

# Making data relevant to clinical practice – what do we want? As a Trust

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**Why does a trust need outcome data?**

**What do we want the data to do?**

**How do we collect the data at  
The Christie?**

**Trust perspective on role of NCIN**



# Aspirations

- Every patient to have high quality care
- Learn from each other
- Strive to improve



# Why does a trust need outcome data?

External use

Internal use

Support inspections



# Why does a trust need data?

## External

- Outcomes in the public domain
- Referring clinicians
- Trainees, attract post-graduate students
- Commissioners / NHSE
- National and international reputation
- Attract R&D - Pharma, research grants
- Recruitment
- Contribute to public health agenda



# Why does a trust need data?

## Internal

- MDT and individual clinicians
- Number of cases treated or operated on
- Appraisal data
- Risk / quality
- Outliers in practice
- Improve treatment protocols
- Improve patient selection for future treatment



# Why does a trust need data?

## Internal

- Identify priorities for audit and research
- Job planning
- Trust strategic planning



# Why does a trust need data?

## Inspections

- National Cancer Peer Review
- CQC
- NHRA





# What do we want the data to do?

**Inform the surgeon**  
**Inform the MDT**  
**Inform the Trust**



# MDT or surgeon's outcomes

## – all procedures

- 30 & 90 day mortality
- Survival
- Intra-operative damage to other organs
- Unplanned returns to theatre
- Unplanned admissions to critical care
- Unplanned readmissions
- Untoward incidents
- Significant complications



# MDT or surgeon's outcome

## - procedure specific colorectal cancer

- Palliative / curative
- Temporary and permanent stoma rates
- Histopathology
- Referrals for clinical trials
- Referrals for chemotherapy
- Referrals for radiotherapy
- Referrals for liver resection



# MDT or surgeon's outcome

- Cases not treated – resection rates
- Risk adjusted mortality
  - Higher risk patients – complexity of procedure
  - Co-morbidity
- Benchmarked
- Must not deter surgeons to treat



# Data quality concerns



# The Christie Clinical Web Portal



# Initial aim

## Clinical Outcomes Unit opened April 2013

Collect, analyse and report on the clinical outcomes for all patients treated at The Christie

- Identify areas and strategies to improve outcomes
- Automatically provide data for national audits
- Benchmark The Christie against other leading cancer centres
- Identify patients for trials
- Generate hypotheses for new trials

