

## Patient Information Leaflet for CT Guided Lung Biopsy

This leaflet aims to answer some of the questions you may have about the procedure. It explains the risks and benefits of the procedure, and what you may expect when you arrive at the hospital.

There is essential information about your CT scan and biopsy.

Please read all sections of the leaflet carefully and follow any instructions.

### What is a CT scan?

CT stands for Computerised Tomography. A CT scan takes a series of cross-sectional images of your body using x-rays. The images are manipulated by a complex computer and can be viewed on a monitor. The scan shows incredibly detailed images of the inside of your body. The scanner consists of a table and a ring-like structure that rotates around a small section of your body as you pass through it.

### What is a CT Guided Lung Biopsy?

A Lung biopsy is a procedure where a sample of tissue (biopsy) is taken from the lungs for analysis. This helps doctors to find out more about the health of your lungs.

A Radiologist uses the X-ray images from a CT scan to guide the needle to the area where the biopsy will be taken.

### Who carries out the procedure?

The Radiologist (doctor) will carry out the biopsy procedure. Nursing and Radiographic staff will be present in the room for assistance.

### Why do I need this test?

Your consultant has suggested that you have this test after discussing your case with a Radiologist. Your previous CT scan and tests may have shown something that your consultant would like to check further.

Your consultant will explain why you need this test and how it will benefit you.

You can decide if you want to go ahead with the procedure or not.

### How do I prepare for the biopsy?

#### Fasting:

Please do not eat anything for 6 hours before your procedure, for safety reasons. You may drink water up to 2 hours before your procedure.

**Can I take my prescribed medicines as usual?**

We will have called you to ask about any medications you are taking. We may tell you to stop some medications. This may include stopping blood thinners, for example, Warfarin, Rivaroxaban, Aspirin, Ticagrelor or any drug like them.

If we tell you to continue taking your regular medication, please make sure that you only take it with a small amount of water on the day of your biopsy. Please bring any medication with you that you normally take with you.

**What clothing should I wear?**

You may wish to wear loose clothing that can be removed easily. You will be asked to change into a hospital gown.

You should bring an overnight bag with you in case you need to stay overnight after your biopsy. Please leave any valuable at home.

We advise you not to drive after the biopsy, as your insurance may not cover you. Please arrange for someone to drive you home after the biopsy.

**Pregnancy enquiry:**

If you are or think you may be pregnant, tell us before the procedure.

**What happens on the day of the biopsy procedure?**

**1. Day ward**

Please check your appointment letter carefully for your appointment date, time and location.

You will attend the day ward stated on your appointment letter.

When you arrive, the day ward nursing staff will check your identity and prepare you for your biopsy procedure.

You will be transported to the CT department in a bed wearing a hospital gown. When you arrive at the radiology department, a member of the radiology staff will carry out some final checks.

We aim to make sure every patient is fully informed about the benefits and risk of a procedure or treatment. A radiologist will talk through the procedure and give you an opportunity to ask any questions. You will be asked for consent (permission) to proceed with the procedure.

You will be asked to sign the consent form, if you have not already done so.

**2. CT scan room**

When your biopsy is due to start, a member of staff will guide you into the CT scan room. We will ask you to lie on the CT table and explain the best position for taking the biopsy. The nursing and radiographic staff will help make you as comfortable as possible.

A CT scan will be taken using a small metallic marker which is placed on the outside of your skin. This marker shows up in the scan images so we can decide the best place to take the biopsy.

The skin is then cleaned with antiseptic solution and numbed with a local anaesthetic. A biopsy needle is carefully inserted into the lung to take the biopsy. The radiologist uses the CT imaging to guide the biopsy needle. The Radiologist will ask you to hold your breath for a few seconds each time a scan is taken, and every time the needle is moved.

When the Radiologist takes the biopsy, the needle may make a snapping sound.

To take a good sample, this part of the test may be repeated two to three times.

The tissue samples are sent to the laboratory for testing.

**How long does the procedure take?**

The biopsy procedure takes approximately 60 minutes. You will be returned to the day ward after the biopsy.

**Will it hurt?**

The local anaesthetic used to numb the area may sting for a few seconds. You may also be aware of pressure from the biopsy needle as it takes the sample.

**What happens after the procedure?**

After the biopsy you will be transferred from the CT table back to your bed and transported to the day ward.

After 30 minutes we will check how you are feeling, and you may be allowed out of bed to walk on the ward. You can eat and drink as normal.

***You will have a chest X-ray three to four hours after the biopsy.*** If this is normal you can go home. If there are any issues after the biopsy, we may ask you to stay in hospital overnight.

**What are the risks of the procedure?**

All medical procedures carry some risk and the possibility that complications may arise. This procedure is considered minimal risk.

**Most patients are likely to experience:**

- Minor bleeding and bruising where the biopsy needle has entered the skin.
- Minor pain after the procedure, which can normally be managed with over-the-counter painkillers.

