6th LCA Lung Clinical Forum

24th June 2014
Welcome

Dr Liz Sawicka, Chair - LCA Lung Pathway Group
LCA Pathology Standards
Developed in line with national clinical guidelines and quality standards issued by NICE and the tissue pathway issued by the Royal College of Pathologists

Dr Paul Cane and Professor Andrew Nicholson
Patients with lung cancer should have their diagnosis confirmed histologically unless patient is unwilling or investigation is too dangerous.
Quality Standard 1

Measure:

- The proportion of all lung cancer patients who have a histological diagnosis

Notes:

Reflects how active an MDT is in treating patients
Quality Standard 2

Patients with histologically confirmed non-small cell lung cancer should be assigned an accurate histological sub-type, according to WHO and IASLC recommendations.

Lung Cancer Biopsy

Prickles or Keratin?
- Squamous cell carcinoma

Glands or Mucin?
- Adenocarcinoma

Correct nuclear features?
- Small cell

None?
Non-small cell carcinoma

P63 +, TTF-1 -
Non-small cell carcinoma, favour squamous cell carcinoma

P63 -, TTF-1 +
Non-small cell carcinoma, favour adeno

Both positive or negative
Non-small cell carcinoma, NOS
Lung Cancer Cytology

- Keratinisation?
  - Squamous cell carcinoma
- Glands?
  - Adenocarcinoma
- Correct nuclear features?
  - Small cell
- None?
  - Non-small cell carcinoma

- P63 +, TTF-1 -
  - Non-small cell carcinoma, favour squamous cell carcinoma
- P63 -, TTF-1 +
  - Non-small cell carcinoma, favour adeno
- Both positive or negative
  - Non-small cell carcinoma, NOS
Quality Standard 2

Measures:

- The proportion of non-small cell carcinoma patients assigned a diagnosis of non-small cell carcinoma NOS
- The relative proportions of non-small cell NOS, squamous cell carcinoma, adenocarcinoma and other subtypes.

Notes:

Reflects quality of samples taken by clinicians and experience of pathologists
Quality Standard 3

Patients with histologically confirmed non-small cell non-squamous lung cancer who are treated with systemic therapy should be tested for EGFR prior to treatment commencing.

It is recommended that ALK testing should also be undertaken in this group.
Quality Standard 3

Measures:

– The proportion of patients with histologically confirmed non-small cell non-squamous lung cancer who are treated with systemic therapy who have an EGFR test result available prior to first-line treatment.

– The proportion of patients with histologically confirmed non-small cell non-squamous lung cancer who are treated with systemic therapy who have an ALK test result available prior to second-line treatment.

– The proportion of EGFR and ALK tests requested that are deemed inadequate or fail analysis

Notes

– Reflects effectiveness of testing policy, sample quality and whether pathologists are preserving tissue

– Any accredited testing methodology may be used
Quality Standard 4

Pathologists reporting lung cancer samples should participate in the specialist lung cancer EQA scheme.
Quality Standard 4

Measure:

- The proportion of pathologists reporting lung cancer specimens who participate in the lung EQA scheme
Measures and Outcomes

• Data from the measures would be collected annually
• Further data may be requested from units that differ significantly from the average
• LCA will implement improvement measures if that unit is to continue to provide the service.
Imaging:
‘CT prior to OPD?’

Dr Paras Dalal, Director of Imaging, RBHT
Things to discuss:

• Background
• Results of ‘CT prior to OPD’ scoping exercise
• Discussion
• Plan of action
Background

• 2ww pathway was designed to streamline rapid access to higher level clinical input in cases of suspected cancer
• What happens after this is more variable
• CT is the gate keeper to further evaluation
• Access to CT imaging needs to be timely, accurate and clinically useful
CT prior to OPD

• Aims:
  – To ascertain current practice across the LCA
  – To canvas opinion
  – To understand barriers to implementing new pathways
CT prior to OPD

• Questions:
  – Can CT (with vetting) be routinely performed before OPD?
  – What is the pathway to initial CT?
  – What are the challenges to implementing of CT prior to OPD?
  – What are the perceived challenges/limitations to performing CT before OPD?
  – Are CTs routinely reported and available before OPD?
  – Are CTs reported on the same day as they are made?
CT prior to OPD

• Results
  – 17 hospitals in LCA (excl RMH)
  – 17/17 responded
CT prior to OPD

• Headlines:
  – Most centres (can) do CT prior to OPD (11/17)
  – Several pathways to CT
  – Most centres have the CT report available for OPD (not necessarily first OPD)
  – More than half of centres can report most CT on the same day as it is made
CT before appointment with vetting

- Yes
- No
- No response
Are CTs routinely reported and available at the clinic appointment?

- Yes
- Yes with caveats
- No
- No response
Is same day CT reporting available?

