NCIN
national cancer intelligence network

Using information to improve quality & choice

Cancer Network Lung TSSG
Clinical Leads workshop

www.ncin.org.uk

NCRI
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Cancer
Research
Institute

NCIN
national cancer
intelligence network

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Cancer Network Lung TSSG Clinical Leads workshop

Dr Mick Peake

Clinical Lead, NCIN

www.ncin.org.uk

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Lung TSSG Workshop - aims

- To promote the use of data to drive up standards of care and outcomes for patients with lung cancer and mesothelioma
- To update cancer network lung groups on some key national issues
- To introduce the work of the NCIN and promote the engagement of regional and local teams in the process of improving data on lung cancer outcomes
- To help the final development of the National Lung Cancer Dataset
- To get feedback on how best we can promote the development of optimal MDT practice

NCIN
national **cancer**
intelligence network

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What is the NCIN?

www.ncin.org.uk

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intelligence network

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Goal for NCIN: “To develop the best cancer information service of any large country in the world”

www.ncin.org.uk

NCRI
National
Cancer
Research
Institute

NCIN Partners

NCIN
national cancer
intelligence network

breakthrough breast cancer

CANCER RESEARCH UK

ecric
Fighting cancer with information

DH Department of Health

NHS
The Information Centre
for health and social care

LONDON SCHOOL OF HYGIENE & TROPICAL MEDICINE
UNIVERSITY OF LONDON

WE ARE MACMILLAN. CANCER SUPPORT

MRC Medical Research Council

NHS
National Cancer Action Team

NATCANSAT
The National Cancer Services Analysis Team

Office for National Statistics

NHS
National Services Scotland

NHS
Northern and Yorkshire
Cancer Registry and Information Service

NWCIS
North West Cancer Intelligence Service

onCore UK

OXFORD CANCER INTELLIGENCE UNIT
O C I U

KING'S College LONDON

abpi

NHS

DH Department of Health

SOUTH WEST PUBLIC HEALTH OBSERVATORY

Trent NHS
Cancer Registry

NHS

West Midlands
Cancer Intelligence Unit

NCRI
National Cancer Research Institute

Cancer Screening Programmes

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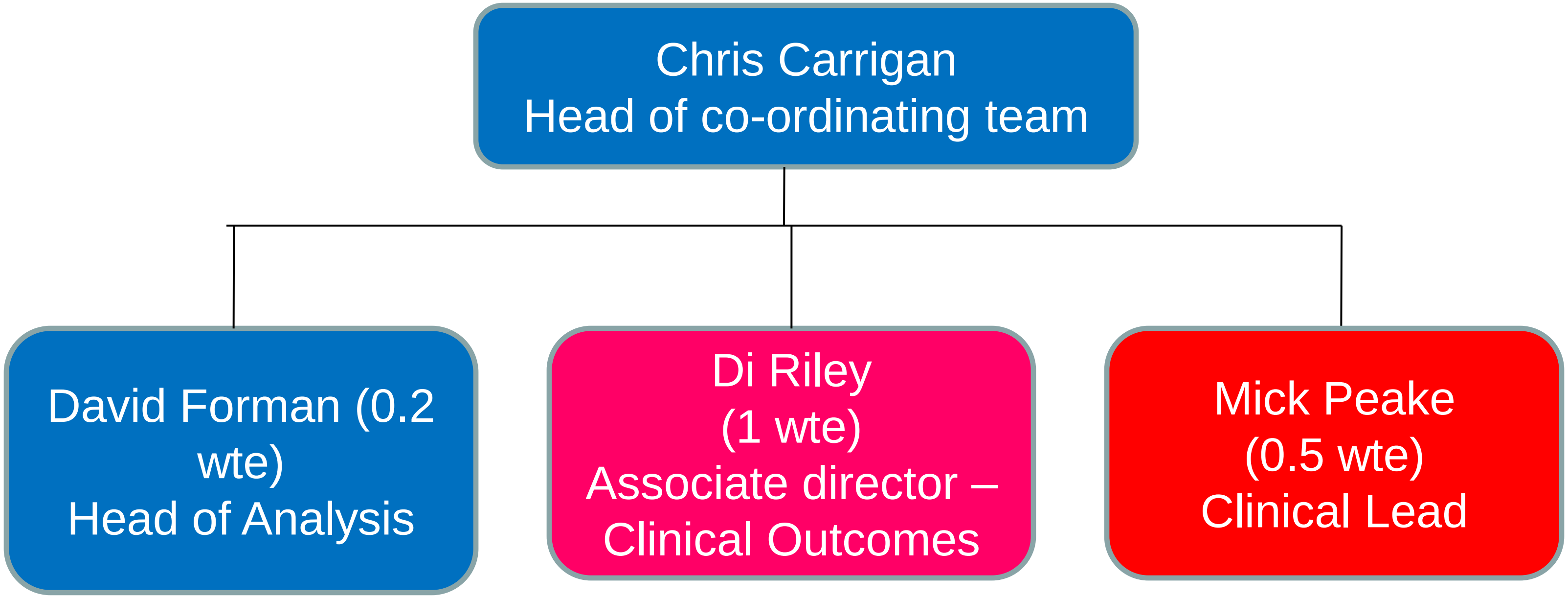
NCIN Core Team



Chris Carrigan
Head of co-ordinating team

- David Forman (0.2 wte)
  Head of Analysis
- Di Riley
  (1 wte)
  Associate director – Clinical Outcomes
- Mick Peake
  (0.5 wte)
  Clinical Lead

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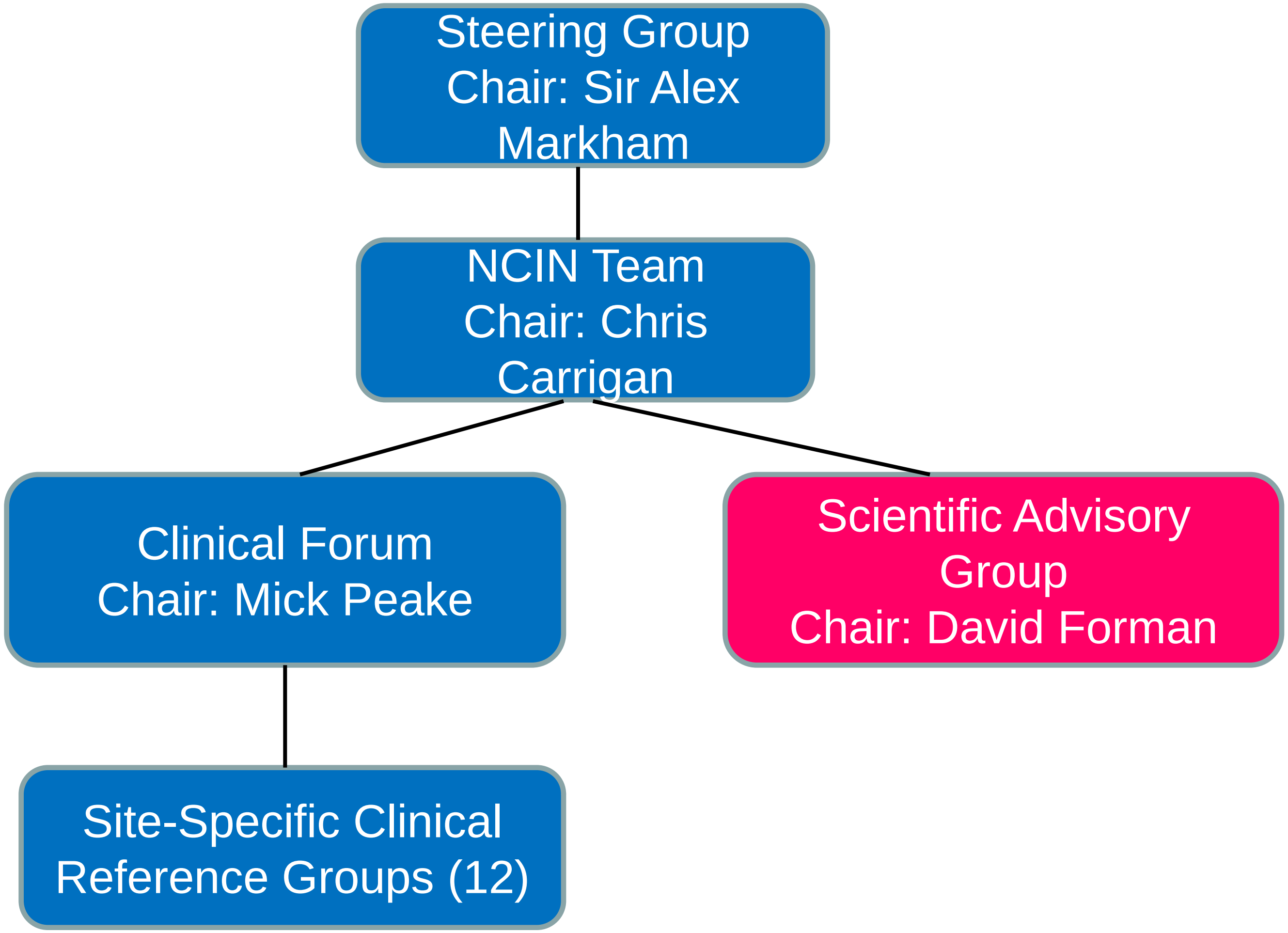
NCIN Current structure

national cancer intelligence network



Steering Group
Chair: Sir Alex Markham

NCIN Team
Chair: Chris Carrigan

Clinical Forum
Chair: Mick Peake

Scientific Advisory Group
Chair: David Forman

Site-Specific Clinical Reference Groups (12)

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NCRI
National Cancer Research Institute

NCIN core objectives

NCIN national cancer intelligence network

- Promoting efficient and effective data collection throughout the cancer journey
- Providing a common national repository for cancer datasets
- Producing expert analyses, based on robust methodologies, to monitor patterns of cancer care
- Exploiting information to drive improvements in standards of cancer care and clinical outcomes
- Enabling use of cancer information to support audit and research programmes

Site-Specific Clinical Reference Groups

- Brain/CNS
- Breast
- Children, Teenage & Young Adults
- Colo-rectal
- Gynaecological cancers
- Haematological cancers (including lymphoma)
- Head & Neck (including thyroid)
- Lung (including mesothelioma)
- Bone & soft tissue Sarcoma
- Skin (including non-melanoma)
- Upper GI (including Hepato-biliary)
- Urology (all 4 sub-types)

Main issues for SSCRGs

- Identification of current initiatives
- Support for data set development
- Identification of main clinical indicators
- Forming a link with Peer Review
- Advising on co-morbidity
- Improving staging (engaging pathologists)
- Promoting clinical (and public) engagement
- Advising on reporting
- Making the most of links with the research community
- Supporting the use of data to change clinical practice
- Advising on care pathways (Map of Medicine)

National Cancer Data Repository

Initial work:

Registry-HES linkage: 1995-2004 (England)

- 8.5 million tumour records from Registries
  - c. 30 fields of data
- 34 million hospital in patient episodes
  - c. 150 fields of data

Current work:

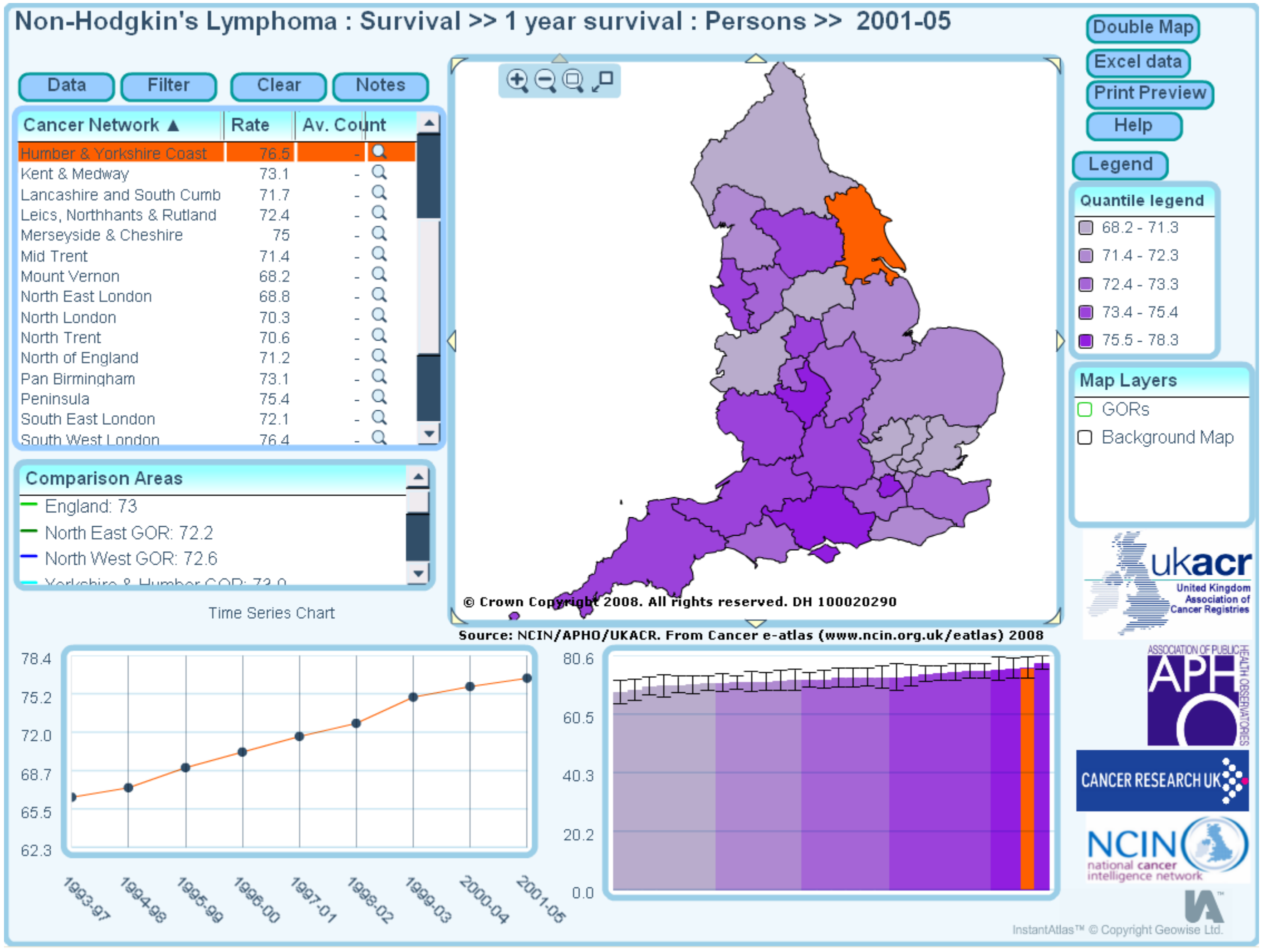
- HES data up to 2007 recently added (including an assessment of out-patient HES)
- Linkage with GP Research Database
- Linkage with NCASP audit data (especially stage and performance status)
- Radiotherapy data beginning to flow (to NatCanSat)
- Linkage with Peer Review Data