**Patients should be aware of other possible risks:**

- Minor bleeding in the lung. This may show as coughing up a small quantity of blood and can occur after approximately 1 in 20 procedures. The coughing and bleeding will usually stop by itself within 10 minutes.
- A small amount of air in the space around the lung (pneumothorax) also called a lung collapse. This may make it painful to breathe for a day or so. Usually this does not cause any real problems and you should still be able to go home. The risk of this is about 1 in every 3 procedures.
- Occasionally, a larger amount of air can become trapped in the space around the lung, which may make you breathless. The risk of this is about 1 in every 15 procedures. This may mean you need a further procedure to relieve the trapped air, where we insert a small plastic tube into your chest, between the lung and the chest wall. This is called a chest drain and allows the trapped air to escape. It is a simple and effective treatment and is usually carried out by the Radiologist.
- If you need a chest drain, you may need to stay overnight in hospital. Sometimes it is possible to go home with a chest drain in place. In this case, you would need to come back to hospital every day to be reviewed by the doctor, until the drain is removed.

**Additionally, there are some more serious but rare complications:**

- Severe internal bleeding. This would need to be treated with an emergency operation. The risk of this is about 1 in 1,000 procedures.
- Air embolus. This is when air enters the blood stream, which can cause a stroke or a heart attack. The risk of this is about 1 in 5,000 procedures.
- Both these complications can pose a risk to life. The overall risk of death from any complication is less than 1 in 1,000 procedures.

**What are the benefits?**

The doctors looking after you have decided that you should have a chest biopsy to help them make a diagnosis and decide on the most suitable treatment for you.

**Exposure to radiation**

A CT guided procedure uses X-ray radiation. The radiation dose that you get from a CT guided lung biopsy is small and the associated risks are low. Clinical staff consider both the risks and benefits when deciding what examination is appropriate for you. The benefits of having the procedure outweigh any risk. Clinical staff are responsible for making sure that the dose you receive is kept as low as necessary to aid your diagnosis or treatment.

**Contrast Injection**

Some patients will require a contrast (dye) injection. The contrast injection contains iodine, which may cause an allergic reaction in some people.

A reaction may take the form of a rash or itching and very rarely, a more severe allergic reaction can occur. The team have measures in place to deal with this safely should this occur.

If you have had a previous reaction, please let us know, and we can put measures in place to minimise risk from another reaction.

There is a small chance that the contrast injection can leak outside the vein and cause temporary swelling (extravasation) and discomfort in the arm. In the unlikely event of this happening, we will help treat the swelling and provide you with further instructions and advice.

### **Can I bring a relative or friend?**

Yes, but they will not be able to go with you into the scan room in Radiology, except in exceptional circumstances. They can wait in the day ward or can leave and return later. We can telephone them to let them know when you are ready to be collected. We are unable to care for young children whilst you are having your scan.

### **Interpreter**

If you require an interpreter, please let us know.

Please be aware that it is Trust policy that family, friends, and other companions, cannot act as an interpreter for you.

### **What happens when I go home?**

We advise you not to drive after the procedure, as your insurance may not cover you. Please arrange for someone to drive you home after the biopsy.

If you are going home on the same day as your biopsy, a relative or friend should accompany you home and stay with you overnight.

When you go home you can eat and drink normally. You should rest until the next day. This is to help the small hole that has been made in your lung to heal. You should not attempt to return to work on the day of your needle biopsy.

### **We advise you not to do the following activities for 24 hours following the procedure:**

- Drive
- Heavy lifting
- Drink large amounts of alcohol
- Anything which requires a lot of effort or makes you strain, such as gardening, operating machinery, decorating or sexual intercourse.

We recommend that you do not book any flights until after the biopsy is complete. If you develop a pneumothorax (lung collapse) following the biopsy you won't be allowed to fly until 10 days after this has completely healed. The length of time this takes can vary from one person to another. We will arrange regular chest x-rays to find out whether the pneumothorax has healed.

We will give you an information sheet to take home with you, which explains what to do and who to contact if you have any problems after the procedure.

### When and how will I know the result of the biopsy?

The results of your biopsy will be available after about 1 week. The doctor who referred you will inform you of the results of the biopsy and what happens next.

If you do not have another outpatient appointment and do not hear anything about the results within three weeks, please telephone the referring doctor or their secretary for advice.

### Image sharing

Your images will be electronically stored on the hospital picture archiving system. This data can be accessed throughout the Belfast Health and Social Care Trust and other doctors and health care professionals who are directly involved in your care. The ability to share images and radiological reports will improve the safety and quality of your care by ensuring that the right information is available in the right place at the right time.

In order to improve the medical services we provide we may also use your data as anonymously as possible for internal audit and medical education. If you would prefer that your data is not used for these purposes, please inform a member of staff when you attend for your examination.

If your data is to be used for research, then a separate consent process will be used. You will be asked for your consent, should this be the case.

### Contact us

If you have any queries, we will be happy to answer any questions on the day of your CT Biopsy procedure or you can contact us on the number given on your appointment letter.

