively). 2 cases had a delay in coming to MDM (15 and 16 days after pathology available. 1 case had a delay in CT being requested (11 days after MDM). 1 case had a delay in staging due to Breslow not being assessable, amputation was performed, no CT performed (Stage IIC). For 1 case no CT was requested (Stage III). 1 case did not have CT requested prior to signoff of this data. 1 patient had CT shortly prior to (8 days before) diagnosis due to suspicion of lymphoma. The MDT used this imaging (This patient should be assumed to have met the QPI, as further imaging within 35 days would be clinically inappropriate.

Further comments
This QPI is being changed to measure timeframe of 35 days from pathology report confirming Stage IIC or above being issued, rather than date of diagnosis.

Action: No action identified. Awaiting the new iteration of this QPI.



	Borders	D&G	Fife	Lothian	SCAN
2017-18	33.0%	25.0%	22.0%	31.8%	28.9%
2018-19	0.0%	50.0%	30.0%	15.8%	25.0%
2019-20	33.3%	50.0%	70.0%	12.5%	26.3%
2020-21	50.0%	100.0%	42.9%	15.6%	29.4%
Target	95.0%	95.0%	95.0%	95.0%	95.0%



Patients 1 and 2 are Borders patients, Patients 3-10 are Fife patients, Patients 11-41 are Lothian patients.
See appendix for detailed breakdown (patients who did not have a CT not included on this graph).

QPI 10: Systemic Therapy Target = 60%

Patients with unresectable stage III and IV cutaneous melanoma should receive Systemic Anti Cancer Therapy (SACT)

Numerator = All patients with unresectable stage III or IV cutaneous melanoma who undergo SACT

Denominator = All patients with unresectable stage III or IV cutaneous melanoma

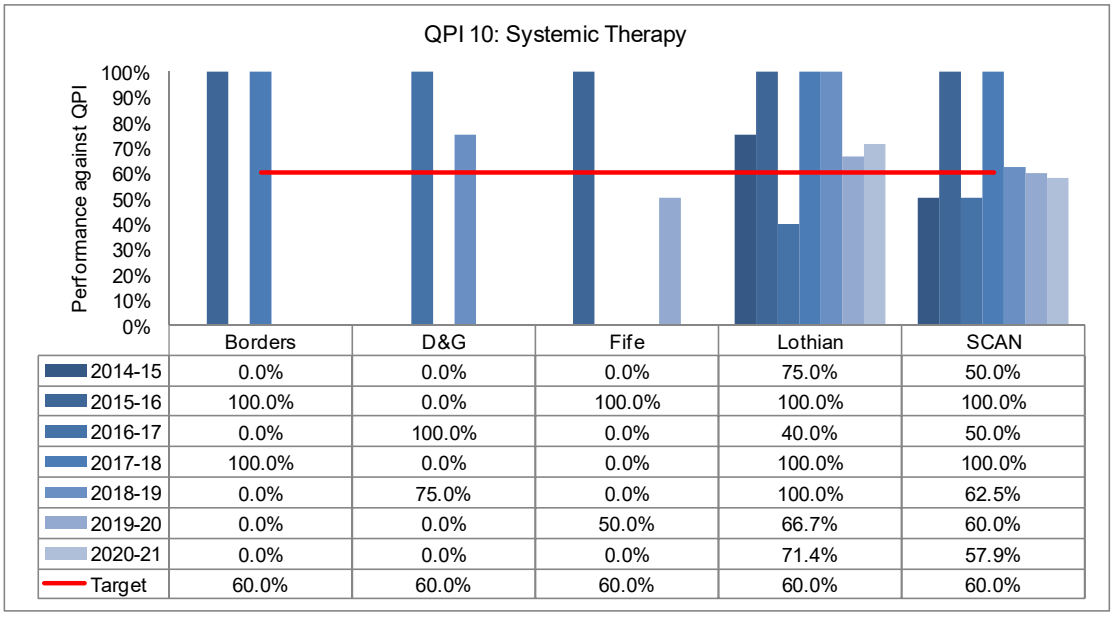
Target 60%	Borders	D&G	Fife	Lothian	SCAN
2020-21 cohort	38	39	61	205	343
Ineligible for this QPI	36	39	58	191	324
Exclusions (died before treatment)	0	0	0	1	1
Numerator	1	0	0	10	11
Not recorded for numerator	0	0	0	0	0
Denominator	2	0	3	14	19
Not recorded for denominator	0	0	0	0	0
% Performance	50.0	N/A	0.0	71.4	57.9

Comments where QPI was not met

Borders: The target was not met showing a shortfall of 10.0% (1 case). Patient upstaged by CT but declined curative surgery. Unfit for systemic therapy and treated with palliative immunotherapy.

Fife: The target was not met showing a shortfall of 60.0% (3 cases). For these 3 cases, 2 patients were treated with Best Supportive Care due to co-morbidities, and 1 patient had rapid progression of disease and died shortly after presentation.

Action: No action identified.



	Borders	D&G	Fife	Lothian	SCAN
2014-15	0.0%	0.0%	0.0%	75.0%	50.0%
2015-16	100.0%	0.0%	100.0%	100.0%	100.0%
2016-17	0.0%	100.0%	0.0%	40.0%	50.0%
2017-18	100.0%	0.0%	0.0%	100.0%	100.0%
2018-19	0.0%	75.0%	0.0%	100.0%	62.5%
2019-20	0.0%	0.0%	50.0%	66.7%	60.0%
2020-21	0.0%	0.0%	0.0%	71.4%	57.9%
Target	60.0%	60.0%	60.0%	60.0%	60.0%

QPI 12: Adequate excision of lesion Target = 85%

Proportion of patients with cutaneous melanoma where complete excision is undertaken with documented clinical margins of 2mm prior to definitive treatment (wide local excision).

Numerator = Number of patients with cutaneous melanoma where complete excision is undertaken with documented clinical margins of 2mm prior to definitive treatment (wide local excision).

Denominator = All patients with cutaneous melanoma who undergo wide local excision. (No exclusions).

Target 85%	Borders	D&G	Fife	Lothian	SCAN
2020-21 cohort	38	39	61	205	343
Ineligible for this QPI	5	7	7	24	43
Numerator	23	12	37	120	192
Not recorded for numerator	0	2	7	20	29
Denominator	33	32	54	181	300
Not recorded for denominator	0	0	0	0	0
% Performance	69.7	37.5	68.5	66.3	64.0

Comments where QPI was not met

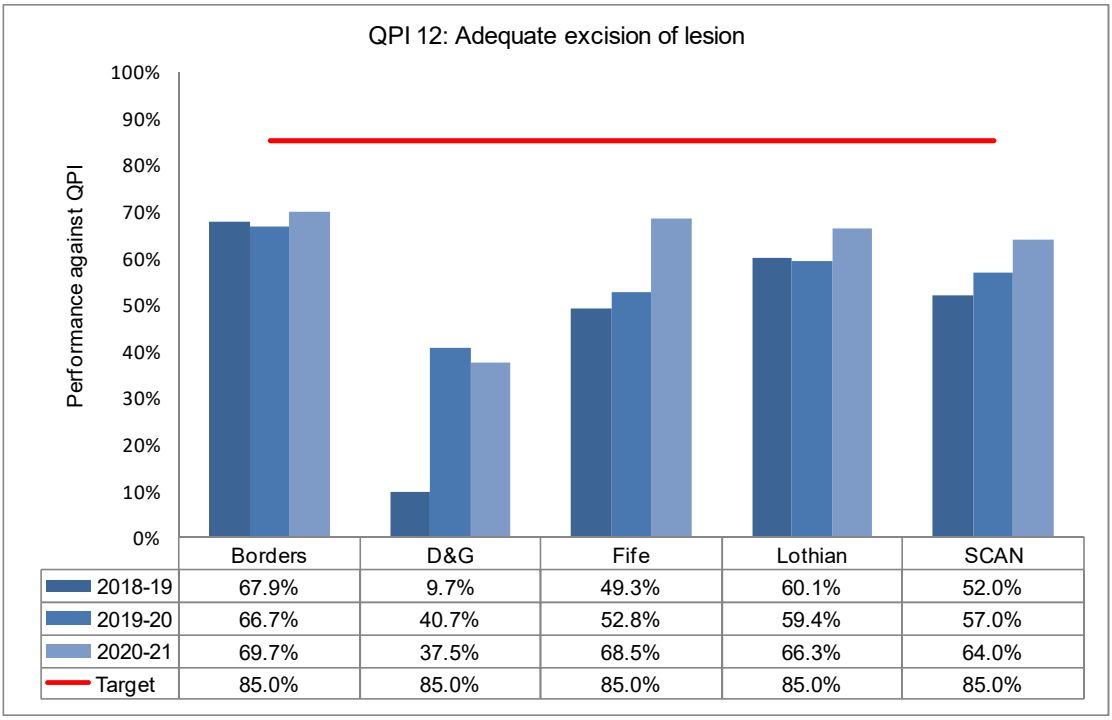
Borders: The target was not met showing a shortfall of 15.3% (10 cases). Of these cases 6 were partial biopsies (no margin), 2 had a margin of 4 mm (lesion thought to be BCC), and 2 had a margin of 1 mm (1 thought to be atypical melanocytic naevus).

D&G: The target was not met showing a shortfall of 47.5% (20 cases). Of these cases 14 were partial biopsies (no margin), 2 had 4 mm margins (one thought to be BCC, one not thought to be overly suspicious), 2 had no margin recorded (one excised by GP as lesion was thought to be seborrhoeic keratosis and one felt clinically to be BCC and removed with a wider margin that was not recorded), 1 case had a 5 mm margin (initial punch biopsy performed by GP showed cytological atypia), and 1 patient opted for initial 1cm WLE with no excision biopsy to avoid multiple hospital trips (during COVID).

Fife: The target was not met showing a shortfall of 16.5% (17 cases). For these 17 cases, 9 patients had no excision biopsy prior to WLE, 7 patients had a diagnostic excision biopsy but margin was not recorded, and 1 case was an incidental finding of a 5mm excision for dysplastic naevus (patient choice for removal).

Lothian: The target was not met showing a shortfall of 18.7% (61 cases). Of these cases 20 cases had an excision biopsy but no margin was recorded, 18 were partial biopsies (no margin), 6 cases proceeded directly to WLE (3 patients with advanced disease, 2 patients with co-morbidities, 1 with breast lump which was core biopsied). A further 17 cases had margins of greater than 2 mm (7 cases with 4 mm margin, 5 cases with >2 mm margin, 2 cases with 5 mm margin, 2 cases with 6 mm margin, and 1 case with a 3 mm margin).

