SOUTH EAST SCOTLAND CANCER NETWORK
PROSPECTIVE CANCER AUDIT

Renal Cancer 2020 Comparative Audit Report

Patients diagnosed 1st January 2020 to 31st December 2020

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Document History

Version	Circulation	Date	Comments
1	Lead Clinicians sign off group	18/11/2021	Actions agreed, clinical comment added.
2	SCAN Renal Lead Clinician & SCAN Regional Leads Sign off group	22/11/2021	For approval and Lead Clinician's commentary
3	SCAN Urology Group	24/12/2021	For final SCAN Group approval
4	SCAN Group SCAN Governance Framework SCAN Action Plan Board Leads	19/01/2022	Further comment added to QPI11 and Lead's commentary
4W	Published to SCAN Website	2022	

Clinical Lead's Summary

The year 2020 has been very challenging for renal cancer services across the region with the advent of the COVID-19 pandemic.

Surgical practice was impacted significantly during the height of the pandemic with the reduction in available surgical capacity – leading to our national association BAUS issuing guidance for the prioritisation of clinical cases. In the second half of the year, as capacity increased, teams worked hard to address the lower priority cases. In Lothian, commencement of training in robotic surgery led to proctored cases in nephrectomy which paved the way for performing robotic assisted partial nephrectomy in 2021. With the recent arrival of the Da Vinci robotic system in NHS Fife, I am pleased to report that the team are also developing robotic assisted renal surgery.

Oncological practice saw the challenge of keeping patients safe during the pandemic whilst offering high quality treatment for their metastatic renal cancer. We had prompt approval of new combination Pembrolizumab (IO) and Axitinib (VEGF TKI) to use as preferred first line treatment instead of Nivolumab-ipililumab (IO-IO) to minimise the hospital visits and admissions for any treatment related complications. IV treatments were delivered in main units as well as all peripheral units, thereby minimising travel. Clinical trial recruitment was paused during the first wave of COVID but has restarted just prior to the second wave and still continues at normal pace.

What has been clear is the exceptional team work between all members of the surgical and oncology teams during these challenging times leading to improved outcomes for our patients. This is reflected in this year's annual QPI report, which I am pleased to present.

We continue to demonstrate good performance against QPI 1 with an improvement from last year in the percentage of patients undergoing full cross sectional imaging prior to treatment. Translating this to TNM staging is the focus of QPI 3 and we continue to make adjustments to the way we capture this information during the regional MDT discussion. We propose to amend the QPI proforma to enable consistent capture of TNM staging in all patients.

QPI 7 describes the percentage of patients with renal cancers less than 4cm in size receiving nephron sparing surgery or cryotherapy. There is a significant improvement from last year in the percentage of patients receiving nephron-sparing treatment.

If we review QPI 13 together with QPI 7, we see that the trifecta of ischaemic time, negative margins and no post-op complications is below the standard set. This in part is due to complexity of the small renal mass and the initial learning curve of robotic partial nephrectomy. It is important to note that those robotic cases that failed based on ischaemia time all had negative surgical margins and uncomplicated post-operative courses.

QPI 10 relates to the assignment of a prognostic score in patients with metastatic renal cancer. Again we show an increase in performance against this QPI compared to last year but there is still significant room for improvement which both the surgical and oncology teams are working towards.

QPI 11 relates to the assignment of the prognostic Leibovich Score in patients with Clear Cell Renal Cell Carcinoma following radical nephrectomy. It is disappointing to note that the Medical Director of NHS Fife has stated that he is content that NHS Fife do not use the Leibovich score to risk stratify their patients in the way that all Health Boards in Scotland are encouraged to, through the QPI process.

I am pleased to note that, in QPI 14, we continue to improve on our recruitment of patients across the network to clinical trials and research studies in renal cancer.

The review of the renal cancer QPIs is scheduled for 2022 and renal cancer services across the nation will have the opportunity to discuss and implement standards to improve patient care.

I wish to thank the SCAN audit team and all members of the clinical teams across the SCAN region who have contributed to this audit report. This report continues to show our commitment to the provision of the highest quality care for our renal cancer patients during these challenging times.

Mr Steve Leung
SCAN Clinical Lead in Renal Cancer
December 2021

Clinical Recommendations 2020

QPI	Action required	Lead	Date for Action Plan returns
QPI 3	Suggest a new section in the MDM list with TNM prompt required to ensure that TNM is recorded at MDM	Steve Leung	16/02/2022
QPI 10	Oncology colleagues to be reminded of this QPI requirement and prognostic scoring should be noted at MDM	Tony Elliott	16/02/2022
QPI 14	NHS Fife to explore why NHS Fife are not involved in the tissue banking studies currently available	Alex Chapman	16/02/2022

Clinical Recommendations 2019

QPI	Action required	Lead	Progress
QPI 3	Add TNM (and plan) to MDM outcome sheet. Suggest to radiologist to update radiology reports post MDM for all boards involved in the Lothian MDM.	S Leung	**Lothian:** Work in progress. Process ongoing.
QPI 11	Steve Leung to clarify if Prof McNeill got a response from NHS Fife.	S Leung	NHS Fife scores 0% in this QPI due to using a separate scoring system, which does not meet the criteria of the QPI. At RCPG (12/3/2021), Chris McKenna highlighted that this has been discussed within the Fife service and patients are not being disadvantaged by NHS Fife using a separate scoring system and that the use of the Leibovich scoring system should be reviewed at the next Formal QPI Review meeting.

Renal Cancer QPI Attainment Summary 2020		Target %	Borders		D&G		Fife		Lothian		SCAN	
QPI 1 Patients with RCC who undergo pre-treatment cross-sectional imaging of chest, abdomen +/- pelvis or MRI.		95	N 14 D 14	100%	N 15 D 15	100%	N 34 D 36	94.4%	N 63 D 64	98.4%	N 126 D 129	97.7%
QPI 2 Patients with RCC who have a histological diagnosis via biopsy before Non-surgical primary treatment.	Cryotherapy / RFA	90	N 0 D 0	N/A	N 0 D 0	N/A	N 0 D 0	N/A	N 2 D 2	100%	N 2 D 2	100%
	SACT	90	N 5 D 5	100%	N 2 D 2	100%	N 8 D 8	100%	N 8 D 8	100%	N 23 D 23	100%
QPI 3 Patients whose RCC is staged pre-treatment using the TNM staging system.		98	N 20 D 20	100%	N 15 D 23	65.2%	N 56 D 67	83.6%	N 152 D 156	97.4%	N 243 D 266	91.4%
QPI 4 Patients with RCC who are discussed at MDT meeting before definitive treatment.		95	N 19 D 19	100%	N 22 D 23	95.7%	N 65 D 67	97.0%	N 139 D 154	90.3%	N 245 D 263	93.2%
QPI 7 T1aN0M0 RCC who have nephron sparing treatment (Cryotherapy, RFA or robotic/lap/open partial nephrectomy)		50	N 2 D 3	66.7%	N 2 D 3	66.7%	N 5 D 7	71.4%	N 11 D 16	68.8%	N 20 D 29	69.0%
QPI 8 Proportion of patients who die within 30 days of treatment for RCC.	Surgery	<2	Presented by Health Board of surgery				N 0 D 28	0%	N 0 D 86	0%	N 0 D 114	0%
	Cryotherapy treatment	<2	N 0 D 0	N/A	N 0 D 0	N/A	N 0 D 0	N/A	N 0 D 3	0%	N 0 D 3	0%
	RFA treatment	<2	N 0 D 0	N/A	N 0 D 0	N/A	N 0 D 0	N/A	N 0 D 0	N/A	N 0 D 0	N/A
QPI 8 Proportion of patients who die within 90 days of treatment for RCC.	Surgery	<2	Presented by Health Board of surgery				N 0 D 28	0%	N 0 D 83	0%	N 0 D 111	0%
	Cryotherapy treatment	<2	N 0 D 0	N/A	N 0 D 0	N/A	N 0 D 0	N/A	N 0 D 2	0%	N 0 D 2	0%
	RFA treatment	<2	N 0 D 0	N/A	N 0 D 0	N/A	N 0 D 0	N/A	N 0 D 0	N/A	N 0 D 0	N/A
QPI 9 Advanced and/or metastatic RCC who have SACT in 12 months of diagnosis.		40	N 1 D 1	100%	N 3 D 5	60.0%	N 2 D 4	50.0%	N 11 D 18	61.1%	N 17 D 28	60.7%
QPI 10 Patients with metastatic RCC who are assigned a valid prognostic score following diagnosis		90	N 6 D 6	100%	N 3 D 5	60.0%	N 7 D 15	46.7%	N 17 D 25	68.0%	N 33 D 51	64.7%
QPI 11 Patients with clear cell RCC who are assigned a Leibovich score following radical nephrectomy.		100	Presented by Health Board of surgery				N 0 D 14	0%	N 47 D 47	100%	N 47 D 61	77.0%

Renal Cancer QPI Attainment Summary 2020	Target %	Borders		D&G		Fife		Lothian		SCAN	
QPI 12 Number of renal surgical resections performed by a surgeon over a 1 year period.	≥15	3 Surgeons within SCAN performed 15 or more surgeries within the cohort year									
QPI 13 Partial nephrectomy (T1a RCC) who achieve trifecta (ischaemia time < 25min, -ve margins, no complications)	50	Presented by Health Board of surgery				N 4 D 6	66.7%	N 6 D 15	40.0%	N 10 D 21	47.6%
QPI 14 Clinical Trial + Research study access - Consented in Trials and held on SCRN database.	15	N 8 D 20	40.0%	N 7 D 33	21.2%	N 3 D 62	4.8%	N 49 D 147	33.3%	N 67 D 262	25.6%

Introduction and Methods

Cohort

This report covers patients newly diagnosed with renal cancer in SCAN between 01/01/2020 and 31/12/2020. The results contained within this report have been presented by NHS board of diagnosis, where the QPI relates to surgical outcomes the results has also been presented by hospital of surgery.

