

# **Mesothelioma - Clinical Audit Report**

Quality Performance Indicators: 01 January – 31 December 2024

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## Introduction

This report presents an assessment of the performance of mesothelioma services using clinical audit data relating to patients diagnosed with mesothelioma across Scotland from 01 January 2024 to 31 December 2024.

These results are measured against version 3 of the Mesothelioma Quality Performance Indicators (QPIs), which were updated in March 2023<sup>1</sup>.

In December 2025, the NSCC initiated a review of the National Network QPI reporting process. This review aimed to standardise and simplify the report content, focusing on identifying areas of concern or where QPIs are unable to be met.

This work aligns with the wider NCQIB review of the National QPI processes, and will continue to evolve and standardise over the coming years.

## Methodology

Detail on the audit and analysis methodology and data quality is available in the meta data within Appendix 1.

## Results

A summary of the Mesothelioma 2024 clinical audit data is presented in the table below, with more detailed analysis presented for each QPI thereafter.

Where a QPI has not been met either nationally or regionally, a table has been included which outlines any relevant commentary from Boards/Regions and any actions the Boards/Regions have identified for themselves.

Information is also included where actions have been identified for the national network and any additional comments regarding the results.

## Next steps

The national networks will build any actions identified below into their workplans, as well as consider how best to present QPIs in future, particularly where small patient numbers can be challenging to both present and interpret.

NSCC and the national networks will continue to work closely with the NCQIB to agree standardised reporting outputs and pathways for escalation where required.

## Performance Summary

QPI	QPI target	Year	NCA	SCAN	WoSCAN	Scotland
<b>QPI 1(i) - Diagnostic Imaging</b> Proportion of patients in whom CT scan optimised for pleural assessment (between 60 and 90 seconds) is carried out for first discussion at the national MDT	90%	2024	80.8%	100%	100%	96.2%
		2023	87.5%	91.2%	97%	93.2%
		2022	82.1%	96.8%	95.6%	92.9%
<b>QPI 1(ii) - Diagnostic Imaging</b> Proportion of patients in whom CT scan optimised for pleural assessment (between 60 and 90 seconds) is carried out for first discussion at the national MDT, and TNM stage is recorded.	95%	2024	95.2%	100%	93.7%	96%
		2023	100%	100%	96.7%	98.3%
		2022	100.0%	100.0%	93.7%	96.4%
<b>QPI 2(i) - Diagnostic: Histopathology</b> Proportion of patients with mesothelioma who have a histopathological diagnosis.	85%	2024	100%	95.2%	96.8%	96.9%
		2023	96.9%	94.1%	92.4%	93.9%
		2022	92.6%	90.3%	100.0%	96.0%
<b>QPI 2(ii) - Diagnostic: Histopathology</b> Proportion of patients with a histopathological diagnosis of mesothelioma who have subtype identified.	95%	2024	96.2%	100%	100%	99.2%
		2023	100%	100%	98.4%	99.2%
		2022	100.0%	92.9%	100.0%	98.3%
<b>QPI 2(iii) - Diagnostic: Histopathology</b> Proportion of patients with a histopathological diagnosis of epithelioid mesothelioma who have IHC markers profiling undertaken.	95%	2024	100%	100%	91.7%	96.3%
		2023	100%	100%	97.1%	98.7%
		2022	84.6%	90.0%	97.4%	93.0%
<b>QPI 3 - Multidisciplinary Team</b> Proportion of patients with mesothelioma who are discussed at the national mesothelioma MDT meeting.	95%	2024	100%	93%	100%	97.7%
		2023	100%	94.1%	98.5%	97.7%
		2022	100.0%	96.8%	97.1%	97.6%
<b>QPI 4 - Systemic Anti Cancer Treatment</b> Proportion of patients with mesothelioma and performance status (PS) 0-1 who receive first line treatment with SACT using platinum and pemetrexed and ipilimumab-nivolumab immunotherapy (This QPI is reported a year in arrears).	60%	2024	78.9%	70%	77.4%	76.7%
		2023	78.6%	90%	71.4%	76.3%

