



Public Health
England

How clinicians use data to make an impact on clinical outcomes

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NCIN core objectives

- 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



Main elements of clinical engagement

- Identification of key clinical issues & priorities
- ‘Ownership’ of data:
 - Dataset development & revision
 - Championing data collection
 - QA
- Clinical input into the analytical programme
- Advice on ways of reporting data
- Communication – colleagues; professional bodies, providers; commissioners
- Promoting the use of routine data in research



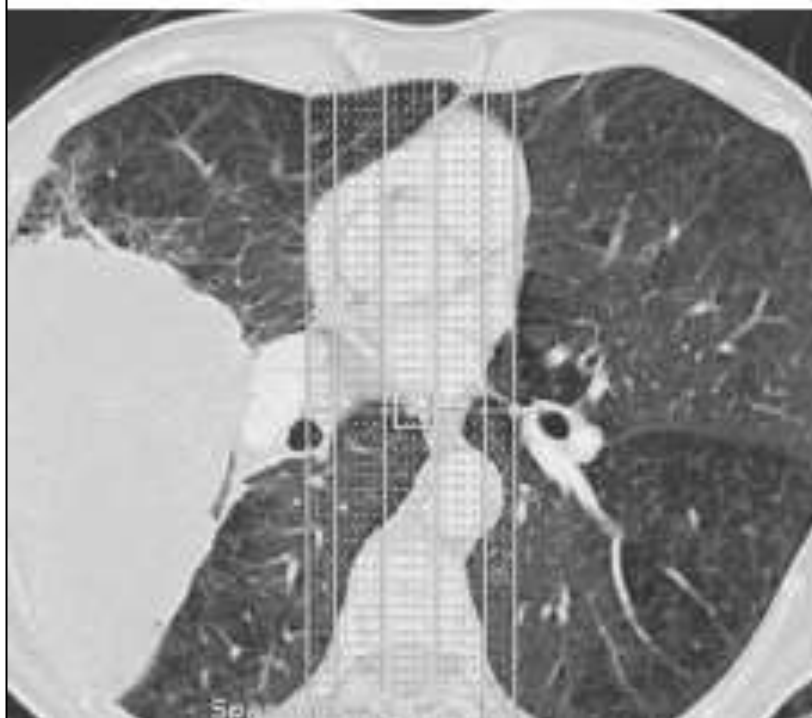
What clinicians use data for

- Audit of their practice and that of their MDT
- In discussions within their Network (Peer Pressure)
- Comparing their activity and outcomes against national 'benchmarks'
- As part of Peer Review
- To support local research
- For professional revalidation



