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New projects in Skin Cancer Analysis

South West Public Health Observatory

Skin Cancer Registration Project

– To pilot the registration of all malignant skin cancers
Malignant Melanoma , Squamous Cell Carcinoma , Basal Cell Carcinoma and rare skin cancers and consider the feasibility of developing the project at national level

Methodology

- Development of a stand alone dataset

- Training of cancer registry officers

- Agreeing entry criteria and specification of the project

- Involvement of clinicians

- Data items based on National Cancer Registry Dataset plus extra fields

- Entry of all pathology histology reports sent from Trusts completed in some cases by MDT data

- All cases diagnosed in 2009 in the South West, Hampshire and IOW

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Results – Number of cases registered

ICD-10 Code	ICD-10 Description	Count	%
C11	Malignant neoplasm of nasopharynx	5	0.01
C21	Malignant neoplasm of anus and anal canal	93	0.27
C43	Malignant melanoma of skin	1,852	5.33
C44	Other malignant neoplasms of skin	31,594	90.83
C46	Kaposi's sarcoma	8	0.02
C51	Malignant neoplasm of vulva	190	0.55
C60	Malignant neoplasm of penis	46	0.13
C63	Malignant neoplasm of other and unspecified male genital organs	13	0.04
C69	Malignant neoplasm of eye and adnexa	30	0.09
C80	Malignant neoplasm without specification of site	78	0.22
D03	Melanoma in situ	875	2.52
Total		34,784	100.00

Source: South Cancer Registration Project

Morphology of recorded cancers other than C43 or C44

| ICD – 10		Morphology			
Code	Description	BCC	SCC	MM	Others
C11	Malignant neoplasm of nasopharynx	0	3	1	1
C21	Malignant neoplasm of anus and anal canal	5	80	2	6
C46	Kaposi's sarcoma	0	0	0	8
C51	Malignant neoplasm of vulva	21	134	11	24
C60	Malignant neoplasm of penis	0	40	2	4
C63	Malignant neoplasm of other and unspecified male genital organs	7	2	1	3
C69	Malignant neoplasm of eye and adnexa	5	2	23	1
C80	Malignant neoplasm without specification of site	0	5	72	1

Source: South Cancer Registration Project

SW Skin Cancer Project-C43 by morphology codes

| Morph. Code	Morphology Code Description	Total
8720	Melanoma, NOS	310
8721	Nodular melanoma	264
8722	Melanoma in regression	1
8730	Amelanotic melanoma	2
8742	Melanoma in Hutchinson's melanotic freckle (Lentigo Maligna)	147
8743	Superficial spreading melanoma	1,067
8744	Acral lentiginous melanoma	31
8745	Desmoplastic melanoma	10
8771	Epithelioid cell melanoma	4
8772	Spindle cell melanoma, NOS	15
8774	Spindle cell melanoma, type B	1
Total		1,852

