

**Reference Number:** FOI2021/166  
**From:** Commercial  
**Date:** 11 May 2021  
**Subject:** Copies of the procedures and policies which you have in place for treatment of lung cancer, specifically undertaking biopsies of lung lesions, and provision of radiotherapy

Q1 I would be grateful if you would provide me with copies of the procedures and policies which you have in place for treatment of lung cancer, specifically undertaking biopsies of lung lesions, and provision of radiotherapy. If these have been recently updated, please provide me with copies of those which were in existence in 2017 and 2018.

I am wanting to know what (if any) policy the Trust has in place in relation to undertaking biopsies of suspicious lesions, how these are done, and what the protocol is if the lesions are considered too small to biopsy.

I would also like to know what (if any) policy the Trust has in place for provision of radiotherapy – what factors are taken into consideration when considering this treatment option and whether there needs to be a formal diagnosis of cancer based on a biopsy before radiotherapy can begin, or whether treatment can begin based on other considerations (for example, if the lesions are too small to biopsy).

A1 Please find attached the documents regarding CT guided lung biopsies for lung lesions.

- [CT Guided Chest Biopsy SOP](#)
- [Patient information CT guided lung biopsy Oct 2017](#)
- [Protocols\\_Biopsy\\_RDA Pt Transfer POST BIOPSY\\_03052018](#)
- [Protocols\\_Biopsy\\_Requesting of post biopsy CXR\\_03052018](#)

Small lesions, unable or difficult to biopsy, would be dealt with in the vetting stages with the patients more than likely referred back to MDT; the patients should never get to us if the lesion is too small. There are however times when due to location, access to the lesion can present significant challenges but again this is a clinical decision.

Radiotherapy is not provided by LHCH. It is provided by Clatterbridge Cancer Centre. Please re-direct your query and contact them directly via the below links:

- [ccf-tr.foi@nhs.net](mailto:ccf-tr.foi@nhs.net)
- <https://www.clatterbridgecc.nhs.uk/about-centre/access-to-information/freedom-information-foi>

## Clinical Management of Referral, Booking and Procedure for CT Guided Lung Biopsy Standard Operating Procedure

For completion by Author			
Author(s) Name and Title:	Mr Stephen James Taylor- CT Clinical Lead Radiographer		
Scope:	Trust Wide	Classification:	Clinical and Clerical
Version Number:	1.0	Review Date:	February 2022
Replaces:	n/a		
To be read in conjunction with the following documents:	Clerical Management of Referral and Booking for CT Guided Lung Biopsy Standard Operating Procedure		
Document for public display:	Yes		
Executive Lead	Dr Raphael Perry		

For completion by Approving Committee			
Equality Impact Analysis Completed:		Yes	
Endorsement Completed:	Yes	Record of Changes	Nil to report
Authorised by:	Clinical services governance committee	Authorisation date:	June 2021

# Contents

Document Statement .....	3
1. Roles and Responsibilities .....	3
2. Controlled Document Standards .....	3
3. Procedure.....	3
4. Policy Implementation Plan .....	6
5. Monitoring of Compliance.....	7
6. References .....	7
7. Appendices.....	8
8. Endorsed By:.....	9
9. Record of Changes .....	10

# Document Statement

## 1. Roles and Responsibilities

- **The Referrer-** This is the clinician who has submitted the referral for CT guided lung biopsy. It is their responsibility to ensure all fields are completed on the referral form. Any fields not supplied will result in the referral being returned to the referrer.
- **Admin Team-** This is the administration team based in radiology; they will be responsible for booking the patient in CRIS and arranging the TCI by PAS. They will also contact the patient to inform them of their appointment time and any stoppage of medications requested by the radiologist.
- **Radiologist-** The radiologist is responsible for reviewing the referral and accepting the request, as well as performing the procedure.
- **The Office Manager-** The office manager will be responsible for coordinating the administration and booking of patients and escalating any capacity issues.
- **CT Clinical Lead Radiographer-** Responsible for overseeing the office manager and dealing with escalations and creating additional capacity when required.
- **Nursing Staff-** Will be responsible for admitting the patient on to the receiving ward and requesting any additional tests as requested by radiology, as well as escorting any patients back to the ward when required.
- **Radiographer-** Responsible for facilitating the patient's arrival into CT for the procedure to take place with all relevant test results available and assisting during the procedure.
- **RDA-** Responsible for transferring the patient back to the receiving ward and handing over the patient to the receiving ward if the patient is fit for transfer without Nurse escort.

