

Testicular Cancer Quality Performance Indicators

Patients diagnosed between
October 2014 and September 2017

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Contents

Introduction	4
Key Points.....	7
Foreword from Testicular Cancer Clinical Leads	8
Results and Commentary.....	10
Case Ascertainment.....	10
Overall Performance Summary.....	12
Quality Performance Indicators.....	16
Clinical Trials	36
List of Tables.....	40
Contact.....	41
Further Information	41
Rate this publication.....	41
Appendices	42
Appendix 1 – Background information.....	42
Appendix 2 – Testicular Cancer QPIs.....	42
Appendix 3 – Testicular Cancer Clinical Trials	44
Appendix 4 – Publication Metadata	45
Appendix 5 – Early access details.....	47
Appendix 6 – ISD and Official Statistics	48

Introduction

The cancer strategy '[Beating Cancer: Ambition and Action](#)' published in March 2016 builds on the commitment made in the Better Cancer Care plan to 'develop a work programme which will define how we will take forward... quality indicators for cancer services' by further supporting a culture of continuous quality improvement in cancer care across NHSScotland. The new cancer strategy states a commitment to improving data collection to advance the quality and delivery of care for cancer patients.

To achieve this, the Scottish Cancer Taskforce established the National Cancer Quality Steering Group (NCQSG), which includes responsibility for:

- The development of small sets (approximately 10-15 indicators) of tumour specific national quality performance indicators (QPIs) as a proxy measure of quality care.
- Overseeing the implementation of the national governance framework that underpins the reporting of performance against these national QPIs.

The QPIs have been developed collaboratively with the three Regional Cancer Networks: North of Scotland Cancer Network ([NOSCAN](#)), South East Scotland Cancer Network ([SCAN](#)), West of Scotland Cancer Network ([WoSCAN](#)), [Information Services Division](#) (ISD), and Healthcare Improvement Scotland. The QPIs are published on the [Healthcare Improvement Scotland website](#).

These indicators, used to drive quality improvement in cancer care across NHSScotland are kept under regular review; NHS Boards will be required to report against QPIs as part of a mandatory [national cancer quality programme](#).

ISD support NHS Boards in improving the quality of local data collection and reporting through the production of data validation specifications, and measurability criteria for QPIs. The current data sets are outlined on the [Cancer Audit website](#).

A rolling programme of reporting is planned across many tumour sites. National reports will include comparative reporting of performance against QPIs at NHS Board level across NHS Scotland, trend analysis and survival analysis (where applicable). This approach will help overcome existing issues relating to the reporting of small volumes in any one year.

This report assesses performance against 10 [Testicular Cancer QPIs](#) using clinical audit data relating to patients diagnosed with testicular cancer for the period from October 2014 to September 2017. In addition Clinical Trials data for testicular cancer patients is also assessed.

Data collection and analysis

Testicular cancer QPI data for patients diagnosed between October 2014 and September 2017 were collected by NHS Boards, supported by the regional cancer networks, and then analysed against the [Testicular cancer measurability document](#). Aggregated analysed data were then submitted to ISD via a data collection template for collation to allow comparisons at NHS Board level.

Data quality and completeness

Small numbers:

Where the number of cases meeting the denominator criteria for any indicator is between one and four, the percentage calculation has not been shown on any associated charts or tables. This is to avoid any unwarranted variation associated with small numbers and to minimise the risk of disclosure. Any charts or tables impacted by this are denoted with a dash (-). However, any commentary provided by NHS Boards relating to the impacted indicators will be included as a record of continuous improvement.

Baseline Review:

Following baseline review and year 1 publication of testicular cancer QPIs data, some changes were made to measurability in order that the QPIs appropriately measured what they were intended to. These were positive changes and led to more focussed analysis in year 2. However, the alterations to measurability mean that year 1 and year 2 results may not be directly comparable for some QPIs.

Formal Review:

In order to ensure the success of the National Cancer QPIs in driving quality improvement in cancer care across NHS Scotland it is critical that the QPIs continue to be clinically relevant and focus on areas which will result in improvements to the quality of patient care.

It was proposed that a formal review of all QPIs should take place following 3 years national comparative reporting, with tumour specific Regional Clinical Leads undertaking a key role in determining the need and extent of the review required.

For testicular cancer, this review has already taken place; revised testicular cancer QPIs for implementation from year 4 onwards will be published later in 2018, following public consultation. Any proposed changes to the QPIs as a result of this review will be noted in this report.

Private Patients:

There may be differences across the regions in the inclusion or exclusion of private patients within this dataset. In WoSCAN, patients diagnosed privately, but treated within the NHS, are included in any figures reported by hospital of surgery/treatment but excluded when reported by hospital of diagnosis. This differs in the approach adopted by the other regions where private patients are also included in QPIs reported by NHS Board of diagnosis. These differences, though, will account for very small numbers across the regions.

Survival Analysis:

For future tumour specific survival analyses, it has been agreed to use the Cancer Audit QPI dataset rather than the Cancer Registry dataset that has been used in the past. This should provide benefits in terms of improved accuracy and more specific and detailed analysis. Due to the limited amount of data available, low incidence rate and high survival rate for testicular cancer the cancer audit dataset is not mature enough to produce any meaningful survival analysis at this time and that analysis should be undertaken with the next reporting cycle. Historic survival analysis figures using Cancer Registry data are available [here](#) for reference.

Key Points

- There were 173 men diagnosed with Testicular Cancer in Scotland over the period October 2017 to September 2017. This is a reduction from the previous year where 213 were diagnosed but higher than year one (139).
- At a Scotland level in 2016/17, the target was met in five of the twelve indicators (i.e. including sub parts of some QPIs) with seven below target. This is a reduction from year one where 7 of the 11 (QPI9 not reported due to the reporting time lag) indicators met the target.

		14/15	15/16	16/17
QPI 1 – Radiological Staging	95%	88	84	89
QPI 2 – Pre Operative Assessment	95%	98	94	92
QPI 3 – Primary orchidectomy	95%	51	49	53
QPI 4 – Multi-Disciplinary Team Meeting (MDT)	95%	99	99	97
QPI 5 – Pathology Reporting	90%	98	99	99
QPI 6 – Quality of Adjuvant Treatment	95%	73	81	86
QPI 7 – Serum Tumour Markers	98%	100	86	97
QPI 8 – Systemic Therapy	95%	88	76	89
QPI 9 – Computed Tomography scanning for surveillance patients	85%	*	96	80
QPI 10(i) – 30 Day Mortality (Orchidectomy)	<5%	0	0	0
QPI 10(ii) – 30 Day Mortality (Chemotherapy)	<5%	0	3	0
QPI 10(iii) – 30 Day Mortality (Radiotherapy)	<5%	0	0	0

- For those QPIs where the target was not met across Scotland, some reasons and appropriate actions are provided from the clinical comments in the Quality Performance Indicators section of this report.



Target not met



Met or exceeded target



No data matching QPI criteria

-

Data not shown due to small numbers

Foreword from Testicular Cancer Clinical Leads

The three Regional Cancer Networks (North of Scotland Cancer Network (NOSCAN), South East Scotland Cancer Network (SCAN), and West of Scotland Cancer Network (WoSCAN)) aim to promote the highest standards of cancer care and equity of access to cancer services across Scotland. The development and introduction of national Quality Performance Indicators (QPIs) across Scotland represents a major step forward for patients with Testicular Cancer.

This is the first report of performance against the Testicular Cancer QPIs at a national level and provides results from the first three years of QPI recording across the three Regional Cancer Networks.

The QPI results have shown that overall, the quality of testicular cancer services across Scotland is good in many areas of care. For example, nearly all patients are discussed at a multi-disciplinary team meeting to discuss their definitive treatment plan (QPI 4), pathology reports provide clear information on the sub-type and stage of tumours to determine clinical management (QPI 5), patients with metastatic disease routinely get Serum Tumour Markers measured prior to chemotherapy (QPI 7) and post-treatment mortality was very low (QPI 10).

However, some challenges remain and these are outlined below:

QPI 1: Radiological Staging. While it is acknowledged that there will be individual and valid reasons why not all patients are able to have a CT scan within 3 weeks of surgery, a number of NHS Boards have made changes to the patient pathway to allow for more timely scanning and consequently improvements in performance against this target. Similar changes are being implemented in other NHS Boards which should result in continued improvement in performance; however constraints in radiology resource may impact on the ability of this QPI to be met in some areas.

QPI 2: Pre-operative Assessment. While most patients do have a pre-operative assessment including Serum Tumour Markers and testicular ultrasound, this target was not always met as some patients had incomplete assessment, for example in patients treated as an emergency, where not all markers were tested or where results were unavailable due to haemolysis.

QPI 3: Primary Orchiectomy. This QPI requires patients to have surgery within 2 weeks of ultrasound diagnosis. This is considered to be unrealistic as while the low performance observed is partly a consequence of pressures on operating theatre capacity there are also significant numbers of patients where it would not be possible to operate within 2 weeks due to the complexity of their case or due to patient requests. Consequently there is a proposal to change this indicator to measure patients having surgery within 3 weeks of diagnosis. It is anticipated that this revision will result in a measure which will more accurately identify areas where improvement is required.

QPI 6: Quality of Adjuvant Treatment: While most patients with stage I seminoma who choose adjuvant therapy are given carboplatin within 8 weeks of surgery to prevent metastatic relapse, some patients require additional CT or PET CT scans to clarify staging to ensure that appropriate treatment can be provided, which will result in intentional delays in treatment which are in the best interest of the patient.

The regular reporting of activity and performance has been fundamental in assuring the quality of care delivered across the country. It is anticipated that the revised QPIs following formal review, will continue to drive improvement and ensure equity of care for patients across Scotland. Where targets have not been achieved, NHS Boards have been asked to develop local action/improvement plans, and progress against these plans will be monitored regionally and reported to the appropriate Regional Cancer Advisory Groups.

