RM Partners
Accountable Cancer Network

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Chief Nurse
NHS Five Year Forward View

• Published in October 2014
• A shared vision across seven national bodies
• New care models programme key to delivery
• Focuses on both NHS and care services
Overview of Cancer Vanguard

• Appointed in October 2015 The Royal Marsden together with The Christie and UCLH

• One Cancer Vanguard with three separate delivery vehicles (DVs) all trialling a different model to improve cancer services over a geography

• Each DV already had an existing ICS which is being transitioned into the DV

• The Christie and The Royal Marsden trialling Lead Provider/pooled budgets. UCLH an Alliance

• Total population 10.7 million.
Vanguard sites for new models of care programme

- Jan 2015: initiation of vanguards sites to deliver the Five Year Forward View (Oct ‘14)
- Mar-Sep 2015: 50 vanguard sites selected to develop new models of integrated care
- Sep 2015: set up of Accountable Clinical Network for Cancer (ACNC) led by RM & Partners, The Christie and UCLH & Partners
The challenges we face

1. Health and wellbeing gap
2. Care and quality gap
3. Funding gap
Five new care models

- Multispecialty community providers
  moving specialist care out of hospitals into the community

- Integrated primary and acute care systems
  joining up GP, hospital, community and mental health services

- Enhanced health in care homes
  offering older people better, joined up health, care and rehabilitation services

- Acute care collaboration
  local hospitals working together to enhance clinical and financial viability

- Urgent and emergency care
  new approaches to improve the coordination of services and reduce pressure on A&E departments
Our core values

- Clinical engagement
- Patient involvement
- Local ownership
- National support
What will success look like for all NCMs?

• Nationally replicable models
• More accessible, more responsive and more effective health, care and support services
• Fewer trips to hospitals
• Care closer to home
• Better co-ordinated support
• 24/7 access to information and advice
• Access to urgent help easily and effectively, seven days a week
Overall aims for the ACNC using a new funding and contracting structure incentivise change to:

1. Improve: **survival** – Early diagnosis & detection
2. Reduce unwanted **variation**
3. Improve **patient /family leadership, engagement and experience**
4. Improved access to **clinical trials from a broad portfolio**
5. Improved access to high quality care during and following treatment
6. Improved access to **24/7 expert palliative and EoLC**
7. Improved utility / reduce excess costs – Carter etc.
What does the system look like?

Across West London (North and South)

• 13 Clinical Commissioning Groups (CCGs)
  – 8 in NWL, SPG led by Clare Parker; and
  – 5 in SWL, SPG led by Kathryn Magson

• 9 Acute Trusts:

• 9 Hospices

• 5 Community Trusts
Membership TBC, but likely to include:
- A representative from each of the three localities that make up the Cancer Vanguard
- NHS England Regional Medical Directors
- Regional leads for the STP process
- SCN rep
- PHE rep
- Cancer Dashboard rep
Draft proposed governance RM Partners

RM Partners Programme Board

Patient /Family Leaders Group

RM Partners Clinical Oversight Group

RM Partners Operational Delivery groups

Clinical Delivery
Cancer Outcomes & Informatics
ICT
R&D
Finance Contracts
Comms & Stakeholder

Tumour Pathway Groups
Cross – cutting groups
Three key focus areas:

1) Transforming the clinical model of delivery
   - Early diagnosis
   - Whole pathways and new models of delivery

2) Changing the system architecture

3) Implementing enabling infrastructure
Early diagnosis of cancer

RM Partners Cancer Vanguard

3 May 2016
Survival rates are higher for cancers diagnosed at earlier stages.

The Case for Early Diagnosis

Cancer Research UK has estimated that there would be a 0.5% increase in 10-year survival for all cancers combined, for every 1% increase in the proportion of patients diagnosed at Stages 1 – 2.

Sources:
The UK performs poorly at early diagnosis of cancer compared to some other developed countries.