Expert analyses

- Cancer eAtlas: - launched July 2008 www.ncin.org.uk/eatlas
  - Large and varied interest
  - International recognition
- Reports on:
  - UK incidence & mortality
  - One year survival
  - Deprivation
  - Prevalence
  - Ethnicity
  - Male cancers
  - Cancer in the Elderly
  - *Surgery (due out Q1 2010)*
- Microsites

National Cancer e-Atlas

www.ncin.org.uk/eatlas


Double Map
Excel data
Print Preview
Help
Legend
Data
Filter
Clear
Notes
Map Layers
☐ GORs
☐ Background Map
ukacr
United Kingdom Association of Cancer Registries
ASSOCIATION OF PUBLIC HEALTH OBSERVATORIES
APHO
CANCER RESEARCH UK
NCIN
national cancer intelligence network
InstantAtlas™ © Copyright Geowise Ltd.
Time Series Chart
78.4
75.2
72.0
68.7
65.5
62.3
1993-97
1994-98
1995-99
1996-00
1997-01
1998-02
1999-03
2000-04
2001-05
80.6
60.5
40.3
20.2
0.0

Non-Hodgkin's Lymphoma : Survival >> 1 year survival : Persons >> 2001-05

Cancer Network ▲	Rate	Av. Count
Humber & Yorkshire Coast	76.5	-
Kent & Medway	73.1	-
Lancashire and South Cumb	71.7	-
Leics, Northhants & Rutland	72.4	-
Merseyside & Cheshire	75	-
Mid Trent	71.4	-
Mount Vernon	68.2	-
North East London	68.8	-
North London	70.3	-
North Trent	70.6	-
North of England	71.2	-
Pan Birmingham	73.1	-
Peninsula	75.4	-
South East London	72.1	-
South West London	76.4	-

Comparison Areas

- England: 73
- North East GOR: 72.2
- North West GOR: 72.6
- Yorkshire & Humber GOR: 73.0

Quantile legend

- ▨ 68.2 - 71.3
- ▨ 71.4 - 72.3
- ▨ 72.4 - 73.3
- ▨ 73.4 - 75.4
- ▨ 75.5 - 78.3

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Source: NCIN/APHO/UKACR. From Cancer e-atlas (www.ncin.org.uk/eatlas) 2008

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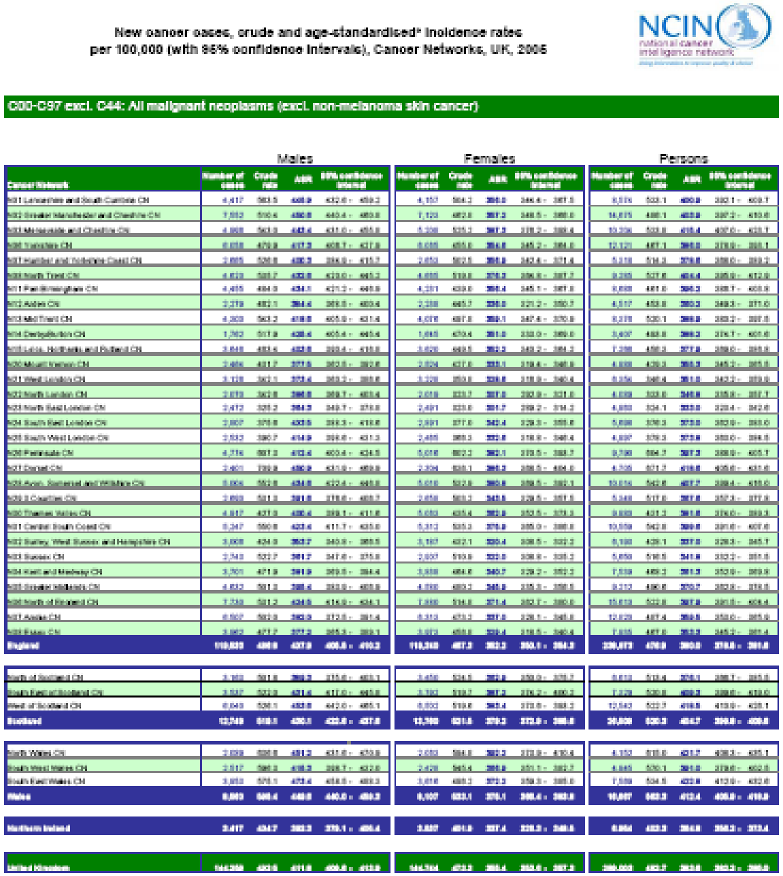
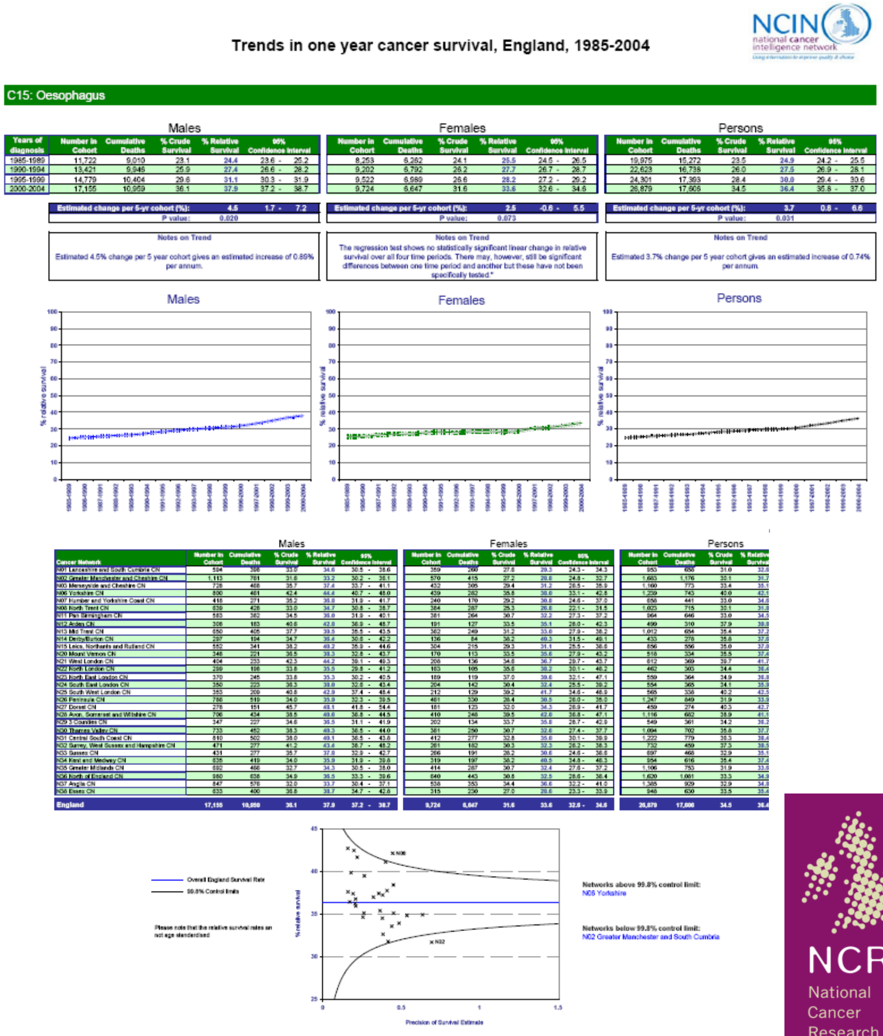
NCIN:
Incidence and mortality



New cancer cases, crude and age-standardised* incidence rates per 100,000 (with 95% confidence intervals), Cancer Networks, UK, 2006

C00-C97 excl. C44: All malignant neoplasms (excl. non-melanoma skin cancer)

Males
Females
Persons



Trends in one year cancer survival, England, 1985-2004

C15: Oesophagus

Males

Years of diagnosis	Number in Cohort	Cumulative Deaths	% Crude Survival	% Relative Survival	95% Confidence Interval
1985-1989	11,722	9,010	23.1	24.4	23.6 - 25.2
1990-1994	13,421	9,946	25.9	27.4	26.6 - 28.2
1995-1999	14,779	10,404	29.6	31.1	30.3 - 31.9
2000-2004	17,155	10,959	36.1	37.9	37.2 - 38.7

Estimated change per 5-yr cohort (%): 4.5 1.7 - 7.2
P value: 0.020

Females

Years of diagnosis	Number in Cohort	Cumulative Deaths	% Crude Survival	% Relative Survival	95% Confidence Interval
1985-1989	8,253	6,262	24.1	25.5	24.5 - 26.5
1990-1994	9,202	6,792	26.2	27.7	26.7 - 28.7
1995-1999	9,522	6,989	26.6	28.2	27.2 - 29.2
2000-2004	9,724	6,647	31.6	33.6	32.6 - 34.6

Estimated change per 5-yr cohort (%): 2.5 -0.6 - 5.5
P value: 0.073

Persons

Years of diagnosis	Number in Cohort	Cumulative Deaths	% Crude Survival	% Relative Survival	95% Confidence Interval
1985-1989	19,975	15,272	23.5	24.9	24.2 - 25.5
1990-1994	22,623	16,738	26.0	27.5	26.9 - 28.1
1995-1999	24,301	17,393	28.4	30.0	29.4 - 30.6
2000-2004	26,879	17,606	34.5	36.4	35.8 - 37.0

Estimated change per 5-yr cohort (%): 3.7 0.8 - 6.6
P value: 0.031

Notes on Trend

Estimated 4.5% change per 5 year cohort gives an estimated increase of 0.89% per annum.

Notes on Trend

The regression test shows no statistically significant linear change in relative survival over all four time periods. There may, however, still be significant differences between one time period and another but these have not been specifically tested.*

Notes on Trend

Estimated 3.7% change per 5 year cohort gives an estimated increase of 0.74% per annum.

Please note that the relative survival rates are not age standardised

Networks above 99.8% control limit:
N06 Yorkshire

Networks below 99.8% control limit:
N02 Greater Manchester and South Cumbria

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Trends in 1 year survival: England 1985-2004