Source: South Cancer Registration Project

MM-C43 Anatomical site and gender
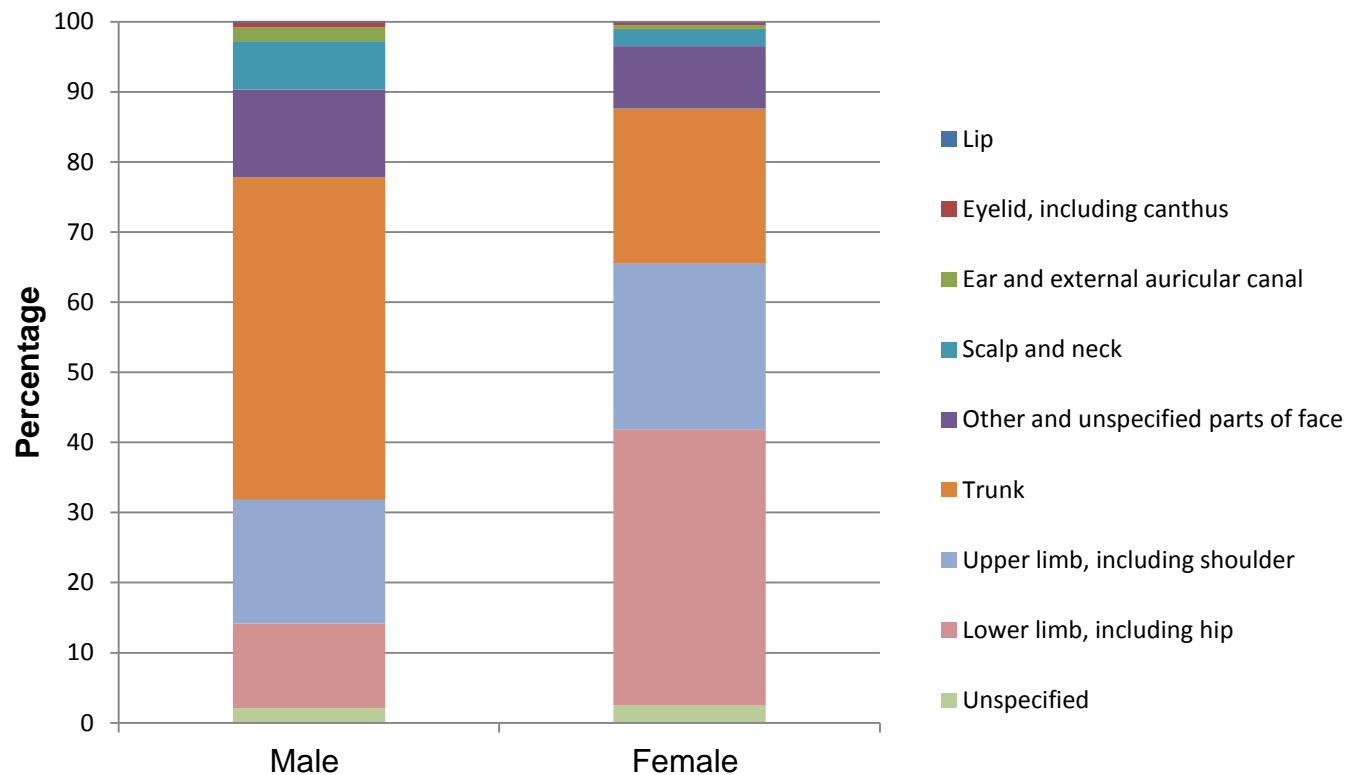
Source: South Cancer Registration Project

NMSC- C44 – Anatomical location and gender

Source: South West Public Health Observatory
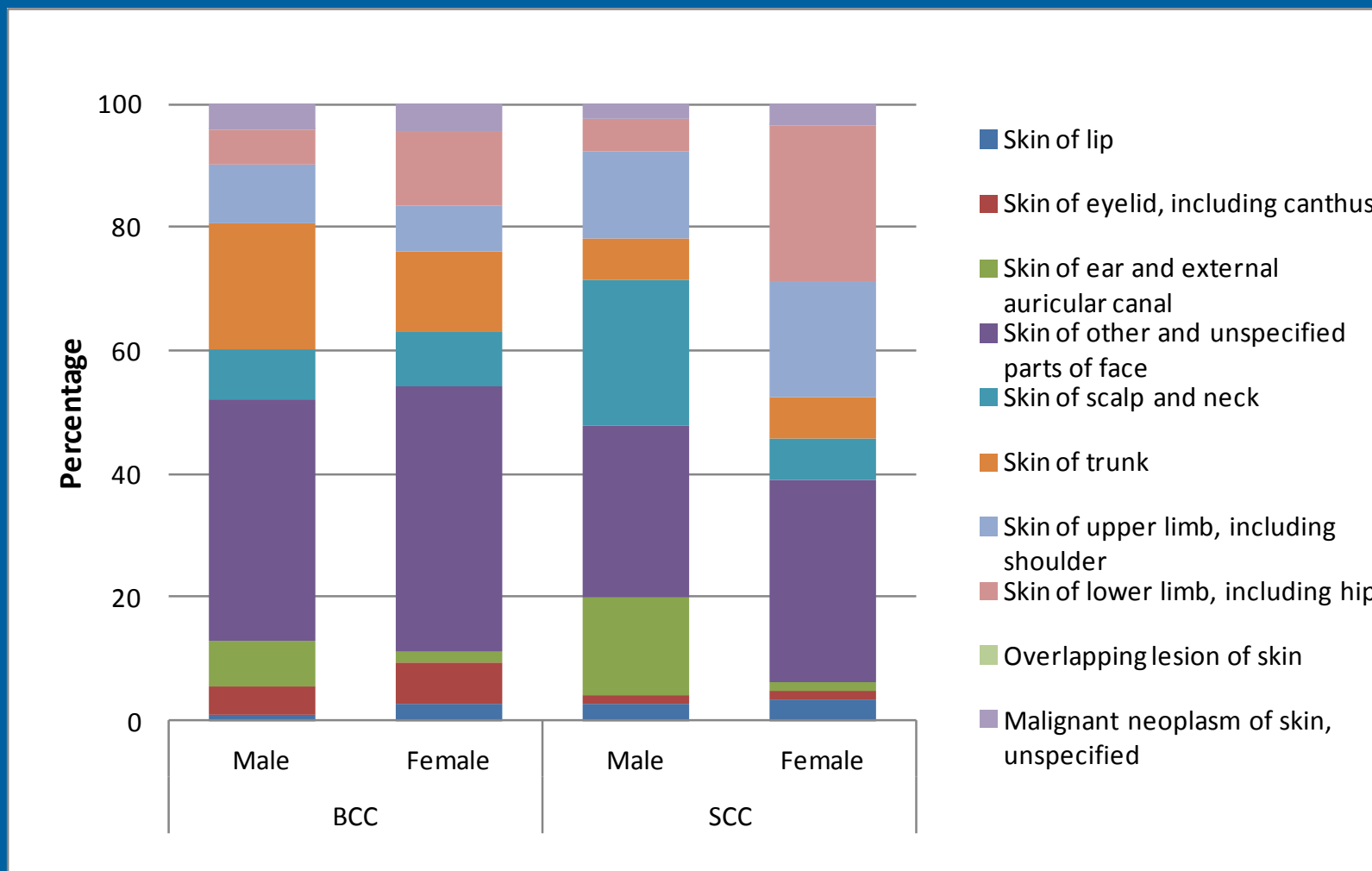
Incidence by age group for MM and NMSC

