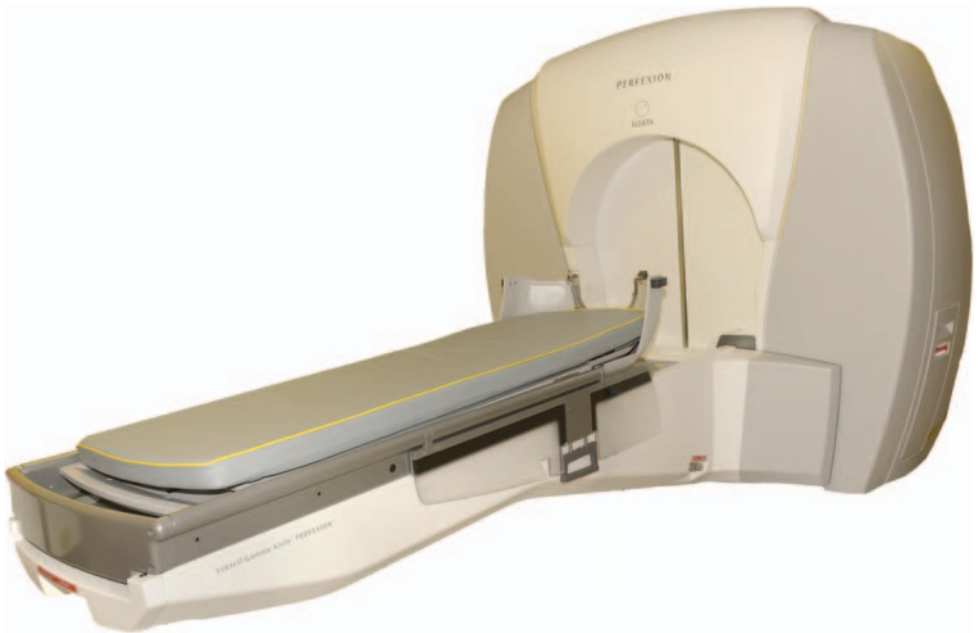


Stereotactic Radiosurgery

Sheffield, United Kingdom



Information for patients Stereotactic Radiosurgery



In hospital and in the community

proud to make a difference

Introduction

This booklet gives you some general information about before, during and after your radiosurgery treatment at the National Centre for Stereotactic Radiosurgery. Our aim is to help you to feel prepared and informed about what will happen during your stay with us and to help make your treatment day as stress free as possible.

You should also be given a condition specific leaflet that is tailored with more detailed information about your condition. Please read both carefully and do not hesitate to contact us on **0114 271 3572** if you have any questions or worries.



Interpreter services

Si tiene alguna dificultad en entender inglés, por favor, aviseselo al personal sanitario que buscará a un intérprete para ayudarle.

Si vous avez la moindre difficulté à comprendre l'anglais, veuillez informer le personnel infirmier qui cherchera un interprète pour vous aider.

Sollten Sie irgendwelche Schwierigkeiten haben, Englisch zu verstehen, bitte sagen Sie es einer der Schwestern, die es dann arrangieren kann, dass ein Dolmetscher Ihnen hilft.

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هل تحتاج الى مترجم ؟

إذا كنت لا تفهم الأنكليزية ، عليك الاتصال

بمكتب الجراحه الأشعاعيه

فى المستشفى وذلك لغرض إيجاد مترجم

لمساعدتك.