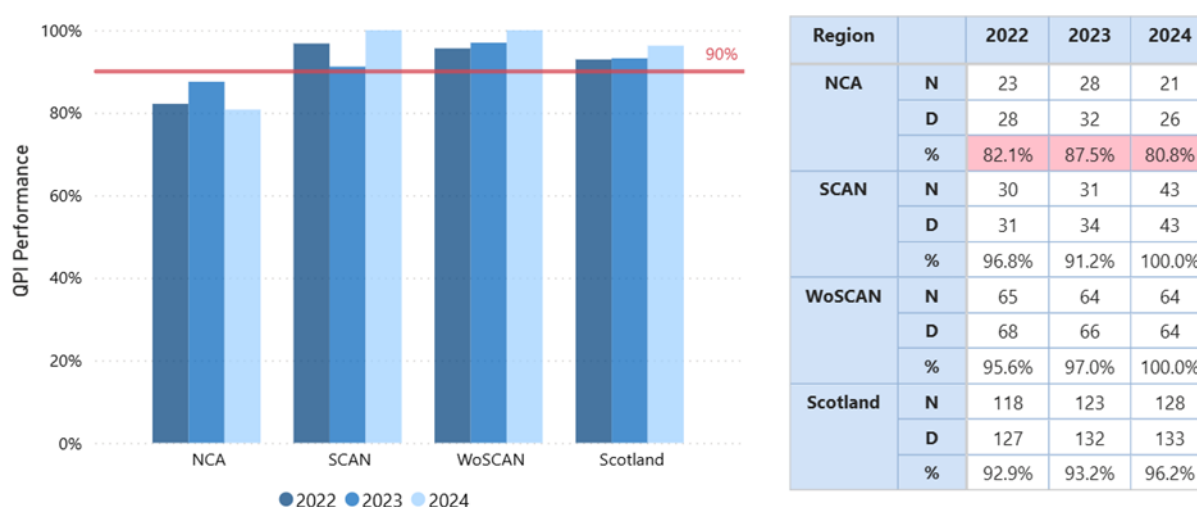
QPI	QPI target	Year	NCA	SCAN	WoSCAN	Scotland
<b>QPI 5 - Radiotherapy for Management of Pain</b> Proportion of patients with mesothelioma who are referred to the national MDT for pain relief who receive radiotherapy.	75%	2024	100%	100%	25%	66.7%
		2023	50%	100%	66.7%	62.5%
<b>QPI 6 - Pleural Fluid Management</b> Proportion of patients with mesothelioma with symptomatic pleural effusion who undergo either talc pleurodesis (via slurry or poudrage) or indwelling pleural catheter (IPC) insertion to manage fluid.	90%	2024	78.6%	94.7%	93.3%	90.5%
		2023	85.7%	100%	55.6%	73.1%
<b>QPI 8 - Post-Mortem Examination</b> Proportion of patients who have died with a pathological diagnosis of mesothelioma who undergo post-mortem examination.	< 10%	2024	0%	4.5%	4.2%	3.4%
		2023	14.3%	5%	3.4%	6.3%
		2022	20.0%	5.6%	0.0%	6.3%

## QPI 1: Diagnostic Imaging

### (i) Proportion of patients in whom CT scan optimised for pleural assessment (between 60 and 90 seconds) is carried out for first discussion at the national MDT

QPI Title:	Thoracic computed tomography (CT) scan optimised for pleural assessment should be undertaken as standard for diagnosis and staging in patients with mesothelioma.
Description:	(i) Proportion of patients in whom CT scan optimised for pleural assessment (between 60 and 90 seconds) is carried out for first discussion at the national MDT.
Numerator:	Number of patients with mesothelioma in whom CT scan optimised for pleural assessment was carried out for first discussion at the national MDT meeting.
Denominator:	All patients diagnosed with mesothelioma.
Exclusions:	Patients who refused investigation.
Target:	90%

**Figure 1: The proportion of patients in whom CT scan optimised for pleural assessment (between 60 and 90 seconds) is carried out for first discussion at the national MDT.**



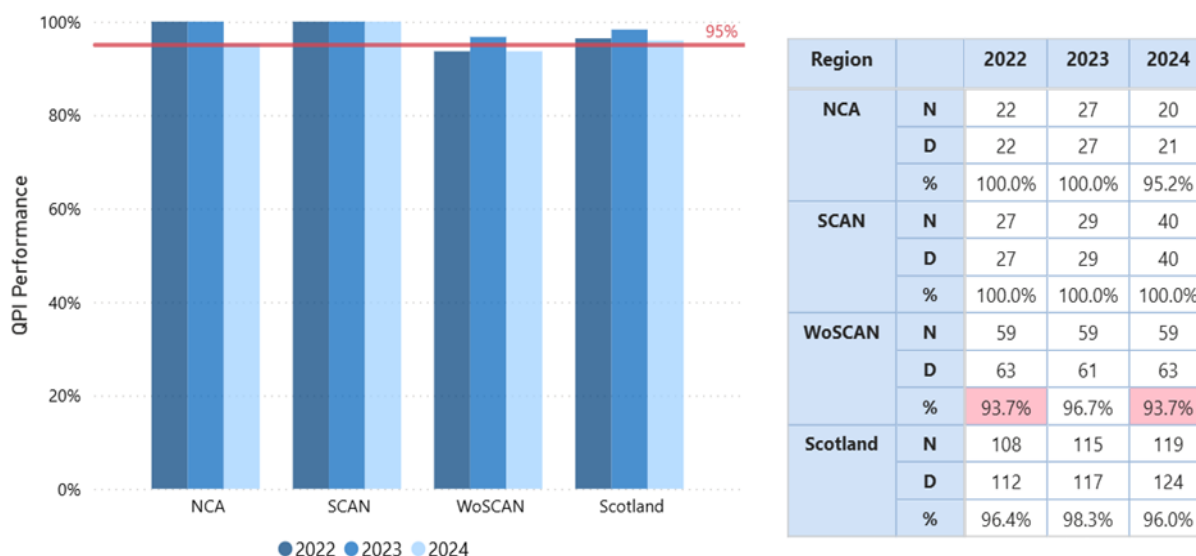
The performance target of 90% was met nationally with 96%. Regionally NCA were below the target achieving 80%.