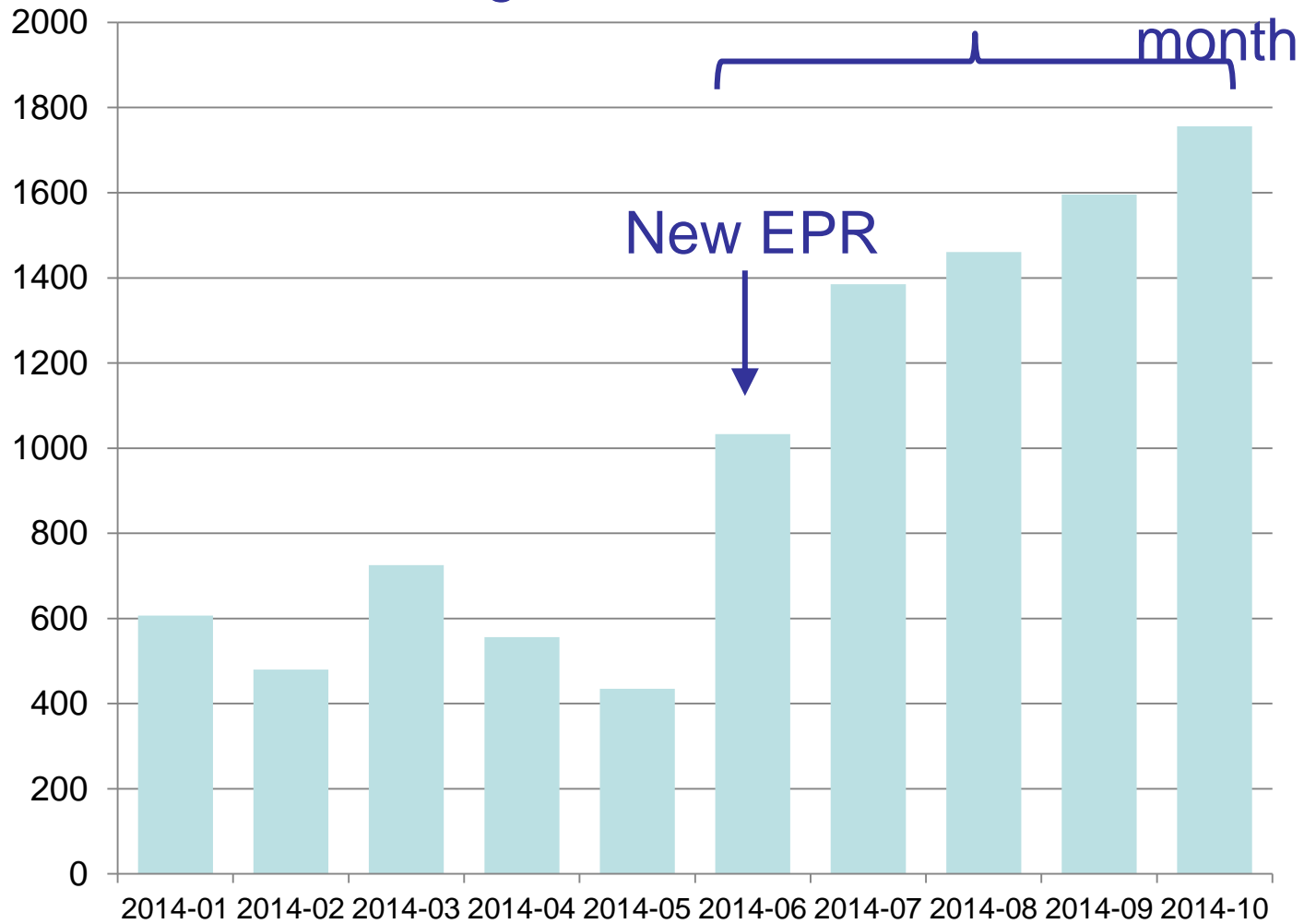


# Engaging consultant staff in outcomes data collection





On average, 64 consultants together submit 1446 forms each



DS Head and Neck

DS - Diagnosis and Staging

You should complete this form for each new primary referral to your specialty. Mandated fi

\* Referring hospital  ?

\* Referred by  ?  
Typing a surname will filter the list

\* Seen by  ?

\* Date seen  ?

\* Responsible consultant  ?

\* Primary disease site

\* Pharynx subsite

Oropharynx subsite

\* Treatment status for this cancer This is about any previous treatment at all for this can