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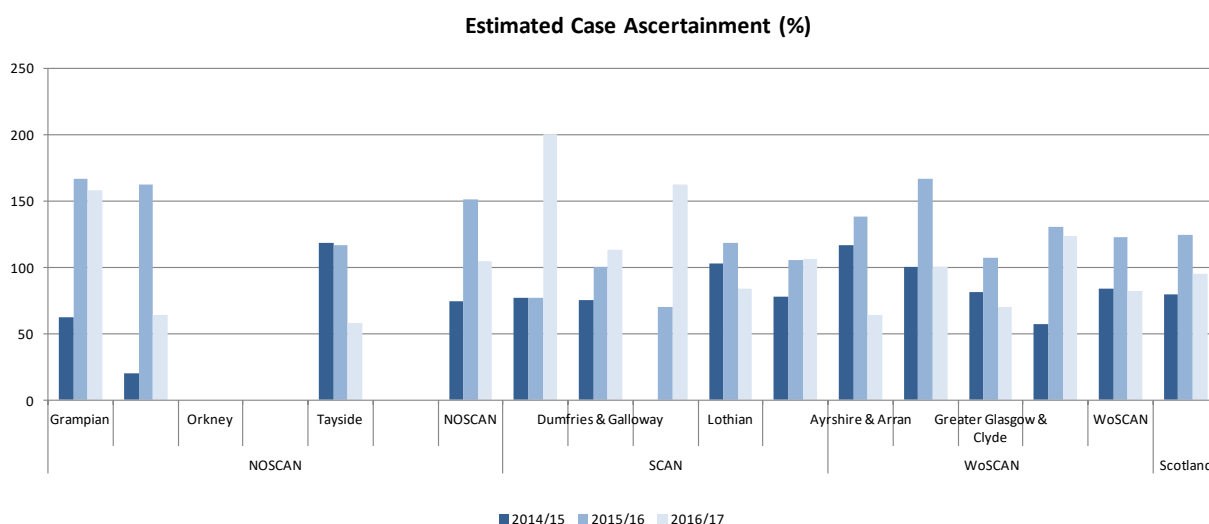
Results and Commentary

Case Ascertainment

Case ascertainment is a measure of data quality and is calculated by comparing the number of new patients captured by the cancer audit with a five year average of the numbers recorded on the cancer registry. A five year average is used for registry data as the information is not available until sometime after the year under examination. This is due to data collection and verification processes. As the number of cases will vary each year, it is possible for case ascertainment to be over or under 100%. Therefore, the figures presented should be seen as an indication only.

The average case ascertainment across Scotland in the year to September 2017 was 94.8%.

Network	Target	2014			2015			2016		
		No of patients enrolled	Av cancer registrations	%Enrolled	No of patients enrolled	Av cancer registrations	%Enrolled	No of patients enrolled	Av cancer registrations	%Enrolled
SCRN - North & East	15%	18	42.8	42.1%	0	41.6	0.0%	1	46.8	2.1%
SCRN - South East	15%	0	50.0	0.0%	0	47.4	0.0%	0	51.6	0.0%
SCRN - West	15%	125	81.4	153.6%	1	81.6	1.2%	19	84.0	22.6%



	No. of Audit Records Diagnosed in 2014/15			Average No. of Cancer Registrations: 2010-2014			Estimated Case Ascertainment %		
	No. of Audit Records Diagnosed in 2014/15	Average No. of Cancer Registrations: 2010-2014	Estimated Case Ascertainment %	No. of Audit Records Diagnosed in 2015/16	Average No. of Cancer Registrations: 2011-2015	Estimated Case Ascertainment %	No. of Audit Records Diagnosed in 2016/17	Average No. of Cancer Registrations: 2012-2016	Estimated Case Ascertainment %
NOSCAN	32	43	74.8	63	42	151.4	49	47	104.7
Grampian	11	18	62.5	28	17	166.7	31	20	158.2
Highland	2	10	20.4	14	9	162.8	6	9	63.8
Orkney	-	-	-	-	-	-	-	-	-
Shetland	-	-	-	-	-	-	-	-	-
Tayside	17	14	118.1	18	15	116.9	10	17	58.1
Western Isles	-	-	-	-	-	-	-	-	-
SCAN	39	50	78.0	50	47	105.5	55	52	106.6
Borders	2	3	76.9	2	3	76.9	6	3	200.0
Dumfries & Galloway	3	4	75.0	4	4	100.0	5	4	113.6
Fife	0	10	0.0	6	9	69.8	14	9	162.8
Lothian	34	33	103.0	38	32	118.0	30	36	84.3
WoSCAN	68	81	83.5	100	82	122.5	69	84	82.1
Ayrshire & Arran	14	12	116.7	18	13	138.5	9	14	64.3
Forth Valley	8	8	100.0	14	8	166.7	9	9	100.0
Greater Glasgow & Clyde	37	46	81.1	49	46	107.5	32	46	70.2
Lanarkshire	9	16	57.0	19	15	130.1	19	15	123.4
Scotland	139	174	79.8	213	171	124.9	173	182	94.8

- Data not shown due to low (<1) average case ascertainment figures

Overall Performance Summary

The tables below summarise the overall % performance across the country for each QPI.

D – by Health Board of Diagnosis

S – by Health Board of Surgery

NOSCAN:

			Grampian			Highland			Orkney			Shetland			Tayside			Western Isles			NOSCAN		
			14/15	15/16	16/17	14/15	15/16	16/17	14/15	15/16	16/17	14/15	15/16	16/17	14/15	15/16	16/17	14/15	15/16	16/17	14/15	15/16	16/17
QPI 1 – Radiological Staging	95%	D	100	85	88	-	85	60	*	*	-	-	*	*	79	80	100	-	-	-	90	84	85
QPI 2 – Pre Operative Assessment	95%	D	100	93	88	-	77	80	*	*	-	-	*	*	93	100	100	-	-	-	97	91	90
QPI 3 – Primary orchidectomy	95%	S	36	52	48	-	67	-	*	*	*	-	*	*	57	67	63	*	*	*	52	60	46
QPI 4 – Multi-Disciplinary Team Meeting (MDT)	95%	D	100	100	100	-	100	80	*	*	-	-	*	*	100	100	100	-	-	-	100	100	96
QPI 5 – Pathology Reporting	90%	D	100	96	97	-	100	100	*	*	-	-	*	*	93	100	100	-	-	-	97	97	96
QPI 6 – Quality of Adjuvant Treatment	95%	D	80	91	82	*	*	-	*	*	-	*	*	*	100	-	-	*	-	*	90	85	80
QPI 7 – Serum Tumour Markers	98%	D	-	83	100	*	50	-	*	*	*	*	*	*	-	*	-	*	-	*	-	69	100
QPI 8 – Systemic Therapy	95%	D	-	100	100	*	33	-	*	*	*	*	*	*	-	*	-	*	-	*	-	62	93
QPI 9 – Computed Tomography scanning for surveillance patients	85%	D	*	-	80	*	*	*	*	*	*	*	-	*	*	*	*	*	*	*	*	-	80
QPI 10(i) – 30 Day Mortality (Orchidectomy)	<5%	S	0	0	0	-	0	-	*	*	*	-	*	*	0	0	0	*	*	*	0	0	0
QPI 10(ii) – 30 Day Mortality (Chemotherapy)	<5%	D	0	6	0	-	0	0	*	*	-	*	*	*	0	9	0	-	-	*	0	5	0
QPI 10(iii) – 30 Day Mortality (Radiotherapy)	<5%	D	*	-	-	*	*	*	*	*	*	*	*	*	-	*	*	*	*	*	-	-	-

D – by Health Board of Diagnosis

S – by Health Board of Surgery

SCAN:

			Borders			Dumfries & Galloway			Fife			Lothian			SCAN		
			14/15	15/16	16/17	14/15	15/16	16/17	14/15	15/16	16/17	14/15	15/16	16/17	14/15	15/16	16/17
QPI 1 – Radiological Staging	95%	D	-	-	100	-	-	-	*	50	93	82	89	96	84	79	96
QPI 2 – Pre Operative Assessment	95%	D	-	-	67	-	-	-	*	67	100	100	100	93	100	96	88
QPI 3 – Primary orchidectomy	95%	S	-	-	17	-	-	-	*	17	71	45	44	50	49	38	50
QPI 4 – Multi-Disciplinary Team Meeting (MDT)	95%	D	-	-	100	-	-	-	*	83	100	97	100	93	97	98	96
QPI 5 – Pathology Reporting	90%	D	-	-	100	-	-	-	*	100	100	97	100	100	97	100	100
QPI 6 – Quality of Adjuvant Treatment	95%	D	*	-	-	-	-	-	*	-	-	83	94	86	75	95	87
QPI 7 – Serum Tumour Markers	98%	D	-	-	-	*	-	-	*	*	80	100	100	100	100	100	92
QPI 8 – Systemic Therapy	95%	D	-	-	-	*	-	-	*	*	100	100	100	67	100	100	77
QPI 9 – Computed Tomography scanning for surveillance patients	85%	D	*	-	*	*	-	-	*	-	-	*	100	-	*	100	83
QPI 10(i) – 30 Day Mortality (Orchidectomy)	<5%	S	-	-	0	-	-	-	*	0	0	0	0	0	0	0	0
QPI 10(ii) – 30 Day Mortality (Chemotherapy)	<5%	D	-	-	-	-	-	-	*	-	-	0	0	0	0	0	0
QPI 10(iii) – 30 Day Mortality (Radiotherapy)	<5%	D	*	*	-	*	*	*	*	*	0	-	-	-	-	-	0

D – by Health Board of Diagnosis


WoSCAN:


S – by Health Board of Surgery


			Ayrshire & Arran			Forth Valley			Lanarkshire			Greater Glasgow & Clyde			WoSCAN		
			14/15	15/16	16/17	14/15	15/16	16/17	14/15	15/16	16/17	14/15	15/16	16/17	14/15	15/16	16/17
QPI 1 – Radiological Staging	95%	D	92	89	100	63	71	71	78	84	78	97	91	88	89	87	85
QPI 2 – Pre Operative Assessment	95%	D	100	100	100	100	64	100	100	100	94	97	98	94	98	94	95
QPI 3 – Primary orchidectomy	95%	S	92	94	56	25	14	71	88	56	78	36	38	47	52	48	59
QPI 4 – Multi-Disciplinary Team Meeting (MDT)	95%	D	100	100	100	100	100	88	100	95	100	97	100	100	99	99	99
QPI 5 – Pathology Reporting	90%	D	100	100	100	100	100	100	100	100	100	97	98	100	99	99	100
QPI 6 – Quality of Adjuvant Treatment	95%	D	100	86	-	-	50	-	-	-	-	67	79	100	63	71	89
QPI 7 – Serum Tumour Markers	98%	D	-	-	*	-	-	-	-	75	100	100	92	-	100	88	100
QPI 8 – Systemic Therapy	95%	D	-	-	*	-	-	-	-	63	100	75	77	-	83	72	100
QPI 9 – Computed Tomography scanning for surveillance patients	85%	D	*	-	-	*	-	-	*	-	*	*	100	-	*	92	-
QPI 10(i) – 30 Day Mortality (Orchidectomy)	<5%	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QPI 10(ii) – 30 Day Mortality (Chemotherapy)	<5%	D	0	0	0	0	0	-	0	13	0	0	0	0	0	3	0
QPI 10(iii) – 30 Day Mortality (Radiotherapy)	<5%	D	-	-	*	*	-	*	-	*	*	-	*	*	-	-	*


Clinical Trials Summary Table – by Scottish Cancer Research Network (SCRN)

	SCRN - North & East			SCRN - South East			SCRN - West		
	2014	2015	2016	2014	2015	2016	2014	2015	2016
Clinical Trials - Interventional - $\geq 7.5\%$	4.7%	0.0%	0.0%	2.0%	0.0%	0.0%	8.6%	7.4%	0.0%
Clinical Trials - Translational - $\geq 15\%$	42.1%	0.0%	2.1%	0.0%	0.0%	0.0%	153.6%	1.2%	22.6%

 Target not met

 Met or exceeded target

 No data matching QPI criteria

 Data not shown due to small numbers

Quality Performance Indicators

The following section includes a detailed summary of each of the ten testicular cancer QPIs outlining the variation at NHS Board level. Charts are colour coded by reporting year or by network if reporting a single year. Where performance at either level is shown to fall below the target, commentary from the relevant NHS Board is included to provide context to the variation. Information in this report is shown by either Health Board of diagnosis or Health Board of surgery as noted. Further information at hospital level is available from the [data tables](#), where applicable.