## 2. Controlled Document Standards

## 3. Procedure

### Admin Team

Referral received into department by either EPR or paper external referrer. If from an external referrer Admin team check that all fields have been completed if not form will be returned to referrer. The Admin team will then input details onto EPR. The admin team will then print the referral and show it to one of the three Biopsy Radiologists.

### Radiologist

The radiologist will review the request checking that all results are within normal range and review prior imaging to assess if biopsy is feasible. If all results and prior imaging are acceptable, the radiologist will accept the request. From this point radiology take ownership of the patient. The radiologist will review patient's medication and make a decision with regards stopping any medication such as blood thinners if appropriate and the requisite time from stopping medication to it being safe to biopsy. The radiologist will document this on the printed referral form. The radiologist will then hand the referral form back to the Admin team. If the referral is to be rejected

Version No 1.0	Current version is held on the Intranet Check with Intranet that this printed copy is the latest issue	Page 3 of 10
----------------	---	--------------

the radiologist should state the reasons and the form be sent back to the referrer by the admin team.

### **Admin Team**

The Office Manager will receive the request back from the Radiologist. The Office Manager will then review the radiologist instruction to see if there needs to be any stoppage of medication. If there is, work out the date that the procedure should be done on. The Office Manager will then review the diary to find the next available slot (this must be within seven days of receiving the request). If there are no available slots within the seven day timeframe the Office Manager will escalate this to the CT Clinical Lead Radiographer who will review the diary and cancel/rebook patients to accommodate the biopsy within the seven day timeframe. Once a time has been found the request will be passed by the Office Manager to the admin team with instructions on which slot book the patient in CRIS. They will then arrange the TCI and W/L on PAS and inform the CNS team of the date of the biopsy. If LCN referral to check that the patient is aware that they are coming for biopsy. The team will then phone the patient to confirm appointment and a conformation letter will be sent out dependant on time scale.

### **Day of Admission**

#### **Radiographer**

- On the day of the biopsy the lead radiographer will review the patient's notes on EPR and CRIS. If any additional tests are required this will be inputted onto the CT Guided Lung Biopsy pro forma and communicated via telephone to the Nurse looking after the patient on the ward.
- If any results are out of normal range the radiographer will communicate this to the radiologist performing the procedure for guidance on how to proceed.

#### **Ward**

- On admission Nurse to contact surgical registrar to clerk the patient.
- Check EPR for any additional test required by radiology.
- Cannulate patient.
- EPR documents to be completed- Nursing Admission and Risk Assessment (Day Case) – VTE assessment on Admission.
- Flow Sheets- Vital Signs Measurements – Assessment and Card Day Case.

#### **Radiographer**

- If all results are obtained and within range the radiographer will arrange for the porters to bring the patient from the ward at the allotted time.

### **Prior to the procedure**

- Once the patient arrives in the department, they will be consented by the radiologist, this does not occur in the scan room but the patient preparation area. If the patient consents to the procedure the radiologist and radiographers will carry out a WHO checklist. Following the RCR Guidance on the implementing safety checklists for radiological procedures. This will include confirming the team and will include performing radiologist, patient lead radiographer, scanning lead radiographer and Radiology Department assistant. The team need to be aware of any risk factors and review the patient's blood results and PFTs. Any allergies should be noted. Previous imaging on PACS should be reviewed. Are all IRMER requirement's met should also be noted.
- Prior to bringing the patient into the scan room to start the procedure all members of the team should be aware of; patient name, biopsy site, lesion site and consent has been completed. Are the team aware of any unexpected events. Is all the relevant equipment in place including biopsy trolley, biopsy needles and pneumothorax drain. All this should be recorded on EPR prior to the patient entering the scan room.
- Once the WHO has been completed the patient is brought into the scan room and the biopsy is performed.

### **Post Procedure**

- Immediately after the biopsy the radiologist will dress the wound appropriately and then dispose of all equipment and sharps correctly. The radiographers will transfer the patient onto a trolley and remove the patient from the scan room. The RDA will then perform obs on the patient to include Blood Pressure, Heart Rate and O2 sats, and any other requested by the radiologist. Dependent on these result and if there are any complications post procedure the radiologist will make a decision on if it is safe for the RDA to transfer the patient back to the ward. If this is the case the radiographer will contact the receiving ward to inform them that the procedure had been completed. Porters will then be arranged and the patient transferred back to the ward. The RDA will then handover the patient to the receiving ward informing them of biopsy site, obs post procedure any complication and the time of CXR.
- If the patient is deemed by the radiologist to require a nurse escort is required the radiographer will contact the receiving ward to request a nurse escort. Once the nurse arrives in the ward the radiographer will hand over the patient to the receiving nurse informing them of biopsy site, obs post procedure any complication and the time of CXR. They will then arrange porters to take the patient back to the ward.
- The performing radiologist will label the samples taken for transfer to the lab. The RDA will take them to the lab post procedure.
- The radiologist will then complete the form on EPR detailing the procedure, Anaesthetic used, needle used etc. They will complete if there were any complication, OBS and post procedure care instructions for the ward to follow.
- The radiographer will order a CXR at the time requested by the radiologist.
- The RDA will transfer the samples to the Lab.
- The patient will return to X-ray at the specified time for their CXR.