Board	Description	Action Identified by Board	Network Action	Comment
Highland	Patients are managed through the lung cancer pathway and as such their initial CT is often arterial phase.	We continue to look at ways to improve this. This is a recurrent issue.	Network lead to seek clarity re imaging practice.	Lung pathways also require venous CT.
Tayside	QPI not met for 2 patients.	We will remind the wider team to request pleural phase contrast CT.	MDT reminders for pleural-phase CT.	

**(ii) Proportion of patients in whom CT scan optimised for pleural assessment (between 60 and 90 seconds) is carried out for first discussion at the national MDT, and TNM stage is recorded.**

QPI Title:	Thoracic computed tomography (CT) scan optimised for pleural assessment should be undertaken as standard for diagnosis and staging in patients with mesothelioma.
Description:	(ii) Proportion of patients in whom CT scan optimised for pleural assessment (between 60 and 90 seconds) is carried out for first discussion at the national MDT, and TNM stage is recorded.
Numerator:	Number of patients with mesothelioma in whom CT scan optimised for pleural assessment was carried out for first discussion at the national MDT meeting, who have TNM stage recorded.
Denominator:	Number of patients with mesothelioma in whom CT scan optimised for pleural assessment was carried out for first discussion at the national MDT meeting.
Exclusions:	No exclusions.
Target:	95%

**Figure 2: The proportion of patients in whom CT scan optimised for pleural assessment (between 60 and 90 seconds) is carried out for first discussion at the national MDT, and TNM stage is recorded.**



The performance target of 95% was met nationally with 96%. Regionally WoSCAN were just below the target achieving 93.7%.

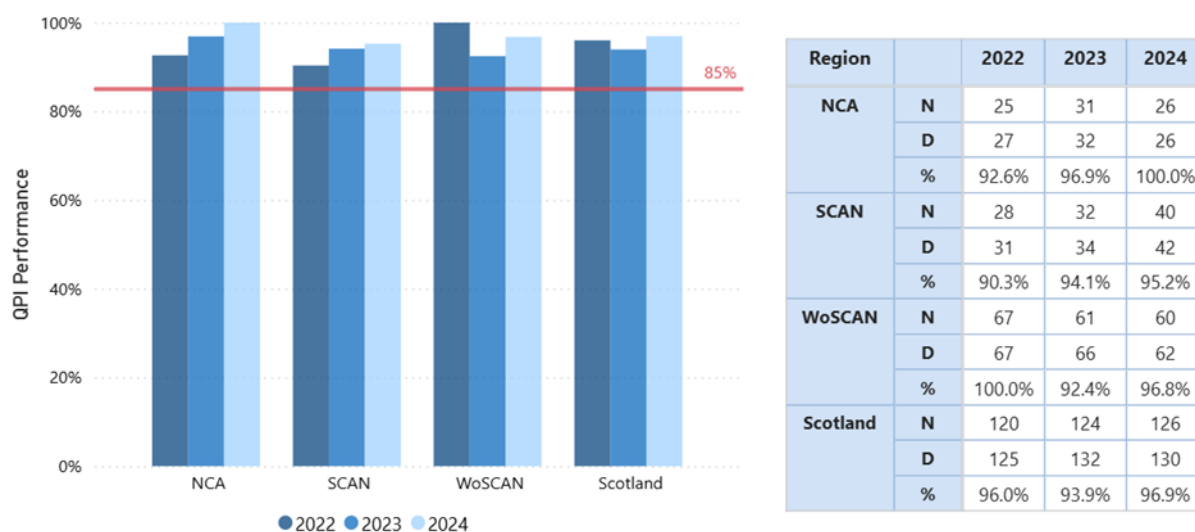
Board	Description	Action Identified by Board	Network Action	Comment
A&A	Staging for mesothelioma is determined at specialist radiology review (available via the National MDT).	We will continue to present at the National MDT.	Reinforce staging expectations at MDT.	Appropriate/ no concerns identified.
FV	Clinical lead has reviewed all cases that missed the target. No TNM's were found for the 2 patients who missed this target.	Continue with working practice.		
Lan	Case has been reviewed by Clinician. National Mesothelioma MDT suggested repeat biopsy for tissue confirmation. Patient was not keen to pursue therefore radiological diagnosis made. No TNM documented at National MDT.	No action required.		

