



**SOUTH EAST SCOTLAND CANCER NETWORK
PROSPECTIVE CANCER AUDIT**

**UROLOGY CANCER 2009
COMPARATIVE AUDIT REPORT**

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SOUTH EAST SCOTLAND CANCER NETWORK (SCAN)
Urological Cancers: SCAN Comparative Report
Report on Patients Diagnosed 1st January - 31st December 2009

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Document History

Version	Events	Date	Actions
Version 1.1	First circulation to SCAN Urology Group	09/12/2010	For review at SCAN
Version 1.2	Clinicians' Meeting	17/12/2010 05/01/2011 – 24/01/2011	Amendments made and SCAN Chair comments added
Version 2.1	Second Circulation to SCAN Group for final comments, sign-off, and identification of action points	16/03/2011	Amendments made (now 2.2)
Version 2.2	Final amendments incorporated.	09/05/2011	Re-circulated to SCAN group for amendment approval
Version 3	Signed-off version circulated to Clinical Governance Groups and forwarded for agenda of Regional Cancer Planning Group	23/05/2011	
Version 3	Review of report contents for potentially disclosive information. Any necessary amendments made Website version prepared	10/01/2012	Amendments made (now 4W)
Version 4 (W)	Website version lodged on SCAN website		

SOUTH EAST SCOTLAND CANCER NETWORK (SCAN)

Urology Cancers: SCAN Comparative Report on Patients diagnosed 1st January - 31st December 2009

1 INTRODUCTION & METHODS

This report presents data collected on urological cancer patients diagnosed in three of the four health board areas of SCAN, Lothian, Borders and Fife health boards, between 1 January and 31 December 2009. Dumfries & Galloway is not included in this analysis.

Lead clinicians:

SCAN & NHS Lothian: Mr Prasad Bollina, Consultant Surgeon

NHS Fife: Mr Ian Mitchell, Consultant Surgeon

NHS Borders: Mr Ben Thomas

Data supplied by Audit Facilitators: Lauren Aitken (SCAN & Lothian), Yvonne Chapman (Fife) and data collection in Borders supervised by Amanda Streets.

Datasets and Definitions

The dataset collected is the National Minimum dataset for Urological Cancers as published by ISD Scotland (July 2005). The definitions were developed by ISD Scotland in collaboration with the Regional Cancer Networks.

Quality of data and Results presented

Estimated Case Ascertainment: See Section 1 for estimate of case ascertainment compared with the latest information available from the Scottish Cancer Registry. High estimated case ascertainment provides confidence in the completeness of the number of patients included in audit and therefore in the reliability of the results shown.

Most patients are identified through referral to the weekly multidisciplinary meeting in Fife for Fife patients and at the Western General Hospital, Edinburgh, for Lothian and Borders patients. Checks are also made against Pathology lists and GRO Death Lists.

SCAN participates in the external quality assurance (QA) programme undertaken by ISD Scotland. No formal QA of Urological cancer data has yet been undertaken.

Clinical sign-off: Data from reports prepared for individual hospitals is signed off as accurate following review between the lead clinicians from each service and the audit staff. Once collated into a draft comparative report it has been reviewed by a group of clinicians, with comments added as appropriate, before final sign-off is agreed.

Audit Processes

Capture of patient referral, investigation, diagnosis, pathology and surgery data is based around the preparation of information for the weekly multidisciplinary meeting (MDM). Oncology data is obtained from the Department of Clinical Oncology retrospective SAS database and casenotes.

Most data is recorded and entered to the Urology Cancer Access database from the patient record of referral, investigation, and treatment (electronic systems and paper casenotes). A summary of data is printed from the database and supplied to the MDM. Meeting decisions are also recorded on the database.

Analysis of Data

The report provides mainly descriptive data about the patients diagnosed with urological cancers in SCAN in 2009. There are currently no detailed nationally-agreed standards for measuring the quality of care for urological cancers, but the SCAN Urology Group has agreed a draft set of clinical effectiveness measures, based on the Scottish Core Cancer standards (published March 2008), and on SIGN Guidelines nos 85 (Bladder cancer) and 28 (Testicular cancer).

For the larger number cancer types categories of tumour stage have been used to present data. In Prostate Cancer for example results have been divided in to localised, locally advanced, etc.

In addition analysis of waiting times is provided including the national target for urgent referral to treatment (max 62 days).

Further Information and Comment

For further information or comment on the measures used and analysis of data, please contact: Lauren Aitken, SCAN Cancer Audit Facilitator

Email: Lauren.aitken@luht.scot.nhs.uk

ACTION POINTS

Report Section	Possible area for improvement	Proposed action	Which clinical standard will this meet?
Prostate Cancer Section 3.1	Reason for age variance- patients in Fife appear to be older at presentation.	Review factors e.g. cultural, screening guidelines.	No clinical standards but in line with aim of cancer network to promote equity of treatment
Prostate cancer Section 3.2	Reasons for treatment choices in relation to age and location of patients	Further review of data in comparison with 2010	
ALL cancers	Measurement of clinical outcome	Report Quality Performance Indicators (QPI)	Publication of Renal & Prostate Cancer QPIs due in 2011. Links to information can be found on: http://www.scotland.gov.uk/Topics/Health/health/cancer
SCAN	Aim for a SCAN wide prospective audit report	Encourage data inclusion from DGRI	Possible addition to-SCAN Urology Group Projects Work Plan October 2010 – September 2012

Urological Cancer Audit Report 2009

Comment by Chair of the SCAN Urology Group

I am pleased to present this report providing information on patients diagnosed with urological cancers within the South East of Scotland Cancer Network (SCAN) in 2009. I would like to thank all the audit staff in Lothian, Borders and Fife for their hard work and commitment in recording and reporting this high quality data and in particular recognise the lead role of our SCAN Audit Facilitator, Lauren Aitken, in bringing together all the data for this report.

We hope presentation of this data and results will help to provide ongoing confidence in the quality of the service provided to urology cancer patients in SCAN network, and allow us to compare the results and to promote equity of treatment for patients in each of the Health Board areas. In reviewing these results allowance should be made where small numbers and variation may be due to chance.

For all members of the SCAN Urology Group, the best possible patient outcomes and the highest possible quality of care are of paramount importance. Demonstration of these high quality outcomes and working to improve them further where possible is the very purpose and mission of this group. This audit report provides very comprehensive descriptive statistics of the numbers, presentation and characteristics of patients diagnosed with one of the six types of cancers comprising the group of urological cancers. These have been categorised by stage and level of risk, what treatment they have received and for the first time the levels of mortality at one year. Although very brief and basic on outcome measures we very much hope that this will provide a basis for developing the future audit reports in reporting the patient outcomes that reflect the quality of care delivered by us all.

Currently there are no national agreed standards for urological cancers or outcomes. In this report we include some measures for the two urological cancers (bladder and testis) for which SIGN guidelines have been published some time ago. We look forward to reporting the results against the forthcoming National Quality Performance Indicators (QPIs) being developed initially for renal and prostate cancer, due to be published this year by the Scottish Cancer Taskforce. Some details on complex surgical cases (Prostatectomy, Cystectomy, and Nephrectomy) are already available within SCAN through collection of the BAUS complex surgery data set helped by the commendable efforts of some individual clinicians. We were able to present comprehensive outcome data including positive margin and continence rates at a national meeting in April 2010 where the outcomes of prostatectomy were discussed from all three cancer networks across Scotland.

Some action points that could be identified from this data and from the initial feedback include possible variation in the age at presentation across Health Boards and the reasons of patient choice for any individual treatment, in particular localised prostate cancer. Currently there is no data available for patients diagnosed in Dumfries & Galloway, hopefully this will be available in future SCAN reports. Further important actions for SCAN urology would be to measure clinical outcomes and quality performance indicators to enable us to review any practice changes and developments required in order to ensure high quality care.

SCAN Urology Group is committed to providing high quality audit data and in particular to making efforts to improve the patient outcomes which would help deliver the highest possible cancer outcomes and the best quality of care for our patients.

