



# **Lung Cancer best practice guidance**

**A practical guide to support implementation of the GIRFT Lung Cancer National Report recommendations**

**November 2022**

## Who should read this guide?

This guide will be of interest to clinicians and operational managers working in lung cancer services at trust level, as well as primary care and system colleagues for information.

## What is the guide's aim?

This guide identifies best practice for key recommendations from the GIRFT Lung Cancer National Report relating to suspected cancer patients from referral to diagnostics. It highlights the ambitions services should be aspiring to, to meet the recommendations, practical advice on how to implement these, potential barriers and mitigations to take and examples of good practice.

Supporting resources are highlighted in the guide and available to download from GIRFT's Best Practice Library: [Lung Cancer – Getting It Right First Time – GIRFT](#).

## What the guide contains:

### Best Practice Guidance

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# Best Practice Guidance

## Referral from Primary Care to diagnostic CT scan

### Lung cancer Recommendation 1

Respiratory teams to immediately move to providing proactive management of unexpected abnormal chest radiology and work with radiology departments to implement pathways that deliver a three working day turnaround from abnormal chest X-ray or referral to CT scan report.

### Ambition

In all scenarios, the aim should be for a CT scan to be taken and reported within 72 hours of the referral (pathway 1 and 2) or request (scenario 3 and 4).

There are a number of possible “optimal” pathways to a rapid CT scan in patients with suspected lung cancer and trusts will run more than one of these in parallel. Where a CXR is required, best practice is for the CXR to be ‘hot’ reported while the patient is still in the radiology department, or at least on the same day, often by increased use of radiographer reporting to compensate for radiologist staffing shortages. Some Trusts have successfully implemented pathways where the CXR step is skipped and all patients with suspected lung cancer go straight to CT scan.

#### 1. Primary care straight-to-CT

If the patient has symptoms or signs of lung cancer, the primary care team refers the patient to the radiology department for a diagnostic assessment. It is very likely that the patient will require a CT scan even if a CXR is normal, and so local agreements can allow the CXR step to be skipped and the patient booked directly for a CT scan. Otherwise, the patient is booked for a CXR with contingency to hot report and proceed to carry out a CT scan immediately afterwards. Radiologists should be empowered to proceed in this manner through local policies.

The primary care referrer retains the responsibility for receiving the imaging reports, informing the patient, and making onward referrals to the lung cancer team. However, abnormal imaging results should be flagged to the lung cancer team and by local agreement may trigger their input even before formal 2-week wait referral.

#### 2. Secondary care straight-to-CT

If the patient has symptoms or signs of lung cancer, the primary care team makes a 2-week wait referral to the secondary care lung cancer team for a diagnostic assessment. It is very likely that the patient will require a CT scan even if the CXR is normal, and so local agreements can allow for this pathway to operate even if there is no recent CXR available. The referral is triaged by senior member of the lung cancer team (usually a consultant Respiratory physician) on the day of receipt, and a CT scan is requested.

Where possible (especially where CXR is suggestive of cancer), a member of the lung cancer nursing team may meet the patient when they attend for their CT scan, to provide support and to obtain information that will help guide downstream investigation if required and can avoid the need for a subsequent out-patient appointment. The secondary care team retains the responsibility for receiving the imaging reports, informing the patient, and carrying out further diagnostic work-up.

For those patients whose CT scans do not suggest lung cancer, they can be discharged back to primary care without the need for an out-patient appointment, or appointed to a more appropriate out-patient service.

### 3. **Abnormal CXR**

For patients having a CXR where ‘possible lung cancer’ is noted as an unexpected finding, the report should be flagged-to and triaged-by the secondary care lung cancer team immediately.

Through local agreement with the primary care services, this should trigger the lung cancer team to take responsibility for further management of the patient. This will usually mean informing the patient of their abnormal imaging and organising an urgent CT scan as above. However, Radiologists should be empowered to proceed directly to a CT scan through locally agreed policies before the input of the lung cancer team.

