SCAN
South East Scotland Cancer Network

NHS SCOTLAND

Working regionally to improve cancer services

SOUTH EAST SCOTLAND CANCER NETWORK
PROSPECTIVE CANCER AUDIT

MELANOMA 2012
COMPARATIVE AUDIT REPORT

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SCAN COMPARATIVE MELANOMA REPORT 2012

PATIENTS DIAGNOSED
1 JANUARY – 31 DECEMBER 2012

Contents

INTRODUCTION AND METHODS

This report presents analysis of data collected on patients newly-diagnosed with primary invasive melanoma ICD-10 C43 (>Clark Level 1) or secondary melanoma with no known primary, except those with melanoma of the eye, between 1 January and 31 December 2012 in the four health board regions comprising the South East Scotland Cancer Network (SCAN) i.e. Borders, Dumfries and Galloway, Fife and Lothian. Numbers include private patients as well as those treated in the NHS.

Basis of Analysis

There are currently no nationally-agreed standards for melanoma cancer care. Measures presented are draft clinical items within the SIGN Guideline on Management of Cutaneous Melanoma (No 72; Date published: July 2003) and items from the Core Standards for Cancer published by NHS Quality Improvement Scotland (NHSQIS) in March 2008. In addition data is presented on recurrence in the format required by the Scottish Melanoma Group and the Scottish Dermatological Society.

Patients included in the Report

All patients diagnosed with Primary Invasive Melanoma or secondary melanoma (no known primary) 1 January – 31 December 2012

Network/Health Board/Hospital	Lead Clinician	Audit Support
SCAN, NHS Lothian and Borders	Dr V Doherty	Jon Pullman
NHS D&G	Dr J Norris	Kirsten Moffat
NHS Fife	Dr M Mowbray	Jackie Stevenson
NHS Lothian – Department of Plastic Surgery	Mr M Butterworth	

Datasets and definitions

The dataset collected is the Scottish National Core Minimum dataset as published by ISD Scotland in April 2005. This may be viewed on the ISD website (www.isdscotland.org). Further information on the dataset and definitions can be obtained from Jon Pullman, SCAN Cancer Audit Facilitator, Dept of Dermatology, Lauriston Building, Edinburgh EH3 9HA. Jonathan.Pullman@luht.scot.nhs.uk

Data Quality

Estimated Case Ascertainment

An estimate of case ascertainment (the percentage of the population with melanoma recorded in the audit) is made by comparison with the Scottish Cancer Registry three year average data from 2009 to 2011 (see Table 1). High levels of case ascertainment provide confidence in the completeness of the audit recording and contribute to the reliability of results presented. However, levels greater than 100% may be attributable to an increase in incidence. Allowance should therefore be made in reviewing results where numbers are small and variation may be due to chance.

Quality assurance of data

All hospitals in the region participate in any Quality Assurance programmes provided by the National Services Scotland Information Services Division (ISD) but QA of the full Primary Invasive Melanoma dataset has not yet been undertaken.

Process for reviewing and reporting the results
To ensure the quality of the data and the results presented, the process was as follows:

- Individual health board results were reviewed and signed-off locally

- The report was reviewed by the lead clinicians with the assistance of the audit staff. Arising from these discussions a number of items of data were checked and amendments made so that there was agreement on the results shown.
- The results and the issues raised by the results will be considered by the Lead Clinicians at a SCAN group meeting on 01/11 /2013 and comments added to the report
- The Lead Clinicians agreed to circulate the report for final sign off by the SCAN Skin Group on 11/02/2014.

Actions for Improvement
After final sign off, the process is for the report to be sent to the Clinical Governance groups within the four health boards and to the Regional Cancer Planning Group. Action plans and progress with plans will be highlighted to the groups. The report will be placed on the SCAN website once it has been fully signed-off and checked for risk of disclosure of personal information.

Action points for 2012: as part of clinical sign-off areas for improvement are highlighted in the Action Plan 2012 results. Information is also provided on progress with Action Plans for 2011.

Action Plan Melanoma 2011

Report Section	Possible area for improvement	Proposed action	Which clinical standard will be met?
Table 1	Review of case ascertainment in D&G	Analyse against tracking/audit data once 2010 cancer registration is complete	No clinical standard but high levels of case ascertainment provide confidence in reliability of results
Table 2	Continuing higher incidence of thicker melanomas in Fife	Request ISD to carry out work on age standardised incidence of thicker mm in Fife. M Mowbray has approached Fife Public Health requesting help in analysing data. Awaiting reply	No specific clinical standard but outcome for patients diagnosed with thicker lesions is poorer Brought forward from 2010
Table 6	% Fife patients diagnosed by GP	Fife audit have looked in more detail at these cases: which GP, type of biopsy, onward referral. M Mowbray to look at GP initial diagnosis on pathology report and thereafter direct education/advice appropriately; check appropriate pathway from Primary to Secondary care	Suspected melanoma should be managed in secondary care
Table 6a	% SCAN patients diagnosed by GP	SCAN to write letters to all GPs in SCAN raising awareness of referral of all suspicious pigmented lesions to secondary care	Suspected melanoma should be managed in secondary care
Table 8	Issue of pathology reports	Fife, and NHS Lothian UHD pathology to review turnaround times >28 days Very little delay in issue of reports in Fife Report on Lothian & Borders cases due February 2012 Clinicians to prompt Pathology for results for patient return appointment	There are no guidelines about optimum time period for issue of pathology reports 2011 data for Lothian & Borders shows improvement to 65% having results within 2 weeks Brought forward from 2010
Table 9	Reporting of mitotic rate Attendance by Fife Lab	Review % of D&G pathology reporting of mitotic rate Fife pathology remains understaffed. M Mowbray to	No clinical standard but mitotic rate is included in calculating eligibility for SLNB Brought forward from 2010