National Lung Cancer Audit Report 2014

Report for the audit period 2013



Royal College
of Physicians

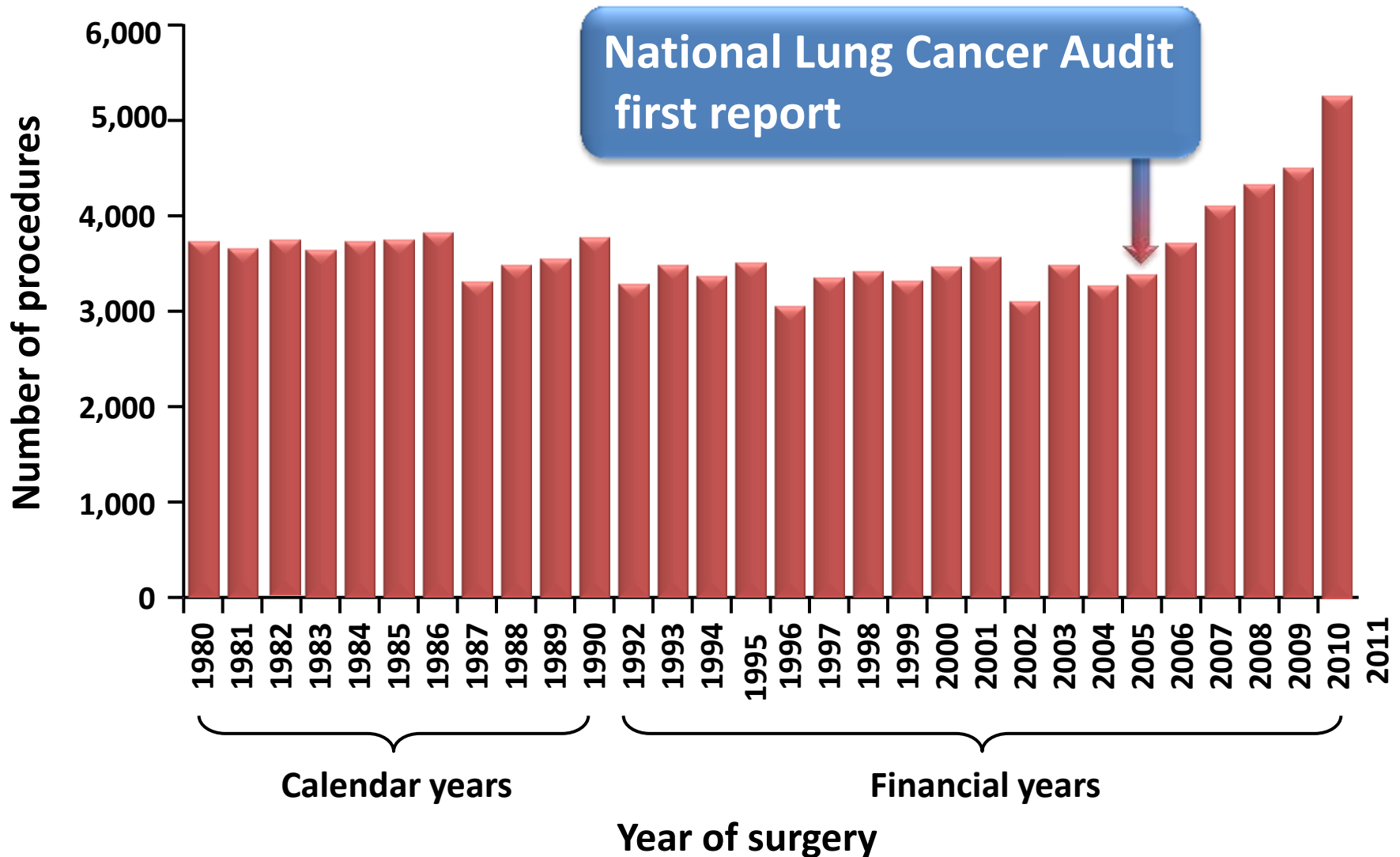


HQIP

Healthcare Quality
Improvement Partnership

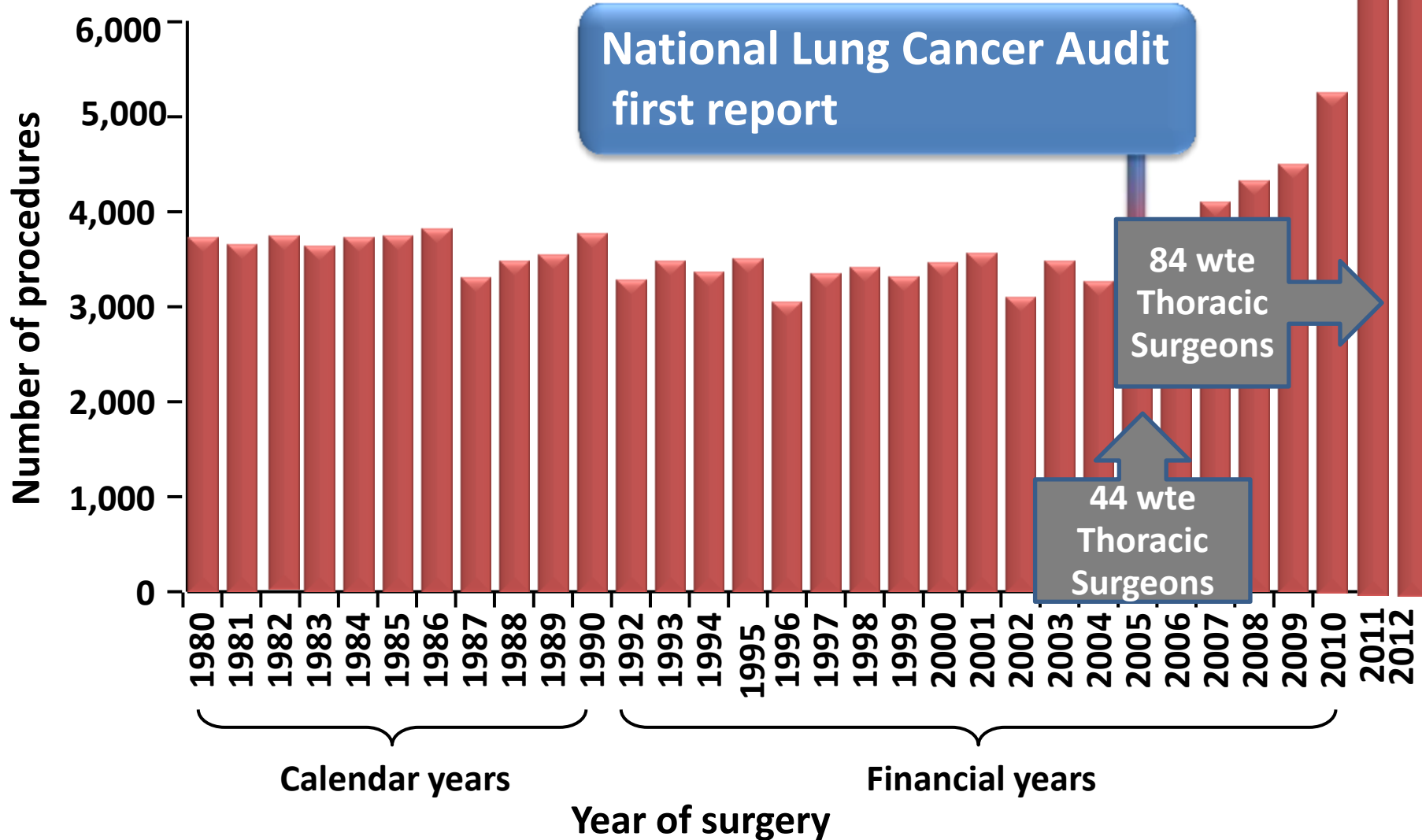
Setting higher standards

Primary lung cancer resections (n=116,148)



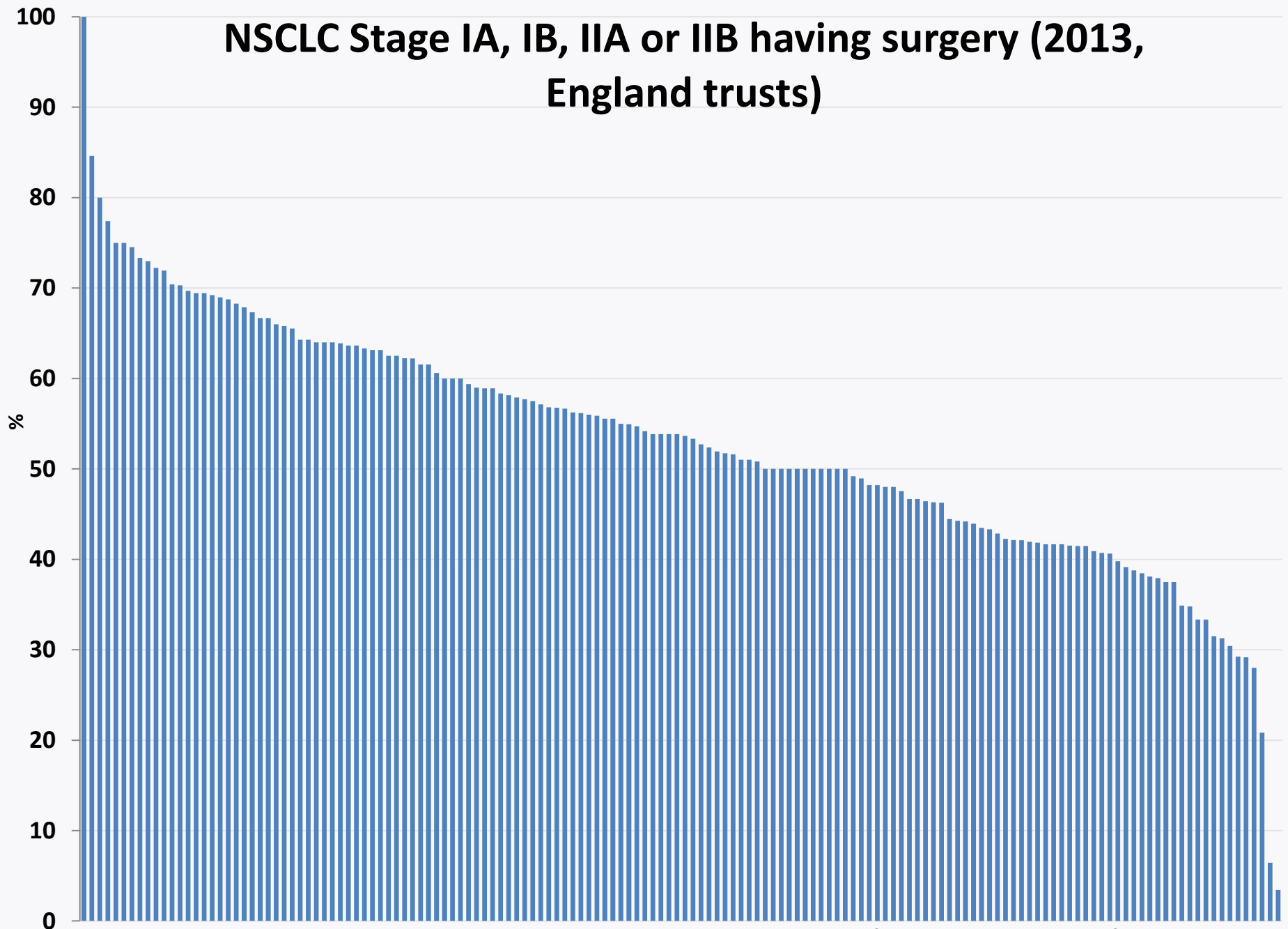
Primary lung cancer resections (n=128,872)

6474



Source: R Page & Doug West, Society of Cardiothoracic Surgeons Audit 2013

NSCLC Stage IA, IB, IIA or IIB having surgery (2013, England trusts)