Dataset and Definitions

The QPIs have been developed collaboratively with the three Regional Cancer Networks, Public Health Scotland, and Healthcare Improvement Scotland. It is intended that QPIs will be kept under regular review and be responsive to changes in clinical practice and emerging evidence.

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

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

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

The QPI dataset for renal cancer was implemented from 01/01/2012. Following year 6 results the Renal QPIs were subject to a second formal review and revised documents for data collection were published in August 2019. This is the 9th publication of QPI results for renal cancer within SCAN which encompasses most of the changes made at both formal reviews.

The following QPIs were updated:

QPI 1 – Radiological Diagnosis – MRI added as valid imaging modality in staging cases prior to active treatment.

QPI 2 – Histological Diagnosis – Exclusion added to the measurement of this QPI to exclude cases where inherited genetic renal cancer was present at diagnosis.

QPI 7 – Nephron Sparing Treatment – This QPI measurement now measures all nephron sparing treatment modalities, so includes Cryotherapy, RFA and nephron sparing surgery. The target for this QPI has been changed to 50%. Exclusion to the measurement has been added for cases of best supportive care, and active surveillance.

QPI 8 – 30 / 90 Day Mortality – Now only measures surgery, Cryotherapy and RFA. The SACT part of this QPI was removed and QPI 15 added to measure this separately.

QPI 10 – Prognostic Scoring in Metastatic Disease – In year 8 of reporting, this QPI measured the prognostic score assigned to patients meeting the criteria prior to first treatment. In year 9 the QPI will measure the prognostic score assigned to cases meeting this criteria at diagnosis.

QPI 12 – Volume of Cases per Surgeon – Target has been updated from 12 cases per surgeon per year, to 15 cases per surgeon per year.

QPI 13 – Trifecta Rate – This QPI now measures Ischaemia time as part of the calculation. (Not differentiating between cold and warm ischaemia time).

The following new QPIs were added:

QPI 15 – 30 Day Mortality following Systemic Anti-Cancer Therapy (SACT) (Chemocare data)

NB. The archiving of QPIs 5 and 6 mean that the QPI numbering is no longer consecutive.

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.	

[1] QPI documents are available at www.healthcareimprovementscotland.org

[2] Datasets and measurability documents are available at www.isdscotland.org

Audit Processes

Data was analysed by the audit facilitators in each NHS board according to the measurability document provided by Public Health Scotland. SCAN data was collated by Adam Steenkamp, SCAN Audit Facilitator for Urological cancer.

Data capture focuses round the process for the weekly multidisciplinary meetings (MDM) ensuring that information is collected through routine process. Data is recorded in eCase for all health boards.

Oncology data is obtained either from the clinical records (electronic systems and case notes) or by downloads from Aria and from the Department of Clinical Oncology database within the Edinburgh Cancer Centre (ECC).

Only 2 hospitals provide surgery and chemotherapy but radiotherapy is provided centrally in Edinburgh Cancer Centre. Patients living closer to either Carlisle or Dundee may opt to have oncology treatment outwith the SCAN region. Collecting complete audit data for these patients remains a challenge.

Clinical Sign-Off: This report compares analysed data from individual Health Boards within SCAN and signed off as accurate following review by the lead clinicians from each board. The collated SCAN results were reviewed by the lead clinicians, including oncologists and pathologists, to assess variances and provide comments on results.

Lead Clinicians and Audit Personnel

SCAN Region	Hospital	Lead Clinician	Audit Support
NHS Borders	Borders General Hospital	Mr Edward Mains	Leanne Robinson
NHS Dumfries & Galloway	Dumfries & Galloway Royal Infirmary	Miss Maria Bews-Hair	Campbell Wallis
NHS Fife	Queen Margaret Hospital	Mr A Chapman	Michelle MacDonald
SCAN & NHS Lothian	St Johns Hospital and Western General Hospital	Mr S Leung Dr J Malik	Adam Steenkamp

Data Quality

Estimate of Case Ascertainment

An estimate of case ascertainment (the percentage of the population with renal cancer recorded in the audit) is made by comparison with the Scottish Cancer Registry five year average data from 2015 to 2019. High levels of case ascertainment provide confidence in the completeness of the audit recording and contribute to the reliability of results presented. Levels greater than 100% may be attributable to an increase in incidence. Allowance should be made when reviewing results where numbers are small and variation may be due to chance.

Number of cases recorded in audit	Borders	D&G	Fife	Lothian	SCAN
2020	20	23	67	156	266
2019	17	38	61	175	291
2018	9	37	66	167	279

Estimate of Case Ascertainment: Calculated using the average of the most recent five years of Cancer Registry Data 2015 to 2019

	Borders	D&G	Fife	Lothian	SCAN
Cases from Audit in 2020	20	23	67	156	266
Cancer Registry 5 Year Average	20	33	62	147	262
Case Ascertainment %	**100**	**70**	**108.1**	**106.1**	**101.5**

Extract taken from PHS Cancer Registry website (05/10/2020) http://www.isdscotland.org/Health-Topics/Cancer/Cancer-Audit/

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.
- Clinical Leads Sign off meeting took place on 18/11/2021.
- Final draft report was sent to SCAN group for sign off and comments on 24/12/2021.
- Final report circulated to SCAN Urology Group and Audit Reporting Governance Framework on 19/01/2022.

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.

QPI 1: Radiological Diagnosis – Target = 95%

Title: Patients with renal cancer should have cross sectional imaging for staging of Renal Cell Carcinoma (RCC).

Numerator = Number of patients receiving active treatment with a diagnosis of RCC who undergo cross-sectional imaging (CT or MRI) of the chest, abdomen +/- pelvis (or CTU + chest with contrast) before first treatment.

Denominator = All RCC patients receiving active treatment (no exclusions).

Target 95%	Borders	D&G	Fife	Lothian	SCAN
2020 cohort	20	23	67	156	266
Ineligible for analysis	6	8	31	92	137
Exclusion from analysis	0	0	0	0	0
Numerator:	14	15	34	63	126
Not recorded for numerator	0	0	0	0	0
Denominator:	14	15	36	64	129
Not recorded for exclusion	0	0	0	0	0
Not recorded for denominator	0	0	0	0	0
% Performance	100	100	94.4	98.4	97.7

Comments:

Fife: The QPI target was not met showing a shortfall of 0.6% (2 cases) 1 had staging CT without contrast. 1 didn't have a staging CT Chest.

SCAN: We have done well with this QPI, previously small renal masses were not done in time.

Action: Good performance this year, with a near miss in Fife, no action was identified.
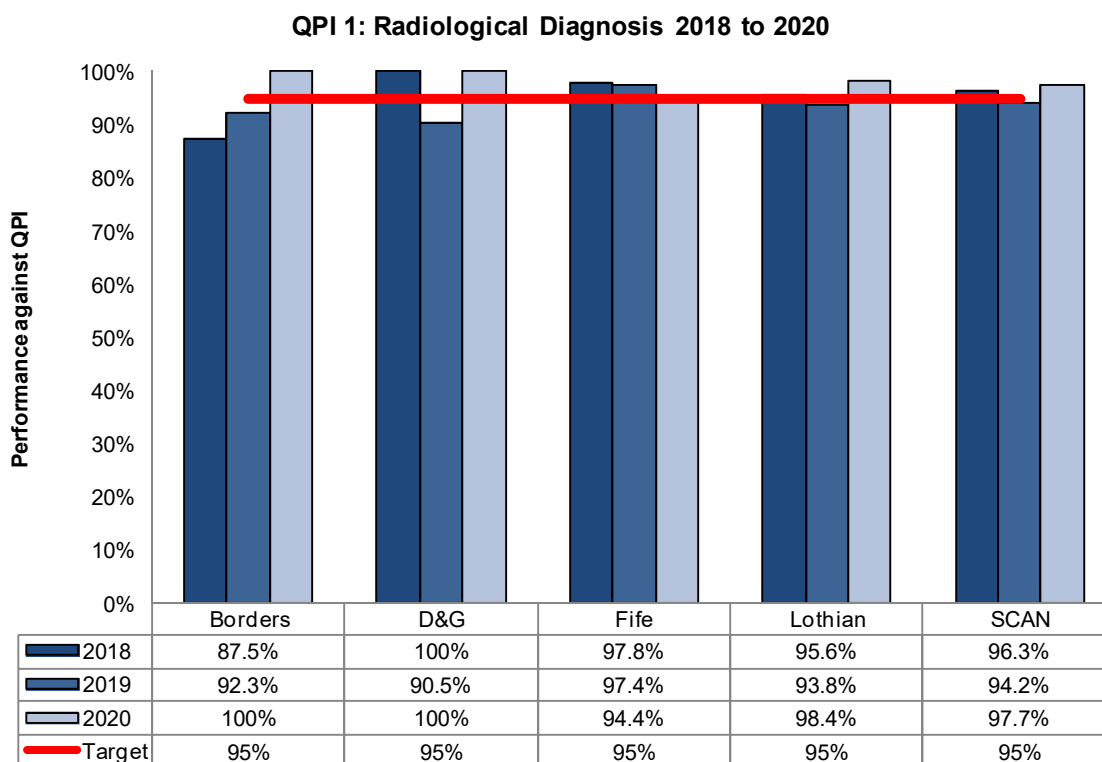
QPI 1: Radiological Diagnosis 2018 to 2020