### **Post-Procedure Care On the Ward**

- Read all post procedure documentation.
- Flow Sheets – Assessment and Care Day Case add parameters CT Guided Biopsy and Discharge Checklist.
- Flow Sheets – Vital Signs Measurement observations half hourly for 1 hour, if stable then continue hourly until discharge. If signs of respiratory distress or deterioration in patient condition contact surgical registrar.
- Flow Sheets – Comfort Checks hourly. Check wound every 20-30 minutes and document.
- Flow Sheets – Assessment and Care Day Case Risk Assessment Bead Rail Assessment (if required).
- Chest X-ray 1 hour post procedure.
- Chest x-ray to be reviewed radiologist and reported. If CXR is reported as normal a nurse lead discharge can be performed.
- Check Medications have been prescribed and given (if required).
- Complete Nursing summary
- Flow Sheets – Assessment and Care Day Case pre discharge checklist and discharge checklist to be completed.
- Documents – Discharge summary
- Discharge Advice- Use advice sheet for pleural aspiration and pleural biopsy.

### **Untoward Incidents**

In the event of any untoward incidents occurring such as pneumothorax bleeding and other complications the following should happen;

- If complications arise in radiology it is the responsibility of the performing radiologist to arrange for the patient to be transferred to Oak Ward. This should be done via the hospital coordinators and Holly suite informed.
- If complications arise post X-Ray and or on the receiving ward of the patient, the receiving ward are responsible for arranging the transfer of the patient to Oak Ward via the hospital coordinators.

## **4. Policy Implementation Plan**

Once all elements of the policy have been agreed the policy should come into force. This will be published on the trust intranet and shared with all relevant parties.

## 5. Monitoring of Compliance

Audit will be carried out on quarterly basis and will look at the correct completion of the biopsy referral form and completion of the CT Guided Lung Biopsy pro forma in particular the sections completed in radiology prior to the procedure which forms the WHO checklist and post procedure.

## 6. References

RCR – guidance on implementing safety checklists for radiological procedures second edition  
Jan 2019

# 7. Appendices

## 8. Endorsed By:

Name of Lead Clinician / Manager or Committee Chair	Position of Endorser or Name of Endorsing Committee	Date
Joanne Shaw	Chair Clinical services Governance	June 2021

## 9. Record of Changes

Section No	Version No	Date of Change	Description of Amendment	Description of Deletion	Description of Addition	Reason

## INFORMATION FOR PATIENTS AND FAMILIES

### CT guided lung biopsy (under local anaesthetic)

This leaflet provides information about the test you are due to have. It should replace the discussions you have with the doctors and nurses involved in your care. If you have any queries or questions please do not hesitate to ask the staff looking after you.

#### What is a CT guided lung biopsy?

It is a biopsy procedure done by the radiology (x-ray) doctor. It involves you lying on the CT scan table, the doctor will then anaesthetise the skin and then pass a fine needle through to the lung shadow seen on the scan and take a sample. The sample is then sent for analysis to the laboratory.

#### Why has the test been advised?

The biopsy can give the doctor information that may help to understand why you have been experiencing the symptoms you have or why your chest scan is abnormal. It can rule out or diagnose conditions and help to make treatment decisions.

#### Is there an alternative test?

This depends on your symptoms or your medical conditions. A lung biopsy gives very specific information. Your doctor will discuss alternatives if possible.

#### How do I prepare for the test?

- **Eating and drinking** – Please refer to your admission letter for advice.
- **Medication** – you should have been advised to stop any blood thinning medication i.e. aspirin, warfarin, clopidogrel, heparin injections. **If you have not been given advice please ring your consultant's secretary asap.**
- **Consent form** – you will have test explained to you and asked to sign a consent form, this will give you an opportunity for questions.

#### What will happen before the test?

The radiology doctor in the CT department will go through what to expect.