**INTERNATIONAL COMPARISONS OF EARLY DIAGNOSIS PERFORMANCE**

<table>
<thead>
<tr>
<th>Country</th>
<th>Proportion of (non-small cell) lung cancers diagnosed at stages 1-2, by country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denmark</td>
<td>20%</td>
</tr>
<tr>
<td>UK</td>
<td>20%</td>
</tr>
<tr>
<td>Sweden</td>
<td>23%</td>
</tr>
<tr>
<td>Canada</td>
<td>25%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Country</th>
<th>Proportion of colorectal cancers diagnosed at Dukes stages A-B, by country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denmark</td>
<td>41%</td>
</tr>
<tr>
<td>UK</td>
<td>44%</td>
</tr>
<tr>
<td>Canada</td>
<td>48%</td>
</tr>
<tr>
<td>Sweden</td>
<td>48%</td>
</tr>
</tbody>
</table>

**Sources:**
Diagnostic imaging services are under increasing strain, with significant shortfalls projected based on current plans.

DIAGNOSTIC IMAGING DEMAND AND CAPACITY – MRI SCANNERS

There were 31 MRI scanners across NW/SWL in December 2015*

*Excludes Royal Brompton & Harefield (did not report)
Note: these figures refer to all diagnostic imaging activity, not just cancer-specific services

Sources:
- Trusts’ data return – excludes plans to replace existing scanners (December 2015), 2020 Delivery analysis.
Diagnostic imaging services are under increasing strain, with significant shortfalls projected based on current plans.

**DIAGNOSTIC IMAGING DEMAND AND CAPACITY – CT SCANNERS**

There were 28 CT scanners across NW/SWL in December 2015 (excluding ED-only scanners)*

*Excludes Royal Brompton & Harefield (did not report)

**Note: these figures refer to all diagnostic imaging activity, not just cancer-specific services**

Sources:
- Trusts’ data return – excludes plans to replace existing scanners (December 2015), 2020 Delivery analysis.
Rapid growth in demand forecast for endoscopy services

ENDOSCOPY DEMAND AND CAPACITY

Projected endoscopy points demand growth (NW/SWL)

Note: based on 2 points per colonoscopy & 1 point per flexible sigmoidoscopy or gastroscopy

Sources:
Endoscopy waiting lists have grown by 44% over last 2 years

ENDOscopy DEMAND AND CAPACITY

Diagram: Diagnostic endoscopy waiting lists (NW/SWL)

Total waiting lists grown by 44% from December 2013 to December 2015

Sources:
In the context of the strain on diagnostic services, how can the Cancer Vanguard best improve early diagnosis of cancer?

Diagnostics demand and capacity gap

- It is essential to address the projected overall gap in diagnostic imaging and endoscopy capacity, to avoid compromising the capability to implement new clinical guidelines relating to improving cancer diagnostics, as well as other services.

- Much of the demand for diagnostic services is driven by non-cancer work and, given the scale of the gap forecast, it is infeasible for the Cancer Vanguard to attempt to address the whole of this gap.

- Therefore, we have sought to address the question of how the Cancer Vanguard can best target improvements in early diagnosis of cancer to have the greatest and most cost-effective impact, in the context of these overall challenges in diagnostic services.
Lung, colorectal and upper GI (OG & HPB) together account for nearly 50% of cancers diagnosed via emergency presentation

TUMOUR GROUPS AND SCOPE

<table>
<thead>
<tr>
<th>Tumour Group</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lung</td>
<td>1477</td>
</tr>
<tr>
<td>Colorectal</td>
<td>924</td>
</tr>
<tr>
<td>Cancer of Unknown Primary</td>
<td>483</td>
</tr>
<tr>
<td>Prostate</td>
<td>385</td>
</tr>
<tr>
<td>Pancreas</td>
<td>384</td>
</tr>
<tr>
<td>Non-Hodgkin Lymphoma</td>
<td>343</td>
</tr>
<tr>
<td>Brain</td>
<td>293</td>
</tr>
<tr>
<td>Stomach</td>
<td>246</td>
</tr>
<tr>
<td>Breast</td>
<td>237</td>
</tr>
<tr>
<td>Bladder</td>
<td>199</td>
</tr>
<tr>
<td>Ovary</td>
<td>191</td>
</tr>
<tr>
<td>Multiple myeloma</td>
<td>178</td>
</tr>
<tr>
<td>Kidney</td>
<td>162</td>
</tr>
<tr>
<td>Oesophagus</td>
<td>158</td>
</tr>
<tr>
<td>Leukaemia: acute myeloid</td>
<td>153</td>
</tr>
<tr>
<td>Liver (excl intrahepatic bile duct)</td>
<td>131</td>
</tr>
<tr>
<td>Biliary tract cancer</td>
<td>119</td>
</tr>
<tr>
<td>Other malignant neoplasms (excl NMSC*)</td>
<td>1118</td>
</tr>
<tr>
<td><strong>Oesophago-Gastric (OG) Total</strong></td>
<td>404</td>
</tr>
<tr>
<td><strong>Upper GI total</strong></td>
<td>1038</td>
</tr>
<tr>
<td><strong>Hepato-Pancreato-Biliary (HPB) Total</strong></td>
<td>634</td>
</tr>
</tbody>
</table>