	Pathologist at fortnightly MDM	highlight again the request for attendance at MDM	
Table 13	Patients waiting >56 days from diagnosis to second stage treatment Fife time from diagnosis to second stage treatment Borders & Lothian diagnosis to second stage treatment	All health boards in SCAN to review waits >56 days to establish if there is a pattern to delays Review and compare with 2012 data following changed service provision in Fife from November 2011 2011 data showed Borders and Lothian 61.3% within 56 days. Review of Q1 and Q2 2012 data 62.8%	No specific standards but improvement of timescales through the care pathway is needed as highlighted in patient experience survey Brought forward from 2010

Action Plan Melanoma 2012

Report Section	Possible area for improvement	Proposed action	Which clinical standard will be met?
Table 2	Continuing higher incidence of thicker melanomas in Fife and rising incidence in Dumfries & Galloway	Megan Mowbray said late presentation affecting all tumour types in Fife: **Clive Preston**, Lead Cancer Clinician for Fife, liaising locally with public health in Fife **Kate Macdonald** to explore possible alternative funding source for Breslow depth data analysis. Megan Mowbray, Val Doherty, Alex Holme to discuss options for further investigating these observations. Will enquire regards funding options.	No specific clinical standard but outcome for patients diagnosed with thicker lesions is poorer
Table 6	Use of sample biopsy method	**Alex Holme** currently looking at impact of punch biopsy (as against incision/excision) on 5-year survival	

Table 7	Time from Diagnostic Biopsy to Path Report	Original Pathology date to be used for analysis where histology is superseded by subsequent reports.	
Table 8	Mitotic Rate reporting	Once melanoma QPIs published, **Megan Mowbray** to write to all SCAN pathologists detailing required pathology and requesting use of a pathology minimum data set such that necessary information is included and easier for audit staff to record.	
Table 10	Pathological T stage reporting	This will be included in letter to all SCAN pathologists following melanoma QPI publication.	
Table 13	Excessive waits for second treatment	Further detailed analysis of waits >56 days. (**Audit**) Progress attempts to obtain data for private patients as part of figures.	
Table 11b	GP Excisions	**(Alex Holme), Megan Mowbray** to provide feedback to Fife GPs about 2012 audit paper.	
Table 17	CNS contact in Borders/D&G	Check for role of Glasgow referrals in low contact % for D&G **Sheena Dryden** to progress establishment of more support links in Borders/D&G	
QPIs: new indicators will incorporate patients' input to service. QPIs: clinical trials QPI under discussion QPIs: draft QPI set, once released, requires "careful review"			

Comment by SCAN Skin Group Chair

Cutaneous melanoma has increased in incidence in Scotland over 50% in the last 10 years (ISD data). Melanoma is the 5th commonest cancer in Scotland. Data from the SCAN comparative melanoma report provides an important source of information for studying the epidemiology of melanoma, monitoring the patient pathway and monitoring changes in the demand for services. It is imperative that the data included in this report is correct. I would like to thank all regional cancer audit facilitators for the time they have spent collecting and collating this data, in particular Jon Pullman who has collated all regional SCAN data to compile this comparative report. The dedication of all audit staff is demonstrated by a case ascertainment figure of 107%.

With the advent of melanoma QPIs in 2014/15 there are likely to be some changes in data collection and regional variation in systems used. Physicians and audit staff must work together both to ensure this change is as streamlined as possible and the data collected continues to be useful in highlighting epidemiological trends, the patient pathway and demands on service provision.

The Breslow thickness of a melanoma remains the strongest predictor of prognosis. A higher than average percentage of thick melanomas (Breslow >4mm) were diagnosed in men in Fife and Dumfries and Galloway and in women in Fife and the Borders. The numbers are small however preliminary analysis of Fife data over the past 5 years suggests this finding is significant. It has been observed that all cancers tend to present later in Fife, this observation is currently being discussed with NHS Fife public health. With regards cutaneous melanoma, we plan to look at options for further analysing these observations across the SCAN region.

Cutaneous melanoma affects a high percentage of the working age population and interestingly this percentage is highest in Fife. This observation may in part explain the higher percentage of thick lesions in Fife. Only 33% of melanomas in the Borders were in those of working age compared with 59% in Fife, this difference may be explained by a higher proportion of the Borders population being retired.

The top 3 anatomical sites remain unchanged over the past 4 years. In men the commonest site is the head and neck and in women the lower leg.

The majority of melanomas are of the superficial spreading type. The proportion of lentigo maligna melanomas has increased over time. This increase could be explained by changes in pathology reporting and demographics. A number of melanomas were listed as ‘unclassifiable’ histogenetic type, it is likely that these were superficial spreading melanomas but no documentation was made on the pathology form. Tables 9 and 10 demonstrate further variation in pathological reporting of ulceration and pathological T stage. With the advent of melanoma QPIs it is hoped that regional variations in pathology reporting will be reduced. The ideal would be that all melanomas are reported using a minimum data set template, this would aid accurate data collection and comparison. The SCAN skin group will write to all SCAN pathologists following the publication of the melanoma QPIs to request uniform reporting using a minimum data set template.

The majority of cutaneous melanomas were diagnosed and therefore treated by excisional biopsy. In most cases this is performed by a dermatologist at the initial clinic visit. Twenty four percent were diagnosed by sample biopsy, this includes incision, shave or curettage. Sampling is often performed if there is diagnostic doubt or for planning/staging purposes in larger lesions or those on cosmetically challenging areas. It is not known if the type of diagnostic biopsy has a prognostic influence. Dr Alex Holme is currently leading a study to look at the 5 year survival of punch biopsy against incision/excision.

The time from diagnostic biopsy to issue of the pathology report remains higher in Lothian, an improvement has been seen since 2011. Lothian is a teaching hospital with a bigger lab and a higher number of trainees. In the past no specific identifiable factors were found but all of these elements probably contribute to the delay.