Source: National Lung Cancer Audit 2014

Case-mix (risk) adjustment

Age



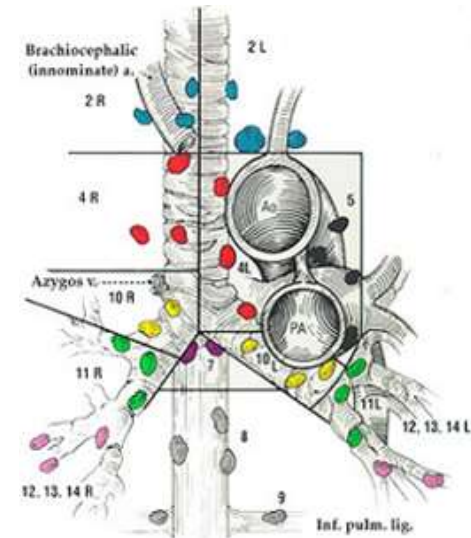
Fitness &
Co-morbidity



Social
Deprivation

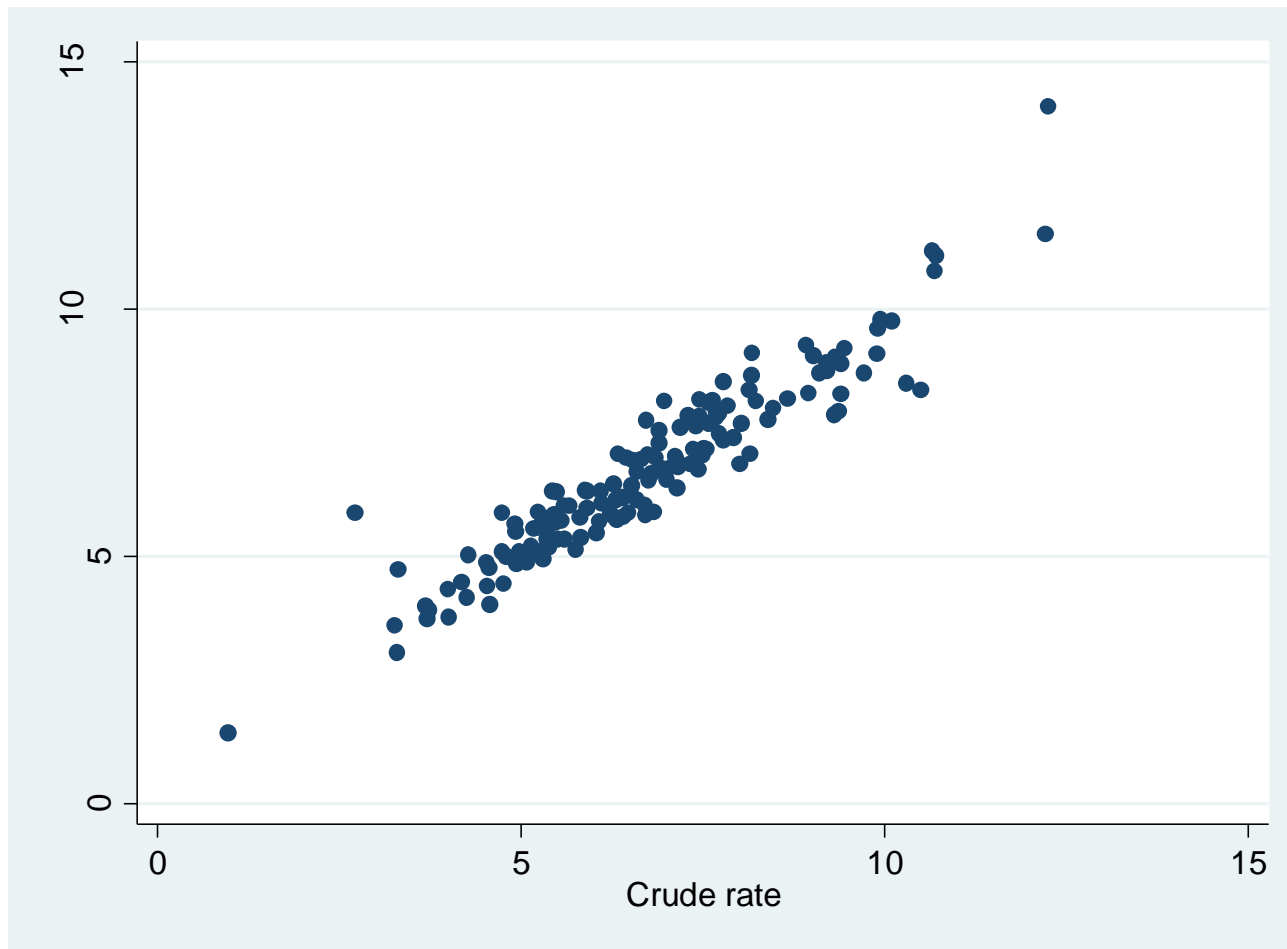


Disease
stage



Risk Adjustment

(30-day post-operative mortality colo-rectal cancer 2008-2010)



Resection rate for patients with tissue confirmation of NSCLC (2004-2008:England)

First seen in centre with thoracic surgery?	Number With a tissue diagnosis of NSCLC	Number who had surgical resection	% having surgery	Adjusted Odds Ratio for surgery*	P value
No	25,248	2,947	12%	1.00	
Yes	9,265 (27%)	1,538	17%	1.51 (1.16-1.97)	<0.001

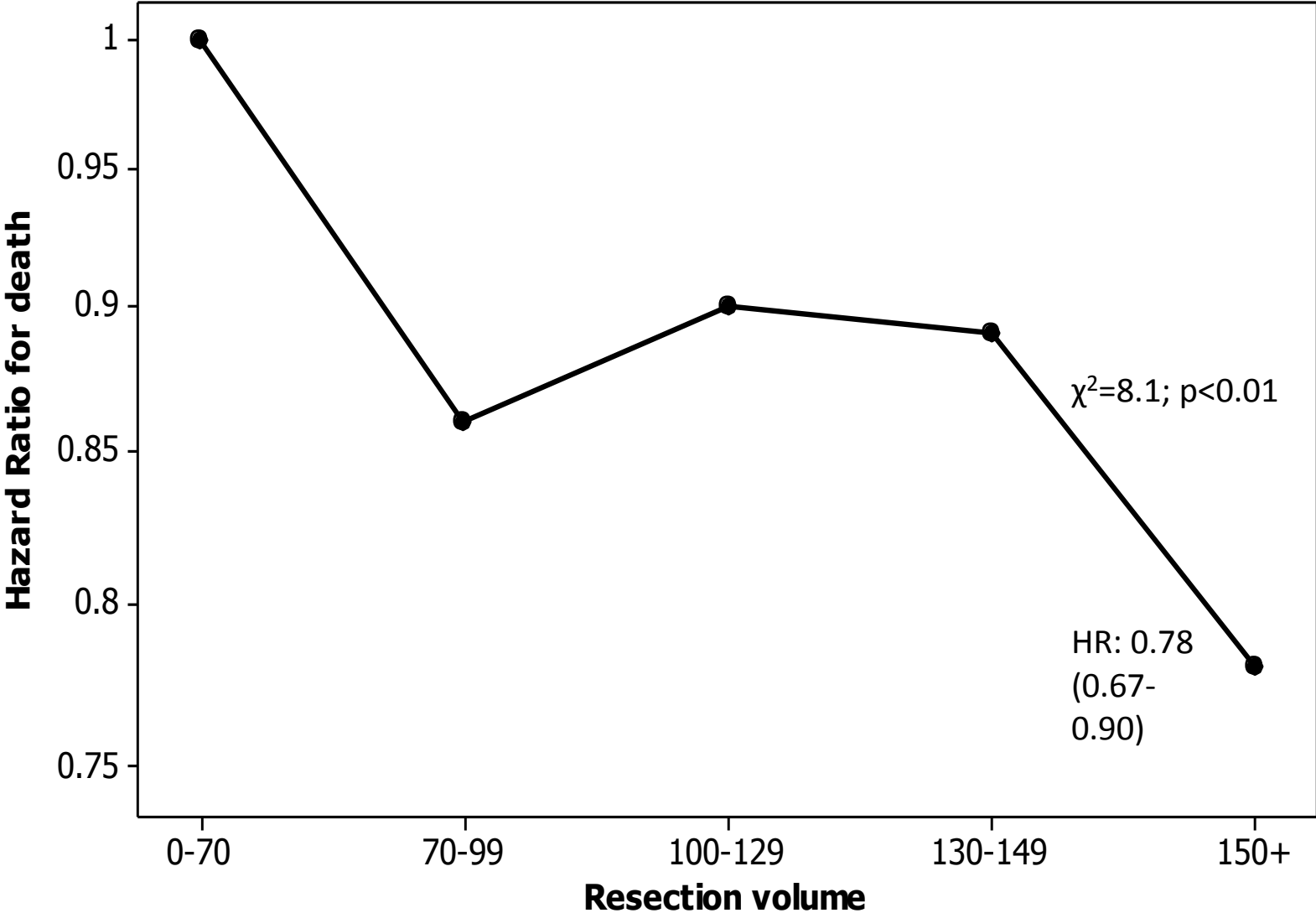
*adjusted for sex, age, PS, stage, deprivation index and Charlson co-morbidity index

Hazard ratio of death after surgery by hospital volume

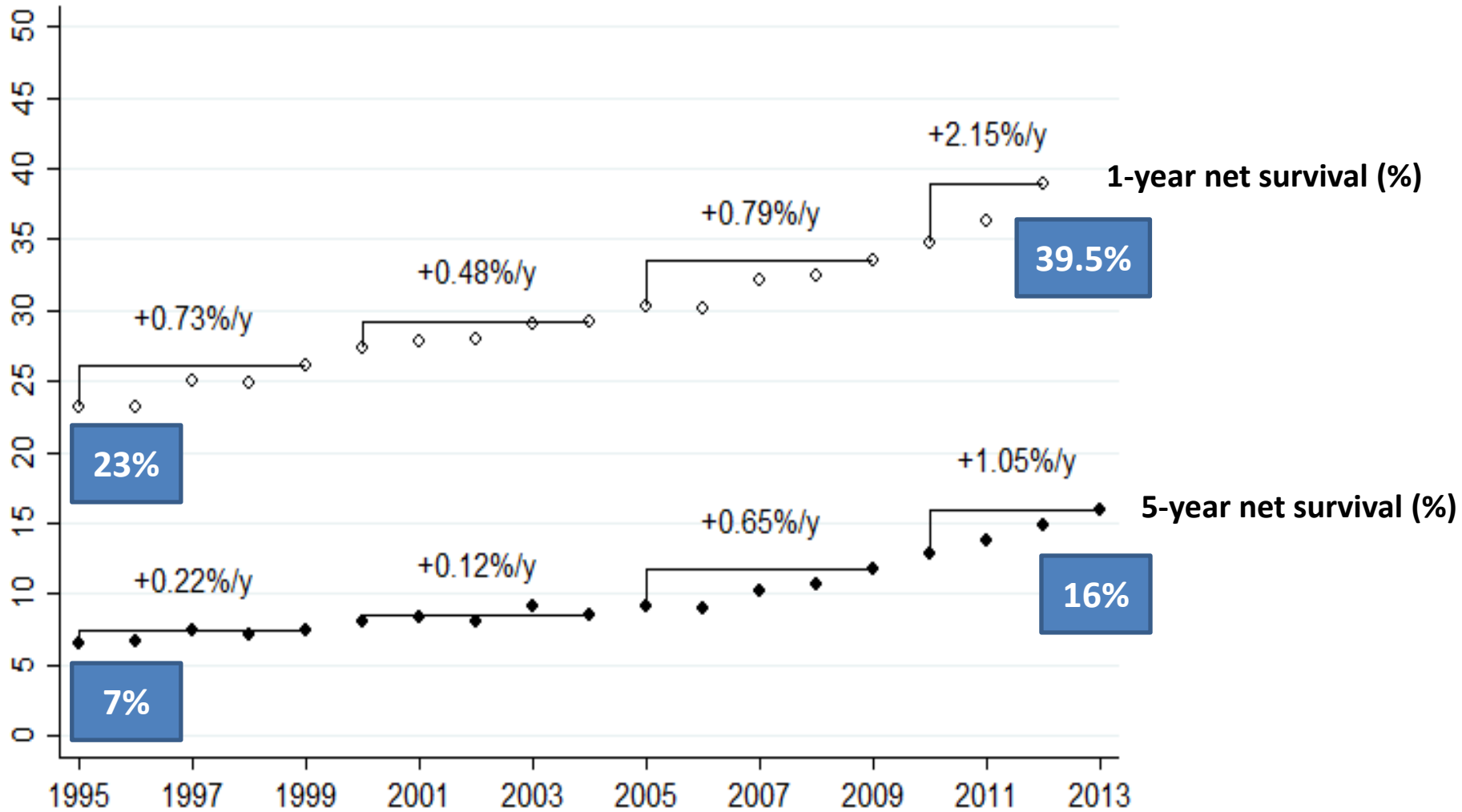
Hospital volume	0-30 days		31-365 days		>365 days	
	HR	95% CI	HR	95% CI	HR	95% CI
<70	1.00	-	1.00	-	1.00	-
70-99	0.81	0.58-1.13	0.82	0.70-0.96	0.95	0.83-1.09
100-129	0.75	0.52-1.08	0.92	0.78-1.09	0.94	0.81-1.08
130-149	0.91	0.64-1.31	0.78	0.66-0.93	0.97	0.84-1.13
150+	0.58	0.38-0.89	0.80	0.67-0.95	0.84	0.71-0.99
$\chi^2(1 \text{ df})$	3.24		5.93		2.67	
p-value	0.07		0.01		0.10	