- Yes
- No
- No response
DISCUSSION
PLAN OF ACTION
Quality Assurance Framework

Seraphim Patel, LCA Quality Assurance Manager
National quality processes/standards

Complex landscape ... includes:

- Provider organisations: compliance with national quality standards
- CQC/Monitor
- Quality surveillance groups

Cancer specific

- National peer review: Changes from April 2014
- National audits (DAHNO): surgeon level data
- Cancer networks → Cancer Strategic Clinical Networks
LCA objectives

*The LCA has an essential role in supporting and driving quality improvement*

LCA objectives - to:

- Improve cancer outcomes
- Improve patient experience
- Reduce variation
LCA Quality Assurance Framework: version 2

– Sets out the structures and governance processes to deliver improvements in quality of cancer services.

– The framework is based on national regulatory metrics and cancer specific metrics.

– Intention is to avoid duplication

– Initial focus will be on a small core set of quality metrics to provide a baseline assurance

– Triangulation of data

– Implementation started from November 2013, LCA QCBER developed in January 2014.

– Reviewed and adapted on an annual basis – latest Version 2
Core quality metrics

- Peer review (immediate risks, serious concerns)
- LCA informatics metrics
- Pathway audit and guideline self-assessment
- Provider engagement in the LCA
# LCA Quality Clinical Board Exception Report (QCBER)

The London Cancer Alliance West and South

## Quality Clinical Board Exception Report [QCBER]

<table>
<thead>
<tr>
<th>SOURCE: Quality priorities aligned to the LCA QAF</th>
<th>Immediate role</th>
<th>Serious Concerns</th>
<th>Concerns resolved</th>
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</thead>
<tbody>
<tr>
<td>LCA QCBER Reference</td>
<td>LCA QCBER Priorities</td>
<td>1. Improve cancer patient experience and outcomes</td>
<td>Quality CCC</td>
</tr>
<tr>
<td>TUMOUR SPECIFIC or PATHWAY SPECIFIC</td>
<td>Level of concern</td>
<td>LCA Partner Organisation</td>
<td>Action for LCA</td>
</tr>
<tr>
<td>Areas of improvement identified</td>
<td>Serious</td>
<td>CCC &amp; Domains</td>
<td>Align to LCA Objectives</td>
</tr>
</tbody>
</table>

### Example Entry:

**LCA QCBER**

**Reference:**

**LCA QCBER Priorities:**

**TUMOUR SPECIFIC or PATHWAY SPECIFIC:**

**Areas of improvement identified:**

**Level of concern:**

**LCA Partner Organisation:**

**CCC & Domains:**

**Action for LCA:**

**Response from the Trust, CD and LCA:**

**Action to be monitored by Trust and agreed:**

---

**Example Details:**

- **QCBER**
- **Reference:**
- **LCA QCBER Priorities:**
- **TUMOUR SPECIFIC or PATHWAY SPECIFIC:**
- **Areas of improvement identified:**
- **Level of concern:**
- **LCA Partner Organisation:**
- **CCC & Domains:**
- **Action for LCA:**
- **Response from the Trust, CD and LCA:**
- **Action to be monitored by Trust and agreed:**

---

**Example Text:**

- There is a mechanism in place for identifying patients who present at A&E, but the A&E to AOD pathway has not been formalized, and places within the system need to be shared. A functioning system is in place and implement an e-prescribing system, and operational and fully functional, is expected to resolve the issue. Areas that are in progress include:
  - **Level of concern:** Serious
  - **LCA Partner Organisation:** St George's Healthcare
  - **CCC & Domains:** Clinical Effectiveness Patient Safety
  - **Action for LCA:** Improve A&E to AOD pathway to review and feedback.
  - **Response from the Trust, CD and LCA:** Project Manager/Innovation for the Acute Oncology pathway to review and feedback.

---

**Example Text:**

- The acute oncology service now provides a service to haematology, oncology and chemotherapy. This service is now formally the AOD with no further arrangements in place. It was agreed during discussions on the need for further arrangements to improve the service with the intent of providing a service with a focus on delivering the best outcomes for patients. The service has been reviewed and the new arrangements implemented.
  - **Level of concern:** Serious
  - **LCA Partner Organisation:** St George's Healthcare
  - **CCC & Domains:** Clinical Effectiveness Patient Safety
  - **Action for LCA:** Improve A&E to AOD pathway to review and feedback.
  - **Response from the Trust, CD and LCA:** Project Manager/Innovation for the Acute Oncology pathway to review and feedback.