### 4. **Self-referral**

By local agreement, patients may refer themselves to a radiology department for a CXR. Ideally this is not reported with contingency to proceed to carry out a CT scan immediately afterwards. In either case, the abnormal imaging should be flagged to the lung cancer team, who take on the responsibility for receiving, informing the patient, and carrying out further diagnostic work-up.

Barrier to implementation	Mitigation
Recent eGFR measurement unavailable	Point of care eGFR testing Mandate result prior to referral Reassurance of low risk of contrast-induced nephropathy
Communication with patients	Provide simple information at all contacts to normalise the need for further diagnostic steps – <a href="#">see example here</a>
Competition with other cancers	Lung cancer patients have a particularly poor outcome and risk of deterioration when pathway is slow.
Inappropriate referrals	Develop local guidelines and feedback issue to primary care or other referrers

Resources needed for managing pathway and triage	Time for triage does not usually require additional resources but can be released from time saved not seeing patients with normal CT scan. Appointment to navigator posts in radiology and/or the lung cancer team can facilitate and failsafe the pathway.
Radiology capacity	Not doing additional scans, just scheduling them differently

**Exemplar practice:**

- At **Royal Liverpool University Hospital**, all patients who have a thoracic imaging test that raises concern for lung cancer, have a code applied to the radiology report which triggers automatic entry onto an electronic spreadsheet. The respiratory medicine consultant team proactively check this list every day and take ownership of the next steps, contacting patients and organising the further tests as needed, without the need to wait for a ‘referral’ to their service.
- **Brighton and Sussex University Hospitals’** planning group involved all relevant parties including the five referring CCGs to set up a radiology-led pathway. The team created a dedicated CXR referral form that required a minimum dataset for entry into the pathway, and all patients were informed via a patient information leaflet that they may be recalled for a CT scan. CXR reporting was rationalised down from 31 to six reporters, fully trained in the pathway, and who are chest specialists. Subsequent assessments showed that patient experience had improved, GP feedback was positive and there was a significant shortening of the diagnostic pathway.

**It is recommended against routinely seeing patients in the lung cancer clinic if CT scan does not suggest lung cancer.**

**It is recommended that all services carry out real-time monitoring of the time taken for the whole pathway and for the individual components using a tool such as [National Optimal Lung Cancer Pathway Model](#). This allows benchmarking, identifies bottlenecks, and identifies deteriorating performance early.**

## CT scan to MDT Discussion

### Lung cancer Recommendation 2

Key diagnostic investigations should be completed within 21 calendar days of the start of the pathway by adopting best practice recommendations on service configuration and pathway planning.

#### Ambition

In all scenarios, the aim should be for a seamless pathway through a bundle of investigation, completed within 21 days, without any unnecessary delays, and with as few individual hospital visits as possible, leading to a single treatment MDT discussion of the results.

The diagnostic phase of the pathway is usually undertaken by Respiratory Physicians alongside the specialist nursing team. Investigations should be carried out in parallel to minimise any delays, and as far as possible any tests and outpatient visits should be co-ordinated, including the use of telephone appointments, to minimise the number of individual hospital visits for the patient.

The following best practice points should be implemented:

- Patients referred on a cancer pathway must be informed of this and given an expectation of the next steps and likely timescales. This can be facilitated by written patient information leaflets available to primary care teams – [see example here](#)
- Daily triage of patients should be undertaken by a clinician with expertise in lung cancer diagnostics, in order that patients can have their pathway planned in advance through the use of diagnostic bundles, and where appropriate, without the need for a prior face-to-face appointment. This must be recognised in job plans.
- Decision-making by the triage team is enhanced when adequate clinical information is provided. A minimum dataset of referral information should be expected from referrers.
- Where resources allow, it can be helpful for an assessment by a CNS to take place at the time of patient attendance for a CT scan. This can provide useful clinical information, highlight the need for smoking cessation/pre-habilitation, as well as providing information and support for the patient ([Urgent CT scan appointment triage form](#)). Local arrangements to highlight those patients most likely to have a lung cancer to the nursing team should be implemented to ensure the best use of specialist nursing time.
- Triage should include the facility for patients without cancer evident on a CT scan to be discharged without an outpatient appointment (can be done by letter or telephone) or moved into a more appropriate service – [see example here](#).
- Capacity for assessing patients, requesting, and reviewing tests should be spread across the working week and where possible carried out daily to avoid batching and undue delay. Use of telephone consultations is encouraged.