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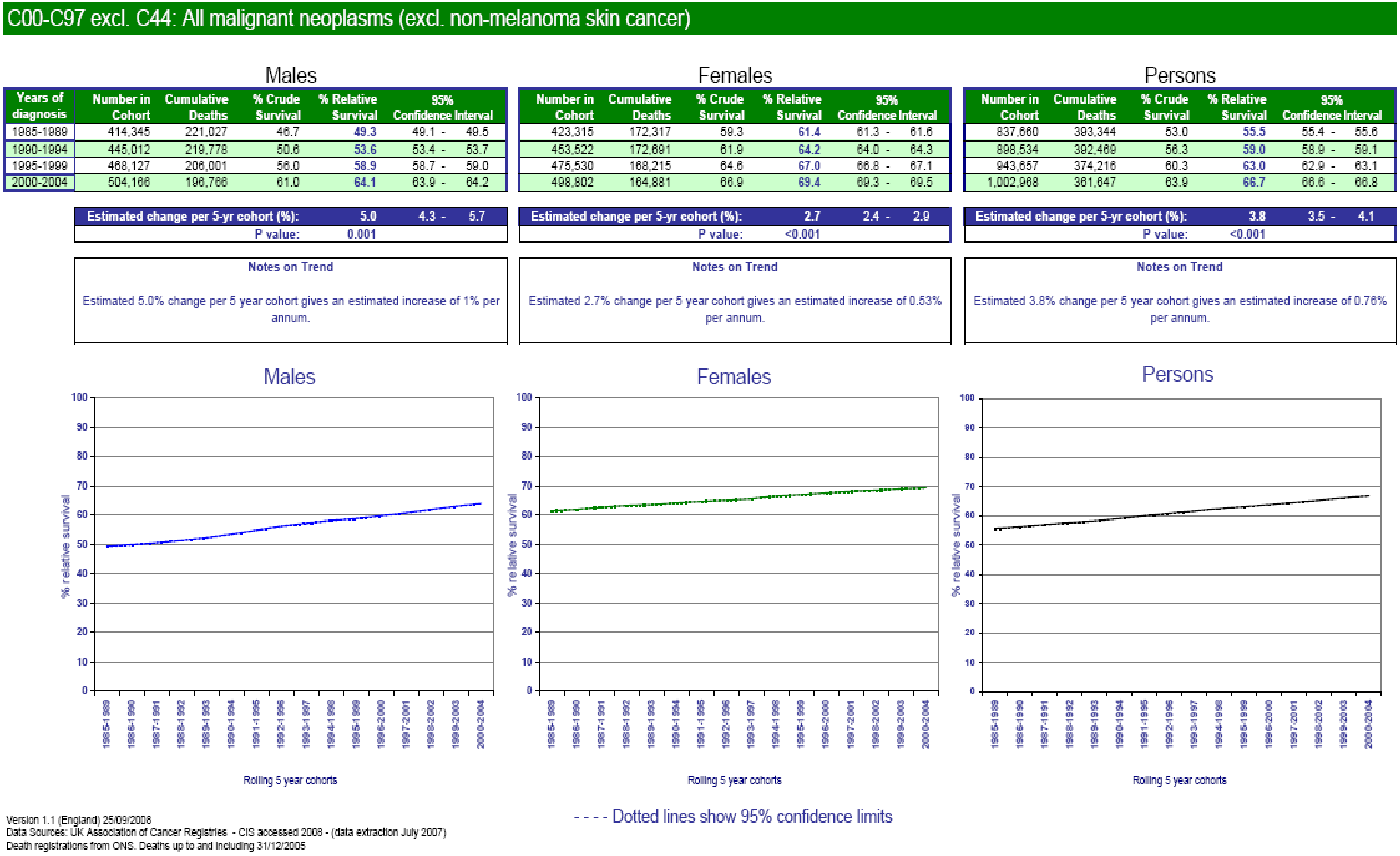


C00-C97 excl. C44: All malignant neoplasms (excl. non-melanoma skin cancer)

Males

Years of diagnosis	Number in Cohort	Cumulative Deaths	% Crude Survival	% Relative Survival	95% Confidence Interval
1985-1989	414,345	221,027	46.7	49.3	49.1 - 49.5
1990-1994	445,012	219,778	50.6	53.6	53.4 - 53.7
1995-1999	468,127	206,001	56.0	58.9	58.7 - 59.0
2000-2004	504,166	196,766	61.0	64.1	63.9 - 64.2

Estimated change per 5-yr cohort (%): 5.0 4.3 - 5.7
P value: 0.001

Females

Years of diagnosis	Number in Cohort	Cumulative Deaths	% Crude Survival	% Relative Survival	95% Confidence Interval
1985-1989	423,315	172,317	59.3	61.4	61.3 - 61.6
1990-1994	453,522	172,691	61.9	64.2	64.0 - 64.3
1995-1999	475,530	168,215	64.6	67.0	66.8 - 67.1
2000-2004	498,802	164,881	66.9	69.4	69.3 - 69.5

Estimated change per 5-yr cohort (%): 2.7 2.4 - 2.9
P value: <0.001

Persons

Years of diagnosis	Number in Cohort	Cumulative Deaths	% Crude Survival	% Relative Survival	95% Confidence Interval
1985-1989	837,660	393,344	53.0	55.5	55.4 - 55.6
1990-1994	898,534	392,469	56.3	59.0	58.9 - 59.1
1995-1999	943,657	374,216	60.3	63.0	62.9 - 63.1
2000-2004	1,002,968	361,647	63.9	66.7	66.6 - 66.8

Estimated change per 5-yr cohort (%): 3.8 3.5 - 4.1
P value: <0.001

Notes on Trend

Estimated 5.0% change per 5 year cohort gives an estimated increase of 1% per annum.

Notes on Trend

Estimated 2.7% change per 5 year cohort gives an estimated increase of 0.53% per annum.

Notes on Trend

Estimated 3.8% change per 5 year cohort gives an estimated increase of 0.76% per annum.

Males

Females

Persons

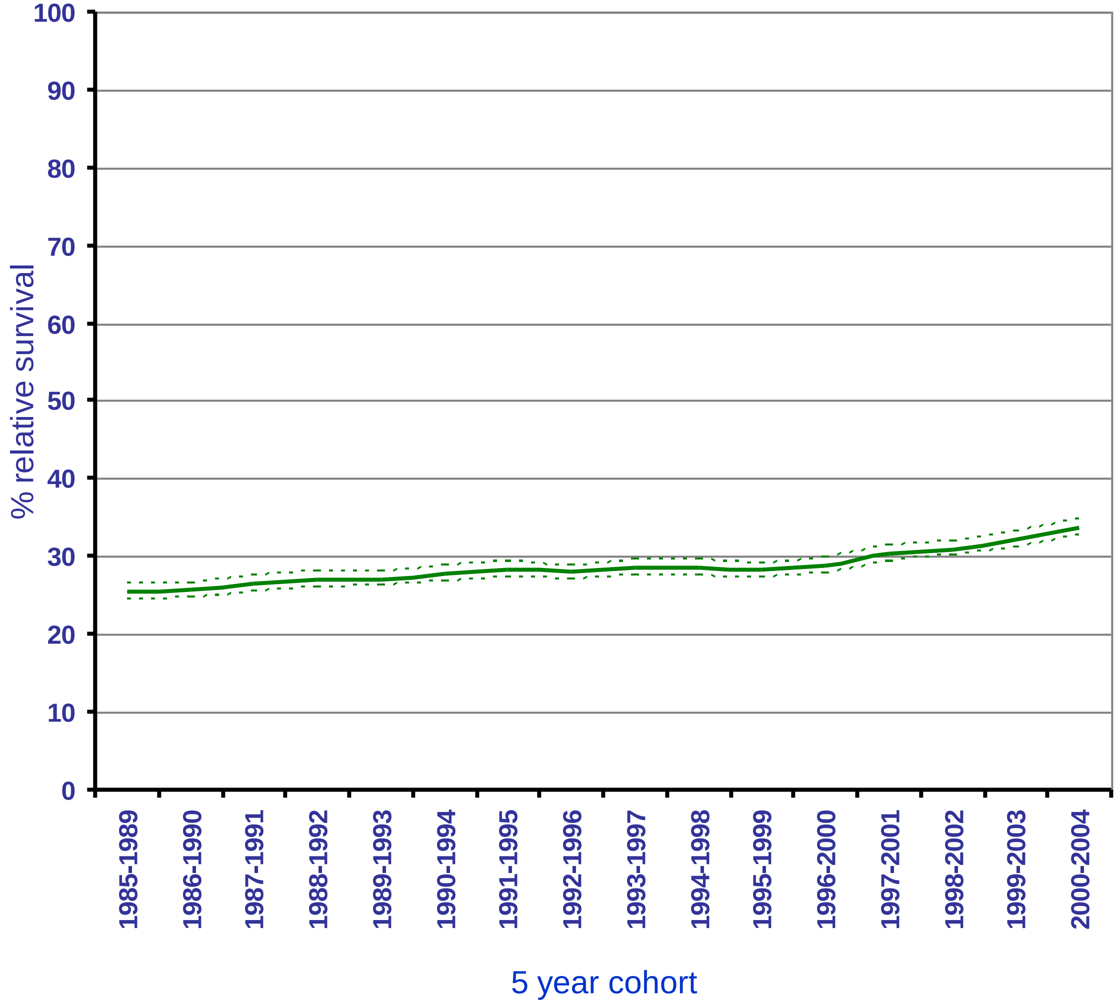
% relative survival
100
90
80
70
60
50
40
30
20
10
0
1985-1989
1986-1990
1987-1991
1988-1992
1989-1993
1990-1994
1991-1995
1992-1996
1993-1997
1994-1998
1995-1999
1996-2000
1997-2001
1998-2002
1999-2003
2000-2004
Rolling 5 year cohorts

- - - - Dotted lines show 95% confidence limits

Version 1.1 (England) 25/09/2008
Data Sources: UK Association of Cancer Registries - CIS accessed 2008 - (data extraction July 2007)
Death registrations from ONS. Deaths up to and including 31/12/2005

C15: Oesophagus
Trends in 1yr survival

national cancer intelligence network



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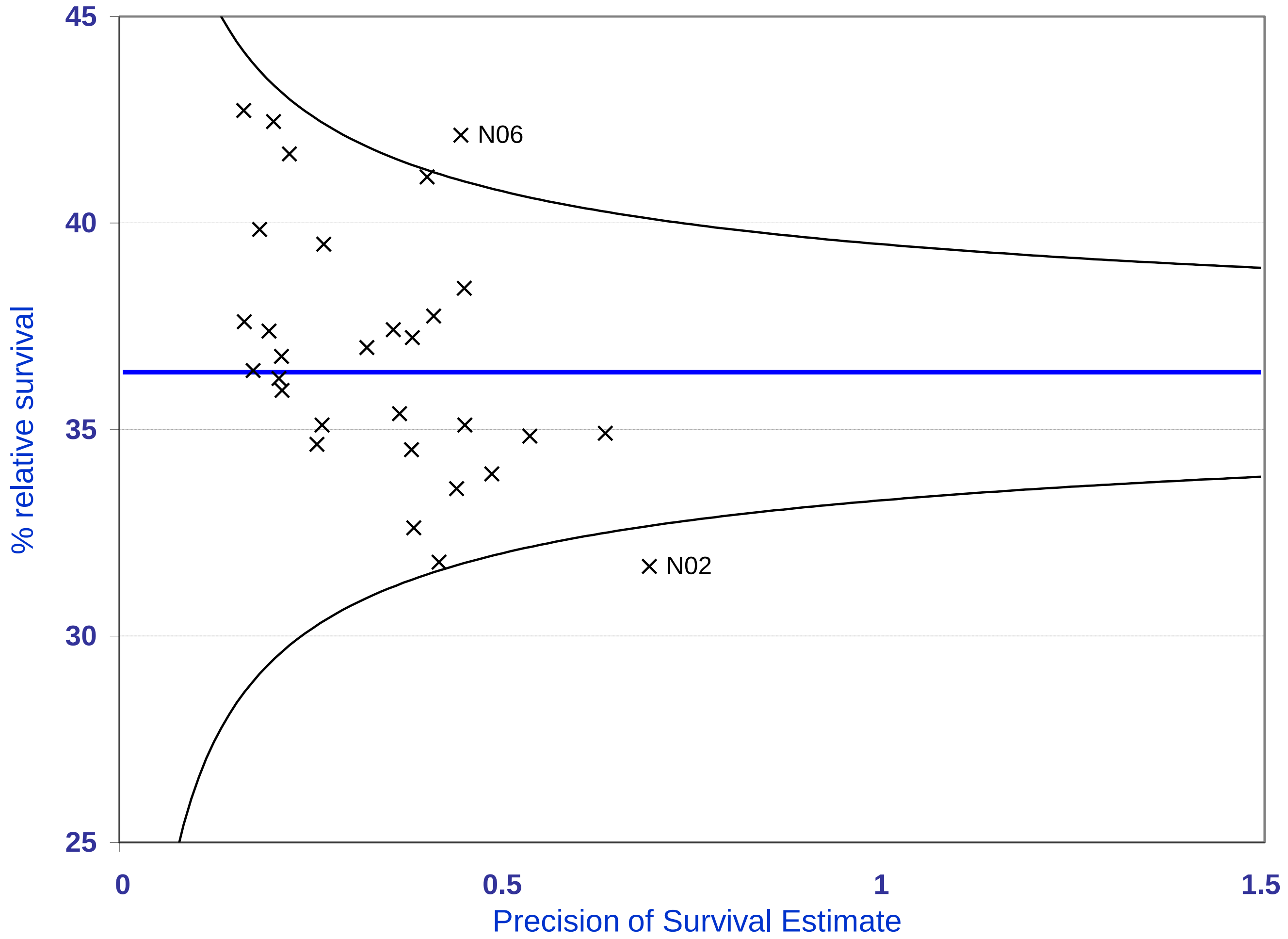
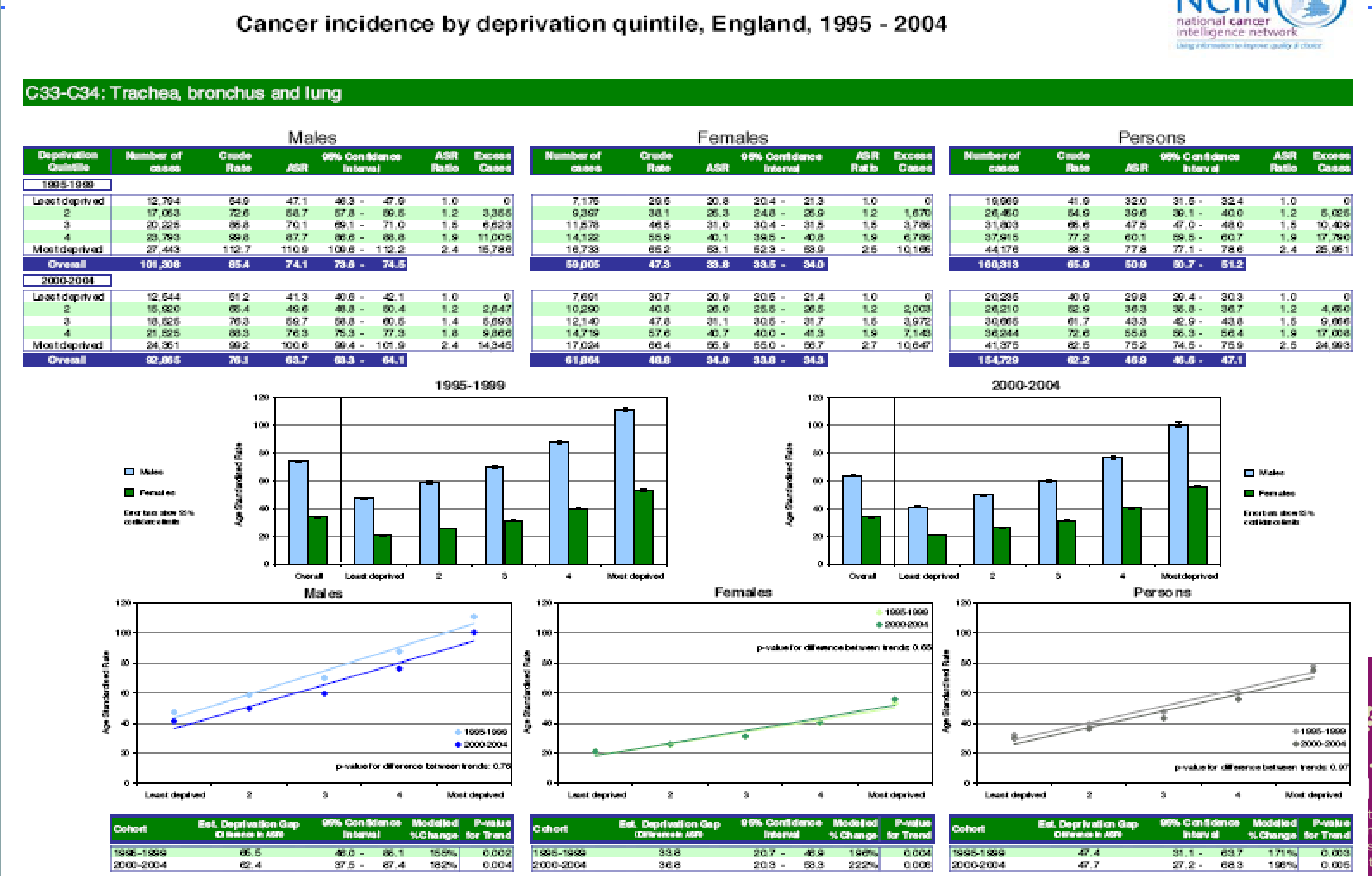
C15: Oesophagus
2005 by Cancer Network