QPI 1: Radiological Staging

Patients with testicular cancer should be evaluated with appropriate imaging to detect the extent of disease and guide treatment decision making. Timely imaging is important to ensure treatment decision making can occur as soon as possible. Unnecessary delays can have an impact on prognostic groups and hence survival rates.

Numerator: Number of patients with testicular cancer undergoing CT scanning of the chest, abdomen and pelvis within 3 weeks of orchidectomy.

Denominator: All patients with testicular cancer undergoing orchidectomy.

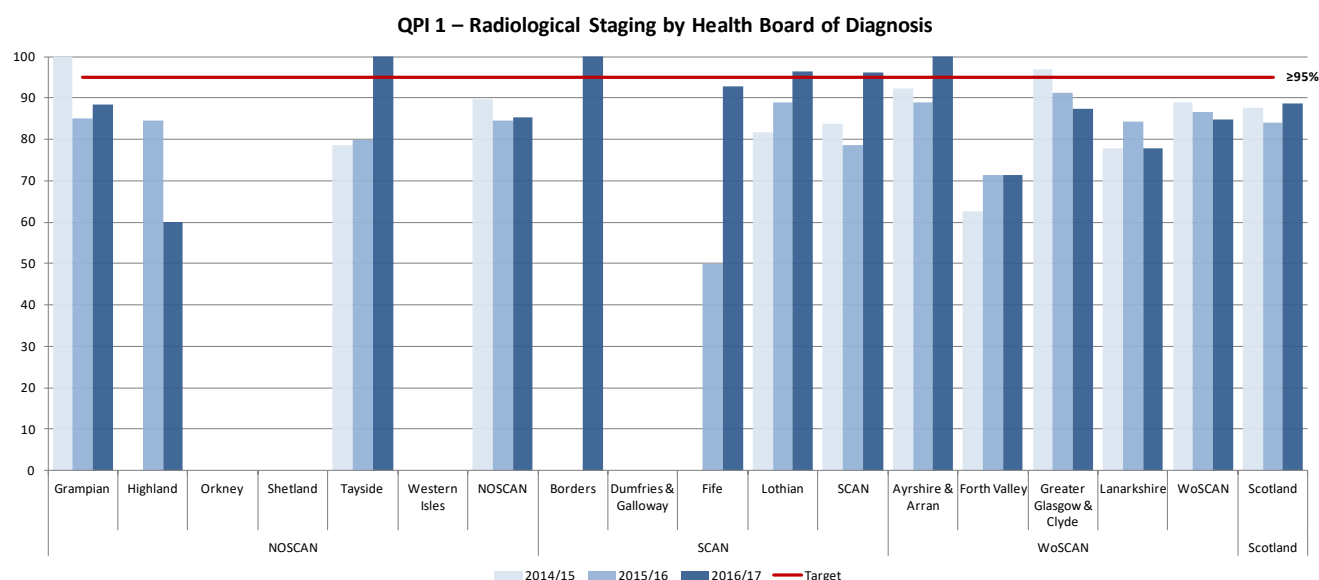
Exclusions:

- Patients undergoing chemotherapy prior to orchidectomy.

Target: 95%

The percentage of patients in Scotland with testicular cancer undergoing a CT scan of the chest, abdomen and pelvis within 3 weeks of an orchidectomy was 89% in 2016/17. This is a slight increase over the previous 2 years, but still below the 95% target. At network level, only SCAN achieved target in year 3, showing significant improvement compared to the previous 2 years. At Board level, small numbers may be impacting some of these figures for some Boards.

At the baseline review after year 1, it was agreed to change the measurability document to accept CT scanning 3 weeks pre-operatively and 3 weeks post operatively. Previously the measurability accepted a CT date anytime before surgery. This may account for some of the variation between year 1 and 2 figures.



NHS Board/Region	2016/17						Past % Performance	
	% Performance	Numerator	Denominator	NR for Numerator	NR for Exclusion	NR for Denominator	2014/15	2015/16
Grampian	88.5	23	26				100.0	85.2
Highland	60.0	3	5				-	84.6
Orkney	-	-	-				*	*
Shetland	*	*	*				-	*
Tayside	100.0	8	8				78.6	80.0
Western Isles	-	-	-				-	-
NOSCAN	85.4	35	41				89.7	84.5
Borders	100.0	6	6				-	-
Dumfries & Galloway	-	-	-				-	-
Fife	92.9	13	14				*	50.0
Lothian	96.4	27	28				81.8	88.9
SCAN	96.2	50	52				83.8	78.7
Ayrshire & Arran	100.0	9	9				92.3	88.9
Forth Valley	71.4	5	7				62.5	71.4
Greater Glasgow & Clyde	87.5	28	32				97.1	91.3
Lanarkshire	77.8	14	18				77.8	84.2
WoSCAN	84.8	56	66				89.1	86.6
Scotland	88.7	141	159				87.7	84.2

Source: Cancer audit

- Data not shown due to small numbers

* No data matching QPI criteria

After year 2, SCAN introduced a new process throughout the region to request CT scans prior to surgery. This change in process has resulted in the significant improvement observed in year 3. A similar change has been proposed in NHS Forth Valley where the CT scan is now booked at the MDT. This will be monitored in future reporting to assess the impact of this change.

In NHS Tayside, improvement was observed in year 3 and the Board cited that there is ongoing work between the Surgical and Radiology teams to continue to improve this process.

NHS Grampian and NHS Lanarkshire noted specific reasons for delays incurred for each patient but there were no systemic issues in the process identified. NHS Highland noted that incomplete staging had been requested which may have contributed to performance in year 3, although small numbers will also have an effect.

NHS Greater Glasgow and Clyde stated that pathology reporting may be required prior to a CT scan where there is uncertainty over the diagnosis, and that this had contributed towards delay. Other cases should have had a CT scan arranged sooner. Within the South Glasgow sector, a Clinical Nurse Specialist (CNS) is now co-ordinating patient pathways for those with testicular cancer. This will improve performance for the QPI and ensure that appropriate investigations are performed pre and post-op.

There were no changes proposed to this QPI at the formal review.

QPI 2: Pre-operative Assessment

Patients with testicular cancer should have pre-operative assessment of the testicle and Serum Tumour Markers (STMs).

Numerator: Number of patients with testicular cancer undergoing orchidectomy, who undergo a pre-operative assessment of the testicle which, at a minimum, includes: (i) STMs (ii) testicular ultrasound.

Denominator: All patients with testicular cancer undergoing orchidectomy.

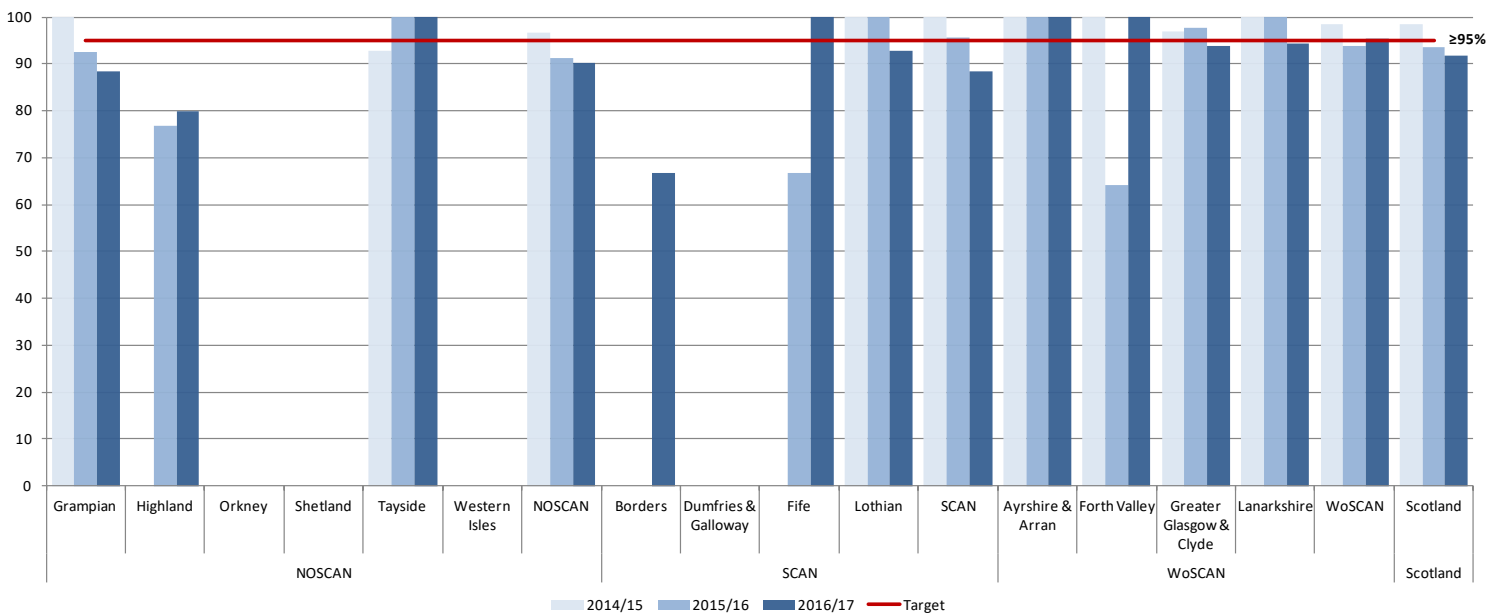
Exclusions:

- Patients who refuse to undergo assessment.
- Patients undergoing chemotherapy prior to orchidectomy.

Target: 95%

Since 2014/15 when 98% of patients in Scotland undergoing orchidectomy had pre-operative assessment of the testicle; the performance has dropped below target to 92% in 2016/17. This pattern is mirrored in NOSCANA and SCAN, with only WoSCAN achieving target in year 3. There are small numbers involved in this cohort which may be contributing to the variation observed across Boards or between years and, therefore, should be interpreted with caution.

QPI 2 – Pre Operative Assessment by Health Board of Diagnosis



NHS Board/Region	2016/17						Past % Performance	
	% Performance	Numerator	Denominator	NR for Numerator	NR for Exclusion	NR for Denominator	2014/15	2015/16
Grampian	88.5	23	26				100.0	92.6
Highland	80.0	4	5				-	76.9
Orkney	-	-	-				*	*
Shetland	*	*	*				-	*
Tayside	100.0	8	8				92.9	100.0
Western Isles	-	-	-				-	-
NOSCAN	90.2	37	41				96.6	91.4
Borders	66.7	4	6				-	-
Dumfries & Galloway	-	-	-				-	-
Fife	100.0	14	14				*	66.7
Lothian	92.9	26	28				100.0	100.0
SCAN	88.5	46	52				100.0	95.7
Ayrshire & Arran	100.0	9	9				100.0	100.0
Forth Valley	100.0	7	7				100.0	64.3
Greater Glasgow & Clyde	93.8	30	32				97.1	97.8
Lanarkshire	94.4	17	18				100.0	100.0
WoSCAN	95.5	63	66				98.4	93.8
Scotland	91.8	146	159				98.5	93.6

Source: Cancer audit
 - Data not shown due to small numbers
 * No data matching QPI criteria

NHS Greater Glasgow & Clyde and NHS Lanarkshire noted that in some cases part of the tumour marker tests were not carried out. This was also true for NHS Forth Valley in year 2 but this may have been as a result of a change in hospital systems; and has since recovered to achieve 100% in year 3. As mentioned by NHS Greater Glasgow and Clyde for QPI 1, it is expected that the appointment of the CNS will improve performance.

