# PATHWAYS MATTER

A REVIEW OF THE IMPLEMENTATION OF THE NATIONAL OPTIMAL LUNG CANCER PATHWAY



OCTOBER 2019

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**ABOUT THE UKLCC** 

is a coalition of the UK's leading lung cancer experts, senior NHS professionals, charities and healthcare companies.

Through our campaigning activity we aim to:

- Raise political awareness of lung cancer
- Raise the general public's awareness of lung cancer – and especially encourage earlier presentation and symptom recognition
- Empower patients to take an active part in their care
- Improve lung cancer services

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#### CONTACTS

The UKLCC is keen to work with all interested organisations and bodies to improve the quality and outcomes of lung cancer treatment and care.

For more information about our work and our partners, please visit our website or contact our secretariat.

www.uklcc.org.uk

## CONTENTS

# Ме

1. 2.

- 3.
- 4.

4.1

4.2

4.3

4.4

4.5

5

Foreword

### Methodology

Introduction	5
Why accelerating the lung cancer care pathway matters	6
of the NOLCP implementation to date Achievements within key elements	8
of the pathway	11
Direct to CT reporting	11
Patient pathway navigator	12
Access to endobronchial ultrasound	12
Central PET scan registry	13
Pathology service turnaround times	14
Systemwide challenges within the implementation of the NOLCP Summary of recommendations	15 17
endix - Best practice examples oss the NOLCP	18
sary	22

### FOREWORD

We are delighted to see the publication of this thorough and independent review of how the NHS in England is progressing towards meeting the standards set out in the National Optimal Lung Cancer Pathway. Although the poor overall survival statistics for lung cancer patients are well rehearsed, if every patient was diagnosed and treated rapidly and to the same high standard of care, the outlook for these patients would improve significantly. The diagnosis, staging and treatment of lung cancer has become very much more complex in the last 10 years making the optimum care both more specialised and potentially more time consuming, posing challenges to all of us responsible for the provision, delivery and commissioning of care.

The UK Lung Cancer Coalition recognises these challenges and supportive of the efforts to meet them, but is committed to pressing for them to be implemented as rapidly and widely as possible to improve the quality of care and outcomes for lung cancer patients in this country. There are many examples of best practice in this report and our other recent reports: 'Millimetres Matter' and 'Molecules Matter' (available at: www.uklcc.co.uk) deal in more depth with a number of the issues highly relevant to the ability of the NHS to meet the challenge of the National Optimal Lung Cancer Pathway. We hope this report will be seen as a constructive contribution to this important initiative.

Professor Michael Peake Chair, Clinical Advisory Group, UKLCC Mr Richard Steyn Chair, UKLCC

### **METHODOLOGY**

The development of the report was informed by comprehensive desk research and literature review of key websites, portals and publications. To assess the progress achieved by Cancer Alliances across the country as well as the barriers they encountered in the implementation of the pathway, a series of semi-structured interviews was carried out with 17 out of 19 Cancer Alliances. We would like to thank the following Cancer Alliances that took part in the interviews:

- Northern Cancer Alliance
- Lancashire and South Cumbria Cancer Alliance
- West Yorkshire and Harrogate Cancer Alliance
- Greater Manchester Cancer Alliance
- Cheshire and Merseyside Cancer Alliance
  South Yorkshire and Bassetlaw Cancer Alliance
- West Midlands Cancer Alliance
- East Midlands Cancer Alliance
- East of England Cancer Alliance
- RM Partners Cancer Alliance
- North Central and East London Cancer Alliance
- South East London Cancer Alliance
- Somerset, Wiltshire, Avon and Gloucestershire Cancer Alliance
- Thames Valley Cancer Alliance
  Peninsula Cancer Alliance
- Wessex Cancer Alliance
- Surrey and Sussex Cancer Alliance

The findings emerging from the conversations with the Cancer Alliances were complemented with insights provided by experts, and we are grateful to:

**Professor Sir Mike Richards,** former National Cancer Director and current Cancer Screening Programme Review Lead

**Professor David Baldwin,** Chair of NHS England's Lung Clinical Expert Group

**Lorraine Dallas,** Director of Information, Prevention and Support at the Roy Castle Lung Cancer Foundation

**Dr Martin Allan,** Clinical Lead for the respiratory workstream, Getting It Right First Time (GIRFT)

The interviews were carried out from April to September 2019.