PRASAD BOLLINA
CHAIR
SCAN UROLOGY

Abbreviations

ADJ	Adjuvant
AM	Active Monitoring
AS	Active Surveillance
BCG	Bacille Calmette-Guerin
BGH	Borders General Hospital
BRACHY	Brachytherapy
CHEMO	Chemotherapy
Cis	Carcinoma in situ
CNS	clinical nurse specialist
CT	Computed tomography
EBRT	External Beam Radiotherapy
G	Grade (Tumour differentiation)
GP	General Practitioner
GRO	General Register of Scotland
Gy	Gray (measurement unit, radiotherapy)
HT	Hormone Therapy
ISD	Information Services Division
MDM	Multi-Disciplinary Meeting
MMC	Mitomycin C
MRI	Magnetic resonance imaging
MTI	Malignant Teratoma Intermediate
MTU	Malignant Teratoma Undifferentiated
NHSQIS	NHS Quality Improvement Scotland
NEO-ADJ	Neo-Adjuvant
NICE	National Institute for Health and Clinical Excellence
PALL	Palliative/ Palliation
PLND	pelvic lymph nodes dissection
PSA	Prostate-Specific Antigen
pT	Pathological tumour stage
QA	Quality Assurance
RFA	Radio Frequency Ablation
RT	Radiotherapy
SCAN	South East of Scotland Cancer Network
SCC	Squamous Cell Carcinoma
SCT	Scottish Cancer Task Force
SIGN	Scottish Intercollegiate Guidelines Network
TCC	transitional cell carcinoma
TNM	Tumour, node, metastasis
TUR	transurethral resection
TURBT	transurethral resection of bladder tumour
WGH	Western General Hospital
WHO	World Health Organisation
WW	Watchful Waiting

2 ALL UROLOGICAL CANCERS

2.1 Summary of Patients by Key Categories

2.1.1 Incidence by Tumour Site

Patients diagnosed within the SCAN network between 01/01/2009 and 31/12/2009 with the following

Primary Tumour Site	Borders	Lothian	Fife	SCAN
C61 Prostate	64	407	198	669
C67 Bladder*	28	209	79	316
C64 Kidney	13	98	51	162
C62 Testis	2	42	11	55
C65 Renal Pelvis & C66 Ureteric & C68 Urethra	3	26	10	39
C60 Penis	1	8	5	14
Total	111	790	354	1255

*Breakdown of Bladder cancer inclusion to allow comparison with national data

C67 Bladder	14	107	49	170
ICD[8010/2] Bladder – carcinoma in situ	1	2	3	6
ICD[8130/2 & 8130/3] Bladder – Stage pTa	13	100	27	140

2.1.2 Estimate of Case Ascertainment: Comparison with Scottish Cancer Registry

Annual incidence and 5 year average by health board of residence for SCAN health boards reported by the Scottish Cancer Registry for all Urological cancers (C60 – 68) (excluding carcinoma in situ and pTa).

	2004	2005	2006	2007	2008	5 year average
Borders	131	101	150	162	148	138.4
Lothian	657	767	724	721	691	712
Fife	305	304	290	273	308	296
SCAN	1093	1172	1164	1156	1147	1146

2.1.3 Estimate of numbers recorded in audit in 2009 in comparison with Scottish Cancer

Registry

	ISD 5 year average	SCAN Audit Registrations 2009	SCAN Audit Registrations 2009 (pTa and Cis excluded)	2009 % of Cancer Registry Average
Borders	138.4	111	97	70.1%
Lothian	712	790	675	94.8%
Fife	296	354	307	103.4%
SCAN	1146	1255	1079	94.2%

Estimates by comparison are not exact because most recent Scottish Cancer Register figures relate to 2008, include patients diagnosed though post mortem only, and are based on the date the patient first attends hospital, rather than the date of definitive diagnosis.

Percentage of Registry average was calculated using SCAN Audit registrations of all cancers minus Cis and Bladder pTa which are not routinely included in cancer register figures.

2.2 Referral category & timeline

Referral Urgency	Borders	Lothian	Fife	SCAN
Urgent	59	400	151	610
Non-Urgent	52	390	203	645
Total	111	790	354	1255

	Borders	Lothian	Fife	SCAN
Timelines	Median (days)	Median (days)	Median (days)	Median (days)
Referral to Diagnosis	15	15	23	17
Referral to First Treatment	50	58	60	58
Diagnosis to First Treatment	28	41	37	39
Diagnosis to First Surgery	34	41	31	37

Comment:

The field 'Urgent with suspicion of cancer' which is now used as the basis for reporting of national cancer waiting times targets is not included in national audit datasets. It may be locally collected at the discretion of individual health boards but is not included for reporting.

Timelines shown above differ from those submitted by health boards for measurement of the national Cancer Waiting Times targets. These timelines include patients referred from any source with any urgency and there are no exclusions for reasons such as patient induced delay, clinical complexity etc.

2.3 Patient Management

NHS QIS Cancer Core Standard 2a states that “All patients with cancer are managed by a multidisciplinary process” as there is evidence that the multidisciplinary management of patients increases their satisfaction and overall outcome.

MDM Discussion	Borders		Lothian*		Fife		SCAN
MDM Discussion	105	95.6%	730	94.2%	352	99.4%	1187
No MDM Discussion	6	5.4%	45**	5.8%	2	0.6%	53
Total	111	100%	775	100%	354	100%	1240

*In total 15 episodes were excluded from this calculation.

**45 patients not discussed (43 prostate cancers). Definitive treatment was as follows: 19 WW/AM/Diathermy, 26 HT +/- Palliative RT.

Comments:

Overall the SCAN percentage of patients discussed at MDM is high. There is a small group of patients who are not discussed due to having very low risk cancer. It is recognised that in order to optimise collection of incidence and diagnostic details, every patient must at least be registered with a treatment plan.

2.4 Outcomes

No patients who were diagnosed in SCAN in 2009 died within 30 days of Radical Radiotherapy or Surgery with Curative intent.

SCAN Mortality

1 Year Mortality	Prostate	Bladder & Urethra	Kidney	Testicular	Renal Pelvis & Ureter	Penile	All Urological cancer
Total Deceased	38	48	28	2	8	1	125
Diagnosis to Death (Range) days	22 - 358	19 - 360	1 - 346	21 - 26	26 - 329	85	1 - 360
Diagnosis to Death (Median) days	229	140	85	23.5	145	85	NR
Age at Diagnosis (Range) years	54 - 90	40 - 91	46 - 92	62 - 72	49 - 96	85	40 - 96
Age at Diagnosis (Median) years	75	76	74	67	78	85	NR

