S E Scotland Cancer Network
SCAN AUDIT

S E Scotland Cancer Network: Prospective Cancer Audit

(excluding Dumfries & Galloway)

MELANOMA CANCER

Report on Patients Diagnosed 1 January 2009 to 31 December 2009

Report Number: SA Skin 02 11 W

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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 2009 in Borders, Fife and Lothian, three of the four health board regions comprising S E Scotland Cancer Network (SCAN).

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.

Patients included in the Report

All patients diagnosed with Primary Invasive Melanoma or secondary melanoma (no known primary) 1 January – 31 December 2009

Network/Health Board/Hospital	Lead Clinician	Audit Support
SCAN Skin Group	Dr V Doherty	Gillian Smith, SCAN Audit Facilitator
NHS Borders	Dr D Kemmett	
NHS Lothian – Dept of Dermatology	Dr V Doherty	
NHS Lothian - St John's Hospital – Plastic Surgery	Mr M Butterworth	
NHS Fife	Dr M Mowbray	Laura Huey

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 Gillian Smith, SCAN Cancer Audit Facilitator, Dept of Dermatology, Lauriston Buildings, Edinburgh.
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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 5 year average data for 2004 to 2008 (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.

Quality assurance of data

All hospitals in the region participate in the Quality Assurance programme provided by the National Services Scotland Information & Statistics Division (ISD). QA of the full Primary Invasive Melanoma dataset has not yet been undertaken. QA of data submitted for Scottish Executive waiting times returns showed overall accuracy of data (including melanoma) when compared with published data definitions at 95.8% (Borders), 93.2% (Lothian) and 87.1% (Fife).

Clinical sign-off: Process for reviewing and reporting the results

To ensure the quality of the data and the results presented individual health board results are reviewed and signed-off locally. The combined report was reviewed by clinicians from Borders, Fife and Lothian at one meeting in 2010 and again in February 2011 to review and provide comments. The full report is circulated in First Draft and in Final Draft to the full membership of the SCAN Skin Group to ensure informed sign-off.

DOCUMENT HISTORY

Version	Circulation	Date	Comments
Version 1.1	1st Draft circulated to SCAN Group	22.11.2010	Circulated to clinicians for "sense checking".
Version 1.1	Briefly discussed at SCAN Group meeting	3.12.2010	Agreed to discuss further at SCAN Group meeting on 11/02/2011
Version 1.2	2nd Draft discussed at meeting of SCAN Skin Group by Val Doherty, Alex Holme, Sheena Dryden, audit staff	11.2.2011	Consequential further comments added and amendments made to draft
Version 2.1	Circulated to SCAN Group with final deadline for comment	24.3.2011	Signed off on 8.4.2011
Version 3	Clinical Governance Groups, Lead Managers and Chairs in the four health boards and to the SCAN Regional Cancer Planning Group.	12.4.2011	Circulated to RCPG Circulated to Health Board Clinical Governance contacts
Website Version	Lodged on SCAN website following assessment for any disclosive information	30.06.2011	Assessed for potential to disclose any patient identifiable information of a sensitive nature. Nothing identified and no changes made.

Comment by Chair of SCAN Skin Group

According to the most recent ISD figures cutaneous melanoma (CM) now ranks as the fourth most frequent malignancy in Scottish women and sixth in men. This situation is a result of ongoing increases in CM incidence in the face of decreasing rates for other malignancies and indeed for cancer as a whole. SCAN data has shown ongoing rising numbers of CM since reports started, a situation being mirrored in the rest of Scotland.

There continues to be much debate as to the cause(s) of the rising rates of CM. Most clinicians, ourselves included, recognise a more complex interaction with UV exposure and melanoma than was originally noted.

Currently there are no national standards for CM management but the SCAN Skin Group has, since its formation, collected information based on the SIGN guideline and the historical experience of the Scottish Melanoma Group. The three regional skin cancer networks now meet annually to compare data collection methods, results and where feasible survival information. SCAN is able to report the latter which reflects their long standing high quality melanoma data collection methods and excellent audit facilitators. A recent snapshot of audit from the regions showed that SCAN data scored very well in the completeness of data and in availability of survival data. In the last two years of reporting we have added two generic cancer quality measures, namely contact with CNS and inclusion at MDM to our reports. Both figures have maintained themselves from a high start point in 2008.

It is not too surprising that there is little difference in overall numbers in 2009 compared with 2008. There is consistency in the high proportion of cases presenting with thin, good prognosis lesions (see Table 2). Concern remains about persisting numbers of patients with thick, poor prognosis lesions. Both actual numbers and proportions of this group have increased in female patients only this year. There is ongoing evidence of narrowing of the gender gap in melanoma in SCAN from the previous position of almost 2:1 F: M of 1980s to 1.1:1 in 2009.

SCAN continues to perform sentinel lymph node biopsies (SLNB) on eligible and clinically appropriate patients thus meaning that the region has a considerable expertise in this technique which seems likely to remain a very useful staging technique in the future.

In terms of at risk population CM affects a significant number of patients of working age (see Table 3a); this emphasises melanoma's impact on population both economically and socially.

Diagnosis and initial surgical management of CM are increasingly the workload of dermatologists rather than surgeons. More than three quarters of patients have their initial treatment/excision at one time and as a result of redesign in dermatology this usually occurs at the time of first visit. This has proved an effective method of meeting both patient need and waiting times constraints. Dermatology also now undertakes a not insignificant number of wide excisions of CM, again a change from previous practice .

Comments throughout the report draw attention to specific areas which may be felt to require additional investigation and analysis. This includes changing patterns of site of CM, reporting of which has been published on behalf of our group in the past, and interestingly is now being reported in other parts of the world.

