What is the NCIN?

Dr Mick Peake

Clinical Lead, NCIN

www.ncin.org.uk
Goal for NCIN: “To develop the best cancer information service of any large country in the world – by 2012”

Mike Richards 2007
NCIN Partners
NCIN Governance

NCRI Board
Ch. Ken Calman

NCIN Steering Group
Ch. Alex Markham

Clinical Outcomes Group
Co-ch: Mike Richards & Mick Peake

SSCRG Chairs Forum
Ch: Mick Peake

Scientific Advisory Group
Ch: TBC

Health Departments
e.g. DH Cancer Programme Board

Using information to improve quality & choice
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

Using information to improve quality & choice
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)

Using information to improve quality & choice
Site-Specific Clinical Reference Groups

- In place for almost 18 months
- All have met at least thrice
- Membership becoming stable (open recruitment over the next 9 - 18 months)
- Strong links emerging with professional bodies
- Chairs’ Forum meets 3 times a year
- 11 groups have held workshops with NSSG chairs to date
- Main work to date:
  - National Cancer Dataset
  - Review of merged HES/CR data
  - Work programmes
  - Some ‘data briefings’
  - Supporting Peer Review (Clinical Lines of Enquiry)

Using information to improve quality & choice
‘Cross-cutting’ Clinical Issue Groups

- **Radiotherapy** (RES sub-group → RT Clinical Information Group – sub-group of NRIG)
- **Chemotherapy** (Chemotherapy Dataset Group → sub-group of NCIG)
- **Pathology** (RCPath datasets)
- **Radiology**: Joint RCR/NCIN working party
  - Proforma-based (codable) reporting (diagnosis/stage)
  - Extraction of data from RIS systems
- **Co-morbidity** advisory group being formed
  - Call for bids to go out shortly

*Using information to improve quality & choice*
National Cancer Dataset Review

- Managed by The Information Centre
- Chaired by NCIN
- Draft dataset in collaboration with SSCRGs by end September 2009
- ‘Sign off’ by Project Board, end December 2009
- Work with Information Standards Board 2010
- ‘Data Set Change Notice’ November 2011?
- Fully operational April 2012?
National Cancer Data Repository (NCDR)

• Currently contains:
  – ONS 1971 - 2006 (9.2m tumours)
  – Registries 1990 - 2006, includes stage and treatments (5.3m tumours)
  – IP HES 1997 - 2007 (33m episodes, 4.9m patients)
  – GP Research Database linkage complete

• Being updated for
  – Registrations up to 2007
  – NCASP data (lung, colorectal, H&N)
  – HES outpatients
  – Radiotherapy data to follow 2010
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

- Microsites

Using information to improve quality & choice
e-Products

- UK Cancer Information Service (UKCIS)
- UK, 2006 Incidence, mortality and survival
- Updated Cancer e-Atlas (incl. prevalence)
- England, 2006 Incidence and mortality
- Cancer Commissioning Toolkit (updated)
- Various portals:
  - Inequalities portal (with National Cancer Equality Initiative): [www.ncin.org.uk/inequalities](http://www.ncin.org.uk/inequalities)
  - Cancer mortality by PCT

*Using information to improve quality & choice*
Expert analyses

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• Reports on:
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• Microsites

Using information to improve quality & choice

www.ncin.org.uk
NCIN: Incidence and mortality

New cancer cases, crude and age-standardised* incidence rates per 100,000 (with 95% confidence intervals), Cancer Networks, UK, 2008

C45. Oesophagus

<table>
<thead>
<tr>
<th>Gender</th>
<th>Year 1865-2004</th>
<th>Year 2005-2006</th>
<th>Year 2007-2008</th>
</tr>
</thead>
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<tr>
<td>Males</td>
<td>2.63</td>
<td>2.43</td>
<td>2.34</td>
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<tr>
<td>Females</td>
<td>2.43</td>
<td>2.25</td>
<td>2.17</td>
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</table>

Estimated change per 10 years: 0.7% increase in estimated number of cases per year.

