



Coming to the proton beam therapy centre at The Christie

A guide for patients and their carers



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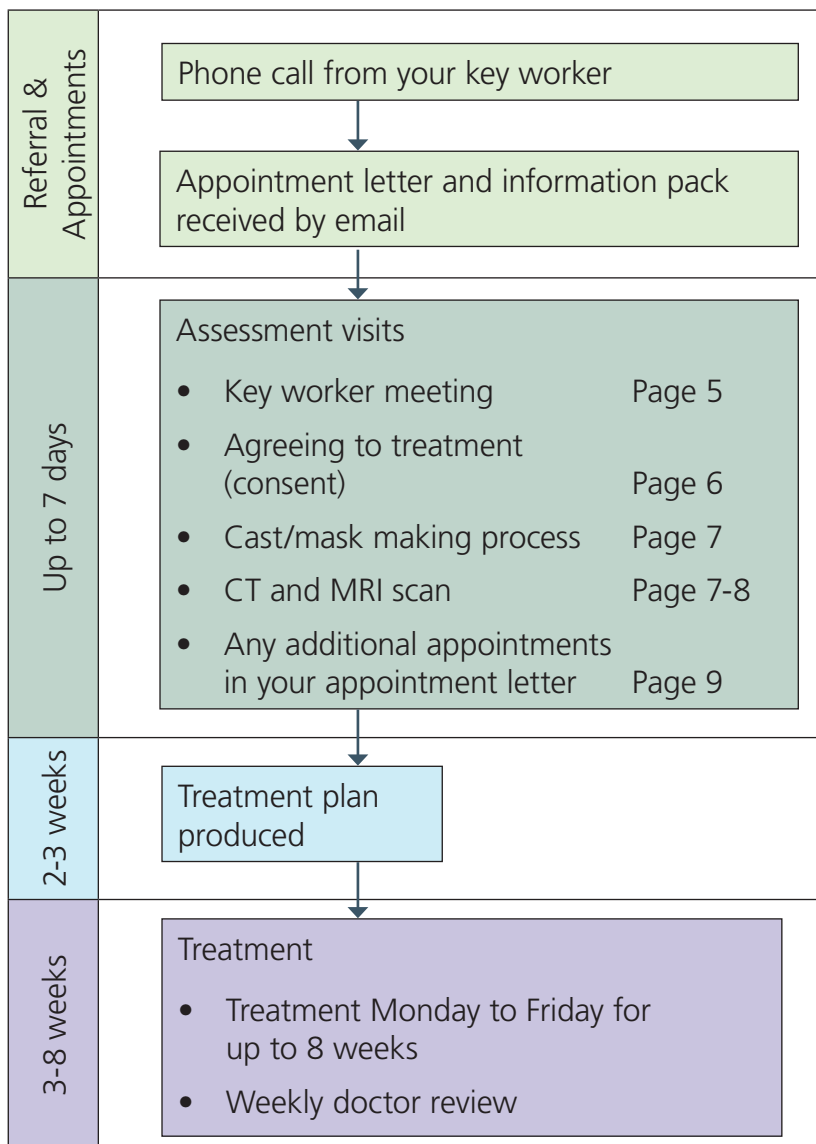
Christie website

For more information about The Christie and our services, please visit **www.christie.nhs.uk** or visit the cancer information centres at Withington, Oldham or Salford.

Introduction

You have been approved for proton beam therapy at The Christie.

What happens now?



What is proton beam therapy?

Proton beam therapy is a type of radiotherapy. Protons are small particles found in the middle of atoms. They can be used to give carefully calculated doses of radiation to treat diseases. This is different from standard radiotherapy which uses high energy X-rays. Protons release their energy at an exact point in the body. This means the dose to the tumour can be given very accurately and there is little or no dose to normal tissue past the tumour.



Proton beam therapy is given using a machine called a gantry. The gantry can rotate through 360 degrees. This means it is able to accurately aim the proton beam to the area needing treatment.

Proton technology in the UK offers pencil-beam scanning on each gantry. Pencil-beam scanning uses a narrow

beam of protons to move back and forth across the tumour site at a range of energies, to meet the required depth of the tumour.

What are the benefits of proton beam therapy?

There are two potential benefits of proton beam therapy.

- Closer sculpting of the radiation dose around the tumour. This sometimes allows a higher dose to be delivered.
- Lower dose received by the normal tissues around the tumour. This may result in fewer long-term side effects.

What happens next?

You will need to attend the proton beam therapy centre at The Christie for a consultation with the doctor and on a number of treatment planning days before your proton treatment can start. These appointments will be completed over approximately one week. You may not be needed every day for the entire day. Please refer to your accompanying appointment letter for the exact dates and times you will be required to attend during the planning days.

You have been allocated a key worker, this is a specialist nurse/radiographer who will give assistance and support throughout your proton treatment.

If you are eligible for accommodation, this will be provided for the duration of your assessment visit and the whole of your treatment. Further details will be found in your appointment letter and the accompanying accommodation guide if this applies to you.