Age Group	Malignant Melanoma		Melanoma In Situ		BCC		SCC	
	N	%	N	%	N	%	N	%
0-24	20	1.1	4	0.5	44	0.2	1	0.0
25 -49	431	23.3	127	14.5	1543	5.9	95	1.8
50 -74	925	49.9	466	53.3	11984	46.1	1674	31.1
75+	476	25.7	278	31.8	12410	47.8	3615	67.1
Total	1,852	100	875	100	25981	100	5385	100

Source: South Cancer Registration Project

C43 Staging and survival in MM level I & II – J.Thompson et al- JCO- 2011

Independent predictive factors for survival

1. Thickness of the lesion
2. Mitotic rate
3. Patient age
4. Ulceration
5. Anatomical site
6. Sex

Availability of data on the Skin Cancer Project – C43

- *Breslow thickness level*: 82% of cases
- *Mitotic rate*: 28.5% of cases had a mitotic rate per Sq.mm but other cases had references to mitosis rates given as x mitoses in 10 or 5 HPF or as low//moderate or other (total of 53%)
- *Date of birth*: 100 % of cases
- *Ulceration:* 85% of cases had mention of ulceration present or not
- *Specific anatomical site*: 97% of cases
- Sex: 100% of cases

Source: South Cancer Registration Project

TNM staging - Melanoma

TNM staging was complete for 9 cases,
- 110 cases had a T N given
- An extra 1630 cases had a T

However these data were based on pathology reports and therefore metastasis would not be necessarily mentioned

Source: South Cancer Registration Project

Other additional data available

- Number per Trusts
- Excision margins
- Procedures
- Multiple Tumours presentation
- Specialties

Main issues with the project –limitations and advantages

Limitations
1. Resource intensive
2. Cost
3. Current lack of proforma use by pathologists
4. Training issues regarding terminology due to a lack of heterogeneity amongst pathologists

Advantages
1. Better understanding of current workload
2. More accurate assessment of cases presenting in the region
3. Sources of data for further studies – baseline assessment
4. Audit of histopathology reporting in the region which can be used for the staging target and implementation of the CODS
5. Allow a more accurate costing of skin cancer care –

The lack of commitment to record Non Melanoma Skin Cancer is often due to lack of awareness in term of numbers – need for complex repair and therefore morbidity and cost

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Additional cases recorded as part of the Skin Cancer Dataset