We hope you found the information in this leaflet helpful. If it did not tell you what you needed to know or you would like to provide any feedback on your experience, please let us know so that we can make any necessary improvements.

- CT Department (Royal Victoria Hospital): 028 961 50011
- CT Department (Belfast City Hospital): 028 950 41120

### Feedback

We hope you found the information in this leaflet helpful. If it did not tell you what you needed to know or you would like to provide any feedback on your experience please let us know so that we can make any necessary improvements.

#### ***You can provide feedback on your experience:***

Telephone: **028 950 48000** (Monday-Friday: 9am-4pm)

Textphone: **18001 028 950 48000**

By email: [compliments@belfasttrust.hscni.net](mailto:compliments@belfasttrust.hscni.net)



By email: [complaints@belfasttrust.hscni.net](mailto:complaints@belfasttrust.hscni.net)

By completing an online form: <http://www.belfasttrust.hscni.net/contact/FeedbackForm.htm>

## Care Opinion



We invite you to share your experience by clicking the following link:  
<https://www.careopinion.org.uk/>

or by scanning the following QR code on your smartphone or tablet:



## Language and accessible support services

### Deaf/Hard of Hearing

If a Sign Language interpreter is required, please either telephone **028 9615 8900** via the Sign Video remote interpreting service (<https://signvideo.co.uk/deaf-community/>) or email us at [MPHAdminFOH@belfasttrust.hscni.net](mailto:MPHAdminFOH@belfasttrust.hscni.net) and we will arrange one for your appointment. Please have your H&C number ready when calling or include it in your email. This can be found at the top right corner of any Health and Social Care letters you may have received.

If you are unable to hear on the phone and need to contact us with regards to your appointment you can email us at [MPHAdminFOH@belfasttrust.hscni.net](mailto:MPHAdminFOH@belfasttrust.hscni.net).

### Do you need this information in another format or language?

The Trust has access to interpreting and translation services. If you need this information in another language or format, including Braille, large print, CD, audio tape please contact the telephone number **028 9615 8900** or e-mail address [MPHAdminFOH@belfasttrust.hscni.net](mailto:MPHAdminFOH@belfasttrust.hscni.net), and we will do our best to meet your needs.

### Polish - Czy potrzebujesz tych informacji w innym formacie lub języku?

Fundusz ma dostęp do usług w zakresie tłumaczeń ustnych i pisemnych. Jeśli potrzebujesz tych informacji w innym języku lub formacie, w tym w piśmie Braille'a, dużym druku, na płycie CD, kasecie magnetofonowej, skontaktuj się z nami pod numerem telefonu lub adresem e-mail **028 9615 8900 / MPHAdminFOH@belfasttrust.hscni.net**, a my dołożymy wszelkich starań, aby spełnić Twoje potrzeby.

### Arabic - هل تحتاج هذه المعلومات بصيغة أو بلغة أخرى؟

تستطيع الجمعية توفير خدمات الترجمة الفورية والتحريرية. إذا احتجت هذه المعلومات بلغة أو بصيغة أخرى، بما فيها صيغة برايل Braille أو صيغة بالأحرف الكبيرة، أو في سي دي CD أو في شريط مسموع، يُرجى الاتصال برقم التليفون أو عبر البريد الإلكتروني **MPHAdminFOH@belfasttrust.hscni.net / 028 9615 8900**، وسوف نبذل قصارى جهدنا في تلبية احتياجاتك.

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### **Lithuanian - Ar jums reikia šios informacijos kitu formatu ar kalba?**

Tarnyba gali suteikti vertimo žodžiu ir raštu paslaugas. Jei reikia šios informacijos kita kalba ar formatu, įskaitant Brailio raštą, didelį šriftą, kompaktinį diską, garso įrašą, skambinkite telefonu arba susisiekite el. paštu **MPHAdminFOH@belfasttrust.hscni.net / 028 9615 8900** ir mes padarysime viską, kad patenkintume jūsų poreikius.

### **Romanian - Aveți nevoie de aceste informații într-un alt format sau altă limbă?**

Trustul are acces la servicii de interpretariat și traducere. Dacă aveți nevoie de aceste informații într-o altă limbă sau într-un alt format, inclusiv Braille, tipărire cu caractere de mari dimensiuni, CD, înregistrare audio, atunci vă rugăm să ne contactați la numărul de telefon sau la adresa de e-mail **MPHAdminFOH@belfasttrust.hscni.net / 028 9615 8900**, iar noi vom face tot posibilul pentru satisfacerea necesităților dumneavoastră.

### **Tetum - Ita presiza atu informasaun ida ne'e iha formatu ka lian seluk ka lae?**

Fidusiáriu ida ne'e iha asesu ba servisu durubasa no tradusaun. Se Ita presiza informasaun ida ne'e iha lian ka formatu seluk, inklui letra Braille, letra boot, CD, kasete audio, entaun favór telefone número ka enderesu e-mail **MPHAdminFOH@belfasttrust.hscni.net / 028 9615 8900**, no ami sei halo esforsu tomak atu kumpre Ita-nia nesesidade sira.