Less than half of cases of CM are referred in urgently. 17% occur in patients attending for review (often of another skin cancer) or are noted incidentally in patients attending for other reasons. In addition the majority of the 23% referred in as routine are up triaged to urgent on the basis of new

active triaging approaches. This means that overall CM cases are diagnosed within the 62 day target even if not referred urgently which is clearly clinically desirable.

Tables 11 & 12 describe experience with sentinel lymph node biopsy in CM. This is an area which we have elected to examine more carefully in two parallel reviews being undertaken in dermatology and plastic surgery. The results of these will hopefully be available to guide and improve practice in 2011. Our skin cancer MDM goes from strength to strength with increasing attendance of clinicians from oncology, surgery and dermatology. This allows improved communication and is also useful for trainees in these disciplines. In addition to new referrals our MDM discussed over 40 individuals who had had recurrent CM. The MDM has also been instrumental in improving recruitment to clinical trials (see Appendix).

In summary it is very encouraging to note the high quality of data collected and more importantly used by the skin cancer team to improve patient care. We are concerned that such standards will be impossible to maintain in the event of any reduction in audit support. Such a change would be likely to be to the detriment of our current high quality service.

Dr Val Doherty
Consultant Dermatologist
Chair, SCAN Skin Group
February 2011

ACTION PLAN MELANOMA

Report Section	Possible area for improvement	Proposed action	Which clinical standard will this meet?
Table 5	Need to ensure adequate resource available for same day surgery in Dermatology tumour clinics	Ensure adequate surgical resource is supported.	There are no specific standards but same-day treatment is required to sustain good practice and integral to meeting waiting times targets
Table 6	In view of high percentage of melanomas diagnosed incidentally and at review clinics increase likelihood of early diagnosis by ensuring high awareness of suspect lesions in follow-up and other clinics	Raise awareness of high percentage of melanomas diagnosed incidentally and at review clinics.	There is no specific clinical standard relating to this but this will improve early diagnosis which is usually associated with improved prognosis.
Table 7	Percentage of Lothian and Borders patients waiting >2 weeks for path results from diagnostic biopsy or excisions in 2009 is 58.2%	Service managers: Borders and Lothian Review 2010 waits to issue of pathology reports as soon as possible in light of problems experienced in 2009 with Administrative and Laboratory Staffing levels in NHS Lothian, Pathology Dept, Western General Hospital	There are no guidelines about the optimum time period for the issue of pathology reports. See also Table 10 re need for improvement of timescales through the care pathway as highlighted in patient experience survey.
Table 10	Review of time between diagnosis and wide local excision	Cancer Nurse Specialist to review impact on patients of any wait between surgical treatments as part of second Patient Experience Survey in 2011	There are no guidelines about the optimum time period and the precise timing of treatment is not of great significance to the prognosis for patients. However, the importance to the patient experience was included in a survey undertaken in 2008 and the results highlighted a need for an improvement of timescales through the care pathway.
Table 11	Need for ongoing review of protocol for Sentinel Lymph Node Biopsy.	Dermatologists and Plastic Surgeons to review awaited papers/ presentations which will inform the development of the protocol for this procedure	There is no national standard for when patients should be considered for sentinel lymph node biopsy. Patients are selected according to most recent AJCC staging guidelines and after formal MDM discussion. Current practice is for patients with a positive sentinel node to proceed to radical node dissection

RESULTS

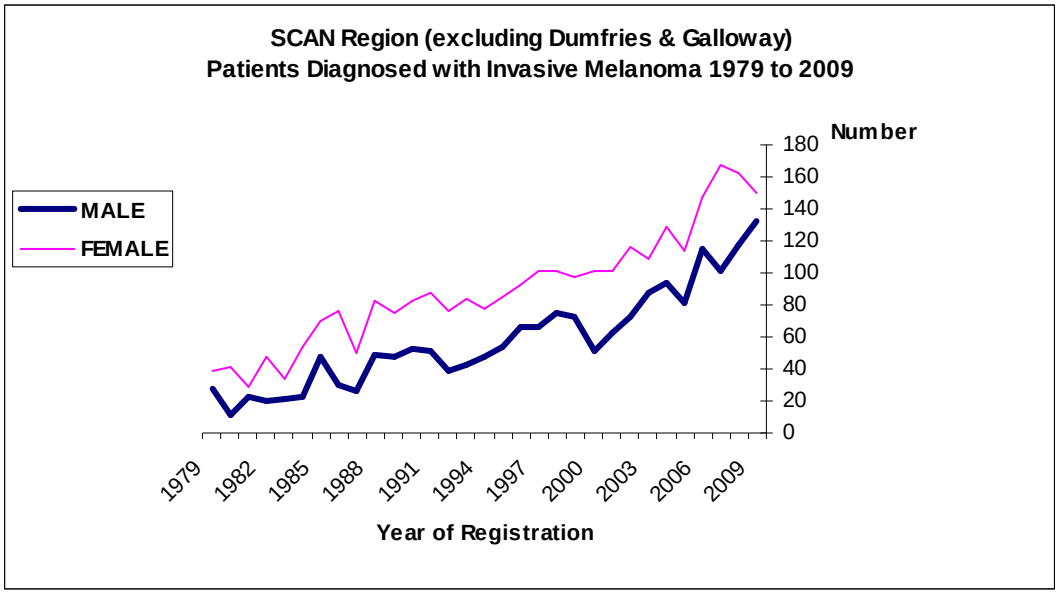
Table 1: Estimate of Case ascertainment n283

Health Board	2009 SCAN Registrations	*2004 - 2008 Average Number of Cancer Registrations per year	Estimated Case Ascertainment
Borders	26	24	108.3%
Fife	51	55	92.7%
Lothian	206	167	123.4%
Total:	**283**	**246**	**115.0%**

* Source: Scottish Cancer Registry, ISD, Malignant melanoma of the skin (ICD-10 C43), Ref: IR2010-02785, Data extracted: December 2010

This table shows the number of diagnoses during 2009 compared with the 5 year annual average number of cancer registrations recorded by the Scottish Cancer Registry (SCR) for 2004 to 2008 for residents of SCAN by Institution of diagnosis. (The number includes two patients with two primaries and one patient with six primaries). High levels of case ascertainment provide confidence in reliability of results.