Sources:
- NCIN Routes to Diagnosis (London), 2006-2013, analysis produced by NCIN for London Cancer
Lung, colorectal & prostate together account for 60% of cancers diagnosed at late stage

TUMOUR GROUPS AND SCOPE – LATE STAGE DIAGNOSES

Late stage cancer diagnoses (stages 3 & 4) per year by tumour group (NW/SW London, 2012-13 average)

- Lung: 937
- Colorectal: 681
- Other: 547
- Prostate: 491
- Breast: 343
- NHL: 104
- Ovarian: 113
- Kidney: 63
- Bladder: 40
- Uterine: 41
- Melanoma: 22

Sources:
Lung and colorectal cancers are both suitable for highly cost-effective early diagnosis interventions

### EARLY DIAGNOSIS BY TUMOUR GROUP

<table>
<thead>
<tr>
<th>Tumour group</th>
<th>No significant risk of over-diagnosis associated with early detection?</th>
<th>Clear ‘at-risk’ population to target?</th>
<th>Is there a cost-effective test for early diagnosis?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lung</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Colorectal</td>
<td>✓</td>
<td>✗</td>
<td>✓</td>
</tr>
<tr>
<td>Prostate</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Upper GI</td>
<td>✓</td>
<td>✗</td>
<td>✗</td>
</tr>
</tbody>
</table>
We have explored proactive and reactive diagnosis options by tumour group

EARLY DIAGNOSIS OPTIONS BY TUMOUR GROUP

Levers for improving early diagnosis of cancer

Proactive
- Proactive referral of high-risk patients
- Screening
- Patient behaviour

Reactive to symptoms
- GP behaviour
- Referral pathways

Recommendation 1: Periodic low-dose CT for patients at high risk of lung cancer

Recommendation 2: Bowel Scope screening for colorectal cancer

Recommendations 3-6
Transforming the clinical model of delivery: Early diagnosis

Outputs

- Pilot models for self referrals
- Replicable new workforce models
- Options for the best screening uptake routes

Outcomes

- Improved ability to discriminate the early detection of cancer in screening services or primary care
- Better 1 year survival rates
- Reduction in diagnosis of cancer in A&E department

What are the research opportunities?
# Current and proposed research areas in early diagnosis

<table>
<thead>
<tr>
<th>Tumour group</th>
<th>Established screening methods</th>
<th>Recommended model within Vanguard</th>
<th>Examples of exploratory research</th>
</tr>
</thead>
</table>
| **LUNG**     | • CT in high risk             | • Low-dose CT for asymptomatic patients at high risk  
                |                               | • ‘Straight to CT’ for symptomatic patients |
|              |                               |                                  | • Circulating biomarkers and methylation  
                |                               |                                  | • Robotic endobronchial optical tomography |
| **COLORECTAL**| • Bowel screening program: Faecal occult blood test (>60) | • Bowel Scope (55-60)  
                           |                               | • ‘Straight to Test’ Colonoscopy for symptomatic patients |
|              |                               |                                  | • Circulating biomarkers, e.g. TRACC  
                |                               |                                  | • Cologuard (multitarget stool DNA test) |
## Current and proposed research areas in early diagnosis