## **1. INTRODUCTION**

Lung cancer is the third most common cancer in the UK and remains the leading cause of cancer mortality in the UK.<sup>1</sup> Whilst outcomes have improved over the past decade, UK lung cancer survival rates continue to fall considerably behind that of other European countries.<sup>2</sup> Delays in timely diagnosis and associated patient access to treatment and care have been identified as contributing to the UK's comparatively low lung cancer outcomes.<sup>3</sup>

The National Optimal Lung Cancer Pathway (NOLCP) was introduced in August 2017 with the objective to help address delays in the diagnostic and treatment pathway. The guidance aimed to provide commissioners and service providers with a roadmap for how the design of lung cancer services can be optimised with the potential to reduce the time from referral to treatment from 62 to 49 days. Now, two years after the introduction of the NOLCP and with the commitment in the NHS Long Term Plan to increase the number of early stage cancer diagnoses through faster diagnosis standards, there is an opportunity to take stock of the progress that has been achieved in the implementation of the NOLCP.<sup>4</sup>

This report highlights best practice examples identified by Cancer Alliances as well as challenges that need to be addressed to enable the wider roll-out of the timed lung cancer pathway. We hope this will provide helpful guidance as Integrated Care Systems (ICS) and Cancer Alliances are developing their plans for meeting the objectives of the NHS Long Term Plan for cancer at a local level, in which the implementation of the NOLCP will play an integral part.





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**OF THE NOLCP** 

TREATMENT

DAYS

### 2. WHY ACCELERATING THE LUNG CANCER **CARE PATHWAY MATTERS**

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"When you receive a diagnosis of suspected lung cancer, it's not about the number of days until you get access to treatment, but about the number of sleepless nights until you do."

#### Interview with Professor Sir Mike Richards, former National Cancer Director

Lung cancer is a devastating diagnosis for those affected and their families. 35,600 people die from lung cancer every year; that is 98 every day.<sup>5</sup> Whilst improvements in survival have been made over recent years, average five-year survival in lung cancer (15%)<sup>6</sup> continues to significantly fall behind that of cancer overall (54%).<sup>7</sup> In international comparison, UK lung cancer outcomes also lag considerably behind those of other comparable countries, ranking lowest in the recent study by the International Cancer Benchmarking Partnership (Figure 1).8

#### Figure 1: Five year lung cancer survival in %



Late stage diagnosis contributes to the UK's relatively poor lung cancer survival outcomes with 48% of patients with lung cancer being diagnosed at late stage (Figure 2).9 This has significant implications for patient outcomes, with those diagnosed at early stage being four time more likely to survive for a year or more from diagnosis than those diagnosed at stage IV.<sup>10</sup>

#### Figure 2: Proportion of cases diagnosed at each stage, 2014





This is compounded by variation in lung cancer care across the country, with the majority of Cancer Alliances meeting the 62 days referral to treatment target for only 2/3 of their patients (Figure 3).<sup>11</sup>

Delays in the lung cancer pathway have become more common due to an increase in the number of urgent referrals and as a result of the pathway becoming more complex. The introduction of advanced diagnostic techniques, such as endobronchial ultrasound (EBUS), PET-CT scanning and CT-guided biopsy as well as the availability of targeted treatment requiring (continued on next page)





detailed molecular pathology, has made the diagnostic and treatment pathway more personalised. This is welcome but also means that there is a growing number of complex interventions per patient.<sup>12</sup>

In addition to the impact on patient outcomes, delays in diagnosis and treatment decision can also have implications for the chance of a patient to receive a potentially curative treatment. The performance status of the patient i.e. the fitness of a person affected by lung cancer to undergo potentially curative treatment, such as surgery, can rapidly decline in the time between the diagnosis was first made and treatment decision being taken. The faster a clinical team can make a decision on the appropriate course of treatment, the better for the patients' prognosis. Even within the range of stages I and II of Non-Small Cell Lung Cancer, the likelihood of survival at five years is almost halved<sup>13</sup> and an adverse stage shift of this scale can occur within the waiting times typically experienced by patients in the UK.<sup>14</sup> One study has shown a 16% increase in mortality if the time from diagnosis to surgery is more than 40 days.<sup>15</sup>

#### Figure 4: Cancer waiting time targets



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In 2015, NHS England's Lung Cancer Expert Group (CEG) reviewed the existing lung cancer service specification to identify areas where processes could be optimised. The NOLCP was officially published in 2017 to introduce a new, improved standard of care for lung cancer, which would result in marked gains against the official 62-day treatment target. If implemented comprehensively, the guidance would provide service providers with a critical instrument to accelerate the diagnostic and treatment pathway to potentially 49 days, thereby helping lung cancer patients access treatment more guickly and potentially improve survival rates overall (Figure 4).

Whilst the guidance was published by NHS England's CEG, the recommended standards also have relevance for healthcare systems in the devolved nations. Optimal care pathways are also being rolled out in cancer centres across the devolved nations. The implications of the findings and recommendations of this report go therefore beyond the NHS in England and should also be considered by commissioners and policy-makers in Northern Ireland, Scotland and Wales to ensure that lung cancer patients in the UK receive the best possible care no matter where they live.

