Implementing new models and standards for earlier and faster diagnosis of cancer

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Five year programme

• Based on Cancer taskforce ambitions:
  • Fewer people getting avoidable cancers
  • More people surviving cancer for longer after a diagnosis
  • More people having a positive experience of care and support
  • More people having a better long-term quality of life
Key messages

• We are making radical changes, as part of a five-year plan to improve NHS cancer services

• We’re already making rapid progress – but know there is more to do

• We’re on track to make long term changes that will put NHS cancer services up with the best in the world.
Achievements so far

• Multi-disciplinary diagnostic ‘one stop shops’ for rapid assessment and diagnosis
• Faster diagnosis pathways published for prostate, colorectal and lung cancers – early implementers show promising signs – more people getting treated faster
• £130 million radiotherapy upgrade programme
• Establishing pilots of lung cancer case finding to diagnose patients more quickly
• World leading quality of life metric
• Fast track funding for the most promising new cancer drugs
• £600 million programme to transform care by 2020/21
NHS Cancer Programme

- Referral
- Diagnosis
- Treatment
- End of treatment

- Prevention
- Early Diagnosis
- Treatment
- Living With and Beyond Cancer

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Faster Diagnosis Standard

“...patients should receive a definitive diagnosis or ruling out of cancer within 28 days of a referral”

• This will apply to patients who are:
  • Referred urgently by their GP (two week wait)
  • Referred with breast symptoms
  • Patients referred urgently from cancer screening programmes
Two implementation themes

• Measuring faster diagnosis
  o Worked with test sites
  o New Cancer Waiting Times system in place
  o National guidance
  o IpsosMORI evaluation

• Spreading best practice
  o Test Site Top Tips
  o Timed pathway implementation handbooks
  o Transformation funding
  o Prioritisation within NHS planning guidance
  o Workforce
  o Diagnostics
Patients have told us they are less anxious because:

- Fewer visits to hospital
- Quicker access to diagnostic tests
- Clearer communication with patients
More patients treated within 62 days
Faster lung cancer pathway

• 13 point improvement in 62 day pathway performance (avg: 62% to 75%)

• Faster lung cancer pathway partially in place, with improvement work on-going
Faster prostate cancer pathway

• 34 point improvement in 62 day pathway performance (avg: 44% to 78%)
• Faster and more efficient pathway helped to manage increased demand
Faster colorectal cancer pathway

• Consultant delivered service
• Full roll out of STT in June 2016
• Initiatives running in parallel:
  • Symptomatic FIT, OSCARS trials
  • Continuous improvement

• 26 point improvement in 62 day performance (avg: 58% to 84%)
System and scale

- National consensus on evidence-based care
- Consistency in guidance across partner organisations
- Implementation in all trusts in England
- Enabling trusts to achieve 28 day diagnosis
- Faster access to treatment with reduced variation
Developing best practice timed pathways

Prof David Shackley – Medical Director, Greater Manchester Cancer Programme
• Single national cancer vanguard – ‘Accountable Clinical Network for Cancer’ – Greater Manchester, Royal Marsden Partners & UCLH Cancer Collaborative (covering 10 million popn)

• Design & test innovations that, at scale, would lead to radical improvements in cancer outcomes

• Precursors/ model for Cancer Alliance structures focussing on Implementing ‘Achieving World Class Cancer Outcomes’

• ‘Each vanguard will take a lead on the development of new care models which will act as the blueprints for the NHS moving forward and the inspiration to the rest of the health and care system’(www.england.nhs.uk/ourwork/futurenhs/new-care-models)
National Cancer Vanguard: some outputs

- Citizen-led social movement: ‘Cancer Champions’
- ‘Gateway C’ – online primary care cancer education platform
- Behavioural nudges in screening: Changes to screening letter
- 7d face to face palliative care: Pilot work
- Best practice timed pathways

- Cancer Intelligence Service
- Optimising medicines: Pharma Challenge
- New system level governance models
- Digital pathology feasibility pilot
- Rapid Cancer diagnostic units
- Can-guide: New SDM tool to aid decision making in advancing disease
- Personalised follow up pilots using technology

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Why are best practice pathways needed?