Assessment visits

Key worker meeting

You will meet your specialist nurse/radiographer and they will provide you with a booklet. This will contain all the information you may require during the whole process.

This includes information about the following:

- your treatment
- available support
- local amenities



You will have frequent contact with your key worker throughout both the assessment visit process and the treatment itself.

Agreeing to treatment (consent)

When you arrive with us you will receive an information booklet related to the area you are having treated. It will contain information on the possible treatment side effects. You will have a consultation with your doctor to make sure you are fully informed about the possible early and late side effects associated with your treatment. At any point along the treatment pathway you will have the chance to ask any questions and discuss anything you do not understand.

We will ask you to sign a consent form agreeing to accept the treatment you are being offered. The basis of the agreement is that you have had The Christie's written description of the proposed treatment and that you have been given an opportunity to discuss any concerns. Your consent may be withdrawn at any time before or during this treatment. Should you decide to withdraw your consent a member of your treating team will discuss the possible consequences with you.

Are there alternatives to this treatment?

Your case will have been discussed with multiple specialist doctors to decide the best option of treatment/s. You are entitled to request a second opinion from another doctor who specialises in treating this cancer. You can ask your own consultant or your GP to refer you.

Cast/mask making

Due to the accuracy and complexity of the treatment and scans, it is vital that you lie very still. To help with this, most patients are fitted with a mask or cast. The type of mask or cast varies depending on the area of the body you are having treated. The radiographers will decide what is most suitable for you. We will ask you to undress as necessary depending on the type of cast/mask made.

During the process it may be necessary to use a small amount of X-rays/radiation to assist in the making of the cast/mask.

During the planning session, the radiographers will put small radiotherapy tattoos on your skin. These are permanent. These will help the radiographers set you up in the correct position for treatment every day. If possible, these marks may be placed directly on your mask or cast, meaning that in some cases it may not be necessary to put the small tattoos on your skin. The marks created during your mask/cast making will be used by the radiographers each day of your treatment to set you up in the correct position.

About X-rays and radiation

Everyone receives some ionizing radiation every day from background radiation, this comes from our environment. Your age and size will influence the amount of radiation used. We ensure we keep the amount of radiation we use as low as possible. Our CT equipment is regularly maintained and is subject to checks by both the radiographers and medical physics teams.

It is important to let the radiographers know if there is any possibility that you may be pregnant.

CT scan

A CT scan is required to plan your proton treatment. You may have more than one CT scan during this session, regardless of whether you have had one recently. This is a technical scan which requires you to be positioned as you will be for treatment. We ensure we keep the amount of radiation used as low as possible, and our priority is to ensure these X-rays benefit you and assist the consultant when planning your treatment. These scans are not



diagnostic and do not give sufficient information to assess the status of your cancer or any other abnormalities. In some cases, scans may occur prior to proton treatment consent being undertaken. If this is applicable, the team will make you aware.

The mask/cast and CT scan process will take around 1 hour 30 minutes. If you take regular pain relief, please bring this medication with you.

MRI scan

You may be required to have an MRI scan. If so, this will be detailed on your appointment letter. An MRI scanner is a large tube that contains powerful magnets and uses strong magnetic fields and radio waves to produce detailed pictures of the body. This sort of scan does not use radiation. The MRI scan process is very similar to the CT scan; the scan will take around 1 hour. You will be given headphones and can listen to some music during your scan if you wish.

Some clothing and makeup may contain small amounts of metal that can interact with the magnet and affect the images. They can also create a heating effect during the scan.

We may ask you to remove certain items before you enter the scanner room. When attending for your scan we ask that you do not wear the following items:

- hairspray, clips, grips and hair accessories
- mascara and other eye make-up
- magnetic eyelashes
- antimicrobial clothing such as sportswear, as this can contain small amounts of silver or copper within the fabric
- any clothing which contains copper (such as specialist underwear or socks etc. or radio frequency shielding clothing)
- any specialist magnetic clothing
- jewellery (including facial and body piercing). If you have any issue removing piercings then please discuss this with your key worker



Injection of contrast agent

During the CT and/or MRI scanning process, it may be necessary to see your organs and vessels more clearly. To do this, a cannula will be inserted into your hand or arm and the contrast agent will be injected in during the scan. If you have another form of venous access for example a PICC line or portacath, we may be able to use this instead. Another method to see your organs more clearly is to give you a special drink prior to your scan. A member of staff will explain which you will require and why. You may eat and drink as normal before the CT and MRI scans unless informed otherwise by a member of staff.

Additional clinic appointments

Depending on your age, treatment site and management plan you may be required to attend other appointments during the assessment visit. Examples of these include:

- general anaesthetic appointment
- physiotherapy
- speech and language therapy (SALT)
- occupational therapy
- dietitian
- chemotherapy
- social worker
- health play specialist

If you need to attend any of these, it will be clearly highlighted on your appointment letter.

Once you finish your assessment visit appointments, you will be given your first treatment appointment.

Paediatric information

If your child requires chemotherapy during the time of their proton beam therapy they will also attend Royal Manchester Children's Hospital, ward 86.