Αυτο το φυλλαδιο εχει στοχο να σας
παρεχει οριομενες πληροφοριες οι
οποιες θα σας χρησιμευσουν κατα
την παραμονη σας στο Σεφηντ για
στερεοτακτικη ακτινοχειρουργικη.
Εαν δυοκολευεστε στην κατανοηση
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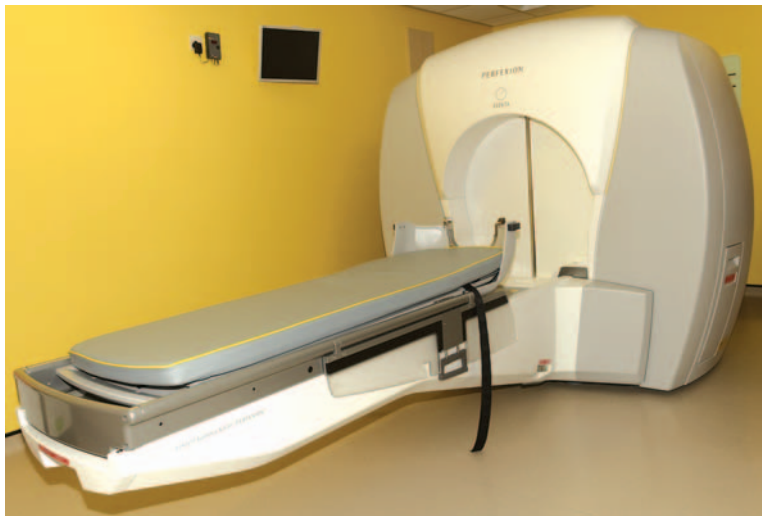
Information is also available in larger print, braille, video, audio CD or tape.

Please contact us should you wish to know more about any of these services.

What is Stereotactic Radiosurgery?

Radiosurgery is a method of focusing multiple narrow beams of radiation, with a very high degree of accuracy, to treat a small defined area or areas within the brain using a machine which is often referred to as a 'Gamma Knife.'

This radiation is used to treat lesions such as: cerebral arteriovenous malformations (AVMs), suitable brain tumours (benign and malignant) and some functional disorders (trigeminal neuralgia).



Stereotactic Radiosurgery is not a new or rare treatment; every year around 60,000 people undergo the treatment at specialised Gamma Knife Centres around the world.

Welcome to the National Centre in Sheffield

The department started treating patients in 1985 and was one of the first centres to open in the world. The technique was originally developed in Sweden by Professor Lars Leksell, a pioneering brain surgeon.

Over 15,000 patients have now been treated in our department to date.



FS 99444

All treatments are carried out according to our Quality Management system which is fully accredited by the British Standards Institution (BSI International Standard: ISO 9001:2015). This recognises our high standards of care, management and safety for both patients and staff.

Meet the staff



Matthias Radatz



Jeremy Rowe



John Yianni



Dev Bhattacharyya



Ramez Ibrahim

A member of our administration team will have already contacted you regarding appointments. They organise your clinic visits and hospital admissions and will contact your referring hospital to arrange your aftercare.

The multidisciplinary team is led by our consultant neurosurgeons Matthias Radatz, Jeremy Rowe, John Yianni, Dev Bhattacharyya and Ramez Ibrahim, one of whom will be responsible for your overall treatment and care whilst you are with us.

Prior to your consultation with the neurosurgeon, you should have received an information booklet specific to your condition. Please ask us if you did not receive this.

During your consultation your treatment options will have been discussed and the risks, benefits and alternatives of individual treatments will have been explained. We will have explained that your consent must be given before any procedure or treatment and you may have been asked to sign a consent form at the end of the consultation. If you do not sign your consent form at your consultation this will be completed at your admission. Please do not hesitate to ask for more information about any aspect of the procedure or treatment.

When you attend the hospital for your treatment you will be cared for by a multi-disciplinary team of staff . Whilst you are on the ward, the doctors, nurses and ward assistants will be there to care for and help you.

Most of your time will be spent with our specialist therapy radiographers who will be responsible for the comfort and care of both you and your relatives during your stay. They will coordinate your treatment day, including preparation and discharge, and operate the Gamma Knife to deliver your treatment. The radiographers are also assisted by a team of support workers.