1. Marked **unwarranted variation** between hospitals/ alliances

2. Standardised pathway is **easier to benchmark, audit & improve**

3. Shorter time to treatment **better for patients**

4. Less appointments mean **more convenience and saved resource**

5. Evidence based clinical guidance to help **deliver the FDS and 62d**
# Degree of variation between Cancer Alliances

<table>
<thead>
<tr>
<th></th>
<th>Colorectal Cancer</th>
<th>Lung Cancer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 1 + 2 (‘Early stage’)</td>
<td>36 to 46%</td>
<td>21-33%</td>
</tr>
<tr>
<td>5 year survival</td>
<td>57 to 64%</td>
<td>12 to 18%</td>
</tr>
<tr>
<td>Variation in last years 62d performance</td>
<td>Median 73% (range 62-82)</td>
<td>Median 71% (range 64-83)</td>
</tr>
</tbody>
</table>
Faster Diagnostic Pathways

Principles

• Clinically led
• Patients involved
• Broad stakeholder engagement
• sMDT by day 21
• Patient clinic discussion re treatment decision by day 28 latest

Recognised Key Enablers

1. Daily senior triage of referrals
2. Straight to test/ one stop clinics
3. Reporting scans (‘hot’ or <24h)
4. Diagnostic ‘bundles’
5. Pathway navigators
6. Clear agreed protocols
7. Avoid repeated MDT’s
Process

Lung, Colorectal, prostate & oesophago-gastric cancers selected

Clinical leadership teams described; evidence and discussions commence

Pathway consensus agreed within working groups

Consultation with national CEG’s, national bodies

Publication for all alliances/commissioners/patients

NHS England approval

Pathways refined following collation of all feedback

National alliance event(s) with clinicians attending from alliances

Incorporation into NHS England planning guidance
Learning & Next Steps

- Through a committed team and clear respected clinical leadership, clinical consensus can emerge in a short time frame.

- Clinical consensus is pivotal before commissioning/broader system ‘buy-in’: Guidance has been positively received.

- Future pathways should set out broader guidance incl for primary care, treatment windows, recovery package & after care.

- Benchmarking and audit against the pathways will drive future improvement.
Best practice timed pathway for lung cancer

Matthew Evison – Greater Manchester Lung Pathway Director
## Best practice timed pathway

<table>
<thead>
<tr>
<th>Day -3 to 0</th>
<th>Day 0 to 3</th>
<th>Day 1 to 6</th>
<th>Day 14</th>
<th>Day 21</th>
<th>Day 28</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct access CXR (urgent or routine)</td>
<td>Direct access or escalation to CT (same day within 72 hours)</td>
<td>Clinical triage Led by radiology or respiratory based on local protocol</td>
<td>Fast track lung cancer clinic (consultant-led)</td>
<td>PET, spirometry (at least)</td>
<td>Communication to patient on outcome (cancer confirmed or all-clear provided)</td>
</tr>
<tr>
<td>Patient information Provided in primary care</td>
<td>Direct biopsy (option)</td>
<td></td>
<td>Detailed lung function and cardiac assessment/ECHO (as req'd)</td>
<td>Further investigations</td>
<td>Further investigations (if required after MDT)</td>
</tr>
</tbody>
</table>

**CT result**
- normal: Patient informed; management according to local protocol
- unlikely: Patient informed; management according to local protocol

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GP referral 2WW suspected lung cancer
High suspicion – NICE guidelines
No CXR

Call Centre contact patient via phone
Patient advised to attend CT department at 8am following day
Bookings team add patient to shared RAPID Outlook

RAPID Patient Navigator reviews outlook calendar daily
Following morning patients added to CRIS with GP referral attached

GP instigated CXR
Suspected lung cancer
Upgrade to the 62 day pathway

CXR report immediately emailed to: RAPID Patient Navigator

RAPID Patient Navigator contacts patient & offer next day CT. Adds patient to RAPID Outlook Calendar & CRIS with CXR report

Patients arrive at CT for 8am – met by a RAPID specialist nurse
History taken, point of care eGFR testing via finger prick if required, venflon
Radiologist vetting of referrals – type of imaging confirmed – low dose non-contrast CT / on table review / contrast enhanced CT staging chest and abdomen