Lung Cancer Incidence by deprivation



Cancer incidence by deprivation quintile, England, 1995 - 2004

C33-C34: Trachea, bronchus and lung

Males

Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval	ASR Ratio	Excess Cases
1995-1999						
Least deprived	12,794	54.9	47.1	46.3 - 47.9	1.0	0
2	17,063	72.6	58.7	57.8 - 59.5	1.2	3,356
3	20,225	86.8	70.1	69.1 - 71.0	1.5	6,623
4	23,793	99.8	87.7	86.6 - 88.8	1.9	11,005
Most deprived	27,443	112.7	110.9	109.6 - 112.2	2.4	15,786
Overall	**101,308**	**85.4**	**74.1**	**73.8 - 74.5**		
2000-2004						
Least deprived	12,544	51.2	41.3	40.6 - 42.1	1.0	0
2	15,920	65.4	49.6	48.8 - 50.4	1.2	2,647
3	18,525	76.3	59.7	58.8 - 60.5	1.4	5,693
4	21,525	88.3	76.3	75.3 - 77.3	1.8	9,866
Most deprived	24,351	99.2	100.6	99.4 - 101.9	2.4	14,345
Overall	**92,865**	**76.1**	**63.7**	**63.3 - 64.1**		

Females

Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval	ASR Ratio	Excess Cases
1995-1999						
Least deprived	7,175	29.5	20.8	20.4 - 21.3	1.0	0
2	9,397	38.1	25.3	24.8 - 25.9	1.2	1,670
3	11,578	46.5	31.0	30.4 - 31.5	1.5	3,786
4	14,122	55.9	40.1	39.5 - 40.8	1.9	6,786
Most deprived	16,733	65.2	53.1	52.3 - 53.9	2.5	10,166
Overall	**59,005**	**47.3**	**33.8**	**33.5 - 34.0**		
2000-2004						
Least deprived	7,691	30.7	20.9	20.5 - 21.4	1.0	0
2	10,290	40.8	26.0	25.5 - 26.5	1.2	2,003
3	12,140	47.8	31.1	30.5 - 31.7	1.5	3,972
4	14,719	57.6	40.7	40.0 - 41.3	1.9	7,143
Most deprived	17,024	66.4	55.9	55.0 - 56.7	2.7	10,647
Overall	**61,864**	**48.8**	**34.0**	**33.8 - 34.3**		

Persons

Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval	ASR Ratio	Excess Cases
1995-1999						
Least deprived	19,969	41.9	32.0	31.5 - 32.4	1.0	0
2	26,460	54.9	39.6	39.1 - 40.0	1.2	5,025
3	31,803	65.6	47.5	47.0 - 48.0	1.5	10,409
4	37,915	77.2	60.1	59.5 - 60.7	1.9	17,790
Most deprived	44,176	88.3	77.8	77.1 - 78.6	2.4	25,951
Overall	**160,313**	**65.9**	**50.9**	**50.7 - 51.2**		
2000-2004						
Least deprived	20,235	40.9	29.8	29.4 - 30.3	1.0	0
2	26,210	52.9	36.3	35.8 - 36.7	1.2	4,650
3	30,665	61.7	43.3	42.9 - 43.8	1.5	9,666
4	36,244	72.6	55.8	55.3 - 56.4	1.9	17,008
Most deprived	41,375	82.5	75.2	74.5 - 75.9	2.5	24,993
Overall	**154,729**	**62.2**	**46.9**	**46.6 - 47.1**		

1995-1999
2000-2004
Males
Females
Error bars show 95% confidence limits
Age Standardised Rate
0
20
40
60
80
100
120
Overall
Least deprived
2
3
4
Most deprived
Males
Females
Persons
1995-1999
2000-2004
p-value for difference between trends: 0.76
p-value for difference between trends: 0.65
p-value for difference between trends: 0.97

Males

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval	Modelled %Change	P-value for Trend
1995-1999	65.5	46.0 - 85.1	155%	0.002
2000-2004	62.4	37.5 - 87.4	182%	0.004

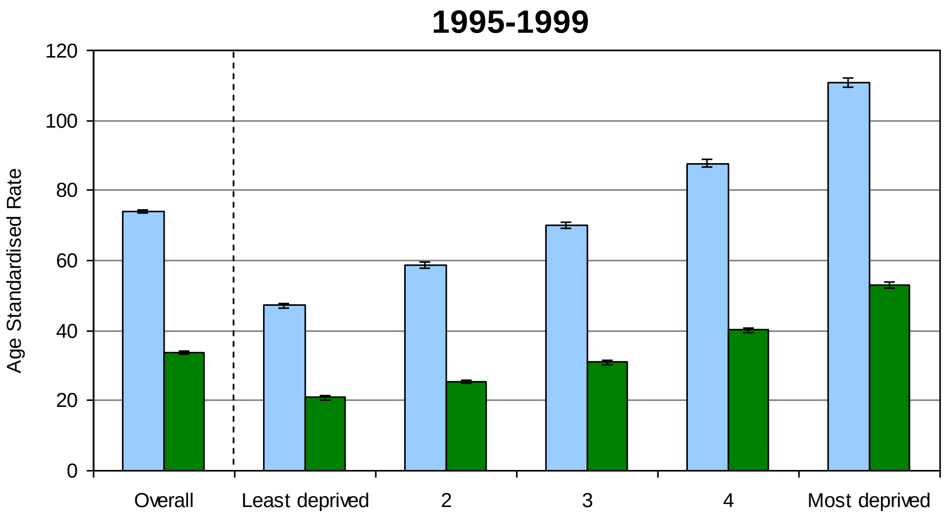
Females

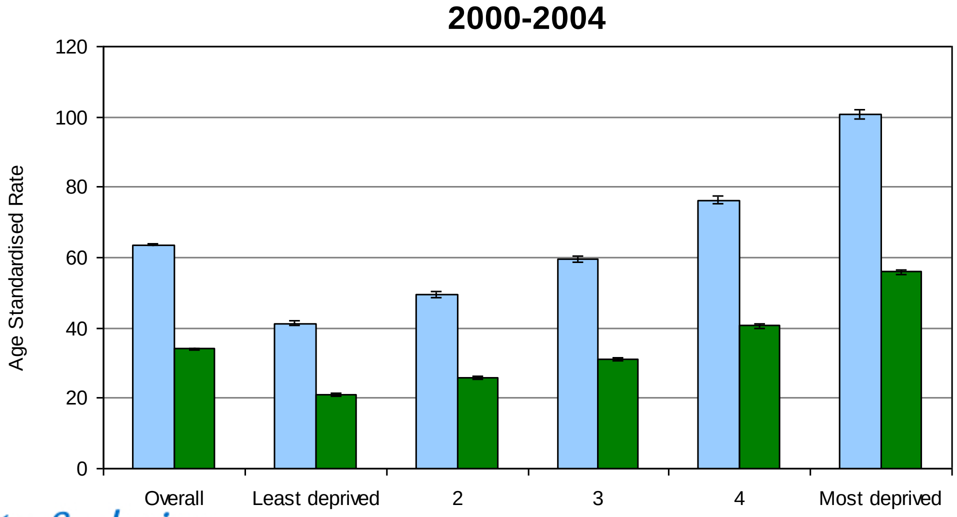
Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval	Modelled % Change	P-value for Trend
1995-1999	33.8	20.7 - 46.9	196%	0.004
2000-2004	36.8	20.3 - 53.3	222%	0.006

Persons

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval	Modelled % Change	P-value for Trend
1995-1999	47.4	31.1 - 63.7	171%	0.003
2000-2004	47.7	27.2 - 68.3	198%	0.005

C33-C34: Lung cancer 2000 - 2004 by deprivation





Expert analyses

- Cancer eAtlas: - launched July 2008 www.ncin.org.uk/eatlas
  - Large and varied interest
  - International recognition
- Reports on:
  - UK incidence & mortality
  - One year survival
  - Deprivation
  - Prevalence
  - Ethnicity
  - Surgical treatment rates ('early' 2010)
- Microsites

Detailed “Microsites”

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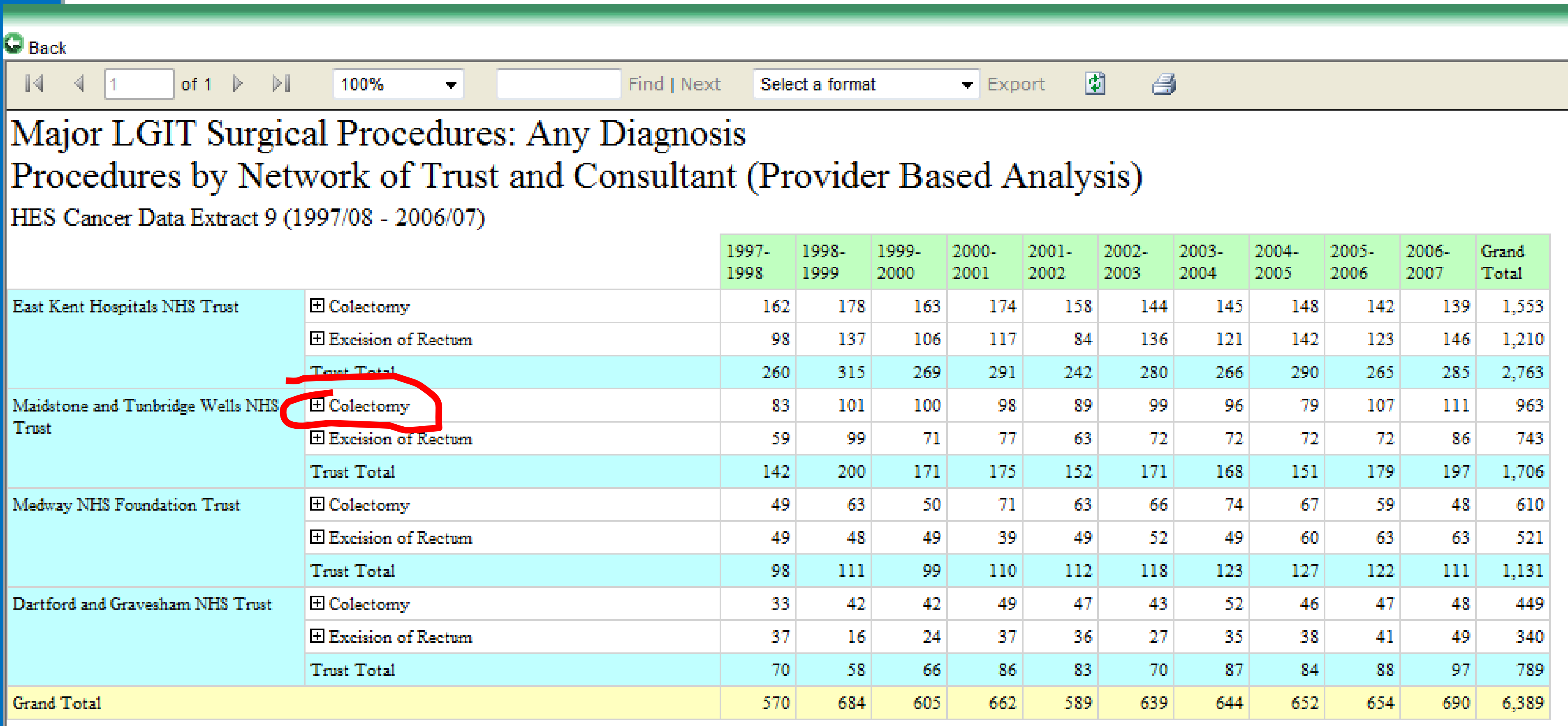