---

**Example Text:**

- The service provides a service for the treatment of patients with acute lymphoblastic leukemia (ALL) and other acute leukemias. The service has been reviewed and the new arrangements implemented.
  - **Level of concern:** Serious
  - **LCA Partner Organisation:** St George's Healthcare
  - **CCC & Domains:** Clinical Effectiveness Patient Safety
  - **Action for LCA:** Improve A&E to AOD pathway to review and feedback.
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**Example Text:**

- The service provides a service for the treatment of patients with acute lymphoblastic leukemia (ALL) and other acute leukemias. The service has been reviewed and the new arrangements implemented.
  - **Level of concern:** Serious
  - **LCA Partner Organisation:** St George's Healthcare
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  - **Action for LCA:** Improve A&E to AOD pathway to review and feedback.
  - **Response from the Trust, CD and LCA:** Project Manager/Innovation for the Acute Oncology pathway to review and feedback.
Thank You
Review of metrics

Michael Sharpe, NCRS and Stephen Scott, LCA
Lucada and COSD
A comparison of data items
For the LCA Lung Cancer Forum

Michael Sharpe
Data Improvement Manager
National Cancer Registration Service
An Overview

LUCADA

- National Audit running since 2005
- All data submitted through MDT system/National Portal

COSD

- Stands for Cancer and Outcomes Services Dataset
- Live Jan 2013 for Core items, July 2013 for Site specific
- Designed to include the bulk of the national audits
- Submitted in four returns, PAS, PATH, RAD & MDT to avoid duplicate recording of data items.
## Who, when and how?

<table>
<thead>
<tr>
<th></th>
<th>Lucada</th>
<th>COSD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients covered</td>
<td>All new diagnoses of invasive Lung Cancer</td>
<td>All new and recurrent diagnoses of invasive and non-invasive cancer</td>
</tr>
<tr>
<td>Submission frequency</td>
<td>Yearly</td>
<td>Monthly (although “top-ups” excepted!)</td>
</tr>
<tr>
<td>Patient grouping</td>
<td>Date First seen</td>
<td>Date of diagnosis</td>
</tr>
<tr>
<td>Submission process</td>
<td>Through a national portal</td>
<td>By email to <a href="mailto:tcr.data@nhs.net">tcr.data@nhs.net</a></td>
</tr>
<tr>
<td>Submission format</td>
<td>Either CSV file or manually</td>
<td>In XML from Jan 2015</td>
</tr>
</tbody>
</table>
Demographics and Referral Items

- All Lucada Demographics are included in COSD
- Most referral items are included or the same in COSD

<table>
<thead>
<tr>
<th>Item Name</th>
<th>Lucada</th>
<th>COSD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lung Cancer Specialist Referral Date</td>
<td>Included</td>
<td>Not included, however has a “Date first seen by Cancer Specialist” field</td>
</tr>
<tr>
<td>Source of Referral</td>
<td>Included, but uses an old dataset no longer used in CWT</td>
<td>Included, and uses the newer national dataset used in CWT</td>
</tr>
</tbody>
</table>
Diagnosis, Staging and Care Plan Items

• All Lucada Diagnosis items are captured in COSD

• Slight difference in definition of date of diagnosis

• Care Plan Intent and Planned Treatment in captured in both, but using different code lists

• COSD captures the ACE 27 co-morbidities index. Lucada has an item on Co-morbidities which precluded treatment.
Diagnostic tests and Clinical Trials

• Lucada asks for dates of Key investigations

• COSD captures full details of all tests done on patients pathway. This includes:
  • Full text of report
  • Procedure code of the investigation
  • Staging, if available
  • Cross referenced and completed with PATH, PAS and Radiology data

• COSD and Lucada capture the same Clinical Trials information
<table>
<thead>
<tr>
<th>Item Name</th>
<th>Lucada</th>
<th>COSD</th>
</tr>
</thead>
<tbody>
<tr>
<td>PATIENT ASSESSED BY LUNG CANCER NURSE SPECIALIST</td>
<td>Included</td>
<td>Included (as a single, combined item)</td>
</tr>
<tr>
<td>DATE FIRST ASSESSMENT BY LUNG CANCER NURSE SPECIALIST</td>
<td>Included</td>
<td>Not included</td>
</tr>
<tr>
<td>HOW WAS PATIENT FIRST ASSESSED BY LUNG CANCER NURSE SPECIALIST</td>
<td>Included</td>
<td>Not included</td>
</tr>
<tr>
<td>AT WHAT STAGE(S) IN THE PATIENT JOURNEY WAS THE PATIENT ASSESSED BY THE LUNG CANCER NURSE SPECIALIST</td>
<td>Included</td>
<td>Not included</td>
</tr>
<tr>
<td>LUNG CANCER NURSE SPECIALIST PRESENT WHEN THE PATIENT RECEIVED THEIR DIAGNOSIS</td>
<td>Included</td>
<td>Included (as a single, combined item)</td>
</tr>
</tbody>
</table>
• Most Lucada Treatment information is captured in COSD
• Lucada specifically captures chemotherapy treatment intent (neo-adjuvant, etc) whereas in COSD this is inferred
• COSD does not capture Radiotherapy anatomical site
• COSD captures OPCS codes for all treatments, Lucada only captures them for surgery.
Additional Items and Benefits of COSD