## QPI 2: Diagnostic: Histopathology

### i) Patients with mesothelioma who have a histopathological diagnosis.

QPI Title:	Patients should have a histopathological diagnosis of Mesothelioma.
Description:	Proportion of patients who have a histopathological diagnosis of mesothelioma. i) Patients with mesothelioma who have a histopathological diagnosis.
Numerator:	Number of patients who have a histopathological diagnosis of mesothelioma.
Denominator:	All patients with mesothelioma.
Exclusions:	Patients who refuse investigations.
Target:	85%

Figure 3: the proportion of patients with mesothelioma who have a histopathological diagnosis.

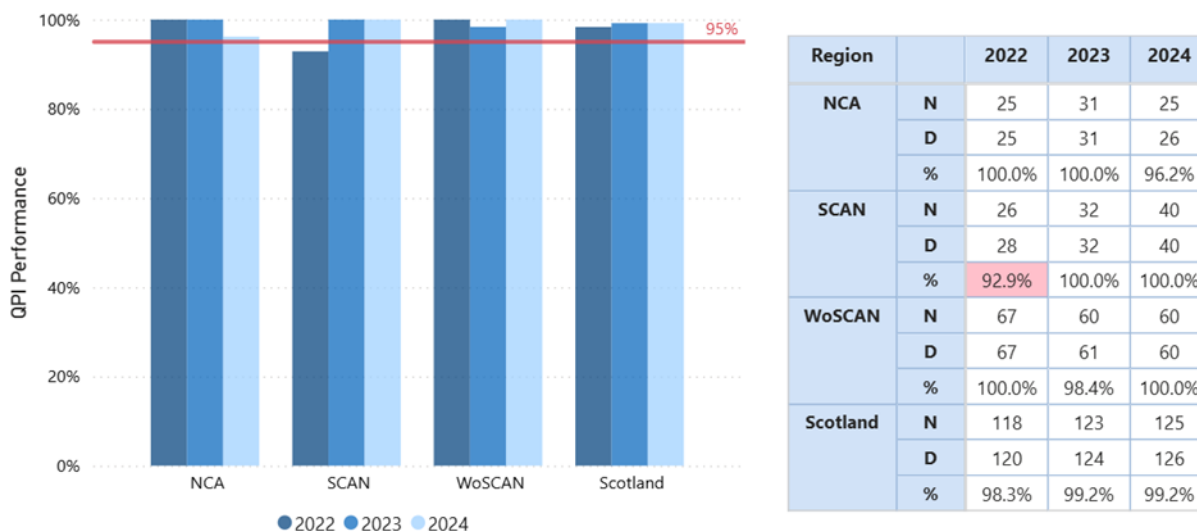


The performance target of 95% was met nationally and by all regions.

**(ii) Patients with a histopathological diagnosis of mesothelioma who have a subtype identified.**

QPI Title:	Patients should have a histopathological diagnosis of Mesothelioma.
Description:	Proportion of patients who have a histopathological diagnosis of mesothelioma. (ii) Patients with a histopathological diagnosis of mesothelioma who have a subtype identified.
Numerator:	Number of patients with a histopathological diagnosis of mesothelioma who have a subtype identified.
Denominator:	All patients with a histopathological diagnosis of mesothelioma.
Exclusions:	No exclusions.
Target:	95%