Action: No action identified.



	Borders	D&G	Fife	Lothian	SCAN
2018-19	67.9%	9.7%	49.3%	60.1%	52.0%
2019-20	66.7%	40.7%	52.8%	59.4%	57.0%
2020-21	69.7%	37.5%	68.5%	66.3%	64.0%
Target	85.0%	85.0%	85.0%	85.0%	85.0%

Clinical Trials QPI Target = 15%

Proportion of patients diagnosed with Melanoma who were consented for a clinical trial

Numerator Number of patients with Melanoma consented for a clinical trial

Denominator All patients with Melanoma - Average 5 year incidence from Cancer Registry (2015-2020)

Target 15%	Borders	D&G	Fife	Lothian	SCAN
Numerator	0	0	7	27	34
Denominator	38	36	68	185	327
% Performance	N/A	N/A	10.3	14.6	10.4

Trials Registered on SCRN database

Clinical Trials in 2020	Numbers
MK7902-003	5
Biobank SR1418	27
IMAGINE	1
Phase 1/2 Study of RP1 +/- other therapies in solid tumours	1

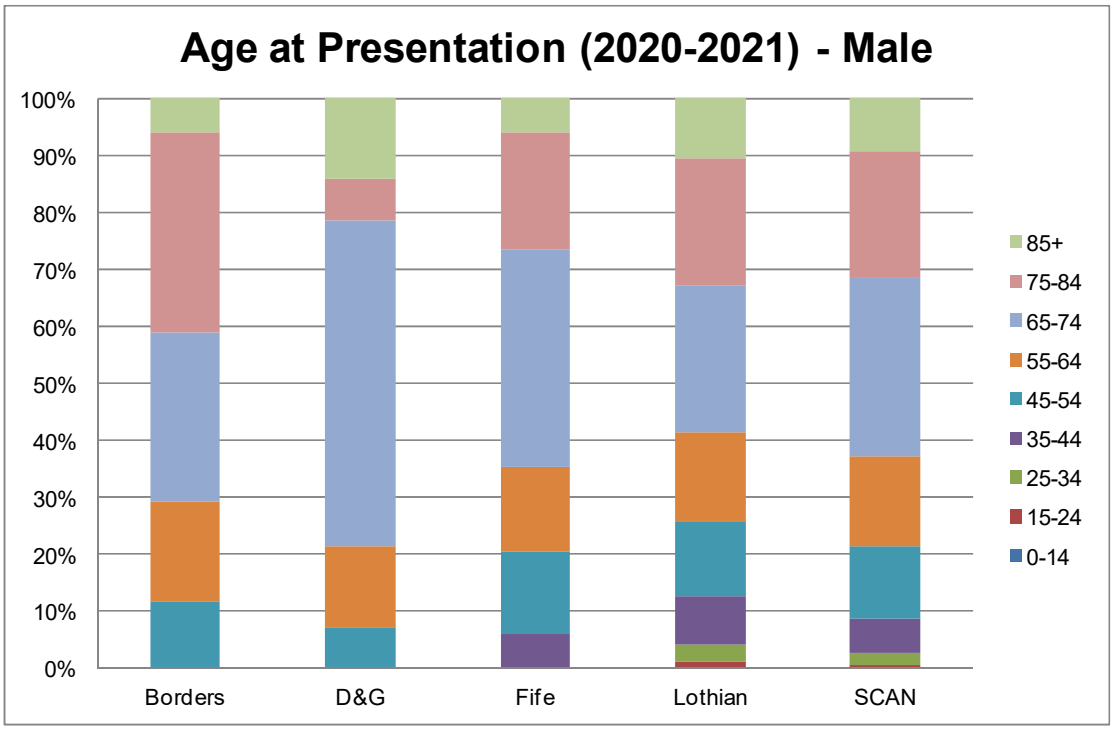
Comment
Numbers of patients being consented for melanoma trials are small because it's currently a small subset of metastatic patients that are being offered trials.

Non QPI Results

Table 1: Age at Presentation

Male	Borders		D&G		Fife		Lothian		SCAN	
Age	n	%	n	%	n	%	n	%	n	%
0-14	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
15-24	0	0.00	0	0.00	0	0.00	1	1.06	1	0.63
25-34	0	0.00	0	0.00	0	0.00	3	3.19	3	1.89
35-44	0	0.00	0	0.00	2	5.88	8	8.51	10	6.29
45-54	2	11.76	1	7.14	5	14.70	12	12.76	20	12.58
55-64	3	17.65	2	14.28	5	14.70	15	15.96	25	15.72
65-74	5	29.41	8	57.14	13	38.23	24	25.53	50	31.44
75-84	6	35.29	1	7.14	7	20.59	21	22.34	35	22.01
85+	1	5.88	2	14.29	2	5.88	10	10.64	15	9.43
Total	17	100.00	14	100.00	34	100.00	94	100.00	159	100.00

Female	Borders		D&G		Fife		Lothian		SCAN	
Age	n	%	n	%	n	%	n	%	n	%
0-14	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
15-24	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
25-34	1	4.76	0	0.00	2	7.41	8	7.14	11	5.94
35-44	5	23.81	1	4.00	1	3.70	10	8.92	17	9.18
45-54	1	4.76	3	12.00	2	7.41	18	16.07	24	12.97
55-64	4	19.05	6	24.00	3	14.82	26	24.11	40	22.16
65-74	7	33.33	4	8.00	9	29.62	20	17.84	39	21.08
75-84	1	4.76	8	32.00	8	29.62	17	15.18	34	18.38
85+	2	9.52	3	12.00	2	7.41	12	10.71	19	10.27
Total	21	100.00	25	100.00	27	100.00	111	100.00	184	100.00



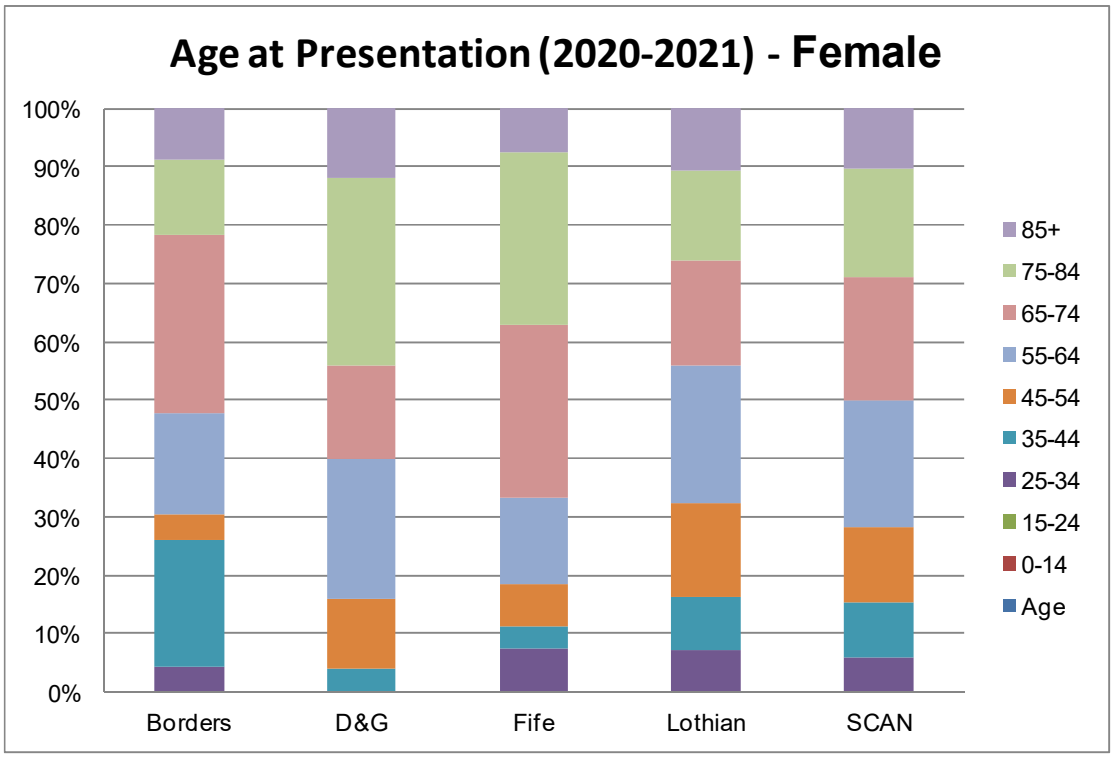


Table IA: Incidence in Working Age Population (18 to 64)

	Borders		D&G		Fife		Lothian		SCAN	
	n	%	n	%	n	%	n	%	n	%
2020-21	16	40.9	13	30.7	20	32.7	101	49.2	151	44.0
2019-20	16	61.5	6	22.2	31	53.4	94	44.1	147	45.4
2018-19	10	32.3	15	40.5	32	43.2	81	48.2	138	44.5
2017-18	10	25.6	11	30.6	37	53.6	92	50.8	150	46.4
2016-17	11	37.9	8	25.0	23	38.3	91	50.3	133	44.0
2015-16	20	55.6	11	47.8	40	54.0	98	48.8	169	50.6
2014-15	12	34.2	15	32.6	21	36.8	95	47.5	143	42.3

Table IB: Incidence in Working Age Population Year on Year (18 to 64)

Year	Number of working age people	% of Total
2020-21	*151*	*44.0*
2019-20	*147*	*45.4*
2018-19	*138*	*44.5*
2017-18	*150*	*46.4*
2016-17	*133*	*44.0*
2015-16	169	50.6
2014-15	143	42.3
2013	135	45.3
2012	155	48.6
2011	156	51.5

Table 1c: Median age at Diagnosis

	Borders		D&G		Fife		Lothian	
	Male	Female	Male	Female	Male	Female	Male	Female
2020-21	71	62	67	70	71	72	69	62
2019-20	62	58	75	70	72	52	70	65
2018-19	77	66	66	69	73	62	69	61
2017-18	73.5	76	76	65	69	58	69	61
2016-17	62	71	76	67	69	67	66	62
2015-16	66	59	69.5	61	65	61	69	61