Note: Case ascertainment levels in excess of 100% may be attributable to an increase in incidence. Allowance has to be made in reviewing the results where numbers are small and variation may be due to chance.



This chart, using data taken from The Scottish Melanoma Group (SMG) and SCAN records, demonstrates the increase in invasive melanoma in Lothian and SE Scotland since SMG records began in 1979.

Table 2: Registrations by Breslow Depth n283

Male:	n15	%	n23	%	n95	%	n133	%	2008 n118	%
mm	Borders	Borders	Fife	Fife	Lothian	Lothian	SCAN	SCAN	SCAN	SCAN
0 - 0.99	8	53.3	9	39.1	56	58.9	73	54.9	70	59.3
1 - 1.99	3	20.0	4	17.4	14	14.7	21	15.8	19	16.1
2 - 2.99	1	6.7	2	8.7	6	6.3	9	6.8	7	5.9
3 - 3.99	0	0.0	1	4.3	8	8.4	9	6.8	5	4.2
>= 4	1	6.7	6	26.1	5	5.3	12	9.0	12	10.2
n/a	1	6.7	1	4.3	2	2.1	4	3.0	1	0.8
Mets.	1	6.7	0	0.0	4	4.2	5	3.8	4	3.4
Total:	15	100%	23	100%	95	100%	133	100%	118	100%

Percentage totals rounded to *100%*

Female:	n11	%	n28	%	n111	%	n150	%	2008 n163	%
mm	Borders	Borders	Fife	Fife	Lothian	Lothian	SCAN	SCAN	SCAN	SCAN
0 - 0.99	8	72.7	14	50.0	66	59.5	88	58.7	101	62.0
1 - 1.99	2	18.2	8	28.6	24	21.6	34	22.7	35	21.5
2 - 2.99	1	9.1	1	3.6	6	5.4	8	5.3	8	4.9
3 - 3.99	0	0.0	0	0.0	5	4.5	5	3.3	6	3.7
>= 4	0	0.0	5	17.9	9	8.1	14	9.3	9	5.5
n/a	0	0.0	0	0.0	1	0.9	1	0.7	3	1.8
Mets.	0	0.0	0	0.0	0	0.0	0	0	1	0.6
Total:	11	100%	28	100%	111	100%	150	100%	163	100%

Percentage totals rounded to *100%*

Ratio of male to female:

Year	Male	Female
2009	1	1.1
2008	1	1.4
2007	1	1.7

Percentage totals rounded to *100%*

Table 3: Age at presentation n283

2008

Male:	**n15**	*%*	**n23**	*%*	**n95**	*%*	**n133**	***%***	*n118*	*%*
Age	**Borders**	*Borders*	**Fife**	*Fife*	**Lothian**	*Lothian*	**SCAN**	***SCAN***	*SCAN*	*SCAN*
0-19	0	*0.0*	0	*0.0*	1	*1.1*	1	*0.8*	*1*	*0.8*
20-34	0	*0.0*	0	*0.0*	5	*5.3*	5	*3.8*	*4*	*3.4*
35-44	3	*20.0*	5	*21.7*	8	*8.4*	16	*12.0*	*13*	*11.0*
45-54	2	*13.3*	1	*4.3*	14	*14.7*	17	*12.8*	*17*	*14.4*
55-64	5	*33.3*	7	*30.4*	20	*21.1*	32	*24.1*	*23*	*19.5*
65-74	2	*13.3*	2	*8.7*	28	*29.5*	32	*24.1*	*36*	*30.5*
>=75	3	*20.0*	8	*34.8*	19	*20.0*	30	*22.6*	*24*	*20.3*
Total:	**15**	***100%***	**23**	***100%***	**95**	***100%***	**133**	***100%***	*118*	*100%*

Percentage totals rounded to *100%*

Female:	**n11**	*%*	**n28**	*%*	**n111**	*%*	**n150**	*%*	*n163*	*%*
Age	**Borders**	*Borders*	**Fife**	*Fife*	**Lothian**	*Lothian*	**SCAN**	***SCAN***	*SCAN*	*SCAN*
0-19	0	*0.0*	0	*0.0*	1	*0.9*	1	*0.7*	*4*	*2.5*
20-34	2	*18.2*	4	*14.3*	21	*18.9*	27	*18.0*	*19*	*11.7*
35-44	1	*9.1*	3	*10.7*	19	*17.1*	23	*15.3*	*20*	*12.3*
45-54	5	*45.5*	4	*14.3*	18	*16.2*	27	*18.0*	*39*	*23.9*
55-64	0	*0.0*	7	*25.0*	13	*11.7*	20	*13.3*	*34*	*20.9*
65-74	2	*18.2*	5	*17.9*	15	*13.5*	22	*14.7*	*17*	*10.4*
>=75	1	*9.1*	5	*17.9*	24	*21.6*	30	*20.0*	*30*	*18.4*
Total:	**11**	***100%***	**28**	***100%***	**111**	***100%***	**150**	***100%***	*163*	*100%*

Percentage totals rounded to *100%*

As with most cancers the incidence of melanoma rises with age, but melanoma is among cancers which not infrequently occur in younger people. In this cohort there are 2 patients under 20 and a total of 34 (12.0%) under 35 years of age, the vast majority of whom are female.