Based on shared frailty model adjusted for age, sex, socioeconomic deprivation, Charlson comorbidity score, resection quintile and hospital volume (random effect)

Resection volume and survival



Trends in one- and five-year net survival from lung cancer in England by year of diagnosis.

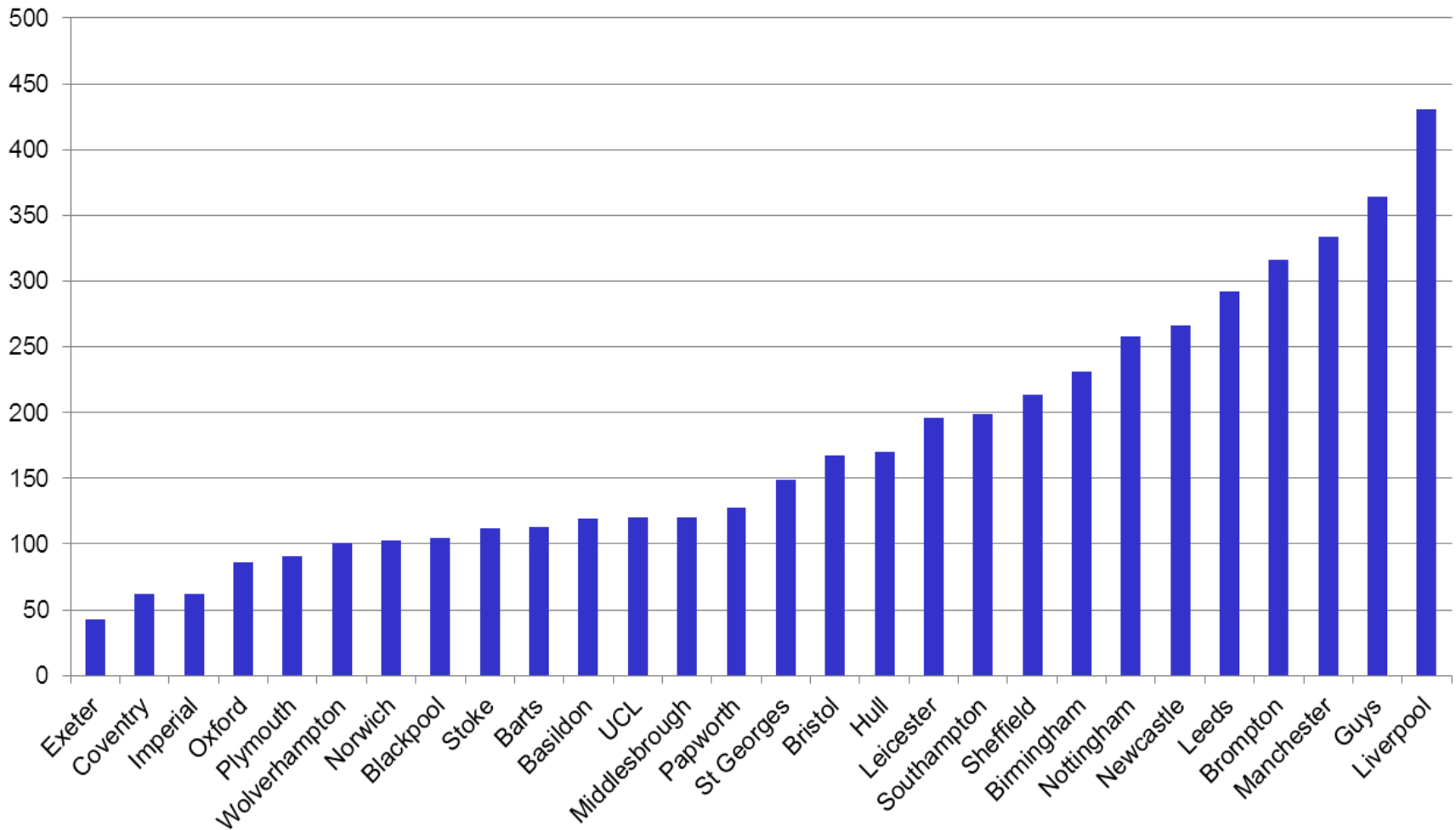


Source: S Walters et al . Br J Cancer: 2015;113(5):848-60

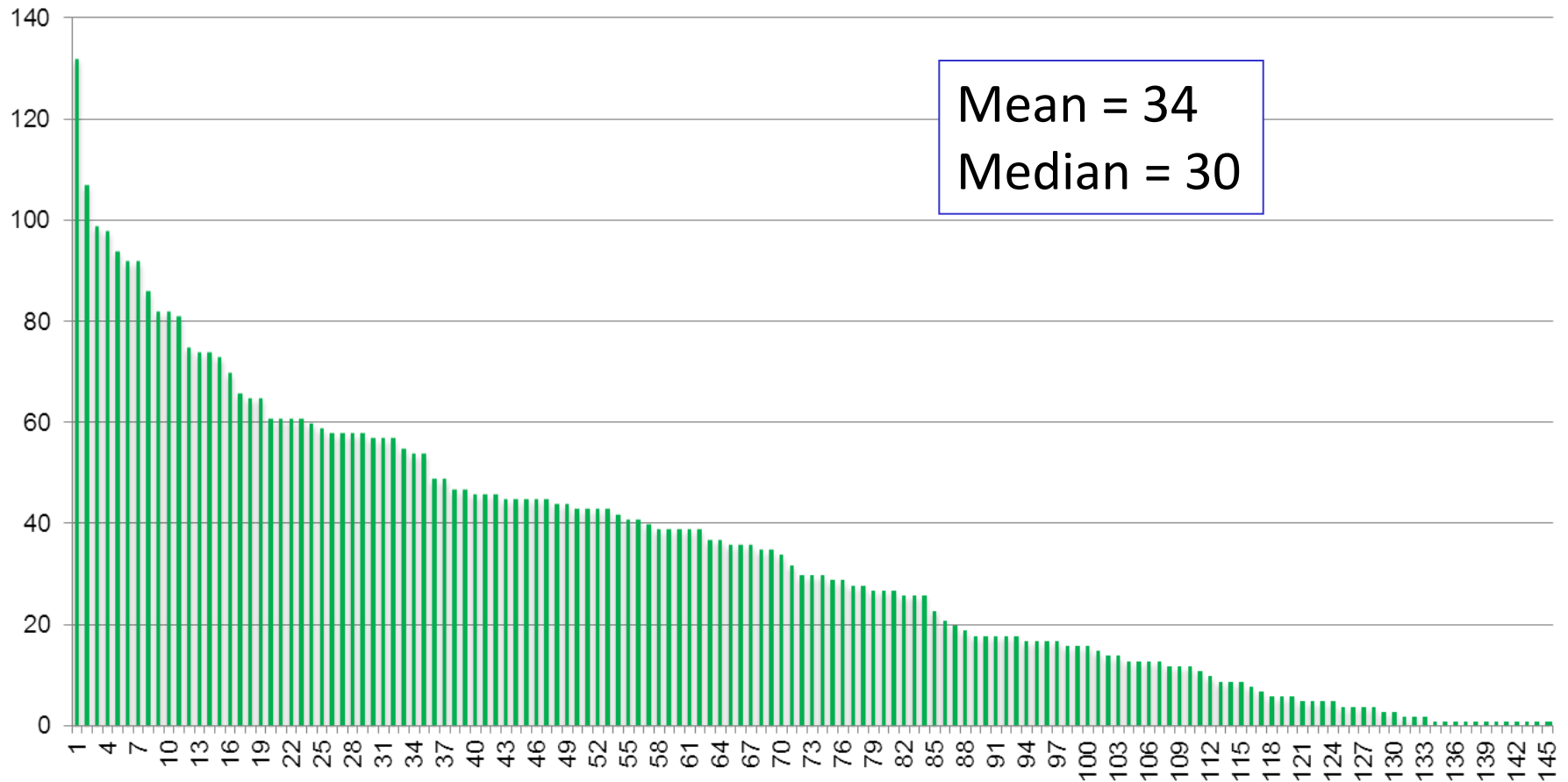
NHS England
Consultant Outcomes Programme
Thoracic surgical outcomes