Table 1d: Median age at Diagnosis Year on Year

Year	Male	Female	Area Covered
2020-21	71	72	SCAN
2019-20	70	64	SCAN
2018-19	71	63	SCAN
2017-18	69	58	SCAN
2016-17	68	65.5	SCAN
2015-16	68	61	SCAN
2014-15	71	66	SCAN
2013	68.5	63.5	SCAN
2012	66	66	B F L
2011	65	61	B F L
2010	65	54	B L
2009	64	53	B L
2008	64	56	B F L
2007	64	55	B F L

Table 1e: Gender Incidence Ratio

Year	Male	Female
2020-21	1	1.2
2019-20	1	1.0
2017-18	1	1.0
2016-17	1	0.9
2015-16	1	1.1
2014-15	1	1.0
2013	1	1.0
2012	1	1.2
2011	1	1.0
2010	1	1.1
2009	1	1.1
2008	1	1.4
2007	1	1.7

Table 2: Anatomical Site

Site	SCAN 2020-21				SCAN 01/2012 - 06/2020			
	Male		Female		Male		Female	
	n	%	n	%	n	%	n	%
Head and Neck	40	25.2	27	15.1	311	28.0	210	18.6
Trunk anterior	11	6.9	9	4.9	140	12.6	70	6.2
Trunk Posterior	51	32.1	31	16.8	301	27.1	174	15.3
Arm	5	3.1	4	2.2	17	1.5	28	2.5
Arm above elbow	9	5.7	25	13.5	82	7.4	153	13.5
Arm below elbow	14	8.8	14	7.6	81	7.3	95	8.4
Leg	1	0.6	7	3.8	10	0.9	20	1.8
Leg above knee	7	4.4	14	7.6	46	4.1	104	9.2
Leg below knee	17	10.7	40	21.6	63	5.7	217	19.1
Dorsum of hand	1	0.6	1	0.5	0	0.0	1	0.1
Dorsum of foot	1	0.6	6	3.2	0	0.0	2	0.2
Acral	0	0.0	1	0.5	20	1.8	31	2.7
Mucosal	0	0.0	0	0.0	5	0.5	7	0.6
Sole	0	0.0	0	0.0	3	0.3	4	0.4
Subungual	1	0.6	3	1.6	8	0.7	3	0.3
Mets at Presentation	1	0.6	2	1.1	22	2.0	14	1.2
Other	0	0.0	0	0.0	0	0.0	2	0.2
SCAN	159	100.00	184	100.00	1109	100.0	1136	100.0

Top 3 anatomical sites 2020-21			
Male	Trunk Posterior (32.1%)	Head and Neck (25.2%)	Leg below knee 10.7%)
Female	Leg Below knee (21.6%)	Trunk Posterior (16.8%)	Head and Neck (15.1%)

Top 3 anatomical sites 2019-20			
Male	Trunk Posterior (30.5%)	Head and Neck (29.3%)	Trunk anterior (16.5%)
Female	Head and Neck (18.1%)	Leg below knee (16.9%)	Trunk Posterior (15%)

Top 3 anatomical sites 2018-19			
Male	Trunk Posterior (29.2%)	Head and Neck (24.2%)	Trunk anterior (14.3%)
Female	Trunk Posterior (17.4%)	Head and Neck (16.8%)	Leg below knee (15.4%)

Top 3 anatomical sites 2017-18			
Male	Head and Neck (28.8%)	Trunk Posterior (26.9%)	Trunk anterior (11.3%)
Female	Head and Neck (20.9%)	Leg below Knee (19.6%)	Arm above elbow (17.2%)

Top 3 anatomical sites 2016-17			
Male	Trunk Posterior (27.8%)	Head and Neck (24.7%)	Trunk anterior/ Arm above elbow (8.9%)

Female	Leg below Knee (28.5%)	Arm above elbow (16.7%)	Head and Neck/ Leg above knee (12.5%)

Top 3 anatomical sites 2015-16			
Male	Head and Neck (28.5%)	Trunk Posterior (25.8%)	Trunk anterior (11.5%)
Female	Leg below Knee (20.2%)	Head and Neck (18.5%)	Trunk Posterior (14.9%)

Table 3a: Histogenetic Type of Melanoma

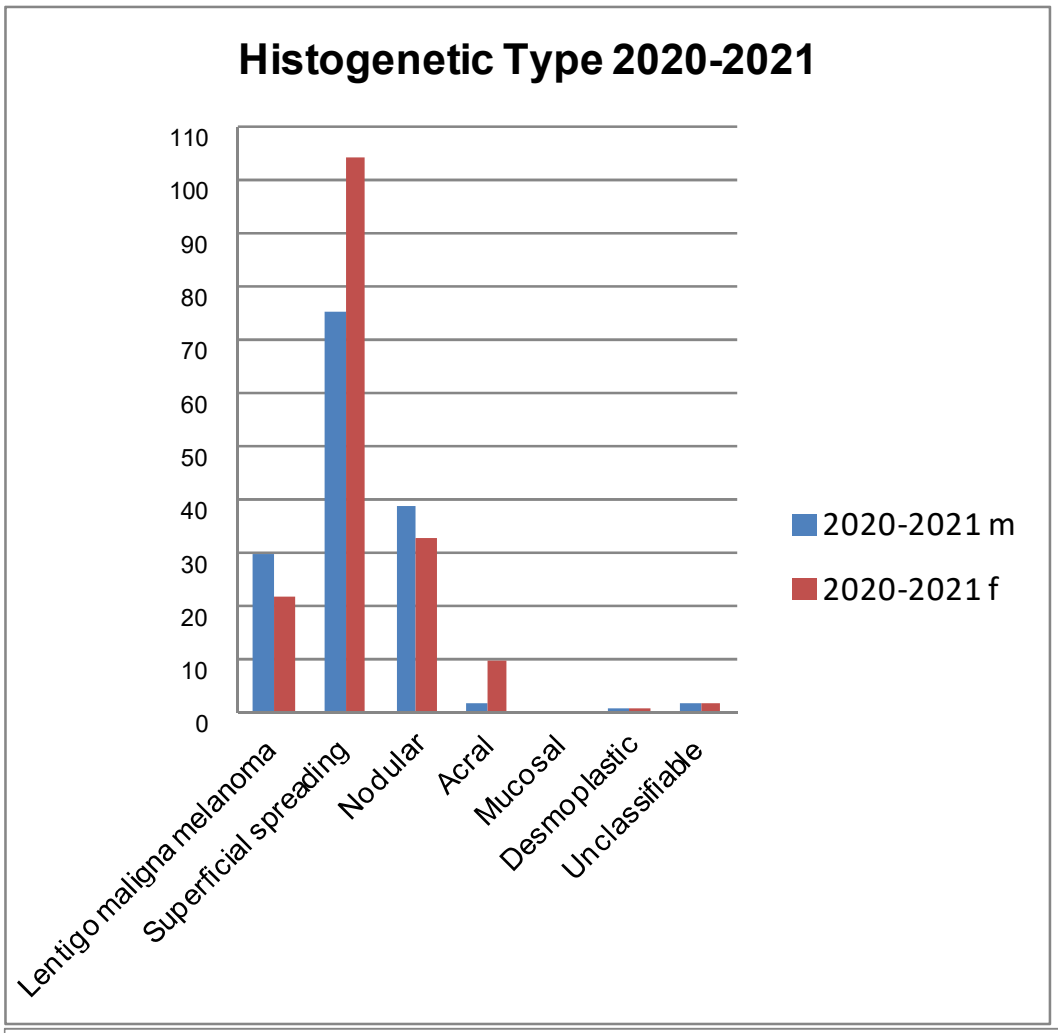
Histogenetic Type	**SCAN 2020-21**			
	Male		Female	
	n	%	n	%
Lentigo maligna melanoma	30	18.9	22	12.5
Superficial spreading	75	47.2	104	56.5
Nodular	39	24.5	33	17.9
Acral	2	1.3	10	5.4
Mucosal	0	0.0	0	0.0
Desmoplastic	1	0.6	1	0.5
Mixed (desmopastic)	0	0.0	1	0.5
Spindle cell	0	0.0	0	0.0
not assessable	2	3.4	0	0.0
Unclassifiable (Melanoma NOS)	2	3.4	2	1.1
Spitzoid	4	6.8	4	2.2
Other	4	6.8	6	3.3
secondary MM	0	0.0	0	0.0
Not Recorded	0	0.0	1	0.5
TOTAL	159	100.00	184	100.00

Table 3b: Unclassifiables by board

	Borders		**D & G**		**Fife**		**Lothian**	
Year	n	%	n	%	n	%	n	%
2020-21	0	-	1	2.6	3	4.9	0	-
2019-20	0	-	0	-	0	-	0	-
2018-19	0	-	6	16.2	1	1.4	0	-
2017-18	0	-	2	5.6	1	1.4	3	1.7
2016-17	1	3.4	2	6.3	3	5.0	5	2.8

Table 3c: Histogenetic Type – year on year

Histogenetic Type	**2013**		**2014-15**		**2015-16**		**2016-17**		**2017-18**		**2018-19**		**2019-20**		**2020-21**	
	m	f	m	f	m	f	m	f	m	f	m	f	m	f	m	F
Lentigo maligna	20	21	30	25	31	30	31	15	30	26	25	21	20	21	30	22
Superficial spreading	79	91	95	91	88	91	78	91	91	101	91	85	79	91	75	104
Nodular	22	10	11	16	27	33	30	22	33	17	24	27	22	10	39	33
Acral	7	7	1	2	2	1	3	8	1	3	7	6	7	7	2	10
Mucosal	0	0	0	0	1	0	3	2	0	0	0	0	0	0	0	0
Desmoplastic	1	2	3	1	2	0	3	0	0	1	2	2	1	2	1	1


Histogenetic Type 2020-2021
110
100
90
80
70
60
50
40
30
20
10
0
Lentigo maligna melanoma
Superficial spreading
Nodular
Acral
Mucosal
Desmoplastic
Unclassifiable
2020-2021 m
2020-2021 f