- No previous treatment
- Post previous treatment

Date symptoms first noted  ?  
An approximate date may be entered

\* Date of diagnosis  ?  
An approximate date may be entered

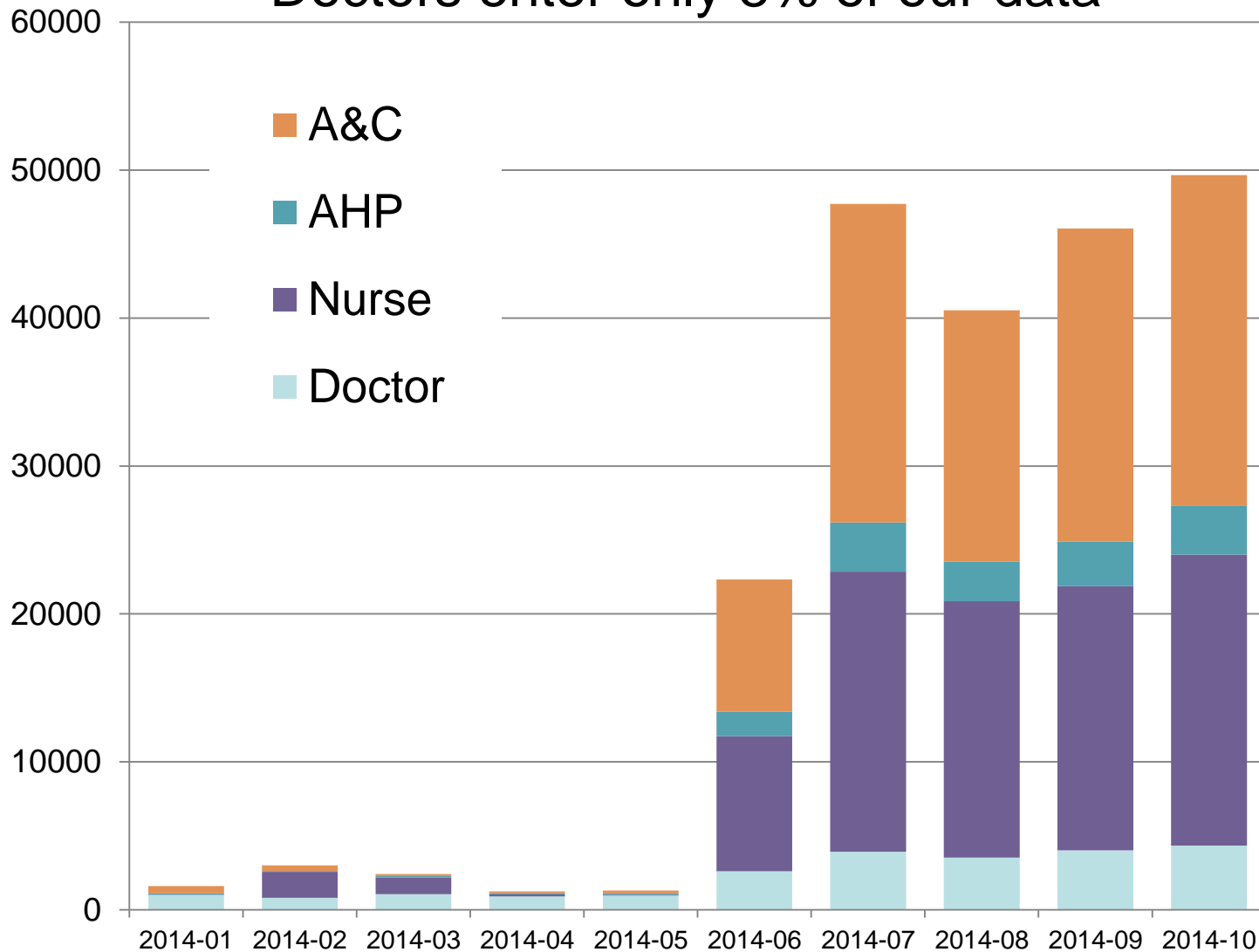
Basis of diagnosis  Tumour biopsy  Radiological imaging  Other ?