## **3. OVERALL OBSERVATIONS IN THE PROGRESS OF THE NOLCP IMPLEMENTATION TO DATE**

The value of accelerating waiting times across the pathway and implementing the NOLCP has been widely recognised amongst Cancer Alliances and trusts across the country. The 49-day to treatment target had be seen by many as too ambitious in light of persisting challenges around meeting the existing national waiting times standard. However, lung cancer clinical leads have welcomed the publication of the NOLCP as a helpful initiative to align clinical teams and create a sense of working together as a team towards a shared ambition for improved patient care.<sup>16</sup>

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"I am impressed by the level of uptake of this pathway. For so many years there were piecemeal suggestions of different pathways but no overall agreement. It's astonishing how much progress has been made so far."

Interview with Professor David Baldwin, Chair of the Lung CEG "

"We brought clinicians from all the trusts in our patch together and presented the objectives and elements of the NOLCP. There was broad support and a buzz in the room with everyone really wanting to achieve it. This resulted in change of pathway and faster scanning."

**Interview with Dr Shahedal Bari,** South Cumbria Cancer Alliance

#### **EARLY STAGES**



#### STRAIGHT-TO-CT **RAPID REPORTING** IN PLACE FOR MOST OF THE CANCER ALLIANCES

The majority of the progress made within the NOLCP implementation has been focussed on the early stages of the pathway, with particular achievements made towards 'hot' x-ray and straight-to-CT rapid reporting. Most of the Cancer Alliances interviewed confirmed that both x-ray and CT images were available for the first meeting of the diagnostic multidisciplinary team (MDT) to review the case. However, challenges continue to persist in the downstream diagnostics of the pathway, including EBUS, PET-CT scanning, CT-guided biopsy and pathology services turnaround times.



"Clinical leadership is one of the key enablers for the implementation of the pathway. Most of the Alliance's trusts have the elements of the pathway in place, but we are not yet meeting all the suggested timelines."

Interview with Sheron Robson and Kattie Elliott, Northern Cancer Alliance

### **PROCESS MAPPING**

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As not all of the NOLCP's elements can be implemented at the same time, the majority of Cancer Alliances have taken a staged approach towards the roll-out of the pathway. Carrying out a process gap analysis at the beginning of the process has helped trusts to identify the parts of the pathway that require the most urgent interventions. Bringing together clinical teams across a referral pathway – including members from primary and secondary care – to assess current processes against the objectives of the NOLCP, has helped trusts identify the greatest backlogs within the system and secure buy-in from members of all relevant specialities to changes in practice.<sup>17</sup>



#### **NOLCP delivery groups**

Cheshire and Merseyside Cancer Alliance have set up 'NOLCP delivery groups' in each of the Cancer Alliance's trusts to oversee and drive the implementation of the pathway

Process gap analysis has also helped Cancer Alliances to make an evidence-based business case for additional investment and for securing Transformation Funding to support the implementation of the NOLCP locally. By highlighting the impact that addressing the CT capacity backlog would make in accelerating the diagnostic turnaround times, Wessex Cancer Alliance was able to make a compelling case and secure additional funding for CT scanning capacity.<sup>18</sup>

#### LACK OF SYSTEMATIC DATA COLLECTION

Assessing the extent of the implementation of the NOLCP remains challenging given the existing lack of a systematic monitoring infrastructure. No Cancer Alliance has a comprehensive data collection system in place to help measure how quickly a patient progresses through the respective elements of the pathway and their performance against the NOLCP's 49-day target. No nationally agreed dataset for the monitoring of the NOLCP has been developed. This has resulted in some confusion at local level around the 49-day and 62-day waiting time reporting requirements and also poses challenges around ensuring accuracy of data collection.<sup>19</sup>

Having a patient pathway navigator has help improve data collection, although the majority of the evidence remains anecdotal. The implementation of the NOLCP has, however, helped Cancer Alliances to meet the national waiting time target more consistently. The planned review of the NOLCP carried out by the Getting It Right First Time (GIRFT) programme will provide a helpful opportunity to bring together datasets on how trusts across the country perform against the pathway's measures through a systematic assessment.



#### **Improved outcomes**

Greater Manchester Cancer Alliance, one of the Cancer Alliances that is most advanced in the implementation of the NOLCP following its participation of the preceding RAPID programme, was able to increase regional surgical resection rates from 7% to 17% over the past five years as a result of the changes introduced to the pathway.