Fully audited from multiple data sources

• As COSD data is from four different sources, it can be considered an audited account of activity at the Trust. Lucada is only compiled from MDT information

• COSD data is hand audited by trained Cancer Registry Officers to produce a complete record of your Patients pathway

Continuously Updated

• COSD Death details come from ONS, and as such 1/5/10 year survival outcomes can be considered to be reliable
Additional Items and Benefits of COSD

Captures additional Relevant items
- COSD captures additional items not in Lucada, such as EGFR status
- COSD provides a standardised dataset allowing your Lung patients to be compared with the wider body of cancer patients

Rolling Clinical Feedback on your Service
- COSD data will shortly be fed back to you on rolling six monthly basis, in the form of level 3 reports

Standards Compatibility
- By Completing COSD, you’ve completed most of your LUCADA
<table>
<thead>
<tr>
<th>Trust</th>
<th>Number of cases</th>
<th>Number of cases</th>
<th>Performance status (%)</th>
<th>Stage (%)</th>
<th>MDT discussion (%)</th>
<th>Treatment recorded (%)</th>
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</thead>
<tbody>
<tr>
<td>South London Healthcare NHS Trust (RYQ)</td>
<td>372</td>
<td>372</td>
<td>86.30%</td>
<td>93.50%</td>
<td>95.70%</td>
<td>84.70%</td>
</tr>
<tr>
<td>Imperial College Healthcare NHS Trust (RYJ)</td>
<td>277</td>
<td>277</td>
<td>97.50%</td>
<td>98.20%</td>
<td>95.70%</td>
<td>94.70%</td>
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<tr>
<td>Epsom and St Helier University Hospital NHS Trust (RVR)</td>
<td>198</td>
<td>198</td>
<td>68.20%</td>
<td>81.80%</td>
<td>95.50%</td>
<td>68.20%</td>
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<tr>
<td>East and North Herforshire NHS Trust (RWH)</td>
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<td>179</td>
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<td>92.70%</td>
<td>98.90%</td>
<td>95.00%</td>
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<tr>
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<td>133</td>
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<td>97.00%</td>
<td>95.50%</td>
<td>98.50%</td>
</tr>
<tr>
<td>The Hillingdon NHS Foundation Trust (RAS)</td>
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<td>131</td>
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<td>87.80%</td>
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<td>98.40%</td>
<td>99.20%</td>
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<td>79.20%</td>
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<tr>
<td><strong>LCA - overall</strong></td>
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<td><strong>2260</strong></td>
<td><strong>91.00%</strong></td>
<td><strong>94.60%</strong></td>
<td><strong>97.70%</strong></td>
<td><strong>88.60%</strong></td>
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<tr>
<td>Area</td>
<td>Cases with Stage</td>
<td>Percentage Staged</td>
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<tr>
<td><strong>South East London</strong></td>
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<td><strong>West London</strong></td>
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<tr>
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<tr>
<td>Imperial College Healthcare NHS Trust (RYJ)</td>
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<td>75</td>
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<tr>
<td>Royal Brompton and Harefield NHS Foundation Trust (RT3)</td>
<td>310</td>
<td>77%</td>
<td></td>
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</tr>
<tr>
<td>The Hillingdon Hospitals NHS Foundation Trust (RAS)</td>
<td>84</td>
<td>82%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>West Middlesex University Hospital NHS Trust (RFW)</td>
<td>86</td>
<td>90%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Thank you for your contributions so far

Contact details:
Michael Sharpe
Data Improvement Manager, NCRS
m.sharpe@nhs.net
07958 758 297
Lung informatics highlights

Stephen Scott, LCA senior cancer information analyst
Overview of areas

• 62 day pathway distribution by week

• Data quality
  – Cancer Outcomes and Services Dataset – MDT feed
    • Staging
    • Basis of Diagnosis
    • Performance Status
    • CNS indicator
  – Systemic Anti Cancer Therapy Dataset

• Holistic Needs Assessment results
62 day distribution by week treated 2013/14

- 79% (584) of patients treated within 62 days
- 19% (138) of patients treated between 62 days and 18 weeks
- 2% (18) of patients treated after 18 weeks
- General increase in numbers of patients on 62 day pathway from 2012/13 to 2013/14
  - Up from 595 patients in 2012/13 to 740 in 2013/14 (+24%)
- Overall 83% of patients with staging provided in Q3 2013/14

- Of providers reporting more than 10 cases – 9/12 above 70%
- Overall 70% of patients with basis of diagnosis provided in Q3 2013/14

- 2 trusts at 100%, 2 trusts at 0%
Data quality – MDT feed to COSD – Performance status