The health play specialist team will work very closely with your child to prepare them for the preparation process and treatment. Age appropriate patient information will be given to you and your child by the health play specialist when you arrive at the proton beam therapy centre.

Infants and some younger children may require a daily general anaesthetic for their treatment. This allows the treatment staff to accurately deliver the treatment to your

child by keeping them in the same position every day during treatment. You and your child will be fully supported throughout this procedure.

When will proton beam therapy begin?

Once the assessment visit is completed, the specialist planning team at The Christie will be working to produce a treatment plan tailored for you. This is a complex process and takes an average 2-3 weeks to complete. If you are staying in accommodation you will return home and come back to the centre once your plan is ready and your treatment will begin. Treatment is usually given Monday to Friday but there may be times when treatment needs to be given over the weekend or on a Bank Holiday. This will be discussed with you in advance. Appointment times will be between 7:00am and 9:00pm and will be booked in advance. Unfortunately you may not be able to have the appointment time of your choice. The treatment may take up to 8 weeks to complete.

For more information on the treatment process please visit our website www.christie.nhs.uk

A short film about proton beam therapy at The Christie is available on our website.

Prescriptions

Prescriptions for medication made by Christie doctors during your treatment can only be collected



from The Christie pharmacy. Any prescriptions relating to your cancer diagnosis will be free of charge. Please speak to your key worker for more information.

If you are taking any medication, please ensure you bring them with you if you are staying in Manchester for the assessment visits and treatment.

How to get to the proton beam therapy centre at The Christie

The centre is accessible via road, rail and air. For help planning your journey please ask at the information centre for a copy of the leaflet 'Travelling to The Christie for patients and patients' visitors' or visit our website www.christie.nhs.uk. For up to date information on public transport and journey planners visit Transport for Greater Manchester www.TFGM.com

Car parking

Minimal parking is available directly outside the proton beam therapy centre. For information on patient car parks, please check the website for the latest details, or refer to the leaflet 'Travelling to The Christie for patients and patients' visitors'.

There is also a shuttle bus service available from your accommodation (if provided) and from Royal Manchester Children's Hospital. A copy of the bus timetable should have been sent alongside this booklet.

Useful links:

Stagecoach Manchester
www.stagecoachbus.com/about/manchester

First Bus
www.firstbus.co.uk

National Rail Enquiries
www.nationalrail.co.uk
Contact: **03457 48 49 50**

Ambulance transport for patients

Ambulance transport can be arranged subject to eligibility criteria based on medical need. There also needs to be a medical need for you to bring an escort on hospital transport.

Hospital transport is provided by a variety of ambulance services. This service is not applicable for patients outside the area. If you are unsure please speak to your key worker or the scheduling team to clarify. Contact the transport liaison office at The Christie directly on **0161 446 8114** or **8143** for advice and bookings (Monday to Friday, 8.00am - 6.00pm).

Patient travel expenses

These can be reimbursed for patients from the Greater Manchester area who qualify under the 'healthcare travel cost scheme'. This can be done at the cashiers' office at The Christie. The cashiers' office can be found within the main hospital, off the main corridor near to the Wilmslow dining room. Opening hours: Monday to Friday, 9:30am - 1:00pm and 2:00 - 4:00pm.

Useful contacts

The proton beam therapy centre at The Christie:	
Ground floor main reception	0161 918 7577
Scheduling team	0161 918 7170
Specialist nurse/radiographer	0161 918 7235/1146
The Day Unit	0161 918 7289
Royal Manchester Children's Hospital (RMCH)	
Proton beam therapy nurse	0161 701 8430 07970 954908
Ward 86	0161 701 8620/8618
Ward 84 Day Case unit	0161 701 8411/8412
RMCH triage nurse hotline 0161 701 7489	
Available 24 hours a day, 7 days a week	
Contact The Christie Hotline for urgent support and specialist advice 0161 446 3658	
Open 24 hours a day, 7 days a week	



Please note:

Mobile phones can be used while in the department. However, you may be asked to turn your mobile on silent or vibrate while treatment takes place to avoid distracting the treating team.

If you need information in a different format, such as easy read, large print, BSL, braille, email, SMS text or other communication support, please tell your ward or clinic nurse.

The Christie is committed to producing high quality, evidence based information for patients. Our patient information adheres to the principles and quality statements of the Information Standard.

If you would like to have details about the sources used please contact the-christie.patient.information@nhs.net

**Royal Manchester Children's Hospital
triage nurse hotline: 0161 701 7489**

Available 24 hours a day, 7 days a week

Contact The Christie Hotline for
urgent support and specialist advice

The Christie Hotline: 0161 446 3658

Open 24 hours a day, 7 days a week

Visit the Cancer Information Centre

The Christie at Withington **0161 446 8100**

The Christie at Oldham **0161 918 7745**

The Christie at Salford **0161 918 7804**

The Christie at Macclesfield **0161 956 1704**

Open Monday to Friday, 10am – 4pm.

Opening times can vary, please ring to check
before making a special journey.

The Christie NHS Foundation Trust

Wilmslow Road

Manchester M20 4BX

0161 446 3000

www.christie.nhs.uk



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