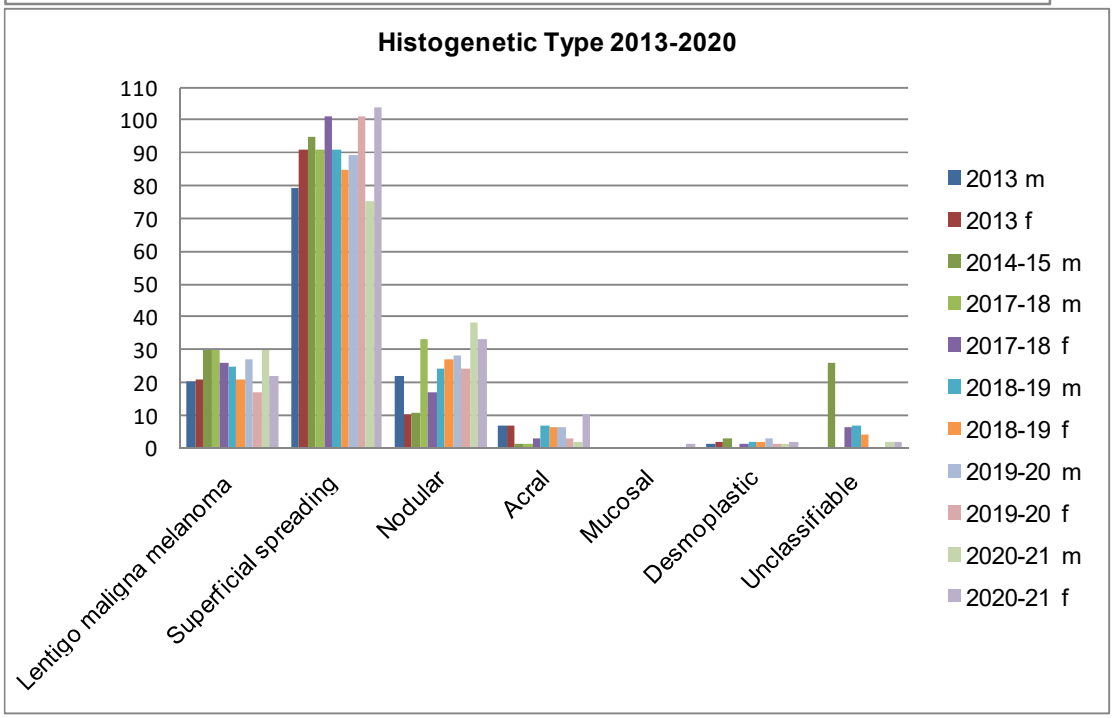

Histogenetic Type 2013-2020
110
100
90
80
70
60
50
40
30
20
10
0
Lentigo maligna melanoma
Superficial spreading
Nodular
Acral
Mucosal
Desmoplastic
Unclassifiable
2013 m
2013 f
2014-15 m
2017-18 m
2017-18 f
2018-19 m
2018-19 f
2019-20 m
2019-20 f
2020-21 m
2020-21 f

Table 4a: Method of diagnosis

	Borders		D&G		Fife		Lothian		SCAN	
	n	%	n	%	n	%	n	%	n	%
Sample biopsy*	9	23.7	17	43.6	12	19.7	25	12.1	66	19.2
Excision/Amputation	29	76.3	20	51.6	47	77.0	173	84.5	266	77.6
FNA	0	0.0	0	0.0	0	0.0	2	1.0	2	0.6
Other	0	0.0	1	2.6	2	3.3	5	2.4	8	2.3
Not known/Inapplicable	0	0.0	1	2.6	0	0.0	0	0.0	1	0.3
Total	38	100	39	100	61	100	205	100	343	100

*Sampling of suspect lesions is used when there is diagnostic doubt or for planning/staging purposes in larger lesions or those on cosmetically challenging areas

Table 4b: Sample biopsy Year on Year

	Borders		D&G		Fife		Lothian		SCAN	
	n	%	n	%	n	%	n	%	n	%
2020-21	9	23.7	17	43.6	12	19.7	25	12.1	66	19.2
2019-20	6	23.1	9	33.3	13	22.4	31	14.6	59	18.2
2018-19	6	19.4	12	32.4	15	20.0	26	15.5	59	19.0
2017-18	12	32.4	12	33.3	11	15.9	37	20.4	72	28.5
2016-17	13	44.9	8	25.0	10	16.7	30	16.6	61	20.2
2015-16	5	13.9	6	26.1	14	18.9	35	17.4	60	18.0
2014-15	5	14.3	19	41.3	17	29.8	37	18.5	78	23.1
2013	6	20.0	18	40.0	14	29.8	43	23.8	81	26.7
2012	5	15.2	8	27.6	15	23.1	49	25.5	77	24.1
2011	5	25.0	8	34.8	12	21.4	58	28.3	83	27.3

Table 5a: Pathology: Time from diagnosis to issue of Pathology report

Time interval in days	Borders		D&G		Fife		Lothian		SCAN	
	n	%	n	%	n	%	n	%	n	%
0 -14	11	28.9	35	89.7	38	62.3	82	39.8	166	48.3
15-28	21	55.3	0	0.0	20	32.8	82	39.8	123	35.8
>28	6	15.8	2	5.1	3	4.9	39	19.4	50	14.8
Data n/a	0	0.0	2	5.1	0	0.0	2	1.0	4	1.2
Inapplicable	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total	38	100.0	39	100.0	61	100	205	100.0	343	100.0
Median		18		7		13		17		15
Range		8-42		2-38		4-45		0-70		0-70

Table 5b: Median Time (days) from diagnosis to Path Report (Year on Year)

Year of Report	Borders and Lothian	D&G	Fife
2020-21	18	7	13
2019-20	19	6	14
2018-19	16	11	14
2017-18	15.5	n/a	13
2016-17	17	n/a	14
2015-16	16	n/a	11
2014-15	15	n/a	8
2013	14	6	10
2012	14	7	9
2011	13	5	8
2010	14	9	7

Table 6a: Breslow Depth

Breslow Depth	SCAN 2020-21									
Male	**Borders**		**D&G**		**Fife**		**Lothian**		**SCAN**	
mm	n	%	n	%	n	%	n	%	n	%
0-0.99	4	23.5	6	42.9	9	26.5	45	47.9	64	36.6
1-1.99	4	23.5	1	7.1	12	35.3	14	14.9	31	17.7
2-2.99	4	23.5	3	21.4	4	11.8	11	11.7	22	12.6
3-3.99	2	11.8	2	14.3	2	5.9	4	4.3	26	14.9
≥4	3	17.6	1	7.1	7	20.6	20	21.3	31	17.7
Mets	0	0.0	1	7.1	0	0.0	0	0.0	1	0.6
Unrecorded	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total	17	100.0	14	100.0	34	100.0	94	100.0	175	100.0

Breslow Depth	SCAN 2020-21									
Female	**Borders**		**D&G**		**Fife**		**Lothian**		**SCAN**	
mm	n	%	n	%	n	%	n	%	n	%
0-0.99	13	61.9	5	20.0	13	48.1	57	51.8	88	48.1
1-1.99	3	14.3	9	36.0	8	29.6	17	15.2	37	20.0
2-2.99	2	9.5	4	16.0	1	3.7	8	7.1	15	8.1
3-3.99	1	4.8	1	4.0	0	0.0	3	2.7	5	2.7
≥4	2	9.5	5	20.0	3	11.1	26	23.2	36	19.5
Mets	0	0.0	0	0.0	1	3.7	0	0.0	1	0.5
Unrecorded	0	0.0	1	4.0	1	3.7	0	0.0	2	1.1
Total	21	100.0	25	100.0	27.0	100.0	111	100.0	184	100.0

Table 6b: Breslow Depth - males (past six cohorts)

Breslow Depth	SCAN 2014/15-2019/20									
Male	**Borders**		**D&G**		**Fife**		**Lothian**		**SCAN**	
mm	n	%	n	%	n	%	n	%	N	%
0-0.99	51	48.1	30	32.3	101	48.6	262	46.13	444	45.5
1-1.99	15	14.2	21	22.6	40	19.2	113	19.89	189	19.4
2-2.99	15	14.2	13	14.0	18	8.7	48	8.45	94	9.6
3-3.99	8	7.5	5	5.4	14	6.7	37	6.51	64	6.6
≥4	17	16.0	16	17.2	33	15.9	92	16.20	158	16.2
Mets	0	0.0	3	3.2	0	0.0	7	1.23	10	1.0
Unrecorded	0	0.0	5	5.4	2	1.0	9	1.58	16	1.6
Total	106	100.0	93	100.0	208	100.0	568	100.0	975	100.0

Table 6c: Breslow Depth - females (past six cohorts)

Breslow Depth	SCAN 2014/15-2019/20									
Female	**Borders**		**D&G**		**Fife**		**Lothian**		**SCAN**	
mm	n	%	N	%	n	%	n	%	N	%
0-0.99	48	54.5	47	43.5	91	49.2	325	56.6	511	53.5
1-1.99	16	18.2	28	25.9	38	20.5	109	18.9	191	20.0
2-2.99	6	6.8	10	9.3	16	8.6	42	7.3	74	7.7
3-3.99	5	5.7	6	5.6	16	8.6	21	3.6	48	5.0
≥4	13	14.8	13	12.0	20	10.8	65	11.3	111	11.6
Mets	0	0.0	0	0.0	3	1.6	9	1.6	12	1.3
Unrecorded	0	0.0	4	3.7	1	0.5	4	0.7	9	0.9
Total	88	100.0	108	100.0	185	100.0	575	100.0	956	100.0

Table 7: Pathology - Mitotic Rate

	Borders		D&G		Fife		Lothian		SCAN	
Mitotic rate per mm	n	%	n	%	n	%	n	%	n	%
0 - .99	17	44.7	19	48.7	14	23.0	87	42.7	137	40.1
≥1	21	55.3	18	46.2	44	72.1	117	56.8	200	58.1
NR/NA/not assessable	0	0.0	2	5.1	3	4.9	1	0.5	6	1.7
Total	38	100.0	39	100.0	61	100.0	205	100.0	343	100.0

Table 8: Pathology - Ulceration

	Borders		D&G		Fife		Lothian		SCAN	
	n	%	n	%	n	%	n	%	n	%
Ulceration	28	73.7	8	20.5	47	77.0	147	71.4	230	66.9
No Ulceration	10	26.3	29	74.4	11	18.0	58	28.6	108	31.7
NR/NA/not assessable	0	0.0	2	5.1	3	4.9	0	0.0	5	1.5
Total	38	100.0	39	100.0	61	100.0	205	100.0	343	100.0

Table 9a: Median Wait in days for 2nd stage WLE treatment following diagnosis (Year on Year)