Table 3a: Incidence in Working Age Population n160 (i.e. n71 Males aged 20 to 65 and n89 Females aged 20 to 60)

Total number	**n26**	*%*	**n51**	*%*	**n206**	*%*	**n283**	*%*
	Borders	*Borders*	**Fife**	*Fife*	**Lothian**	*Lothian*	**SCAN**	***SCAN***
Incidence:	18	*69.2*	31	*60.8*	111	*53.9*	160	*56.5*

The following three tables demonstrate the types of melanoma and the distribution of anatomical sites

Table 4a: Anatomical Site n283

Site	**SCAN n133**		**SCAN n150**	
	MALE	***%***	**FEMALE**	*%*
Head and Neck:				
Face	24	*18.0*	17	*11.3*
Scalp	5	*3.8*	2	*1.3*
Neck	4	*3.0*	2	*1.3*
Ears	1	*0.8*	0	*0.0*
Trunk anterior above waist	15	*11.3*	14	*9.3*
Trunk anterior below waist	0	*0.0*	3	*2.0*
Trunk posterior	2	*1.5*	2	*1.3*
Trunk posterior above waist	31	*23.3*	14	*9.3*
Trunk posterior below waist	4	*3.0*	0	*0.0*
Arm above elbow	4	*3.0*	15	*10.0*
Arm below elbow	17	*12.8*	16	*10.7*
Leg above knee	4	*3.0*	18	*12.0*
Leg below knee	9	*6.8*	36	*24.0*
Dorsum of foot	3	*2.3*	1	*0.7*
Sole	3	*2.3*	4	*2.7*
Mucosal	1	*0.8*	4	*2.7*
Subungual hand	1	*0.8*	2	*1.3*
Mets at presentation	5	*3.8*	0	*0.0*
Total:	**133**	***100%***	**150**	***100%***

Percentage totals rounded to *100%*

Table 4b: Histogenetic Type of Melanoma n283

Male:	**n133**	*%*	**2008** n118	*%*
Histological Pattern	**SCAN**	***SCAN***	SCAN	*SCAN*
Lentigo maligna melanoma (lmm)	27	*20.3*	20	*16.9*
superficial spreading (ssmm)	66	*49.6*	58	*49.2*
nodular	13	*9.8*	15	*12.7*
acral/mucosal	5	*3.8*	2	*1.7*
other	4	*3.0*	3	*2.5*
unclassifiable	12	*9.0*	15	*12.7*
not recorded	1	*0.8*	1	*0.8*
secondary	5	*3.8*	4	*3.4*
Total:	**133**	***100%***	118	*100%*

Percentage totals rounded to *100%*

Female:	**n150**	**%**	2008 n163	*%*
Histological Pattern	**SCAN**	***SCAN***	SCAN	*SCAN*
Lentigo maligna melanoma (lmm)	19	*12.7*	28	*17.2*
superficial spreading (ssmm)	76	*50.7*	89	*54.6*
nodular	11	*7.3*	13	*8.0*
acral/mucosal	5	*3.3*	3	*1.8*
other	14	*9.3*	8	*4.9*
unclassifiable	25	*16.7*	21	*12.9*
not recorded	0	*0.0*	0	*0.0*
secondary	0	*0.0*	1	*0.6*
Total:	**150**	***100%***	163	*100%*

Top three sites in 2009: **Male**: Head and Neck (25.6%), Trunk posterior above waist and Arm below elbow;
Female: Head and Neck (23.3%), Leg below knee and Trunk posterior above waist

Top three sites in 2008: **Male**: Head and Neck (28.8%), Trunk posterior above waist (25.4%) and Trunk anterior above waist (13.6%)
Female: Head and Neck (23.3%), Leg below knee (21.5%) and Trunk posterior above waist (14.7%)

Table 4c: Histogenetic Type and Anatomical Site n283

Male n133

Histo type	Face	Scalp	Neck	Ear	Trunk anterior above waist	Trunk anterior below waist	Trunk post	Trunk posterior above waist	Trunk posterior below waist	Arm above elbow	Arm below elbow	Leg above knee	Leg below knee	Dorsum of foot	Sole	Mucosal	Subungual hand	Mets	Total
lmm	17	4	1								4				1				**27**
ssmm	3		1	1	12		1	22	3	4	8	3	7	1					**66**
nodular			2		1			4	1		3	1				1			**13**
unclass	4				1			3			2		2						**12**
other		1			1			1									1		**4**
acral							1							2	2				**5**
nr/na								1											**1**
Totals:	**24**	**5**	**4**	**1**	**15**	**0**	**2**	**31**	**4**	**4**	**17**	**4**	**9**	**3**	**3**	**1**	**1**	**5**	**133**

Female n150

Histo type	Face	Scalp	Neck	Ear	Trunk anterior above waist	Trunk anterior below waist	Trunk post	Trunk posterior above waist	Trunk posterior below waist	Arm above elbow	Arm below elbow	Leg above knee	Leg below knee	Dorsum of foot	Sole	Mucosal	Subungual hand	Mets	Total
lmm	12							1		2	2	1	1						**19**
ssmm			2		8	1	1	11		8	7	11	25		1	1			**76**
nodular	1	2					1				2		2		1	1	1		**11**
unclass	2				5	1		1		2	4	4	5	1					**25**
other	2				1	1		1		3	1	2	2			1			**14**
acral													1		2	1	1		**5**
Totals:	**17**	**2**	**2**	**0**	**14**	**3**	**2**	**14**	**0**	**15**	**16**	**18**	**36**	**1**	**4**	**4**	**2**	**0**	**150**

There is international interest in changing patterns of melanoma and anatomical sites it affects. See the recent paper published about this in relation to S E Scotland.