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<thead>
<tr>
<th>Tumour group</th>
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<th>Recommended model within Vanguard</th>
<th>Exploratory research</th>
</tr>
</thead>
<tbody>
<tr>
<td>PANCREAS</td>
<td>• None</td>
<td>• Vague symptoms pathway (e.g. Multidisciplinary Diagnostic Clinic)</td>
<td>• Circulating exosomes • Abdominal symptom questionnaire (Pereira)</td>
</tr>
<tr>
<td>OESOPHAGEAL</td>
<td>• Endoscopy for Barrett’s oesophagus</td>
<td>• Vague symptoms pathway (e.g. Multidisciplinary Diagnostic Clinic)</td>
<td>• Breath test</td>
</tr>
<tr>
<td>PROSTATE*</td>
<td>• Elevated PSA count</td>
<td>• Best practice 62 day diagnostic pathway</td>
<td>• PROMIS study (multiparametric MRI to exclude biopsy) • New genetic markers</td>
</tr>
</tbody>
</table>
Transforming the clinical model of delivery: Whole Pathways and new models of delivery

Outputs

- Reports of variation from best practice, e.g. age-related variations
- Trial availability clearly communicated to all MDTs
- Protocols for chemo in the community

Outcomes

- Reducing variation
- Increased number of patients on trials
- Shorter length of stay for the acute episode
- Better management of other conditions through more holistic approaches
- Consistent access to service ‘recovery package’ and improved high quality 24/7 specialist palliative care support

What are the research opportunities?
Health Services Research: current and proposed areas in London

• **Reduction in variation**
  – Variation in use of urgent referral pathway by GPs (Thomas Round)
  – Factors affecting survival in women with breast cancer (Henrik Møller)
  – Provision of the recovery package in patients with breast or prostate cancer (Susie Stanway)

• **Cancer in Older People**
  - Improving outcomes for older women with ovarian cancer (Lucy Dumas)
  - Comprehensive geriatric screening tool in management of older patients with colorectal cancer (Ross, Harari, Bridgewater)

• **Palliative and Supportive Care (Fliss Murtagh)**
Clinical Trials: NIHR Study sites in London, 2014-15 interventional studies

- North West London: 40 (111)
- North Thames: 65 (179)
- South London: 94 (213)

Population NWL: 2.3 mil
Population SL: 3.4 mil
Population NT: 3.5 mil

- Total # of trials: 503
- 199 trials open only in single network in London (40%)
- Only 42 trials (8%) open across all 3 networks
Changing the system architecture

Outputs

- Establish baseline activity and income for services
- Governance, accountability and performance management infrastructure

Outcomes

- Defined set of outcomes, owned by providers, commissioners, and patients
- Establish incentives aligned to outcomes, embedded in system through contracts, and organisational relationships
- Shared accountability
- Sharing of resources, workforce and capital
Implementing enabling infrastructure to streamline patterns of care

Outputs
- Replicable training and education modules
- Extendable IT infrastructure
- Replicable information sharing agreements

Outcomes
- Improve communication and information exchange between care providers in primary, secondary and tertiary care
- Improve decision making by clinicians
- Better outcomes leading to better survival and health economic financial benefits
Opportunities for Pan-London & Vanguard research

- Early diagnosis: Acute Diagnostic Oncology Clinic, Multidisciplinary diagnostic clinic, integration of primary/secondary care

- Novel mechanisms for early detection

- Use of circulating biomarkers in various settings

- Living with and beyond cancer

- Variation in clinical practice, including: treatment recommendations, management of older patients etc

- Pan-London/Vanguard clinical trial strategy

- Research at the scale of pan-London/Vanguard should add value and not duplicate
Potential advantages to a pan-London/Vanguard approach

- Clinical Trials Directory
- Build on potential for contrasting outcomes/variations based on socioeconomics
- Build on expertise in specific areas of developmental therapy e.g. immunology, stereotactic radiotherapy, molecular diagnostics
- Build on expertise in imaging research
- Build on insight of relevance of studies in cancer biology, tumour heterogeneity, cancer evolution
- Increased potential for collaboration across ECMC/BRC/CRUK centres