	Borders	D&G	Fife	Lothian	SCAN
Year of Report	days	days	days	days	days
2020-21	68	58	77	65	67
2019-20	67.5	42	65.5	78	71.5
2018-19	76	68	66	71	70
2017-18	62	-	77	53	-
2016-17	69.5	-	65	43	-
2015-16	55	46	74	57	-
2014-15	57	48	71	51	-
2013	67	51	66	51	-
2012	61	59	64	47	-
2011	65	48	58	48	-
2010	58	53	57	51	-

Table 9b:
Patient wait > 84 days for 2nd stage WLE treatment following diagnosis

	Borders		D&G		Fife		Lothian	
Year of Report	n	% of Total WLE	n	%of Total WLE	n	%of Total WLE	n	%of Total WLE
2020-21	7	21.2	6	19.4	17	32.0	41	23
2019-20	5	20	8	29.6	12	22.2	73	42
2018-19	12	41.4	11	35.5	6	9.0	52	36.1
2017-18	5	14.3	10	27.8	23	33.3	20	12.4
2016-17	5	17.9	3	11.5	12	23.0	21	13.0
2015-16	6	19.4	6	27.3	26	36.6	30	15.4
2014-15	7	24.1	5	20.8	11	27.5	20	14.1
2013	5	21.0	6	17.1	11	24.4	13	7.8

Table 10a: Sentinel Lymph Node Biopsy (SLNB)

	Borders		D&G		Fife		Lothian		SCAN	
	n	% of Total	n	% of Total	n	% of Total	n	% of Total	n	% of Total
Patients eligible for SLNB	24	63.2	26	66.7	42	68.9	124	60.2	216	62.8
Patients receiving SLNB	10	26.3	10	25.6	17	27.9	57	27.7	94	27.3
Patients with +ve SLNB	3	7.9	2	5.1	6	9.8	11	5.3	22	6.4

Table 10b: Patients Eligible for SLNB – Year on Year

	Borders		D&G		Fife		Lothian		SCAN	
	n	% of Total	n	% of Total	n	% of Total	n	% of Total	N	% of Total
2020-21	24	63.2	26	66.7	42	68.9	124	60.2	216	62.8
2019-20	11	42.3	23	85.2	37	63.8	117	54.9	188	58
2018-19	12	38.7	NA	NA	29	39.2	85	50.6	NA	NA
2017-18	28	75.7	30	83.3	38	55.1	107	59.1	203	62.9
2016-17	15	51.7	23	79.3	45	75.0	85	47.0	168	55.6
2015-16	12	33.3	18	78.3	39	52.7	100	49.8	169	50.6
2014-15	20	57.1	33	71.1	40	70.2	87	43.5	180	61.6
2013	16	53.3	29	64.4	33	70.2	82	45.3	160	52.3
2012	20	60.6	13	44.8	40	61.5	83	43.2	156	48.9

Table 10c: Sentinel Node Biopsy (SLNB) – Year on Year

	% SLNB Eligible of patient total	No of SLNB carried out of patient total	No of SLNB carried out (% total of eligible)	Positive SLNB no of patient total	Positive % SLNB of total carried out
2020-21	62.8	94	43.5	22	23.4
2019-20	58	63	33.5	18	9.6
2018-19	51.6	57	35.6	12	21.0
2017-18	62.9	60	29.6	9	15.0
2016-17	55.6	46	27.4	11	24.0
2015-16	50.6	58	34.3	13	22.4
2014-15	61.6	56	31.1	14	25.0
2013	52.3	51	31.9	15	29.4
2012	48.9	65	41.7	11	16.9
2011	53.9	92	56.1	15	16.3
2010	46.9	86	70.0	15	16.7

NB: Increasing numbers of SLNB eligible patients reflect changed staging guidelines. Figures above show a significantly reduced % of positives as a result.

Table 12a: contact with Cancer Nurse Specialist (CNS) for Melanoma

	Borders		**D&G		*Fife		Lothian	
	n	% of Total	n	% of Total	n	% of Total	n	% of Total
Contact	26	68.4	n/a	n/a	59	96.7	188	91.7
No contact	12	31.6	n/a	n/a	2	3.3	17	8.3
Total	38	100	39	n/a	61	100	205	100

*Fife doesn't have a CNS but instead has 2 Skin Cancer Link Nurses (SCLN) 1 based at each site in dermatology - Victoria Hospital in Kirkcaldy and Queen Margaret Hospital in Dunfermline, 1 based in plastics surgery.
**D&G does not have a CNS, 26 of the 39 Dumfries cases noted as having contact with Lothian CNS

***For guidance: Macmillan levels of intervention for healthcare posts and services are* defined as:**
Level 1 – Indirect input: No direct involvement with patient/service user and/or carer, general advice via telephone or email, e.g. general dietary advice given over the phone
Level 2 – Single consultation: Face-to-face/Skype/digital/telephone consultation, usually one off to assess requirements with referring health professional to give basic advice to with patient/service user and/or carer, e.g. one-off appointment following assessment to provide basic advice
Level 3 – Direct short-term intervention: Face-to-face/Skype/digital/telephone consultations, advice on specific issue(s) and/or extra support for short periods for with patient/service user and/or carer, e.g. therapeutic conversation resulting in care plan
Level 4 – Long term intervention: long term involvement and/or carer with patient/service user and/or carer for multiple and/or complex issues

Table 12b: Contact with Cancer Nurse Specialist (CNS) for Melanoma (Year on Year)

Patient contact % of Total					
Year of report	**Borders**	**D&G**	**Fife**	**Lothian**	**SCAN**
2020-21	68.4	n/a	96.7	91.7	n/a
2019-20	42.3	n/a	98.3	92.0	n/a
2018-19	n/a	n/a	97.3	n/a	n/a
2017-18	n/a	n/a	100	n/a	n/a
2016-17	45.0	19	93.3	86.0	83.3
2015-16	25.0	n/a	85.1	82.6	76.5
2014-15	45.7	15.2	86.0	85.7	80.0
2013	36.7	35.6	37.0	87.3	61.4
2012	60.6	17.2	61.5	80.7	67.4

ABBREVIATIONS

ACaDME **A**cute **C**ancer **D**eaths and **M**ental Health: PHS data mart contains linked inpatient and day-case, mental health, cancer registration and death (GRO) records. It is updated on a monthly basis.

AJCC	American Joint Committee on Cancer
BGH	Borders General Hospital, Melrose
B	Biopsy
CM	Cutaneous Melanoma
CNS	Cancer Nurse Specialist
D&G	Dumfries and Galloway
FNA	Fine Needle Aspirate
GP	General Practitioner
LMM	Lentigo Maligna Melanoma
MDM	Multidisciplinary Meeting
MDT	Multidisciplinary Team
Mets	Metastasis/Metastases
N/A	Not Applicable
NR	Not Recorded
PHS	Public Health Scotland
QA	Quality Assurance
SCAN	Southeast Scotland Cancer Network
SCR	Scottish Cancer Registry
SIGN	Scottish Intercollegiate Guidelines Network
SLNB	Sentinel Lymph Node Biopsy
SMG	Scottish Melanoma Group
SSMM	Superficial Spreading Malignant Melanoma
WLE	Wide local excision

Acral: relating to the extremities of peripheral body parts (fingers/palms/soles)

Adjuvant treatment: treatment that is given in addition to the primary, main or initial treatment

Anterior: nearer the front (of body)

Breslow Depth: prognostic factor in melanoma of the skin which describes how deeply tumour cells have invaded.

Desmoplastic: growth of fibrous or connective tissue

Desmoplastic melanoma: rare subtype of melanoma characterised by malignant spindle cells

Histogenetic Type: relating to formation of body tissue

Incidental finding: patient may be attending or referred to hospital for investigation or treatment of a condition unrelated to their cancer and a melanoma is diagnosed

Lentigo Maligna: a specific type of melanoma in situ that occurs around hair follicles on the sun-damaged skin of the head and neck

Lentigo Maligna Melanoma: melanoma evolving from Lentigo Maligna

Mitosis (pl. Mitoses): the process of cell division

Mitotic Rate: a measurement of how fast tumour cells are dividing.

Mucosal: relating to mucous membranes

Naevoid: resembling/in the form of a naevus/naevi

Nodular Melanoma: type of malignant, often fast-growing melanoma which typically presents as a raised bluish-black tumour

Pathological T stage: pathological staging of the tumour based on examined specimens of tissue

Polypoid: resembling/in the form of a polyp

Review patient: patient attending outpatient cancer clinic as part of follow-up for a previous melanoma

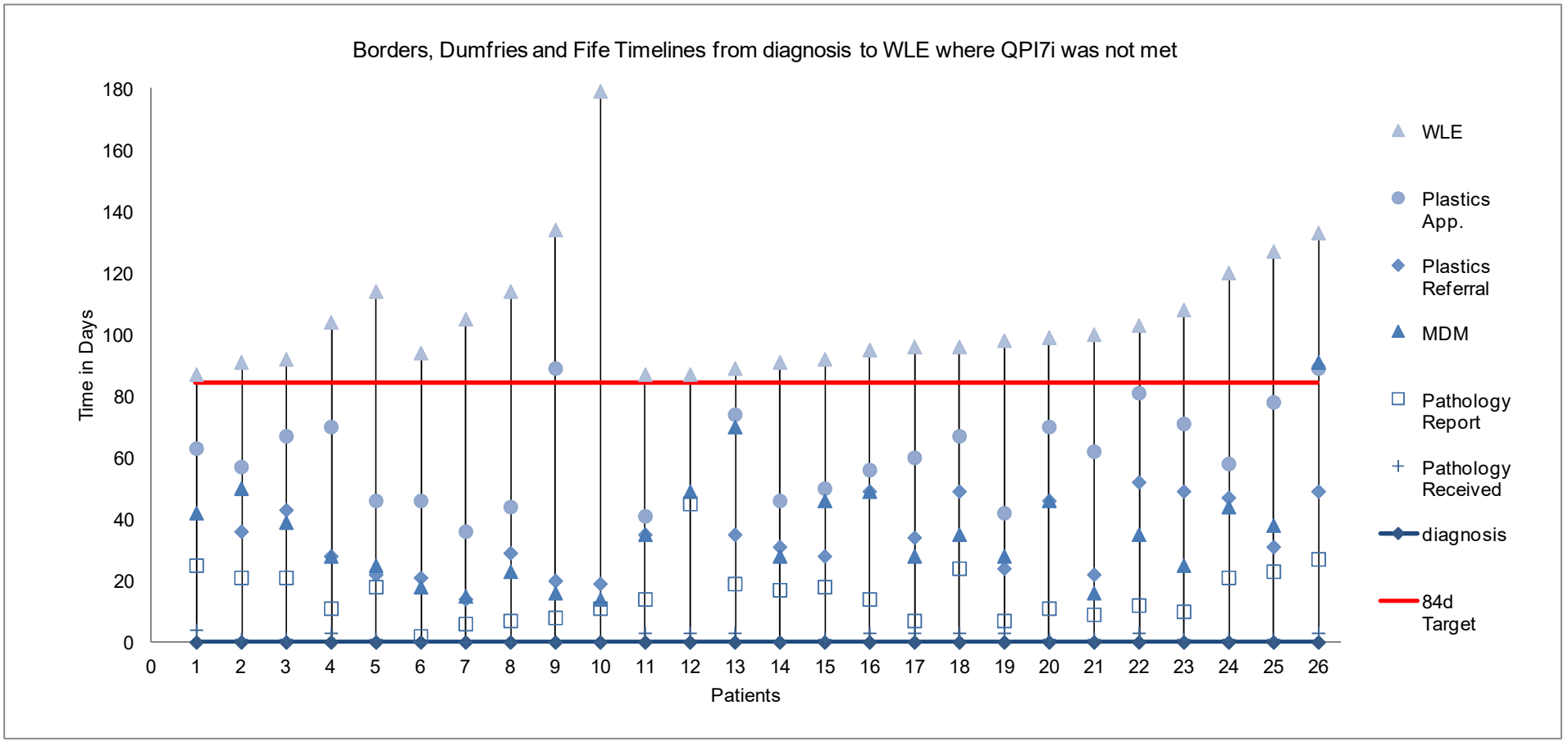
Spitzoid melanoma: melanoma with the features of a Spitz naevus (a rare melanocytic lesion)

