# Portsmouth Lung Cancer Pathway

## - working towards faster diagnosis -

Dr. David Lodge

Respiratory Registrar & Wessex QI Fellow

Queen Alexandra Hospital, Portsmouth

## 1. Background and Aim

**400** people

Lung cancer is the most common cause of cancer death in the UK.[1] In Portsmouth, around **400 people** are diagnosed with lung cancer each year.[2]

**49** days

Diagnosing lung cancer faster leads to better outcomes. The new National Optimal Lung Pathway mandates that patients receive a diagnosis and start treatment for lung cancer within **49 days** of referral from their GP, by April 2020.[3]

**Aim**

**I aimed to reduce the time from GP referral to first definitive treatment for patients referred under the 'two-week-wait' lung cancer pathway in Portsmouth.**

## 2. Principles

My improvement work was based on five key principles:

1. **Every day matters**
   Limiting any delays in a patient's pathway, always moving towards diagnosis & treatment
2. **Better communication, accurate data**
   Proactively communicating results and decisions, and accurately evaluating our outcomes
3. **Right investigations requested, first time**
   Reducing variation in clinical practice to limit delays in diagnosis and treatment
4. **Cancer clinics reserved for cancer patients**
   Ensuring clinic appointments are available for patients who need them most urgently
5. **Encouraging smoking cessation**
   Improving the chance of treatment success, and the health of people without cancer

## 3. Driver Diagram

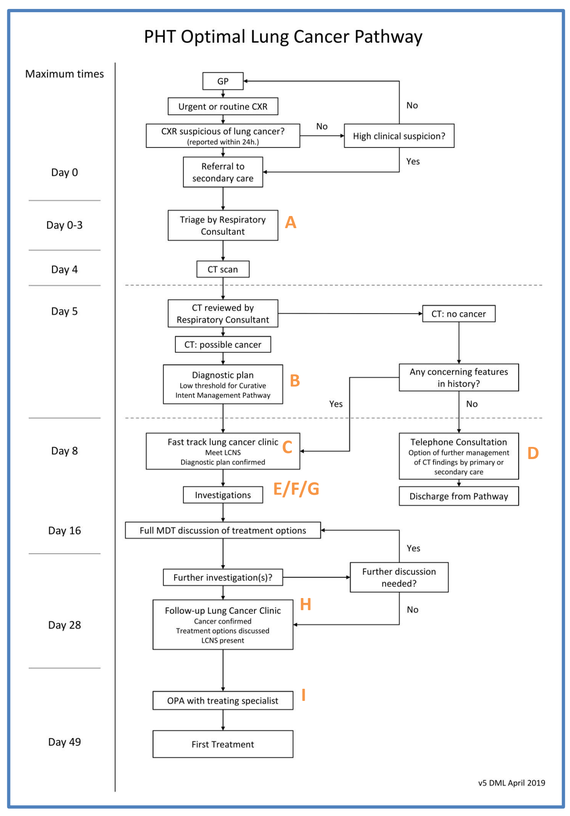
Every member of the lung cancer multidisciplinary team was invited to provide suggestions for improvements. A total of 26 members contributed. The resulting Driver Diagram is shown below. Change Ideas highlighted in green are being pursued.