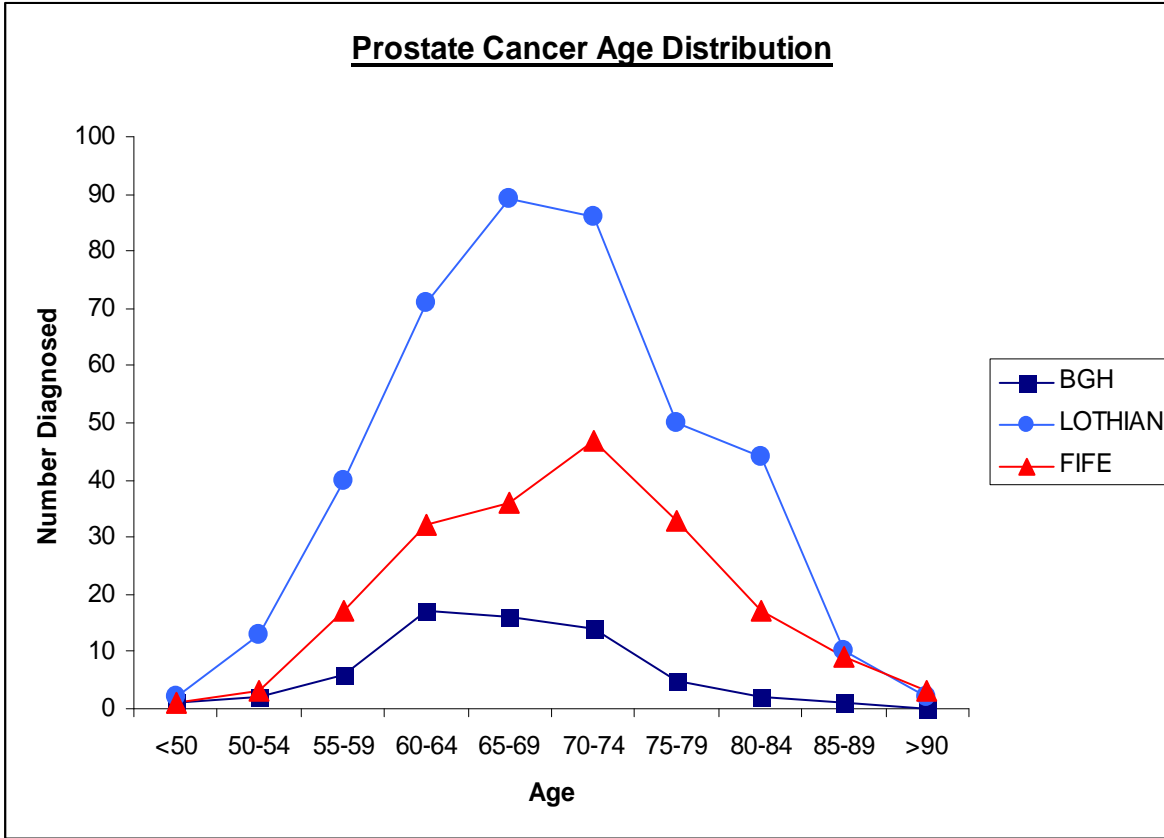
Comment:

The table above shows patients who were diagnosed in SCAN during 2009 and were recorded as deceased within 365 days of diagnosis date.

This is an all-cause of death comparison so may include patients where cancer was not their primary cause of death.

PROSTATE CANCER

3.1 Incidence & Timeline



Age Distribution								
Age	Borders		Lothian		Fife		SCAN	
<50	1	1.6%	2	0.5%	1	0.5%	4	0.6%
50-54	2	3.1%	13	3.2%	3	1.5%	18	2.7%
55-59	6	9.4%	40	9.8%	17	8.6%	63	9.4%
60-64	17	26.6%	71	17.4%	32	16.2%	120	17.9%
65-69	16	25.0%	89	21.9%	36	18.2%	141	21.1%
70-74	14	21.9%	86	21.1%	47	23.7%	147	22.0%
75-79	5	7.8%	50	12.3%	33	16.7%	88	13.2%
80-84	2	3.1%	44	10.8%	17	8.6%	63	9.4%
85-89	1	1.6%	10	2.5%	9	4.5%	20	3.0%
>90	0	0.0%	2	0.5%	3	1.5%	5	0.7%
Total	64	100.0%	407	100.0%	198	100.0%	669	100.0%

3.2 Diagnosis & Staging

3.2.1 Number and percentage of patients categorised by risk group

Risk Group (9 cystoprostatectomies excluded)	Borders	%	Lothian	%	Fife	%	SCAN	%
Localised Cancer	46	71%	305	75.5%	109	57%	460	70%
Locally Advanced Cancer	7	11%	32	8%	30	16%	70	10%
Nodal Involvement	1	2%	14	3.5%	10	5%	25	4%
Distant Mets +/- nodes	10	16%	53	13%	43	22%	106	16%
Total	64	100%	404	100%	192	100%	660	100%

3.2.2 Age at Diagnosis - Number and Percentage of patients Aged > 75

Risk Group (9 cystoprostatectomies excluded)	Borders (N=64)	% of N	Lothian (N=404)	% of N	Fife (N=192)	% of N	SCAN (N=660)	% of N
Localised Cancer :								
Low	2	3%	11	2.5%	3	1.5%	16	2%
Intermediate	0	0%	21	5%	8	4%	28	4.5%
High	2	3%	19	4.5%	15	8%	36	5.5%
Locally Advanced Cancer:								
PSA <50	0	0%	5	1.5%	8	4%	13	2%
PSA >50	0	0%	9	2%	5	2.5%	14	2%
Nodal Involvement	0	0%	0	0%	1	0.5%	1	0%
Distant Mets +/- Nodes	4	6%	26	7%	21	11%	51	8%
Total	8	12%	91	22.5%	61	31.5%	159	24%

NOTE: 9 (3 Lothian, 6 Fife) incidental diagnoses via cystoprostatectomy are excluded from further analyses of Prostate cancer- included in Bladder cancer numbers.

3.3 Treatment

3.3.1 Treatment type by risk group – localised cancer – SCAN summary

ALL SCAN	Localised LOW RISK	Localised INTERMEDIATE RISK	Localised HIGH RISK	TOTAL	% of Total
Surgery	47	61	6	114	25%
Radiotherapy	4	54	37	95	21%
Brachytherapy	13	19	1	33	7%
HT Alone	1	8	28	37	8%
WW/AM	106	60	15	181	39%
TOTAL	171	203	87	460	100%

3.3.2 Localised Prostate Cancer (N=460)

Localised Prostate cancer is defined as: organ confined, non-metastatic with PSA < 50
Treatment success can be estimated by risk group.

		Borders	Lothian	Fife	SCAN	Total
<u>LOW RISK</u>	Surgery	5	39	3	47	Low
T1 - T2b , Gleason <7	Radiotherapy	0	3	1	4	
Diagnosis PSA <10	Brachytherapy	1	11	1	13	171
	HT	0	1	0	1	
	WW/ AM	17	64	25	106	(37%)
<u>INTERMEDIATE RISK</u>	Surgery	4	52	5	61	Intermediate
T2b, Gleason 7	Radiotherapy	4	34	16	54	
Diagnosis PSA 10 - 19	Brachytherapy	3	11	5	19	202
	HT	1	4	3	8	
	WW/ AM	1	36	23	60	(44%)
<u>HIGH RISK</u>	Surgery	2	4	0	6	High
GL >7 (8 - 10) , T3a	Radiotherapy	4	27	6	37	
Diagnosis PSA >20 (<50)	Brachytherapy	0	0	1	1	87
	HT	3	14	11	28	
	WW/ AM	1	5	9	15	(19%)
TOTAL		46	305	110	460	461

AM= Active Monitoring, WW= Watchful Waiting, HT= Hormone Therapy, EBRT= External Beam Radiotherapy, RT= Radiotherapy

3.3.3 Treatment type by risk group – locally advanced & metastatic cancer – SCAN summary

ALL SCAN	Locally Advanced (PSA <50)	Locally Advanced (PSA >50)	Nodal Involvement	Metastatic	TOTAL	% of Total
Surgery	0	0	1	0	1	0.5%
HT Alone	13	23	15	98	149	74.5%
EBRT & HT	9	14	6	5	34	17%
WW	4	6	2	0	12	6%
Other Oncology	0	0	1	3	4	2%
TOTAL	26	43	25	106	200	100%

3.3.4 Treatment for Non-Localised Prostate Cancer (N=200)

		Borders	Lothian	Fife	SCAN	Total
<u>LOCALLY ADVANCED</u>	Surgery	0	0	0	0	
Diagnosis PSA <50	HT Alone	0	4	9	13	26
No Nodes/ Metastases	EBRT & HT	1	4	4	9	
	WW	0	2	2	4	(15%)
	Clinical Trial	0	0	0	0	
<u>LOCALLY ADVANCED</u>	Surgery	0	0	0	0	
Diagnosis PSA >50	HT Alone	3	15	5	23	43
No Nodes/ Metastases	EBRT & HT	2	7	5	14	
	WW	1	0	5	6	(19%)
	Clinical Trial	0	0	0	0	
<u>NODAL INVOLVEMENT</u>	Surgery	1	0	0	1	
Any PSA	HT Alone	0	11	4	15	25
No Distant Metastases	EBRT & HT	0	1	5	6	
	WW	0	1	1	2	(14%)
	Clinical Trial	0	1	0	1	
<u>METASTATIC</u>	Surgery	0	0	0	0	
Any PSA	HT Alone	8	48	42	98	106
Distant Metastases (+/- Nodes)	EBRT & HT	2	2	1	5	
	WW	0	0	0	0	(52%)
	Clinical Trial	0	3	0	3	
TOTAL		18	99	83	200	