**Figure 4: the proportion of patients with a histopathological diagnosis of mesothelioma who have subtype identified.**

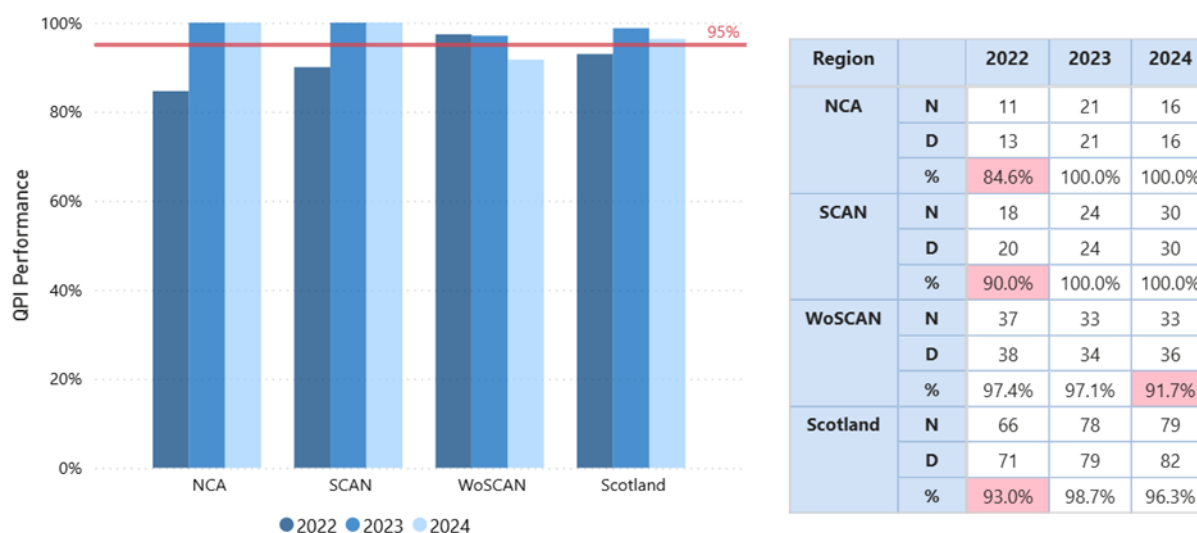


The performance target of 95% was met nationally and by all regions.

**(iii) Patients with a histopathological diagnosis of epithelioid mesothelioma who have IHC markers profiling\* undertaken.**

QPI Title:	Patients should have a histopathological diagnosis of Mesothelioma.
Description:	Proportion of patients who have a histopathological diagnosis of mesothelioma  (iii) Patients with a histopathological diagnosis of epithelioid mesothelioma who have IHC markers profiling* undertaken.
Numerator:	Number of patients with a histopathological diagnosis of epithelioid mesothelioma who have an appropriate immuno-histochemical panel undertaken on the biopsy.
Denominator:	All patients with a histopathological diagnosis of epithelioid mesothelioma.
Exclusions:	No exclusions.
Target:	95%

**Figure 5: the proportion of patients with a histopathological diagnosis of epithelioid mesothelioma who have IHC marker profiling undertaken.**



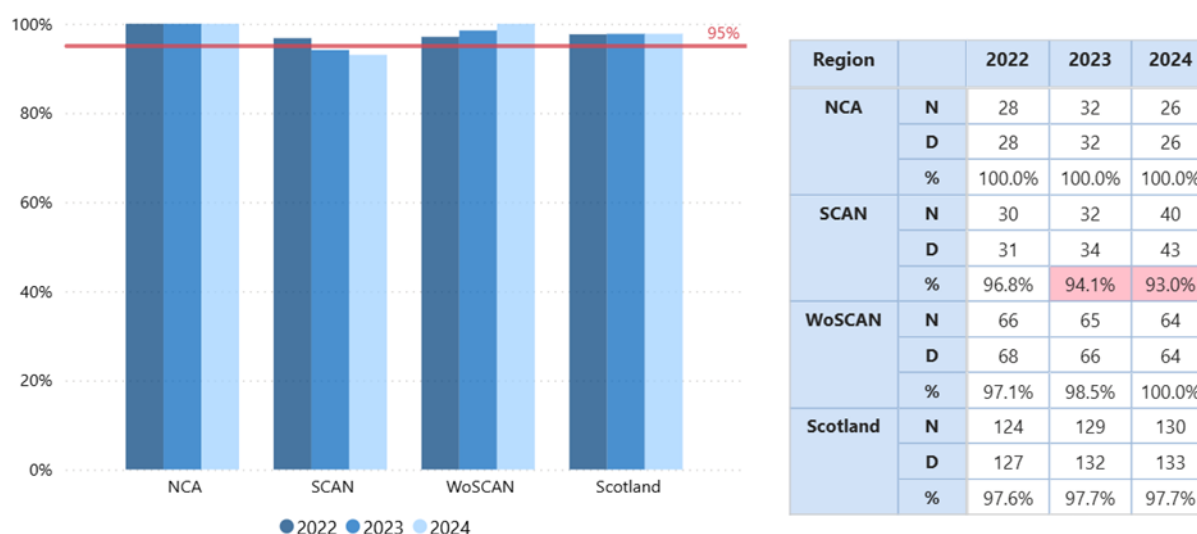
The performance target of 95% was met nationally with 96.3%. Regionally WoSCAN were below the target achieving 91.7%.

Board	Description	Action Identified by Board	Network Action	Comment
Lan	This one case has been reviewed by Clinician. One single adenocarcinoma specific marker undertaken.	Will follow this up with Pathology department to ensure at least two adenocarcinoma markers are performed.	No specific Network actions identified.	Appropriate/ no concerns Identified.
GGC	Both cases had appropriate number of mesothelial IHC markers done. Did not meet QPI due to having only one adenocarcinoma marker that is included in the QPI 'accepted' panel.	No specific action required.		

### QPI 3: Multidisciplinary Team

QPI Title:	Patients should be discussed by a multidisciplinary team (MDT)
Description:	Proportion of patients with mesothelioma who are discussed at the national mesothelioma MDT meeting.
Numerator:	Number of patients with mesothelioma discussed at the national mesothelioma MDT.
Denominator:	All patients diagnosed with mesothelioma.
Exclusions:	No exclusions.
Target:	95%

**Figure 6: Proportion of patients with mesothelioma who are discussed at the national mesothelioma MDT meeting.**



The performance target of 95% was met nationally with 97.7%. Regionally SCAN were just below the target achieving 93%.