Subungual: beneath a fingernail or toenail

Superficial spreading melanoma: most common form of cutaneous melanoma in Caucasians. Occurs most frequently from middle age onwards on sun-exposed skin. especially on the backs of males and lower limbs of females.

Cutaneous Melanoma QPI Attainment 2019-20		Target %	Borders		D&G		Fife		Lothian		SCAN	
QPI 1: Excision Biopsy. patients should have their diagnostic excision biopsy carried out by a skin cancer clinician	Excision biopsy	90	N 19 D 20	95.0%	N 18 D 18	100.0%	N 44 D 45	97.8%	N 155 D 172	90.1%	N 236 D 255	92.5%
	Partial biopsy	90	N 5 D 6	83.3%	N 8 D 9	88.9%	N 13 D 13	100.0%	N 27 D 31	87.1%	N 53 D 59	89.8%
QPI 2: Pathology Reporting. Surgical pathology reports cutaneous melanoma should contain full pathology information		90	N 20 D 20	100.0%	N 15 D 20	75.0%	N 50 D 50	100.0%	N 157 D 178	88.2%	N 242 D 268	90.3%
QPI 3: Multi-Disciplinary Team Meeting (MDT). Patients should be discussed prior to definitive treatment		95	N 24 D 26	92.3%	N 23 D 27	85.2%	N 54 D 58	93.1%	N 181 D 211	85.8%	N 282 D 322	87.6%
QPI 4: Clinical Examination of Draining Lymph Nodes as part of clinical staging		95	N 25 D 26	96.2%	N 27 D 27	100.0%	N 58 D 58	100.0%	N 193 D 213	90.6%	N 303 D 324	93.5%
QPI 5: Sentinel Node Biopsy Pathology. Reports should contain full pathology information		90	N 6 D 6	100.0%	N 3 D 3	100.0%	N 6 D 6	100.0%	N 47 D 48	97.9%	N 62 D 63	98.4%
QPI 6: Wide Local Excisions to reduce the risk of local recurrence		95	N 24 D 26	92.3%	N 27 D 27	100.0%	N 54 D 58	93.1%	N 171 D 202	84.7%	N 276 D 313	88.2%
QPI 7: Time to Wide Local Excision. WLE within 84 days of diagnostic Biopsy	Excision biopsy	95	N 16 D 20	80.0%	N 12 D 18	66.7%	N 31 D 45	68.9%	N 78 D 173	45.1%	N 137 D 256	53.5%
	Partial biopsy	95	N 3 D 6	50.0%	N 7 D 9	77.8%	N 11 D 13	84.6%	N 21 D 31	67.7%	N 42 D 59	71.2%
QPI 8: BRAF Status. Patients with unresectable stage III or IV		75	N 0 D 0	NA	N 0 D 0	NA	N 2 D 2	100.0%	N 3 D 3	100.0%	N 5 D 5	100.0%
QPI 9: Imaging in Advanced Melanoma. CTPET/CT within 35 days of diagnosis (stage IIC, III or IV melanoma)		95	N 2 D 6	33.3%	N 1 D 2	50.0%	N 7 D 10	70.0%	N 5 D 40	12.5%	N 15 D 57	26.3%
QPI 10: Systemic Therapy. Patients with unresectable stage III or IV melanoma should receive SACT		60	N 0 D 0	NA	N 0 D 0	NA	N 1 D 2	50.0%	N 2 D 3	66.7%	N 3 D 5	60.0%
QPI 12: Adequate excision of lesion prior to definitive treatment (with clinical margins of 2mm prior to WLE)		85	N 16 D 24	66.7%	N 11 D 27	40.7%	N 28 D 53	52.8%	N 107 D 180	59.4%	N 162 D 284	57.0%
Clinical trials N= patients consented to a trial on SCRN database (EDGE). D= 5 year average from Cancer Registry		15	N 0 D 37	0%	N 0 D 34	0%	N 0 D 71	0%	N 2 D 188	1.0%	N 2 D 325	0.6%

Appendix 2

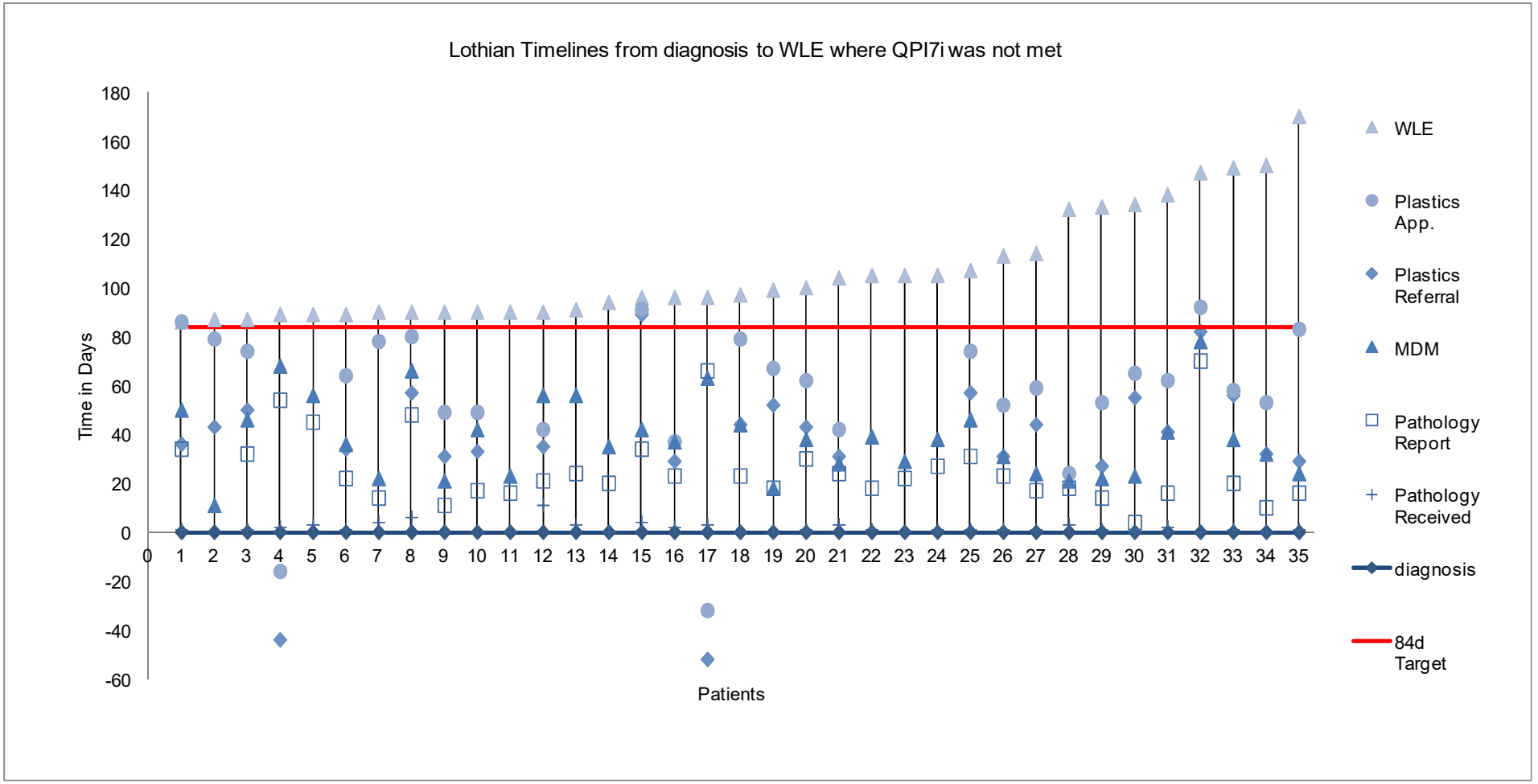


Patients 1-5 are Borders patients, Patients 6-10 are Dumfries & Galloway patients, Patients 11-26 are Fife patients.
Patients who did not have a WLE are not included on graphs.