3.4 Prostatectomy Approach

3.4.1 Prostatectomies: patients diagnosed in Borders, Fife, and Lothian in 2009 (Does not include patients diagnosed in Dumfries & Galloway)

Type of procedure	Borders	Lothian	Fife	SCAN
Open Procedure	1	2	6	9
Laparoscopic	11	93	2	106
Total Prostatectomy	12	95	8	115

3.4.2 Prostatectomy patients having surgery in Lothian and Fife in 2009

Number of prostatectomies carried out in SCAN health boards (Lothian and Fife) during 2009. This includes those diagnosed on any date and in any health board. Only patients who had prostatectomy as their first treatment are included in Fife figures.

Type of procedure	Lothian surgery	Fife surgery	SCAN
Open Procedure	1	4	5
Laparoscopic	116	0	116
Total Prostatectomy	117	4	121

Comment:

Table 3.4.1 shows 2 open procedure cases for Lothian while Table 3.4.2 shows 1 case- this can be explained by difference in cohort as the Table 3.4.1 includes patients who were diagnosed in 2009 but may have had surgery in 2010 while Table 3.4.2 contains only patients who had surgery in 2009 regardless of diagnosis date.

3.5 Edinburgh Cancer Centre- Radiotherapy

Oncologists based at the Edinburgh Cancer Centre serve the entire SCAN region and a proportion of patients from other boards for specialist procedures. Below is a summary of radiotherapy service activity which is based on number of Bladder and Prostate cancer patients seen by each oncologist by calendar year (does not include duplicate patients within the year but does include patients twice if seen in both years).

Prostate Cancer- Radical Radiotherapy Patients receive 3 months of hormone therapy prior to radiation so may begin treatment the year following their diagnosis. Some also defer starting oncological treatment (from months to years) and may undergo radiotherapy post-surgery or as part of a clinical trial which can intentionally be some time after diagnosis. There are also a significant number of patients receiving radiotherapy for a recurrence/ spread of cancer or with a palliative intent e.g. Bone metastases.

SCAN reporting focuses on patients diagnosed within a year who are then followed for recording of definitive treatment. A small proportion of patients who have not yet started or completed definitive treatment at time of analysis may not be included in the figures for patients receiving radiotherapy.

Prostate and Bladder Cancer	2009	2010
Number of patients seen by Consultant Uro-oncologist	633	625

Note: 2 full time oncologists in 2009, addition of a third oncologist in 2011.

3.6 Outcome - Mortality

1 year mortality	Borders	Lothian	Fife	SCAN
Total Deceased	4	16	18	38
Diagnosis to Death (Range) days	50 - 356	54 - 358	22 - 357	22 - 358
Diagnosis to Death (Median) days	300	193	205	229
Age at Diagnosis (Range) years	60-87	54 - 90	60 - 89	54 - 90
Age at Diagnosis (Median) years	66	75.5	74.5	75

Comment:

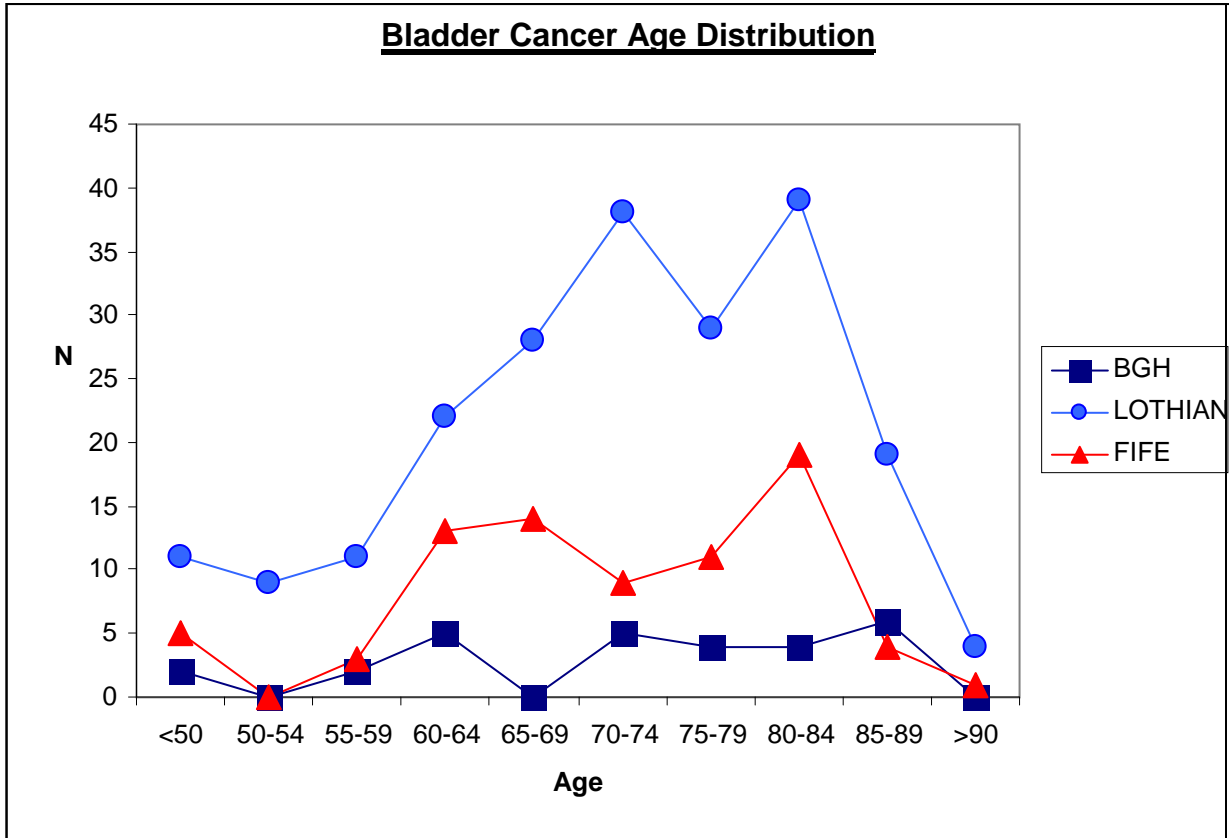
The table above shows patients who were diagnosed in SCAN during 2009 and were recorded as deceased within 365 days of diagnosis date.

This is an all-cause of death comparison so may include patients where cancer was not their primary cause of death.