In 2011 it was observed that a higher proportion of melanomas were excised in general practice than was seen in other regions. This proportion was particularly high in Fife. A letter was written to all GPs in SCAN to remind them of referral guidelines for suspicious pigmented lesions. In addition a 'lesion teaching programme' was set up for GPs in Fife. This report shows a reduction in the proportion of melanomas excised in general practice across SCAN. Feedback will be provided to Fife GPs with regards these observations. A high proportion of melanomas were excised by GPs in Dumfries, possibly reflecting the smaller numbers. Clarification will be sought as to whether there is a GPwSI working in the hospital or community which may have resulted in this higher proportion of GP excisions.

No specific clinical standards exist for the wait from diagnostic biopsy to second stage/ definitive treatment. In those whose diagnostic biopsy was a sample biopsy, definitive treatment will include excision with a wide local excision (WLE) +/- sentinel lymph node biopsy (SLNB). In those whose diagnostic biopsy was an excision, definitive treatment will include a WLE +/- SLNB. The SCAN skin group feel that 90 days should be regarded as the maximum a patient should wait, ideally all patients should have their definitive treatment within 56 days. In 2012 42% of patients waited longer than 56 days for their definitive treatment. Further analysis will be performed in the hope that we can better understand where these delays have arisen. Eleven patients were treated in the private sector - Dr Alex Holme will attempt to obtain treatment time figures for these patients.

The role of SLNB remains unclear. Of those eligible, the number having a SLNB has fallen from 70% in 2010 to 42% in 2012. This data remains useful for service planning.

Contact with the regional skin cancer nurse specialist (CNS) is invaluable. A regional CNS makes contact with the majority of melanoma patients in Lothian and all those travelling into Lothian from other regions for WLE, SLNB or oncology services. A regional CNS in Tayside makes contact with all patients from Fife who travel to Tayside for WLE and SLNB. Fife patients have the opportunity to meet with a dermatology skin cancer link nurse based in Fife, such local support has allowed for 92% of Fife patients to be seen by a regional CNS, link nurse or both. With the help of MacMillan funding Fife plan to develop this service and assess the impact it has on

patients. SCAN regional CNS Sheena Dryden will explore methods which can be adopted in the Borders and Dumfries and Galloway with the hope of increasing local support available.

Five year survival analysis for the SCAN region is comparable with published figures. The results presented in this report have also been compared with data presented by NOSCAN and WOSCAN at the annual Scottish Melanoma Group meeting held in November 2013. I thank all contributors to this report for providing high quality audit data and I look forward to the challenge of measuring our data against the national melanoma QPIs.

Document History

Version	Circulation	Date	Comments
Version 1	Draft circulated to Lead clinicians ahead of pre-sign off meeting	29/08/2013	
Version 1	Lead Clinicians and Audit Staff for pre sign-off meeting	12/09/2013	Suggested amendments and action points discussed
Version 2	Draft circulated to Lead Clinicians and Audit Staff	22/10/2013	
Version 3	SCAN Skin Group	01/11/2013	Glossary added Interactive contents page added
Version 4	Clinical Governance Groups, Lead Managers and Chairs in the four health boards and to the SCAN Regional Cancer Planning Group	24/02/2014	Report number added
Final Version	Lodged on SCAN website	June 2014	Checked for disclosive data.

Table 1: Estimate of Case Ascertainment

Health Board	2012 SCAN Registrations	2009 - 2011 Average Number of Cancer Registrations per year^	Estimated Case Ascertainment
Borders	33	26	126.9%
D&G	29	32	90.6%
Fife	65	57	114.0%
Lothian*	192	184	104.3%
SCAN	319	299	106.7%

^ historical figures from ACaDMe

*Lothian n192 includes 11 patients diagnosed in private sector

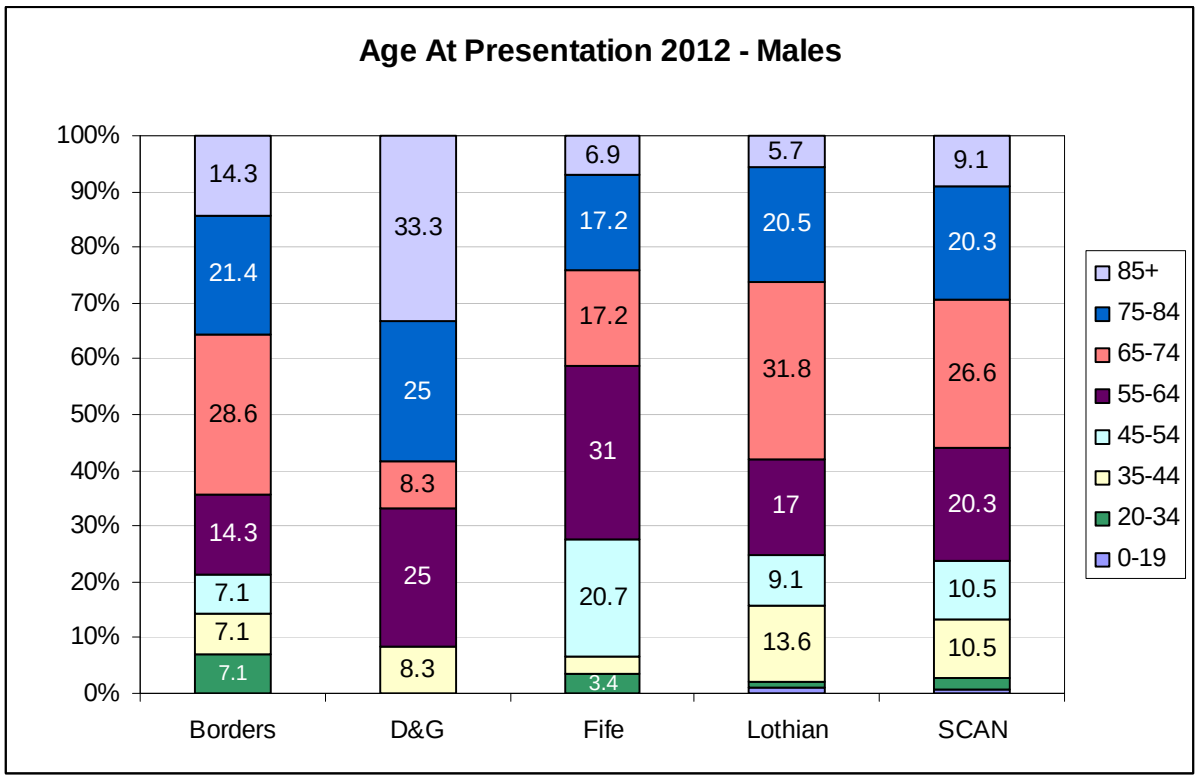
High levels of case ascertainment provide confidence in reliability of results. However, allowance has to be made in reviewing the results where numbers are small and variation may be due to chance.