Using information to improve quality & choice
Trends in 1 year survival: England 1985-2004

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

Males

<table>
<thead>
<tr>
<th>Years of diagnosis</th>
<th>Number in Cohort</th>
<th>Cumulative Deaths</th>
<th>% Crude Survival</th>
<th>% Relative Survival</th>
<th>95% Confidence Interval</th>
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</thead>
<tbody>
<tr>
<td>1985-1986</td>
<td>414,345</td>
<td>221,827</td>
<td>48.7</td>
<td>49.3</td>
<td>49.1 - 49.6</td>
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<tr>
<td>1990-1994</td>
<td>466,017</td>
<td>210,778</td>
<td>53.6</td>
<td>53.8</td>
<td>53.4 - 53.7</td>
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<tr>
<td>1995-1999</td>
<td>466,127</td>
<td>206,001</td>
<td>58.0</td>
<td>58.9</td>
<td>58.7 - 58.7</td>
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<tr>
<td>2000-2004</td>
<td>504,186</td>
<td>186,166</td>
<td>61.0</td>
<td>62.9</td>
<td>62.2 - 63.2</td>
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</tbody>
</table>

Estimated change per 5-yr cohort (%): 3.9 4.3 - 5.7
P value: <0.001

Notes on Trend

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

Females

<table>
<thead>
<tr>
<th>Years of diagnosis</th>
<th>Number in Cohort</th>
<th>Cumulative Deaths</th>
<th>% Crude Survival</th>
<th>% Relative Survival</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985-1986</td>
<td>423,315</td>
<td>172,317</td>
<td>59.3</td>
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<td>61.3 - 61.6</td>
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<tr>
<td>1990-1994</td>
<td>455,533</td>
<td>172,861</td>
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<td>1995-1999</td>
<td>476,530</td>
<td>168,815</td>
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<td>65.6 - 66.1</td>
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<tr>
<td>2000-2004</td>
<td>496,032</td>
<td>164,661</td>
<td>68.5</td>
<td>69.3</td>
<td>69.0 - 70.5</td>
</tr>
</tbody>
</table>

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

Notes on Trend

Estimated 2.7% change per 5 year cohort gives an estimated increase of 0.63% per annum.

Persons

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<th>Cumulative Deaths</th>
<th>% Crude Survival</th>
<th>% Relative Survival</th>
<th>95% Confidence Interval</th>
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</thead>
<tbody>
<tr>
<td>1985-1986</td>
<td>637,630</td>
<td>303,344</td>
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<td>55.1 - 55.9</td>
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<td>1990-1994</td>
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<td>68.1</td>
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<td>62.8 - 63.2</td>
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<td>2000-2004</td>
<td>1,022,080</td>
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<td>63.6</td>
<td>65.7</td>
<td>65.3 - 66.0</td>
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Estimated change per 5-yr cohort (%): 3.8 3.5 - 4.1
P value: <0.001

Notes on Trend

Estimated 3.3% change per 5 year cohort gives an estimated increase of 0.76% per annum.
C15: Oesophagus
Trends in 1yr survival

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C15: Oesophagus 2005 by Cancer Network

Using information to improve quality & choice
Lung Cancer Incidence by deprivation

Cancer incidence by deprivation quintile, England, 1995 - 2004

C33-C34: Trachea, bronchus and lung
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

• Microsites
  www.ncin.org.uk

Using information to improve quality & choice
## 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)

<table>
<thead>
<tr>
<th></th>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colectomy</td>
<td>162</td>
<td>178</td>
<td>163</td>
<td>174</td>
<td>158</td>
<td>144</td>
<td>145</td>
<td>148</td>
<td>142</td>
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<td>98</td>
<td>137</td>
<td>106</td>
<td>117</td>
<td>84</td>
<td>136</td>
<td>121</td>
<td>142</td>
<td>123</td>
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<td>265</td>
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<td></td>
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<td></td>
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</tr>
<tr>
<td>Colectomy</td>
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<td>101</td>
<td>100</td>
<td>98</td>
<td>89</td>
<td>99</td>
<td>96</td>
<td>79</td>
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<td>77</td>
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<td></td>
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<tr>
<td>Colectomy</td>
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<td>63</td>
<td>50</td>
<td>71</td>
<td>63</td>
<td>66</td>
<td>74</td>
<td>67</td>
<td>59</td>
<td>48</td>
<td>610</td>
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<tr>
<td>Excision of Rectum</td>
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<td>48</td>
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<td>49</td>
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<td>521</td>
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<td>99</td>
<td>110</td>
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<td>123</td>
<td>127</td>
<td>122</td>
<td>111</td>
<td>1,131</td>
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<tr>
<td><strong>Dartford and Gravesham NHS Trust</strong></td>
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<td></td>
<td></td>
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<tr>
<td>Colectomy</td>
<td>33</td>
<td>42</td>
<td>42</td>
<td>49</td>
<td>47</td>
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<td>52</td>
<td>46</td>
<td>47</td>
<td>48</td>
<td>449</td>
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<tr>
<td>Excision of Rectum</td>
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<td>35</td>
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<td>86</td>
<td>83</td>
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<td>87</td>
<td>84</td>
<td>88</td>
<td>97</td>
<td>789</td>
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<tr>
<td><strong>Grand Total</strong></td>
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<td>605</td>
<td>662</td>
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<td>639</td>
<td>644</td>
<td>652</td>
<td>654</td>
<td>690</td>
<td>6,389</td>
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</tbody>
</table>
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)