CTs performed 8-9am
RAPID CTs hot reported 9-10am

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No cancer

No ongoing issues for secondary care
Nurse-led discharge back to GP

No cancer
Non-malignant respiratory issues
Specialist clinician review
Refer to general respiratory clinic

Patient attends the RAPID hub clinic
Specialist nurse clerking 9-10am

Daily triage:
GP referral, nursing history, CT images & report

- Chest physician
- RAPID nursing team
- Radiologist
- Patient Navigator

Suspected Lung Cancer
Specialist clinician consultation
Diagnostic algorithms 1-5

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**GROUP 1:**
Peripheral tumour with normal hilar and mediastinum on staging CT with no distant metastases

Including:
- Solid pulmonary nodules ≥5mm diameter / ≥80mm³ volume and B-10 risk ≥10% and persistent sub-solid nodules for ≥3 months and solid component ≥5mm

Excluding:
- Pure ground glass nodules, and sub-solid nodules with solid component <5mm

**Diagnostic tests** (request simultaneously):
- PET-CT
- Percutaneous image-guide biopsy
- CT radial EBUS bronchoscopy

**Physiology tests** (request simultaneously):
- Spirometry and diffusing capacity
- Shuttle walk or stair climbing test
- Cardiac examination
- ECG
- Creatinine clearance / eGFR

**Notes and guidance**
Peripheral tumour is positioned in the outer 2/3 of the thorax based on axial CT Image (blue area):

- If biopsy is considered high risk or probability of malignancy is borderline it may be appropriate to await PET results prior to biopsy.
- If any positive hilar / mediastinal nodes on PET request staging EBUS.

Greater Manchester Cancer
Referral to specialist consultation

- CT scan
- CT report
- Diagnostic MDT
- Specialist consultation
- CNS support
- Protocolised diagnostic and staging pathway commenced

• **Diagnosis of no cancer**

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Data analysis:
Year 1 = 526 2WW GP referrals
Data analysis:
Year 1 = 526 2WW GP referrals

- Pre-RAPID: 6 days
- Post-RAPID: 0 days

CT Report to Patient Aware (median number of days)
Data analysis:
Year 1 = 526 2WW GP referrals

<table>
<thead>
<tr>
<th>Timeframe</th>
<th>Pre-RAPID</th>
<th>Post-RAPID</th>
</tr>
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<tbody>
<tr>
<td>&lt;7 days</td>
<td>0%</td>
<td>8%</td>
</tr>
<tr>
<td>&lt;14 days</td>
<td>8%</td>
<td>42%</td>
</tr>
<tr>
<td>&lt;21 days</td>
<td>17%</td>
<td>77%</td>
</tr>
<tr>
<td>&lt;28 days</td>
<td>46%</td>
<td>90%</td>
</tr>
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Results

1st year of implementation

82% compliance with NOLCP

Data analysis:
Year 1 = 526 2WW GP referrals

Figure 8

94% of GP referrals completed 62 Day Pathway within 63 Days

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Patient experience: 1000 patients RAPID service via postal survey (1/3 response rate)

Did You Feel that All Staff Were Caring and Sensitive?

Always                      Sometimes                            Never
Patient experience: 1000 patients RAPID service via postal survey 
(1/3 response rate)
Patient experience: 1000 patients RAPID service via postal survey (1/3 response rate)
Patient experience: Mainly positive comments (56%)

‘A first class service all round’

‘All the staff at Wythenshawe Hospital so caring, all went the extra mile’;

‘Consultants and everybody were excellent. Through a worrying time for me having lots of scans and surgery, I couldn’t have had better care’

‘Efficient. I’ve never enjoyed the NHS before, very very impressed’.

‘My cancer was detected on May 4th, operated on 13 days later. Fantastic service by the most dedicated people I have ever met’

‘I was extremely fortunate to have benefited from the RAPID programme which had only recently started at the time I was being diagnosed. Without exception, the staff were efficient, caring and sensitive. Even now I am stunned at how efficient the NHS was’

‘Fantastic from start to finish. I was so scared but the team were there for me. Lead nurse and the doctor who gave me the results’

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High praise for the whole unit, complete efficiency’;
Patient experience: a small amount of negative feedback (6%)

Consistent themes appeared around communication, lack of awareness of reason for referral or appointments, and difficulty car parking.