Table 2: Breslow Depth n319 lesions

Male	Borders		D&G		Fife		Lothian		**SCAN**		**SCAN 2009-11**	
mm	n14	%	n12	%	n29	%	n88	%	n143	%	n	%
0-0.99	6	42.9	8	66.7	15	51.7	52	59.1	81	56.6	*232*	*53.6*
1-1.99	3	21.4	1	8.3	6	20.7	14	15.9	24	16.8	66	15.2
2-2.99	1	7.1	0	0.0	0	0.0	10	11.4	11	7.7	32	7.4
3-3.99	1	7.1	0	0.0	1	3.4	2	2.3	4	2.8	25	5.8
≥4	2	14.3	3	25.0	5	17.2	7	8.0	17	11.9	55	12.7
Mets	1	7.1	0	0.0	2	6.9	3	3.4	6	4.2	11	2.5
n/a	0	0	0	0	0	0	0	0	0	0	12	2.8
Total	14	100.0	12	100.0	29	100.0	88	100.0	143	100.0	433	100

Female	Borders		D&G		Fife		Lothian		**SCAN**		**SCAN 2009-11**	
mm	n19	%	n17	%	n36	%	n104	%	n176	%	n	%
0-0.99	8	42.1	12	70.6	20	55.6	74	71.2	114	64.8	266	58.5
1-1.99	5	26.3	2	11.8	4	11.1	14	13.5	25	14.2	94	20.7
2-2.99	1	5.3	0	0.0	2	5.6	6	5.8	9	5.1	32	7.0
3-3.99	1	5.3	1	5.9	4	11.1	3	2.9	9	5.1	12	2.6
≥4	3	15.8	1	5.9	5	13.9	7	6.7	16	9.1	39	8.6
Mets	1	5.3	0	0.0	0	0.0	0	0.0	1	0.6	5	1.1
n/a	0	0.0	1	5.9	1	2.8	0	0.0	2	1.1	7	1.5
Total	19	19.0	17	100.0	36	100.0	104	100.0	176	100.0	455	100

Table 3: Age at Presentation n319 lesions



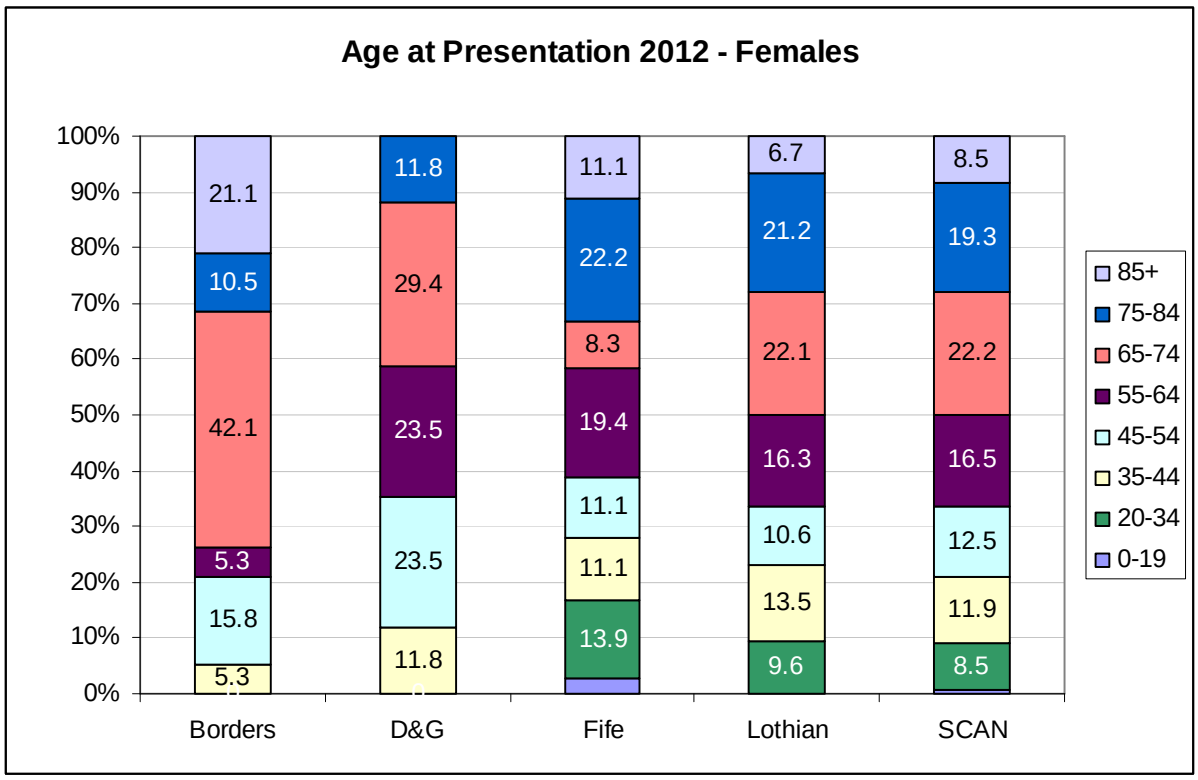


Table 3a: Incidence in Working Age population (18 to 64, Male and Female) n319 lesions