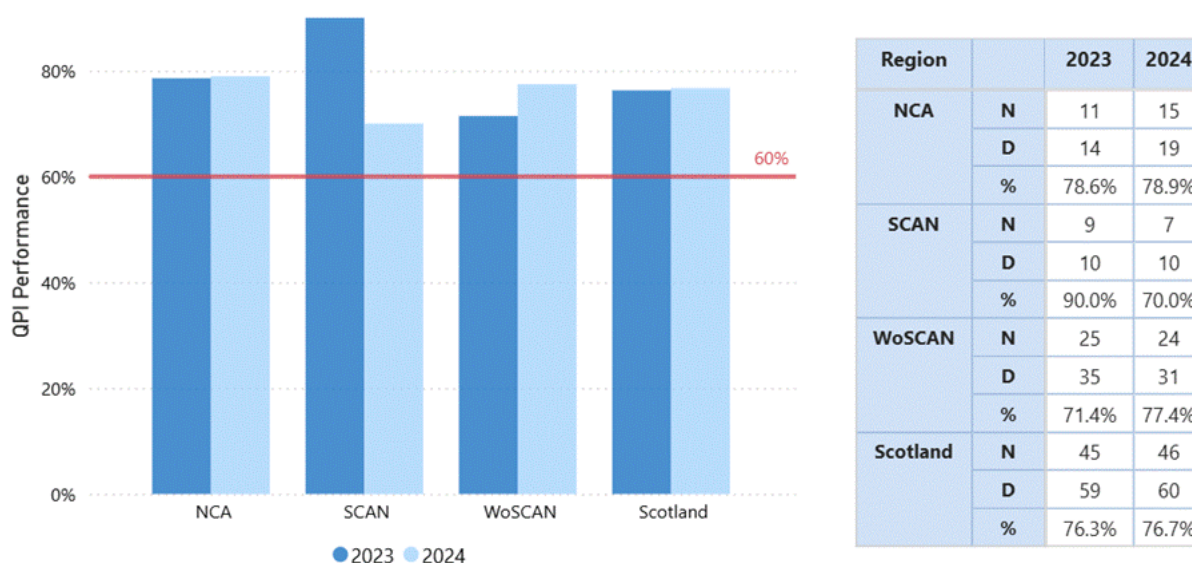
Region	Description	Action Identified by Board	Network Action	Comment
SCAN	Three patients should have been referred to national MDT but all three cases were missed due to oversight. These are patients for best supportive care and one without tissue confirmation.	Feedback and education delivered to Boards that all patients should be referred to MDT regardless of expected outcome.	Education & feedback to boards – Further case ascertainment work to be progressed in 26/27 to look at differences between QPI and cancer registry data.	This QPI feeds into wider considerations about case ascertainment.

## QPI 4 - Systemic Anti-Cancer Treatment

QPI Title	Patients with good performance status should receive first line treatment with Systemic Anti-Cancer Treatment (SACT).
Description:	Proportion of patients with mesothelioma and performance status (PS) 0 -1 who receive first line treatment with SACT.
Numerator:	Number of patients with a diagnosis of mesothelioma and PS 0-1 who receive first line treatment with SACT.
Denominator:	All patients with a diagnosis of mesothelioma and PS 0 -1.
Exclusions:	<ul style="list-style-type: none"> <li>• Patients who decline or defer SACT treatment.</li> <li>• Patients receiving chemotherapy treatment as part of a clinical trial.</li> </ul>
Target:	60%

**Please Note:** This QPI is reported one year in arrears. This enables reporting of all patients who receive first line SACT within 12 months following diagnosis. This has been deemed a more appropriate time frame to capture this particular aspect of treatment given the established practice of watch and wait in some patients immediately after diagnosis.

**Figure 7: Proportion of patients with mesothelioma and performance status (PS) 0-1 who receive first line treatment with SACT using platinum and pemetrexed or ipilimumab-nivolumab immunotherapy**