| Trust Name                                | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colecto

| Trust Name                                | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colectomy | Colecto
June 2010

- Progress on Cancer Mortality Targets
- England by SHA, cancer network and PCT

Mortality rates and trends
- Analysis carried out by South West Public Health Observatory
- Trends and rates by cancer network, PCT's and SHA's across England and whether they are on course to reduce mortality from cancer to the required levels.
Mid 2010

- Routes to Diagnosis
- Complex analysis led by Lucy Elliss-Brookes with SWPHO and NatCanSat utilising combined data from multiple sources, to track routes to diagnosis for cancer patients
## All cancer Routes to Diagnosis:
by cancer type

<table>
<thead>
<tr>
<th>Cancer Type</th>
<th>GP/OP referral</th>
<th>Two Week Wait</th>
<th>Emergency presentation</th>
<th>Other outpatient</th>
<th>Screen detected</th>
<th>Inpatient elective</th>
<th>DCO</th>
<th>Unknown</th>
<th>Total</th>
<th>Number of patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute leukaemia</td>
<td>17%</td>
<td>3%</td>
<td>61%</td>
<td>12%</td>
<td>0%</td>
<td>4%</td>
<td>0%</td>
<td>4%</td>
<td>100%</td>
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<tr>
<td>Bladder</td>
<td>22%</td>
<td>36%</td>
<td>18%</td>
<td>13%</td>
<td>0%</td>
<td>6%</td>
<td>1%</td>
<td>5%</td>
<td>100%</td>
<td>1,167</td>
</tr>
<tr>
<td>Brain &amp; CNS</td>
<td>18%</td>
<td>2%</td>
<td>49%</td>
<td>20%</td>
<td>0%</td>
<td>5%</td>
<td>0%</td>
<td>5%</td>
<td>100%</td>
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<tr>
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<td>40%</td>
<td>5%</td>
<td>5%</td>
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<td>100%</td>
<td>5,646</td>
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<tr>
<td>Cervix</td>
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<td>17%</td>
<td>12%</td>
<td>8%</td>
<td>23%</td>
<td>3%</td>
<td>1%</td>
<td>15%</td>
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<td>Chronic leukaemia</td>
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<td>12%</td>
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<td>0%</td>
<td>7%</td>
<td>100%</td>
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<td>34%</td>
<td>8%</td>
<td>14%</td>
<td>0%</td>
<td>5%</td>
<td>0%</td>
<td>3%</td>
<td>100%</td>
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<td>4%</td>
<td>1%</td>
<td>7%</td>
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<tr>
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<td>4%</td>
<td>8%</td>
<td>0%</td>
<td>5%</td>
<td>0%</td>
<td>22%</td>
<td>100%</td>
<td>1,686</td>
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<td>14%</td>
<td>44%</td>
<td>13%</td>
<td>0%</td>
<td>4%</td>
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<td><strong>28%</strong></td>
<td><strong>22%</strong></td>
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<td><strong>5%</strong></td>
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<td><strong>100%</strong></td>
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Relative one year survival: by cancer type