	Borders		D&G		Fife		Lothian		SCAN	
Number	n33	%	n31	%	n65	%	n192	%	n319	%
Incidence	11	33.3	14	48.3	38	58.5	92	47.9	155	48.6

Table 3b: Median Age at Diagnosis (2002-2012)

Year	Male	Female	Area
2002	64	51	B F L
2003	61	55	B F L
2004	61	48	B F L
2005	61	57	B F L
2006	58	58	B F L
2007	64	55	B F L
2008	64	56	B F(6/12 only) L
2009	64	53	B L
2010	65	54	B L
2011	65	61	B F L
2012	67	66	B L

Table 3c: Gender incidence ratio (2007-2012)

Ratio of male to female

Year	Male	Female
2012	1	1.2
2011	1	1.0
2010	1	1.1
2009	1	1.1
2008	1	1.4
2007	1	1.7

Table 4: Anatomical Site n319 lesions

Site:	SCAN 2012		2009 -11		SCAN 2012		2009 -11	
	n143	%	n433	%	n176	%	n456	%
	Male		Male		Female		Female	
Head and Neck*	38	26.6	111	25.6	37	21.0	82	18.0
Trunk anterior	13	9.1	50	11.5	7	4.0	46	10.1
Trunk posterior	35	24.5	134	30.9	21	11.9	59	12.9
Arm (unspecified)	1	0.7	4	0.9	4	2.3	1	0.2
Arm above elbow	9	6.3	18	4.2	18	10.2	47	10.3
Arm below elbow	12	8.4	41	9.5	14	8.0	40	8.8
Leg (unspecified)	0	0.0	1	0.2	2	1.1	1	0.2
Leg above knee	12	8.4	13	3.0	10	5.7	51	11.2
Leg below knee	7	4.9	26	6.0	45	25.6	84	18.4
Acral	4	2.8	14	3.2	10	5.7	23	5.0
Mucosal	3	2.1	5	1.2	4	2.3	10	2.2
Subungual	1	0.7	4	0.9	2	1.1	4	0.9
Mets at presentation	7	4.9	11	2.5	2	1.1	5	1.1
Not recorded/not known	1	0.7	1	0.2	0	0.0	2	0.4
SCAN	143	100.0	433	100.0	176	100.0	455	100.0

Top three anatomical sites for SCAN 2012			
Male	Head & Neck (26.6%)	Trunk Posterior (24.5%)	Trunk Anterior (9.1%)
Female	Leg below knee (25.6%)	Head & Neck (21.0%)	Trunk Posterior (11.9)

Top three anatomical sites for SCAN 2009 - 2011			
Male	Trunk Posterior (30.9%)	Head & Neck (25.6%)	Trunk Anterior (11.5%)
Female	Leg below knee (18.4%)	Head & Neck (18.0%)	Trunk Posterior (12.9)

NB: *the increased profile of Head & Neck reflects a growing incidence of Lentigo Maligna Melanoma on the face and scalp (see Table 5).

Table 5: Histogenetic Type of Melanoma n319 lesions

	SCAN n143	%	SCAN n176	%
	Male		*Female*	
Lentigo maligna melanoma(lmm)	21	14.7	27	15.3
Superficial spreading (ssmm)	74	51.7	94	53.4
Nodular	14	9.8	21	11.9
Acral	2	1.4	8	4.5
Mucosal	1	0.7	1	0.6
*Other	1	0.7	4	2.3
Unclassifiable	20	14.0	15	8.5
Desmoplastic	1	0.7	1	0.6
Spitzoid	2	1.4	4	2.3
Secondary	7	4.9	1	0.6
SCAN	143	100.0	176	100.0

*Other: animal type (3), polypoid (1), naevoid (1)
Unclassifiable includes Melanoma NOS (not otherwise specified)

NB: As noted on page 14, Lentigo maligna melanoma is increasing in proportion to other types. This trend is partly demographic and may also reflect changes in biopsy practice and pathological reporting.

Table 6: Method of diagnosis n319 lesions

	Borders		D&G		Fife		Lothian		SCAN	
	n33	%	n29	%	n65	%	n192	%	n319	%
*Sample biopsy	5	15.2	8	27.6	15	23.1	49	25.5	77	24.1
Excision/Amputation	23	69.7	21	72.4	49	75.4	137	71.4	230	72.1
FNA	0	0.0	0	0.0	0	0.0	2	1.0	2	0.6
Other	5	15.2	0	0.0	*1*	1.5	3	1.6	1	0.3
Not recorded/Inapplicable	0	0.0	0	0.0	0	0.0	1	0.5	9	2.8
Total	33	100	29	100	65	100	192	100	319	100

* incision, shave, curettage

Fife (Other): CT guided bx for mets at presentation
Lothian (Other): 1 Lymph Node bx, 1 Anal bx, 1 Anal resection
Lothian (Inapplicable): mets at presentation

Note1: Sampling of suspect lesions is used when there is diagnostic doubt or for planning/staging purposes in larger lesions or those on cosmetically challenging areas.