At least an additional 60% of cases of NMSC were recorded on the stand alone dataset compared to our registry for 2009.
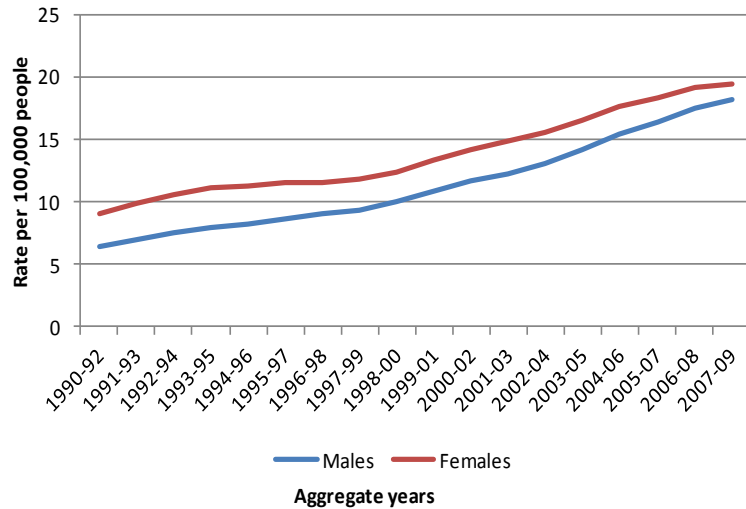However the project has had an effect on our normal registration process when compared with previous years
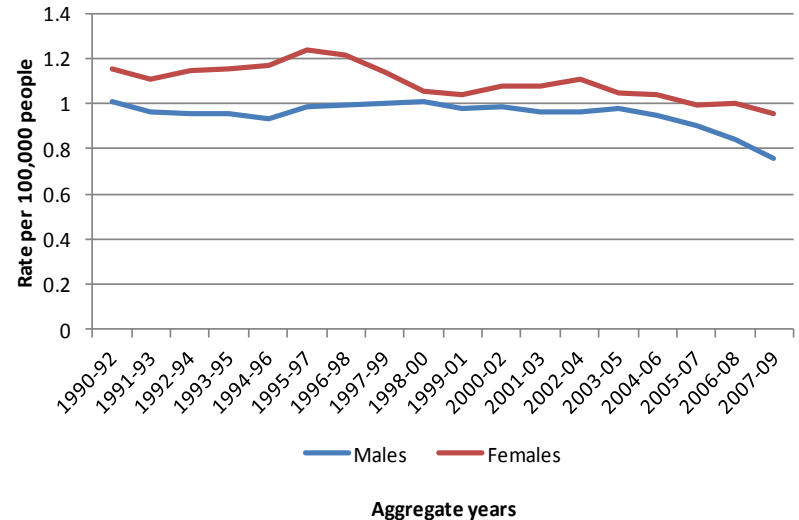
Data missing

- NMSC treated by topical treatment

- Data incomplete for 2 Trusts (NBT and RUH)

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MM C43 and Melanoma non-skin sites- trends

3 year aggregate crude incidence rate for skin MM in England

3 year aggregate crude incidence rate for non skin MM in England

Cases were extracted from the National Cancer Data Repository using a morphology code corresponding to malignant melanoma (M87203, M87213, M87223, M87233, M87303, M87403, M87413, M87423, M87433, M 87443, M87453, M87613, M87703, M87713, M87723, M87733, M87743, M87803). The years covered expand from 1990 to 2009. These data covered 8 English Cancer Registries
Source: NCDR

Rare skin cancer

Data Source: NCDR 1999- 2008.
The cases were selected for the ICD code 10 C44 (other malignant neoplasm of skin