- Nationally agreed diagnostic bundles (standards of care) should be agreed locally and implemented robustly to ensure bundles of tests are carried out in parallel with minimal need for MDT input (<https://www.roycastle.org/app/uploads/2019/11/Lung-Cancer-NHSE-DSOC-Final-for-NHSEV2.pptx>).
- Schedule physiological tests such as lung function and echocardiogram to be done immediately before/after an outpatient visit to minimise visits to the hospital.
- Carved-out slots with the PET-CT provider can speed up the pathway and allows the lung cancer team to better co-ordinate downstream investigations.
- Ensure that day case capacity for patients requiring recovery, monitoring and treatment after an image-guided biopsy is adequate and does not act as a barrier.
- Members of the Respiratory team can train in ultrasound-guided neck-node biopsy that can allow same day sampling in some patients, and releases radiologist time for other activities.
- All lung cancer teams should have an administrative navigator post integrated into their specialist nursing team to facilitate the complex pathways. This can greatly improve communication with patients regarding next steps; avoiding misunderstanding, dissatisfaction or missed appointments.
- Ensure that supportive care is considered immediately from the point of referral – including smoking cessation prescribing/referral, dietician support, exercise prescription/rehab, and palliative care input.
- Carry out real-time monitoring of the time taken for the whole pathway and for the individual components using a tool such as the [National Optimal Lung Cancer Pathway Model](#). This allows benchmarking, identifies bottlenecks, and identifies deteriorating performance early.

Barrier to implementation	Mitigation
No time in job plan for triage	Triage reduces the number of patients seen face to face in clinic and so releases clinical time.
Telephone consultations inappropriate in cancer patients	Results of patient satisfaction surveys suggest the opposite as long as these consultations are carried out appropriately and effectively. Inclusion of the nurse specialist in telephone consultations is recommended.
Triage should be a multi-disciplinary exercise	Respiratory physicians who are members of the lung cancer team should be experienced and skilled enough to make a diagnostic plan in the vast majority of cases.

### Exemplar practice:

- Some organisations have introduced shared electronic diaries to enable pre-booking following on from triage or have enabled the radiology department to book directly into a clinic slot where lung cancer is evident.
- **Liverpool Heart and Chest NHS Foundation Trust** have abandoned the traditional outpatient clinic model and moved to a system whereby the majority of the diagnostic work-up is done virtually, using telephone assessment/consultation rather than using face-to-face appointments. When properly implemented and resourced, such a service can be efficient, timely and patient-centred.

**It is recommended against routinely seeing patients in the lung cancer clinic if CT scan does not suggest lung cancer.**

**It is recommended against routinely requiring an MDT discussion of a CT scan in order to progress patients through the rest of the pathway.**

## PET-CT scanning

### Lung cancer Recommendation 3

Renegotiate the national PET-CT contract to include a 5 calendar day turnaround from request to report and available imaging for initial investigations of new diagnoses of lung cancer.

#### Ambition

For a reported PET-CT scan to be available to the clinical team within 5 calendar days of the request.

Where an initial CT scan has not excluded cancer, PET-CT is recommended in most scenarios to provide risk assessment, resolve diagnostic uncertainty, to accurately stage disease and to guide the most appropriate biopsy site.

The following best practice points should be implemented:

- There should be a rapid and seamless process between the request, the scan being taken, the report being issued, and the report becoming available to the requesting clinical team (often at a separate trust). PET-CT providers should monitor these timescales, report them to their commissioners, and work to reach the 5 calendar day ambition.
- Having “protected” scans available to the lung cancer team allows patients to be booked into these slots directly which reduces the time to scan. Moreover, this allows the clinical team to work through availability and transport issues and to better plan downstream tests and follow-up.