Major LGIT Surgical Procedures: Any Diagnosis

Procedures by Network of Trust and Consultant (Provider Based Analysis)

HES Cancer Data Extract 9 (1997/08 - 2006/07)

		1997-1998	1998-1999	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	Grand Total
East Kent Hospitals NHS Trust	⊞ Colectomy	162	178	163	174	158	144	145	148	142	139	1,553
	⊞ Excision of Rectum	98	137	106	117	84	136	121	142	123	146	1,210
	Trust Total	260	315	269	291	242	280	266	290	265	285	2,763
Maidstone and Tunbridge Wells NHS Trust	⊞ Colectomy	83	101	100	98	89	99	96	79	107	111	963
	⊞ Excision of Rectum	59	99	71	77	63	72	72	72	72	86	743
	Trust Total	142	200	171	175	152	171	168	151	179	197	1,706
Medway NHS Foundation Trust	⊞ Colectomy	49	63	50	71	63	66	74	67	59	48	610
	⊞ Excision of Rectum	49	48	49	39	49	52	49	60	63	63	521
	Trust Total	98	111	99	110	112	118	123	127	122	111	1,131
Dartford and Gravesham NHS Trust	⊞ Colectomy	33	42	42	49	47	43	52	46	47	48	449
	⊞ Excision of Rectum	37	16	24	37	36	27	35	38	41	49	340
	Trust Total	70	58	66	86	83	70	87	84	88	97	789
Grand Total		570	684	605	662	589	639	644	652	654	690	6,389

..with detailed "drill through"

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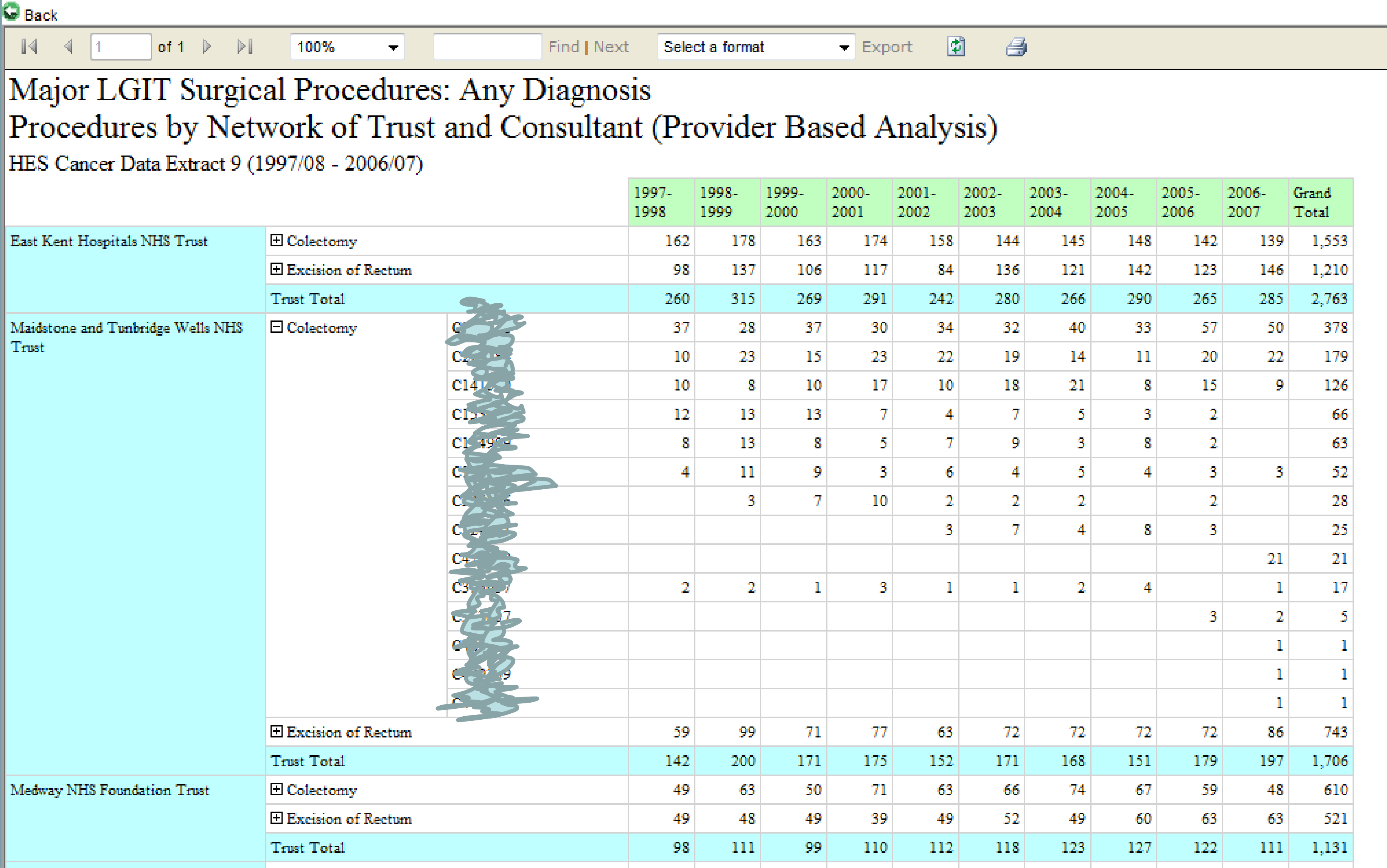

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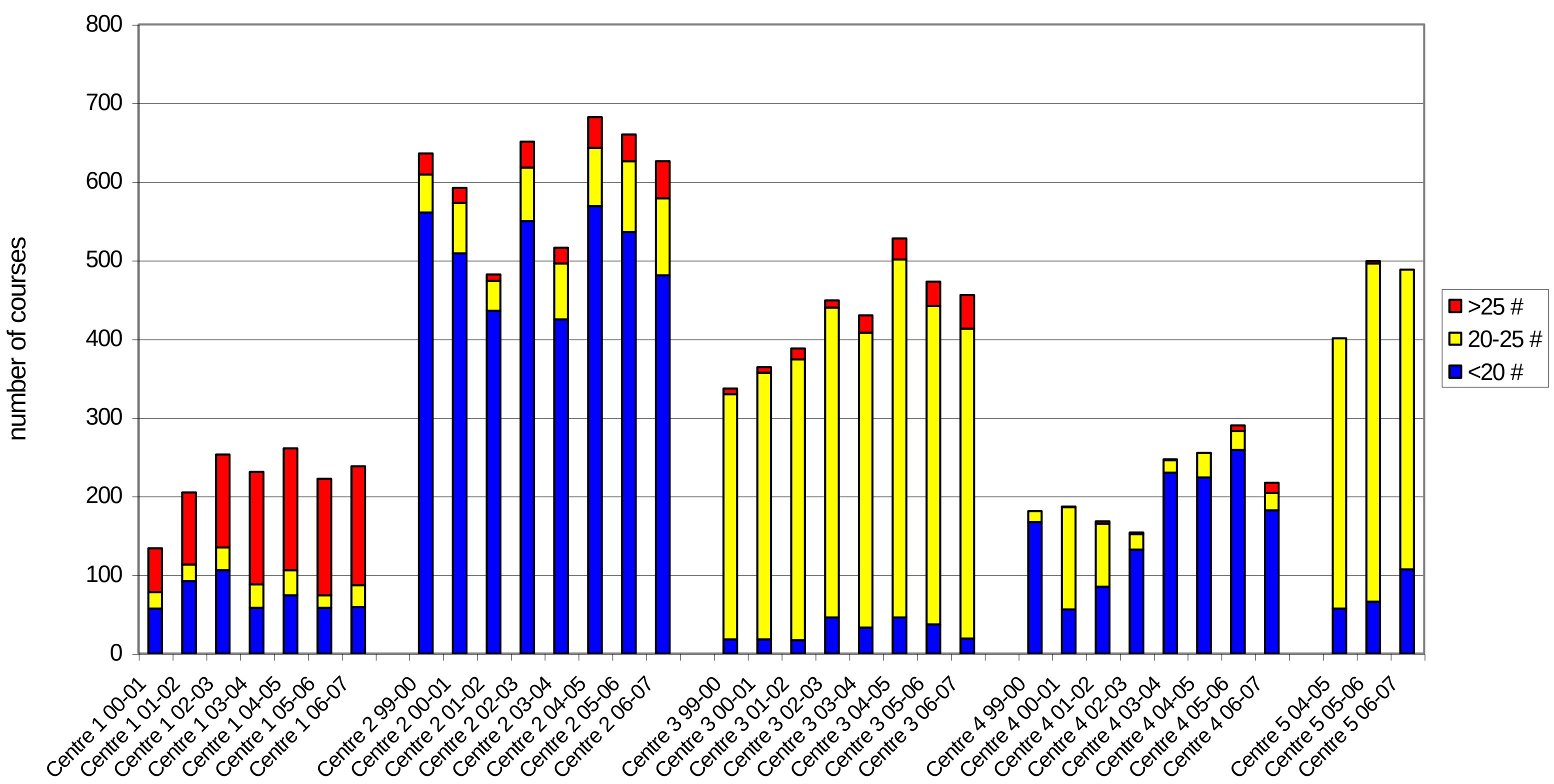
	⊞ Excision of Rectum		98	137	106	117	84	136	121	142	123	146	1,210
	Trust Total		260	315	269	291	242	280	266	290	265	285	2,763
Maidstone and Tunbridge Wells NHS Trust	⊟ Colectomy	[redacted]	37	28	37	30	34	32	40	33	57	50	378
		[redacted]	10	23	15	23	22	19	14	11	20	22	179
		[redacted]	10	8	10	17	10	18	21	8	15	9	126
		[redacted]	12	13	13	7	4	7	5	3	2		66
		[redacted]	8	13	8	5	7	9	3	8	2		63
		[redacted]	4	11	9	3	6	4	5	4	3	3	52
		[redacted]		3	7	10	2	2	2		2		28
		[redacted]					3	7	4	8	3		25
		[redacted]										21	21
		[redacted]	2	2	1	3	1	1	2	4		1	17
		[redacted]									3	2	5
		[redacted]										1	1
		[redacted]										1	1
		[redacted]										1	1
	⊞ Excision of Rectum		59	99	71	77	63	72	72	72	72	86	743
	Trust Total		142	200	171	175	152	171	168	151	179	197	1,706
Medway NHS Foundation Trust	⊞ Colectomy		49	63	50	71	63	66	74	67	59	48	610
	⊞ Excision of Rectum		49	48	49	39	49	52	49	60	63	63	521
	Trust Total		98	111	99	110	112	118	123	127	122	111	1,131

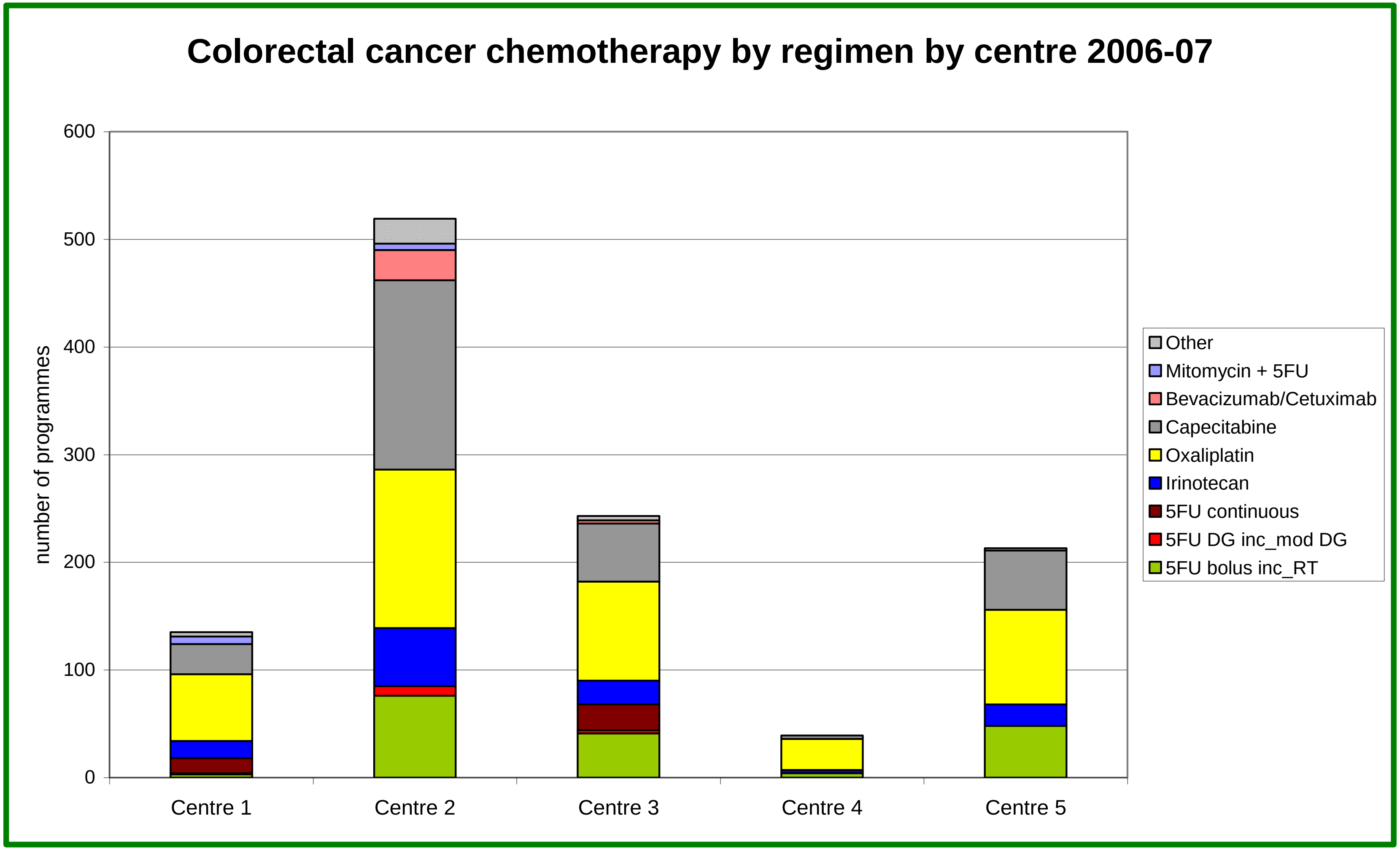
Links with treatment data



Trends in breast cancer radical radiotherapy
(courses divided into fraction groups)