As a first step towards implementing a more consistent data monitoring system, some Cancer Alliances have adopted a live data dashboard which provide trusts in their area with a monthly overview of whether the 14-day as well as 62-day targets have been met by the individual trusts. By marking whether a respective target has been met through a red, amber and green scoring system, the dashboard has helped create a greater clinical focus on meeting the targets and stimulated comparisons across the Alliance's trusts. By providing the data monthly rather than on an annual basis as it is currently the case with the National Lung Cancer Audit (NLCA), Lancashire and South Cumbria Cancer Alliance has been able to consistently unlock efficiencies across the trusts in the Alliance.<sup>20</sup>

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"Clinicians' focus has changed now. Not that long ago, it was an accepted norm that you would wait a week or two to get some basic information. Most of the changes are organisational. Improving the pathway will not lead to more tests, just doing them more quickly."

**Interview with Seamus Grundy,** Greater Manchester Cancer Alliance

## 4. ACHIEVEMENTS WITHIN KEY ELEMENTS OF THE PATHWAY

Five key aspects within the lung cancer diagnostic and treatment decision pathway have been identified as key for accelerating waiting times for patients. These include:

#### Figure 5: Five key areas for accelerating the pathway



### STRAIGHT TO CT REFERRAL SYSTEM

A chest x-ray (CXR) is likely to be the first investigation for a person with symptoms that may indicate lung cancer. If the CXR shows abnormalities, the report is sent back to the GP who decides on the next steps. Enabling radiologists to 'hot report' suspicious CXR and send them straight to further CT investigation can significantly reduce timescales between tests.<sup>21</sup> It also allows the MDT to make more informed decisions earlier by having the results from both the CXR and CT scan available upon the first review of the case.

Significant progress has been achieved in implementing this step of the pathway. All of the Cancer Alliances interviewed confirmed that both CXR and CT images are available before the diagnostic MDT meeting. In some cases that has led to a reduction of the delays within the pathway of up to 14 days.<sup>22</sup>

There are three key initiatives that have contributed to this progress:

**1. The introduction of a new CXR coding system** – through which normal results are coded CX1, equivocal results CX2 and suspicious cases as CX3. CX3 reported results will trigger a referral to a CT scan appointment by either the radiologist or lung cancer nurse specialist (LCNS). The clear definition of the categories is crucial to avoid variation in reporting practice and a potential increase in CT referrals with some trusts reporting 7% of cases as CX3 whilst other up to 30%<sup>23</sup>

2. Upskilling of radiographers – to accelerate CXR reporting and address workforce challenges in radiology, Somerset, Wiltshire, Avon and Gloucestershire and Peninsula Cancer Alliances have dedicated their Transformation Funding towards training radiographers. This has enabled

Given that no specific additional funding has been made available to support the rollout of the NOLCP, Cancer Alliances have welcomed the idea of having a best practice guide to support the wider implementation. The idea of a national platform or forum – that builds on the *existing communities of practice* meetings – to exchange and discuss organisational changes that have been successful in other areas was widely supported.

RECOMMENDATIONS



#### 1

NHS England should consider the development and roll-out of a systematic data monitoring system to help trusts measure the time it takes for patients to progress through the individual stages of the lung cancer pathway and identify potential backlogs in the system.

### 2

NHS England should consider funding the organisation of a national annual conference to allow Cancer Alliances to share and review best practice in the implementation of the NOLCP and discuss how these can be implemented in their area. radiographers to either hot report suspicious CXR or help reduce existing reporting backlogs, thereby freeing up radiologists' time for urgent suspected lung cancer referrals.<sup>24</sup> A trial carried out by Homerton Hospital of immediate reporting of CXR referred from primary care by radiographers and, where possible same-day appointment of CT-scan, reduced the time to diagnosis by 14 days where the CXR were suspicious and by eight days for all patients. The trial further showed no variation in reporting accuracy between those carried out by radiologists and those by radiographers<sup>25</sup>



#### **Technological advances**

Technological advances including Artificial Intelligence recently promoted through the creation of NHSX's National Artificial Intelligence Lab have the potential to further support radiologists in analysing CXR images and help reduce bottlenecks in the diagnostic pathway

**3. Innovative approaches to MDT review** – the introduction of daily 'mini-MDTs' for up to an hour per day where the consultant reviews new CT scans together with the pathway navigator at Surrey and Sussex Cancer Alliance or 'virtual MDTs' where images are being reviewed remotely online by the clinical team at Barts Health NHS Trust have helped process suspicious CXR and CT scans more quickly

#### PATIENT PATHWAY NAVIGATOR

"The change would not have been possible without the patient pathway navigator. They have been critical to the implementation of the NOLCP as they have been that person who can pick up what nobody else within the team would have been able to."