- Overall 43% of patients with performance status provided in Q3 2013/14

- 1 trust at 100%, five trusts at 0%
- Overall 13.6% of patients with CNS indicator provided in Q3 2013/14 with 12.9% reporting that a CNS had seen the patients
- Highest trust at 84% – 3 trusts at 0%
## Data quality – SACT

<table>
<thead>
<tr>
<th>Trust Name</th>
<th>Number of regimens - Submitted in quarter</th>
<th>Data Completeness Morphology</th>
<th>Data Completeness Treatment Intent</th>
<th>Data Completeness Performance status</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Royal Marsden NHS Foundation Trust (RPY)</td>
<td>322</td>
<td>100%</td>
<td>2%</td>
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</tr>
<tr>
<td>Guys and St Thomas' NHS Foundation Trust (RJ1)</td>
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<td>89%</td>
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</tr>
<tr>
<td>East and North Hertfordshire Hospitals NHS Trust</td>
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<td>90%</td>
<td>100%</td>
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</tr>
<tr>
<td>Imperial College Healthcare NHS Trust (RYJ)</td>
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</tr>
<tr>
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<td>66%</td>
</tr>
<tr>
<td>Lewisham and Greenwich NHS Trust (RJ2)</td>
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<tr>
<td>Chelsea and Westminster NHS Foundation Trust (RQM)</td>
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</tr>
<tr>
<td>North West London Hospitals NHS Trust (RV8)</td>
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</tr>
<tr>
<td>King’s College Hospital NHS Foundation Trust (RJ7)</td>
<td>1</td>
<td>0%</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>LCA overall</strong></td>
<td><strong>924</strong></td>
<td><strong>73%</strong></td>
<td><strong>56%</strong></td>
<td><strong>46%</strong></td>
</tr>
<tr>
<td><strong>England Overall</strong></td>
<td></td>
<td><strong>52%</strong></td>
<td><strong>82%</strong></td>
<td><strong>46%</strong></td>
</tr>
</tbody>
</table>

- 924 regimens submitted in Q3 2013/14
- Morphology completeness good at 73% - but varies from 0-100%
- Treatment intent – 56% overall varies from 0-100%
- Performance status – 46% overall – varies from 0-89%
The London Cancer Alliance West and South

Holistic Needs Assessment – At diagnosis

<table>
<thead>
<tr>
<th>Trust</th>
<th>Proxy for number of new patients</th>
<th>Number of HNA offered within 31 days of diagnosis</th>
<th>Numbers of HNA completed within 31 days of diagnosis</th>
<th>% patients with HNA completed within 31 days of diagnosis</th>
<th>Proxy for number of new patients</th>
<th>Number of HNA offered within 31 days of diagnosis</th>
<th>Numbers of HNA completed within 31 days of diagnosis</th>
<th>% patients with HNA completed within 31 days of diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lewisham and Greenwich Healthcare NHS Trust</td>
<td>50</td>
<td>50</td>
<td>27</td>
<td>54%</td>
<td>23</td>
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<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>The Hillingdon Hospitals NHS Foundation Trust</td>
<td>11</td>
<td>8</td>
<td>5</td>
<td>45%</td>
<td>7</td>
<td>10</td>
<td>15</td>
<td>214%</td>
</tr>
<tr>
<td>Chelsea and Westminster Hospital NHS Foundation Trust</td>
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<td>7</td>
<td>7</td>
<td>44%</td>
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<td>4</td>
<td>4</td>
<td>25%</td>
</tr>
<tr>
<td>Kingston Hospital NHS Foundation Trust</td>
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<td>16</td>
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<tr>
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<td>60</td>
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<td>61%</td>
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<tr>
<td>The Royal Brompton and Harefield NHS Foundation Trust</td>
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<tr>
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<td>6</td>
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<tr>
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<td>18</td>
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<tr>
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</tr>
<tr>
<td>Ealing Hospital NHS Trust</td>
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<td>0</td>
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<td>0%</td>
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<tr>
<td>Epsom and St Helier University Hospitals NHS Trust</td>
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<td>17</td>
<td>28</td>
<td>28</td>
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<tr>
<td>Kings College Hospital Foundation Trust</td>
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<td>0%</td>
<td>27</td>
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<td>0%</td>
</tr>
<tr>
<td>North West London Hospitals NHS Trust</td>
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<td>0</td>
<td>0%</td>
<td>7</td>
<td>3</td>
<td>3</td>
<td>43%</td>
</tr>
<tr>
<td>West Middlesex University Hospital NHS Trust</td>
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<td>0</td>
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<td>0%</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>LCA Total</td>
<td>726</td>
<td>183</td>
<td>84</td>
<td>12%</td>
<td>705</td>
<td>172</td>
<td>116</td>
<td>16%</td>
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</table>

- Only 12% of patients in Q3 reported as having HNA
# Holistic Needs Assessment – End of treatment