Source: Monica Roche: Oxford Cancer Intelligence Unit

Links with treatment data



Source: Monica Roche: Oxford Cancer Intelligence Unit

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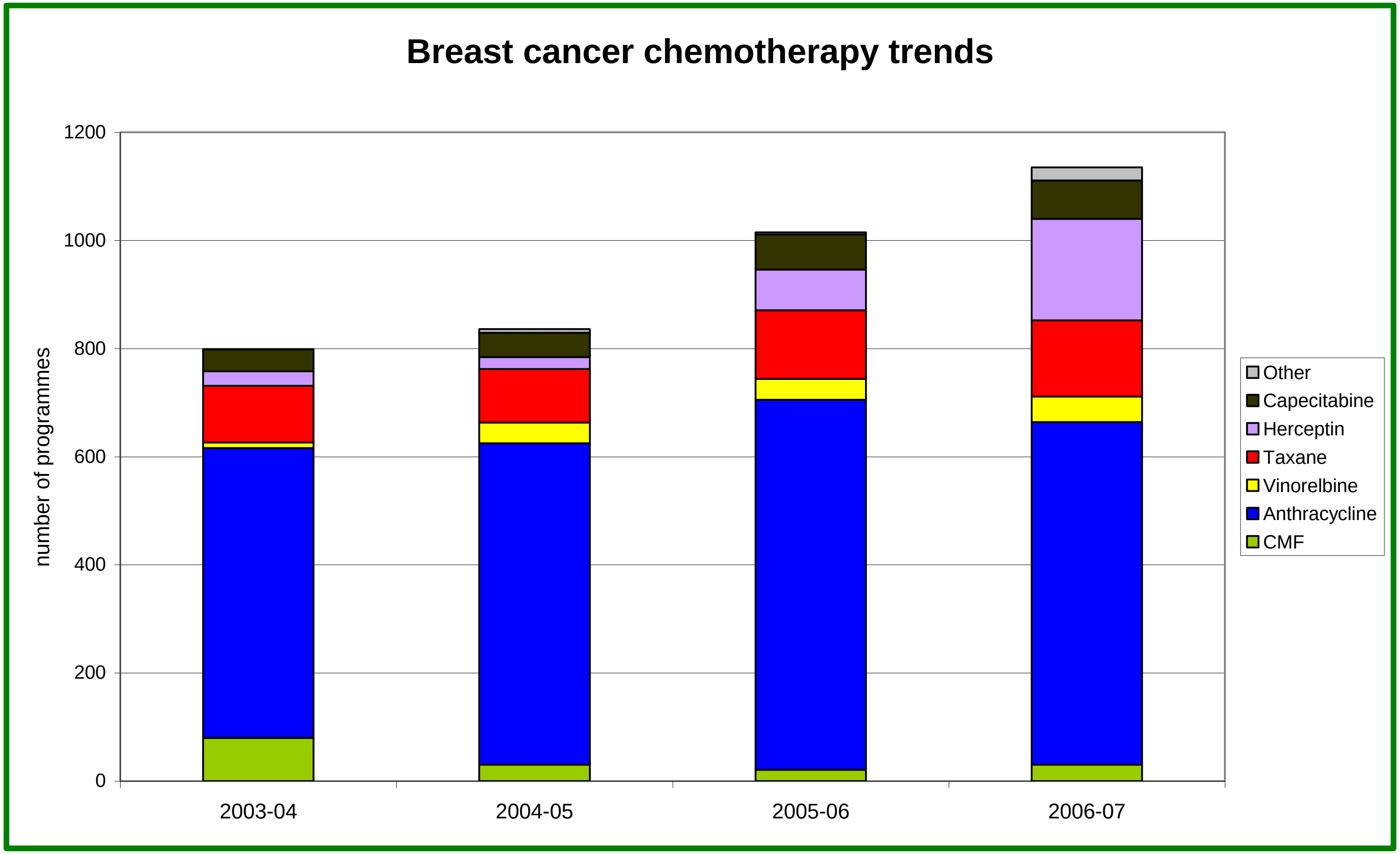

Source: Monica Roche: Oxford Cancer Intelligence Unit

Drivers for change

- Cancer Peer Review
- CQC ‘Annual Health Check’
- Peer pressure
- Voluntary sector pressure
- Cancer Reform Strategy
- DH ‘Quality agenda’
- Commissioning
- National Guidelines
- Patient choice

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+ Data

Clinical Outcomes Group

Clinical Outcomes Group: Main purposes

NCIN
national cancer intelligence network

- To provide a strategic link between the NCIN & the National Cancer Action Team
- To oversee & support the development of Peer Review
- To link between those producing data and those responsible for improving the quality of care
- To identify what data is required to support the strategic development of cancer services
- To support' intelligent commissioning'
- To promote the use of outcome data in service improvement
- To support the implementation of NICE guidance
- To support the development of care pathways

NCIN

national **cancer** intelligence network

Using information to improve quality & choice

www.ncin.org.uk

NCRI
National
Cancer
Research
Institute

Questions for Tables?

- Does the dataset project approach seem right to you?
- What are the barriers to being able to capture information interactively /electronically at the time of your MDT?
- What are the extra key items required specifically for Lung cases?

Questions for Tables?

- What are the key outcome questions you have about your services?
- How well do your MDTs currently use the information available to support changes in practice?
- How can we use cancer intelligence better in the future to more effectively improve patient care?

National Policy Issues

Some relevant current national issues

- Cancer Reform Strategy
  - National Awareness and Early Diagnosis Initiative (NAEDI)
  - In-Patient workstream
  - MDT development programme
- Specialist Commissioning & Quality Agenda
- NCAG Report and Acute Oncology
- NICE Lung Guideline Revision
- Recent and imminent NICE STAs (emphasis on NSCLC sub-types)
- Re-establishment of the DH Lung Cancer and Mesothelioma Advisory Group

National Awareness & Early Diagnosis Initiative (NAEDI): Rationale

- Late diagnosis has been a major factor in the poor survival rates in the UK
- Particularly true of: Breast, Colo-Rectal, Lung, Ovary, Oesophageal and Stomach cancers
- Little or no mention in the 2001 National Cancer Plan
- A major element of the Cancer Reform Strategy

NAEDI Programme

- Co-chaired by Mike Richards and Harpal Kumar
- Administration and co-ordination – CRUK & DH
- NCRI closely involved
- Strong links with screening programme
- Academic links with key researchers
- Cancer Action Team and NHS Cancer Improvement involved
- Primary Care and Secondary Care Clinical Leads
- Launch conference November 2008

Work Streams

- Reviewing the evidence base (BJC supplement Dec '09)
- Cancer awareness measures (public)
- Key messages
- Promoting earlier presentation
- Reducing primary care delay
- International comparisons
- Research
- Diagnostics
- Health Economics

Associated initiatives

- PM’s ‘Cancer Guarantee’ – rapid GP access to diagnostics
- NCRI Early diagnosis, screening and prevention ‘Cross Cutting’ Group
- NAEDI/NPSA audit of Primary care delays
- NAEDI/NCRI Research strategy (recent call for bids)
- NAEDI International Benchmarking study
- ?Review of NICE Urgent referral guidelines
- DH and NHS Improvement work on diagnostics for 18 week wait
- Health Technology Assessment processes for diagnostics

Reducing Primary Care Delay

- An analysis of Significant Event Audits for diagnosis of lung and Teenage & Young Adult cancer published late 2009
- 18 cancer networks across the country are now taking forward the Cancer in Diagnosis Primary Care Audit

Future priorities:

- We are working with the RCGP to identify specific areas of work to support early diagnosis in primary care
- NPSA Thematic Review of Delayed diagnosis - published autumn 2009

National Cancer Action Team work with Local Services

- 27 Cancer Networks together with their PCTs are establishing new services and strategies to promote early diagnosis
- General practitioners and public health clinicians are providing clinical leadership, which is critical to the success of this initiative
- A wide range of services being taken forward, funded both nationally and locally
- We are beginning to gather the learning from local implementation to inform national policy and delivery

Key Messages

- Lung, prostate, ovarian and bowel cancer key messages published and available on NHS Choices plus stakeholder websites

Future priorities:

  - Breast cancer key messages – Published Oct 2009
  - Cervical cancer key messages – Published end Oct 2009
  - Next tumour sites currently under review by NAEDI steering group – suggestions welcome

Strengthening Research and the Evidence Base

- BJC supplement ‘The Size of the Prize’ published Dec 2009

- NCRI funding partners current call for research proposals in the fields of early diagnosis. Main themes:
  - public awareness and reasons for late presentation
  - identification of ways to improve identification and referral of patients suspected of a cancer diagnosis
  - methodological research to measure the impact of interventions aimed at promoting increased awareness and earlier diagnosis
  - (novel diagnostic techniques)

International Comparisons

- Modular approach - One core and several optional modules exploring potential root causes of cancer survival rate differences across participating countries
- Work planned and partners identified: Norway, Sweden, Denmark, Canadian provinces & Australian states
- Focus on breast, lung, colorectal and ovarian cancers
- First module - core benchmarking – commenced late 2009

Primary Care Diagnostics

- Taking forward 3 pilots to test open access for primary care: lung, ovarian and colorectal. Starting with lung this year – using risk assessment tools (Willie Hamilton). PM’s ‘Cancer Guarantee’
- Carrying out a baseline assessment to understand current access to diagnostics information.
  - Survey of GPs about open access to diagnostics piloted amongst Macmillan GPs; revised and final questionnaire to go out shortly
  - Survey of hospital radiology departments
  - Analysis of HES (? and RIS) data to quantify usage

Some relevant current national issues

- Cancer Reform Strategy
  - National Awareness and Early Diagnosis Initiative (NAEDI)
  - **In-Patient workstream**
  - MDT development programme
- Specialist Commissioning & Quality Agenda
- National Cancer Intelligence Network (NCIN)
- NCAG Report and Acute Oncology
- NICE Lung Guideline Revision
- Recent and imminent NICE STAs (emphasis on NSCLC sub-types)
- UICC TNM staging V7 publication

Cancer Bed Utilization: HES England

	Elective	**Non-elective**	**Total**
Episodes			
•IP Episodes	**376,101**	**409,218**	**785,319**
•DC Episodes	**782,992**		**782,992**
•Reg. Day Attenders etc	**182,285**	**10**	**182,295**
•TOTAL	**1,341,378**	**409,228**	**1,750,606**
Bed days			
• General	**2,072,185**	**3,071,861**	**5,144,046**
• HDU/ITU	**79,909**	**39,255**	**119,164**
• TOTAL	**2,152,094**	**3,111,116**	**5,263,210**
Bed Equivalents			
• General	**5,677**	**8,416**	**14,093**
• HDU/ITU	**219**	**108**	**327**
• TOTAL	**5,896 (~40%)**	**8,524 (~60%)**	**14,420**

Cancer Bed Numbers

- Over 14,000 cancer patients are in hospital at any one time
- This equates to around 29 occupied beds per 100,000 population and around 435 for a network with a population of 1.5 million
- 60% of these beds are occupied by patients admitted non-electively

In Patient Bed Days by Tumour Group

	Elective	Emergency	Total
Haematology	290,632	508,134	798,766
Urology	305,789	404,510	710,299
Colorectal	323,484	311,471	634,955
Lung	116,633	434,273	550,906
Upper GI	187,038	346,819	538,857
Breast	200,203	154,599	354,802
Gynaecology	137,619	129,949	267,568
Neurology	102,457	138,504	240,961
Head and Neck	90,237	60,706	150,943
Musculoskeletal	53,936	35,858	89,794
Skin	54,912	31,942	86,836
All other	209,245	515,114	724,359

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In Patient Bed Days by Treatment Specialty

	Elective	Emergency	Total
General Medicine	95,962	925,341	1,021,303
Care of the Elderly	99,938	394,541	494,479
Surgery	544,623	410,921	955,544
Haematology	201,898	219,204	421,102
Clinical Oncology	174,013	192,170	366,183
Medical Oncology	101,271	155,691	256,962
All Others	854,480	773,773	1,628,473
TOTAL	2,072,185	3,071,861	5,144,046