	Borders	D&G	Fife	Lothian	SCAN
2018	87.5%	100%	97.8%	95.6%	96.3%
2019	92.3%	90.5%	97.4%	93.8%	94.2%
2020	100%	100%	94.4%	98.4%	97.7%
Target	95%	95%	95%	95%	95%

QPI 2i: Histological Diagnosis – Target = 90%

Title: Patients with renal cancer not undergoing surgery should have a histological diagnosis prior to commencing treatment.

Numerator = Number of patients with RCC for whom surgery is not first treatment who have a histological diagnosis (confirmed by biopsy) before Cryotherapy or Radiofrequency ablation as first treatment.

Denominator = All patients with RCC undergoing cryotherapy or radiofrequency ablation as their first treatment (no exclusions).

Exclusion = Patients with inherited genetic renal cancer.

Target 90%	Borders	D&G	Fife	Lothian	SCAN
2020 cohort	20	23	67	156	266
Ineligible for analysis	19	23	67	153	262
Exclusion from analysis	0	0	0	1	1
Numerator:	0	0	0	2	2
Not recorded for numerator	0	0	0	0	0
Denominator:	0	0	0	2	2
Not recorded for exclusion	1	0	0	0	1
Not recorded for denominator	0	0	0	3	3
% Performance	N/A	N/A	N/A	100	100

QPI 2i: Histological Diagnosis 2015 to 2020

	Borders	D&G	Fife	Lothian	SCAN
2015	100%	100%	0%	100%	100%
2016	0.0%	100%	50.0%	100%	81.8%
2017	0.0%	100%	0.0%	0%	100%
2018	0.0%	0%	100%	100%	100%
2019	100%	100%	0%	100%	100%
2020	0%	0%	0.0%	100%	100%
Target	90%	90%	90%	90%	90%

QPI 2ii: Histological Diagnosis – Target = 90%

Title: Patients with renal cancer not undergoing surgery should have a histological diagnosis prior to commencing treatment.
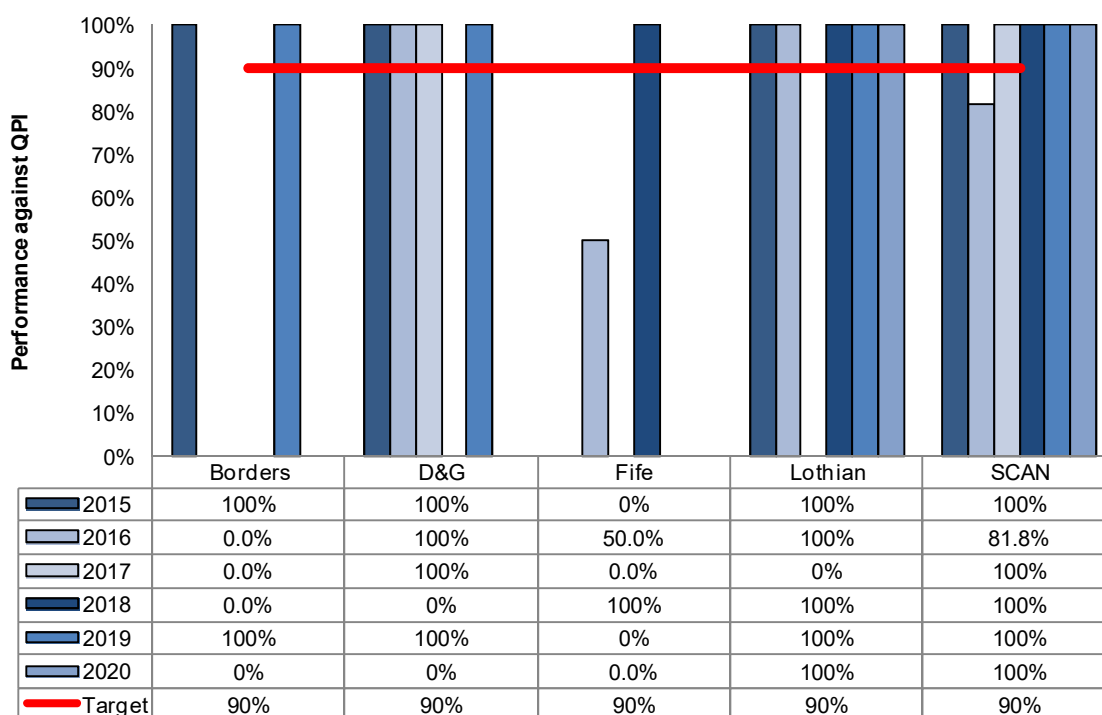
Numerator = Number of patients with RCC for whom surgery is not first treatment who have a histological diagnosis (confirmed by biopsy) before SACT as first treatment.

Denominator = All patients with RCC undergoing SACT as their first treatment (no exclusions)

Target 90%	Borders	D&G	Fife	Lothian	SCAN
2020 cohort	20	23	67	156	266
Ineligible for analysis	15	21	59	148	243
Exclusion from analysis	0	0	0	0	0
Numerator:	5	2	8	8	23
Not recorded for numerator	0	0	0	0	0
Denominator:	5	2	8	8	23
Not recorded for exclusion	0	0	0	0	0
Not recorded for denominator	0	0	0	3	3
% Performance	**100**	**100**	**100**	**100**	**100**

Comments: QPI met across all health boards.

QPI 2ii: Histological Diagnosis 2015 to 2020

	Borders	D&G	Fife	Lothian	SCAN
2015	100%	100%	57.1%	100%	90.0%
2016	0.0%	0.0%	75.0%	80.0%	78.6%
2017	100%	100%	100%	100%	100%
2018	100%	100%	66.7%	93.8%	91.7%
2019	100%	100%	100%	100%	100%
2020	100%	100%	100%	100%	100.0%
Target	90%	90%	90%	90%	90%
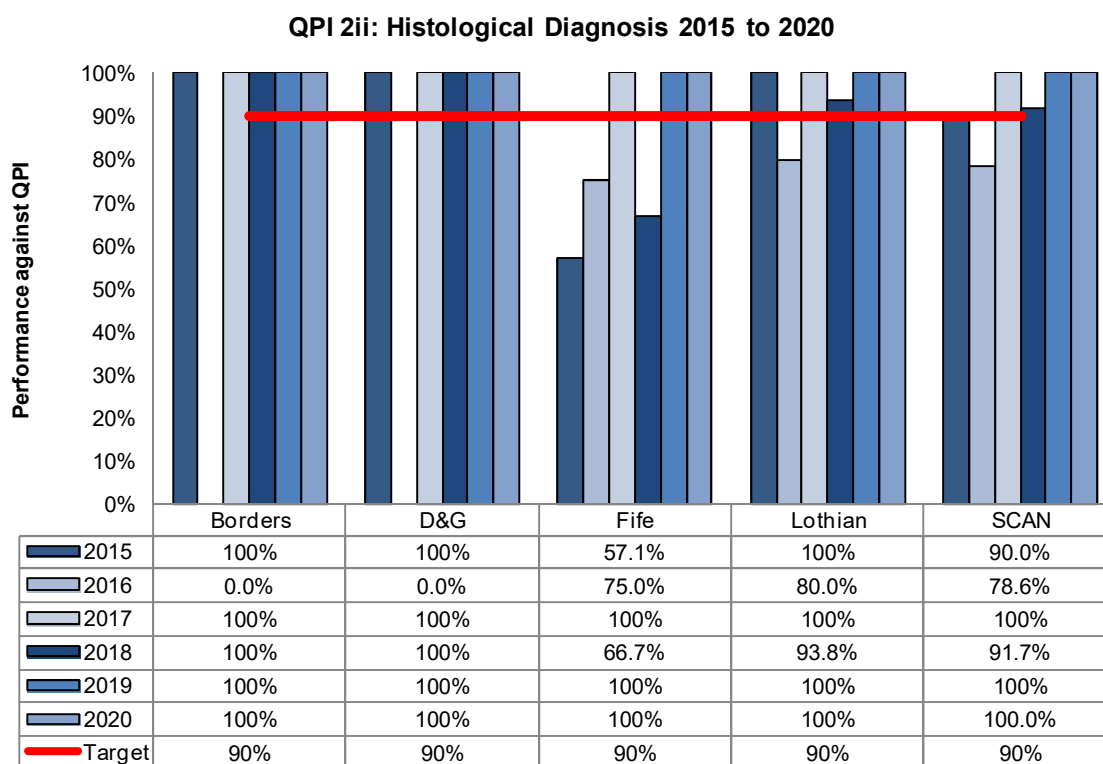
QPI 3: Clinical Staging - TNM – Target = 98%

Title: The TNM staging system should be used to stage patients with Renal Cell Carcinoma (RCC).