Working with them is a specialist neurosurgical team which includes consultant neuroradiologists. They are experienced in the diagnosis and identification of lesions such as yours. They also perform angiograms (a type of x-ray to check blood vessels), if required. They are assisted by nurses and radiographers carrying out the scanning in the MRI and X-ray department.

The physicists and medical physics technicians assist the neurosurgeons in the planning of the best possible treatment for you. They also work with the therapy radiographers in preparing the Gamma Knife and maintaining the accuracy and safety of the machines.



The National Centre for Radiosurgery in Sheffield has the most experienced team in the country.

The Royal Hallamshire is a teaching hospital where many professionals receive their training. This means that you may be asked to allow students to be involved in your care. You do not have to agree to this. If you do not agree to students being present during your stay with us, it will not affect your care in any way.

Important points to consider before attending for treatment

- Please be aware that in line with DVLA regulations some people must refrain from driving for a period of time following their treatment. This period can vary and you should have been informed by the consultant in clinic if any restrictions apply to you.
- Stereotactic radiosurgery is a procedure that uses ionising radiation. Even small doses can be potentially harmful to an unborn child. All female patients of child bearing age will be asked to have a blood test prior to the treatment to confirm that they are not pregnant. This blood test is the most accurate available, however, there is a small interval after conception when a pregnancy is undetectable. It is therefore advisable that all women who have the potential to become pregnant ensure that they use contraception in the two weeks prior to admission. A positive pregnancy test will result in the treatment being postponed. If there is any possibility that you may have become pregnant whilst awaiting your admission, please inform the Stereotactic Radiosurgery department immediately by contacting us on **0114 226 8952**

If you are unsure about any of these considerations or require more information please contact the Stereotactic Radiographers on **0114 226 8952**

What will I need to bring with me?

You will need:

- Nightwear, toiletries, a towel and loose comfortable clothing which has no metal zips, buttons or embellishments on it.
- Any mobility aids you use, eg frames, sticks or wheelchairs.
- Any medicines you are already taking (in their original packaging please), including over the counter medicines and herbal or alternative treatments.
- Any insurance certificates for stamping.
- Proof of benefits that may entitle you to travel expenses.

Please keep what you bring to a minimum, for example a small weekend bag or case. Please be aware this may have to accompany you during your treatment day so it is advisable that you label this with your name and address.

Useful items to bring

- Music (CDs or iPod / MP3 players) for playing during treatment.
- Contact lenses, If worn (you will be unable to wear glasses once the frame is in place).
- Shampoo / conditioner. As you will be unable to wash your hair for 3 days after your treatment, you may wish to wash your hair beforehand.
- Entertainment: books, newspapers, computer tablets etc, as you may have long periods of waiting during your treatment day. Please note that the Gamma Suite does have free wifi for patients to access.

What should I not bring?

- Unnecessary large items
- Jewellery
- Large amounts of money.

Relatives and friends

We encourage accompanying friends and relatives to be with you whenever appropriate during your stay with us. You may find it useful to have someone with you on your first afternoon as there will be a lot of information to take in. A relative or friend can stay with you for most of the time during your treatment day to support you and keep you company during the periods of waiting. They will be asked to wait in the waiting room when your frame is put on, when you have an MRI scan and during your treatment. The time and place your relatives meet you on the treatment day will be arranged by the radiographers.

Please consider that our hospital is not a suitable environment for children. Under 12s are not routinely allowed to visit and may only do so with prior arrangement with staff.

Facilities at the hospital

Please note that disabled parking facilities are very limited around the hospital and can get very busy. If you have limited mobility and are being brought in the car, it would be advisable for you to be dropped off near the entrance before the driver enters the car park as the car park is multi-storey and has no lifts.

The hospital visiting times are 08.00am - 08.00pm. Please note visiting times only apply if you are on the ward. During your treatment day there are no visiting restrictions for the relative / friend that is staying with you.