In SCAN it was commented that tumour marker testing does not change clinical practice for non-metastatic patients undergoing orchidectomy so clinical management was not compromised in those cases not meeting the target.

There were no changes to this QPI implemented at the baseline review or proposed at the formal review.

QPI 3: Primary Orchidectomy

Orchidectomy is the primary therapeutic intervention for patients who have early-stage testicular cancer. The overall aim of this treatment is to remove the tumour and minimise local recurrence and abnormal lymphatic spread. Therefore, it is important that orchidectomy is carried out as quickly as possible from diagnosis.

Numerator: Number of patients with testicular cancer undergoing orchidectomy within 2 weeks of ultrasonographic diagnosis.

Denominator: All patients with testicular cancer undergoing orchidectomy.

Exclusions:

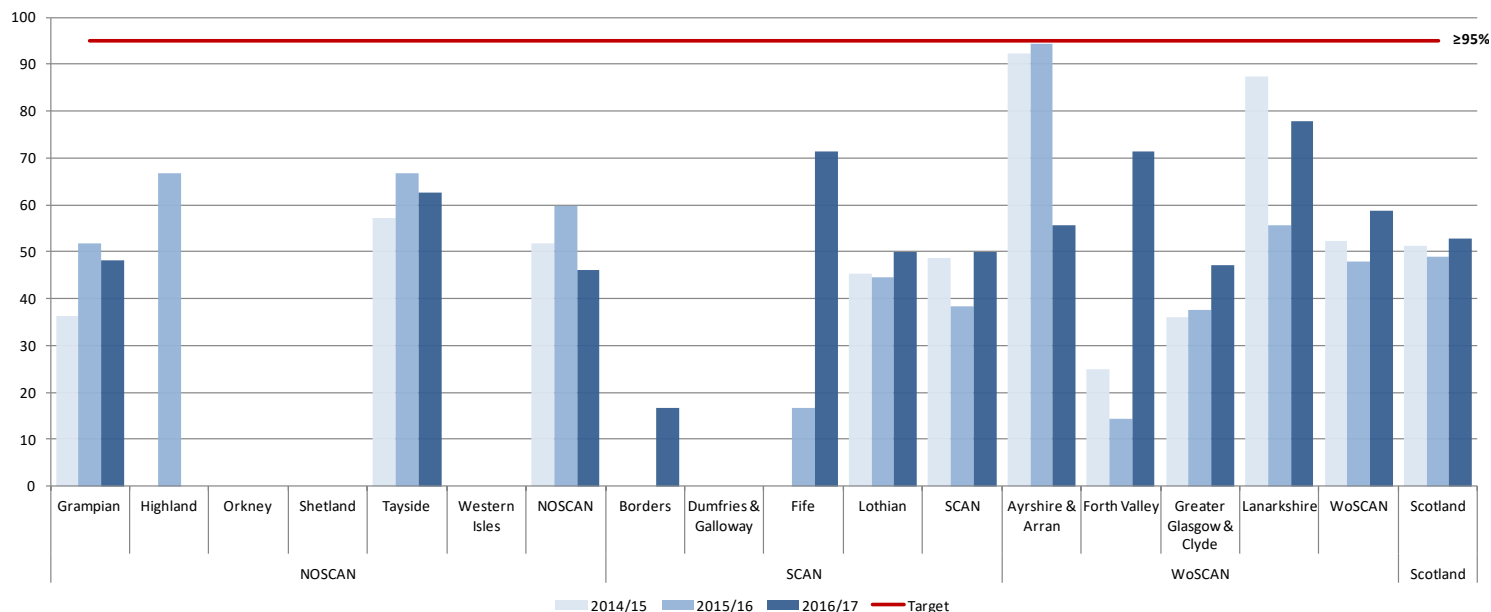
- Patients undergoing chemotherapy prior to orchidectomy.

Target: 95%

This has been a challenging QPI for all Boards to meet. In Scotland, over the 3 years only approximately half of all testicular cancer patients underwent orchidectomy within 2 weeks of an ultrasonographic diagnosis. Most NHS Boards did not meet target in any of the 3 years with NHS Ayrshire & Arran approaching the 95% target in years 1 and 2.

The performance of this QPI was discussed extensively at the baseline review. It was noted that there were issues in the work flow of getting patients through from diagnosis to surgery and improvements should be sought. Additionally, it was felt that the tolerance in the QPI did not adequately account for patients requiring more complex pre-operative assessments, repeat ultrasound for clinical confirmation or the requirement for pre-surgical semen storage for some men. The wording of the QPI tolerance was updated to reflect these but the target was kept at 95%. Consequently there is no clear of evidence of improvement for year 2 onwards.

QPI 3 – Primary orchidectomy by Health Board of Diagnosis



NHS Board/Region	2016/17						Past % Performance	
	% Performance	Numerator	Denominator	NR for Numerator	NR for Exclusion	NR for Denominator	2014/15	2015/16
Grampian	48.1	13	27				36.4	51.9
Highland	-	-	-				-	66.7
Orkney	*	*	*				*	*
Shetland	*	*	*				-	*
Tayside	62.5	5	8				57.1	66.7
Western Isles	*	*	*				*	*
NOSCAN	46.2	18	39				51.7	59.6
Borders	16.7	1	6				-	-
Dumfries & Galloway	-	-	-				-	-
Fife	71.4	10	14				*	16.7
Lothian	50.0	14	28				45.5	44.4
SCAN	50.0	26	52				48.6	38.3
Ayrshire & Arran	55.6	5	9				92.3	94.4
Forth Valley	71.4	5	7				25.0	14.3
Greater Glasgow & Clyde	47.1	16	34				36.1	37.5
Lanarkshire	77.8	14	18				87.5	55.6
WoSCAN	58.8	40	68				52.3	48.0
Scotland	52.8	84	159				51.1	49.0

Source: Cancer audit

- Data not shown due to small numbers
 * No data matching QPI criteria

The common concern expressed by all Boards regarding this QPI was the short 2 week timescale being unrealistic mainly due to service demand pressures on operating theatre capacity. Factors such as primary care referral for ultrasound and ultrasound surveillance prior to diagnosis also impacted upon the patient pathway.

Whilst some Boards have implemented changes to try and minimise these issues (for example, SCAN and NHS Forth Valley have implemented improved referral pathways; NHS Fife have a new ‘hot-list’ clinic in place; NHS Greater Glasgow & Clyde have established a ‘one stop testicular cancer clinic’) it was felt that the QPI criteria was unachievable and should be reviewed. At the formal review, these concerns were recognised and it has been proposed to increase the timescale to 3 weeks between diagnosis and surgery.

QPI 4: Multi-Disciplinary Team Meeting

Evidence suggests that patients with cancer managed by a multi-disciplinary team have a better outcome. There is also evidence that the multidisciplinary management of patients increases their overall satisfaction with their care.

Numerator: Number of patients with testicular cancer undergoing orchidectomy who are discussed at the MDT to agree a definitive management plan post orchidectomy.

Denominator: All patients with testicular cancer undergoing orchidectomy.

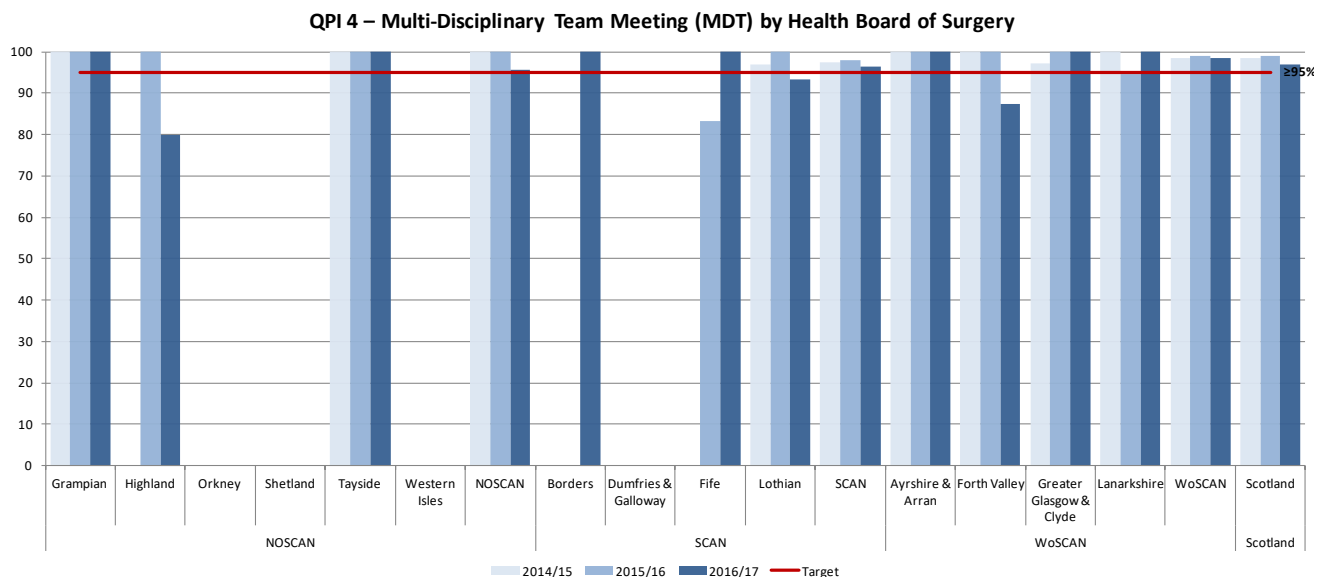
Exclusions:

- No exclusions

Target: 95%

Of the 169 patients with testicular cancer undergoing orchidectomy in Scotland in 2016/17 only 5 were not discussed at MDT as per the above criteria. This is the third consecutive year that the 95% target has been achieved in Scotland. At Board level, only NHS Lothian, NHS Highland and NHS Forth Valley did not meet the target in 2016/17, although small numbers may be a factor in the latter two Boards.

Due to the generally good performance across the country in year 1 no changes were recommended for this QPI at the baseline review.