M Mowbray, DL Stockton, VR Doherty (2007) Changes in the site distribution of malignant melanoma in South East Scotland (1979-2002). *British Journal of Cancer* **96**: 832-835

Melanoma in Situ

Year	2007	2008	**2009**
Male	10	16	**20**
Female	21	30	**40**
Total	31	46	**60**

Table 5: Method of Diagnosis n283

Method of Diagnosis	**SCAN n283**	***SCAN %***	*2008* *Method of Diagnosis*	*SCAN n281*	*SCAN %*
*Shave/Curettage	12	*4.2*	*Shave/Curettage*	*9*	*3.2*
*Incision/Partial Biopsy	43	*15.2*	*Incision/Partial Biopsy*	*51*	*18.1*
Excision Biopsy	216	*76.3*	*Excision Biopsy*	*212*	*75.4*
Wide excision	6	*2.1*	*Wide excision*	*6*	*2.1*
FNA	0	*0.0*	*FNA*	*2*	*0.7*
Other	5	*1.8*	*Other*	*0*	*0.0*
Not recorded	1	*0.4*	*Not recorded*	*1*	*0.4*
Total:	**283**	**100%**	*Total:*	*281*	*100%*

Percentage totals rounded to *100%*

As a result of redesign in the NHS Lothian Dermatology Service almost 80% of cases had their initial treatment/excision at one time and this usually occurred at the time of first visit.

*Sampling of suspect lesions (20%) is used when there is diagnostic doubt or for planning/staging purposes in larger lesions or those on cosmetically challenging areas. After the first excision or biopsy which leads to a diagnosis of melanoma, patients will go on to have a second procedure (see Table 10).

Table 6: Mode and Urgency of Referral n283

Mode and urgency of referral	**n26**		**n51**		**n206**		**n283**		*n281*	
	Borders	*%*	**Fife**	*%*	**Lothian**	*%*	**SCAN**	*%*	*SCAN*	*%*
Urgent with suspicion of cancer*	0	*0.0*	0	*0.0*	27	*13.1*	27	*9.5*	*0*	*0.0*
Urgent Referral	12	*46.2*	23	*45.1*	75	*36.4*	110	*38.9*	*137*	*48.8*
Self Referral to A&E	0	*0.0*	0	*0.0*	1	*0.5*	1	*0.4*	*2*	*0.7*
GP referral to A&E	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*	*0*	*0.0*
Routine Referral	6	*23.1*	12	*23.5*	48	*23.3*	66	*23.3*	*54*	*19.2*
Urgency not recorded	1	*3.8*	1	*2.0*	0	*0.0*	2	*0.7*	*16*	*5.7*
Diagnosed by GP	1	*3.8*	3	*5.9*	13	*6.3*	17	*6.0*	*33*	*11.7*
Incidental finding	1	*3.8*	6	*11.8*	20	*9.7*	27	*9.5*	*11*	*3.9*
Review patient	4	*15.4*	3	*5.9*	16	*7.8*	23	*8.1*	*18*	*6.4*
'Other'	0	*0.0*	3	*5.9*	0	*0.0*	3	*1.1*	*6*	*2.1*
Mode of referral not known	1	*3.8*	0	*0.0*	0	*0.0*	1	*0.4*	*1*	*0.4*
Wholly treated in private sector	0	*0.0*	0	*0.0*	6	*2.9*	6	*2.1*	*3*	*1.1*
Totals:	**26**	***100%***	**51**	***100%***	**206**	***100%***	**283**	***100%***	*281*	*100%*

Percentage totals rounded to *100%*

The additional mode of referral *'urgent with suspicion of cancer' was introduced nationally in October 2009 for the measurement of the new cancer waiting times. The field was added to the Lothian data collection but is not available for the 2009 cohort SCAN wide. The total number of 'urgent' referrals was 48.8%.

23% of GP referrals were assigned as ‘routine’ but the majority were triaged appropriately as 'urgent'.

There was a substantial drop in the number of patients diagnosed by GP (6.0%) compared to 11.7% in 2008 and a rise in incidental and review numbers from 10.3% in 2008 to 17.6% in 2009.

Table 7: Time from Diagnostic Biopsy/Excision to Issue of Pathology Report n283

Time Interval	**Borders and Lothian**	**%**	**Fife**	**%**	**SCAN**	*%*	*SCAN*	*SCAN %*
Days	**n232**		**n51**		**n283**		*n281*	
0 - 7	16	*6.9*	34	*66.7*	50	*17.7*	*60*	*21.4*
8 - 14	81	*34.9*	7	*13.7*	88	*31.1*	*99*	*35.2*
15 - 21	58	*25.0*	4	*7.8*	62	*21.9*	*68*	*24.2*
22 - 28	27	*11.6*	2	*3.9*	29	*10.2*	*34*	*12.1*
> 28	46	*19.8*	4	*7.8*	50	*17.7*	*16*	*5.7*
n/a	4	*1.7*	0	*0.0*	4	*1.4*	*4*	*1.4*
Median	15		6					
Range	1 - 80		1 - 46					

Note 1. Borders and Lothian histology reported by NHS Lothian, University Hospitals Division Pathology Dept, Edinburgh
Note 2. Fife histology reported by Fife Area Laboratory, Kirkcaldy

NHS Lothian, University Hospitals Division Pathology Department: 41.8% of Borders and Lothian registrations were reported in <15 days compared to 47.6% in 2008; median wait in both years was 15 days.

Fife Area Laboratory: 80.4% of Fife 2009 registrations were reported in <15 days compared to 84.1% of 2008 registrations; median wait in 2008 was 7 days.

In 2009 there were service issues related to levels of administrative and laboratory staffing in Lothian with 58.2% of patients waiting more than two weeks for pathology results from diagnostic biopsies and excisions. It would be important to review 2010 results as soon as possible to see if this has improved. In Fife, 19.5% of patients waited more than two weeks.