Rare Skin Cancer incidence by gender over a 10 year period
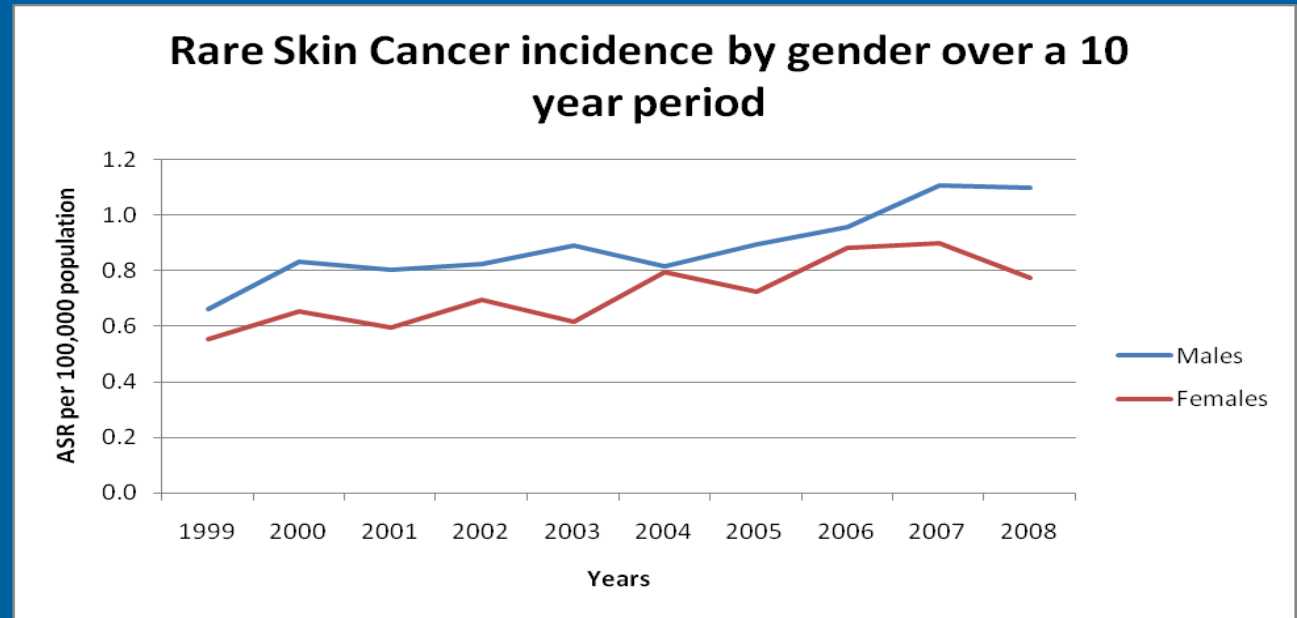
Main rare skin cancers : Epidermal : Merkel Cell Carcinoma (1,515), Sebaceous Adenocarcinoma (713) and Dermal : Dermatofibrosarcoma (1,228)
Considering the poor outcomes of patients diagnosed with Merkel Cell Carcinoma, 79% of these patients died within the 2 first years of diagnosis with Merkel Cell Carcinoma

Indoor and outdoor work, socio-economic status and skin cancer in the South West

Aims:

To investigate the relationship between indoor and outdoor work, socio-economic status and skin cancer.

Methods:

- Data on persons (3,096), where skin cancer (C43 and C44) was recorded as an underlying or contributory cause of death on the Death Certificate (2001-2010) were extracted.
- Occupation was classified in terms of exposure using an occupational health led New Zealand model (outdoor, intermittent, and indoor), and socio-economic status (NS-SEC).

*Cooke KR et al. IJC 1984, **34**, 57-62*.

Indoor and outdoor work, socio-economic status and skin cancer

- Outdoor workers were more likely to die with a non-melanoma, and indoor workers with a melanoma