<table>
<thead>
<tr>
<th>Trust</th>
<th>Proxy for number of new patients</th>
<th>Number of HNA offered at end of treatment</th>
<th>Number of HNA completed at end of treatment</th>
<th>% patients with HNA completed at end of treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Royal Marsden NHS Foundation Trust</td>
<td>49</td>
<td>22</td>
<td>4</td>
<td>8%</td>
</tr>
<tr>
<td>Guy’s and St Thomas’ NHS Foundation Trust</td>
<td>81</td>
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<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Chelsea and Westminster Hospital NHS Foundation Trust</td>
<td>7</td>
<td>0</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Croydon Healthcare NHS Trust</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Ealing Hospital NHS Trust</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>East and North Hertfordshire NHS Trust</td>
<td>23</td>
<td>0</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Epsom and St Helier University Hospitals NHS Trust</td>
<td>8</td>
<td>0</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Imperial College Healthcare NHS Trust</td>
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<td>0</td>
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<tr>
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<td>0%</td>
</tr>
<tr>
<td>Kingston Hospital NHS Foundation Trust</td>
<td>9</td>
<td>0</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Lewisham and Greenwich Healthcare NHS Trust</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>North West London Hospitals NHS Trust</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>St George’s Healthcare NHS Trust</td>
<td>12</td>
<td>0</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>The Hillingdon Hospitals NHS Foundation Trust</td>
<td>7</td>
<td>0</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>West Middlesex University Hospital NHS Trust</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td><strong>LCA Total</strong></td>
<td><strong>334</strong></td>
<td><strong>23</strong></td>
<td><strong>5</strong></td>
<td><strong>1%</strong></td>
</tr>
</tbody>
</table>

Only 1% of patients in Q3 reported as having HNA
Questions?
An Audit of the use of Specialist Guidelines for the Investigation and Follow-up of Pulmonary Nodules by Lung MDTs in the London Cancer Alliance

Dr Anna Minchom, Dr Ioanna Letsa, Dr Liz Sawicka and Dr Mary O’Brien
Small, indeterminate lung nodules are detected with increasing frequency on CT

Guidelines to stratify the risk of developing invasive cancers aim to:
- Reduce the rate of biopsy/surgery
- Unify the decision making process
Fleischner Guidelines

<table>
<thead>
<tr>
<th>Nodule Size (mm)*</th>
<th>Low-Risk Patient†</th>
<th>High-Risk Patient‡</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;= 4</td>
<td>No follow-up needed §</td>
<td>Follow-up CT at 12 mo; if unchanged, no further follow-up.</td>
</tr>
<tr>
<td>&gt;4-6</td>
<td>Follow-up CT at 12 mo; if unchanged, no further follow-up</td>
<td>Initial follow-up CT at 6–12 mo then at 18–24 mo if no change</td>
</tr>
<tr>
<td>&gt;6-8</td>
<td>Initial follow-up CT at 6–12 mo then at 18–24 mo if no change</td>
<td>Initial follow-up CT at 3–6 mo then at 9–12 and 24 mo if no change</td>
</tr>
<tr>
<td>&gt;8</td>
<td>Follow-up CT at around 3, 9, and 24 mo, dynamic contrast-enhanced CT, PET, and/or biopsy</td>
<td>Same as for low-risk patient</td>
</tr>
</tbody>
</table>

Note.—Newly detected indeterminate nodule in persons 35 years of age or older.
* Average of length and width.
† Minimal or absent history of smoking and of other known risk factors.
‡ History of smoking or of other known risk factors.
§ The risk of malignancy in this category (<1%) is substantially less than that in a baseline CT scan of an asymptomatic smoker.
### Recommendations for the Management of Subsolid Pulmonary Nodules Detected at CT

<table>
<thead>
<tr>
<th>Nodule Type</th>
<th>Management Recommendations</th>
<th>Additional Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Solitary pure GGNs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(\leq 5) mm</td>
<td>No CT follow-up required</td>
<td>Obtain contiguous 1-mm-thick sections to confirm that nodule is truly a pure GGN</td>
</tr>
<tr>
<td>&gt;5 mm</td>
<td>Initial follow-up CT at 3 months to confirm persistence then annual surveillance CT for a minimum of 3 years</td>
<td>FDG PET is of limited value, potentially misleading, and therefore not recommended</td>
</tr>
<tr>
<td><strong>Solitary part-solid nodules</strong></td>
<td>Initial follow-up CT at 3 months to confirm persistence. If persistent and solid component (&lt;5) mm, then yearly surveillance CT for a minimum of 3 years. If persistent and solid component (\geq 5) mm, then biopsy or surgical resection</td>
<td>Consider PET/CT for part-solid nodules (\leq 10) mm</td>
</tr>
<tr>
<td><strong>Multiple subsolid nodules</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pure GGNs (\leq 5) mm</td>
<td>Obtain follow-up CT at 2 and 4 years</td>
<td>Consider alternate causes for multiple GGNs (\leq 5) mm</td>
</tr>
<tr>
<td>Pure GGNs (&gt;5) mm without a dominant lesion(s)</td>
<td>Initial follow-up CT at 3 months to confirm persistence and then annual surveillance CT for a minimum of 3 years</td>
<td>FDG PET is of limited value, potentially misleading, and therefore not recommended</td>
</tr>
<tr>
<td>Dominant nodule(s) with part-solid or solid component</td>
<td>Initial follow-up CT at 3 months to confirm persistence. If persistent, biopsy or surgical resection is recommended, especially for lesions with &gt;5 mm solid component</td>
<td>Consider lung-sparing surgery for patients with dominant lesion(s) suspicious for lung cancer</td>
</tr>
</tbody>
</table>