Table 8a: Specialty of Clinician Diagnosing melanoma and Health Board of diagnosis n283

	n26	%	n51	%	n206	%	n283	%	2008 n281	%
	Borders	*Borders*	**Fife**	*Fife*	**Lothian**	*Lothian*	**SCAN**	*SCAN*	*SCAN*	*SCAN*
Dermatologist	23	*88.5*	39	*76.5*	162	*78.6*	224	*79.2*	*213*	*75.8*
General Surgeon	2	*7.7*	3	*5.9*	1	*0.5*	6	*2.1*	*4*	*1.4*
Plastic Surgeon	0	*0.0*	5	*9.8*	19	*9.2*	24	*8.5*	*19*	*6.8*
GP	1	*3.8*	3	*5.9*	13	*6.3*	17	*6.0*	*33*	*11.7*
Other	0	*0.0*	1	*2.0*	11	*5.3*	12	*4.2*	*12*	*4.3*

Table 8b: Specialty of Clinician undertaking second procedure of patients diagnosed initially in these Health Boards

	n26	%	n51	%	n206	%	n283	%	2008 n281	%
	Borders	*Borders*	**Fife**	*Fife*	**Lothian**	*Lothian*	**SCAN**	*SCAN*	*SCAN*	*SCAN*
Dermatologist	9	*34.6*	5	*9.8*	44	*21.4*	58	*20.5*	*57*	*20.3*
General Surgeon* WGH	10	*38.5*	1	*2.0*	50	*24.3*	61	*21.6*	*72*	*25.6*
General Surgeon QMH	0	*0.0*	1	*2.0*	0	*0.0*	1	*0.4*	*0*	*0*
Plastic Surgeon ST J	4	*15.4*	27	*52.9*	99	*48.1*	130	*45.9*	*106*	*37.7*
Plastic Surgeon QMH/VHK	0	*0.0*	12	*23.5*	0	*0.0*	12	*4.2*	*22*	*7.8*
Other	2	*7.7*	1	*2.0*	8	*3.9*	11	*3.9*	*9*	*3.2*
No second procedure	1	*3.8*	3	*5.9*	4	*1.9*	8	*2.8*	*13*	*4.6*
Plastic Surgeon (MF)	0	*0.0*	1	*2.0*	0	*0.0*	1	*0.4*	*0*	*0*
n/a	0	*0.0*	0	*0.0*	1	*0.5*	1	*0.4*	*2*	*0.7*

* with special interest in melanoma

Almost 80% of patients were initially diagnosed by Dermatologists who also performed 20% of wide local excisions. 46% of patients were referred for further treatment to Plastic Surgeon(s) at St John's Hospital and 22% to a General Surgeon with special interest at Western General Hospital, Edinburgh.

Table 9: Specialty of Clinician diagnosing melanoma and Institution and Specialty of further procedure n283

Borders n26	**Derm**	*%*	**Gen Surg**	*%*	**Plastics**	*%*	**Other**	**%**	**inapplicable**	**%**
Diagnosed by:	**BGH**		**WGH**		**StJ**					
BGH Derm n23	9	*39.1*	9	*39.1*	4	*17.4*	0	*0.0*	1	*4.3*
GP n1	0	*0.0*	1	*100.0*	0	*0.0*	0	*0.0*	0	*0.0*
Other n2	0	*0.0*	0	*0.0*	0	*0.0*	2	*100.0*	0	*0.0*

Lothian n152	**Derm**	*%*	**Gen Surg**	*%*	**Plastics**	*%*	**Other**	**%**		**%**
Diagnosed by:	**Laur**		**WGH/MF**		**StJ/MF**				**not recorded**	
Lauriston Derm n116	41	*35.3*	39	*33.6*	36	*31.0*	0	*0.0*	0	*0.0*
Roodlands derm n7	0	*0.0*	4	*57.1*	3	*42.9*	0	*0.0*	0	*0.0*
General Surgeon n1	0	*0.0*	1	*100.0*	0	*0.0*	0	*0.0*	0	*0.0*
GP n13	2	*15.4*	3	*23.1*	7	*53.8*	1	*7.7*	0	*0.0*
Murrayfield n6	0	*0.0*	2	*33.3*	3	*50.0*	0	*0.0*	1	*16.7*
New RIE n4	0	*0.0*	0	*0.0*	1	*25.0*	3	*75.0*	0	*0.0*
Other n5	0	*0.0*	1	*20.0*	2	*40.0*	2	*40.0*	0	*0.0*

St John's n54	**Derm**	*%*	**Gen Surg**	*%*	**Plastics**	*%*	**Other**	**%**	**inapplicable**	**%**
Diagnosed by:			**WGH**		**StJ**					
Dermatology n35	1	*2.9*	0	*0.0*	34	*97.1*	0	0.0	0	*0.0*
Plastic Surgeon n17	0	*0.0*	0	*0.0*	13	*76.5*	1	5.9	3	*17.6*
Other n2	0	*0.0*	0	*0.0*	0	*0.0*	1	50.0	1	*50.0*

Fife n51	**Derm**	*%*	**Derm**	*%*	**Gen Surg**	*%*	**Plastics**		*%*	**Other**	**inapp**
Diagnosed by:	**VHK**	*VHK*	**QMH**	*QMH*	**Fife/Lothian**		**St John's**	**QMH**	**VHK**		
QMH Dermatology n16	0	*0.0*	1	*6.3*	1	*6.3*	8 *(50.0%)*	4 *(25.0%)*	1 *(6.3%)*	1 *(6.3%)*	*0*
VHK Dermatology n23	3	*13.0*	0	*0.0*	0	*0.0*	14 *(60.9%)*	2 *(8.7%)*	2 *(8.7%)*	1 *(4.3%)*	1 *(4.3%)*
General Surgeon n3	0	*0.0*	0	*0.0*	1	*33.3*	1 *(33.3%)*	1 *(33.3%)*	*0*	*0*	*0*
Plastic Surgeon n5	0	*0.0*	0	*0.0*	0	*0.0*	1 *(20.0%)*	1 *(20.0%)*	1 *(20.0%)*	*0*	*2*
Other n1	0	*0.0*	0	*0.0*	0	*0.0*	*0*	*0*	*0*	1 *(100%)*	*0*
GP n3	0	*0.0*	0	*0.0*	0	*0.0*	3 *(100%)*	*0*	*0*	*0*	*0*

Table 10 : Time from Diagnosis to Wide Local Excision n283

After the diagnosis of melanoma is obtained (usually when patients first present), all patients thereafter are referred on for a second procedure to ensure complete clearance of the lesion. The table below shows the wait for the second stage of treatment following excision or biopsy of the lesion.