**Acknowledgement: Richard Page,
all Thoracic Surgical Units and The HSCIC**

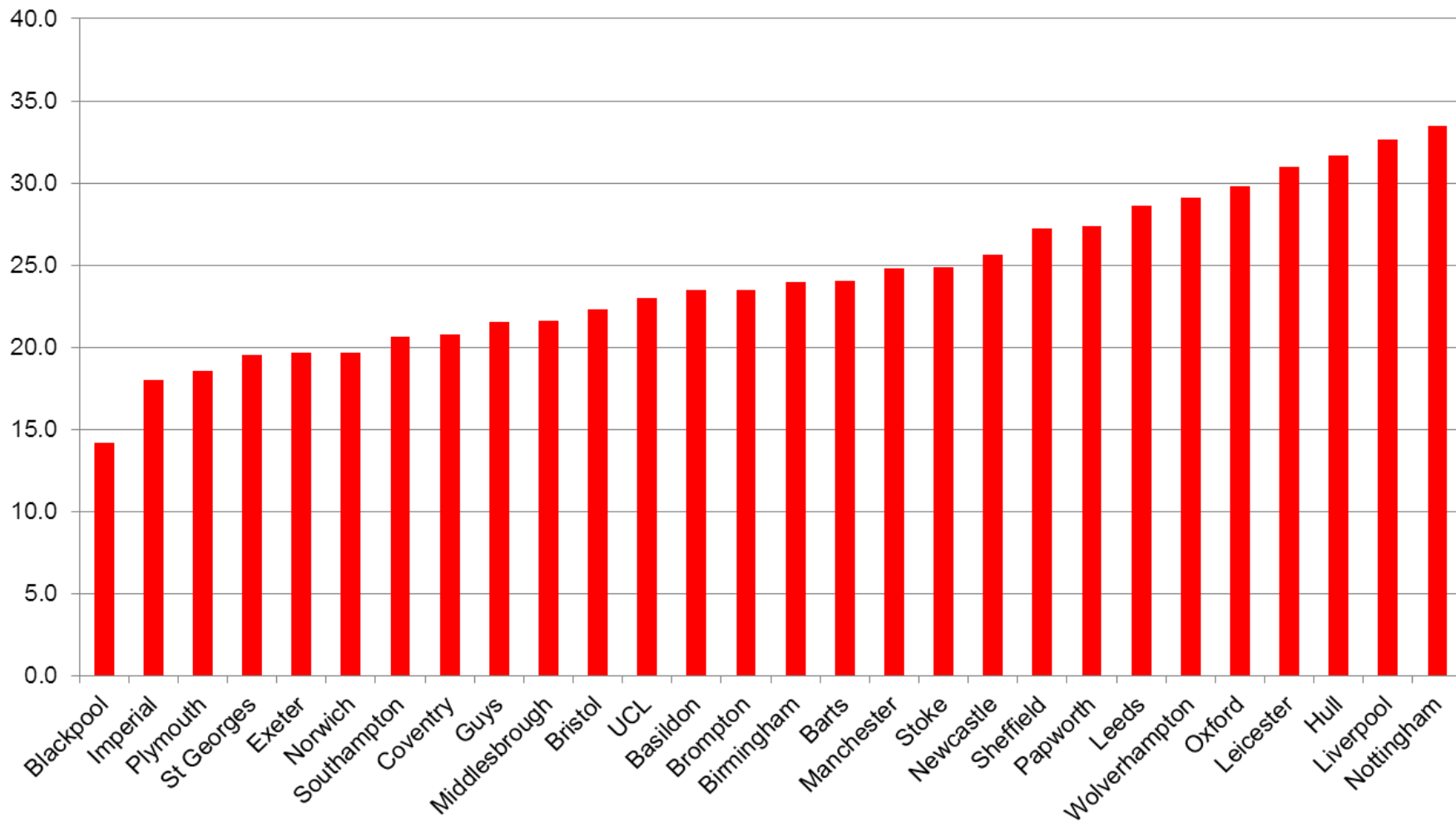
Numbers of procedures per Unit



Numbers of procedures per surgeon



Surgical Unit resection rate – histologically confirmed NSCLC





Our cancer shame: Survival rates in UK are the worst among leading nations

By JENNY HOPE

THE Sun

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health

Lung cancer lottery

By JANE SYMONS

IT is the most deadly cancer in the UK – and your chance of surviving it could be wrecked by GEOGRAPHY.

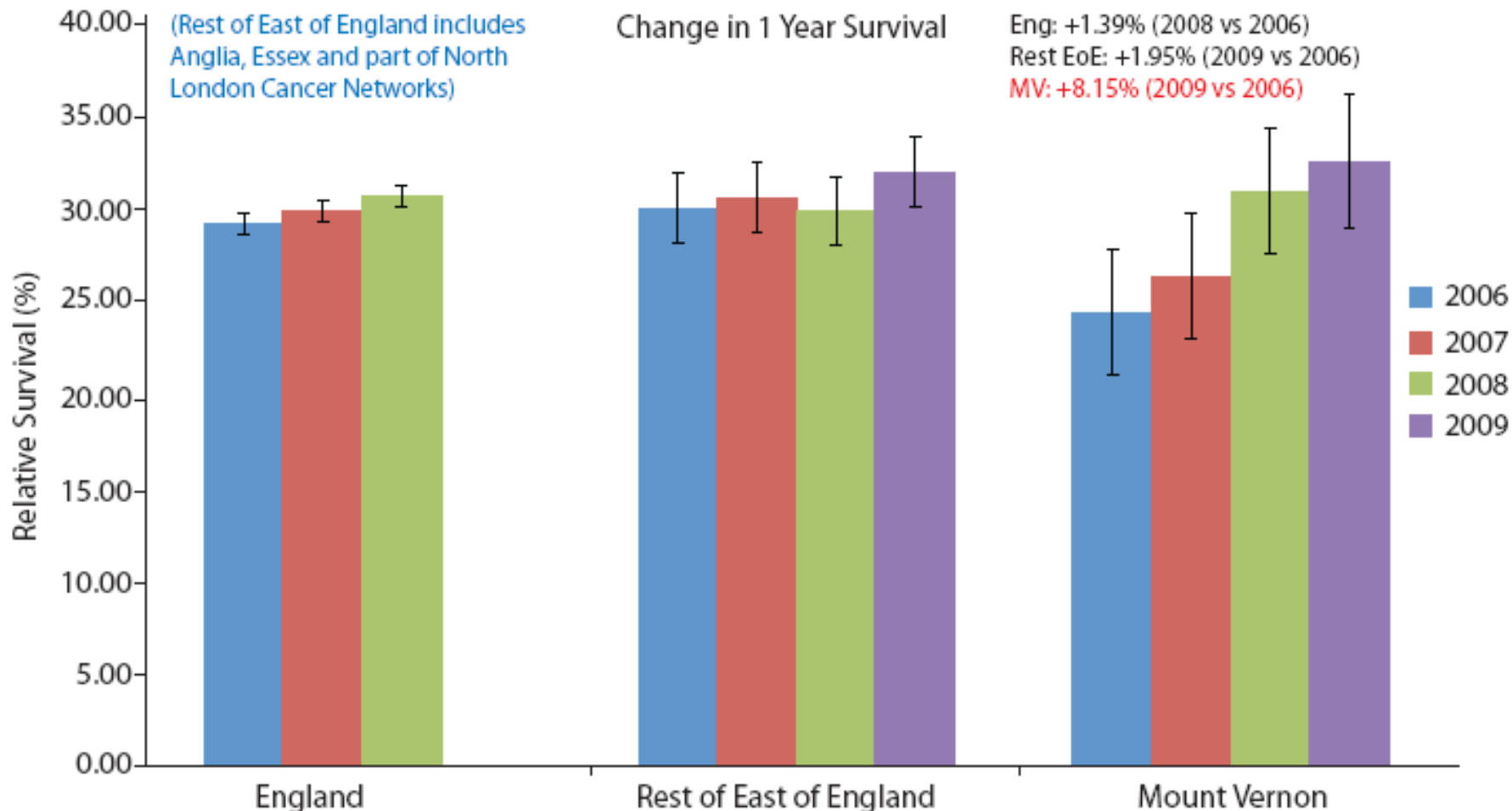
Like Tweet 0

HOW THE TREATMENTS COMPARE

	BREAST		BOWEL	
	1-yr survival	5-yr survival	1-yr survival	5-yr survival
Australia	96.7%	88.1%	84.9%	65.9%
Canada	96.3%	86.3%	83.5%	63.7%
Denmark	95.0%	82.4%	77.7%	55.8%
Norway	96.6%	85.5%	82.4%	62.0%
Sweden	98.0%	88.5%	83.8%	62.6%
UK	94.2%	81.6%	74.7%	53.6%