NHS Board/Region	2016/17						Past % Performance	
	% Performance	Numerator	Denominator	NR for Numerator	NR for Exclusion	NR for Denominator	2014/15	2015/16
Grampian	100.0	30	30				100.0	100.0
Highland	80.0	4	5				-	100.0
Orkney	-	-	-				*	*
Shetland	*	*	*				-	*
Tayside	100.0	10	10				100.0	100.0
Western Isles	-	-	-				-	-
NOSCAN	95.7	45	47				100.0	100.0
Borders	100.0	6	6				-	-
Dumfries & Galloway	-	-	-				-	-
Fife	100.0	14	14				*	83.3
Lothian	93.3	28	30				97.1	100.0
SCAN	96.3	52	54				97.4	98.0
Ayrshire & Arran	100.0	9	9				100.0	100.0
Forth Valley	87.5	7	8				100.0	100.0
Greater Glasgow & Clyde	100.0	32	32				97.3	100.0
Lanarkshire	100.0	19	19				100.0	94.7
WoSCAN	98.5	67	68				98.5	99.0
Scotland	97.0	164	169				98.5	99.1

Source: Cancer audit

- Data not shown due to small numbers

* No data matching QPI criteria

For the isolated cases not meeting the criteria across the country valid reasons were provided including patients being treated urgently due to advanced disease - this is accounted for in the tolerance of this QPI.

No changes were proposed to this QPI at the formal review.

QPI 5: Pathology Reporting

To allow treatment planning to take place for patients diagnosed with testicular cancer, it is important that adequate subtyping and staging of testicular tumours is carried out to determine clinical management. This information will allow patients to make informed decisions about their care. The pathology report should contain a description of tumour type and size, and a comment on the presence or absence of vascular invasion and rete stromal invasion.

Numerator: Number of patients with testicular cancer undergoing orchidectomy where histological pathology report contains tumour type and size, vascular invasion and rete stromal invasion (based upon the current Royal College of Pathologists dataset).

Denominator: All patients with testicular cancer undergoing orchidectomy.

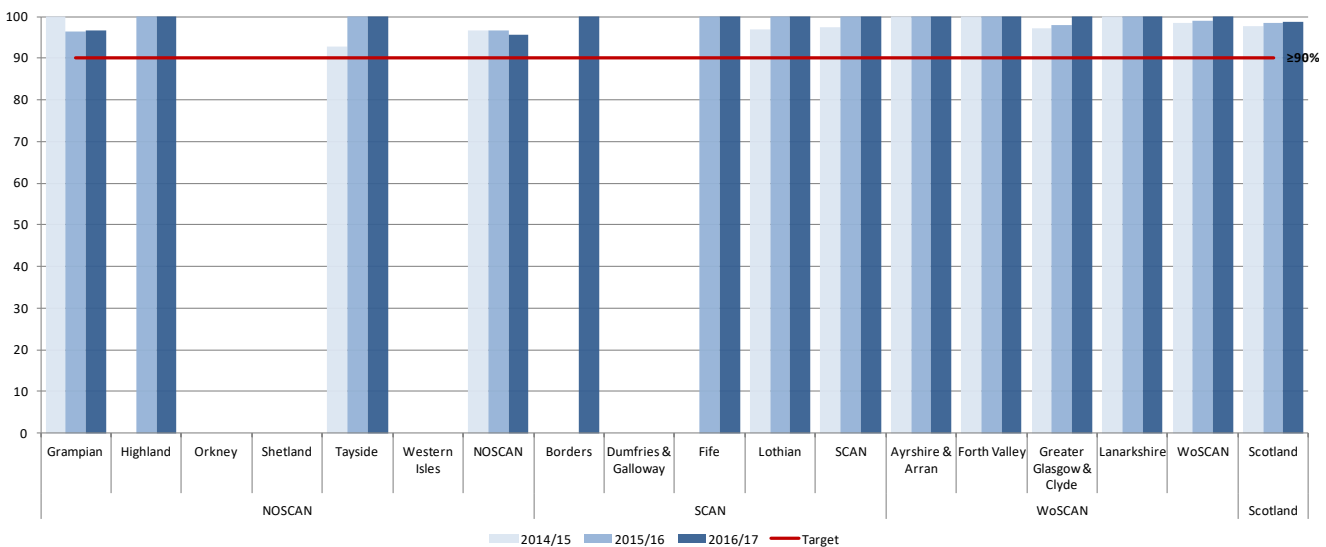
Exclusions:

- No exclusions.

Target: 90%

Across the 3 years in Scotland, the performance of this QPI was very high with >98% of cases where the histological pathology report contained the required information. This is also generally observed across all Boards.

QPI 5 – Pathology Reporting by Health Board of Surgery



NHS Board/Region	2016/17						Past % Performance	
	% Performance	Numerator	Denominator	NR for Numerator	NR for Exclusion	NR for Denominator	2014/15	2015/16
Grampian	96.7	29	30				100.0	96.3
Highland	100.0	5	5				-	100.0
Orkney	-	-	-				*	*
Shetland	*	*	*				-	*
Tayside	100.0	10	10				92.9	100.0
Western Isles	-	-	-				-	-
NOSCAN	95.7	45	47				96.6	96.7
Borders	100.0	6	6				-	-
Dumfries & Galloway	-	-	-				-	-
Fife	100.0	14	14				*	100.0
Lothian	100.0	30	30				97.1	100.0
SCAN	100.0	54	54				97.4	100.0
Ayrshire & Arran	100.0	9	9				100.0	100.0
Forth Valley	100.0	8	8				100.0	100.0
Greater Glasgow & Clyde	100.0	32	32				97.3	97.9
Lanarkshire	100.0	19	19				100.0	100.0
WoSCAN	100.0	68	68				98.5	99.0
Scotland	98.8	167	169				97.8	98.6

Source: Cancer audit

- Data not shown due to small numbers

* No data matching QPI criteria

Since all Boards are consistently exceeding the target, it was proposed at the formal review to archive this QPI.

QPI 6: Quality of Adjuvant Treatment

Evidence has shown that the administration of carboplatin can prevent metastatic relapse and contralateral cancer in patients with testicular cancer.

Numerator: Number of patients with stage I seminoma undergoing adjuvant single dose carboplatin AUC7, based on EDTA clearance, within 8 weeks of orchidectomy.

Denominator: All patients with stage I seminoma undergoing adjuvant single dose carboplatin AUC7.

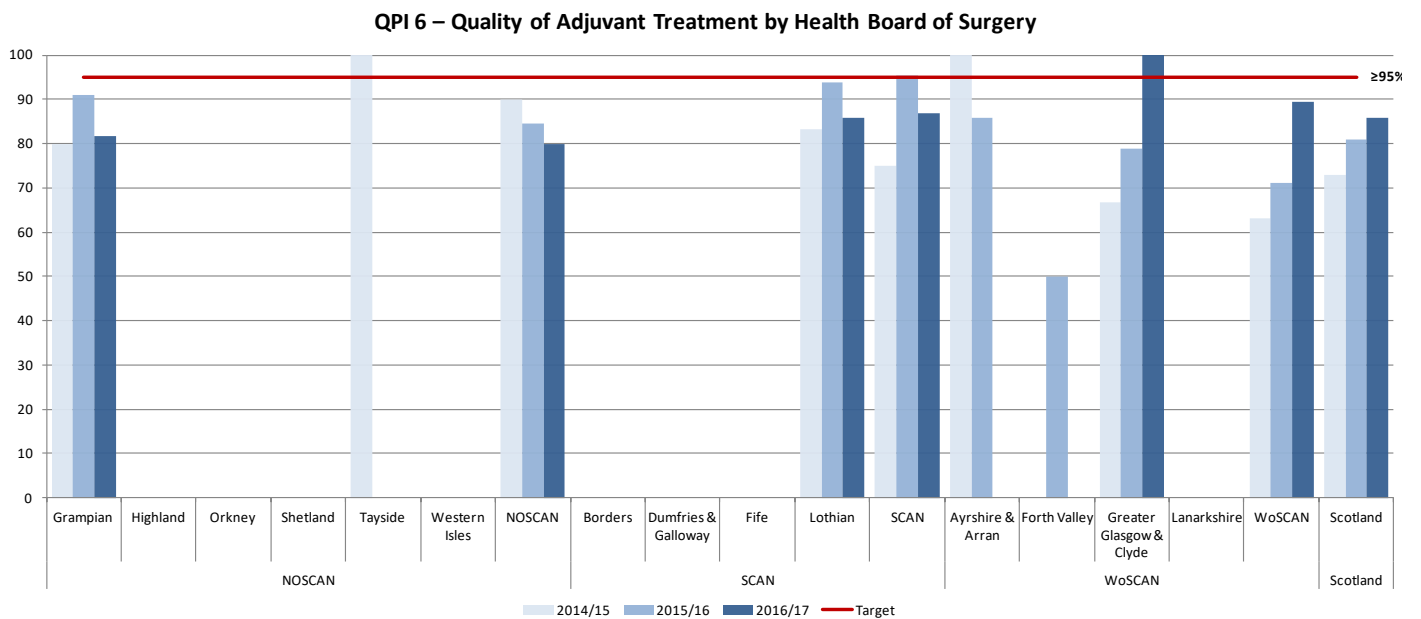
Exclusions:

- Patients who are treated within a clinical trial.

Target: 95%

The percentage of patients in Scotland with Stage 1 seminoma undergoing adjuvant carboplatin chemotherapy within 8 weeks of surgery was below target in each of the three years achieving 86% in 2016/17. Similarly both WoSCAN and NOSCAN were below target across the period with only SCAN achieving target in year 2. There are very small numbers of patients in this cohort so any fluctuations across years may be due to this and should be interpreted with caution.

No significant changes to the QPI criteria were implemented at the baseline review.



NHS Board/Region	2016/17						Past % Performance	
	% Performance	Numerator	Denominator	NR for Numerator	NR for Exclusion	NR for Denominator	2014/15	2015/16
Grampian	81.8	9	11				80.0	90.9
Highland	-	-	-				*	*
Orkney	-	-	-				*	*
Shetland	*	*	*				*	*
Tayside	-	-	-				100.0	-
Western Isles	*	*	*				*	-
NOSCAN	80.0	12	15				90.0	84.6
Borders	-	-	-				*	-
Dumfries & Galloway	-	-	-				-	-
Fife	-	-	-				*	-
Lothian	85.7	12	14				83.3	93.8
SCAN	87.0	20	23				75.0	95.5
Ayrshire & Arran	-	-	-				100.0	85.7
Forth Valley	-	-	-				-	50.0
Greater Glasgow & Clyde	100.0	11	11				66.7	78.9
Lanarkshire	-	-	-				-	-
WoSCAN	89.5	17	19				63.2	71.1
Scotland	86.0	49	57				73.0	80.8

Source: Cancer audit
 - Data not shown due to small numbers
 * No data matching QPI criteria

In NHS Lothian, NHS Dumfries & Galloway and NHS Grampian some of the delays incurred were due to some patients requiring additional PET CT scans to clarify staging so that appropriate treatment could be provided. PET CT is a complex examination requiring two radiologists to double report using a dedicated workstation, so is necessarily time consuming and may contribute to additional waits for discussion and treatment. These were intentional delays and not indicative of any systematic issue.

In NHS Lanarkshire, delays in the referral pathway contributed to the performance of this QPI which have since been addressed.

There were no changes proposed to this QPI at the formal review.