Note2: Incomplete removal may compromise subsequent measurements of tumour thickness. Suspected melanomas or suspicious melanocytic lesions should not be treated with curettage and cautery

Table 6a: Sample biopsy

	Borders		D&G		Fife		Lothian		SCAN	
	n	%	n	%	n	%	n	%	n	%
2012	5	15.2	8	27.6	15	23.1	49	25.5	77	24.1
2011	5	25.0	8	34.8	12	21.4	58	28.3	83	27.3
2010	Breakdown of individual Health Board data not available								60	20.0
2009 (excl D&G)									55	19.4
2008 (excl D&G)									60	21.3

Table 7a:Time from Diagnostic Biopsy to issue of Pathology Report

n308 lesions

Time interval in days	Borders		D&G		Fife		Lothian		SCAN	
	n33	%	n29	%	n65	%	n181*	%	n308	%
0-14	13	39.4	26	89.7	49	75.4	106	58.6	194	63.0
15-28	17	51.5	2	6.9	9	13.8	69	38.1	97	31.5
>28	3	9.1	1	3.4	7	10.8	6	3.3	17	5.5
Median	19		7		9		13			
Range	6 - 65		2 - 61		2 - 53		0 -106		0 - 106	

* excludes 11 private patients (Lothian)

Borders and Lothian histology: NHS Lothian, University Hospitals Division Pathology Department, Western General Hospital, Edinburgh
Fife histology: Fife Area Laboratory, Kirkcaldy
D&G histology: Pathology Department, Dumfries & Galloway Royal Infirmary, Dumfries
Spire Pathology Services, Spire Murrayfield Hospital, Edinburgh

Table 7b:Median Wait Time from Diagnosis to Pathology Report (Year on Year)

Time interval in days	Borders and Lothian	D&G	Fife
2012	14	7	9
2011	13	5	8
2010	14	9	7
2009	15	n/a	6
2008	15	n/a	7

Table 8: Pathology: Mitotic Rate

Mitotic rate per mm²	Borders		D&G		Fife		Lothian		SCAN	
	n33	%	n29	%	n65	%	n192	%	n319	%
*zero	12	36.4	11	37.9	15	23.1	104.0	54.2	142	44.5
≥1mm²	20	60.6	13	44.8	46	70.8	78.0	40.6	157	49.2
Nr/na	1	3.0	5	17.2	4	6.2	10.0	5.2	20	6.3
Total	33	100.0	29	100.0	65	100.0	192	100.0	319	100.0

*zero includes those reported as <1mm²

NB: high % volume of greater mitotic rate in Fife corresponds with its figures for thicker melanomas (see Table 2)

Table 9: Pathology: Ulcerations

Ulceration reported	Borders		D&G		Fife		Lothian		SCAN	
	n33	%	n29	%	n65	%	n192	%	n319	%
Ulceration	7	21.2	9	31.0	4	6.2	17	8.9	37.0	11.6
No ulceration	24	72.7	18	62.1	29	44.6	148	77.1	219.0	68.7
Nr/na	2	6.1	2	6.9	32	49.2	27	14.1	63.0	19.7
Total	33	100.0	29	100.0	65	100.0	192	100.0	319	100.0

Melanoma National Data Definitions revised February 2012 (for implementation January 2013) are as follows:
Not identified (includes incipient ulceration); present; indeterminate; not applicable

"Notes for Users: Ulceration is an integral component of AJCC staging system and independent predictor of outcome in patients with clinically localised primary cutaneous melanoma."

Table10: Pathology: Pathological T Stage

T stage reported	Borders		D&G		Fife		Lothian		SCAN	
	n33	%	n29	%	n65	%	n192	%	n319	%
Reported	24	72.7	29	100.0	21	32.3	133	69.3	207	64.9
Not reported	8	24.2	0	0.0	44	67.7	58	30.2	110	34.5
Inapplicable	1	3.0	0	0.0	0	0.0	1	0.5	2	0.6
Total	33	100.0	29	100.0	65	100.0	192	100.0	319	100.0

Table 11: Specialty of Clinician performing diagnostic biopsy of melanoma

	Borders		D&G		Fife		Lothian		SCAN	
	n33	%	n29	%	n65	%	n192	%	n319	%
Dermatology	25	75.8	22	75.9	52	80.0	170	88.5	269	84.3
Plastic Surgery	2	6.1	0	0.0	0	0.0	8	4.2	10	3.1
Oral surgery	0	0.0	0	0.0	0	0.0	1	0.5	1	0.3
ENT Surgery	0	0.0	0	0.0	0	0.0	2	1.0	2	0.6
General Medicine	0	0.0	0	0.0	2	3.1	1	0.5	3	0.9
General Surgery	1	3.0	0	0.0	3	4.6	5	2.6	9	2.8
GP	4	12.1	6	20.7	7	10.8	4	2.1	21	6.6
Medical Oncology	0	0.0	0	0.0	0	0.0	1	0.5	1	0.3
Other	0	0.0	1	3.4	1*	1.5	0	0.0	2	0.6
Not Known	1	3.0	0	0.0	0	0.0	0	0.0	1	0.3
Total	33	100.0	29	100.0	65	100.0	192	100.0	319	100.0

*gynaecology

Table 11a: GP-performed Diagnostic Biopsy (Year on Year)

	Borders		D&G		Fife		Lothian		SCAN	
	n	%	n	%	n	%	n	%	n	%
2012	4	12.1	6	20.7	7	10.8	4	2.1	21	6.6
2011	4	20.0	3	13.6	10	17.9	9	13.6	26	8.6
2010	3	10.7	9	22.0	2	4.1	6	22.0	20	6.6
2009	1	3.8	n/a	n/a	3	5.9	13	n/a	17	6.0
2008	12	52.2	n/a	n/a	4	5.8	17	n/a	33	11.7
2007	11	39.3	n/a	n/a	6	11.3	17	n/a	34	12.6

Table 12: Mode of Referral

	Borders		D&G		Fife		Lothian		SCAN	
	n33	%	n29	%	n65	%	n192	%	n319	%
GP referral	30	90.9	27	93.1	53	81.5	147	76.6	257	80.6
Self referral to A&E	0	0.0	0	0.0	2	3.1	0	0.0	2	0.6
Incidental	1	3.0	1	3.4	5	7.7	24	12.5	31	9.7
Review	2	6.1	1	3.4	4	6.2	9	4.7	16	5.0
Other referral	0	0.0	0	0.0	1	1.5	12	6.3	13	4.1
Total	33	100.0	29	100.0	65	100.0	192	100.0	319	100.0