Malignant registrations, South West 2007, excluding multiples and DCOs

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<th>Cancer type</th>
<th>GP/OP referral (+TWW)</th>
<th>Emergency</th>
<th>Other route</th>
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<td>95% CIs</td>
<td>Relative Survival</td>
<td>95% CIs</td>
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<td>Acute leukaemia</td>
<td>39.7</td>
<td>(28.1 - 51)</td>
<td>39.4</td>
<td>(32.9 - 45.8)</td>
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<tr>
<td>Bladder</td>
<td>78.3</td>
<td>(74.6 - 81.5)</td>
<td>34.0</td>
<td>(27.3 - 40.8)</td>
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<tr>
<td>Brain &amp; CNS</td>
<td>68.4</td>
<td>(60.1 - 75.4)</td>
<td>34.0</td>
<td>(29.1 - 38.9)</td>
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<td>Breast</td>
<td>97.7</td>
<td>(96.8 - 98.4)</td>
<td>50.8</td>
<td>(44.4 - 56.9)</td>
</tr>
<tr>
<td>Colorectal</td>
<td>84.5</td>
<td>(82.7 - 86.2)</td>
<td>48.4</td>
<td>(45.2 - 51.5)</td>
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<tr>
<td>Kidney</td>
<td>81.1</td>
<td>(76.8 - 84.7)</td>
<td>24.0</td>
<td>(18.4 - 30)</td>
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<td>Lung</td>
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<td>(37.4 - 42.3)</td>
<td>8.9</td>
<td>7.6 - 10.3</td>
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<td>Multiple myeloma</td>
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<td>53.1</td>
<td>(46.5 - 59.2)</td>
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<td>(38.1 - 49.1)</td>
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<td>(38.9 - 48.6)</td>
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<td>(79.8 - 82.4)</td>
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<td>(25.2 - 29.2)</td>
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<tr>
<td>Ovary</td>
<td>83.4</td>
<td>(79.1 - 86.9)</td>
<td>38.8</td>
<td>(32.4 - 45.1)</td>
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<tr>
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<td>21.0</td>
<td>(16.6 - 25.9)</td>
<td>6.0</td>
<td>(4.1 - 8.6)</td>
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<tr>
<td>Prostate</td>
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<td>(97 - 98.7)</td>
<td>48.2</td>
<td>(43.6 - 52.7)</td>
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<tr>
<td>Stomach</td>
<td>49.1</td>
<td>(43.1 - 54.8)</td>
<td>17.7</td>
<td>(13.3 - 22.8)</td>
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</tbody>
</table>

Using information to improve quality & choice
Mid - late 2010

- Joint Cancer Research UK and NCIN CancerStats report on cancer by ethnic group
- Joint Cancer Research UK, NWCIS, NCIN CancerStats Report on cancer in teenagers and young adults
- Major surgery rates
## Major surgery - by age*

<table>
<thead>
<tr>
<th></th>
<th>All ages</th>
<th>Under 40</th>
<th>40-59</th>
<th>60-79</th>
<th>80+</th>
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<td>87%</td>
<td>90%</td>
<td>86%</td>
<td>51%</td>
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<tr>
<td>Colorectal</td>
<td>66%</td>
<td>73%</td>
<td>70%</td>
<td>70%</td>
<td>54%</td>
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<tr>
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<td>22%</td>
<td>12%</td>
<td>10%</td>
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<tr>
<td>Prostate</td>
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<td>35%</td>
<td>38%</td>
<td>13%</td>
<td>0%</td>
</tr>
<tr>
<td>Bladder</td>
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<td>82%</td>
<td>87%</td>
<td>86%</td>
<td>76%</td>
</tr>
<tr>
<td>Kidney</td>
<td>58%</td>
<td>83%</td>
<td>75</td>
<td>60%</td>
<td>27%</td>
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</table>

*Provisional data

*Using information to improve quality & choice*
By age

Using information to improve quality & choice
Deprivation quintile

Using information to improve quality & choice
Scientific Advisory Group

- Agree analytical methodologies – including the identification of outliers
- To review the ‘scientific’ content of NCIN reports
- To advise on the commissioning of methodological research
- To advise on Peer Review of analytical and research proposals put to the NCIN
- To liaise with the UKACR and other analytical bodies to, common approaches to the analysis and reporting of results

Using information to improve quality & choice
Clinical Outcomes Group: Main purposes