The following shops are available at the Royal Hallamshire Hospital:

- On both A and B floor of the hospital there are 2 cafes for hot drinks and snacks.
- On B floor there is also a newsagent that sells snacks, toiletries, cards and gifts.
- On C floor there is a Boots Pharmacy which sells sandwiches, drinks, toiletries and a small range of Boots' usual products. Opening hours are 8.30am - 7.00pm Monday - Friday and 9.00am - 2.00pm on Saturdays.
- On D floor there are dining facilities that serve a selection of hot and cold food and drinks. Opening hours are 7.00am – 7.00pm every day.

On your arrival

When you arrive please go straight to the ward specified in your admission letter. As your admission is planned for 1.00pm (or 2.30pm on Sundays or bank holidays), we advise you to either bring your own lunch to eat in your room, or to visit the canteen beforehand on D floor.

The options for your accommodation will be discussed during the course of your consultation with a radiographer. For some, it may be advisable to stay in the hospital for medical reasons. If you are not required to stay in the hospital, then you may be given the option of staying in the patient accommodation adjacent to the hospital on Beech Hill Road. The facilities here include a bedroom plus shared seating area, toilet / bathroom and kitchen facilities. No food will be provided but you can bring your own food and drink.

The hospital dining area, small supermarkets, restaurants and takeaway outlets are all within easy reach. If you are traveling to the hospital with someone and they are staying in a hotel, then it may be possible for you to stay with them on the night before your treatment.

Please note that the accommodation we have at the hospital is limited and it will not be possible for your friend / relative to stay with you overnight on the ward. However, it may be possible to arrange for you to have a shared room at Beech Hill Road if this is suitable. A list of bed and breakfasts, guest houses and hotels close to the hospital will be included with your admission letter.

On the first afternoon on the ward, you will meet a variety of staff. These include:

- Nursing staff who will complete your ward admission paperwork.
- Junior doctor or specially trained radiographer who will update our knowledge of your medical history and check any medication you are taking, if this has not been done at a prior clinic appointment.
- Stereotactic radiographer who will explain in detail how and when your treatment will be carried out. We will explain to you how the treatment day will run and what to expect while you are with us.
- Consultant or senior registrar. If you have not been to see a consultant in clinic, a senior registrar or research fellow will answer any questions you may have and ask you to sign a consent form once you are happy to go ahead with the treatment.

Please note that if you are admitted on a Sunday or bank holiday you will not see a radiographer or consultant. However, you will be given a letter by the ward staff explaining the timetable for the following day.

Any relevant blood tests required will be completed on this first afternoon. This includes all female patients of child bearing age being asked to have a blood test prior to the treatment to confirm that they are not pregnant, as discussed earlier in this leaflet. Other blood tests may be required and these will be discussed with you on admission by your treatment team.

Preparing for your treatment

Most patients will be started on a short course of steroid tablets on the evening before their treatment. If this applies to you, we will let you know. These tablets are given to counteract the possible side effects of the radiosurgery. You would normally finish the course of steroids on the morning after treatment.

Please ensure all make-up and nail varnish is removed prior to your treatment.

Unless you are having an AVM treated (which requires you to wear a hospital gown), you can wear your own clothes during the treatment day, providing these are loose, comfortable and free of metal. We will have advised you already about which of your own medications should be continued.

On your treatment day

A radiographer or clinical support worker will collect you from the ward. They will take you to the X-ray department on C floor at the Royal Hallamshire hospital to have your localisation frame fitted.

Frame fitting



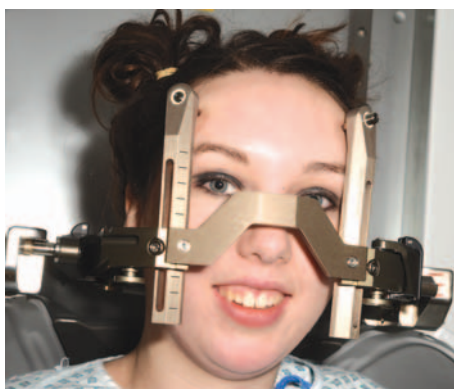
The frame is an essential device to localise your brain lesion and to immobilise your head during treatment. It is made of lightweight aluminium metal. It is not claustrophobic or enclosed and will not restrict you from eating, drinking or walking around.