Due to the small numbers involved in each year, the 3 year aggregate figures are shown below for reference.

QPI 6 – 3 year aggregate figures

NHS Board/Region	% Performance	Numerator	Denominator
Grampian	85.2	23	27
Highland	-	-	-
Orkney	-	-	-
Shetland	*	*	*
Tayside	85.7	6	7
Western Isles	-	-	-
NOSCAN	84.2	32	38
Borders	-	-	-
Dumfries & Galloway	75.0	6	8
Fife	100.0	7	7
Lothian	88.9	32	36
SCAN	88.7	47	53
Ayrshire & Arran	93.3	14	15
Forth Valley	50.0	6	12
Greater Glasgow & Clyde	82.1	32	39
Lanarkshire	40.0	4	10
WoSCAN	73.7	56	76
Scotland	80.8	135	167

QPI 7: - Serum Tumour Markers

Advanced testicular cancer studies have shown that it is beneficial to measure STMs (Serum Tumour Markers) pre-chemotherapy. The value of this is to allow for appropriate treatment planning for patients with elevated STMs. If delays occur in checking STMs, prior to commencing chemotherapy, this could have a negative impact on a patients overall prognosis.

Numerator: Number of patients with metastatic testicular cancer undergoing chemotherapy who have STMs checked 2 weeks before starting chemotherapy.

Denominator: All patients with metastatic testicular cancer undergoing chemotherapy.

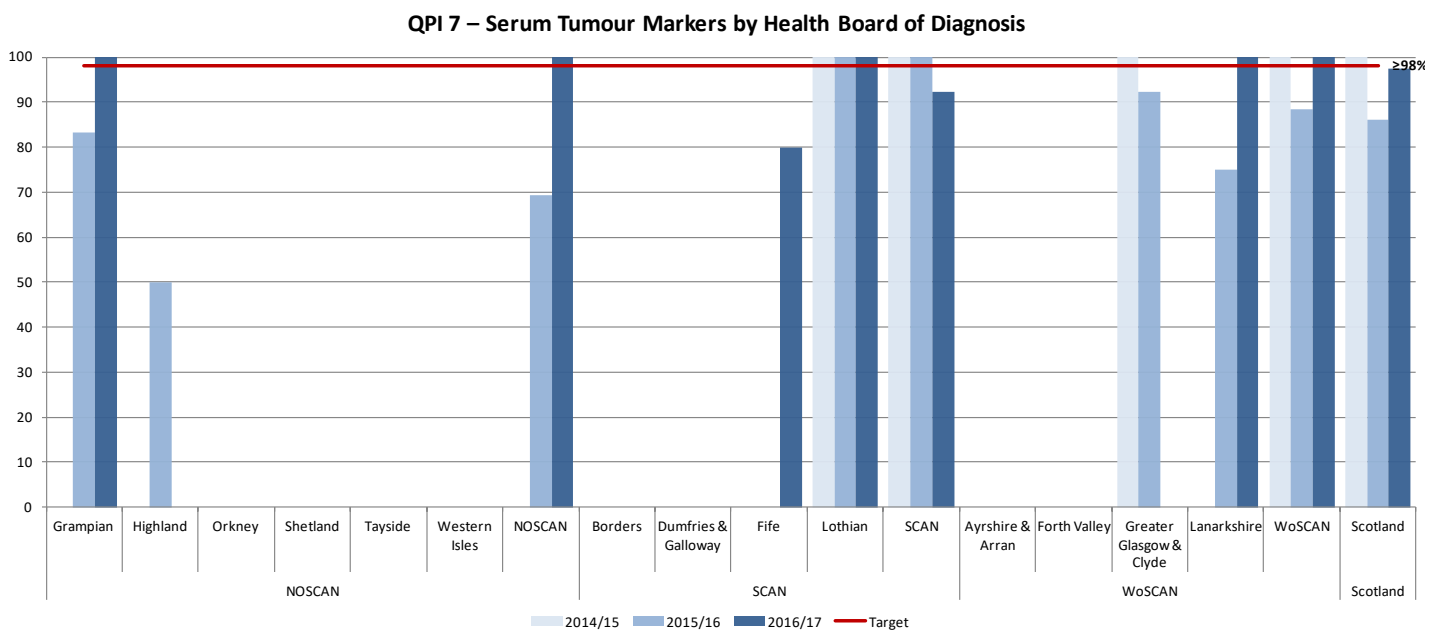
Exclusions:

- Patients for whom paracentesis, image-guided biopsy or laparoscopy is considered not suitable.

Target: 98%

In each cancer network in at least 1 of the 3 years, 100% of patients with metastatic testicular cancer had serum markers checked 2 weeks before starting chemotherapy. Due to the small numbers involved, single cases not meeting the criteria can have a significant impact on the percentages and should be interpreted with caution. This is evident for Scotland in 2016/17 where the target was narrowly missed at 97% due to a single case.

No changes were implemented for this QPI, post Baseline review.



NHS Board/Region	2016/17						Past % Performance	
	% Performance	Numerator	Denominator	NR for Numerator	NR for Exclusion	NR for Denominator	2014/15	2015/16
Grampian	100.0	9	9				-	83.3
Highland	-	-	-			1	*	50.0
Orkney	*	*	*				*	*
Shetland	*	*	*				*	*
Tayside	-	-	-			2	-	*
Western Isles	*	*	*			1	*	-
NOSCAN	100.0	14	14			4	-	69.2
Borders	-	-	-				-	-
Dumfries & Galloway	-	-	-				*	-
Fife	80.0	4	5				*	*
Lothian	100.0	6	6				100.0	100.0
SCAN	92.3	12	13				100.0	100.0
Ayrshire & Arran	*	*	*				-	-
Forth Valley	-	-	-			2	-	-
Greater Glasgow & Clyde	-	-	-				100.0	92.3
Lanarkshire	100.0	6	6				-	75.0
WoSCAN	100.0	11	11			2	100.0	88.5
Scotland	97.4	37	38			6	100.0	86.0

Source: Cancer audit
 - Data not shown due to small numbers
 * No data matching QPI criteria

Since most regions are consistently meeting this QPI and the timing of the STM check prior to chemotherapy is now embedded in standard clinical practice with most done on the day of chemotherapy, it has been proposed at the formal review to archive this QPI.

Due to the small numbers involved in each year, the 3 year aggregate figures are shown below for reference.

QPI 7 – 3 year aggregate figures

NHS Board/Region	% Performance	Numerator	Denominator
Grampian	93.8	15	16
Highland	62.5	5	8
Orkney	*	*	*
Shetland	*	*	*
Tayside	-	-	-
Western Isles	-	-	-
NOSCAN	86.2	25	29
Borders	-	-	-
Dumfries & Galloway	-	-	-
Fife	80.0	4	5
Lothian	100.0	23	23
SCAN	97.0	32	33
Ayrshire & Arran	100.0	8	8
Forth Valley	100.0	5	5
Greater Glasgow & Clyde	96.0	24	25
Lanarkshire	88.2	15	17
WoSCAN	94.5	52	55
Scotland	93.2	109	117

QPI 8: Systemic Therapy

Patients with metastatic testicular cancer who are undergoing systemic therapy should receive Systemic Anti-Cancer Therapy (SACT) within 3 weeks of a MDT decision to treat with SACT. Evidence has demonstrated that delays in diagnosis and treatment can have a negative impact on the survival rates of patients.

Numerator: Number of patients with metastatic testicular cancer undergoing SACT within 3 weeks of an MDT decision to treat with SACT.

Denominator: All patients with metastatic testicular cancer undergoing SACT.

Exclusions:

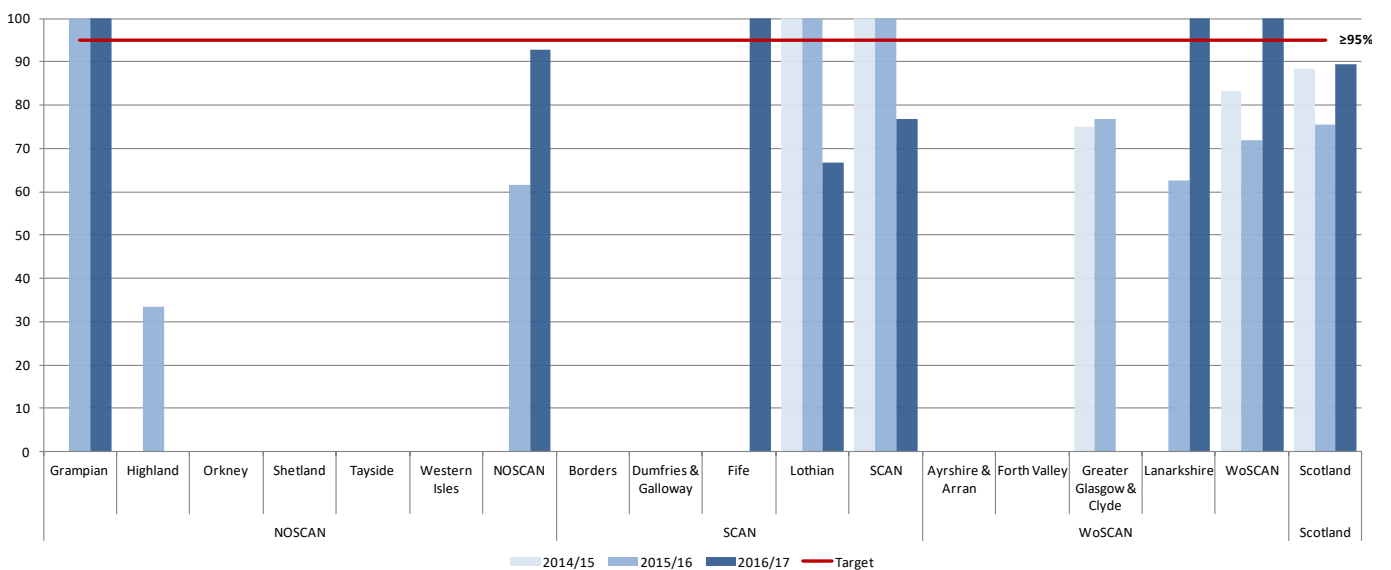
- Patients whose primary chemotherapy management is as part of a chemotherapy clinical trial.

Target: 95%

In Scotland in 2016/17, 89.5% of patients with metastatic testicular cancer undergoing SACT received the treatment within 3 weeks of MDT. This is below the 95% target as in the previous 2 years. However, due to the small numbers involved, single cases not meeting the criteria can have a significant impact on these percentages.

No changes were implemented for this QPI, post Baseline review.