Table 13: wait in days from diagnostic biopsy to second stage of treatment

Second stage of treatment includes a wide local excision (WLE) +/- sentinel lymph node biopsy. A patient whose diagnostic biopsy was a sample biopsy will have their residual lesion excised at the time of WLE.
Fife exclusions: 2 Mets,1 deceased, 1 refused, 1 bowel ca
Lothian exclusions: 2 Mets, 3 deceased, 1 co-morbid, 11 Private, 1 WLE only, 1 inoperable (treated with XRT)

Time interval in days	Borders		D&G		Fife		Lothian		SCAN	
	n29	%	n24	%	n60	%	n173	%	n286	%
≤28	0	0.0	4	16.7	2	3.3	28	16.2	34	11.9
29-56	13	44.8	7	29.2	17	28.3	94	54.3	131	45.8
>56	16	55.2	13	54.2	41	68.3	51	29.5	121	42.3
Total	29	100	24	100	60	100	173	100	286	100
Median	61		59		64		47		N/a	
Range	33 - 118		7 - 165		22-122		14 - 181		7 - 181	
≥90	3	10.3	5	21.0	5	10.3	11	6.4	24	8.4

Table 13a: Median wait in days for second stage of treatment following diagnosis (Year on Year)

Median wait in days	Borders	D&G	Fife	Lothian
2012	61	59	64	47
2011	65	48	58	48
2010	58	53	57	51
2009	55	n/a	67	56
2008	48	n/a	63	55

Table 14: Sentinel lymph node biopsy (SLNB)

	Borders		D&G		Fife		Lothian		SCAN	
	n33	% of Total	n29	% of Total	n65	% of Total	n192	% of Total	n319	% of Total
Patient Eligible for SLNB	20	60.6	13	44.8	40	61.5	83	43.2	156	48.9
Patient having SLNB	8	24.2	4	13.8	18	27.7	35	18.2	65	20.4
Patient with positive SLNB	1	3.0	1	3.4	3	4.6	6	3.1	11	3.4

Protocol of eligibility for consideration of SLNB: Breslow depth ≥1.0mm or Breslow depth <1.0mm with mitotic rate ≥1mm²

The role of SLNB is unclear. There is no Randomised Clinical Trial evidence to show that SLNB has any overall survival advantage. SLNB aids staging and provides some diagnostic information. SLNB is discussed with eligible patients.

Table 14a: Sentinel lymph node biopsy (Year on Year)

Year	eligible (% of total)	SLNB carried out (Total No)	SLNB carried out (% of eligible)	Positive SLNB (Total No)	Positive (% of carried out)
2012	48.9	65	41.7	11	16.9
2011	53.9	92	56.1	15	16.3
2010	46.9	86	70.0	15	16.7
2009	48.8	91	66.0	15	16.5
2008	32.7	92	63.4	10	10.9
2007	50.2	77	57.0	21	27.3

Note: Years 2007, 2008, 2009 and 2010 exclude D&G patient data

Table 15: Lymph Node Dissection

	Borders		D&G		Fife		Lothian		SCAN	
	n33	%	n29	%	n65	%	n192	%	n319	%
Lymph node dissection	2	6.1	1	3.4	4	6.1	9	4.7	16	5
Positive lymph nodes	1	---	0	----	1	----	3	----	5	----

Current practice is for patients with a positive sentinel node to proceed to radical node dissection. Some patients may not have had previous SLNB. *Treatment of clinically apparent regional lymph nodes is dependent on positive FNA or frozen paraffin sections of involved lymph node.*

Table 15a: Lymph Node Dissection (Year on Year)

Lymph node dissection	SCAN	Number Positive	% Positive
2012	16	5	31.3
2011	20	8	40.0
2010	17	4	23.5

Table 16: Multidisciplinary Meeting (MDM) for Melanoma patients

Patient discussed at MDM	Borders		D&G		Fife		Lothian		SCAN	
	n33	%	n29	%	n65	%	n192	%	n319	%
Discussed	32	97.0	24	82.8	65	100.0	189	98.4	310	97.2
Not discussed	1	3.0	5	17.2	0	0.0	3	1.6	9	2.8
Total	33	100.0	29	100.0	65	100.0	192	100.0	319	100.0

Table 16a: Multidisciplinary Meeting (MDM) for Melanoma patients (Year on Year)

Patient discussed at MDM %	Borders	D&G	Fife	Lothian	SCAN
2012	97.0	82.8	100.0	98.4	97.2
2011	100.0	95.7	100.0	96.6	97.4
2010	100.0	61.0	100.0	92.3	90.0
2009	100.0	n/a	100.0	96.6	97.5
2008	100.0	n/a	100.0	98.4	98.9

Table 17: Contact with Cancer Nurse Specialist (CNS) for Melanoma

Patient contact with CNS	Borders		D&G		Fife		Lothian		SCAN	
	n33	%	n29	%	n65	%	n192	%	n319	%
Contact	20	60.6	5*	17.2	40	61.5	155	80.7	215	67.4
No contact	13	39.4	24	82.8	25	38.5	37	19.3	104	32.6
Total	33	100	29	100	65	100	192	100	319	100

* most D&G patients treated locally

Table 17a: Contact with Cancer Nurse Specialist (CNS) for Melanoma (Year onYear)

Patient contact with CNS %	Borders	D&G	Fife	Lothian	SCAN
2012	60.6#	17.2#	61.5*	80.7	67.4
2011	65.0	26.1	87.5	82.9	78.8
2010	82.1	n/a	64.6	90.6	86.9
2009	88.5	n/a	72.5	89.4	86.2
2008	95.7	n/a	68.1	88.9	84.3

#D&G and Borders do not have a specific CNS for skin. Dermatology nurse specialists see patients alongside the medical staff at clinics. Patients in these cohorts were not seen by the nurses at a nurse led clinic or on a one to one basis. Both Borders and D&G patients who are referred to NHS Lothian for their further treatment are offered contact with the CNS.