4 BLADDER CANCER

4.1 Incidence and Timeline

NOTE: The inclusion criteria for national prospective cancer audit datasets includes superficial and in situ cancers



Age Distribution				
Age	Borders	Lothian	Fife	SCAN
<50	2	11	5	18
50-54	0	9	0	9
55-59	2	11	3	16
60-64	5	22	13	40
65-69	0	28	14	42
70-74	5	37	9	51
75-79	4	29	11	44
80-84	4	39	19	62
85-89	6	19	4	29
>90	0	4	1	5
Total	28	209	79	316

4.2 Tumour Type & Staging

Tumour Type	Borders	Lothian	Fife	SCAN
TCC	26	190	71	287
SCC	0	11	1	12
Cis	1	2	3	6
Adenocarcinoma	1	0	1	2
Clinical	0	6	1	7
Sarcomatoid	0	0	1	1
Small cell	0	0	1	1
Total	28	209	79	316

4.3.1 Bladder Cancer By Tumour Grade/ Stage - Treatment Given

Staging Groups	Diagnosis Board Totals: Borders 28 Lothian 209 Fife 79	Total		SCAN Total	
		Total	% board total	Total	% SCAN total
Superficial (G1/G2 pTa)	Borders Lothian Fife	13 100 27	46 48 35	140	45
Superficially Invasive (G3, pTa/ pT1)	Borders Lothian Fife	8 44 28	29 21 35	80	24
Invasive (G3, pT2- 4)	Borders Lothian Fife	4 40 13	14 19 16	57	18
Metastatic (N+, M+)	Borders Lothian Fife	0 10 0	0 5 0	10	3
Inapplicable (G3 pTx, pTis, Clinical, Not Recorded)	Borders Lothian Fife	3 15 11	11 7 14	29	9
Total		316	100	316	100

4.3.1 Superficial Bladder Cancer - Treatment Given

Superficial (G1/G2 pTa)	BCG/ MMC course (after +/- TURBT)	TURBT alone/ unknown (+/- diathermy)	TURBT + MMC	Cystectomy	Radical RT	Palliative	Chemo & RT	Pt died before treatment	Total
Borders	0	13	0	0	0	0	0	0	13
Lothian	2	21	74	0	2	1	0	0	100
Fife	0	11	16	0	0	0	0	0	27
	2	45	90	0	2	1	0	0	140

4.3.2 Superficially Invasive Bladder Cancer - Treatment Given

Superficially Invasive (G3, pTa/ pT1)	BCG/ MMC course (after +/- TURBT)	TURBT alone/ unknown (+/- diathermy)	TURBT + MMC	Cystectomy	Radical RT	Palliative	Chemo & RT	Pt died before treatment	Total
Borders	2	5	0	0	1	0	0	0	8
Lothian	6	8	23	3	1	3	0	0	44
Fife	5	8	13	1	1	0	0	0	28
	13	21	36	4	3	3	0	0	80

4.3.3 Invasive Bladder Cancer - Treatment Given

Invasive (G3, pT2- 4)	BCG/ MMC course (after +/- TURBT)	TURBT alone/ unknown (+/- diathermy)	TURBT + MMC	Cystectomy (4 neo adj. chemo, 1 adj chemo, 1 adj RT)	Radical RT	Palliative	Chemo & RT	Pt died before treatment	Total
Borders	0	3	0	1	0	0	0	0	4
Lothian	0	2	1	21	7	5	2	2	40
Fife	1	4	1	3	0	4	0	0	13
	1	9	2	25	7	9	2	2	57

4.3.4 Metastatic Bladder Cancer - Treatment Given

Metastatic (N+, M+)	BCG/ MMC course (after +/- TURBT)	TURBT alone/ unknown (+/- diathermy)	TURBT + MMC	Cystectomy	Radical RT	Palliative	Chemo & RT	Pt died before treatment	Total
Borders	0	0	0	0	0	0	0	0	0
Lothian	0	0	0	1	0	8	1	0	10
Fife	0	0	0	0	0	0	0	0	0
	0	0	0	1	0	8	1	0	10

4.3.5 Bladder Cancer with no available staging - Treatment Given

	BCG/ MMC course (after +/- TURBT)	TURBT alone/ unknown (+/- diathermy)	TURBT + MMC	Cystectomy (4 neo adj. chemo, 1 adj chemo, 1 adj RT)	Radical RT	Palliative	Chemo & RT	Pt died before treatment	Total
Borders	0	0	0	2	0	1	0	0	3
Lothian	1	1	0	2	0	9	0	2	15
Fife	2	3	3	2	0	0	0	1	11
	3	4	3	6	0	10	0	3	29

Borders- 3 patients could not be categorised: 3 G3 (2 pTx, 1pT stage not recorded)
Lothian- 15 patients could not be categorised: 6 patients who were G3pTx
7 clinically diagnosed with no record of metastatic staging
2 patients who were pTis
Fife- 11 patients could not be categorised: 7 patients with no pTNM recorded
3 with grade not recorded or inapplicable
1 G3 pTx with no N or M staging

4.4 Edinburgh Cancer centre- Radiotherapy

Please see point 3.5 of the Prostate Cancer chapter for Radiotherapy at the Edinburgh Cancer Centre data and detail (Page 16)

4.5 Outcome - Mortality

1 year Mortality	Borders	Lothian	Fife	SCAN
Total Deceased	1	34	13	48
Diagnosis to Death (Range) days	n/a	37 - 329	19- 360	19 - 360
Diagnosis to Death (Median) days	176	134	171	140
Age at Diagnosis (Range) years	43-88	52 - 91	40 - 90	40 – 91
Age at Diagnosis (Median) years	74.5	73.5	82	76

Comment: The table above shows patients who were diagnosed in SCAN during 2009 and were recorded as deceased within 365 days of diagnosis date. This is an all-cause of death comparison so may include patients where cancer was not their primary cause of death.

4.5 Clinical Effectiveness Measures

These measures are based on selected guidelines from the SIGN Guideline No. 85 for Management of Transitional Cell Carcinoma of the Bladder. There are no formally-defined measurement criteria for these guidelines e.g. to clarify appropriate exclusions, which may affect compliance achievements.

SIGN 85 3.1.3

100% of patients diagnosed with a pT2-4 (N0, M0) tumour should have a cystectomy within three months of diagnosis (Diagnosis defined as first positive histology)

These results relate to patients diagnosed in Lothian, Fife, and Borders between 01/01/2009 and 31/12/2009. Cystectomies were also performed in Lothian on patients from other health boards, on those whose initial pathology did not meet above criteria, and also those who were initially diagnosed outside the 2009 cohort.

	Borders	Lothian	Fife
Total numbers diagnosed with pT2 – 4, N0, M0	4	40	13
Number of those patients undergoing Radical cystectomy (partial cystectomy excluded)	1	21	3
<93d from diagnosis to cystectomy	1	14	0
>93d from diagnosis to cystectomy	0	7	3
Median time from diagnosis to cystectomy	79 days	51 days	236
Range	79 days	30 - 246 days	159 - 241
Compliance	100%	67%	0%

Reason for cystectomy delay:

Lothian Note:

40 pT2-4 N0 M0 patients of which 21 had Cystectomies, reasons for delay to surgery can be summarised: 4 had neo adjuvant chemotherapy, 1 decided against chemotherapy, 1 needed colorectal investigations, 1 delayed due to availability of operating facilities.

Fife Note:

13 pT2-4, 3 Cystectomies (2 patients had neo-adj chemo, 1 unsuitable for neo-adj chemo)
The remaining 10 did not undergo a Cystectomy for the following reasons: 8 palliative/ supportive care, 2 Chemotherapy/ Radiotherapy)

Borders Note:

3 patients diagnosed in borders had a cystectomy. They did not meet the criteria for inclusion in this measure. 4 patients were diagnosed with invasive disease however only 1 proceeded to surgery, the remaining 3 patients were either unfit for surgery or were treated palliatively.

SIGN 85 4.4

A single instillation of intravesical chemotherapy (Mitomycin C, MMC) should be used to reduce the risk of recurrence in all patients considered to be at high risk of recurrence
(Defined by clinicians as Tis/ T2/ G3)

High risk patients & TURBT.	Borders	Lothian	Fife
All patients with Tis / T2 / G3 at diagnosis and had TURBT	Not Recorded	87	44
Patients receiving 1 shot chemo at 1st TURBT	Not Recorded	37	18
Compliance	Not Recorded	43%	41%

Comment: Includes patients who did not have pathological staging prior to TURBT so the risk group was determined using clinical staging.