‘Need to be more clear on the phone when contacting people to invite to CT’.

‘It was a whirlwind of appointments that overwhelmed me as I was trying to take it all in’

‘Car parking at hospital is a nightmare’

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Conclusions

- Integration between chest medicine, radiology & thoracic surgery
- Fine tuned the very front end of the pathway
- Significant improvements in the pathway
- Exceptional patient experience
- Exceptional professional satisfaction

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</thead>
<tbody>
<tr>
<td>Number of cases</td>
<td>212</td>
<td>274</td>
<td>338</td>
<td>-</td>
</tr>
<tr>
<td>Surgical resection</td>
<td>22.9%</td>
<td>25.2%</td>
<td>32.9%</td>
<td>17.5%</td>
</tr>
<tr>
<td>Systemic therapy</td>
<td>62.2%</td>
<td>67.6%</td>
<td>70.6%</td>
<td>62.6%</td>
</tr>
<tr>
<td>1yr Survival</td>
<td>-</td>
<td>47.8%</td>
<td>50%</td>
<td>37%</td>
</tr>
</tbody>
</table>
Best practice timed pathway for prostate cancer

Karen Stalbow
Head of Policy, Knowledge and Impact at Prostate Cancer UK
The potential to treat prostate cancer is missed

75% of men with a raised PSA do not have prostate cancer

1 in 4 clinically significant prostate cancers missed

The potential to treat clinically insignificant prostate cancer

Delays to MRI staging
The benefits of PROMIS

- A negative MRI enables some men to avoid an immediate – sometimes invasive biopsy
- The cancers detected are more likely to be clinically significant – with only 1 in 10 missed
- Biopsies can be MRI image-guided, reducing the need for repeat biopsies
- Over-diagnosis and over-treatment are reduced
The potential to achieve the 62-day wait

- mpMRI before biopsy ends the lengthy wait for biopsy artefact to heal before staging the cancer
- More time is available for localised prostate cancer treatment choices
- A more accurate diagnosis gives men with advanced stage cancers the means to access optimal treatments quicker
Widespread implementation

Percentage of Trusts carrying out mpMRI before biopsy

- 2016: 54%
- 2018: 60%

Percentage of eligible men getting access

- 2016: 31%
- 2018: 50%
Even faster access to treatment?

The one-stop shop

An alternative approach to achieving a diagnosis in 14 days

- Developed at UCLH
- Evolving at RM Partners and soon to be in the east Midlands Cancer Alliance

Evidence shows it can achieve:
- High attendance rates
- High patient acceptance of avoiding biopsies
- High clinically significant cancer detection rates
- Low time to diagnosis and definitive treatment for those who undergo biopsy

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Best practice timed pathway for colorectal cancer

Arun Takhar
Case for change

- Fourth most common cancer in England
- Over 40,000 people diagnosed each year
- We need to close the gap on the rest of the world
- 7% behind European comparators for five year survival
- Only 40.6% diagnosed at early stage in 2016 in England
Straight to test

• 59% reduction in outpatient clinic demand (ACE Wave 1)

• Evidence from early adopters supports this finding

• Telephone consultation then straight to the right test, first time
Best practice timed pathway

Day 0
- Urgent GP referral including locally mandated information
- Patient information provided in primary care

Day 0 to 3
- Clinical triage (with telephone consultation)

Day 3 to 14
- Straight to test (STT)
  - Colonoscopy or CT Colon / CT / Flexi Sig +/- OGD
- Outpatient clinic
  - Only if not clinically appropriate for straight to test
  - Cancer unlikely; patient informed; management according to local protocol

Day 14
- Staging investigation
  - Contrast CT
  - Chest / Abdo / Pelvis
  - MRI +/- TRUS (rectal cancer)
  - Biofluids (incl. CEA)

Day 21
- MDT

Day 28
- Communication to patient on outcome (cancer confirmed or all-clear provided)

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Any questions?