MDT = multidisciplinary team meeting  PET = Positron Emission Tomography

| Primary Driver | Secondary Driver | Change Ideas |
|---|---|---|
| Clinics | Capture all information at the first appointment | Standardised clinic letter layout |
| | | Proforma for clinics |
| | | MDT database (updated as results come through) |
| | Ensure the right investigations are requested first time | Design a 'reference' diagnostic pathway |
| | | Pre-clinic diagnostic MDT |
| Communication | Flag all procedures on the Day Ward to the MDT Co-ordinator | Day Ward to keep record of patients for MDT |
| | | Band 4 Patient Navigator to keep record of patients for MDT |
| | | Additional box on Procedure Checklist |
| | Send all investigation results to clinicians | "Reflex" highlighting of results; 'tracking' screen |
| | Highlight Small Cell Lung Cancer patients outside of the MDT | Email alert from pathologists to MDT |
| | Reduce PET scan delays | Pre-booked slots |
| | Clear information for inpatient referrals | MDT referral tab on Bedview |
| | | MDT proforma on intranet |
| | Nurses to spend less time doing admin | Band 4 Care co-ordinator (paid for by the Transformation Bid) |
| | | Highlight Day Ward patients needing MDT discussion |
| | Improve communication between Lung Cancer Nurses | New phone line for the Lung Cancer Nurses |
| | Lung Cancer Nurses to do more pleural work (e.g. chest drain management) | Pleural training |
| | Patient information at the point of referral to the pathway | Patient information leaflets, to be given out by GPs |
| Pathway | Ensure single-sex policy doesn't delay patient care | Audit; Discuss options with Deputy Chief Nurse |
| | Ensure investigations are booked urgently and results chased appropriately | Recruit additional admin support |
| | Ensure investigations are appropriately prioritised | Special folder for use in cancer clinics |
| | | Pre-stamping request forms with Cancer Alert stickers |
| | Arrange PET scan and CT brain on the same day | Pre-diagnostic MDT |
| | Ensure Lung Function Tests are performed on all appropriate patients before MDT | Spread Lung Function Test slots in line with clinics |
| | | Pathway guide for clinics |
| | | Pre-clinic diagnostic MDT with radiology |
| | Delays in getting results of molecular markers | Review current data; move provider |
| Referrals | Electronic referrals | Ensure cancer patients are prioritised |
| | Straight to CT | Review referrals |
| | | Low threshold for CT |
| | | Pre-warn patients: patient information leaflet |
| | Emergency admissions avoidance | Urgent next-day review of cases in Ambulatory Care |
| Surgery | Improve fitness for surgery for 'borderline' candidates | Surgical pre-hab |
| | Increase number of 'borderline' patients reviewed by surgeons | Surgeons to attend whole of MDT |
| | Reduce delays to surgery - review by surgeons on same day as clinic? | 'Emergency' appointment at end of surgical clinic |
| MDT | Venue not good for discussion | Change the venue/establish MDT room for the Trust |
| | Alternative MDT forums for some discussions | Identify whether this is an issue |
| | More efficient | Change the list layout/order |
| | | Regular list preparation |
| | Access to all information necessary during MDT | Laptops |

## 4. Improvements So Far

Change Ideas are being implemented throughout the diagnostic pathway to improve capacity and efficiency, with each change being delivered and evaluated using Quality Improvement methodology such as Plan/Do/Study/Act (PDSA) cycles. Some of these changes have been supported through a £2.1million Department of Health Transformation Grant.




**A** Daily reviews of fast-track referrals

**B** New Band 4 Patient Navigator, coordinating appointments and investigations

**C** New cancer clinic proforma, to improve data capture at clinic and facilitate MDT discussion

**D** Removing some patients with normal CT scans from the fast-track pathway before they are seen in clinic, improving cancer clinic capacity

**E** Standardised investigative pathways, reducing diagnostic delays and identifying patients potentially suitable for curative treatment

**F** Improving access to investigations, e.g. co-ordinating lung function test appointments with cancer clinics; increasing diagnostic capacity

**G** Highlighting results outside of the MDT, to expedite decision-making, e.g. email alert to all MDT members when Small Cell Lung Cancer is identified by histopathology; tracking the results of biopsies taken on the Respiratory Day Ward

**H** Improved access to Lung Cancer Nurses to support patients, through additional nurse capacity and a new Band 4 Care Co-ordinator

**I** Improved communication with treating specialists, e.g. pre-notifying surgical secretaries of surgical referrals

**These changes are being implemented during Spring/Summer 2019, with new members of staff in place by Summer 2019**
It is expected the full impact of our changes to be seen for the first time in pathway data for patients referred in Autumn 2019

## 5. Plan / Do / Study / Act Example

Patients attend the Respiratory Day Ward for diagnostic procedures. I wanted to improve the communication between the Day Ward and Lung Cancer Office, to ensure patients having diagnostic tests for possible cancer were identified and reviewed at the Lung MDT.