Numerator = Number of patients diagnosed with RCC who were clinically staged using TNM staging system before first treatment.

Denominator = All patients diagnosed with RCC (no exclusions)

Target 98%	Borders	D&G	Fife	Lothian	SCAN
2020 cohort	20	23	67	156	266
Ineligible for analysis	0	0	0	0	0
Exclusion from analysis	0	0	0	0	0
Numerator:	20	15	56	152	243
Not recorded for numerator	0	8	0	0	8
Denominator:	20	23	67	156	266
Not recorded for exclusion	0	0	0	0	0
Not recorded for denominator	0	0	0	0	0
% Performance	100	65.2	83.6	97.4	91.4

Comments:

D&G: The QPI target was not met showing a shortfall of 32.8% (8 cases) TNM staging was not recorded.

Fife: The QPI target was not met showing a shortfall of 14.4% (11 cases) 4 had no TNM staging documented. 7 had incomplete TNM documented.

Lothian: The QPI target was not met showing a shortfall of 0.6% (4 cases) 1 had no treatment recorded at time of reporting. 1 died prior to treatment (no treatment date). 2 had active surveillance, complete staging will be done once active treatment is decided.

SCAN: It was noted that there is a problem with asking non renal radiologists to assign TNM for renal cancers. However, these should be documented on review of the scans at MDM.

Action: Suggest a new section in the MDM list with TNM prompt required. This should highlight where TNM is missing in order to get it recorded at MDM.

QPI 3: Clinical Staging TNM 2012 to 2020

	Borders	D&G	Fife	Lothian	SCAN
2012	0.0%	60.0%	100%	97.0%	90.0%
2013	12.5%	63.3%	100%	99.2%	91.5%
2014	96.3%	59.4%	100%	99.4%	94.4%
2015	100%	80.0%	40.0%	100%	82.0%
2016	100%	73.7%	74.6%	99.2%	90.2%
2017	100%	60.0%	72.3%	100%	88.9%
2018	100%	73.0%	90.9%	100%	94.3%
2019	100%	71.1%	91.8%	96.0%	92.1%
2020	100%	65.2%	83.6%	97.4%	91.4%
Target	98%	98%	98%	98%	98%
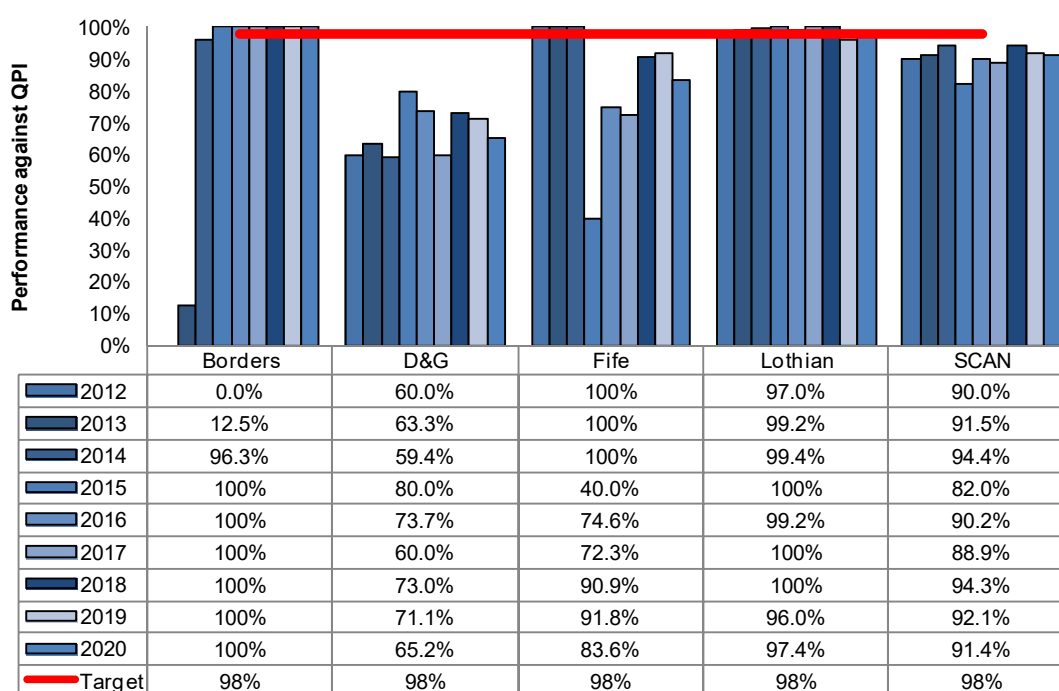
QPI 4: Multi-Disciplinary Team Meeting (MDT) – Target = 95%

Title: Patients with renal cell carcinoma should be discussed by a multidisciplinary team prior to definitive treatment.

Numerator = Number of patients with renal cancer discussed at the MDT before definitive treatment.

Denominator = All patients diagnosed with RCC.

Exclusion = Patients who died before first treatment.

Target 95%	Borders	D&G	Fife	Lothian	SCAN
2020 cohort	20	23	67	156	266
Ineligible for analysis	0	0	0	0	0
Exclusion from analysis	1	0	0	2	3
Numerator:	19	22	65	139	245
Not recorded for numerator	0	0	0	3	3
Denominator:	19	23	67	154	263
Not recorded for exclusion	0	0	0	3	3
Not recorded for denominator	0	0	0	0	0
% Performance	100	95.7	97.0	90.3	93.2

Comments:

Lothian: The QPI target was not met showing a shortfall of 4.7% (12 cases) 4 did not have MDM discussion (2 were for best supportive care. 1 was for active surveillance and 1 had cryotherapy.) 8 had treatment options agreed prior to MDM review and discussion (3 had surgery agreed as treatment option. 4 had active surveillance agreed prior to MDM review. 1 was agreed for best supportive care prior to MDM discussion.) 3 had no treatment recorded as they were awaiting Cryotherapy treatment at time of reporting.

Action: None identified.

QPI 4: MDT Meeting 2012 to 2020

	Borders	D&G	Fife	Lothian	SCAN
2012	100%	100%	96.0%	89.0%	91.0%
2013	100%	96.7%	100%	91.5%	94.7%
2014	96.3%	96.8%	96.2%	96.1%	96.2%
2015	100%	96.7%	98.4%	95.3%	96.7%
2016	93.8%	100%	95.2%	92.0%	93.7%
2017	100%	100%	92.1%	94.2%	94.7%
2018	100%	94.6%	95.5%	95.6%	95.6%
2019	100%	100%	95.1%	93.6%	95.1%
2020	100%	95.7%	97.0%	90.3%	93.2%
Target	95%	95%	95%	95%	95%
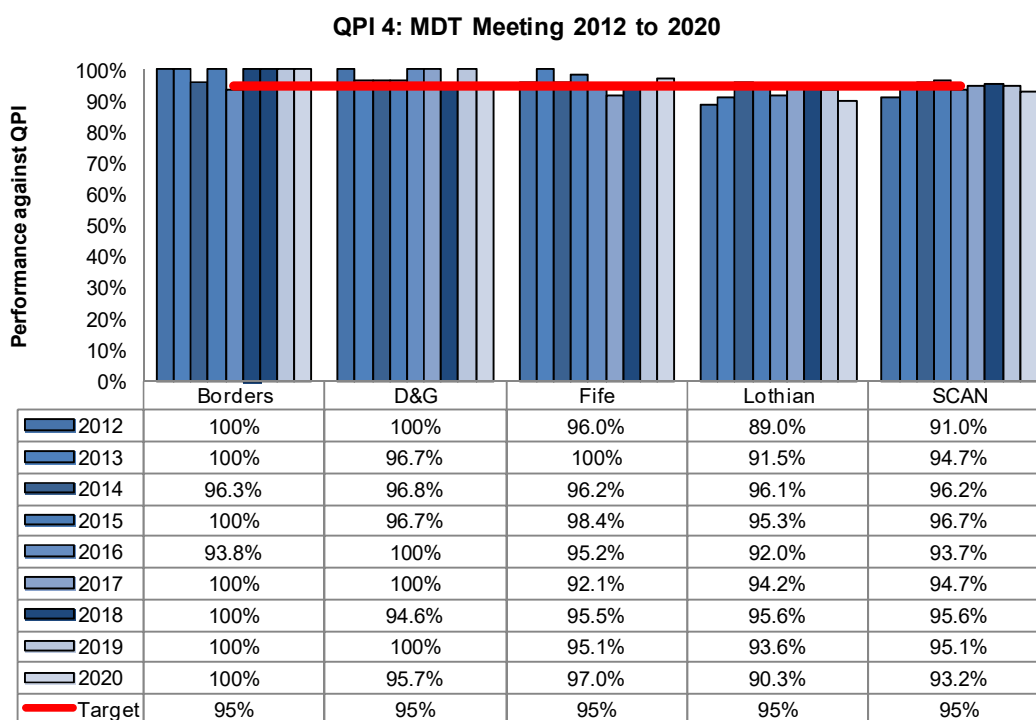
QPI 7: Nephron Sparing Treatment – Target = 50%

Title: Patients with T1a renal cancer should receive Nephron Sparing treatment (Cryotherapy, RFA or robotic / laparoscopic / open partial nephrectomy).