#### Interview with Sarah Hardy-Pickering, Cheshire and Merseyside Cancer Alliances

Navigating the complex system of diagnostic tests, appointment schedules and number of specialists can pose an additional burden on patients at a time when coming to terms with the devastating diagnosis of lung cancer. The introduction of the role of a patient pathway navigator can provide additional support for the patient whilst at the same time supporting the coordination of the diagnostic team across the pathway.<sup>26</sup>

**Turnaround times** – having a navigator who can track appointments, chase testing results and ensure that missed appointments are rescheduled has helped clinical teams process patients through the pathway more guickly. One Cancer Alliance estimated that the appointment of a patient pathway navigator has helped one trust to more than double the number of lung cancer patients receiving treatment by day 49.27

**Patient experience** – having a direct point of contact and someone help ensure that the appointment schedule minimises the number of times a patient has to travel to the hospital can significantly improve patient experience of care. They can also free up clinical time for LCNS to provide more holistic care for the patient, including assisting with decision-making, symptom management and providing emotional support



Service improvements – having a person with oversight and accountability over the entire pathway can help drive service improvements, enable more comprehensive data collection as well as support the identification of backlogs and potential inefficiencies within the system

Given the diverse range of tasks currently carried out by pathway navigators, the introduction of a clear role definition and associated competence framework was highlighted as a helpful step for providing a level of standardisation for the role across the Cancer Alliances.<sup>28</sup>

Throughout the interviews with Cancer Alliances, the introduction of patient pathway navigators was singled out as the one of the most impactful and cost-effective changes made to the pathway as part of the NOLCP implementation.<sup>29</sup>

Yet securing funding for this additional role has been challenging for Cancer Alliances. Not all of the Cancer Alliances interviewed were able to secure the funding required to support the role.<sup>30</sup> Even those that have been successful in securing support for a navigator face uncertainty over whether funding for these posts will continue when Transformation Funding runs out.

RECOMMENDATIONS



## 3

Economic modelling should be taken forward to assess the impact of patient pathway navigators in enabling safeguard efficiencies in other parts of the system in addition to contributing to positive patient experience of care.

#### ACCESS TO ENDOBRONCHIAL ULTRASOUND

EBUS is a ultrasound-guided bronchoscopy by which a flexible tube is used to obtain a tissue or fluid sample from the patient's airways, lungs and, importantly, the associated lymph nodes. Obtaining the samples is an important part in the histological and staging assessment of the suspected lung cancer. However, not all lung cancer patients require EBUS.<sup>31</sup>

Alliance and Transformation Funding has helped increase EBUS scope across a number of Cancer Alliances. Lung Cancer Leads from West Yorkshire and Harrogate, South Cumbria and Somerset, Wiltshire, Avon and Gloucestershire Cancer Alliances reported better access to EBUS locally as part of the implementation of the NOLCP.<sup>32</sup> Nonetheless, having a large number of individual trusts providing EBUS carries risks. If the equipment is distributed to the extent that a trust has only one scope, the service can become hostage to technological failure and regular maintenance outages which can take up to a month to fix.33

A central service with several EBUS scopes in one place can provide a more specialised and consistent service. However, there was no consensus amongst the Cancer Alliances interviewed as to whether a central or localised system is preferable. A network of local systems that allow coordination of and access to EBUS scopes across an Alliance may provide a solution that enables access to EBUS locally whilst ensuring consistency of service provision at the same time.



#### **Diagnostic bundling**

A number of trusts have now introduced a one-stop-shop where the patient undergoes a specific bundle of tests if they are suited for curative treatment (e.g. PET-CT spirometry, EBUS, cardiopulmonary exercise testing and echocardiogram) via a streamlined assessment process and ringfenced time allocated towards it. This has allowed for diagnostic tests to be carried out more quickly whilst reducing the number of times the patient has travel to hospital at the same time.

The importance of quality assurance measures within local EBUS services was highlighted to address variation in the quality of tumour samples. EBUS is a complex procedure that requires high diagnostic accuracy and negative predictive value of staging. It therefore needs to be carried out by a specifically trained professional who is confident in undertaking staging procedures and has regular experience of carrying out the technique. Having to duplicate testing due to insufficient guality tissue sample not only introduces unnecessary delays in the pathway but also negatively impacts patient experience with patients having to undergo this invasive procedure multiple times. Greater Manchester Cancer Alliance recently commissioned an Alliance-wide quality assurance programme for EBUS services, requiring all EBUS centres to collect and submit service performance data.

#### **CENTRAL PET-CT SCAN BOOKING SYSTEM**



#### THE UK HAS LESS THAN HALF THE PET-CT SCAN FACILITIES THAN OTHER **COMPARABLE EUROPEAN COUNTRIES**

With the UK's 78 PET-CT scanners – less than half the number of those available in other EU countries with similar population size e.g. Italy has 185 PET-CT scanners - timely access to PET-CT scans remains challenging for lung cancer patients.<sup>34</sup> This is compounded by the fact the PET-CT scan turnaround times in the nationally

commissioned contract deviates from those stipulated in the NOLCP. With the contract commissioned nationally, trusts do not have much influence locally over accelerating the turnaround times of an external PET-CT scan provider.