Inpatient Costs By Tumour Group

	In Patients	**Day Cases**	**Total**
Breast	£161,766,566	£29,547,803	£191,314,369
Colorectal	£237,498,834	£34,980,438	£272,479,272
Lung	£205,589,816	£17,333,829	£222,923,645
Upper GI	£187,176,356	£16,274,844	£203,451,200
Urology	£264,262,283	£34,909,932	£299,172,215
Haematology	£278,799,020	£103,878,769	£382,677,789
Gynaecology	£99,156,465	£13,701,543	£112,858,008
Neurology	£96,617,619	£3,710,744	£100,328,363
Head & Neck	£60,996,098	£2,432,666	£63,428,764
All Others	£316,267,883	£66,340,939	£382,608,822
TOTAL	£1,908,130,940	£323,111,507	£2,231,242,447

Excludes Regular Day Attenders (Total Costs £63m)

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In-patient workstream & acute oncology

- NHS Improvement pilot studies
  - Preventing inappropriate admission
  - Rapid identification of new admissions (‘alerts’)
  - Rapid transfer to appropriate ward
  - Better discharge planning

- Development of the role of the ‘Acute Oncologist’:
  - Rapid review of new and emergency in-patients
  - Supervision of febrile neutropenia policies
  - Support in management of patients cancer of unknown primary

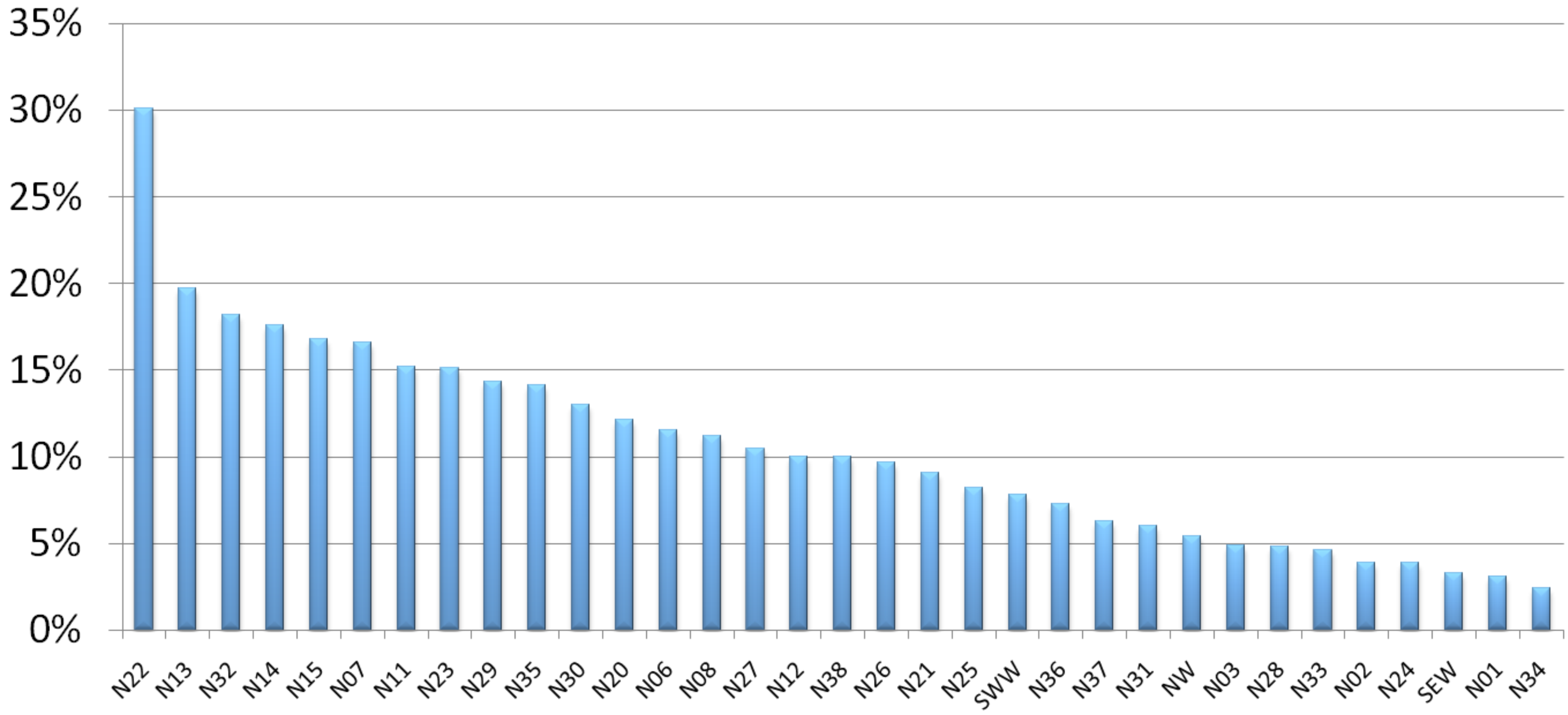
Lung Cancer and Mesothelioma Advisory Group

Main current initiatives:

- Promoting better access to specialist thoracic surgeons
- Pathology:
    - NSCLC sub-typing
    - Measurement of biomarkers – EGFR
- Review of evidence of the impact of specialist nursing
- Specialist Radiotherapy (SBHRT; IMRT etc.)
- Review of the impact of the National Mesothelioma Framework

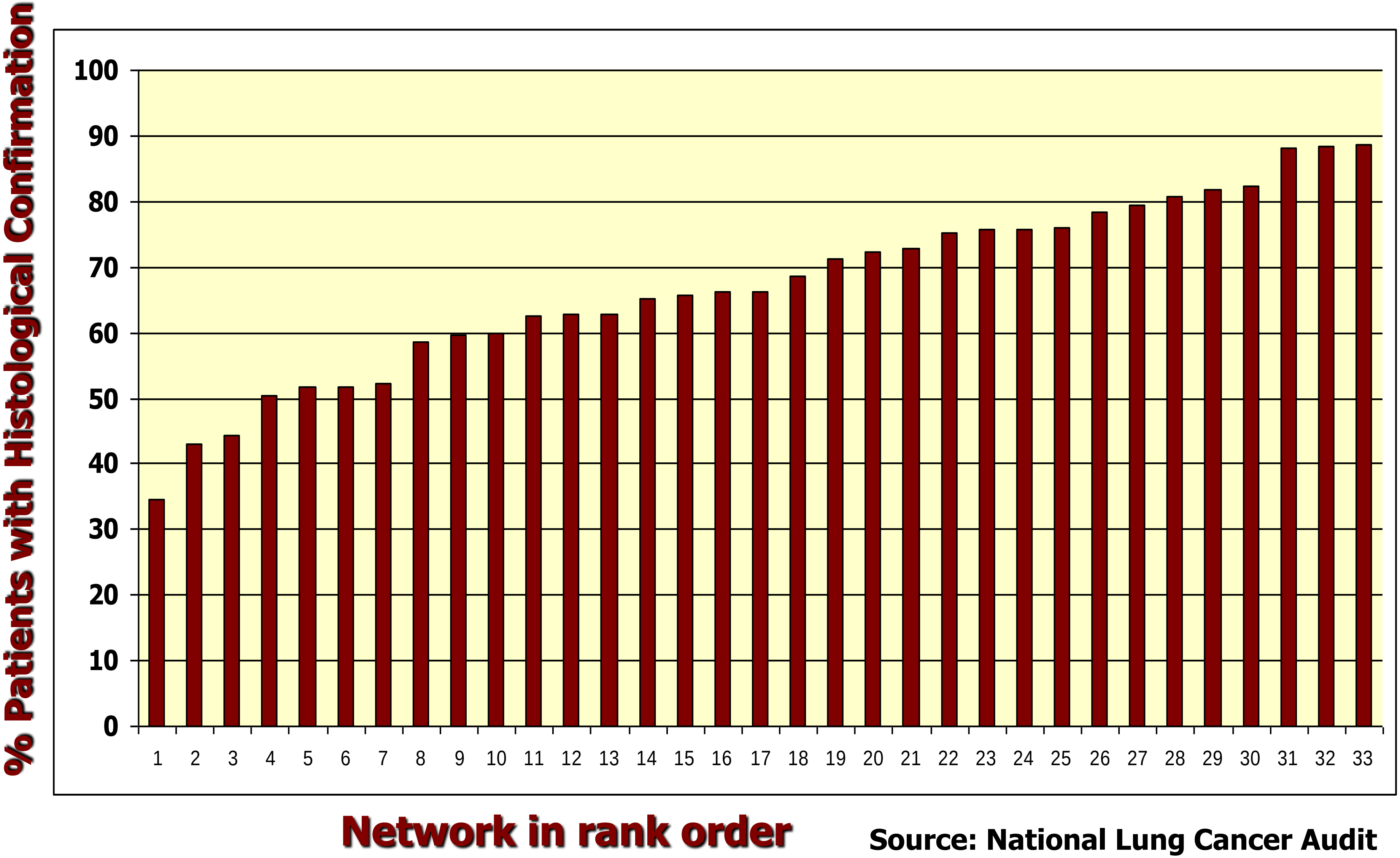
Surgery

Resection Rate by Network



Pathology

Proportion of patients with Histological Confirmation of Diagnosis by Network (2007)