**Note.**—These guidelines assume meticulous evaluation, optimally with contiguous thin sections (1 mm) reconstructed with narrow and/or mediastinal windows to evaluate the solid component and wide and/or lung windows to evaluate the non-solid component of nodules, if indicated. When electronic calipers are used, bidimensional measurements of both the solid and ground-glass components of lesions should be obtained as necessary. The use of a consistent low-dose technique is recommended, especially in cases for which prolonged follow-up is recommended, particularly in younger patients. With serial scans, always compare with the original baseline study to detect subtle indolent growth.
The Audit

- Aimed to:
  - obtain a snapshot of practice in LCA
  - assess number of patients with lung nodules reviewed within the LCA MDTs
  - assess adherence to Fleischner guidelines

- Audit proformas distributed to members of Lung MDTs in LCA hospitals

- Proformas completed for all patients discussed at MDMs with pulmonary nodules 1st-29th Feb. 2014
Lung Nodule Audit

To be completed in any xray meeting or lung MDM where a patient has been found to have one of the following:

- Nodule
- Solitary pulmonary nodule (SPN)
- Ground glass nodule
- Or any lesion that is suspicious for cancer but not cancer at the moment.

Please aim to complete information on 4-6 patients over 4 MDMs/4 weeks.

<table>
<thead>
<tr>
<th>Description of lesion:</th>
</tr>
</thead>
</table>

1. High risk according to Liverpool Lung prognostic index (LLP) is as follows:
   - smoker OR non smoker <10 yrs with 40 + pack years
   - as above but 30 pk/yr with one of the following - either past history of pneumonia, poor PFTs
   - OR asbestos/dust exposure, previous lung cancer or other cancer OR family history of lung cancer

High risk LLP?  Y □  N □

2. Initial presentation that lead to first CT was via (choose at least one):
   - TWR referral □
   - COPD clinic □
   - Other tumour □
   - Pneumonia □
   - Cardiac □
   - Incidental finding on CTPA □
   - Incidental finding on abdominal CT □
   - Other □ ................................................................. (please specify)

3. Is this the:
   - First discussion at MDM/x ray meeting  Y □  N □
   - Second or subsequent discussion at MDM  Y □  N □

4. Which best applies to history to date or reason for discussion today:
   - a) first discussion of index lesion  Y □  N □
   - b) Investigated by PET +/- biopsy – cancer ruled out, still lesion, low SUV  Y □  N □
   - c) Investigated by PET +/- biopsy – inconclusive  Y □  N □
   - d) Investigated by previous CT  Y □  N □
   - e) other  Y □  N □

5. Nodules size (or ground glass, if more than one lesion then size of largest most suspicious):
   ........................................mm

6. Next step, management plan at this meeting:
   - PET scan  Y □  N □
   - Biopsy by bronchoscopy  Y □  N □
   - Biopsy by CT  Y □  N □
   - Surgical excision  Y □  N □
   - Repeat PET  3 / 6 / 9 / 12 / 24 -- mths (choose one)  Y □  N □
   - Repeat CT  3 / 6 / 9 / 12 / 24 -- mths (choose one)  Y □  N □
   - Discharge from MDM to respiratory FU  Y □  N □
   - Discharge  Y □  N □
   - Other  Y □  N □

7. What SPN guidelines did you use, if any:
   ........................................................................................................ (please specify)
Audit Returns

- 11 of 17 MDTs returned audit forms

- 69 patients

- One patient had nodule of 150mm in diameter - referred via the 2-week rule with weight loss and MDT recommended a PET scan. i.e. suspected cancer and excluded from the audit

- 35 (51%) discussed for the first time and 33 (49%) on a second or subsequent occasion
Audit returns by MDT

- Second or subsequent discussion at MDM
- First discussion at MDM/x ray meeting
Patient Characteristics - LLP

- High risk defined as:
  - Current smoker
  - Non-smoker of <10 years with >40 pack years
  - Non-smoker of <10 years with 30 pack years AND past history of pneumonia, poor PFTs, asbestos/dust exposure, previous lung cancer or other cancer, family history of lung cancer