- There should be no requirement for a patient to be discussed in an MDT to allow a PET-CT to be requested.
- All requests for PET-CT should be made electronically, and reports sent electronically to speed up the process and provide an audit trail.
- Sharing capacity across a region or clinical network can make best use of existing capacity and reduce the time to scan for patients able to travel.
- Process mapping the pathway may reveal bottlenecks that can be addressed.
- Carry out real-time monitoring of the time taken for the whole pathway and for the individual components using a tool such as [National Optimal Lung Cancer Pathway Model](#). This allows benchmarking, identifies bottlenecks, and identifies deteriorating performance early.

Barrier to implementation	Mitigation
Lung cancer patients should not be prioritised with protected scans	Lung cancer patients have an especially poor prognosis, and a risk of deterioration during the diagnostic phase that is not the same for some other tumours. The lung cancer diagnostic pathway is complex and an early PET-CT is needed to plan other downstream tests.
MDT discussion is needed to ensure PET-CT scans are used appropriately	Experienced Respiratory physicians are able to determine this in most cases, especially if they use diagnostic bundles.

### Exemplar practice:

- **Greater Manchester Cancer Alliance** have pooled their PET-CT capacity across the region, using Inflex to act as an availability and booking system. This allows clinicians and patients to choose a date for their scan from a range of providers, making best use of the available capacity, while also providing patient choice and reducing the time to scan for some patients.
- Some PET-CT providers give protected scan slots to referring lung cancer teams, allowing the specialist nurses at local trusts to discuss the available dates/times with patients face to face in the clinic or over the telephone. This provides patients and family with immediate certainty as to when their scan will take place, and allows the nurses to also agree dates for other downstream tests or appointments all at the same time.

## EBUS Service

### Lung cancer Recommendation 5

EBUS for lung cancer should be available within five calendar days of request and must comply with the national service specifications, with regular monitoring of performance by local commissioners.

#### Ambition

EBUS, being a critical diagnostic and staging tool, needs to be provided with speed, flexibility, adequate capacity, and the necessary skill.

In order to achieve a high quality EBUS service, the following best practice points should be implemented:

- All providers of EBUS should ensure full compliance with national service specifications (<https://www.roycastle.org/app/uploads/2020/12/NHSE-EBUS-Service-Specification-Final-Oct-19DRB.pdf>).
- This includes regular assessment of diagnostic and staging accuracy to ensure performance is adequate, with the results being shared within the Cancer Alliance.
- Clinical teams should improve their selection of patients for EBUS by following national diagnostic standards of care (<https://www.roycastle.org/app/uploads/2019/11/Lung-Cancer-NHSE-DSOC-Final-for-NHSEV2.pptx>) and ensuring a reported PET scan is available where indicated. It is particularly important that EBUS is not “rationed” to cope with a lack of capacity.
- Systems should be implemented to allow real-time booking of EBUS procedures, and such bookings should specify clearly whether a diagnostic or a staging procedure is required.
- We recommend that trusts set an ambition of providing the test within five working days of the request rather than the seven days suggested in the national service specification.
- EBUS providers to establish a demand and capacity model for staging and diagnostic EBUS and agree sharing of resources with neighbouring trusts if capacity to provide these tests within five calendar days of request is insufficient.
- This will include cross-cover for annual leave and sickness, support for ongoing training and professional development and allowing patients to transfer into another service where access times cannot be met within their local service.
- Trusts must ensure that endoscopy facilities are made available to the lung cancer service, with appropriate prioritisation with regards to the NOLCP, in accordance with demand and capacity models.
- All trusts should ensure they have access to GA/deep sedation for those patients unable to tolerate the procedure under light sedation.

**Exemplar practice:**

- Greater Manchester Cancer Alliance have developed a regional network of EBUS providers who have pooled their capacity and provided access to a real-time booking system allowing patients to choose the most convenient time and place for their procedure.

## Effective Multidisciplinary meetings

### Lung cancer Recommendation 21 & 22

Review operational arrangements for multidisciplinary working to ensure it is as timely, efficient, and effective as possible and meeting the needs of patients.

Improve timeliness and effectiveness of communication from the MDT to lung cancer patients and primary care.