- Indoor workers die younger

- No significant difference was observed for intermittent workers

Percentage of persons dying with melanoma or non-melanoma by professional group

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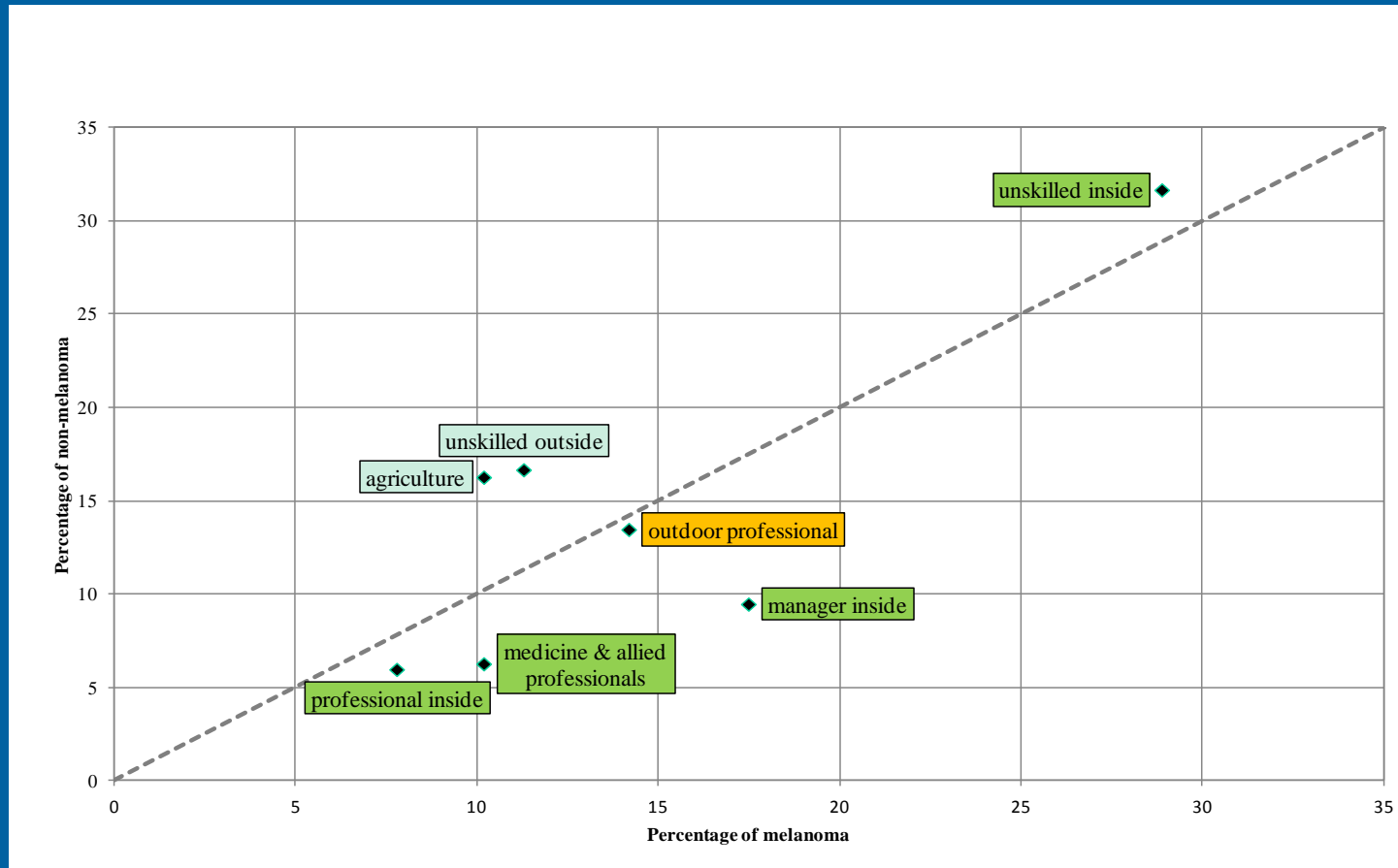
Lymph nodes biopsy for *MM* patients in England

- To assess variation across the country and cancer networks - feasibility of assessing these data will be determined using links with HES data

- Data for patients diagnosed with skin cancer in 2006-08 were extracted from NCDR and HES using a range of procedure codes (T911, T873, 0142, Z618)

Lymph nodes results

- 1041 cases were identified over 3 years : 275, 2006; 353, 2007; 413, 2008

- Male/Female ratio: 519/522

- 16 Cancer networks – inc 2 with less than 10 cases over three years

- 58% of cases were between 50 and 74 years old

- 8.3% of cases were from the most deprived quintile while 33% were from the most affluent quintile (r2: 0.96)

- 89% of cases had a bed day episode of 0 to 2 days

Proms

- The aims of this study are to identify and test a suite of questions which can be adapted for use for patient-reported outcome measures (PROMS) with patients who have undergone complex surgery for skin cancer.
- Collaboration with Centre for Appearance Research (University of the West of England)

Outlines of the project

- Stage 1: literature review to identify measures, methods and questions used in previous skin cancer research and service evaluation
- Stage 2: a Delphi study with skin cancer surgery and treatment experts and patients who have undergone complex skin cancer surgery

SWPHO teams involved

Analysts involved
- Ade Abitoye
- Alex Ives
- Nicola Bowtell
- Veronique Poirier

Cancer registry
- Carlos Rocha
- Chris Middleton
- Ian Horlock
- Tina Ball

IT
- Paul Eves