Your radiosurgery team will talk you through the framing procedure and everything will be explained before it happens on the day.

You will not need to have your head shaved, but longer hair may need to be tied up.

We will apply local anaesthetic to the four areas of the scalp where the frame will be attached. We attach the frame using 4 pins, two at the front and two at the back. In certain cases four pins may be impractical, due to surgeries you may have had and if this is the case we do have other methods that we can use.

The fitting of the frame takes 15 to 20 minutes and once it is fitted, it will remain in place until your treatment is complete.



Planning the treatment

You will have an MRI and/or a CT scan which will show the relationship between your brain lesion and the frame. This will allow us to accurately locate its exact position within your head. Patients with AVMs may also need another type of imaging called a cerebral angiogram.

Our physics staff will then computerise all the information from these scans and develop a treatment plan which will be unique to you.



Whilst your treatment is being planned you will be taken either to the Gamma Knife waiting area on A floor or returned to your ward to await treatment.

You will be able to eat and drink whilst you are waiting for your treatment plan to be created.

During your treatment



We will ask you to lie on the couch and your frame will be attached to the top of the bed using a special attachment. The couch moves you into the correct treatment position and your lesion is targeted by up to 200 beams of radiation. You will not feel, hear or see anything. As everyone's treatment is different, it is difficult to say how many times you will move once your treatment is started but this will be discussed with you before your treatment starts.

The radiographers will be watching you all the time during your treatment on monitors in the control room. You will be able to speak to and hear them through a speaker and microphone system that is built into the machine. If you feel uncomfortable or need a comfort break, your treatment can be paused and resumed at any point.

Overall, the treatment can take anything from 30 minutes to over 3 hours and, on the whole, will be very boring. Music does help pass the time and we do recommend that you bring some form of music with you on the day. Don't worry if you forget as we do have a selection of music that you can choose from.

Your frame is removed immediately after you have completed your treatment.

After your treatment

Some people may be allowed home or to go to a hotel nearby at the discretion of the consultant. Others may have to stay on the ward overnight for closer observation.

If you do stay on the ward with us overnight, a radiographer or nurse will discharge you between 8.00am and 9.00am the following morning.

We will give you a booklet on after-care and phone numbers should you need further advice.

Letters will be sent to your referring consultant and your GP so that they will know what treatment you have received. Usually your referring hospital will be asked to resume your follow-up care and they will send a summary of your clinical progress to Sheffield.

The consultants in the radiosurgical unit will continue to advise on the management of your case.

Some questions and answers

When you come to Sheffield, all the staff will be happy to answer any questions that you or your relatives may have.

If there is anything you are worried or unsure about please do not hesitate to ask.

Here are some frequently asked questions

Q. How long does a treatment last?

A. The preparation before treatment will take approximately 2 to 3 hours. Waiting for the treatment is very variable but usually takes between 1 and 3 hours. The treatment itself can be from 1 hour to over 3 hours. As you can see it is a very difficult question to answer, anything from 3 to 7 hours overall.

Q. Is it a laser treatment?

A. No, the Gamma Knife produces gamma radiation which cannot be seen or felt. It is very similar to having a long X-ray.

Q Will I lose my hair?

A. No, it will not be necessary to shave off any hair before treatment. A few people will temporarily lose a small patch of hair a few weeks after treatment, if the treatment beam is focused near the scalp. This will be explained to you on the day if this applies to you. The hair that you lose will grow back a few months after treatment.

Q. Will it hurt?

A. The fixing of the stereotactic frame takes place using local anaesthetic. There is some initial discomfort as an anaesthetic is injected but the area quickly becomes numb. There will also be a feeling of pressure for a few minutes as the pins are tightened but this feeling will wear off.