20,352  
Consultant-entered  
forms

35,389  
total doctor-  
entered forms



# Doctors enter only 8% of our data



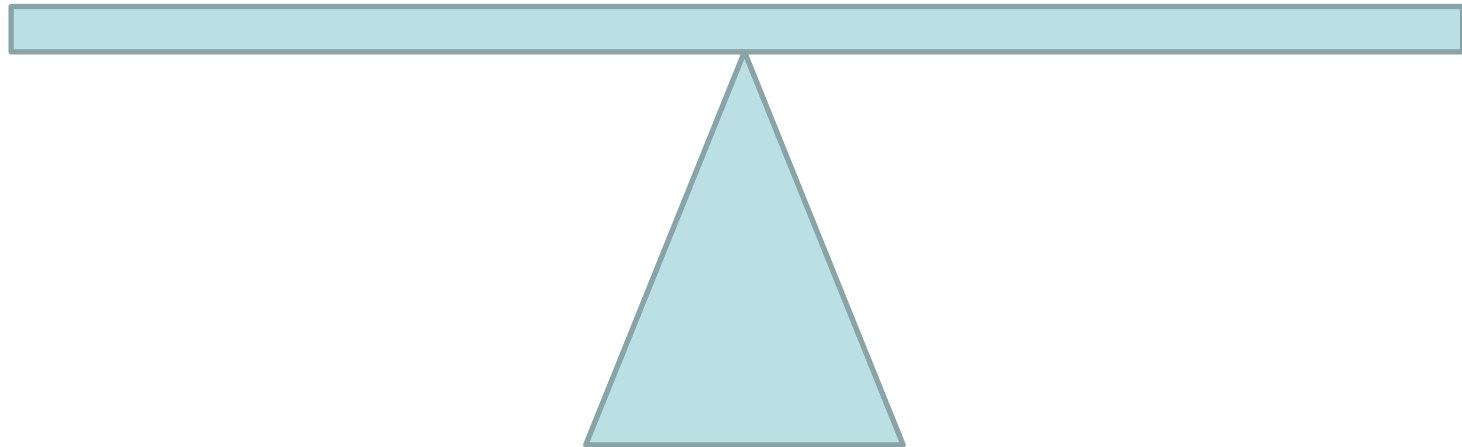
**But doctor-entered data represents  
extremely high data quality**