Numerator = Number of patients with T1a N0 M0 RCC undergoing Nephron Sparing treatment (Cryotherapy, RFA or robotic / laparoscopic / open partial nephrectomy)

Denominator = All patients with T1a N0 M0. RCC

Exclusion = Patients who refuse treatment, Patients receiving supportive care only (not for active treatment), Patients receiving active surveillance (no active treatment), Patients who died before treatment.

Data presented by Health board of Diagnosis to reflect treatment decisions by MDM.

Target 50%	Borders	D&G	Fife	Lothian	SCAN
2020 cohort	20	23	67	156	266
Ineligible for analysis	10	20	53	73	156
Exclusion from analysis	5	0	6	67	78
Numerator:	2	2	5	11	20
Not recorded for numerator	0	0	0	1	1
Denominator:	3	3	7	16	29
Not recorded for exclusion	0	0	0	1	1
Not recorded for denominator	2	2	1	1	4
% Performance	**66.7**	**66.7**	**71.4**	**68.8**	**69.0**

All Surgical procedures for Borders and D&G patients are performed in Lothian

Comments: These results show that patients are offered a good service, despite pandemic limitations.

QPI 7: Nephron Sparing Treatment 2018 to 2020

	Borders	D&G	Fife	Lothian	SCAN
2018	50.0%	100%	81.8%	60.9%	66.7%
2019	66.7%	50.0%	50.0%	43.8%	48.3%
2020	66.7%	66.7%	71.4%	68.8%	69.0%
Target	50%	50%	50%	50%	50%
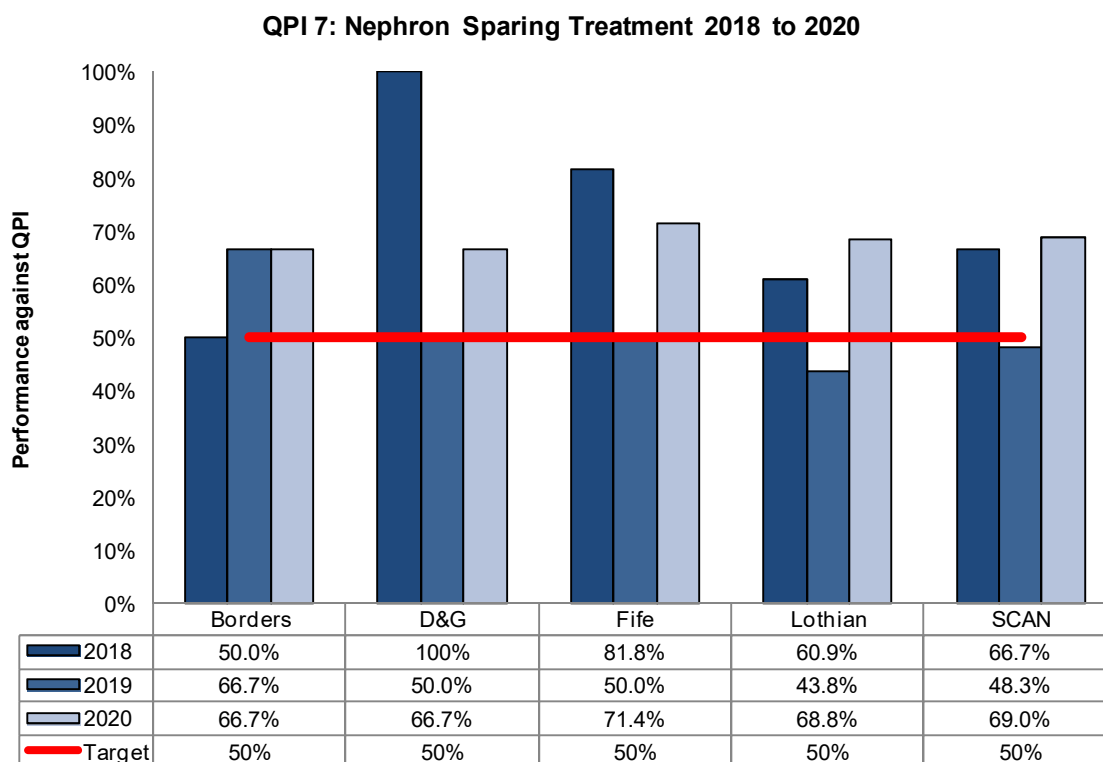
QPI 8: 30/90 Day Mortality – Target = Surgery, Cryotherapy and RFA <2%

Title: Proportion of patients who die within 30 or 90 days of first treatment (Surgery, Cryotherapy and RFA) for RCC.

Numerator = Number of patients who undergo minimally invasive RFA, Cryotherapy or operative treatment as first treatment for RCC who die within 30 / 90 days of first treatment.

Denominator = All patients who undergo minimally invasive RFA, Cryotherapy or operative treatment as first treatment for RCC.

Exclusion = Patients who undergo emergency surgery (radical nephrectomy).

QPI 8i 30 day Mortality

Presented by Board of Surgery

Target <2% Surgery	Borders	D&G	Fife	Lothian	SCAN
2020 cohort	20	23	67	156	266
Ineligible for analysis	10	9	39	99	157
Exclusion from analysis	0	0	0	1	1
Numerator – Surgery	-	-	0	0	0
Denominator – Surgery	-	-	28	86	114
% Performance	**N/A**	**N/A**	**0**	**0**	**0**

Presented by Board of Diagnosis

Target <2% Cryotherapy	Borders	D&G	Fife	Lothian	SCAN
2020 cohort	20	23	67	156	266
Ineligible for analysis	20	23	67	153	263
Exclusion from analysis	0	0	0	0	0
Numerator	0	0	0	0	0
Denominator	0	0	0	3	3
% Performance	**N/A**	**N/A**	**N/A**	**0**	**0**

Presented by Board of Diagnosis

Target <2% RFA	Borders	D&G	Fife	Lothian	SCAN
2020 cohort	20	23	67	156	266
Ineligible for analysis	20	23	67	156	266
Exclusion from analysis	0	0	0	0	0
Numerator	0	0	0	0	0
Denominator	0	0	0	0	0
% Performance	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**

QPI 8ii: 90 Day Mortality

Presented by Board of Surgery

Target <2% Surgery	Borders	D&G	Fife	Lothian	SCAN
2020 cohort	20	23	67	156	266
Ineligible for analysis	10	9	39	101	159
Exclusion from analysis	0	0	0	1	1
Numerator – Surgery	-	-	0	0	0
Denominator – Surgery	-	-	28	83	111
% Performance	**N/A**	**N/A**	**0**	**0**	**0**

Presented by Board of Diagnosis

Target <2% Cryotherapy	Borders	D&G	Fife	Lothian	SCAN
2020 cohort	20	23	67	156	266
Ineligible for analysis	20	23	67	154	264
Exclusion from analysis	0	0	0	0	0
Numerator	0	0	0	0	0
Denominator	0	0	0	2	2
% Performance	**N/A**	**N/A**	**N/A**	**0**	**0**

Presented by Board of Diagnosis

Target <2% RFA	Borders	D&G	Fife	Lothian	SCAN
2020 cohort	20	23	67	156	266
Ineligible for analysis	20	23	67	156	266
Exclusion from analysis	0	0	0	0	0
Numerator	0	0	0	0	0
Denominator	0	0	0	0	0
% Performance	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**

QPI 9: Systemic Therapy – Target = 40%

Title: Patients with advanced and/or metastatic renal cell carcinoma (RCC) should receive systemic therapy between diagnosis and death.

