Estimated age-standardized incidence and mortality rates (World) in 2018, United Kingdom, males, all ages

Data source: GLOBOCAN 2018
Graph production: Global Cancer Observatory (http://gco.iarc.fr)
“We need to change the manner in which we diagnose prostate cancer.”

Prof Hashim Ahmed
NHS England Clinical Expert Group for Prostate Cancer
April 2018
Integrating multiparametric MRI into prostate cancer diagnostic pathways within the NHS and internationally – A diagnostic pathways mapping study

Dr Samuel W D Merriel, Dr Fiona Walter, Prof Willie Hamilton
CRUK Early Diagnosis Conference 2019, Birmingham, UK
Raised PSA \rightarrow \text{Symptoms} \rightarrow \text{TRUS biopsy} \rightarrow \text{Cancer} \text{ or } \text{No cancer} \rightarrow \text{Abnormal prostate Ex}
Diagnostic accuracy of multi-parametric MRI and TRUS biopsy in prostate cancer (PROMIS): a paired validating confirmatory study

Rapid diagnostic and assessment pathways

Implementing a timed prostate cancer diagnostic pathway

A handbook for local health and care systems

April 2018
Raised PSA

Symptoms

Abnormal prostate Ex

mpMRI

Biopsy

No biopsy
To characterise current prostate cancer diagnostic pathways in use within the NHS and internationally, and identify whether mpMRI is being utilised as a diagnostic test.
Methods
<table>
<thead>
<tr>
<th>Author</th>
<th>Date published</th>
<th>Incorporates mpMRI</th>
<th>Pre-biopsy</th>
<th>Criteria</th>
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<tr>
<td>Prostate Cancer UK</td>
<td>01/01/2016</td>
<td>Y</td>
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<td>Raised PSA OR abnormal DRE OR clinical suspicion</td>
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<td>Biopsy negative patient if still suspect Ca</td>
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<td>Cancer Council Aus</td>
<td>20/01/2016</td>
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</table>

* Draft 2019 guidance recommends pre-biopsy mpMRI
Results – NHS cancer alliances

15/19 (78.95%)
NHS Cancer alliances responded
Results – NHS cancer alliances

13/19 (68.42%)
Incorporate mpMRI into pathway
11/19 (57.89%) use pre-biopsy mpMRI
Results – NHS cancer alliances

RAPID Pathway

Indicative timeline

Day 1

Days 2-7

Days 7-14

GP referral under 2WW

Senior Clinical Triage

1st appointment

MRI or Mo-MRI

MRI not suspicious

Targeted biopsy

30% of men discharged to primary care

MRI suspicious

Same day diagnostics 'One stop'
Results – NHS cancer alliances

Prostate Urgent Referral Pathway

DAY 0-3
Referral sent to hospital

DAY 0-6
Telephone consultation with Consultant Urologist

DAY 3-10
Outpatient appointment with Consultant Urologist
(Urology Outpatients)

Discharged back to care of GP with letter

Follow-up by GP

DAY 2-20
MRI scan (X-ray Department (Radiology))

DAY 17-34
Prostate biopsy (Urology Outpatients)

DAY 18+
Outpatient appointment to discuss results (Urology Outpatients)
4/6 sites (66%) offer pre-biopsy mpMRI

3/6 sites (50%) able to perform PiRADS v2 standard mpMRI scan

3/6 sites (50%) currently running at maximum capacity for MRI scanners

1-3 radiologists able to interpret and report mpMRI per site

Source – Dr Harry Bardgett, Western West Yorkshire Uro-Oncology Centre
Audit of 94 anonymised mpMRI scans from 15 sites
24/96 (26%) of scans were mpMRI
56% of mpMRI scans rated as acceptable
50% of MRI scanners > 6 years old
Source – Dr Paul Burn, Musgrove Park Hospital, Taunton
Prostate Cancer Diagnostic Pathway Steering Group
Discussion

• mpMRI has potential
• NHS moving towards mpMRI integration
• Issues
  o ‘Best pathway’?
  o Scanner age & capacity
  o Workforce
Thank you

@CanTest_PC www.cantest.org @sammerriel