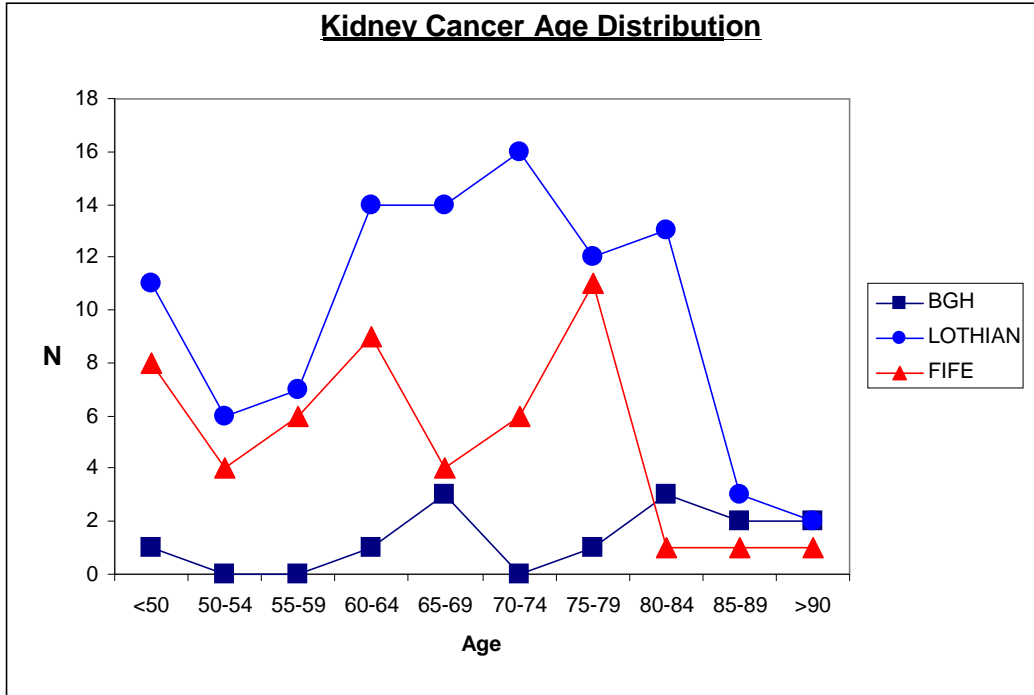
SIGN 85.4.6.1

Cis patients should have BCG (Bacillus Calmette-Guerin) treatment

	Borders	Lothian	Fife	SCAN
Patients diagnosed with Cis alone	1	2	3	6
Patients receiving BCG	1	2	3	6
Compliance	100%	100%	100%	100%

5 KIDNEY CANCER

5.1 Incidence & Timeline



Age Distribution									
Age	Borders		Lothian		Fife		SCAN		
<50	1	7.7%	11	11.2%	8	15.7%	20	12.3%	
50-54	0	0.0%	6	6.1%	4	7.8%	10	6.2%	
55-59	0	0.0%	7	7.1%	6	11.8%	13	8.0%	
60-64	1	7.7%	14	14.3%	9	17.6%	24	14.8%	
65-69	3	23.1%	14	14.3%	4	7.8%	21	13.0%	
70-74	0	0.0%	16	16.3%	6	11.8%	22	13.6%	
75-79	1	7.7%	12	12.2%	11	21.6%	24	14.8%	
80-84	3	23.1%	13	13.3%	1	2.0%	17	10.5%	
85-89	2	15.4%	3	3.1%	1	2.0%	6	3.7%	
>90	2	15.4%	2	2.0%	1	2.0%	5	3.1%	
Total	13	100.0%	98	100.0%	51	100.0%	162	100.0%	

Age	MALE- Age Distribution			FEMALE- Age Distribution			SCAN
	Borders	Lothian	Fife	Borders	Lothian	Fife	
<50	1	5	3	0	6	5	20
50-54	0	1	3	0	5	1	10
55-59	0	5	5	0	2	1	13
60-64	1	5	4	0	9	5	24
65-69	1	9	4	2	5	0	21
70-74	0	8	3	0	8	3	22
75-79	1	5	6	0	7	5	24
80-84	2	8	0	1	5	1	17
85-89	1	1	1	1	2	0	6
>90	1	2	1	1	0	0	5
Total	8	49	30	5	49	21	162

Timelines	Borders	Lothian	Fife	SCAN
	Median (days)	Median (days)	Median (days)	Median (days)
Referral to Diagnosis	2	0	1	0
Referral to First Treatment	22	56.5	57	56
Diagnosis to First Treatment	22	47	40	43
Diagnosis to First Surgery	53	54	44	53

5.2 Tumour Type & Staging

Tumour Morphology	Borders	Lothian	Fife	SCAN
Renal Cell Carcinoma	5	59	35	99
Clinical Diagnosis only	8	32	14	54
Chromophobe/papillary TCC/ oncocytic neoplasm	0	4	2	6
Metastases Histology	0	3	0	3
Total	13	98	51	162

Pathological Tumour Size	Borders	Lothian	Fife	SCAN
Number with Size recorded	3	63	34	100
Range	n/a*	20 - 187	25 - 150	20 - 187
Median	n/a*	64	57	60
Inapplicable	n/a*	n/a	n/a	3

* Range and Median cannot be calculated due to small numbers.

Median Tumour Size (mm)	Male	Female
Borders	<i>Number too small for comparison</i>	
Lothian	70	60
Fife	62.5	47.5

5.3 Treatment Types by Stage Group

Fuhrman	Surgery	Supportive care & Palliative RT/ Chemo	WW	RFA	Systemic Therapy (Sutent)	Total
Borders						
Grade 1	0	0	0	0	0	0
Grade 2	1	0	0	0	0	1
Grade 3	1	0	0	0	0	1
Grade 4	0	0	0	0	0	0
Not recorded	0	1	3	0	2	6
Not applicable	1	4	0	0	0	5
Lothian*						
Grade 1	2	0	0	0	0	2
Grade 2	31	0	0	0	0	31
Grade 3	11	0	0	0	0	11
Grade 4	16	0	0	0	0	16
Not recorded	2	12	13	2	4	33
Not applicable	2	0	1	0	0	3
Fife						
Grade 1	2	0	0	1	0	3
Grade 2	21	0	0	2	0	23
Grade 3	9	0	0	0	0	9
Grade 4	2	0	0	0	0	2
Not recorded	0	0	0	0	0	0
Not applicable	0	8	2	0	4	14
TOTAL	101	25	19	5	10	160

*Exclusion: 2 patients excluded (one went private and one went out of region- both surgery)

5.4 Surgery

Type of Radical Surgery	Borders	Lothian*	Fife	SCAN
Laparoscopic Nephrectomy	1	54	19	74
Open Nephrectomy	2	7	11	20
Partial Nephrectomy (open)	0	3	1	4
Lap Nephroureterectomy	0	0	3	3
Total	3	64	34	101

*Exclusion:

2 patients excluded (one went private and one went out of region- both surgery)