Numerator = Number of patients with RCC which is advanced and / or metastatic at time of diagnosis where at least 12 months have elapsed since diagnosis irrespective of whether or not they have died who receive first treatment with SACT, within 12 months of diagnosis. (Advanced/ metastatic disease is defined as T4 N (any) M (any); T (any) N (any) M1)

Denominator = All patients with RCC which is advanced and / or metastatic at time of diagnosis where at least 12 months have elapsed since diagnosis irrespective of whether or not they have died
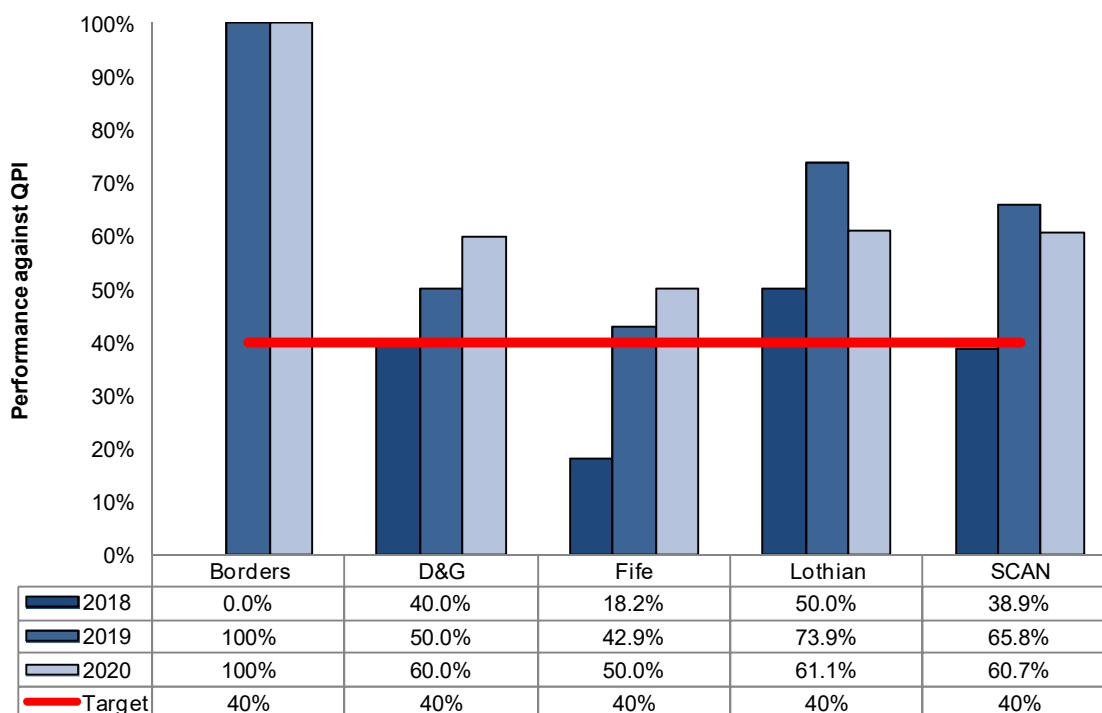
Exclusions = Patients documented to have performance status 2, 3 or 4 at time of diagnosis, Patients documented to have declined systemic treatment, Patients enrolled in clinical trials.

Target 40%	Borders	D&G	Fife	Lothian	SCAN
2019 cohort	17	38	62	175	292
Ineligible for analysis	16	32	52	147	247
Exclusion from analysis	0	1	4	10	15
Numerator:	1	3	2	11	17
Not recorded for numerator	0	0	0	0	0
Denominator:	1	5	4	18	28
Not recorded for exclusion	0	2	2	10	14
Not recorded for denominator	0	2	2	0	4
% Performance	**100**	**60.0**	**50.0**	**61.1**	**60.7**

*Reported 12 months retrospectively i.e., patients diagnosed in 2019

SCAN Comment: Performance of 50-60% seems reasonable given the patient cohort. It was noted that this target level was debated extensively at the formal review.

QPI 9: Systemic Therapy 2018 to 2020

	Borders	D&G	Fife	Lothian	SCAN
2018	0.0%	40.0%	18.2%	50.0%	38.9%
2019	100%	50.0%	42.9%	73.9%	65.8%
2020	100%	60.0%	50.0%	61.1%	60.7%
Target	40%	40%	40%	40%	40%

QPI 10: Prognostic Scoring for Metastatic Disease – Target = 90%

Title: Patients with metastatic Renal Cell Carcinoma (RCC) should be assigned a valid prognostic score following diagnosis.

Numerator = Number of patients with metastatic RCC who are assigned a valid prognostic score following diagnosis.

Denominator = All patients diagnosed with metastatic RCC (no exclusions)

Target 90%	Borders	D&G	Fife	Lothian	SCAN
2020 cohort	20	23	67	156	266
Ineligible for analysis	14	18	44	131	207
Exclusion from analysis	0	0	0	0	0
Numerator:	6	3	7	17	33
Not recorded for numerator	0	2	0	0	2
Denominator:	6	5	15	25	51
Not recorded for exclusion	0	0	0	0	0
Not recorded for denominator	6	4	8	4	22
% Performance	**100**	**60.0**	**46.7**	**68.0**	**64.7**

Comments:

D&G: The QPI target was not met showing a shortfall of 30% (2 cases) No prognostic scores recorded.
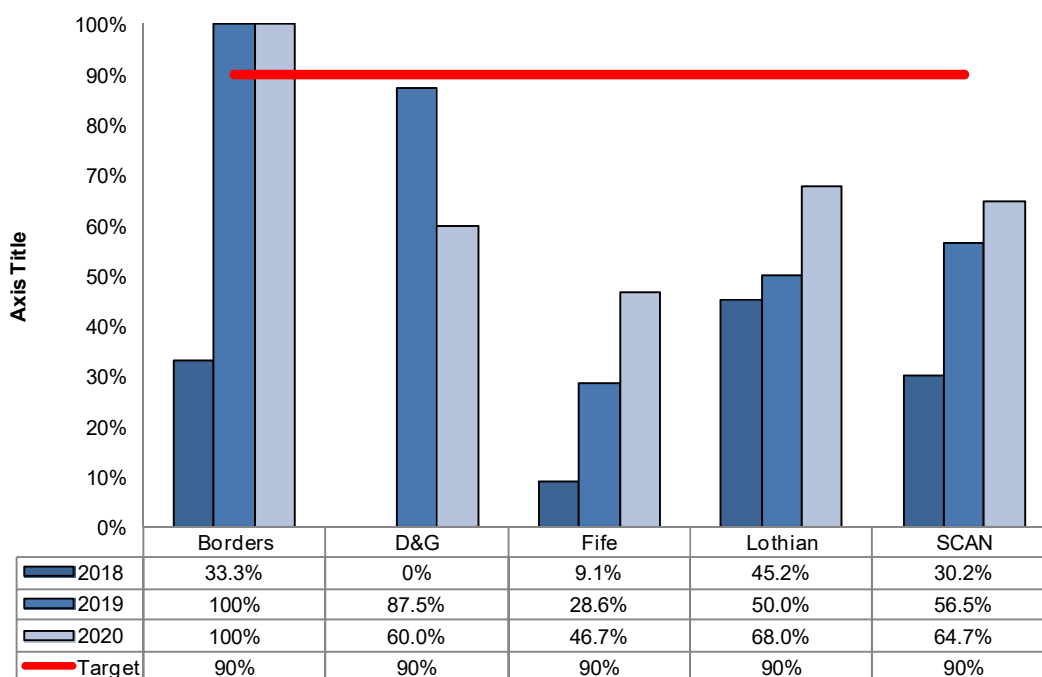
Fife: The QPI target was not met showing a shortfall of 43.3% (8 cases) No prognostic scores recorded.

Lothian: The QPI target was not met showing a shortfall of 22% (8 cases) 4 were for BSC from MDM review - IMDC score was not realistically possible. 4 were seen by Oncology registrars. -

SCAN: Although year on year progress is seen, some were missed with the arrival of an oncology consultant new to renal cancer and some by registrars.

Action: Oncology colleagues to be reminded of this QPI requirement and prognostic scoring should be noted at MDM.

QPI 10: Prognostic Scoring in Metastatic Disease 2018 to 2020

	Borders	D&G	Fife	Lothian	SCAN
2018	33.3%	0%	9.1%	45.2%	30.2%
2019	100%	87.5%	28.6%	50.0%	56.5%
2020	100%	60.0%	46.7%	68.0%	64.7%
Target	90%	90%	90%	90%	90%

QPI 11: Leibovich Score – Target = 100%

Title: Patients with Clear Cell Renal Cell Carcinoma (RCC) should be assigned a Leibovich score following radical nephrectomy.

Numerator = Number of patients with Clear Cell RCC who undergo radical nephrectomy and are assigned a Leibovich score following surgery.

Denominator = All patients with Clear Cell RCC who undergo radical nephrectomy.