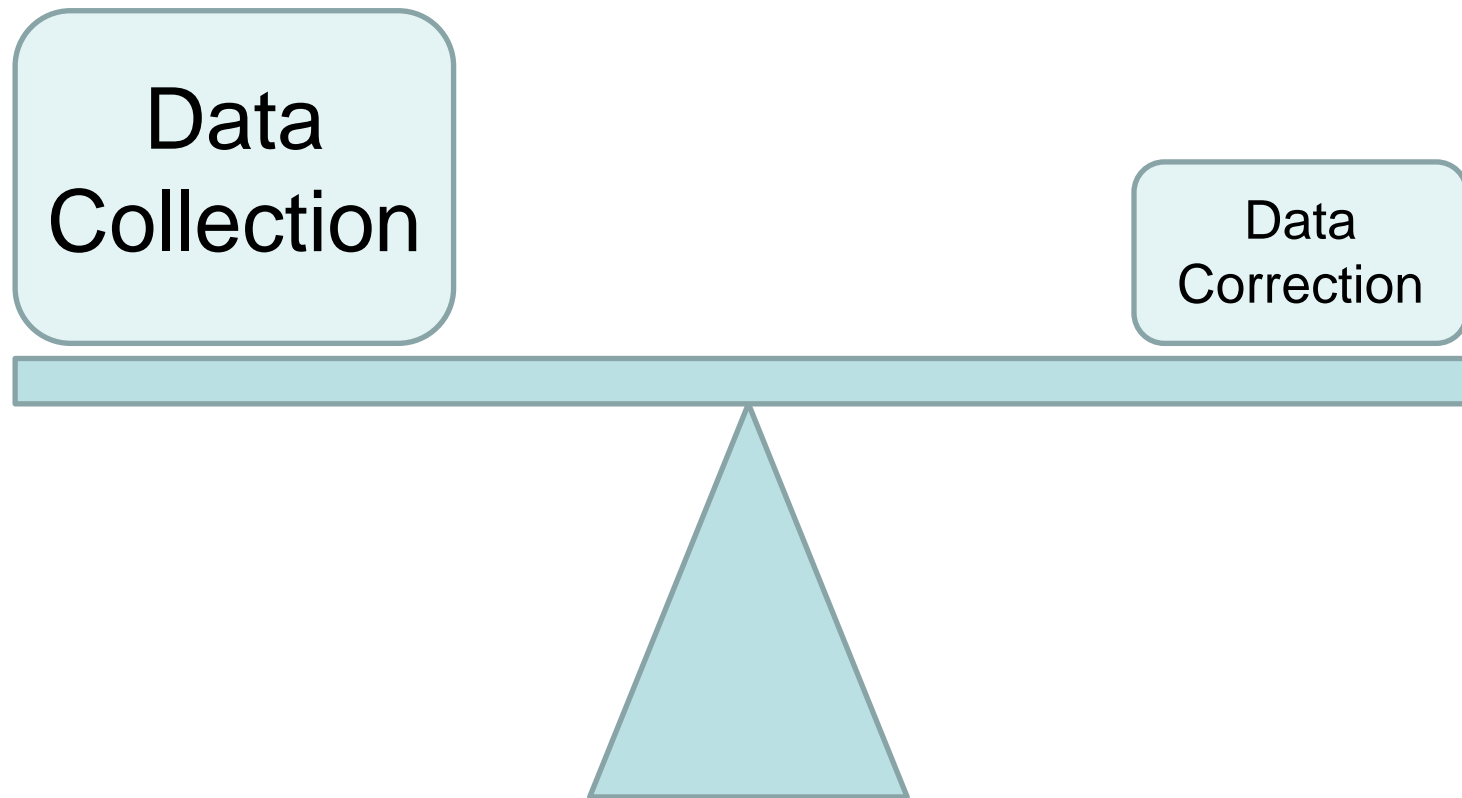
In the past, we had a huge burden of attempting to correct poor quality data