### Ambition

Multidisciplinary teams should promote processes that allow straightforward cases to proceed rapidly through diagnosis and treatment without delay but ensure that more complex cases receive adequate and appropriate specialist multidisciplinary discussion to plan their diagnostic work-up or management plan.

The outcomes from multidisciplinary discussions should be recorded clearly in the medical record, relayed to the patient/primary care team, and actioned at the earliest opportunity.

The development of an MDT approach in the UK has delivered significant progress in enabling a more standardised approach to the diagnosis and treatment of cancer, along with providing a forum for education, peer support for clinicians and protected time for sharing opinions on complex cases. For the patient, the advantages have meant that they are more likely to receive treatment and that this treatment is more likely to be concordant with contemporary guidelines, with less variation in access to treatment. For trusts however, it represents an expensive resource in terms of clinician time which must be used in a time effective manner.

Culturally, decision-making by Medical Decision Making (MDM) has become a victim of its own success, and there has been mission creep leading to inefficiencies in practice, such as over-reliance on MDM rather than individual clinician-led action, multiple re-discussions risking inconsistent management plans and overly long meetings leading to decision-fatigue. This impacts delays to a patient's care and have led to less of a sense of responsibility for individual clinicians driving a pathway forward and being accountable for reaching treatment decisions swiftly. Effective leadership (see [MDT Lead Clinician job](#)

[description template](#)), commitment of core members, clear roles and responsibilities within the team, and supportive team dynamics are paramount for effective multidisciplinary decision-making. As the complexity of patients and their treatment options increases, review of the ways in which the team and meetings are organised both in terms of structure and function is important in ensuring the best outcome for the patient within the constrained resources of the NHS, as outlined in recent guidance from NHS England (<https://www.england.nhs.uk/wp-content/uploads/2020/01/multi-disciplinary-team-streamlining-guidance.pdf>).

The following considerations and changes can ensure that the ambitions recorded above can be achieved whilst making the most efficient use of clinical time:

- MDT meetings for patient in a cancer service should be designated according to their purpose e.g., treatment MDT, diagnostic MDT, nodule MDT.
- Time needed for MDT meeting preparation as well as post-meeting actions should be quantified and recognised in job plans.
- All members of the MDT should be provided with adequate resources, particularly administrative support, IT and private clinic space, to enable them to effectively carry out their roles.
- Patients on a diagnostic pathway should not normally need to be discussed in an MDT until all their investigations are complete. The robust implementation of locally agreed diagnostic standards of care helps to speed up the diagnostic pathway but can also prevent unnecessary MDT discussions (<https://www.roycastle.org/app/uploads/2019/11/Lung-Cancer-NHSE-DSOC-Final-for-NHSEV2.pptx>).
- Although a formal weekly diagnostic MDT can be helpful for some cases that do not easily follow the SOC's, this does inevitably lead to delays, which can be avoided by a more responsive ad hoc arrangement, for example by email or in a Teams channel.
- Referrals for MDT discussion come from a variety of sources and are often inappropriate. This is especially true of referrals from acute services and other cancer teams. Lung cancer teams should develop and promote their ability to offer advice in real time rather than requiring referral for an MDT discussion. A useful guide is that if it does not need more than 2 people to make a decision, it does not require an MDT discussion.
- In order to filter out unnecessary, inappropriate or low-value MDT discussions, it is good practice to set aside job planned time 1-2 days before the MDT meeting, for an experience clinician to confirm appropriateness, or to move on patient care in other ways. Anecdotal evidence suggests this can reduce the number of cases on an MDT by around 30%.
- Patients who have died before treatment can commence, or patients who are very clearly not suitable for anti-cancer treatment, do not benefit from multidisciplinary discussion. Instead, processes should be implemented so that adequate data on these cases are recorded for national registration and audit that bypasses the treatment MDT meeting.