**Cycle 1**
July 2018

**I asked doctors performing procedures to highlight patients for MDT** on the procedure report. However, procedure reports are not produced for pleural procedures (48% of all procedures). Doctors were also unreliable at documenting the need for MDT. **Overall success: 55%**

**Cycle 2**
Autumn 2018

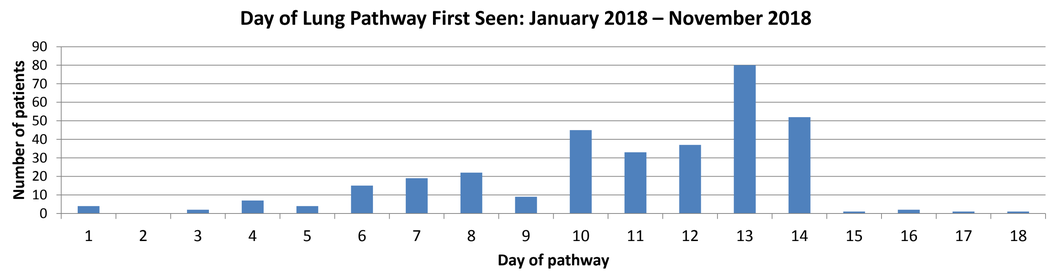
**I asked nurses from the Day Ward to highlight patients for MDT in the ward admissions book.** The initial documentation rate was 90%. However, a loss of staff engagement resulted in a decline to only **10%** after two months.

**Cycle 3**
Spring 2019

**I asked the nurses to record patients for MDT in the sample record book** held within the procedure room. The book is checked daily by the lung cancer admin team. This has resulted in **100% documentation**.

## 6. Early Evidence of Improvement

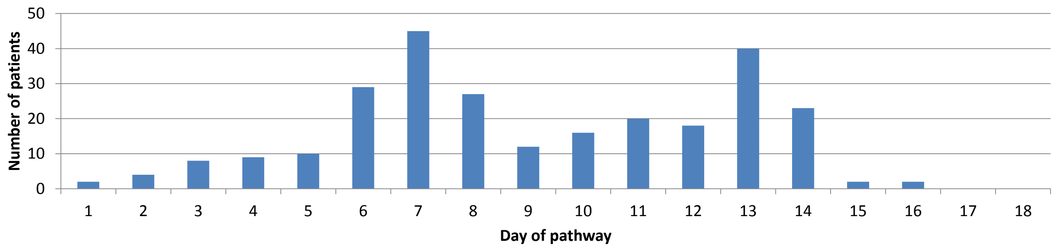
This graph displays the number of days after GP referral on which patients were seen in 2018. Although nearly every patient was seen within the 14-day target, most patients were not seen until Day 13. The graph also does not reflect the effort required to see patients within 14 days, such as 'emergency' clinic appointments.




In November 2018, I introduced some simple changes:

- Referrals were reviewed throughout the week, rather than once per week
- CT capacity was spread throughout the week, rather than only on three days
- The department stopped GPs from pre-booking cancer clinic slots, so that the lung cancer team could co-ordinate CT and clinic appointments

The resulting graph shows a change in the distribution of clinic appointments. Patients are still seen within 14 days, but half of our patients are now seen within 8 days of referral. This reduces the time patients wait to receive an 'all clear' CT result, and means further investigations can be requested sooner with expedited diagnosis.




## 7. Reflections & Conclusions

**Reflections**

- This work has been a collaborative effort from the whole clinical team. Some of the most significant learning opportunities were identified by administrative staff, who are often overlooked in Service Development projects
- Establishing lines of communication between the clinical team, managers and Information Services has been central to understanding performance and identifying areas for improvement

**Conclusions & Future Work**

- By reviewing every stage of the lung cancer pathway I have identified areas of inefficiency, and have introduced changes which I am confident will reduce the time to diagnosis and first treatment whilst also improving patient experience
- Evaluation of the impact of these changes is ongoing, as data becomes available
- The learning from my improvement work will be shared with other lung cancer departments in Wessex, and with other tumour sites, to help teams improve their cancer pathways

## References

1. Cancer Research UK. Lung Cancer statistics. Available from: bit.ly/2UcFMUx
2. National Lung Cancer Audit. Annual Report 2017. RCP 2017
3. Lung Clinical Expert Group. NOLCP Implementation Guide. 2017.