- 65% of patients of high risk
## Nodule Characteristics

- Mean size 9.8mm (2mm - 30mm)
- 10 cases with multiple lesions, 7 sub-solid nodules

<table>
<thead>
<tr>
<th></th>
<th>Number of patients</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nodule</strong></td>
<td></td>
</tr>
<tr>
<td>&lt;= 4 mm</td>
<td>4</td>
</tr>
<tr>
<td>&gt;4-6 mm</td>
<td>11</td>
</tr>
<tr>
<td>&gt;6-8 mm</td>
<td>6</td>
</tr>
<tr>
<td>&gt;8mm</td>
<td>37</td>
</tr>
<tr>
<td><strong>Solitary pure GGNs</strong></td>
<td></td>
</tr>
<tr>
<td>&lt;= 5 mm</td>
<td>1</td>
</tr>
<tr>
<td>&gt;5 mm</td>
<td>4</td>
</tr>
<tr>
<td><strong>Solitary part-solid nodules</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Multiple subsolid nodules</strong></td>
<td></td>
</tr>
<tr>
<td>Pure GGNs &lt;= 5 mm</td>
<td>1</td>
</tr>
<tr>
<td>Pure GGNs &gt;5 mm without a dominant lesion(s)</td>
<td></td>
</tr>
<tr>
<td>Dominant nodule(s) with part-solid or solid component</td>
<td>1</td>
</tr>
<tr>
<td><strong>Not documented</strong></td>
<td>3</td>
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</table>
Presentation at MDT

- 46% incidental findings
- 13% of patients referred by the “2-week rule” (TWR) for urgent assessment of suspected cancer
MDT recommendations

- Patients who were discharged:
  - average size 7.1mm
  - 43% at high risk

- Patients who were not discharged:
  - average size 10.4mm
  - 69% at high risk
Adherence with Fleischner I

- Fleischner guidelines **44%**
- Local guidelines **12%**
- None/Not documented **44%**

<table>
<thead>
<tr>
<th></th>
<th>Fleischner guid.</th>
<th>Local guid./None</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;=4mm</td>
<td>3</td>
<td>4</td>
</tr>
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<td>&gt;4–6mm</td>
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<tr>
<td>&gt;6–8mm</td>
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<td>5</td>
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<tr>
<td>&gt; 8mm</td>
<td>21</td>
<td>18</td>
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<tr>
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</table>
Adherence with Fleischner II

First MDT discussion

<table>
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<tr>
<th></th>
<th>CT</th>
<th>CT 3m</th>
<th>CT 6m</th>
<th>CT 12m</th>
<th>PET</th>
<th>Bronch</th>
<th>D/C</th>
<th>Blunk</th>
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</thead>
<tbody>
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<td>1</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>&gt;4-6</td>
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<td>1</td>
<td>1</td>
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<tr>
<td>&gt;6-8</td>
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<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>
Cases with lung nodules reviewed at LCA MDMs tend to refer to high risk patients and present from a variety of sources.

Wide range of pulmonary nodule types represented and, as appropriate, MDT recommendations are diverse.

Significant workload in LCA MDMs:
- Estimated cost per new patient reviewed at the MDM: £415
- 35 patients presented at the MDM for the first time: £14,525/month
- 33 patients discussed for 2nd or subsequent time
The majority of MDTs choose not to use Fleischner guidelines – more frequent Ix recommended...
- ? disagreement with the substance of the guidelines
- ? lack of knowledge
- ? misinterpretation
- ? fear of legal vulnerability

Prolonged patients’ uncertainty

Guidelines = general framework for patient-centred management decisions
Conclusion

- Lung nodules are reviewed frequently at MDMs and account for a significant workload and prolonged patients’ anxiety
- Deviation from Fleischner guidelines seen
- Need to capture and standardise ‘local guidelines’
Centralised MDT for review of lung nodules

- Volumetrics

  - NELSON Screening Trial: classification of nodules based on volume-doubling time.
    
    False-positive rate 64% (96% in screening trials)
Thanks to........

- Katie Morris, LCA

- MDT members who filled in and returned audit forms
  - The Royal Marsden
  - Royal Brompton Hospital
  - Chelsea and Westminster Hospital
  - Kingston Hospital
  - Croydon University Hospital
  - West Middlesex University Hospital
  - Ealing Hospital
  - Hillingdon Hospital
  - Imperial College
  - King’s College
  - Epsom & St Helier Hospitals
References

- De Ieso PD, Coward JI, Letsa I et al. A study of the decision outcomes and financial costs of multidisciplinary team meetings (MDMs) in oncology. *British J Cancer.* 2013; 109: 2295 - 2300
Update from the Lung Pathway Group & Close

Dr Liz Sawicka, Chair - LCA Lung Pathway Group
Thank you for coming today

Presentations will be available on the website shortly.

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