Time Interval Days	**Borders**	**Fife**	**Lothian**	**SCAN**	***SCAN***	***SCAN***	*2008*		
							SCAN	*SCAN*	*SCAN*
n	**n26**	**n51**	**n206**	**n283**	***%***	***cumulative %***	*n281*	*%*	*cumulative %*
1-14	1	0	4	5	*1.8*	*1.8%*	*3*	*1.1*	*1.1%*
15-28	0	2	14	16	*5.7*	*7.4%*	*17*	*6.0*	*7.1%*
29-42	7	4	40	51	*18.0*	*25.4%*	*50*	*17.8*	*24.9%*
43-56	5	12	42	59	*20.8*	*46.3%*	*59*	*21.0*	*45.9%*
57-70	4	8	38	50	*17.7*	*64.0%*	*49*	*17.4*	*63.3%*
71-84	4	11	28	43	*15.2*	*79.2%*	*41*	*14.6*	*77.9%*
85-98	1	5	8	14	*4.9*	*84.1%*	*24*	*8.5*	*86.5%*
99-112	0	2	10	12	*4.2*	*88.3%*	*9*	*3.2*	*89.7%*
113-126	0	3	3	6	*2.1*	*90.5%*	*3*	*1.1*	*90.7%*
127-140	0	0	2	2	*0.7*	*91.2%*	*1*	*0.4*	*91.1%*
>140	1	1	3	5	*1.8*	*92.9%*	*4*	*1.4*	*92.9%*
Inapplicable*	3	3	14	20	*7.1*	*100%*	*21*	*7.5*	*100%*
Range	**9-182**	**24-171**	**13-259**						
Median	**55**	**67**	**56**						

Inapplicable*: declined, single procedure, co-morbidity, partially/wholly treated in private sector, unable to calculate (missing date)

2008

Time Interval Days	*Borders*	*Fife*	*Lothian*
Range	*34-104*	*0-265*	*14-290*
Median	*48*	*63*	*55*

There are no guidelines on optimal timing of wide excision. Not infrequently some of delay is by patient preference or the need to take into account other medical conditions the patient may have. However, the importance to the patient experience was included in a survey undertaken in 2008 and the results highlighted a need for an improvement of timescales through the care pathway. A further Patient Experience Survey is to be carried out in 2011 when results can be reviewed against the 2008 figures.

Table 11: Number of patients having sentinel lymph node biopsy (SLNB) n91

SIGN Guideline 72 Cutaneous Melanoma: "The sentinel lymph node is defined as the first node in the lymphatic basin that drains the lesion and is the node at greatest risk for the development of metastasis." Biopsy of this node can assist in staging patients at risk of metastatic disease.

2009 Protocol of eligibility for consideration of SLNB in SCAN region (excluding D&G): Breslow depth ≥1.0mm or Clark Level IV with Breslow depth <1.0mm

	Borders	Fife	Lothian	SCAN
Total Number eligible for SLNB	11	30	97	138

Data in the table below shows the number of patients having sentinel lymph node biopsy and percentage of those where nodes are positive. Currently there is no national standard for when patients should be considered for sentinel lymph node biopsy. Data on patients offered SLNB is recorded at the Multidisciplinary Meeting. 45 SNLBs were performed by a General Surgeon (with special interest in melanoma) and 46 by Plastic Surgeons.

SLNB Status	Borders	Fife	Lothian	SCAN	*SCAN 2008*
Patients having SLNB*	10	16	65	91	*92*
Positive SLNB	1 (10.0%)	2 (12.5%)	12 (18.5%)	15 (16.5%)	*10 (10.9%)*

* includes n3 patients diagnosed in 2009 and discussed at MDM in 2010 per protocol introduced in January 2010 (see Note below)

47 patients from Borders, Fife and Lothian met the above criteria of being eligible for consideration of SLNB but did not undergo the procedure. This could be due to co-morbidity, contra indications or patient refusal; this may also apply to lymph node clearances.

Note: from January 2010: Protocol of eligibility for consideration of SLNB in SCAN region will change to:
Breslow depth ≥1.0mm or Breslow depth <1.0 but mitotic rate ≥1mm² and histopathology reports now routinely report the mitotic rate per mm².

Current practice is for patients with a positive sentinel node to proceed to radical node dissection

Table 12: Patients Having Lymph Node Clearance n21*

	Borders	Fife	LUHT	SCAN	*SCAN*
Lymph Node Clearance	2	5	14	21	*15*
Positive Lymph Nodes	2	3	5	10	*10*

* includes n7 patients with no previous sentinel lymph node biopsy, three of whom presented with metastatic disease (one from Borders and two from Lothian). One Lothian patient had positive SLNB but did not proceed to node dissection.