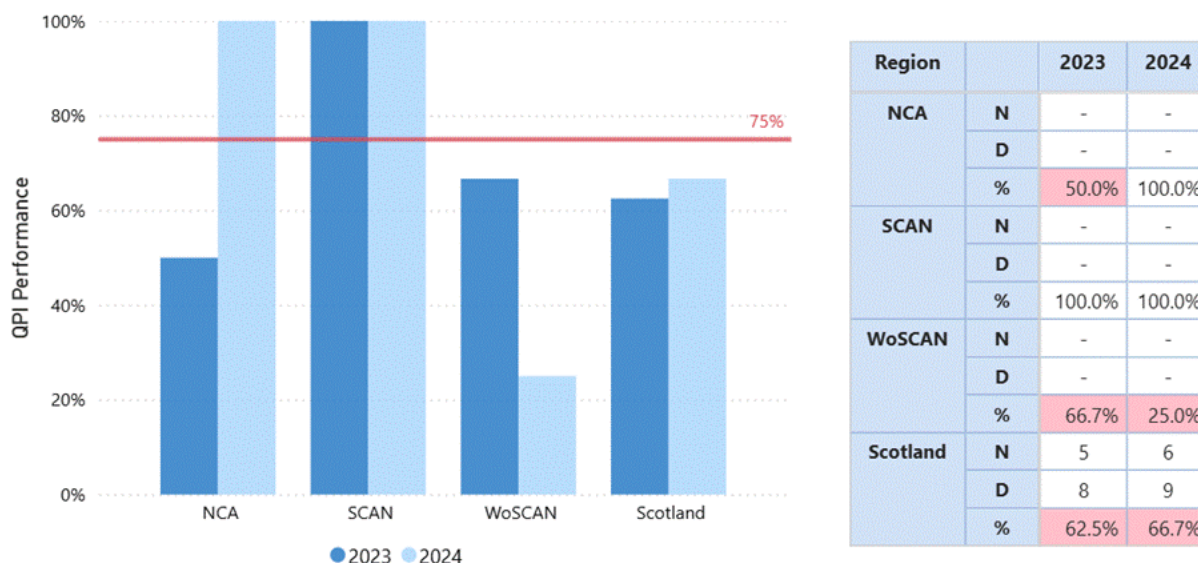
The performance target of 60% was met nationally and by all regions.

## QPI 5 - Radiotherapy for the Management of Pain

QPI Title:	Radiotherapy should be given for management of uncontrolled pain in patients with mesothelioma where appropriate.
Description:	Proportion of patients with mesothelioma who are referred to the national MDT with uncontrolled pain who receive radiotherapy.
Numerator:	Number of patients with mesothelioma referred to the national MDT with uncontrolled pain who receive radiotherapy.
Denominator:	All patients with mesothelioma referred to the national MDT with uncontrolled pain.
Exclusions:	<ul style="list-style-type: none"> <li>• Patients who decline radiotherapy treatment.</li> <li>• Patients receiving radiotherapy treatment as part of a clinical trial.</li> <li>• Patients who undergo a cordotomy.</li> <li>• Patients with uncontrolled pain which becomes controlled after optimisation of analgesia.</li> </ul>
Target:	75%

**Please Note:** This QPI is reported one year in arrears. This enables reporting of all patients referred to the national MDT for pain management who receive radiotherapy within 12 months following diagnosis. This has been deemed a more appropriate time frame to capture this aspect of treatment given the tendency for uncontrolled pain to develop later.

**Figure 8: the proportion of patients with mesothelioma who are referred to the national MDT for pain relief who receive radiotherapy.**



(-) dash denotes a denominator of less than 5. Figures have been removed to ensure confidentiality

The performance target of 75% was not met nationally with 66.75%. Regionally WoSCAN were below the target, achieving 25%.

Region	Description	Action Identified by Board	Network Action	Comment
WoSCAN	All patients reviewed - not fit for treatment.	Numbers are small, and this is only the second year of reporting since formal review changes more data is needed. Once the 2025 data is reported the network will look to schedule a deeper look into management of pain encompassing all who have uncontrolled pain recorded at MDT).	Network review with palliative care.  Consider further revision/exclusions for QPI.	Linked/supported by ongoing PROMs/PREMs work.

## QPI 6 - Pleural Fluid Management

QPI Title:	Patients with mesothelioma, who have symptomatic pleural effusion should be offered talc pleurodesis or indwelling pleural catheter (IPC) to manage fluid.
Description:	Proportion of patients with mesothelioma with symptomatic pleural effusion who undergo either talc pleurodesis (via slurry or poudrage) or indwelling pleural catheter (IPC) insertion to manage fluid.
Numerator:	Number of patients with mesothelioma who have symptomatic pleural effusion who undergo either talc pleurodesis (via slurry or poudrage) or indwelling pleural catheter (IPC) insertion to manage fluid.
Denominator:	All patients with mesothelioma who have symptomatic pleural effusion.
Exclusions:	<ul style="list-style-type: none"> <li>• Patients who refuse to undergo fluid management procedures.</li> <li>• Patients in whom pleural management is not required e.g. no symptomatic re-accumulation of pleural effusion after initial fluid aspiration or fluid removal during thoracoscopy.</li> </ul>
Target:	90%

**Please note:** Information on the type of procedure used to manage pleural fluid (talc pleurodesis or IPC) will be reported across NHS Boards alongside this QPI. This information should be reviewed to ensure there is sufficient choice between these options for patients.