A cannula (tiny plastic tube) is inserted into your vein usually in your arm, so that the scan dye can be given. You will be asked to lie on the scanning table, which will be the same or similar to one you have seen before when you had your CT scan. The staff will position you so that you are comfortable and in a position that allows the doctor to do the biopsy.

The staff will advise you to keep still as best you can and be available to you throughout the procedure. The doctor will inject your skin with an anaesthetic so that it goes numb before he passes the biopsy needle.

Once the biopsy sample has been obtained, the needle will be quickly removed and you will be taken back to the ward.

**How long does the test take?**

It takes approximately 30 minutes although you will need to be on the ward a couple of hours before and afterwards.

**What are the risks with this test?**

The test is a safe procedure but all procedures have risks but complications are rare. The risks include bleeding and air can leak into the space surrounding your lung (pneumothorax), often no treatment is needed. Very occasionally treatment with a tube to drain the air is advised and this would involve staying in hospital until resolved.

Any risks will be discussed with you at the time of you signing your consent form.

**What happens after the test?**

A nurse will look after you until you leave the hospital. Your breathing rate, heart rate and blood pressure will be checked. You will be advised to rest on your bed/chair after the biopsy until the chest x-ray is done. You will have a chest x-ray 2 hours after the biopsy, this is to check if any air has leaked around your lung. You may cough up some blood or blood stained sputum, this is normal and usually ceases within 24 hours. If you feel unwell please inform the nursing staff. You can eat and drink as normal, unless advised otherwise.

**Results of the test**

The biopsy samples will take approximately 5-10 days to be processed, so a follow up appointment will be arranged for after this time for you to see the Consultant who referred you for the biopsy test. The arrangements of this appointment will be discussed with you prior to going home.

**Going home and usual activities.**

You will be able to go home, once your chest x ray has been reviewed and no air leak found and you are feeling well enough to go home.

You will need somebody to accompany you home and to stay with you for 24 hours. If this is not possible please discuss this with the secretary or the nurse on the ward.

We advise you should rest for the remainder of the day/night. Most people feel able to resume normal activities after 24 hours.

**If you cough up large amounts of blood, develop chest pain, worsening breathlessness, fever or become unwell, please seek medical attention.** You will have a plaster over the biopsy area that can be removed the next day and we expect will be dry, if there is any swelling or bleeding seen you should seek medical advice.

**For further information visit:**

[www.lhch.nhs.uk](http://www.lhch.nhs.uk)

## **PATIENT TRANSFER TO WARD POST CT GUIDED BIOPSY BY RADIOGRAPHIC DEPARTMENT ASSISTANT**

In order to maintain patient safety it is desirable to transfer a patient back to their base ward as soon as possible after the procedure. To expedite the transfer stable patients may be escorted back to their ward by B3/4 RDA's. Patients who are not stable must be escorted by a qualified nurse from the ward.

Post procedure a record must be made on EPR and Transfer Form of the patients observations (BP / HR / SATS). These Obs are then to be checked and authorised by a CT Radiographer who must also check and sign the Transfer Form before the patient is returned to the ward.

If in any doubt the Radiographer should consult with the Radiologist before allowing transfer by an RDA.

The RDA will then escort the patient back to the ward and give a formal "handover" to the ward staff.

After transfer the RDA will ensure the Transfer Form has been scanned into CRIS. The RDA will then escort the patient back to the ward and give a formal "handover" to the ward staff.

## RDA PATIENT TRANSFER FORM

Pt Name.....

DOB..... RBQ.....

	Heart Rate	Blood Pressure	Oxygen Sats
Pre Biopsy			
Post Biopsy			

Biopsy Site	
Puncture Site	

	Y	N		Y	N
Pneumothorax			Haemorrhage		
Pain			Haemoptysis		
Oxygen Reqd.			Light Diet		

Patient Position	
------------------	--

CXR Time	
----------	--

Radiographer Signature.....

RDA Signature.....

Ward Staff Signature.....

## **PROTOCOL FOR THE REQUESTING OF CHEST X-RAY'S POST CT BIOPSY EXAMINATION**

### **AIM**

To facilitate a more efficient service and reduce demands on Radiologists time.

### **PROTOCOL**

- All radiographers listed as approved operators will be designated as referrers, and will be permitted to request post biopsy chest x-rays only, in line with IR(ME)R regulations.
- Log into EPR and locate the patients electronic file and click Enter Order
- Ensure all appropriate sections of the request form are complete.
- Ensure the necessary time for the x-ray, as dictated by the radiologist, is clear on the request form.
- Check in the patient's orders that the request was successful

Colin Monaghan  
Radiation Protection Supervisor (CT)

Dr McCann  
Clinical Lead For Radiology