A central PET-CT booking system, which enables the clinical team to coordinate PET-CT scan availability in a specific area, may provide an organisational approach towards unlocking efficiencies in this part of the pathway. Work has begun across trusts in London to develop a register through which capacity and waiting times for the available PET-CT scan facilities is managed in the future via a single booking system. This will enable comparison of waiting times across the PET-CT scanners in the area and the patient to be sent to next available.35



#### **Reduced PET scan turnaround times**

Trusts in South Cumbria Cancer Alliance have implemented a system in which the administrator in the radiology department provides daily email updates to the oncology team on the available PET scan images which has helped reduced PET scan turnaround times by 5 days, from 12 to 7 days.

Whilst this approach will enable PET-CT scan capacity to be more efficiently managed (particularly in urban areas), Cancer Alliances in rural parts of the country have warned that such a system would potentially require lung cancer patients having to travel long distances to the next available PET-CT scanner rather than going to the one nearest to them. With the average age of people diagnosed with lung cancer at 72 years, having to travel long distances can be challenging for them.<sup>36</sup>

A network of radiologists within a Cancer Alliances may provide an alternative organisational approach by which the PET-CT scan images are sent to and interpreted by the radiologist with the greatest capacity in that area. PET-CT scan images can be easily shared electronically and therefore do not require the patient to travel.

However, the recent NHS pension tax controversy has highlighted that consultants are being penalised for taking on additional work by increasing the tax they have to pay on their pension contributions.<sup>37</sup> This provides a strong disincentive for consultant radiologists (as well as for other specialities across the pathway) to take on work beyond their contracted capacity, posing an unnecessary barrier towards the potential of addressing backlogs in other parts of the system.

#### RECOMMENDATIONS

### 4

NHS England should review the national PET-CT commissioning guidance to align PET-CT scan reporting turnaround timelines with that set out in the NOLCP.

### 5

The Department of Health and Social Care should urgently review the pension tax system to incentivise consultants to take on additional hours should they have capacity to support other parts in the system.

#### PATHOLOGY TURNAROUND TIMES



"As part of the implementation of the guidelines, some of the trusts were able to re-negotiate their laboratory contracts, allowing them to agree faster turnaround times in line with the NOLCP with the new provider."

#### Interview with Sheron Robson and Kattie Elliott. Northern Cancer Alliance

The pathology pathway provides the greatest area where turnaround times can be further accelerated. Most of the organisational changes have focussed on the earlier stages of the pathway with the majority of Cancer Alliances stating that turnaround times for pathology services still pose considerable challenges towards meeting the NOLCP targets.

Mapping the pathology pathway has been a helpful exercise for some Cancer Alliances in identifying backlogs on the system. South Cumbria Cancer Alliance detected that tissue samples crossed up to 21 hands within the pathology pathway, increasing the risk of delays being introduced or samples being lost in the system. As a result, a local pathology service was established at Blackpool NHS Trust, allowing samples to be assessed locally rather than having to be sent to a number of different centres. This has helped accelerate pathology reporting times by 2 days, reducing it from 5 to 3 days.<sup>38</sup>



#### TISSUE SAMPLES CROSSED 21 HANDS WITHIN THE PATHOLOGY PATHWAYS IN SOME CANCER ALLIANCES

A simple coding system by which urgent cancer samples are marked with a specific colour code or sticker to indicate the need for prioritisation by the pathologist has helped UCLH as well as Cheshire and Merseyside Cancer Alliance reduce waiting times for their lung cancer patients.<sup>39</sup>

As with EBUS samples, the importance of having common high-quality testing standards is crucial to avoid delays in reporting. Pathologist in tertiary centres across Somerset, Wiltshire, Avon and Gloucestershire and in Peninsula Cancer Alliances have developed common testing and reporting standards for all providers across their Alliances to avoid the need for double testing and reporting.<sup>40</sup>

The digitalisation of pathology services by which pathologists can analyse samples and specimen via electronic imaging rather than having to analyse the tissue sample directly, provides the potential to significantly streamline accelerate pathology reporting. The images could easily be shared and tracked amongst centres electronically potentially increasing the accuracy and speed of reporting as well as reducing the risk of samples getting lost in the process. However, the timescales for the wider roll out of digital pathology services and associated service standards still remain to be confirmed.

#### RECOMMENDATIONS



### 6

Professionals involved in tissue sampling procedures should be required to participate in audit and quality assurance programmes to minimise the need to double testing and reporting.