*Fife: In addition to the regional CNS, Fife patients also have the opportunity to meet with specialist dermatology skin cancer link nurses based in Fife. These nurses link in with the regional CNS if there are any issues with which she may be able to help. 92.3% of Fife patients were seen by a skin cancer link nurse, regional CNS or both.

Table 18: Five year Survival of Patients diagnosed in 2007 for Borders/Fife/Lothian (Clark Level ≥II or metastatic disease at presentation n287)

Breslow Depth		0-0.99	1-1.99	2-2.99	3-3.99	4+	Mets
Male		n50	n25	n12	n6	n22	n2
5 year survival: Alive	n	39	15	4	0	8	0
	%	78.0	60.0	33.3	0.0	36.3	0.0
5 year survival: Deceased	n	10	8	5	4	9	1
	%	20.0	32.0	41.7	66.6	41.0	50.0
Dead of melanoma	n	1	2	3	2	5	1
	%	2.0	8.0	25.0	33.3	22.7	50.0
Female		n103	n33	n12	n7	n13	n2
5 year survival: Alive	n	94	30	10	3	6	0
	%	91.3	91.0	83.3	42.8	46.2	0.0
5 year survival: Deceased	n	7	2	2	2	6	1
	%	6.8	6.0	16.7	28.6	46.2	50.0
Dead of melanoma	n	2	1	0	2	1	1
	%	1.9	3.0	0.0	28.6	7.7	50.0

Extract from SCAN Management Guidelines September 2012: *Follow-up*

There is no strong evidence to determine the exact pattern of follow-up. The following suggestion should be tailored to the individual patient:

Breslow <1mm, no ulceration, no mitoses: 3 - 6/12 months up to one year then discharge
Breslow <1mm, ulceration or ≥1 mitoses: 3/12 for three years, then 6/12 to 5 years
Breslow >1mm: 3/12 for three years, then 6/12 to five years
Stage IIIB, IIIC, resected stage IV: 3/12 for three years then 6/12 to five years, then 12/12 to 10 years
Stage IV unresectable: seen according to need

Melanoma Oncology 2012

During 2012 42 new patients were seen in the medical oncology clinic and 25 in the clinical oncology clinic as well as approximately 250 follow-up appointments

The majority of patients seen in the medical oncology clinic had metastatic disease although high risk adjuvant patients were also seen if they wished to discuss adjuvant treatment options including the Avast-M clinical trial.

Patients in the clinical oncology clinic were primarily seen to discuss radiotherapy either in the adjuvant or palliative setting.

Clinical Trials in Melanoma in Edinburgh 2012

The only trial open to recruitment in 2012 was Avast-M and 1 patient was recruited.

Adjuvant

AVAST-M
Adjuvant aVAStin Trial in high risk Melanoma; a randomised trial evaluating the VEGF inhibitor, Bevacizumab (Avastin), as adjuvant therapy following resection of AJCC stage IIB, IIC and III cutaneous melanoma.

A total of 37 patients have been considered and 11 were recruited.

This study completed recruitment in March 2012. 8 patients remain on follow up.

Metastatic

BRIM 3
A Randomized, open-label, controlled, multicenter, phase III Study
in previously untreated patients with unresectable stage IIIC or stage IV melanoma. For patients with V600E BRAF mutation only, randomised to dacarbazine or RO5185426.

This study closed to recruitment in 2010.
1 patient remains on follow up

Other Developments

Vemurafenib, a BRAF inhibitor, which is associated with improved survival compared to DTIC chemo in patients with previously untreated metastatic melanoma was unavailable for use in NHS Scotland in 2012 but a resubmission to the Scottish Medicines Consortium has been made with a decision expected in December 2013.

Ipilimumab, a CTLA4 antibody, associated with improved survival in patients with metastatic melanoma compared to gp100 control, was unavailable for use in 2012 but was approved for use in NHS Scotland in 2013 for patients with previously treated metastatic melanoma.

ABBREVIATIONS

ACaDME	**A**cute **C**ancer **D**eaths and **M**ental Health: ISD data mart contains linked inpatient and daycase, mental health, cancer registration and death (GRO) records. It is updated on a monthly basis.
AJCC	American Joint Committee on Cancer
BGH	Borders General Hospital, Melrose
Bx	Biopsy
CM	Cutaneous Melanoma
CNS	Cancer Nurse Specialist
D&G	Dumfries and Galloway
FNA	Fine Needle Aspirate
GP	General Practitioner
ISD	Information Services Division, National Services Scotland
LMM	Lentigo Maligna Melanoma
MDM	Multidisciplinary Meeting
MDT	Multidisciplinary Team
Mets	Metastasis/Metastases
QA	Quality Assurance
SCAN	Southeast Scotland Cancer Network
SCR	Scottish Cancer Registry
SIGN	Scottish Intercollegiate Guidelines Network
SLNB	Sentinel Lymph Node Biopsy
SMG	Scottish Melanoma Group
SSMM	Superficial Spreading Malignant Melanoma
WLE	Wide local excision

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

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

Anterior: nearer the front (of body)

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

Desmoplastic: growth of fibrous or connective tissue

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

Histogenetic Type: relating to formation of body tissue

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

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

Lentigo Maligna Melanoma: melanoma evolving from Lentigo Maligna

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

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

Mucosal: relating to mucous membranes

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

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

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

Polypoid: resembling/in the form of a polyp

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

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

Subungual: beneath a fingernail or toenail

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