Exclusion = Patients with metastatic disease (TanyNanyM1).
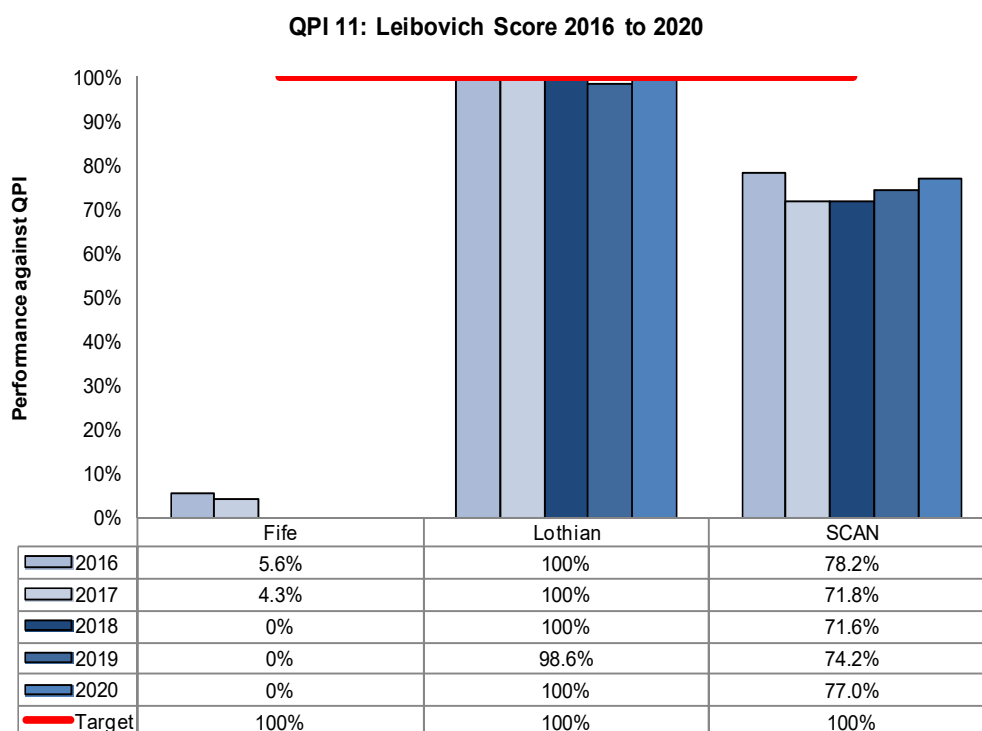
Data presented by Health board of Surgery

Target 100%	Borders	D&G	Fife	Lothian	SCAN
2020 cohort	20	23	67	156	266
Ineligible for analysis	9	13	52	122	196
Exclusion from analysis	5	2	1	5	13
Numerator:	-	-	0	47	47
Not recorded for numerator	-	-	0	0	0
Denominator:	-	-	14	47	61
Not recorded for exclusion	-	-	1	1	2
Not recorded for denominator	-	-	0	0	0
% Performance	N/A	N/A	0	100	77.0

Comments:

Fife: Not used as a risk stratification tool in NHS Fife.

After much discussion and deliberation regarding the lack of implementation of QPI 11 in NHS Fife over the last few years, their Medical Director has stated that he is content that NHS Fife do not use the Leibovich score to risk stratify their patients in the way that all other Health Boards in Scotland are encouraged to, through the QPI process.

Action: None identified

QPI 11: Leibovich Score 2016 to 2020

	Fife	Lothian	SCAN
2016	5.6%	100%	78.2%
2017	4.3%	100%	71.8%
2018	0%	100%	71.6%
2019	0%	98.6%	74.2%
2020	0%	100%	77.0%
Target	100%	100%	100%

QPI 12: Volume of cases per Surgeon – Target ≥ 15

Title: Renal surgical resection should be performed by surgeons who perform the procedures routinely.

SMR01 data is used to support reporting and monitoring of this QPI rather than clinical audit. This will maximise the use of data which are already collected and remove the need for any duplication of data collection. Standard reports have been specified and each Board has direct access to run these reports to ensure nationally consistent analysis and reporting."

Exclusion = No Exclusions

Number of Radical Nephrectomy procedures by Surgeonin 2020				
	A	B	C	D
SMR01 Figures 2020	55	35	43	11

SMR01 Figures 2019	51	63	72	7

Target: Minimum 15 procedures per surgeon in a 1 year period.

This is a minimum target level and is designed to ensure that all surgeons performing renal surgery perform a minimum of 15 procedures per year. Varying evidence exists regarding the most appropriate target level for surgical case volume. In order to ensure that the target level takes account of level 1 evidence and will drive continuous quality improvement as intended this performance indicator must be kept under regular review.

It is recommended that where two consultants operate together on the same patient the case should be counted under the Lead Surgeon.

QPI 13: Trifecta Rate – Ischaemia Time – Target = 50%

Title: Trifecta Rate in Partial Nephrectomy T1a Renal Cell Carcinoma (RCC) patients.

Numerator = Number of patients with T1a RCC undergoing partial nephrectomy under cold ischaemic conditions who have cold ischaemia time less than 25 minutes, negative surgical margins and no complications (length of stay ≤7days).

Denominator = All patients with T1a RCC undergoing partial nephrectomy (no exclusions)

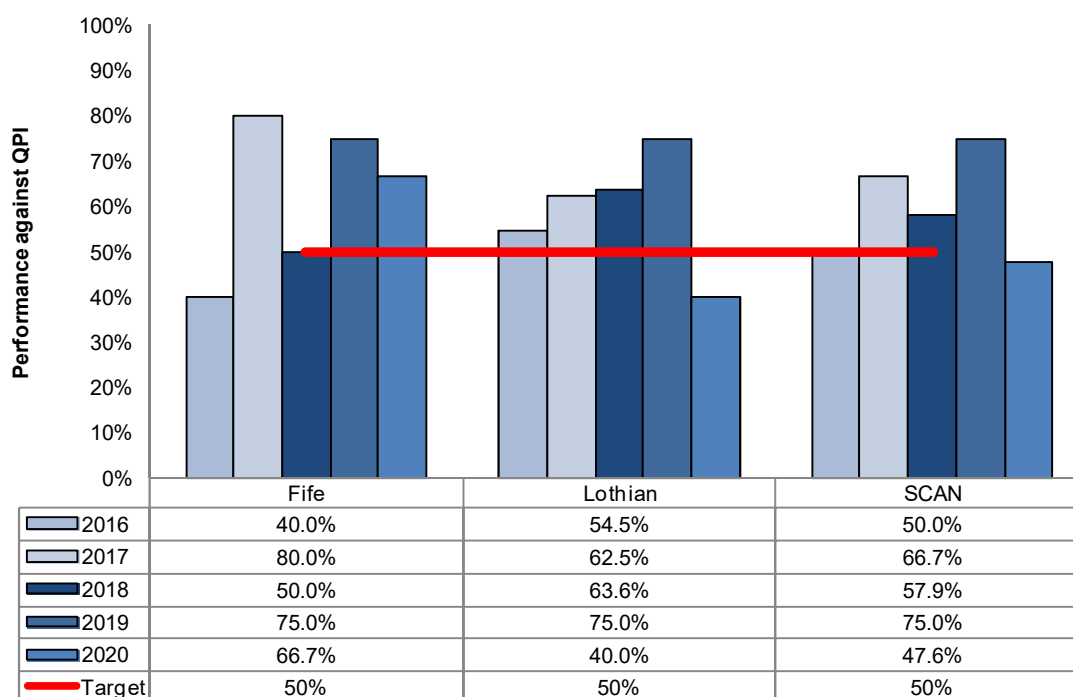Data presented by Health board of Surgery

Target 50%	Borders	D&G	Fife	Lothian	SCAN
2020 cohort	20	23	67	156	266
Ineligible for analysis	19	21	61	145	246
Exclusion from analysis	0	0	0	0	0
Numerator:	-	-	4	6	10
Not recorded for numerator	-	-	0	1	1
Denominator:	-	-	6	15	21
Not recorded for exclusion	-	-	0	0	0
Not recorded for denominator	-	-	0	0	0
% Performance	N/A	N/A	66.7	40.0	47.6

Comments:

Lothian: 6 cases that failed to meet the trifecta criteria were robotic partial nephrectomies. One had a positive surgical margin and 5 failed based on the ischaemia time. It is important to note that those robotic cases that failed based on ischaemia time all had negative surgical margins and uncomplicated post-operative courses despite four of the five being increased complexity with RENAL nephrometry scores (4P, 7A,7A, 9A and 9A respectively). The one robotic case which had a positive surgical margin also had a medium complexity with a RENAL score 8A but with a multinodular tumour histologically. The robotic partial nephrectomy programme was commenced in Feb 2021 and these cases are early in the series and likely to represent part of the learning curve.

Action: None identified

QPI 13: Trifecta Rate 2016 to 2020

	Fife	Lothian	SCAN
2016	40.0%	54.5%	50.0%
2017	80.0%	62.5%	66.7%
2018	50.0%	63.6%	57.9%
2019	75.0%	75.0%	75.0%
2020	66.7%	40.0%	47.6%
Target	50%	50%	50%

QPI 14: Clinical Trial and Research Study Access – Target = 15%

Title: Proportion of patients diagnosed with renal cancer who are consented for a clinical trial / research study.