	OVARIAN		LUNG	
	1-yr survival	5-yr survival	1-yr survival	5-yr survival
Australia	73.5%	37.5%	42.8%	17.0%
Canada	75.2%	41.9%	43.1%	18.4%
Denmark	70.6%	36.1%	34.9%	10.9%
Norway	75.2%	39.7%	39.2%	14.4%
Sweden	n/a	n/a	43.6%	16.3%
UK	65.0%	36.4%	29.7%	8.8%

Survival improvements in Mount Vernon Cancer Network

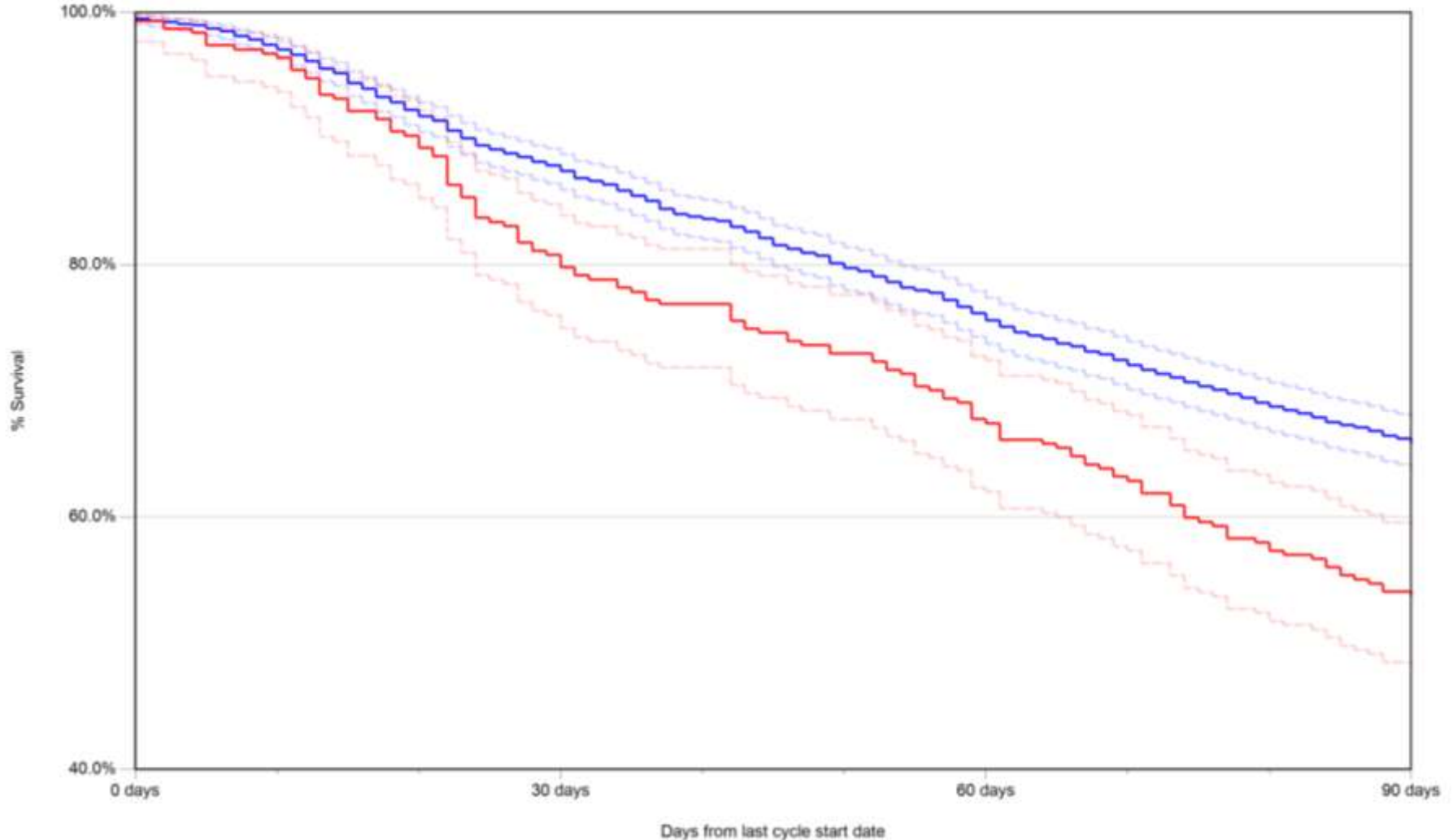




Post Chemotherapy Survival Analysis: Non-Small Cell Lung Cancer, palliative intent

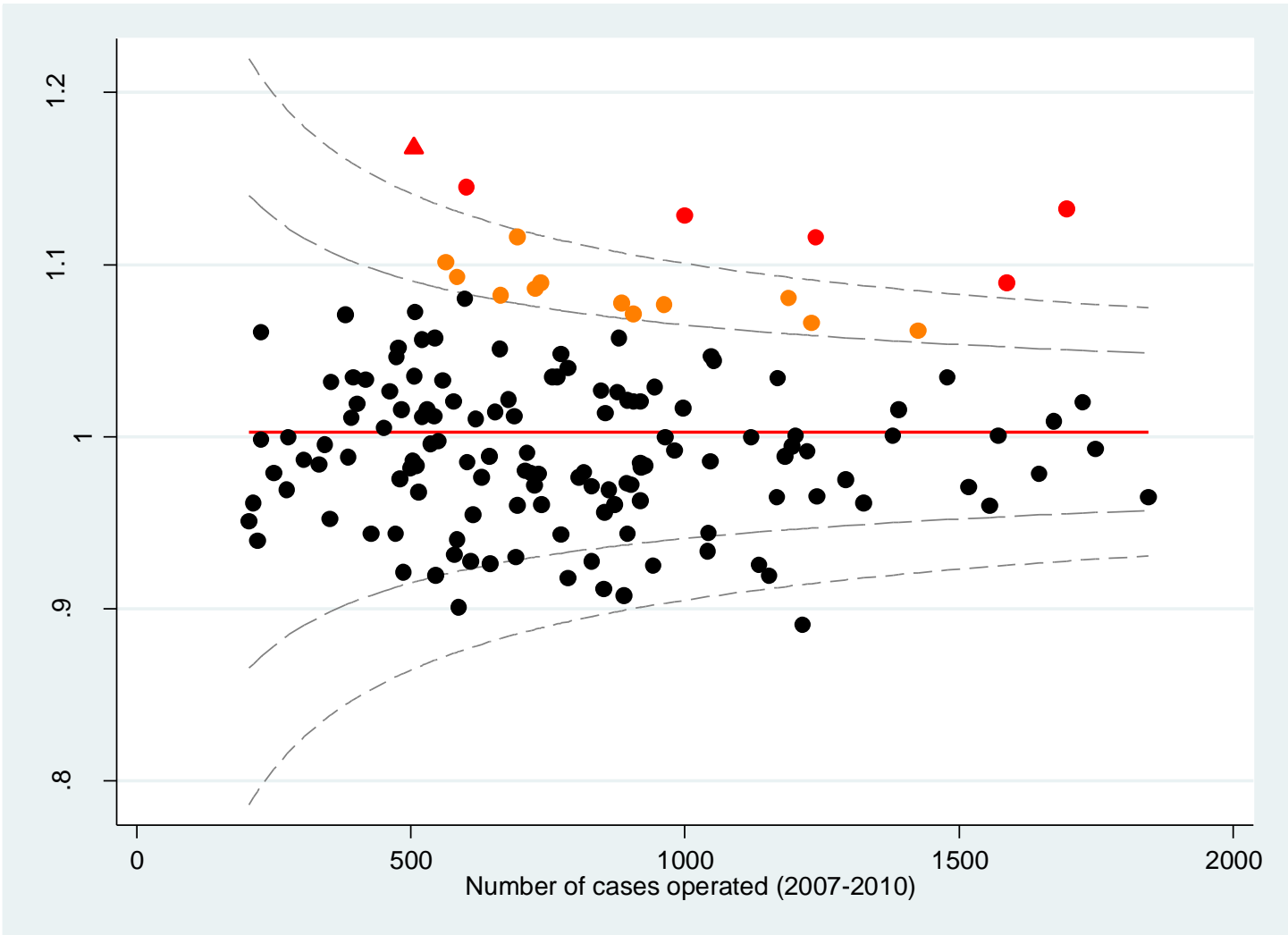
— All submitting trusts aggregated — NHS Foundation Trust