The benefits of the wider roll-out of a digital pathology service should be explored and considered for implementation alongside the NOLCP.

## **5. SYSTEMWIDE CHALLENGES WITHIN THE IMPLEMENTATION OF THE NOLCP**

Significant progress has been achieved over the past two years since the publication of the NOLCP. However, Cancer Alliances have encountered challenges that have prevented a more comprehensive implementation of the optimised pathway. The challenges raised in conversations with Cancer Alliances' lung cancer leads fall under three key categories:

#### Figure 6: Diagnostic capacity



**Diagnostic capacity** 

"Our diagnostic capacity is woefully poor. CT scanning rates, for instance, are much lower than those in France, Germany or Spain."

Interview with Professor Sir Mike Richards, former National Cancer Director

Capacity shortages not only apply to PET-CT scanning but also across other diagnostic technologies. The UK's CT scan capacity of 8 scanners per million population is significantly lower than European average of 21.4. The same is true for MRI scanners at 6.1 per million population compared to an EU average of 15.4 (although this data does not include diagnostic scanners based in non-NHS providers that used by the NHS).<sup>41</sup>

Lack of access to diagnostic capacity in CT, EBUS and PET-CT was a recurring challenge cited by Cancer Alliances. This is particularly acute in rural areas, with Sussex and Surrey as well as West Yorkshire and Harrogate Cancer Alliance reporting that patients have to travel long distances to access CT and PET-CT scan facilities.





Workforce challenges

Continuation of funding



"There is general consensus that capacity poses a problem with everything. Achieving the pathway's turnaround times is just not feasible within the current constraints within each organisation."

Interview with Dr Anny Sykes, Thames Valley Cancer Alliance

Lack of diagnostic capacity impacts turnaround times and patient experience, and has implications for other parts in the system. Uncertainty over PET-CT scan capacity in Thames Valley Cancer Alliance has meant that members of the medical workforce have sought employment elsewhere over concerns around the security of their positions. This has added further pressure to an already stretched clinical workforce across the Alliance's trusts.<sup>42</sup>

#### RECOMMENDATIONS



8

Investment in diagnostic capacity needs to urgently be increased as part of the NHS Long Term Plan's commitment to the wider roll-out of Rapid Diagnostic Centres (RDCs).

### **WORKFORCE CHALLENGES**



#### "Personnel shortages is the root cause of variation in services."

Interview with Professor David Baldwin, Chair of NHSE's Lung Cancer CEG

Organisational changes will only unlock efficiency and accelerated turnaround times to a certain extent. Limited availability of radiographers, radiologists and thoracic oncologists as well as LCNSs was cited as a continuing barrier to the effective implementation of the pathway.

The NOLCP guidance sets out the minimum amount of time specialists should dedicate to lung cancer, including one full-time consultant respiratory physician per 200 newly diagnosed patients per year and one LCNS per 80 newly diagnosed patients. Even in those places where additional funding was available for recruitment of staff, Cancer Alliances often struggled to fill the positions due to a lack of available specialists.



#### WITH ONLY SEVEN RADIOLOGIST PER 100,000 POPULATION, THE UK FALLS SIGNIFICANTLY BELOW THE FU AVFRAGE

Radiology paints a similar picture. With only seven radiologists per 100,000 population, the UK has one of the lowest number of radiologists, significantly falling below the European average of 12 radiologists per 100,000 population.<sup>43</sup> This means that even if investment in diagnostic capacity is made, the number of scans that can be processed will not increase unless existing shortages in the radiology workforce are also being addressed.

#### RECOMMENDATIONS

### 

### 9

Alongside investment in diagnostic capacity, workforce shortages across the lung cancer pathway need to be urgently addressed by the planned NHS People Plan.

### **CONTINUATION OF FUNDING**

No specific additional funding has been made available to support the implementation of the NOLCP. However, Cancer Alliances have been able to dedicate some of the allocated Transformation Funding towards elements of the new pathway. This has allowed an increase in diagnostic capacity e.g. CT or EBUS scopes, training of radiology staff and in some cases the introduction of a patient pathways coordinator.

However, the fact that Transformation Funding is only made available to trusts for one to two years has made long-term planning and the associated introduction of substantial organisational changes difficult. Some positions face a cliff-edge when the Transformation Funding comes to an end.

The additional £400 million allocated to Cancer Alliances towards meeting the cancer ambitions in the NHS Long Term Plan by 2023/24 presents an opportunity to support innovations identified through the implementation of the NOLCP through more sustainable funding.

RECOMMENDATIONS

### 10

Cancer Alliances should carry out an assessment of where investment can make the greatest impact for the roll-out of the NOLCP in their area to inform the development of and funding allocations for their local NHS Long Term Plan implementation plans.