- 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

Using information to improve quality & choice
Clinical Outcomes Group:

Members

- NCIN
- National Cancer Action Team
- Peer Review Team
- DH Cancer Policy Team
- DH Quality Team
- SHA rep
- Specialist commissioner
- Network Director
- NHS Improvement
- NHS Information Centre
- NICE
- CQC

Using information to improve quality & choice
Research potential

• Analysis of Data Repository (∞)
  – Hospital ‘footprint’
  – Primary care data

• Follow up of longer term outcomes of patients in clinical trials:
  – OP visits/primary care data
  – Recurrence
  – Late effects
  – Survival

• Planning of clinical trials
• Biosample annotation
• Development of PROMS

Using information to improve quality & choice
Drivers for change

- Cancer Peer Review (‘Clinical Lines of Enquiry’)
- CQC ‘Annual Health Check’
- Peer pressure
- Voluntary sector pressure
- Cancer Reform Strategy
- DH ‘Quality agenda’ (Quality Accounts)
- Commissioning
- National Guidelines
- Patient choice

Using information to improve quality & choice
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

Using information to improve quality & choice
Main issues for SSCRGs

- Development of a work programme (linked to national priorities)
- Support for data set development
- Identification of main clinical indicators
- Supporting the development of Peer Review measures
- Advising on co-morbidity/radiology etc.
- 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)

Using information to improve quality & choice
Trends in breast cancer radical radiotherapy
(courses divided into fraction groups)

Source: Monica Roche: Oxford Cancer Intelligence Unit
Colorectal cancer chemotherapy by regimen by centre 2006-07

<table>
<thead>
<tr>
<th>Centre</th>
<th>Other</th>
<th>Mitomycin + 5FU</th>
<th>Bevacizumab/Cetuximab</th>
<th>Capecitabine</th>
<th>Oxaliplatin</th>
<th>Irinotecan</th>
<th>5FU continuous</th>
<th>5FU DG inc_mod DG</th>
<th>5FU bolus inc_RT</th>
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</table>

Source: Monica Roche: Oxford Cancer Intelligence Unit
Breast cancer chemotherapy trends

- Capecitabine
- Herceptin
- Taxane
- Vinorelbine
- Anthracycline
- CMF
- Other

Source: Monica Roche: Oxford Cancer Intelligence Unit
Coordinated National Data Management

• Linked National Cancer Data Repository (NCDR)
  – ONS Registration record
  – Extended registry records (staging, treatments)
  – Hospital Episodes (IP)
  – Covers England only

• GPRD (controlled linkage)

• To Follow:
  – HES OP
  – National audit data
  – Cancer Waiting Times (referral data, recurrence)
  – Radiotherapy (mandated from April 2009)
  – HES A&E

*Using information to improve quality & choice*
C33-C34: Lung cancer 2000-2004 by deprivation

1995-1999

2000-2004

Using information to improve quality & choice
<table>
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<th>Age Band</th>
<th>GP/OP referral</th>
<th>Two Week Wait</th>
<th>Emergency presentation</th>
<th>Other outpatient</th>
<th>Screen detected</th>
<th>Inpatient elective</th>
<th>DCO</th>
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<th>Total</th>
<th>Number of Patients</th>
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Breast Routes to Diagnosis: by age band

All malignant registrations South West 2007 excluding C44 and multiples

Using information to improve quality & choice
Lung Routes to Diagnosis: by deprivation quintile

All malignant registrations, South West 2007, excluding C44 and multiples

<table>
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<tr>
<th>Lung cancer</th>
<th>GP/OP referral</th>
<th>Two Week Wait</th>
<th>Emergency presentation</th>
<th>Other outpatient</th>
<th>Screen detected</th>
<th>Inpatient elective</th>
<th>DCO</th>
<th>Unknown</th>
<th>Total</th>
<th>Number of patients</th>
</tr>
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<tbody>
<tr>
<td>5 (least deprived)</td>
<td>17%</td>
<td>24%</td>
<td>37%</td>
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<td>3%</td>
<td>1%</td>
<td>6%</td>
<td>100%</td>
<td>917</td>
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<tr>
<td>1 (most deprived)</td>
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<td>25%</td>
<td>41%</td>
<td>10%</td>
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<td>4%</td>
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