- Treatment MDT should run at least weekly, depending on the workload. We suggest 3 hours as a maximum length of any meeting, and meetings over 2 hours should include a 5-10 minute break.
- MDT meetings scheduled on a Monday will have to be cancelled at least 5 times a year due to Bank Holidays. Lung cancer teams should plan ahead for such cancellations and implement mitigations so that patient care is not delayed.
- The treatment MDT should be attended by its core membership (or appropriate cover) for 52 weeks of the year, particularly where services are commissioned from external trusts. Cover must be provided for annual leave to prevent unnecessary delays in decision making.
- Where resources allow, we encourage teams to include more than one oncologist/surgeon in the MDT meeting which can increase the use of second opinions where appropriate.
- Ensure adequate physical space, IT infrastructure, and administrative support in the form of a pathway navigator and/or MDT co-ordinator to support the meeting and post-meeting communication and activities.
- It is good practice for the multidisciplinary team to review the information that is recorded on the discussion in real time (for example by projection or on a shared screen), or for a clinical member of the team to review the records immediately after to ensure these are accurate and complete.
- MDT etiquette should be agreed and adhered to e.g., pre-meeting preparation, arriving on time, mobile phones off, consideration for all opinions and voices.
- Assessment of the effectiveness of the MDT should be assessed intermittently using a validated tool such as MDT-FIT (<https://www.mdtfit.co.uk>).
- Patients with lung cancer should be informed of the MDT recommendation within 24 hours by either face to face or virtual consultation. The primary care physician should be updated immediately following this interaction.
- Multidisciplinary teams should review the range of written, electronic and verbal methods of support they provide patients, to ensure it is accessible and effective.

Barrier to implementation	Mitigation
No time in job plan to filter out cases from the MDT	Cases removed from an MDT meeting save time for ALL the attendees at the meeting, so the impact is multiplicative. Allocating time for this process improves overall efficiency.
Patients need discussion in an MDT meeting to plan their diagnostic work-up.	Most patients follow a common diagnostic pathway that can be protocolised though locally agreed standards of care, saving clinical resources and reducing time in the pathway.

### Exemplar practice:

The treatment MDT meeting at **Royal Derby Hospital** would regularly overrun its allocated 2 hour time slot, causing general dissatisfaction, forcing rushed discussion of later cases, and causing clinicians to be late for clinics. They introduced a 30 minute “pre-MDT” review of the agenda 2 days before the meeting, attended by the lead clinician and a specialist nurse. This reduced the MDT meeting from regularly overrunning 2 hours to an average of 75 minutes, sometimes even finishing within 1 hour. This increased satisfaction from the team members and allowed all cases to receive appropriate consideration.

**It is recommended against routinely requiring an MDT discussion of a CT scan in order to progress patients through the rest of the pathway.**

## Resources to support implementation

Resources to support this guidance can be accessed on the [GIRFT Best Practice Library](#) including:

- [Lung Cancer Discharge from cancer pathway template letter](#);
- [Lung Cancer MDT Lead Clinician job description template](#);
- [Lung Cancer Urgent CT scan triage form template \(nursing checklist\)](#).
- [National Optimal Lung Cancer Pathway Model](#)

## About GIRFT and the GIRFT Academy

Getting It Right First Time (GIRFT) is an NHS programme designed to improve the quality of care within the NHS by reducing unwarranted variation. By tackling variation in the way services are delivered across the NHS, and by sharing best practice between trusts, GIRFT identifies changes that will help improve care and patient outcomes, as well as delivering efficiencies such as the reduction of unnecessary procedures and cost savings.

The GIRFT Academy has been established to provide easily accessible materials to support best practice delivery across specialties and adoption of innovations in care.

Importantly, GIRFT Academy is led by frontline clinicians who are expert in the areas they are working on. This means advice is developed by teams with a deep understanding of their discipline, generated by the management of services on a daily basis.

The GIRFT programme is one element of the government's response to the recommendations of Lord Carter's report on operational productivity and performance in NHS acute trusts in England, published in 2016. The Carter Report highlighted the GIRFT programme within its theme on quality and efficiency, outlining the orthopaedic GIRFT pilots which identified the scale of benefit to tackling unwarranted variation.

**For more information on the GIRFT programme, visit our website at:**

[www.gettingitrightfirsttime.co.uk](http://www.gettingitrightfirsttime.co.uk)

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