Data  
Collection

Data  
Correction



So we're now rebalancing the share of effort between data collection and data correction



# The Christie Clinical Outcomes Unit

## Example to data output

# NSCL cancer results

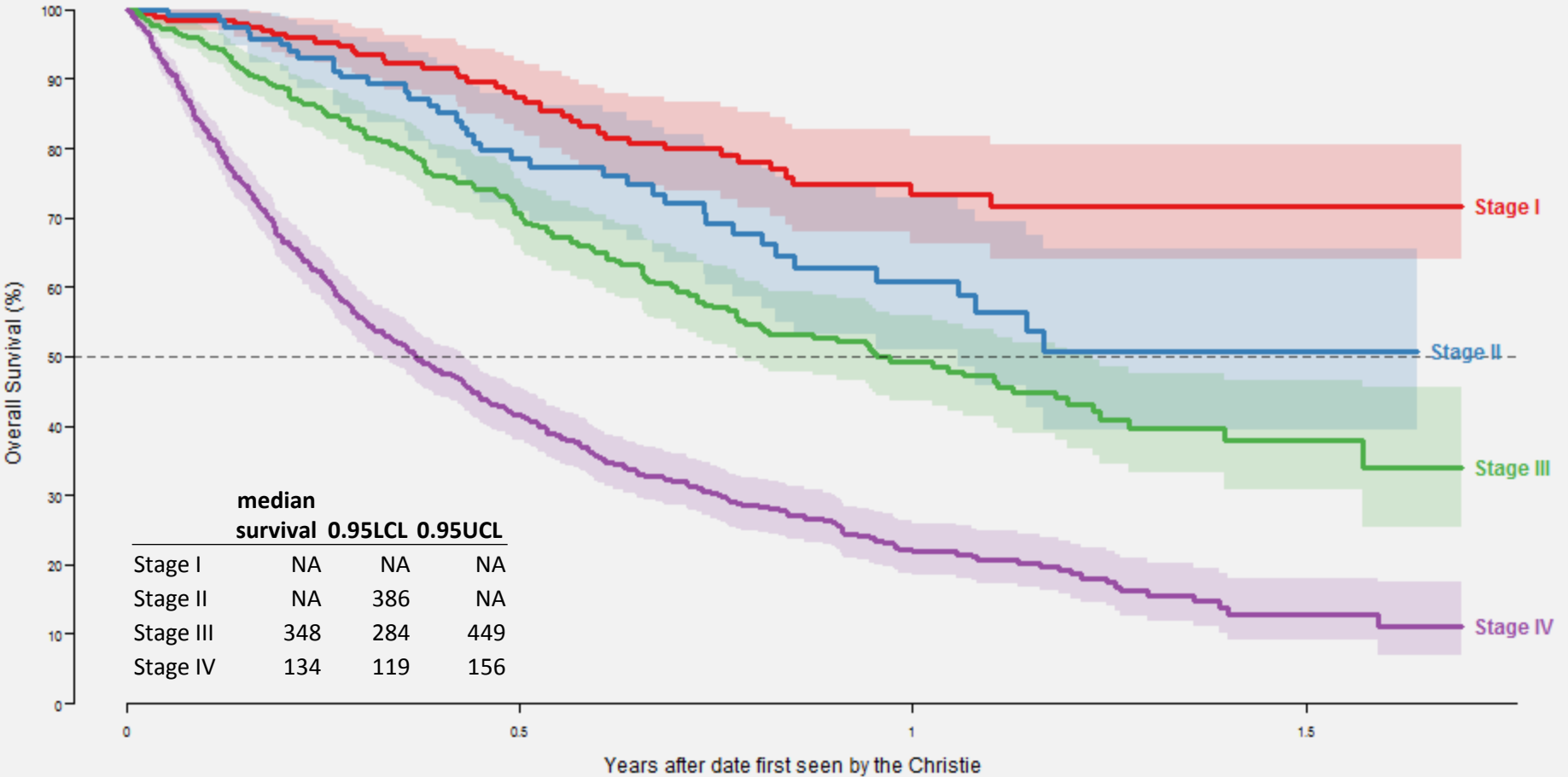
## 1799 patients

2011-Sept 2013



# Overall Survival by stage

NSCLC Survival by Stage  
(Nov 2011 - Sep 2013)



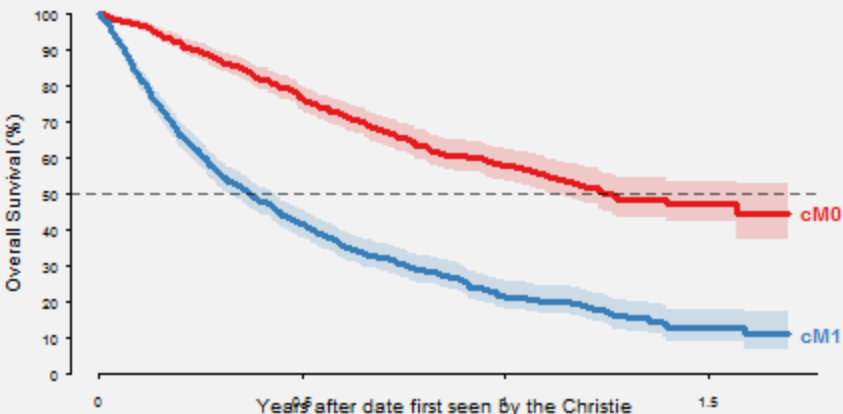
## Number at risk

203	125	52	6	Stage I
127	69	28	2	Stage II
408	207	78	14	Stage III
758	236	69	9	Stage IV