**Figure 9: Proportion of patients with mesothelioma with symptomatic pleural effusion who undergo either talc pleurodesis (via slurry or poudrage) or indwelling pleural catheter (IPC) insertion to manage fluid**



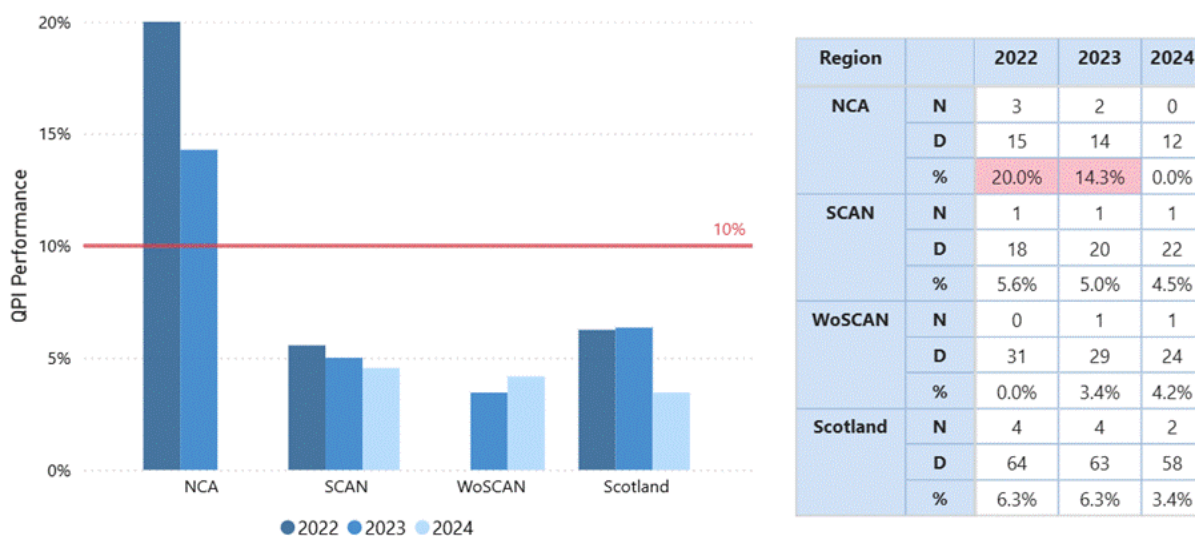
The performance target of 90% was met nationally with 90.5%. Regionally NCA were below the target, achieving 78.6%.

Region	Description	Action Identified by Board	Network Action	Comment
NCA	Patients reviewed and either did not require or were not appropriate for treatment.	No action required.	No action required.	Appropriate/no concerns identified.

## QPI 8 - Post-Mortem Examination

QPI Title:	Patients with a diagnosis of mesothelioma should only undergo post-mortem examination in the absence of pathological evidence of diagnosis.
Description:	Proportion of patients who have died with a pathological diagnosis of mesothelioma who undergo post-mortem examination.
Numerator:	Number of patients who have died with a pathological diagnosis of mesothelioma who undergo post-mortem examination.
Denominator:	All patients who have died with a pathological diagnosis of mesothelioma.
Exclusions:	None
Target:	<10%

**Figure 10: the proportion of patients who have died with a pathological diagnosis of mesothelioma who undergo post-mortem examination.**



The performance target was met nationally and by all regions.

## References

1. Healthcare Improvement Scotland. Mesothelioma Quality Performance Indicators, v3.0; June 2019 (updated March 2023) Available at:  
<https://www.healthcareimprovementscotland.scot/publications/mesothelioma-clinical-quality-performance-indicators-march-2023/>

## Methodology

Report Title	Cancer Audit Report: Mesothelioma Quality Performance Indicators
Time Period	Patients diagnosed between 1st January 2024 and 31st December 2024
Data Source	Cancer Audit Support Environment (eCASE). A secure centralised web-based database which holds cancer audit information in Scotland.
Data Extraction Date	The data contained within this report was extracted from eCASE on 14th August 2025
Methodology	<p>Analysis was performed centrally by NSS Information Management Service. The timescales agreed considered the patient pathway to ensure that a complete treatment record was available for the majority of patients.</p> <p>Initial results were provided to Health Boards to check for inaccuracies, inconsistencies or obvious gaps and a subsequent download taken upon which final analysis was carried out.</p> <p>The final data analysis was disseminated for NHS Board &amp; Region verification in line with the regional audit governance process to ensure that the data was an accurate representation of service in each area.</p>

## Document Control Sheet

Title	Mesothelioma – 2024 Clinical Audit Report
Version Number	V1.0
Document Type	Clinical Audit Report
Author/Owner	Anna Morton, Programme Manager, NSCC
Approval	Prof Kevin Blyth, Scottish Mesothelioma Network Clinical Lead
Date Published	25/05/2026