Table 13: Discussion at Multidisciplinary Meeting (MDM) n283

SCAN Draft Clinical Effectiveness Measure: All patients should be treated or have their treatment reviewed by clinicians with expertise in the management of melanoma and who have an active role in the MDM

Multidisciplinary Meeting	Borders	Fife	Lothian	SCAN	*2008 SCAN*
	n26	**n51**	**n206**	**n283**	*n281*
Discussed	26	51	199	276	*278*
Not discussed	0	0	7*	7	*3*
% discussed	**100%**	**100%**	**96.6%**	**97.5%**	*98.9%*

6 of 7* patients not discussed at MDM were partially or wholly treated in private sector

Multidisciplinary Team Meetings are currently held fortnightly and are regularly attended by the clinicians with expertise in the management of melanoma. The protocol for MDM includes keeping a register of clinicians who attend.

At least 40 patients diagnosed with recurrence of their melanoma disease during 2009 were also referred/re-referred to the MDM for discussion of their treatment.

Table 14: Contact with Skin Cancer Nurse Specialist (CNS) n276*
Scottish Core Cancer Standards 2008 3c: Patients have access to appropriate specialist nursing staff.

Contact with CNS	Borders	Fife	Lothian	SCAN	*2008 SCAN*
Number of Patients:	**n26**	**n51**	**n199***	**n276**	*n281*
Yes	23	37	178	238	*237*
No	3	14	21	38	*44*
% contact	**88.5%**	**72.5%**	**89.4%**	**86.2%**	*84.3%*

*total number adjusted: 2 patients with two primary lesions and one patient with 6 primary lesions.

All patients are offered contact number of regional specialist nurse and are asked if she can contact them.

Table 15: Five Year Follow-up of Patients diagnosed with malignant melanoma in 2004 n229

Clark Level II to V and metastatic disease at presentation

Borders, Fife and Lothian																	
Number and Percentage by Breslow depth																	
Breslow Depth	Alive and disease free		Alive, previous recurrence, now disease free		Alive, ongoing recurrence		Dead of melanoma		Dead other causes		Dead cause n/a		Lost to Follow up		Total Male	Total Female	Overall Totals
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M/F
0 - 0.99	35	67	0	2	1	2	1	0	4	1	1	2	2	4	44	78	122
1 - 1.99	11	15	3	1	0	0	1	2	3	1	0	0	0	1	18	20	38
2 - 2.99	1	6	1	2	0	0	2	1	0	0	1	2	0	1	5	12	17
3 - 3.99	0	4	1	0	0	1	3	0	0	0	3	0	0	1	7	6	13
4 +	5	3	2	3	1	1	4	5	0	0	4	0	1	0	17	12	29
Breslow n.a	0	0	0	0	1	0	1	0	0	0	1	0	0	0	3	0	3
Mets	0	1	1	0	0	0	2	1	0	1	0	1	0	0	3	4	7
Total	52	96	8	8	3	4	14	9	7	3	10	5	3	7	97	132	229
% Total	53.6	72.7	8.2	6.1	3.1	3.0	14.4	6.8	7.2	2.3	10.3	3.8	3.1	5.3			

Note: Follow-up data extracted during 2009 for presentation at The Scottish Melanoma Group Annual General Meeting in November 2010
Complete data for SCAN is a valuable resource to provide information on survival rates. No marked change has been shown in survival rate compared with current and previous data.

Protocol for Follow-up in 2009:

a) Dermatology practice: 3 year follow-up for lesions Breslow <1mm and 5 years for Breslow >=1mm: 10 visits over 3 years and 16 over 5
b) Plastic Surgery practice: identical for all melanomas regardless of depth; first 2 years 3 monthly; 3rd year 4 monthly and 4th & 5th years six monthly: 15 visits over 5 years

In both services follow-up may be extended beyond this if patient has recurrence.

41 patients registered with malignant melanoma were recorded by Audit as having died during 2009: 29 from melanoma (18 males and 11 females), 9 from other causes and 4 currently of unknown cause

APPENDIX: Oncology and Clinical Trials

Adjuvant:

1. 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

8 patients entered: 5 treatment arm (Tx arm; 2 withdrawn being followed as per Obs.arm), 3 observation arm (Obs arm).

Study remains open to recruitment as of 31.10.2010

Metastatic:

1. APL-B-016-05

Phase I-II multicenter, randomized, open-label, clinical and pharmacokinetic study of plitidepsin, administered alone or in combination with dacarbazine, as frontline therapy to subjects with unresectable advanced melanoma

5 patients entered

Study now closed to recruitment

2. 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 V6000E BRAF mutation only, randomised to dacarbazine or RO5185426.

7 patients screened. 4 failed due to absence of mutation and one due to incidental brain metastasis; two on treatment (one on each arm)

Study now closed to recruitment

ABBREVIATIONS

AJCC	American Joint Committee on Cancer
BGH	Borders General Hospital, Melrose
CM	Cutaneous Melanoma
CNS	Cancer Nurse Specialist
FNA	Fine Needle Aspirate
GP	General Practitioner
ISD	Information and Statistics Division, National Services Scotland
LMM	Lentigo Maligna Melanoma
MDM	Multidisciplinary Meeting
MDT	Mutidisciplinary Team
Mets	Metastasis/Metastases
MF	Murrayfield Hospital, Edinburgh (now SPIRE, Murrayfield)
New RIE	Royal Infirmary of Edinburgh, Little France
QMH	Queen Margaret Hospital, Dunfermline
SCR	Scottish Cancer Registry
SIGN	Scottish Intercollegiate Guidelines Network
SLNB	Sentinel Lymph Node Biopsy
SMG	Scottish Melanoma Group
SSMM	Superficial Spreading Malignant Melanoma
St J	St John's Hospital, Livingston
VHK	Victoria Hospital, Kirkcaldy
WGH	Western General Hospital, Edinburgh

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

Review patient: patient may attend outpatient cancer clinic as they are being followed up for a previous melanoma

Triage: process of allocating treatment assessing urgency of medical needs