QPI 8 – Systemic Therapy by Health Board of Surgery



NHS Board/Region	2016/17						Past % Performance	
	% Performance	Numerator	Denominator	NR for Numerator	NR for Exclusion	NR for Denominator	2014/15	2015/16
Grampian	100.0	9	9				-	100.0
Highland	-	-	-			1	*	33.3
Orkney	*	*	*				*	*
Shetland	*	*	*				*	*
Tayside	-	-	-			2	-	*
Western Isles	*	*	*			1	*	-
NOSCAN	92.9	13	14			4	-	61.5
Borders	-	-	-				-	-
Dumfries & Galloway	-	-	-				*	-
Fife	100.0	5	5				*	*
Lothian	66.7	4	6				100.0	100.0
SCAN	76.9	10	13				100.0	100.0
Ayrshire & Arran	*	*	*				-	-
Forth Valley	-	-	-			2	-	-
Greater Glasgow & Clyde	-	-	-				75.0	76.9
Lanarkshire	100.0	6	6				-	62.5
WoSCAN	100.0	11	11			2	83.3	72.0
Scotland	89.5	34	38			6	88.5	75.5

Source: Cancer audit

- Data not shown due to small numbers

* No data matching QPI criteria

Each Board reviewed those cases not meeting the target and concluded that all patients were treated appropriately with no further action required. Some reasons provided include delays due to case complexity and patients requiring emergency chemotherapy.

Due to the small numbers involved in each year, the 3 year aggregate figures are shown below for reference.

QPI 8 – 3 year aggregate figures

NHS Board/Region	% Performance	Numerator	Denominator
Grampian	100.0	16	16
Highland	37.5	3	8
Orkney	*	*	*
Shetland	*	*	*
Tayside	-	-	-
Western Isles	-	-	-
NOSCAN	79.3	23	29
Borders	-	-	-
Dumfries & Galloway	-	-	-
Fife	100.0	5	5
Lothian	90.0	18	20
SCAN	90.0	27	30
Ayrshire & Arran	85.7	6	7
Forth Valley	100.0	5	5
Greater Glasgow & Clyde	80.0	20	25
Lanarkshire	76.5	13	17
WoSCAN	81.5	44	54
Scotland	83.2	94	113

QPI 9: Computed Tomography scanning for surveillance patients

There are several ways to manage patients with stage I testicular non-seminomatous germ cell tumours. Active surveillance is a standard approach to take. Evidence has shown that the results from surveillance are as favourable as those who undertake adjuvant therapy.

Numerator: Patients with stage I testicular non-seminomatous (or mixed) germ cell tumour who undergo at least three CT scans of the abdomen +/- chest and pelvis within 14 months of diagnosis.

Denominator: All patients with stage I testicular non-seminomatous (or mixed) germ cell tumour.

Exclusions:

- Patients who have received adjuvant chemotherapy.
- Patients who are treated within a clinical trial.

Target: 85%

Due to the 14 month time lag, only 2 years worth of data is available and since there are very small numbers in this cohort only the 2 year aggregate data is shown. In Scotland across the two years, 90% of patients in this cohort received at least three CT scans within 14 months of diagnosis. At NHS Board or network level it is difficult to draw any meaningful conclusions due to the small numbers involved.

QPI 9 – 2 year aggregate figures

NHS Board/Region	% Performance	Numerator	Denominator
Grampian	85.7	6	7
Highland	*	*	*
Orkney	*	*	*
Shetland	-	-	-
Tayside	*	*	*
Western Isles	*	*	*
NOSCAN	87.5	7	8
Borders	-	-	-
Dumfries & Galloway	-	-	-
Fife	-	-	-
Lothian	100.0	10	10
SCAN	93.3	14	15
Ayrshire & Arran	-	-	-
Forth Valley	-	-	-
Greater Glasgow & Clyde	83.3	5	6
Lanarkshire	-	-	-
WoSCAN	87.5	14	16
Scotland	89.7	35	39

There were no changes proposed at the formal review for this indicator.

QPI 10: 30 Day Mortality

Treatment related mortality is a marker of the quality and safety of the whole service provided by the Multi Disciplinary Team (MDT).

Numerator: Number of patients with testicular cancer who receive treatment who die within 30 days of treatment.

Denominator: All patients with testicular cancer undergoing treatment (orchidectomy, chemotherapy, radiotherapy).

Exclusions:

- No exclusions

Target: <5%

Orchidectomy

In each of the 3 years, there were no deaths across Scotland for patients with testicular cancer within 30 days of an orchidectomy.

Chemotherapy

The 30 day mortality rate for testicular cancer patients receiving chemotherapy has been consistently below 5% in each year. Over the 3 year period, there were 4 deaths (from 351 patients) in Scotland for patients with testicular cancer within 30 days of chemotherapy.

Radiotherapy

In each of the 3 years, there were no deaths across Scotland for patients with testicular cancer within 30 days of radiotherapy treatment.

There were no changes proposed at the baseline or formal reviews for this QPI.

Clinical Trials

Access to Clinical Trials is a common issue for all cancer types; therefore, a generic QPI was developed to measure performance across the country. Specifically for testicular cancer, the QPI is defined as follows and Appendix A3 contains a list of testicular cancer trials into which patients have been recruited in Scotland during the period January 2014 to December 2016. Information is shown by each Scottish Cancer Research Network (SCRN).

Clinical Trials Access: Proportion of patients with testicular cancer who are enrolled in an interventional clinical trial or translational research.

All patients should be considered for participation in available clinical trials, wherever eligible.

Numerator: Number of patients with testicular cancer enrolled in an interventional clinical trial or translational research.

Denominator: All patients with testicular cancer.

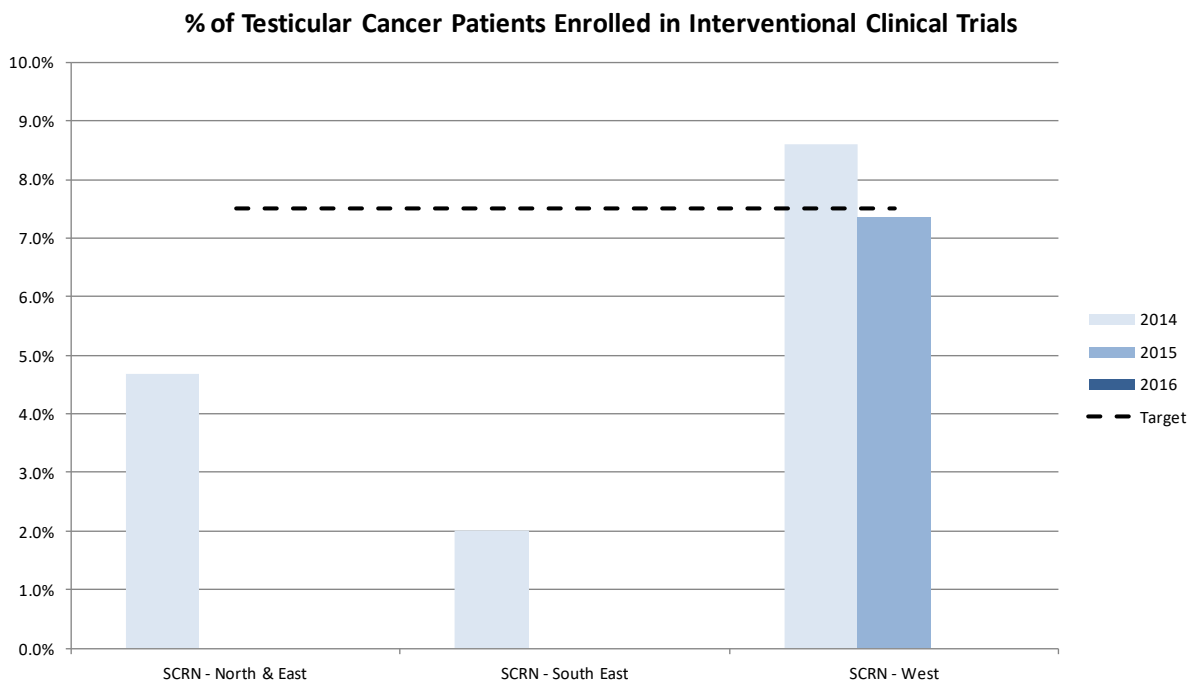
Exclusions: No exclusions.

Target: Interventional clinical trials – 7.5%
 Translational research – 15%

The aspiration is to enrol a minimum of **7.5%** of patients into Interventional Clinical Trials and **15%** into Translational research.

Interventional Trials

There were very few patients enrolled in clinical trials during the period 2014 to 2016 with none at all in year 3. Only the West region met target in year 1.

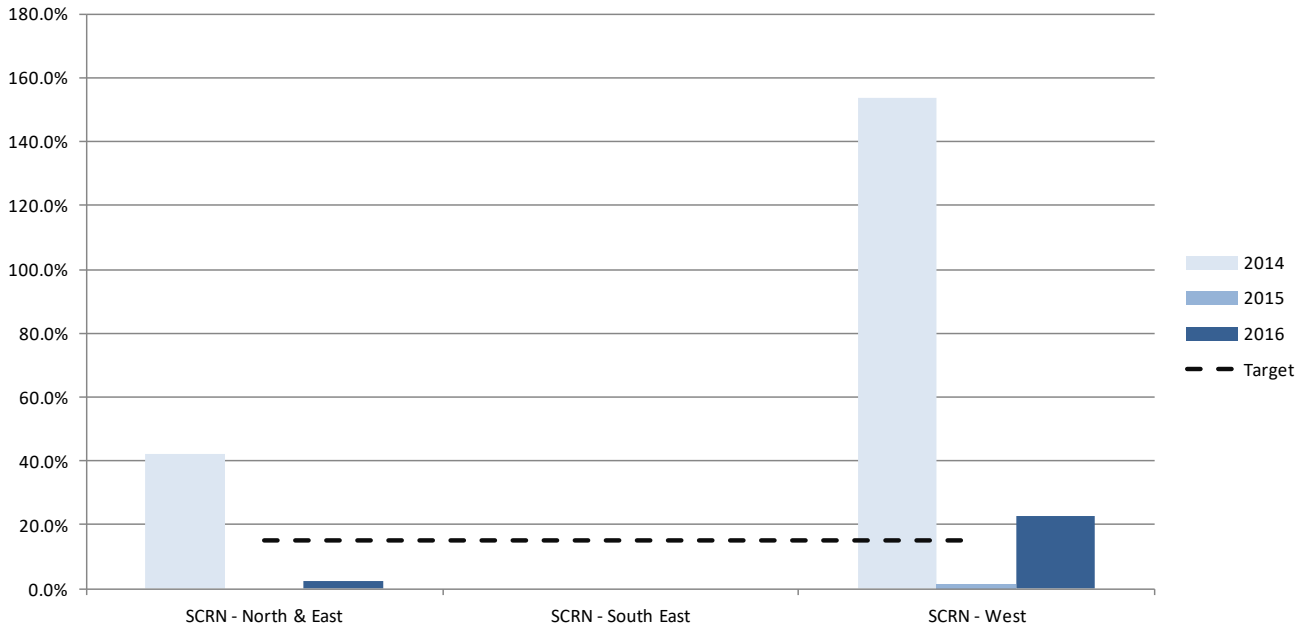


Network	Target	2014			2015			2016		
		No of patients enrolled	Av cancer registrations	%Enrolled	No of patients enrolled	Av cancer registrations	%Enrolled	No of patients enrolled	Av cancer registrations	%Enrolled
SCRN - North & East	7.5%	2	42.8	4.7%	0	41.6	0.0%	0	46.8	0.0%
SCRN - South East	7.5%	1	50.0	2.0%	0	47.4	0.0%	0	51.6	0.0%
SCRN - West	7.5%	7	81.4	8.6%	6	81.6	7.4%	0	84.0	0.0%

Translational Trials

Only the North and West regions recruited patients to clinical trials across the 3 years and with sufficient numbers in year 1 such that the target was achieved in both regions. It should be noted that the high numbers of patients recruited in the West in year 1 include all patients recruited that year and will include men diagnosed in previous years not just those diagnosed in 2014. Consequently, when comparing to the average number of cancer registrations per year, the percentage figure will be higher than expected.