For demonstration purposes only



Colo-rectal cancer - Indicator I

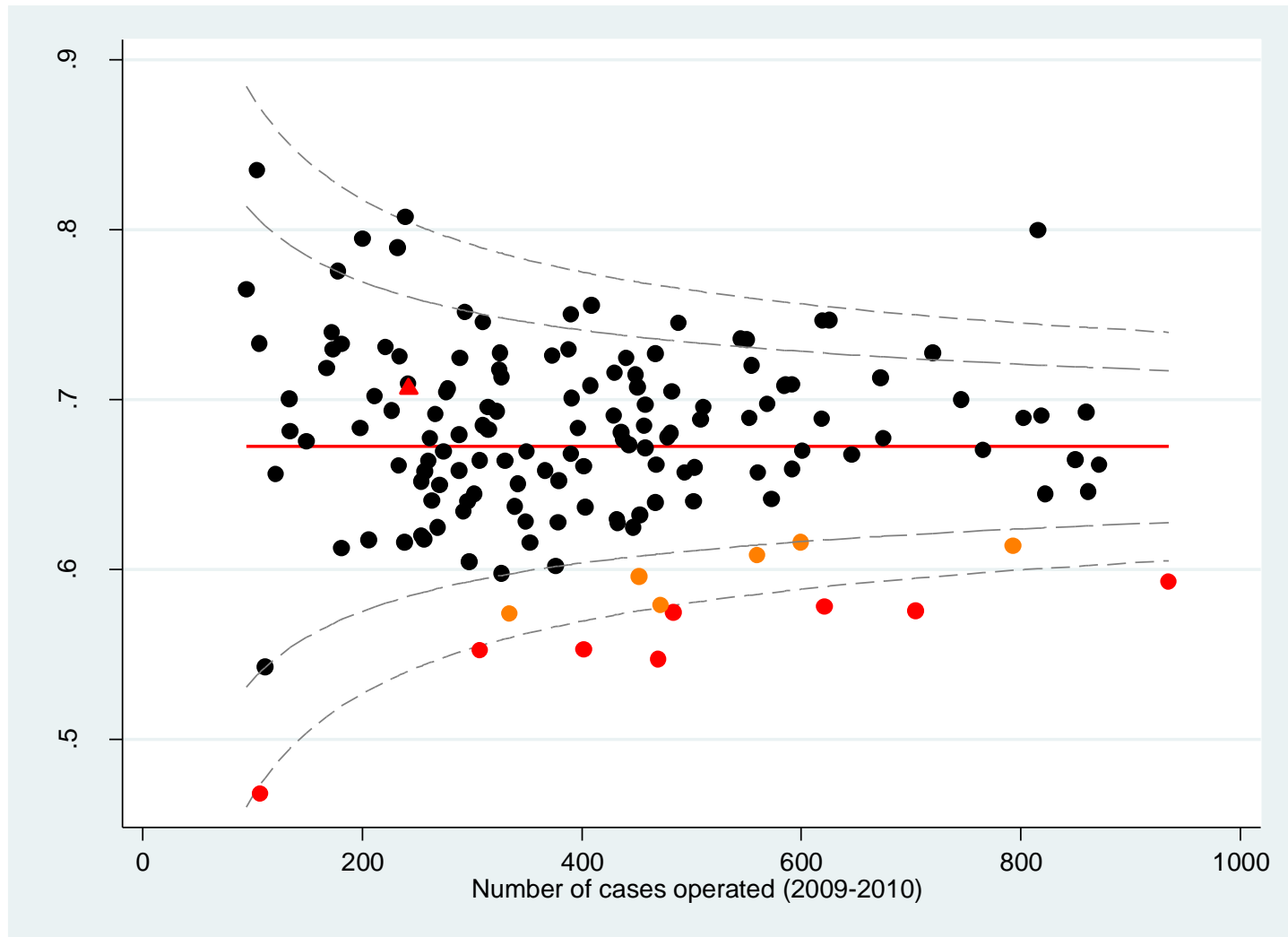
1 year crude survival



Source: E Morris, P Finan et al, Leeds

Colo-rectal cancer - Indicator II

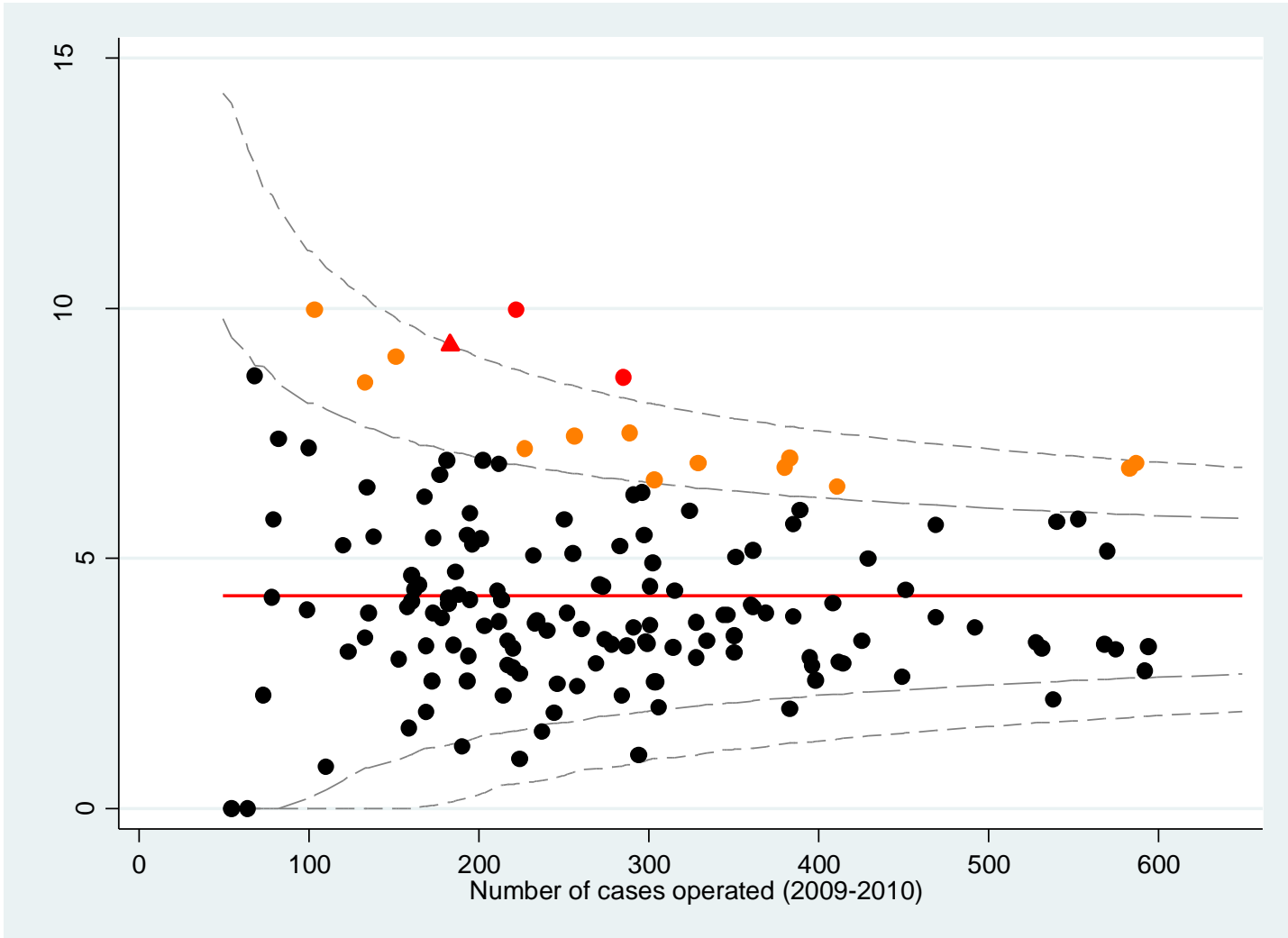
Odds of a Major Resection



Source: E Morris, P Finan et al, Leeds

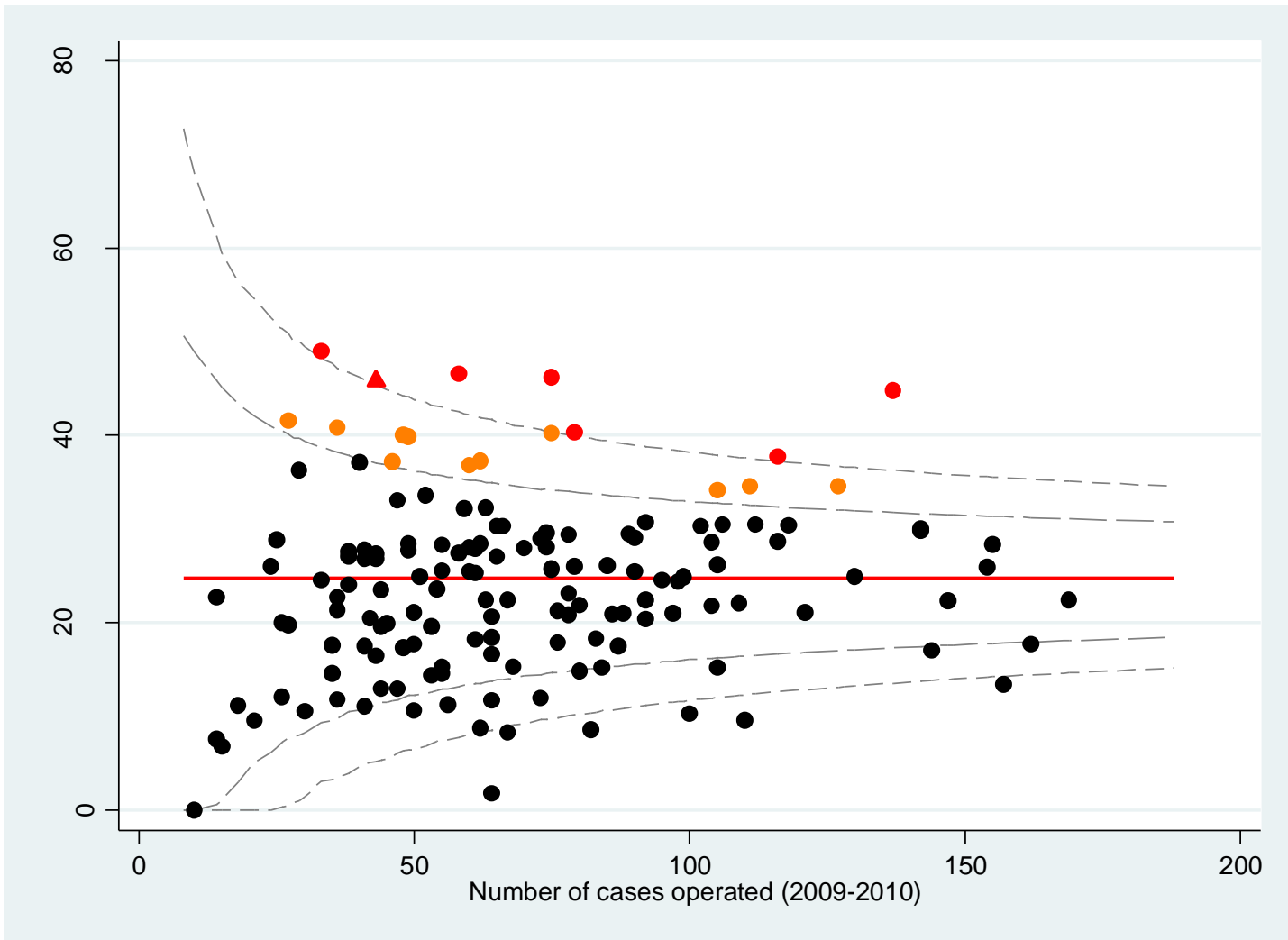
Colo-rectal cancer - Indicator III

30-day postoperative mortality



Colo-rectal cancer - Indicator IV

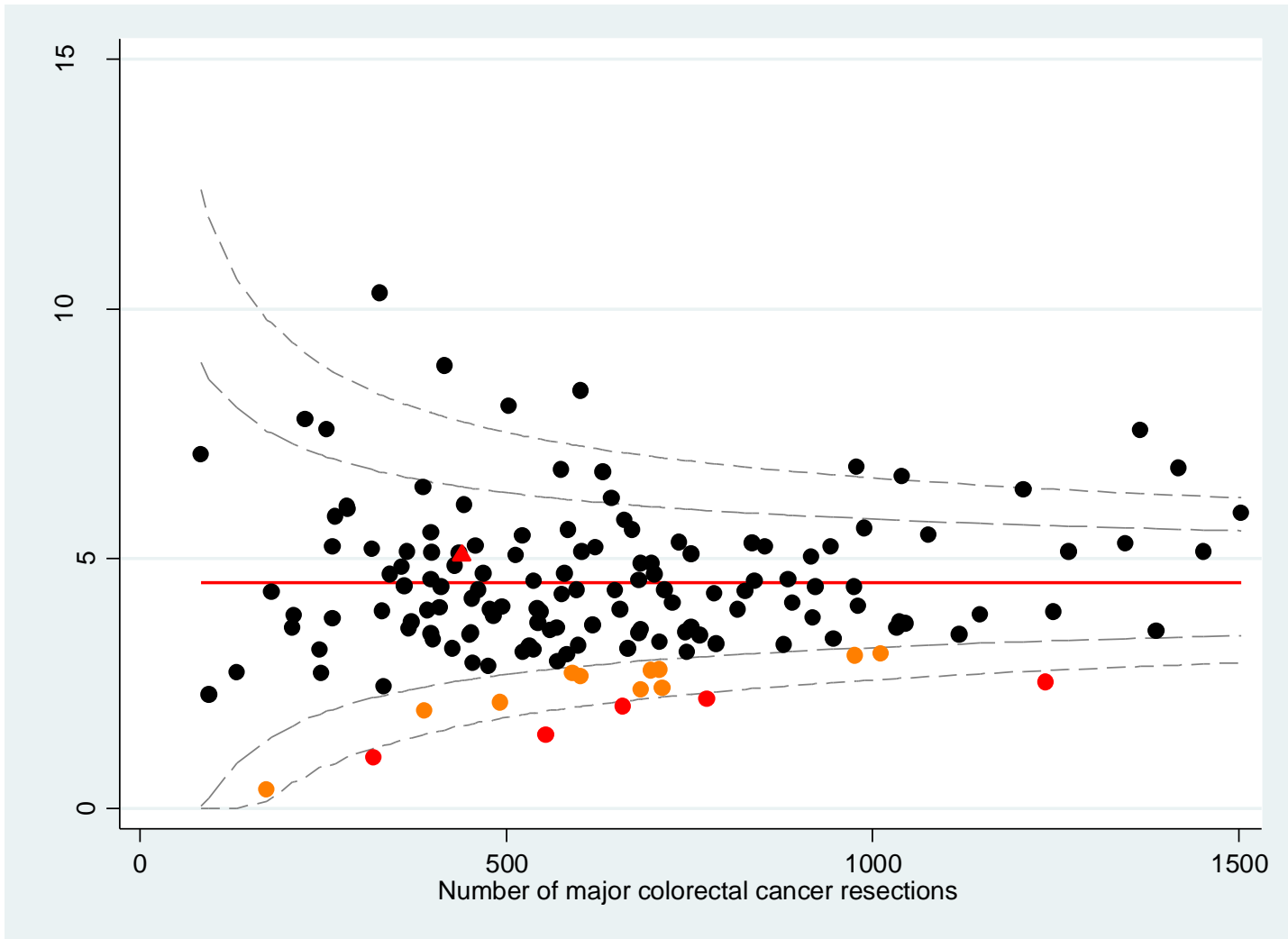
Odds of an APE



Source: E Morris, P Finan et al, Leeds

Colo-rectal cancer - Indicator V

Odds of a liver resection within 3 years of surgery for colorectal cancer



Source: E Morris, P Finan et al, Leeds

Conclusions

- Ensuring the best outcomes of clinical practice and service configuration is highly dependent on robust data
- Clinicians have to take seriously their part in data collection
- We need to expand the size of the clinical community engaged with cancer data - feedback and ongoing interaction with clinicians is an essential part of the process
- Every MDT should have at least one senior clinician responsible for overseeing data collection and feedback
- High quality population-based data can clearly drive clinical behavioural change – and is now impacting on outcomes for patients

National Lung Cancer Update

The new NLCA contract