## SUMMARY OF RECOMMENDATIONS

NHS England should consider the development and roll-out of a systematic data monitoring system to help trusts measure the time it takes for patients to process through the individual stages of the lung cancer pathway and identify potential backlogs on the system.

## 2

NHS England should consider the organisation of a national annual conference to allow Cancer Alliances to share and review best practice in the implementation of the NOLCP and discuss how these can be implemented in their area.

### 3

Economic modelling should be taken forward to assess the impact of a patient pathway navigator in enabling safeguard efficiencies in other parts of the system in addition to contributing to positive patient experience of care.

#### 4

NHS England should review the national PET-CT commissioning guidance to align PET scan reporting turnaround timelines with that set out in the NOLCP.

### 5

The Department of Health and Social Care should urgently review the pension tax system to incentivise consultants to take on additional hours should they have capacity to support other parts in the system.

### 6

### 8

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Alongside investment in diagnostic capacity, workforce shortages across the lung cancer pathway need to be urgently addressed by the planned NHS People Plan.

### 10

Cancer Alliances should carry out an assessment on where investment can make the greatest impact for the roll out of the NOLCP in their area to inform the development of and funding allocations for their local NHS Long Term Plan implementation plans.

Professionals involved in tissue sampling procedures should be required to participate in audit and quality assurance programmes to minimise the need to double testing and reporting.

The benefits of the wider roll-out of a digital pathology service should be explored and considered for implementation alongside the NOLCP.

Investment in diagnostic capacity needs to urgently been increased as part of the NHS Long Term Plan commitment to the wider roll-out of Rapid Diagnostic Centres (RDCs).

Process gap analysis: a joint review of the local lung cancer care process, bringing together all members of the team across the referral pathway to identify the greatest backlogs in the system

#### Wessex Cancer Alliance

**Outcome:** the approach has allowed trusts within the Alliance identify where changes are most needed within the pathway, ensure alignment across the team for meeting the targets and inform the business case for targeted funding requests

#### Direct to CT reporting



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**Outcome:** the approach has helped streamline the referral process and ensure that urgent cases are identified and processed more quickly. In some trusts this approach has helped reduce the mean time from flagged CXR to MDT discussion by 15 days.44

Somerset, Wiltshire, Avon and Gloucestershire Cancer Alliance

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**CXR coding system:** a number or colour coding system that highlights urgent cases for immediate escalation through labels such as CX1 'Normal', CX2 'Equivocal', CX3 'Need for CT'. CX3 would trigger an automatic CT booking request, with urgent scans highlighted to the CT booking clerk and the patient simultaneously being informed by a CNS

South Cumbria Cancer Alliance

**NOLCP delivery groups:** the elements of the NOLCP were presented at local roundtable, bringing together members from the primary and secondary care team. 'NOLCP delivery groups' were subsequently set up for each of the trusts to oversee the pathway implementation, including specialtyspecific action plans

South Cumbria Cancer Alliance

**Outcome:** ongoing comparison of trusts' performance has helped focus clinical leadership in trying to meet the targets as well as identifying and sharing of good practice across the Alliance

60

**Reporting radiographers:** training of local radiographers to enable them to hot report suspicious CXRs or take on other additional reporting tasks to free up radiologists' time to assess urgent suspicious cases

Somerset, Wiltshire, Avon and Gloucestershire Cancer Alliance / Peninsula Cancer Alliance



**Outcome:** upskilling the radiographer workforce has helped reduce the burden on radiologists and allowed suspicious CXRs to be processed more quickly



Flexible approaches to MDTs: 'virtual MDTs' where all new cases are reviewed by a chest physician and specialist thoracic radiologist via an electronic messaging system or daily 'mini MDTs' in which the consultant reviews the case with the MDM coordinator for one hour each day

#### Surrey and Sussex Cancer Alliance



### **APPENDIX** Best practice examples across the NOLCP implementation



### **GLOSSARY**

- CEG Clinical Expert Group CT Computerised Tomography CXR Chest X-Ray EBUS Endobronchial Ultrasound GIRFT Getting It Right First Time ICS Integrated Care Systems MRI Magnetic Resonance Imaging MDT Multidisciplinary Team NLCA National Lung Cancer Audit NLCFN National Lung Cancer Forum for Nurses NOLCP National Optimal Lung Cancer Pathway PET-CT Positron Emission Tomography–Computed Tomography RAPID Rapid Access to Pulmonary Investigation Days -programme RDCs Rapid Diagnostic Centres SCLC Small Cell Lung Cancer UKLCC United Kingdom Lung Cancer Coalition
- UCLH University College London Hospitals

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