% of Testicular Cancer Patients Enrolled in Translational Clinical Trials



The QPI targets for clinical trials were 7.5% for interventional trials and 15% for translational trials. It should be noted that these targets are ambitious, particularly with the move towards more targeted trials and the relatively low incidence rate of testicular cancer. There were only a small number of trials available within the UK for testicular cancer. Therefore cancer centres across Scotland were not able to open a large number of trials.

This QPI has been changed after formal review to monitor the number of patients **consented** for clinical trials with no split by trial type and a target of 15%. Further details on the revised specification for this QPI can be found [here](#).

List of abbreviations

QPI	-	Quality Performance Indicator
ISD	-	Information Services Division
NOSCAN	-	North of Scotland cancer network
WoSCAN	-	West of Scotland cancer network
SCAN	-	South East Scotland cancer network
MDT	-	Multidisciplinary team
SCRN	-	Scottish Cancer Research Network
SIMD	-	Scottish Index of Multiple Deprivation
SMR01	-	Scottish Morbidity Record (Inpatient and Daycase Activity)
CT	-	Computed Tomography scan
MRI	-	Magnetic Resonance Imaging scan

List of Tables

File name	File and size
Testicular Cancer Data Tables	Excel 115 Kb

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Further Information

Further information on Cancer Quality Performance Indicators can be found on the [Cancer QPI](#) section of the ISD website.

The next release of this publication will be February 2021.

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Appendices

Appendix 1 – Background information

The purpose of the cancer quality work programme and the roles and responsibilities of each organisation are outlined in Chief Executives Letter ([CEL 06](#)). This document also provides details of the data collection, quality assurance and governance processes that are critical to the reporting of QPIs.

Appendix 2 – Testicular Cancer QPIs

The table below shows the list of Testicular Cancer QPIs applicable to this publication. Please note that revisions to these QPIs may have been made since the initial data collection – refer to the [Healthcare Improvement Scotland website](#) for the latest version of these QPIs.

QPI	Numerator	Denominator	Exclusions	Target
QPI 1: Radiological Staging	Number of patients with testicular cancer undergoing CT scanning of the chest, abdomen and pelvis within 3 weeks of orchidectomy.	All patients with testicular cancer undergoing orchidectomy.	Patients undergoing chemotherapy prior to orchidectomy.	95%
QPI 2: Pre-operative Assessment	Number of patients with testicular cancer undergoing orchidectomy, who undergo a pre-operative assessment of the testicle which, at a minimum, includes: (i) STMs (ii) testicular ultrasound.	All patients with testicular cancer undergoing orchidectomy.	Patients who refuse to undergo assessment. Patients undergoing chemotherapy prior to orchidectomy.	95%
QPI 3: Primary Orchidectomy	Number of patients with testicular cancer undergoing orchidectomy within 2 weeks of ultrasonographic diagnosis.	All patients with testicular cancer undergoing orchidectomy.	Patients undergoing chemotherapy prior to orchidectomy.	95%
QPI 4: Multi-Disciplinary Team Meeting	Number of patients with testicular cancer undergoing orchidectomy who are discussed at the MDT to agree a definitive management plan post orchidectomy.	All patients with testicular cancer undergoing orchidectomy.	No exclusions.	95%

QPI 5: Pathology Reporting	Number of patients with testicular cancer undergoing orchidectomy where histological pathology report contains tumour type and size, vascular invasion and rete stromal invasion (based upon the current Royal College of Pathologists dataset).	All patients with testicular cancer undergoing orchidectomy.	No exclusions.	90%
QPI 6: Quality of Adjuvant Treatment	Number of patients with stage I seminoma undergoing adjuvant single dose carboplatin AUC7, based on EDTA clearance, within 8 weeks of orchidectomy.	All patients with stage I seminoma undergoing adjuvant single dose carboplatin AUC7.	Patients who are treated within a clinical trial.	95%
QPI 7: Serum Tumour Markers	Number of patients with metastatic testicular cancer undergoing chemotherapy who have STMs* checked 2 weeks before starting chemotherapy.	All patients with metastatic testicular cancer undergoing chemotherapy.	No exclusions.	98%
QPI 8: Systemic Therapy	Number of patients with metastatic testicular cancer undergoing SACT within 3 weeks of an MDT decision to treat with SACT.	All patients with metastatic testicular cancer undergoing SACT.	Patients whose primary chemotherapy management is as part of a chemotherapy clinical trial.	95%
QPI 9: Computed Tomography scanning for surveillance patients	Patients with stage I testicular non-seminomatous (or mixed) germ cell tumour who undergo at least three CT scans of the abdomen +/- chest and pelvis within 14 months of diagnosis.	All patients with stage I testicular non-seminomatous (or mixed) germ cell tumour.	Patients who have received adjuvant chemotherapy. Patients who are treated within a clinical trial.	85%
QPI 10: 30 Day Mortality	Number of patients with testicular cancer who receive treatment who die within 30 days of treatment.	All patients with testicular cancer undergoing treatment (orchidectomy, chemotherapy, radiotherapy).	No exclusions.	<5%

Appendix 3 – Testicular Cancer Clinical Trials

The list of clinical trials in use for testicular cancer patients in Scotland across the Scottish Cancer Research Networks is shown below. Further details on these clinical trials are available from the relevant SCRNs.

Study Type	Study Title	SCRN - North & East	SCRN - South East	SCRN - West
Interventional	TRISST	✓		✓
	TRYMS			✓
	111 Trial (formerly BEP 111)		✓	✓
Translational	The UK Genetics of Testicular Cancer	✓		✓
	Vascular Effects of Chemotherapy for Testicular Cancer			✓
	Latent Vascular Effects of Chemotherapy for Testicular Cancer			✓

Appendix 4 – Publication Metadata

Metadata Indicator	Description
Publication title	Testicular Cancer Quality Performance Indicators
Description	This report shows the performance of NHS Boards against ten Testicular Cancer QPIs for the period October 2014 to September 2017. Relevant commentary from NHS Boards is also included to provide local context to the data.
Theme	Health and Social Care
Topic	Cancer services
Format	PDF Document
Data source(s)	Cancer audit, Cancer registry
Date that data are acquired	March 2018
Release date	August 28th 2018
Frequency	Every 3 years
Timeframe of data and timeliness	Data covering patients diagnosed between October 2014 and September 2017
Continuity of data	First publication
Revisions statement	It is expected that QPI definitions and measurability documents will evolve and therefore future publications may contain revisions to previously published information.
Revisions relevant to this publication	Not applicable
Concepts and definitions	QPI definitions and measurability criteria are available from the Cancer Audit section of the ISD website.
Relevance and key uses of the statistics	The reporting of performance against these national QPIs is underpinned by a national governance framework that aims to use these data to improve cancer services in Scotland.
Accuracy	<p>Information on the accuracy of some of the national datasets used within this publication is available on the ISD website.</p> <p>ISD only receives aggregate data from each NHS Board to populate these indicators (with the exception of SMR based indicators and case ascertainment). Derivations of the figures and data accuracy are matters for individual NHS</p>

	Boards.
Completeness	For the reporting period, information based on the SMR01 data completeness can be found here . 100% of QPI aggregate data was returned.
Comparability	The national dataset and data definitions in conjunction with the final quality performance indicators and the accompanying measurability document were agreed in public engagement to ensure data collection is comparable across the country.
Accessibility	It is the policy of ISD Scotland to make its web sites and products accessible according to published guidelines .
Coherence and clarity	Statistics for each QPI are presented consistently in chart and table format at NHS Board level, with national figures and performance targets included for comparison and clarity.
Value type and unit of measurement	The units of measure include numbers and percentages.
Disclosure	The ISD protocol on Statistical Disclosure Protocol is followed.
Official Statistics designation	Official Statistics
UK Statistics Authority Assessment	Not currently put forward for assessment
Last published	First release
Next published	August 2021
Date of first publication	28th August 2018
Help email	johnconnor@nhs.net
Date form completed	25 th June 2018

Appendix 5 – Early access details

Pre-Release Access

Under terms of the "Pre-Release Access to Official Statistics (Scotland) Order 2008", ISD is obliged to publish information on those receiving Pre-Release Access ("Pre-Release Access" refers to statistics in their final form prior to publication). The standard maximum Pre-Release Access is five working days. Shown below are details of those receiving standard Pre-Release Access.

Standard Pre-Release Access:

Scottish Government Health Department
NHS Board Chief Executives
NHS Board Communication leads

Early Access for Management Information

These statistics will also have been made available to those who needed access to 'management information', i.e. as part of the delivery of health and care:

Members of the National Cancer Quality Operational Group
Members of the National Cancer Quality Steering Group

Early Access for Quality Assurance

These statistics will also have been made available to those who needed access to help quality assure the publication:

Members of the National Cancer Quality Operational Group
Members of the National Cancer Quality Steering Group
Regional and NHS Board Testicular Cancer Clinical Leads
Network Lead Clinicians

Appendix 6 – ISD and Official Statistics

About ISD

Scotland has some of the best health service data in the world combining high quality, consistency, national coverage and the ability to link data to allow patient based analysis and follow up.

Information Services Division (ISD) is a business operating unit of NHS National Services Scotland and has been in existence for over 40 years. We are an essential support service to NHSScotland and the Scottish Government and others, responsive to the needs of NHSScotland as the delivery of health and social care evolves.

Purpose: To deliver effective national and specialist intelligence services to improve the health and wellbeing of people in Scotland.

Mission: Better Information, Better Decisions, Better Health

Vision: To be a valued partner in improving health and wellbeing in Scotland by providing a world class intelligence service.

Official Statistics

Information Services Division (ISD) is the principal and authoritative source of statistics on health and care services in Scotland. ISD is designated by legislation as a producer of 'Official Statistics'. Our official statistics publications are produced to a high professional standard and comply with the Code of Practice for Official Statistics. The Code of Practice is produced and monitored by the UK Statistics Authority which is independent of Government. Under the Code of Practice, the format, content and timing of statistics publications are the responsibility of professional staff working within ISD.

ISD's statistical publications are currently classified as one of the following:

- National Statistics (i.e. assessed by the UK Statistics Authority as complying with the Code of Practice)
- National Statistics (i.e. legacy, still to be assessed by the UK Statistics Authority)
- Official Statistics (i.e. still to be assessed by the UK Statistics Authority)
- other (not Official Statistics)

Further information on ISD's statistics, including compliance with the Code of Practice for Official Statistics, and on the UK Statistics Authority, is available on the [ISD website](#).