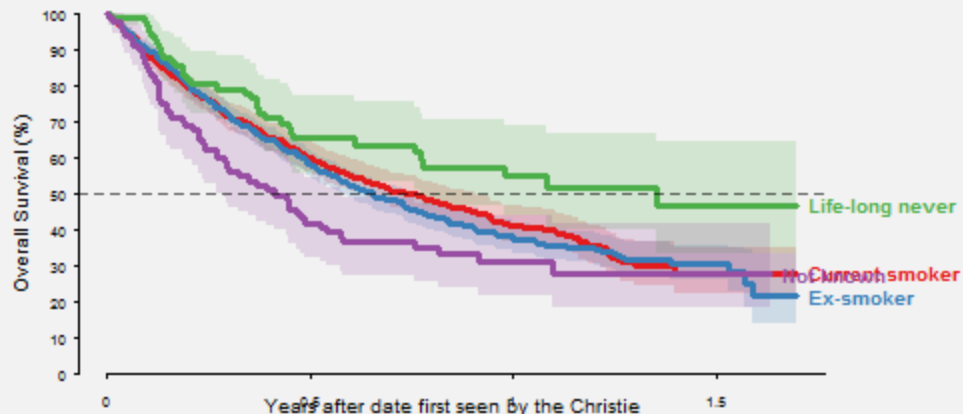
# Overall survival by other factors

**NSCLC Survival by Metastatic Status**  
(Nov 2011 - Sep 2013)



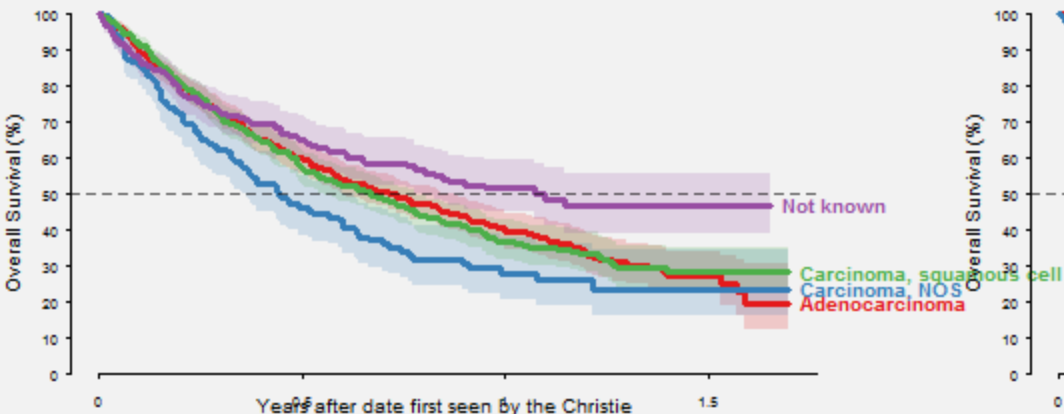
Number at risk	0	0.5	1.0	1.5
cM0	744	405	158	23
cM1	750	232	66	9

**NSCLC Survival by Smoking Status**  
(Nov 2011 - Sep 2013)



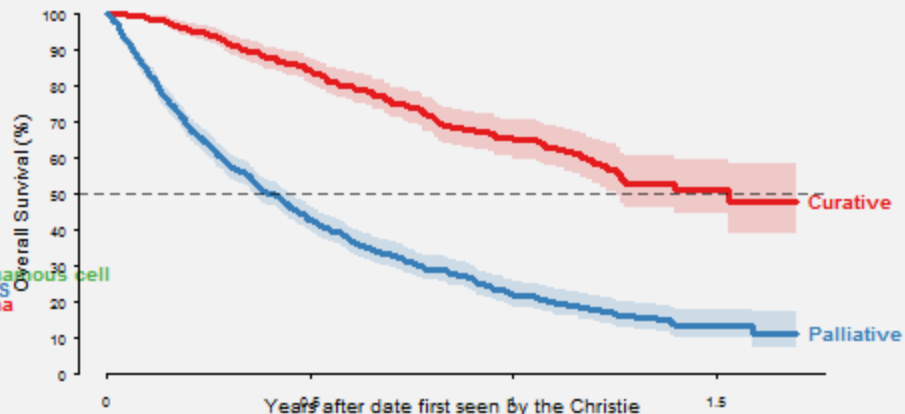
Number at risk	0	0.5	1.0	1.5
Current smoker	577	254	91	14
Ex-smoker	845	352	125	16
Life-long never	82	40	21	3
Not known	80	32	12	2

**NSCLC Survival by Histology**  
(Nov 2011 - Sep 2013)



Number at risk	0	0.5	1.0	1.5
Adenocarcinoma	610	256	92	16
Carcinoma, NOS	158	60	18	4
Carcinoma, squamous cell	536	209	71	13
Not known	271	125	46	3

**NSCLC Survival by Treatment Intent**  
(Nov 2011 - Sep 2013)



Number at risk	0	0.5	1.0	1.5
Curative	528	307	120	20
Palliative	905	293	61	10

# Future

## **Data capture from outside sources**

Proton beam radiotherapy

Regional MDTs

Patient reported outcomes

## **Service improvements (plus data capture)**

Radiotherapy booking forms

Chemotherapy booking forms

## **Nursing data capture**



# Role of the NCIN – trust perspective

- Risk adjust outcomes
- Benchmark nationally (and internationally?)
- Outcomes in the public domain
- Learn from each other
- Strive to improve
- Outliers given a chance to question data
- Outliers provided with support / mentorship
- Individual clinician given opportunity to agree data
- Multi surgeon operating

