Variation in optimal pre-diagnostic pathway in lung cancer patients in 2013 & 2014 using cancer registrations and the diagnostic imaging dataset

Clare Pearson
Senior Cancer Information Analyst, ACE Programme, CRUK-PHE partnership
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Outline

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Introduction

• ACE programme – accelerate, coordinate, and evaluate (ACE) learning to achieve the earlier diagnosis of cancer

• ACE Wave 1 projects
  o Lung Cancer pathways

• Earlier diagnosis
  o Better outcomes
  o Improved patient experience

• How to achieve earlier diagnosis?

Aims

• Using national linked datasets to explore pre-diagnostic pathways for lung cancer patients
  o Where are potential delays in lung cancer patients being diagnosed?

• Benchmarking proportions of lung cancer patients against a proposed standardised optimal pathway.
**Methods – Data linkage**

- Cancer registrations linked with DID and CWT
  - using NHS number & date of birth
- All lung cancers diagnosed in 2013 & 2014
  - excluding multiple primaries
- Imaging procedures of interest
  - Chest x-ray (CXR) and chest computed tomography (CT) scans
- Time frame – 3 months prior to diagnosis

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**National Optimal Clinical Pathway for suspected and confirmed lung cancer**

Source: Adapted from Lung Cancer Clinical Reference Group
Sources of data in pathways

Results – cohort details

2013 & 2014 Lung cancer patients

Cancer registrations
n=73,628 (100%)

DID & CWT
n=54,789 (74%)

CWT
57,894 (79%)

DID
68,431 (93%)

1,086,263 images

Images of interest (3 months pre-diagnosis) CXR: 104,771 CT: 57,440
Results – optimal pathways

- **Testing pathway**
  15,542 (21%)
  Variation by age, sex, region, deprivation, stage, source of imaging, CCG

- **Pre-diagnostic pathway**
  3,665 (5%)
  Variation by age, sex, region, stage, source of imaging, CCG

Benchmarking: 1. optimal testing pathway

CCG proportions range from 0% to 78% (median 23%).
Benchmarking: 2. optimal pre-diagnostic pathway

CCG proportions range from 0% to 27% (median 4.2%).

Data source: National cancer registry, NHS Digital (DID & CWT)

Limitations

- DID dataset
  - Established in 2012
  - Data quality – accuracy, missing data
  - Reason for imaging?

- CWT data
  - Not available for all patients
Conclusions

• Many patients not meeting either pathway timings
• Proportions meeting timeframes varied for both pathways
• Many CCGs have very low proportions of patients meeting optimal pathway timeframes
• This pathway is not implemented - benchmarking to gain an idea of the required progress

Next steps

• Repeat analysis using 2015 data
• Report (April/May 2017)
• Colorectal cancer pre-diagnostic pathway project
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Clare Pearson
Senior Cancer Information Analyst
clare.pearson@phe.gov.uk
clare.pearson@cancer.org.uk