- **The NLCA is commissioned by the Healthcare Quality Improvement Partnership (HQIP) and until the end of 2014 the contract was held by the Health and Social Care Information Centre (HSCIC)**

At the end of 2014, a new contract to run the audit for the next 3-5 years was awarded to the Royal College of Physicians of London

- **National Cancer Registration Service (NCRS) - manage the data collection and processing**
- **University of Nottingham – manage analysis**
- **The clinical leadership of the audit is unchanged: Dr Ian**

Woolhouse, Dr Mick Peake, Dr Paul Becket



National Lung
Cancer Audit

Main changes to the audit

- Cohort by Date of Diagnosis (cf date first seen)
- Data collection via COSD
- CancerStats portal for data completeness and performance
- Spotlight audits
- PROMS/PREMS
- Consultant Outcome Programme (early 2016)

COSD data set

- Most of the items in the legacy (LUCADA) NLCA dataset map across to the same field in COSD
- Some of the legacy data items are not included in COSD, but can be derived or obtained from other data sources
- There are a few new data items such as smoking status and EGFR mutation status

2015 annual report

- Transition report – data from some trusts not available
- Launch in December 2015 (Winter BTS, 2nd December)
- Data completeness online only
- Selected key performance measures + risk adjustment

In association with:



National Lung
Cancer Audit