Source: National Lung Cancer Audit

Cell type distribution in Histologically confirmed NSCLC England 2006

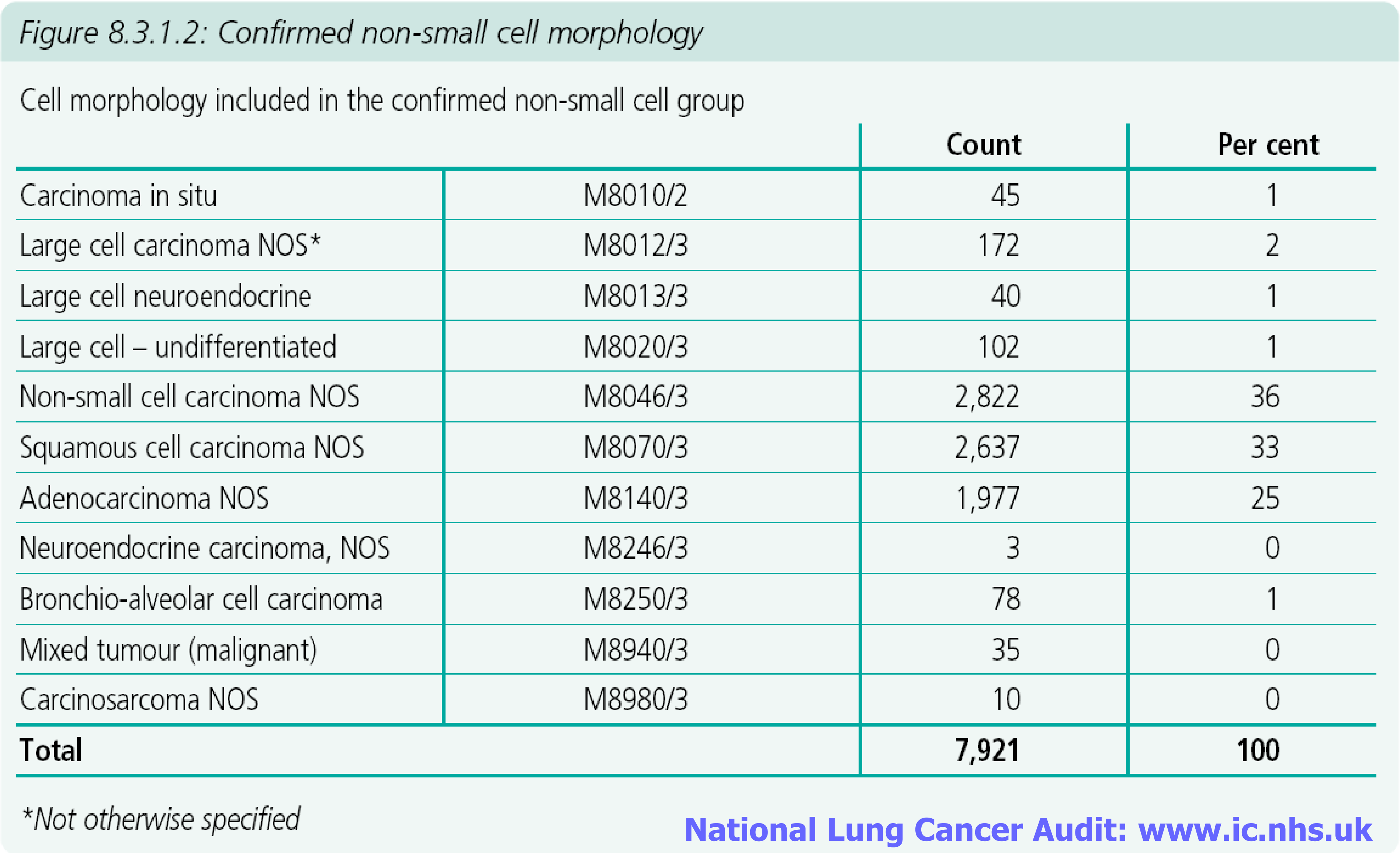


Figure 8.3.1.2: Confirmed non-small cell morphology

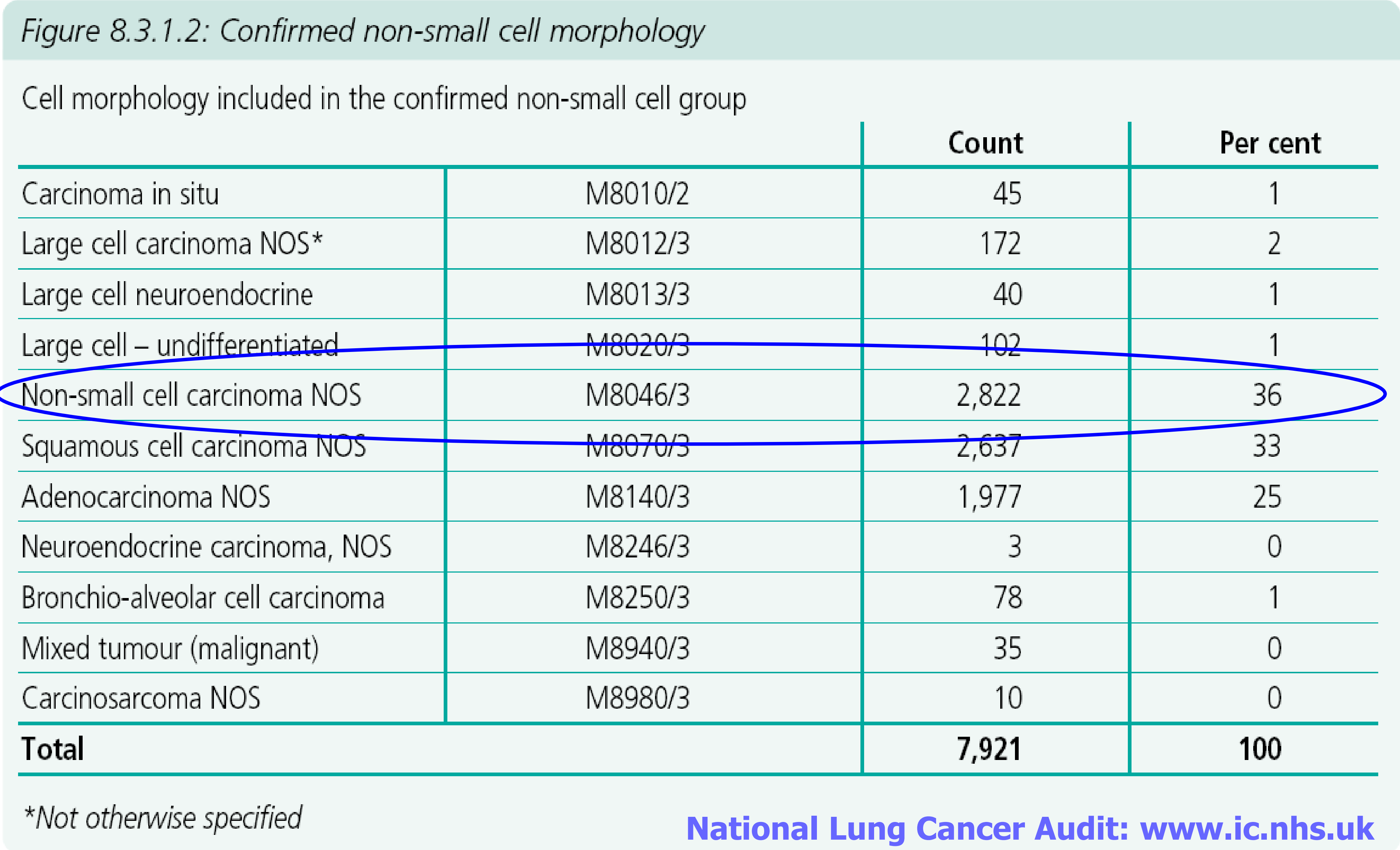
Cell morphology included in the confirmed non-small cell group

		Count	Per cent
Carcinoma in situ	M8010/2	45	1
Large cell carcinoma NOS*	M8012/3	172	2
Large cell neuroendocrine	M8013/3	40	1
Large cell – undifferentiated	M8020/3	102	1
Non-small cell carcinoma NOS	M8046/3	2,822	36
Squamous cell carcinoma NOS	M8070/3	2,637	33
Adenocarcinoma NOS	M8140/3	1,977	25
Neuroendocrine carcinoma, NOS	M8246/3	3	0
Bronchio-alveolar cell carcinoma	M8250/3	78	1
Mixed tumour (malignant)	M8940/3	35	0
Carcinosarcoma NOS	M8980/3	10	0
Total		**7,921**	**100**

**Not otherwise specified*

National Lung Cancer Audit: www.ic.nhs.uk

Cell type distribution in Histologically confirmed NSCLC England 2006



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Total		**7,921**	**100**

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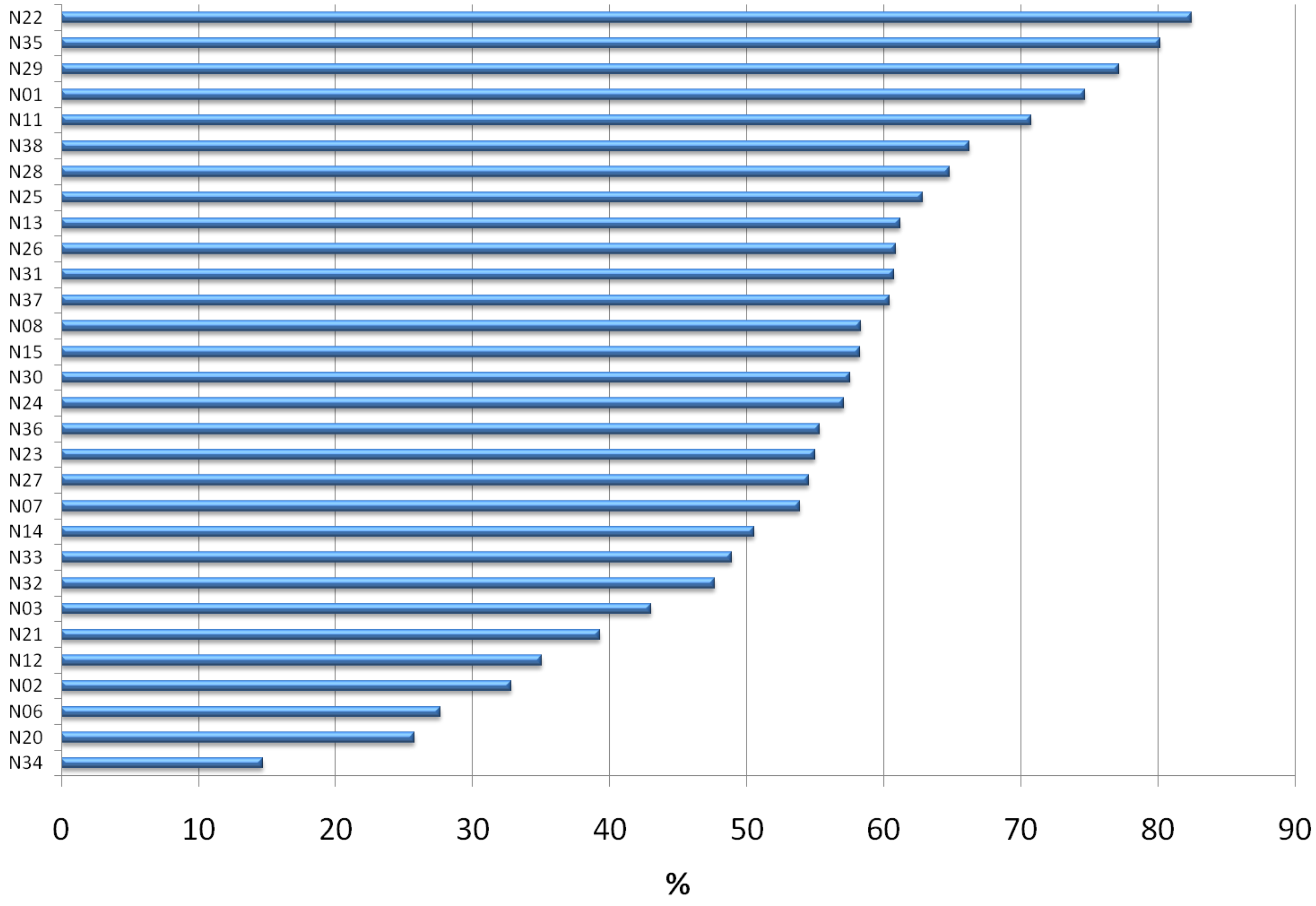
National Lung Cancer Audit: www.ic.nhs.uk

National Lung Cancer Audit: NSCLC pathology analysis: 2007

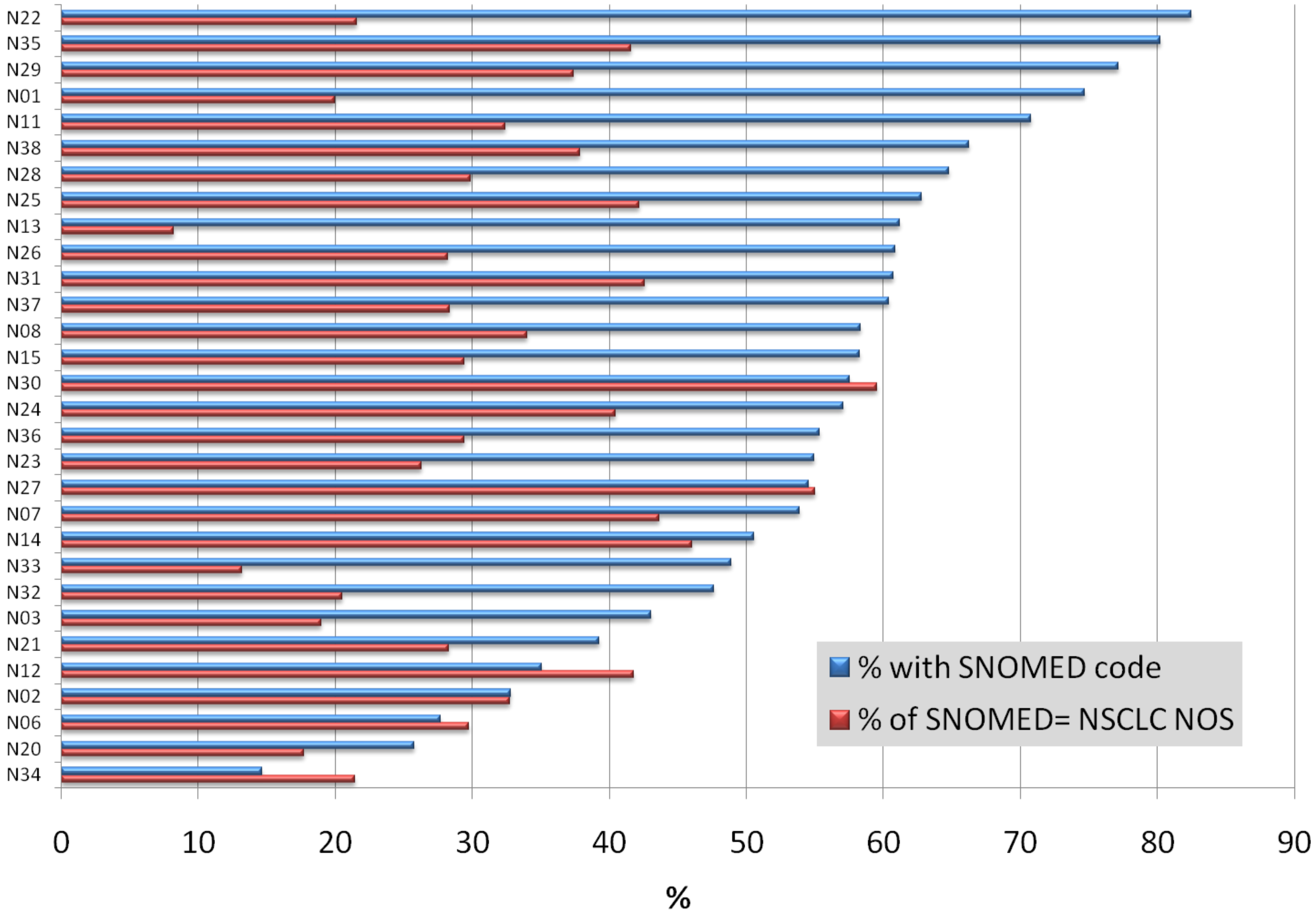
- Patients first seen 2007 (England only)
- 'NSCLC' cases (excl. SCLC, meso, carcinoid)
  - 18,522 cases
  - 52.4% had a SNOMED histology code
  - 47.6% had no SNOMED code

Network in rank order

Proportion with SNOMED code by Network



Proportion with SNOMED and NSCLC NOS by Network



Some issues for discussion

- What can pathologists do to improve the sub-typing of NSCLC?
- Should we always go for a minimum of core biopsy or equivalent?
- Do we need to do further work to establish the relative yields for biomarker (e.g. EGRF) testing in the commoner biopsy techniques?
- When is re-biopsy justified?
- How will these changes impact on the speed of the diagnostic pathway?
- Is there a workforce issue for pathology here and if so, how great is it?
- Should there be more sub-specialisation in thoracic pathology – perhaps some ‘hub and spoke’ arrangement?
- How do we ‘horizon scan’ for new biomarkers and support their timely introduction into clinical practice?

NCIN

national cancer
intelligence network

Using information to improve quality & choice

Thank you

www.ncin.org.uk

NCRI
National
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Research
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