Cumulative Times and additional information for QPI 7i Outliers

QPI7i	Breslow	Surgeon/ Derm Cons	Path received	Path report	MDM	Plastics referral	Plastics Appt	WLE	Comments
B1	2.2	MacKenzie	4	25	42	NR	63	87	Referred to Lothian.
B2	3.1	Andrews	1	21	50	36	57	91	Borders excision – routine referral Lothian. Plastics delay.
B3	1.4	MacKenzie	1	21	39	43	63	92	Referred to Lothian. Plastics delay
B4	1.8	MacKenzie	3	11	28	28	70	104	Patient induced delay
B5	4.4	MacKenzie	1	18	25	22	46	114	Referred to Lothian. Plastics delay
B6	0.6	Gordon	1	4	31	n/a	n/a	n/a	Sufficient margin
B7	0.3	MacKenzie	3	21	42	n/a	n/a	n/a	Patient declined
D1	3.9	Malone	0	2	18	21	46	94	
D2	2.8	Yeo	0	6	15	14	36	105	
D3	2.5	Malone	0	7	23	29	44	114	
D4	0.9	Lindsey	0	8	16	20	89	134	
D5	0.1	Yeo	0	11	14	19	n/a	179	Deemed no OP appointment needed at referral vetting, straight to W/L
D6	1	Yeo	0	7	22	n/a	n/a	n/a	MDT advised against WLE, felt first excision was sufficient treatment
D7	6	Yeo	0	5	16	n/a	n/a	n/a	WLE cancelled due to 2nd wave of COVID-19, family then decided they were not keen for any further WLE
D8	0.4	Malone	0	7	21	n/a	n/a	n/a	Margin from invasive disease not far from 10mm, patient happy to decline to WLE
F1	0.9	Holme	3	14	35	35	41	87	Dermatology referral to Plastics
F2	0.5	Matthews	3	45	49	n/a	n/a	87	Pathology delay
F3	0.5	Matthews	3	19	70	35	74	89	Administrative errors by both Pathology & Dermatology. Plastics capacity
F4	0.4	Mowbray	0	17	28	31	46	91	Patient induced delay

QPI7i	Breslow	Surgeon/ Derm Cons	Path received	Path report	MDM	Plastics referral	Plastics Appt	WLE	Comments
F5	2.6	Mowbray	1	18	46	28	50	92	Plastics capacity
F6	6.6	Matthews	3	14	49	49	56	95	Delay in referral to MDM & Plastics capacity
F7	8.0	Fraser	3	7	28	34	60	96	Patient induced delay
F8	1.5	Mitchell	3	24	35	49	67	96	Dermatology referral to Plastics
F9	2.36	Matthews	3	7	28	24	42	98	Complex patient, co-morbidities led to surgical delay
F10	0.4	Ng	1	11	46	46	70	99	Plastics delay in listing patient for MDM
F11	1	Sergeant	1	9	16	22	62	100	COVID & Plastics outpatient capacity
F12	10	Mitchell	3	12	35	52	81	103	Patient induced delay
F13	3.4	Amy	1	10	25	49	71	108	COVID isolation & patient induced delay
F14	1.3	Matthews	1	21	44	47	58	120	Complex patient. Path 2nd opinion & extra step in pathway
F15	0.4	Mitchell	1	23	38	31	78	127	Patient induced delay & Plastics capacity
F16	1.5	Matthews	3	27	91	49	89	133	Administrative errors by both Pathology & Dermatology. Plastics capacity
F17	0.57	Mitchell	2	16	31	n/a	n/a	n/a	No WLE
F18	30	General	1	8	2	n/a	n/a	n/a	No WLE



Patients who did not have a WLE are not included on graphs.

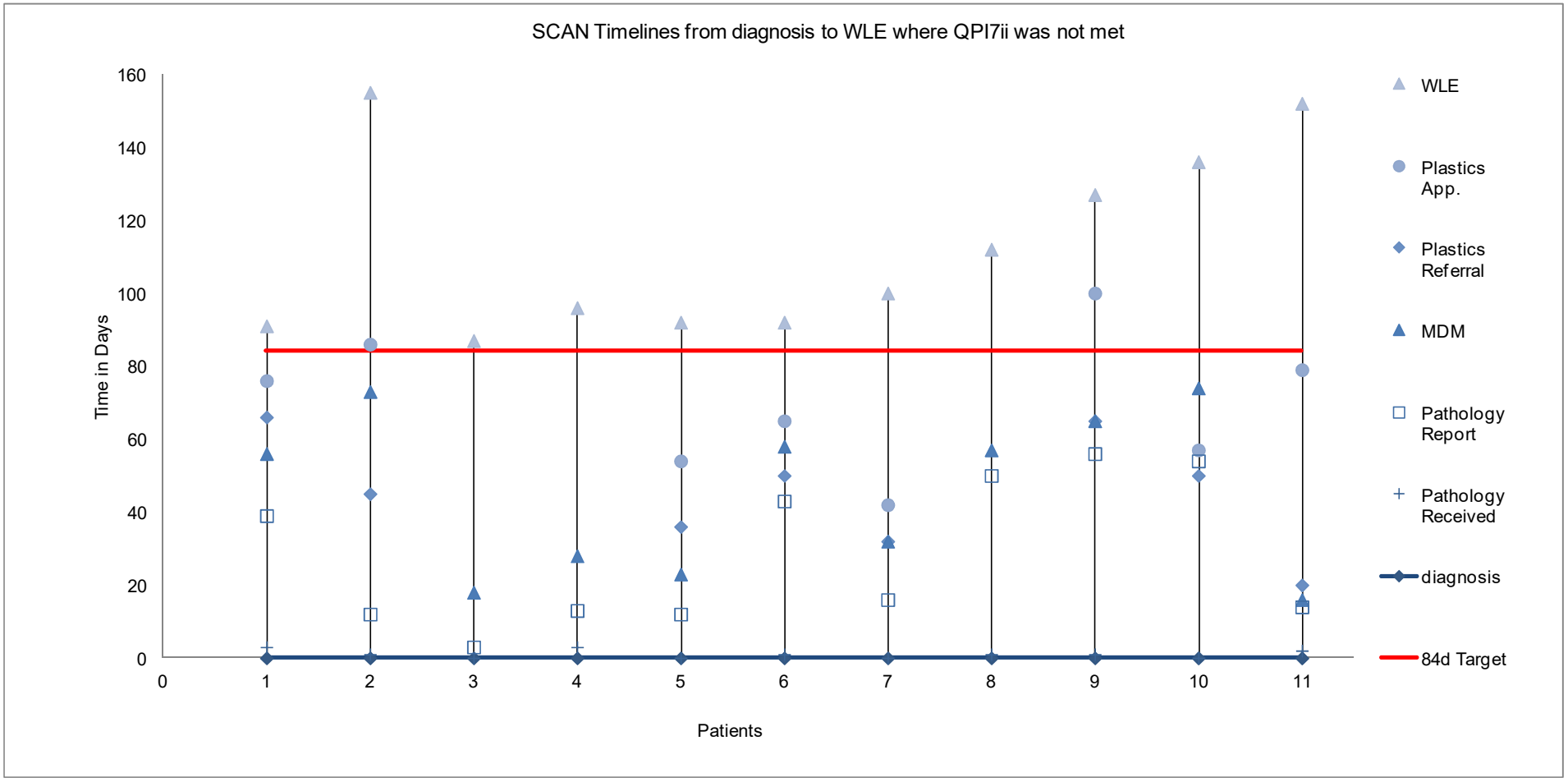
Cumulative times (days) and additional information for Lothian Outliers in QPI 7i

QPI7i	Breslow	Surgeon	Path received	Path report	MDM	Plastics referral	Plastics Appt	WLE	AJCC Stage	Comments
L1	5.5	Aldridge	1	34	50	36	86	86	IIC	Plastics capacity delay
L2	1.1	Burden*	NR	NR	11	43	79	87	IB	Private diagnosis, Plastics capacity delay
L3	1	Aldridge	1	32	46	50	74	87	IB	
L4	0.4	Majdek	2	54	68	-44	-16	89	IA	Pathology delay
L5	0.85	Robertson	3	45	56	in house	N/A	89	IB	Pathology delay
L6	1.2	Rice	1	22	36	34	64	89	IIA	Plastics capacity delay
L7	1.2	Ooi	4	14	22	57	78	90	IIC	Plastics cancellation
L8	18	Ooi	6	48	66	57	80	90	IIA	Pathology delay
L9	1.7	Aldridge	0	11	21	31	49	90	III	Plastics capacity delay
L10	1.1	Aldridge	0	17	42	33	49	90	IB	Plastics capacity delay
L11	0.2	Laube	0	16	23	in house	N/A	90	IA	
L12	6.5	Cheena*	11	21	56	35	42	90	IIC	Private diagnosis
L13	0.3	Bahia	3	24	56	N/A	55	91	IIA	Delay in MDT referral
L14	0.3	Ooi	0	20	35	in house	N/A	94	IA	
L15	4.3	Naysmith	4	34	42	89	91	96	III	Plastics referral delay
L16	0.6	Leitch	2	23	37	29	37	96	IA	Plastics capacity delay
L17	0.7	Geary	3	66	63	-52	-32	96	III	Path re-reviewed, Referred direct to plastics
L18	0.8	Aldridge	0	23	44	44	79	97	IB	Plastics capacity delay
L19	2.1	Aldridge	0	18	18	52	67	99	IIB	Plastics capacity delay
L20	4.1	Kavanagh	1	30	38	43	62	100	IIC	Plastics capacity delay
L21	4.5	Geary	3	24	28	31	42	104	IIB	Plastics capacity delay
L22	7.5	Bahia	1	18	39	in house	N/A	105	IA	

QPI7i	Breslow	Surgeon	Path received	Path report	MDM	Plastics referral	Plastics Appt	WLE	AJCC Stage	Comments
L23	0.75	Rice	0	22	29	In house	92	105	IA	
L24	0.9	Laube	1	27	38	in house	N/A	105	IB	Patients delay
L25	0.7	Kavanagh	1	31	46	57	74	107	IB	Plastics capacity delay
L26	1.3	Robertson	1	23	31	31	52	113	III	Plastics capacity delay
L27	0.95	Gupta	1	17	24	44	59	114	IB	Plastics capacity delay
L28	2.1	Naysmith	3	18	21	24	24	132	IIA	Plastics capacity delay
L29	3.7	Aldridge	1	14	22	27	53	133	IIB	Plastics capacity delay
L30	1.7	Ooi	0	4	23	55	65	134	IB	Plastics capacity delay
L31	1	Fairbairn	2	16	41	41	62	138	IB	Plastics capacity delay
L32	1.4	Taylor	0	70	78	82	92	147	IB	Pathology delay, plastics capacity
L33	4.5	Kavanagh	1	20	38	56	58	149	IIB	Plastics capacity delay
L34	3.5	Biddlestone	0	10	32	32	53	150	IIB	Plastics capacity delay
L35	1.05	Kavanagh	1	16	24	29	83	170	IB	Plastics capacity delay
L36	4.5	Salucci	6	19	27	N/A	N/A	N/A	III	Awaiting WLE
L37	5	Kavanagh	1	35	52	55	N/A	N/A	IV	Onto immunotherapy
L38	0.3	Rice	0	16	23	N/A	N/A	N/A	IA	Sufficient margin
L39	6.5	Kavanagh	0	17	24	N/A	N/A	N/A	IV	Declined treatment
L40	0.4	Kavanagh	1	13	22	N/A	N/A	N/A	IA	Sufficient margin
L41	0.6	Rice	1	32	52	N/A	N/A	N/A	IA	Sufficient margin
L42	0.3	Aldridge	1	12	29	N/A	N/A	N/A	IA	Sufficient margin
L43	0.4	Bahia	3	27	35	N/A	N/A	N/A	IA	Sufficient margin
L44	7.2	Aldridge	0	7	7	N/A	N/A	N/A	IV	Died before WLE
L45	0.8	Kavanagh	1	10	24	N/A	N/A	N/A	IB	Declined treatment
L46	4.1	Aldridge	3	8	21	N/A	N/A	N/A	IV	Onto immunotherapy
L47	0.6	Aldridge	3	20	35	N/A	N/A	N/A	IA	Comorbidity