Numerator = Number of patients with renal cancer consented to a clinical trial (Data from SCRN database EDGE).

Denominator = Average 5 year incidence from Cancer Registry (2015 – 2019)

Target 15%	Borders	D&G	Fife	Lothian	SCAN
Numerator	8	7	3	49	67
Denominator	20	33	62	147	262
% Performance	**40.0**	**21.2**	**4.8**	**33.3**	**25.6**

Open Trials and Research 2020	Numbers consented
CELL FREE DNA	53
BIOBANK SR1418	12
CALYPSO	1
RAMPART	1

Action: Explore why NHS Fife are not involved in the tissue banking studies listed above.

QPI 15: 30 Day Mortality following SACT for RCC

Title: Proportion of patients with RCC who die within 30 days of SACT treatment.

This QPI has been replaced with a standardised 30 day SACT Mortality QPI across all the tumour types covered by the QPI program.

Measurement is being revised to use data from Chemocare (electronic chemotherapy prescribing system) for reporting in order to utilise existing data and provide an accurate picture of all patients with renal cancer undergoing chemotherapy, rather than the subset of all diagnosed in the audit year cohort only.

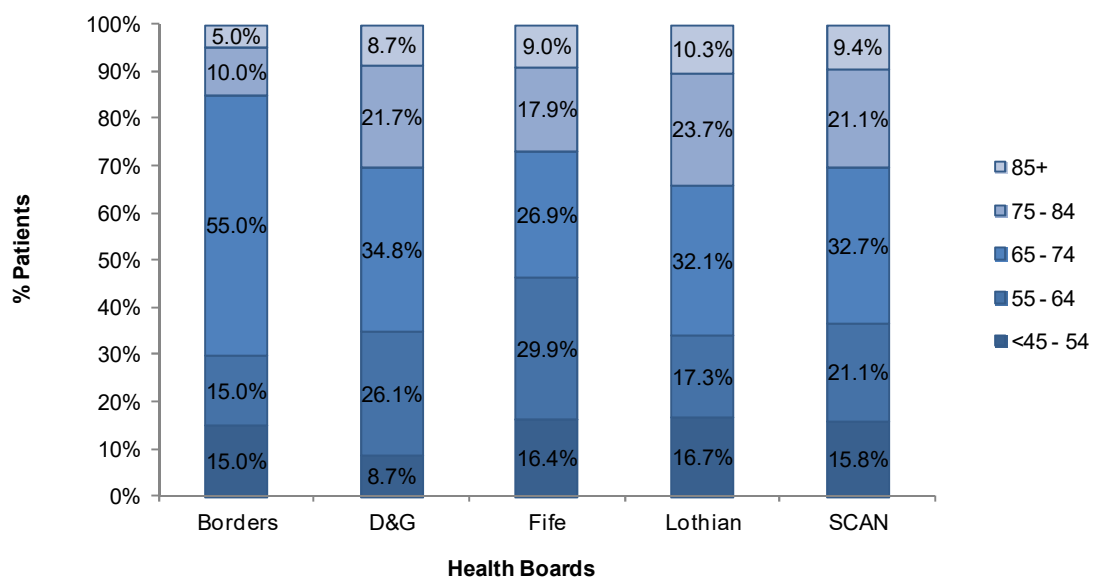The development of a National reporting tool is currently underway through a collaboration with Public Health Scotland and the 3 Cancer Networks; NCA, SCAN and WoSCAN. This is to ensure that reporting in consistent throughout Scotland.

Progress has been complicated by the differences in the 5 instances of Chemocare across Scotland and a date for initial reporting is yet to be confirmed at the time of writing this report.

Age and Gender Analysis

Age and Gender Analysis		Borders	D&G	Fife	Lothian	SCAN
Under 45	M	0	0	1	7	8
	F	0	0	2	2	4
45 - 49	M	0	0	4	5	9
	F	1	0	0	1	2
50 - 54	M	0	2	3	7	12
	F	2	0	1	4	7
55 - 59	M	0	3	6	8	17
	F	0	0	2	3	5
60 - 64	M	1	2	8	10	21
	F	2	1	4	6	13
65 - 69	M	5	2	7	19	33
	F	3	2	3	3	11
70 - 74	M	1	3	6	18	28
	F	2	1	2	10	15
75 - 79	M	1	1	3	11	16
	F	1	1	5	4	11
80 - 84	M	0	1	3	12	16
	F	0	2	1	10	13
85+	M	1	1	5	8	15
	F	0	1	1	8	10
Total	M	9	15	46	105	175
	F	11	8	21	51	91

Age at Diagnosis 2020

Renal Cancer QPI Attainment Summary 2019		Target %	Borders			D&G			Fife			Lothian			SCAN		
QPI 1 Patients with RCC who undergo pre-treatment cross-sectional imaging of chest, abdomen +/- pelvis or MRI.		95	N	12	92.3%	N	19	90.5%	N	38	97.4%	N	76	93.8%	N	145	94.2%
			D	13		D	21		D	39		D	81		D	154	
QPI 2 Patients with RCC who have a histological diagnosis via biopsy before Non-surgical primary treatment.	Cryotherapy / RFA	90	N	1	100%	N	2	100%	N	0	N/A	N	2	100%	N	5	100%
			D	1		D	2		D	0		D	2		D	5	
	SACT	90	N	2	100%	N	1	100%	N	4	100%	N	13	100%	N	20	100%
			D	2		D	1		D	4		D	13		D	20	
QPI 3 Patients whose RCC is staged pre-treatment using the TNM staging system.		98	N	17	100%	N	27	71.1%	N	56	91.8%	N	168	96.0%	N	268	92.1%
			D	17		D	38		D	61		D	175		D	291	
QPI 4 Patients with RCC who are discussed at MDT meeting before definitive treatment.		95	N	15	93.8%	N	38	100%	N	58	95.1%	N	160	93.6%	N	271	94.8%
			D	16		D	38		D	61		D	171		D	286	
QPI 7 T1aN0M0 RCC who have nephron sparing treatment (Cryotherapy, RFA or robotic/lap/open partial nephrectomy)		50	N	2	66.7%	N	1	50.0%	N	4	50.0%	N	7	43.8%	N	14	48.3%
			D	3		D	2		D	8		D	16		D	29	
QPI 8 Proportion of patients who die within 30 days of treatment for RCC.	Surgery	<2	Presented by Health Board of surgery						N	0	0%	N	2	1.9%	N	2	1.4%
									D	35		D	105		D	140	
	Cryotherapy treatment	<2	N	0	0%	N	0	0%	N	0	N/A	N	0	0%	N	0	0%
			D	1		D	2		D	0		D	3		D	6	
	RFA treatment	<2	N	0	N/A	N	0	N/A	N	0	N/A	N	0	N/A	N	0	N/A
			D	0		D	0		D	0		D	0		D	0	
QPI 8 Proportion of patients who die within 90 days of treatment for RCC.	Surgery	<2	Presented by Health Board of surgery						N	0	0%	N	2	1.9%	N	2	1.5%
									D	33		D	103		D	136	
	Cryotherapy treatment	<2	N	0	0%	N	0	0%	N	0	N/A	N	0	0%	N	0	0%
			D	1		D	2		D	0		D	3		D	6	
	RFA treatment	<2	N	0	N/A	N	0	N/A	N	0	N/A	N	0	N/A	N	0	N/A
			D	0		D	0		D	0		D	0		D	0	
QPI 9 Advanced and/or metastatic RCC who have SACT in 12 months of diagnosis.		40	N	2	100%	N	3	50.0%	N	3	42.9%	N	17	73.9%	N	25	65.8%
			D	2		D	6		D	7		D	23		D	38	
QPI 10 Patients with metastatic RCC who are assigned a valid prognostic score following diagnosis		90	N	3	100%	N	7	87.5%	N	2	28.6%	N	14	50.0%	N	26	56.5%
			D	3		D	8		D	7		D	28		D	46	
QPI 11 Patients with clear cell RCC who are assigned a Leibovich score following radical nephrectomy.		100	Presented by Health Board of surgery						N	0	0%	N	69	98.6%	N	69	74.2%
									D	23		D	70		D	93	

Renal Cancer QPI Attainment Summary 2019	Target %	Borders		D&G		Fife		Lothian		SCAN	
QPI 12 Number of renal surgical resections performed by a surgeon over a 1 year period.	>12	4 of 5 Surgeons within SCAN performed 15 or more surgeries within the cohort year									
QPI 13 Partial nephrectomy (T1a RCC) who achieve trifecta (Cold ischaemia time < 25min, -ve margins, no complications)	50	Presented by Health Board of surgery				N 3 / D 4	75.0%	N 6 / D 8	75.0%	N 9 / D 12	75.0%
QPI 14 Clinical Trial + Research study access - Consented in Trials and held on SCRN database.	Clinical Trial/ Research — 15	N 8 / D 21	38.1%	N 13 / D 30	43.3%	N 6 / D 64	9.4%	N 59 / D 154	38.3%	N 86 / D 269	32.0%