The radiosurgery treatment itself is painless and some patients fall asleep during the procedure.

Q. How will I feel afterwards?

A. You will have four tiny puncture marks in your scalp where the frame was fixed, which are going to feel sore when the local anaesthetic wears off but should feel fine by the following morning.

You may also experience mild headaches and tiredness for a few days following your treatment.

Q. Is it safe?

A. Uncontrolled radiation can be very dangerous but the Gamma rays used in medical treatments are given in controlled, carefully measured doses. The aim is to treat the illness while minimising the risk of harming the patient.

Q. Can I continue to work?

A. On returning home it is advisable to give yourself a couple of days' rest before resuming your daily routines.

Whether or not you go back to work depends on many factors which you may need to discuss with your local doctors. However, the treatment itself should do nothing to prevent you returning to work when you feel fit.

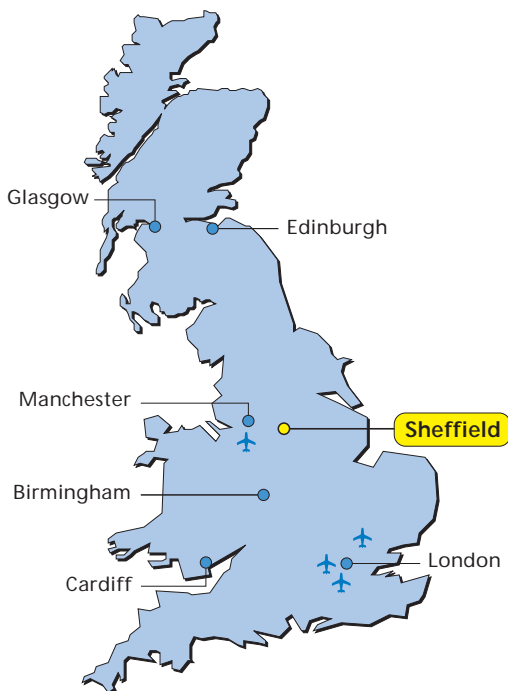
Q. Does the treatment work immediately?

A. It does take some time for the treatment to start work and the details of this will be explained to you when you come to the hospital. You will have follow up examinations at your local hospital, and they will send the information to Sheffield for assessment.

Travelling to Sheffield

There are frequent train and coach services to Sheffield. The coach and the rail stations are shown on the map.

There are good bus services from the station to the Royal Hallamshire Hospital. Alternatively you could take a taxi. It is about 3 miles from the station to the hospital.