QPI7i	Breslow	Surgeon	Path received	Path report	MDM	Plastics referral	Plastics Appt	WLE	AJCC Stage	Comments
L48	7.8	Geary	4	12	29	N/A	N/A	N/A	IIC	Sufficient margin
L49	14.5	Kavanagh	1	13	45	N/A	N/A	N/A	IIC	Declined treatment
L50	0.3	Aldridge	0	19	50	N/A	N/A	N/A	IA	Declined treatment
L51	0.8	Gupta	0	33	43	N/A	N/A	N/A	IB	Sufficient margin
L52	16	Majdek	3	35	42	N/A	N/A	N/A	IV	Sufficient margin
L53	0.65	Bahia	3	25	42	N/A	N/A	N/A	IA	Sufficient margin
L54	0.5	Aldridge	1	30	39	N/A	N/A	N/A	IA	Sufficient margin
L55	5.4	Kavanagh	0	22	38	N/A	N/A	N/A	IIC	Another primary

*External Provider

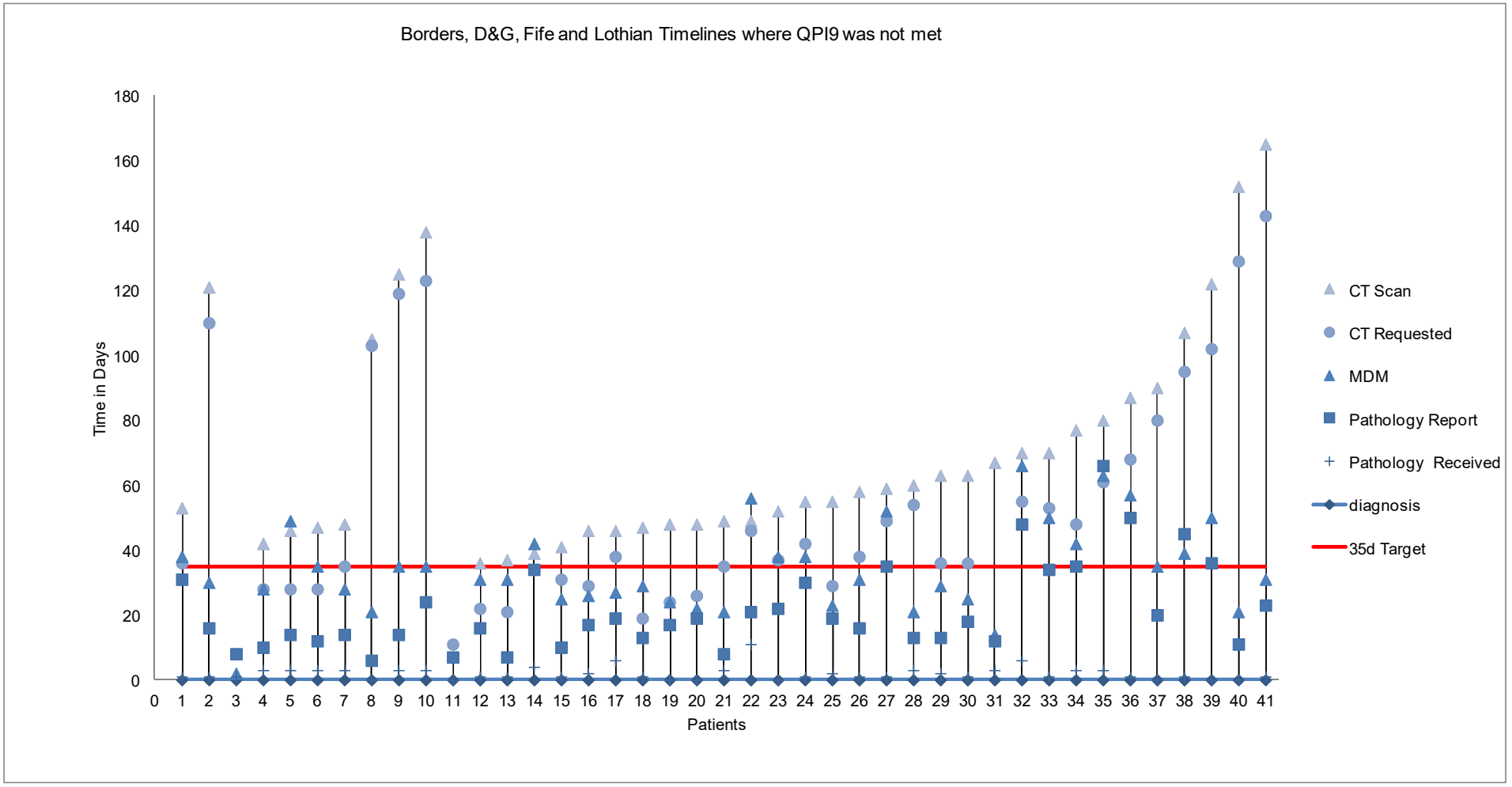


Patients 1 and 2 are Borders patients, Patient 3 is a Dumfries & Galloway patient, Patient 4 is a Fife patient, Patients 5-11 are Lothian patients. Patients who did not have a WLE are not included on graphs.

Cumulative times for QPI 7ii

QPI7ii	Breslow	Operating Surgeon/ Dermatology Cons	Path received	Path report	MDM	Plastics referral	Plastics Appt	WLE	Comments
B1	0.47	Kemmett	3	39	56	66	76	91	Delay in plastics referral
B2	1.8	Gordon	1	12	73	45	86	155	Covid infection delay
B3	3.1	MacKenzie	1	16	30	N/A	N/A	N/A	Patient declined
B4	2.2	MacKenzie	3	11	28	N/A	N/A	N/A	Patient declined
B5	18	P.Gordon	1	31	38	N/A	N/A	N/A	Patient declined
D1	1.1	Yeo	0	3	18	10	32	87	
F1	0.5	Holme	3	13	28	34	54	96	Patient induced delay
F2	5.0	Amy	1	28	25	N/A	N/A	N/A	No WLE
F3	2.8	Matthews	3	12	14	13	130	N/A	No WLE
F4	NR	Mitchell	3	14	35	N/A	N/A	N/A	No WLE
L1	1.4	Tidman	0	12	23	36	54	92	Plastics delay
L2	1.3	Leitch	1	43	58	50	65	92	Pathology delay
L3	2.1	Fairbairn	0	16	32	32	42	100	Plastics delay
L4	7.5	Lancerotto	1	50	57			112	FNA, amputation (WLE)
L5	0.9	Ewen	1	56	65	65	100	127	Pathology delay and Plastics delay
L6	4.2	Biddlestone	0	54	74	50	57	136	Pathology delay and Plastics delay
L7	4.5	Holme*	2	14	16	20	79	152	Plastics delay and patient induced delay. Diagnosed privately
L8	0.7	Butterworth	2	22	39	N/A	N/A	N/A	Surgery postponed and patient died
L9	2.5	Girish	1	24	45	N/A	N/A	N/A	Patient declined further treatment

*External provider



Patients 1 and 2 are Borders patients, Patients 3-10 are Fife patients, Patients 11-41 are Lothian patients.
Patients who did not have a CT are not included on this graph.

Cumulative times for Outliers in QPI9

Patient	diagnosis	Pathology Received	Pathology Report	MDM	CT Requested	CT Scan
B1	0	1	31	38	36	53
B2	0	1	16	30	110	121
F1	0	1	8	2	-2	-2
F2	0	3	10	28	28	42
F3	0	3	14	49	28	46
F4	0	3	12	35	28	47
F5	0	3	14	28	35	48
F6	0	0	6	21	103	105
F7	0	3	14	35	119	125
F8	0	3	24	35	123	138
L1	0	0	7	7	11	-8
L2	0	1	16	31	22	36
L3	0	1	7	31	21	37
L4	0	4	34	42	34	39
L5	0	1	10	25	31	41
L6	0	2	17	26	29	46
L7	0	6	19	27	38	46
L8	0	1	13	29	19	47
L9	0	0	17	24	24	48
L10	0	0	19	22	26	48
L11	0	3	8	21	35	49
L12	0	11	21	56	46	49
L13	0	0	22	38	37	52
L14	0	1	30	38	42	55
L15	0	2	19	23	29	55
L16	0	1	16	31	38	58
L17	0	1	35	52	49	59
L18	0	3	13	21	54	60

Patient	diagnosis	Pathology Received	Pathology Report	MDM	CT Requested	CT Scan
L19	0	2	13	29	36	63
L20	0	1	18	25	36	63
L21	0	3	12	14	12	67
L22	0	6	48	66	55	70
L23	0	1	34	50	53	70
L24	0	3	35	42	48	77
L25	0	3	66	63	61	80
L26	0	1	50	57	68	87
L27	0	0	20	35	80	90
L28	0	1	45	39	95	107
L29	0	0	36	50	102	122
L30	0	0	11	21	129	152
L31	0	1	23	31	143	165
L32	0	2	14	16	N/A	N/A
L33	0	NR	9	17	N/A	N/A
L34	0	1	26	36	N/A	N/A
L35	0	4	12	29	N/A	N/A
L36	0	1	13	45	N/A	N/A
L37	0	0	18	29	N/A	N/A
L38	0	2	22	39	N/A	N/A