Fife acquired approval to perform laparoscopic nephrectomies in April 2009

5.5 Mortality

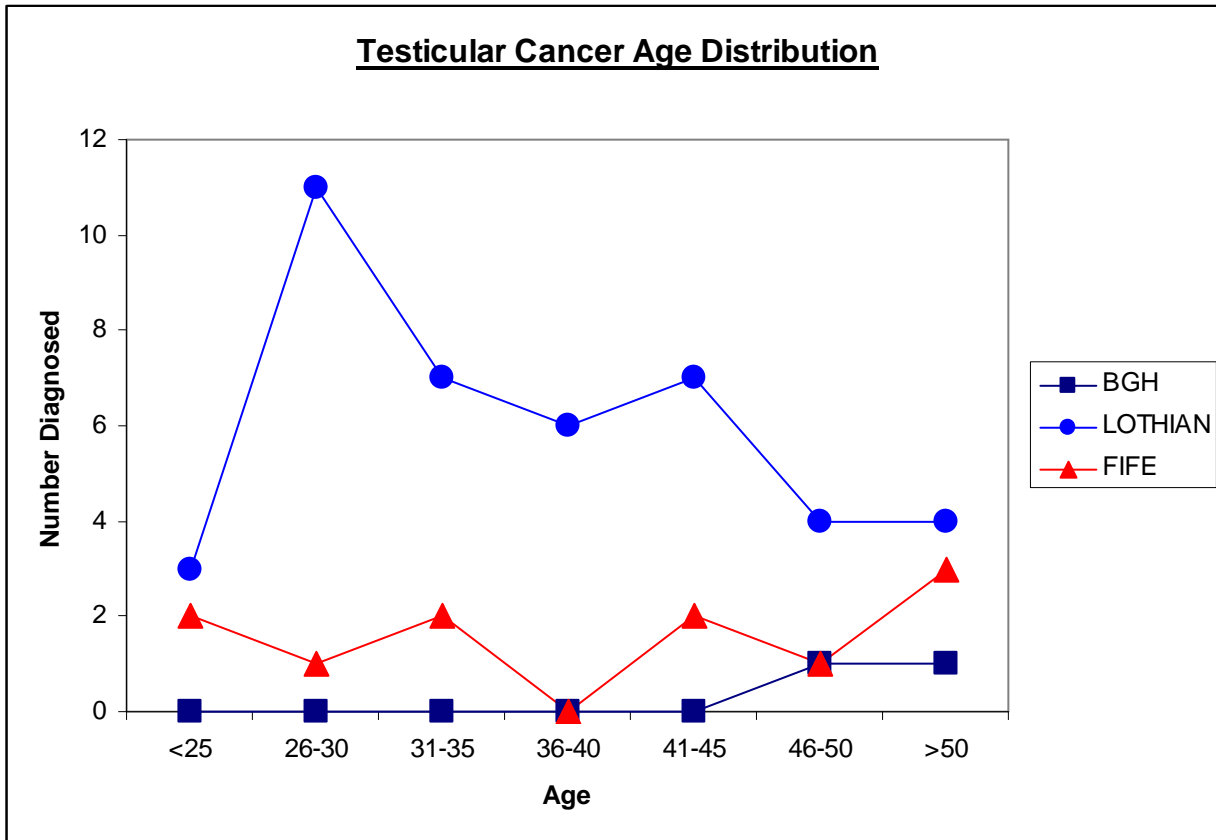
1 year Mortality	Borders	Lothian	Fife	SCAN
Total Deceased	5	12	11	28
Diagnosis to Death (Range) days	13 - 113	37 - 346	1 - 331	1 - 346
Diagnosis to Death (Median) days	72	85	105	85
Age at Diagnosis (Range) years	50-92	46 - 87	50 - 92	46 - 92
Age at Diagnosis (Median) years	81	72	73	74

Comment:

The table above shows patients who were diagnosed in SCAN during 2009 and were recorded as deceased within 365 days of diagnosis date. This is an all-cause of death comparison so may include patients where cancer was not their primary cause of death.

6 TESTICULAR CANCER

6.1 Incidence



Age Distribution				
Age	Borders	Lothian	Fife	SCAN
<25	0	3	2	5
26-30	0	11	1	12
31-35	0	7	2	9
36-40	0	6	0	6
41-45	0	7	2	9
46-50	1	4	1	6
>50	1	4	3	8
Total	2	42	11	55

	Borders	Lothian	Fife	SCAN
Timelines	Median (days)	Median (days)	Median (days)	Median (days)
Referral to Diagnosis	26.5	7	8	8
Referral to First Treatment	26.5	15	18	18
Diagnosis to First Treatment	0	7	7	7
Diagnosis to First Surgery	0	6	7	7

6.2 Tumour Type & Staging

Tumour Types	Borders	Lothian	Fife	SCAN
Seminoma	2	26	7	35
Malignant Teratoma Undifferentiated (MTU)	0	4	0	4
Teratoma	0	3	1	4
Leydig/ Interstitial cell tumour	0	2	0	2
Malignant Teratoma Intermediate (MTI)	0	1	1	2
Mixed Germ Cell	0	1	2	3
SCC	0	1	0	1
Cerebrum- Metastatic choriocarcinoma	0	1	0	1
Carcinoma in-situ	0	1	0	1
Ovarian type Serous papillary cystic tumour of borderline malignancy	0	1	0	1
Serous cystadenoma, borderline malignancy	0	1	0	1
Total	2	42	11	55

6.3 Treatment by Tumour Stage

	Surgery alone	Surgery & Adj. chemo	Surgery & Adj. EBRT	Chemo	Chemo & EBRT	Pt died	Total
SCAN							
Tis	1	0	0	1	0	0	2
T0	1	0	0	0	0	0	1
T1	17	1	2	0	0	0	20
T2	6	2	3	0	0	0	11
T3	0	3	0	0	0	0	3
Not Recorded	12	2	0	2	1	1	18
TOTAL	37	8	5	3	1	1	55

6.4 Outcome- Mortality

1 year Mortality	Borders	Lothian	Fife	SCAN
Total Deceased	0	1	1	2
Diagnosis to Death (Range) days	n/a	26	21	21 - 26
Diagnosis to Death (Median) days	n/a	26	21	23.5
Age at Diagnosis (Range) years	n/a	62	72	62 - 72
Age at Diagnosis (Median) years	n/a	62	72	67

Comment:

The table above shows patients who were diagnosed in SCAN during 2009 and were recorded as deceased within 365 days of diagnosis date. This is an all-cause of death comparison so may include patients where cancer was not their primary cause of death.

6.5 Clinical Effectiveness Measures

These measures are based on selected guidelines from the SIGN Guideline No 28: Management of Adult Testicular Germ Cell Tumours. There are no formally-defined measurement criteria for these guidelines e.g. to clarify appropriate exclusions, which may affect compliance achievements.

SIGN 28 2.2

Testicular cancer patients should be seen within 2 weeks: 100% less than 2 weeks

Time from referral to first clinic	Borders		Lothian		Fife		SCAN	
	n	%	n	%	n	%	n	%
<15 days	0	0	29	69	8	73	37	67
>15 days	2	100	13	31	3	27	18	33
Median (days)	17.5		11		12		11	
Range	17-18		-19 to 109		0 - 56		-19 to 109	

SIGN 28 3.4

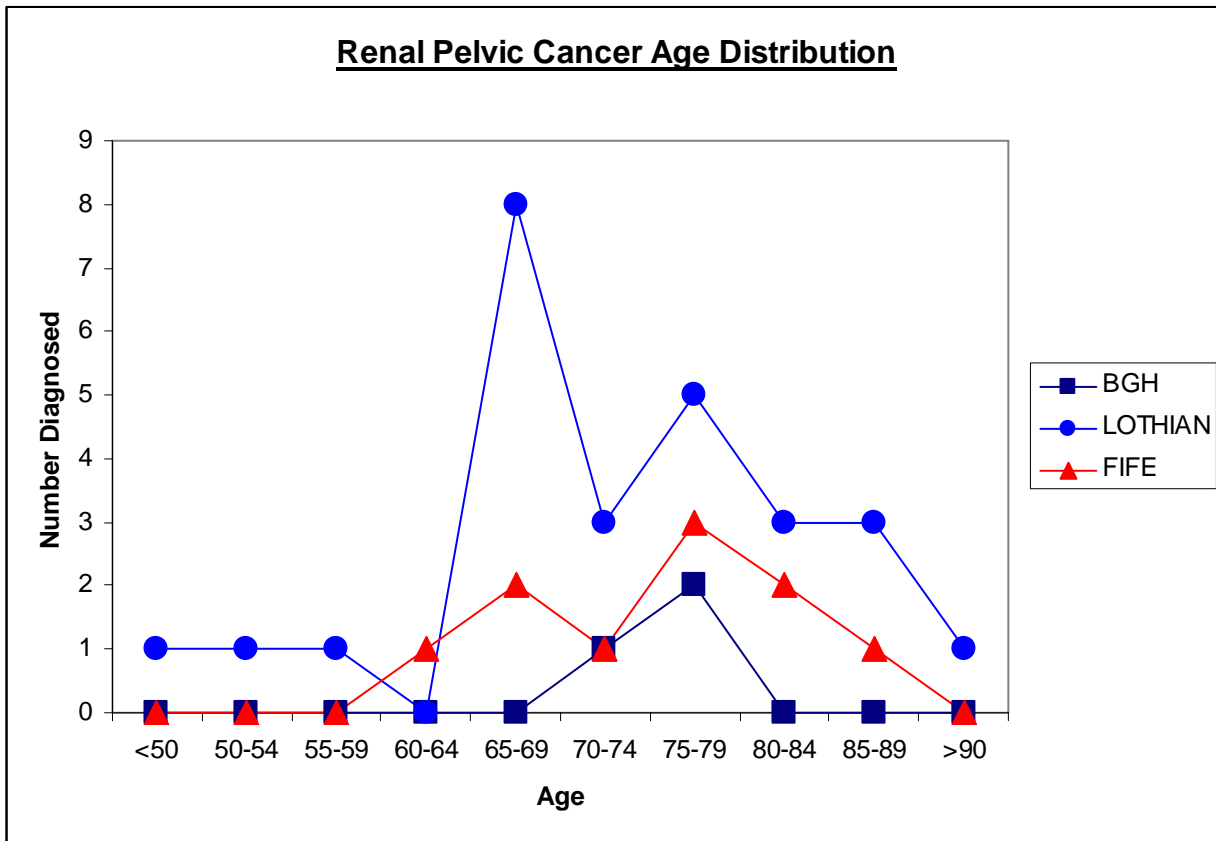
Following confirmation of a germ cell tumour all patients should be referred to a specialist centre and seen by an oncologist within 2 weeks (confirmation date is the date the histological specimen obtained)