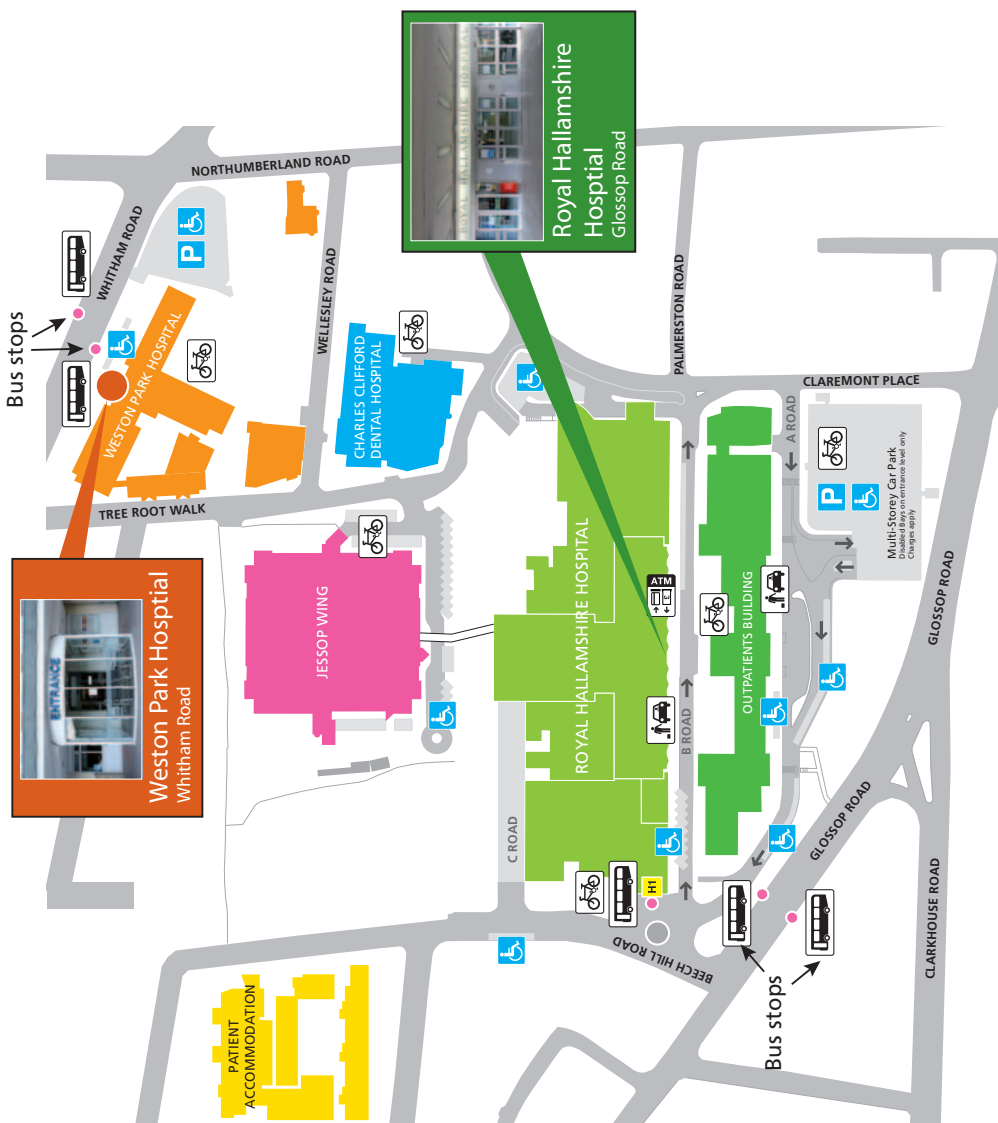


If you are travelling by road, the easiest route is to leave the M1 at junction 33 and follow the dual carriageway to the centre of Sheffield. You will arrive at Park Square roundabout shown on the map on the following page. Follow the road signs for the central hospitals or the University and these will bring you close to the hospital.

When you are near to the Royal Hallamshire Hospital, the road signs change and the individual hospitals are signposted separately.

As soon as you see signs for the Royal Hallamshire Hospital you should follow these and they will bring you to the main entrance. The hospital is located on Glossop Road which is the A57.





Contacts

National Centre for Stereotactic Radiosurgery
C Floor
Royal Hallamshire Hospital
Glossop Road
Sheffield S10 2JF
United Kingdom

Tel: **+44 (0) 114 271 3572**

Fax: **+44 (0) 114 275 4930**

Clinical enquiries: Radiographers **+44 (0) 114 226 8952**

Email: **gamma.knife@sth.nhs.uk**

Website: **www.gammaknife.org.uk**

The department is open routinely: **8.00am - 5.30pm**
 Monday - Friday

You have been seen today at clinic by:

.....

who will now become your key radiographer.

Please do not hesitate to contact them on 0114 226 8952 if you would like to discuss any aspect of your admission or treatment.

The Royal Hallamshire Hospital is committed to providing the highest quality personal and medical care to patients and their families. We are always trying to improve the service that we offer; you can help us by letting us know of any changes that you think would improve the service we give.



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