Time from pathological procedure to oncology appointment	Borders		Lothian		Fife		SCAN	
	n	%	n	%	n	%	n	%
<15 days	0	0	14	40	2	18	16	35
>15 days	2	100	21	60	9	82	30	65
Median (days)	41.5		18		39		23	
Range	41 to 42		- 19 to 54		0 to 238*		-19 to 238	

*Fife Note: patient deferred oncology follow-up.

7 RENAL PELVIS, URETER & URETHRAL CANCERS

7.1 Incidence & Timeline



Age Distribution				
Age	Borders	Lothian	Fife	SCAN
<50	0	1	0	1
50-54	0	1	0	1
55-59	0	1	0	1
60-64	0	0	1	1
65-69	0	8	2	10
70-74	1	3	1	5
75-79	2	5	3	10
80-84	0	3	2	5
85-89	0	3	1	4
>90	0	1	0	1
Total	3	26	10	39

	Borders	Lothian	Fife	SCAN
Timelines	Median (days)	Median (days)	Median (days)	Median (days)
Referral to Diagnosis	69	2.5	42	21
Referral to First Treatment	187	68	64	72
Diagnosis to First Treatment	118	54	40	51
Diagnosis to First Surgery	118	63.5	45	61

7.2 Tumour Type & Staging

Tumour Type	Borders	Lothian	Fife	SCAN
TCC	3	18	8	29
Clinical Diagnosis/ other	0	3	0	3
SCC	0	3	0	3
Carcinoma in-situ	0	1	0	1
Adenocarcinoma	0	1	0	1
Urothelial	0	0	1	1
N/A (no path)	0	0	1	1
Total	3	26	10	39

Clinical T Stage	Borders	Lothian	Fife	SCAN
Tx	0	1	0	1
Ta	0	2	0	2
Tis	0	1	0	1
T1	3	2	0	5
Not Recorded	0	20	10	30
Total	3	26	10	39

<u>Pathological T Stage</u>	Surgery	Chemotherapy	Endoscopic treatment/ Laser Ablation	No active treatment/ Pt died/ Pt refused/ WW	Total
Borders					
pTx	2	0	0	0	2
pTa	0	0	0	0	0
pTis	0	0	0	0	0
pT3	0	0	0	0	0
pT4	1	0	0	0	1
Not Recorded	0	0	0	0	0
Clinical	0	0	0	0	0
Lothian					
pTx	1	0	0	1	2
pTa	8	0	5	0	13
pTis	1	0	0	0	1
pT3	2	0	0	0	2
pT4	0	0	0	1	1
Not Recorded	0	1	1	2	4
Clinical	0	0	0	3	3
Fife					
pTa	2	0	1	0	3
pT1	1	0	0	0	1
pT2	3	0	0	0	3
pT3	1	0	0	0	1
pT4	0	0	0	0	0
Not Recorded	0	0	0	1	1
Clinical	0	0	0	1	1
Total	22	1	3	8	39

7.3 Surgery Type

Surgery	Borders	Lothian	Fife	SCAN
Nephroureterectomy	2	11	7	20
Cystectomy	1	1	0	2
Totals	3	12	7	22

7.4 Outcome- Mortality

1 year Mortality	Borders	Lothian	Fife	SCAN
Total Deceased	0	5	3	8
Diagnosis to Death (Range) days	n/a	39 - 205	26 - 329	26 - 329
Diagnosis to Death (Median) days	n/a	99	273	145
Age at Diagnosis (Range) years	n/a	49 - 96	71 - 85	49 - 96
Age at Diagnosis (Median) years	n/a	79.5	80	78

Comment:

The table above shows patients who were diagnosed in SCAN during 2009 and were recorded as deceased within 365 days of diagnosis date. This is an all-cause of death comparison so may include patients where cancer was not their primary cause of death.

8 PENILE CANCERS

8.1 Incidence & Timeline

Age Distribution	
Age	SCAN
<56	4
56-60	2
61-65	2
66-70	2
71+	4
Total	14

	Borders	Lothian	Fife	SCAN
Timelines	Median (days)	Median (days)	Median (days)	Median (days)
Referral to Diagnosis	117	17.5	38	34
Referral to First Treatment	117	48.5	63	61
Diagnosis to First Treatment	0	20	0	13
Diagnosis to First Surgery	0	20	0	13

8.2 Tumour Morphology

Tumour Type	SCAN
SCC Keratinising	2
SCC	9
SCC in-situ	1
Cis	1
Intra-epidermal carcinoma	1
Total	14

8.3 Treatment Type by Tumour Stage & Grade

Grade	Glansectomy / Partial Penectomy	Complete Penectomy	Excision of lesion / Circumcision	Total
SCAN				
G1	0	0	4	4
G2	1	1	0	2
G3	1	1	0	2
G9/ G10	2	0	4	6
TOTAL	4	2	8	14
pT Stage	Glansectomy / Partial Penectomy	Complete Penectomy	Excision of lesion / Circumcision	Total
SCAN				
Tis	1	0	1	2
T1	0	0	4	4
T2	0	2	1	3
T3	1	0	0	1
T9	2	0	2	4
TOTAL	4	2	8	14

8.4 Follow-up treatment

pT Stage	3 months post-treatment	6 months post-treatment	12 months post-treatment
pTis (n=2)	No Recurrence	No Recurrence	No Recurrence
pT1 (n=4)	1 sentinel node dissection & 1 excision Biopsy	1 Nodal Biopsy	No Recurrence
pT2 (n=3)	2 Lymphadenectomies, RIP	1 Nodal Biopsy	1 Radiotherapy
pT3 (n=1)	1 Lymphadenectomy	No Recurrence	No Recurrence
Not Recorded (n=4)	1 Lymphadenectomy & 1 Nodal Biopsy	1 Topical Chemotherapy	No Recurrence

8.5 Outcome - Mortality

1 year Mortality	Borders	Lothian	Fife	SCAN
Total Deceased	0	1	0	1
Diagnosis to Death (Range) days	n/a	85	n/a	85
Diagnosis to Death (Median) days	n/a	85	n/a	85
Age at Diagnosis (Range) years	n/a	88	n/a	85
Age at Diagnosis (Median) years	n/a	88	n/a	85

Comment:

The table above shows patients who were diagnosed in SCAN during 2009 and were recorded as deceased within 365 days of diagnosis date. This is an all-cause of death comparison so may include patients where cancer was not their primary cause of death.