

Stereotactic Ablative Radiotherapy (SABR) to the spine

Information for patients



Leeds Cancer
Centre

This leaflet aims to help you and your family understand more about radiotherapy to the spine. The treatment technique used is Stereotactic Ablative Radiotherapy (SABR).

This leaflet will be given in addition to the information you will receive from your clinical oncologist (who is a specialist doctor in cancer treatment). His/her team will be caring for you during your treatment. This team will include radiographers and clinical nurse specialists but may also include social workers, physiotherapists, occupational therapists, speech and language therapists and dietitians.

The leaflet describes radiotherapy planning and treatment. It also explains the side-effects which you may experience during and after treatment.

Each person's treatment will vary, so the information given is a general guide. The healthcare team looking after you will explain your treatment and the side-effects in detail. If you have any questions after reading this leaflet, please speak to the team looking after you or ring the numbers at the end of the leaflet. Staff will make every effort to meet your individual needs or will direct you to the person who can help.

All your radiotherapy planning and treatment will take place in the Radiotherapy Department on Level -2, Bexley Wing, Leeds Cancer Centre (LS9 7TF).

Radiotherapy reception Telephone: 0113 206 8940

Please do not bring any valuables into hospital with you as the Trust cannot accept liability for loss or theft.

What is Stereotactic Ablative Radiotherapy to the spine?

The spine is made up of a series of bones called vertebrae. Spinal SABR is a radiotherapy technique which delivers radiotherapy to cancer in one or more vertebrae. A high dose of radiotherapy is given at each treatment visit, therefore fewer treatments are needed in total. However each treatment session will be longer than in standard radiotherapy treatment.

Radiotherapy is the use of high energy X-rays and other types of radiation to treat cancer. It causes damage to cancer cells in the treated area. Although normal cells are also affected, they can repair themselves and are able to recover. Radiotherapy is a local treatment. This means it only affects the part of the body that is treated.

When you are having your radiotherapy you do not feel anything and it does not make you radioactive. You may hear a buzzing noise when the machine is switched on.

It is perfectly safe for you to be around others, including children and anyone who may be pregnant, throughout your treatment.

You will have your radiotherapy on a treatment machine called a linear accelerator, as shown in the photograph. You will see your radiographers at each treatment session. They will be happy to answer any questions you may have.

How often is it given?

A course of spinal SABR to one body area is delivered over three or five treatment visits. Treatment is given two to three times a week with at least one day between each appointment. Treatment is not delivered at the weekend.



If you are having more than one area of your spine treated you will have more treatment appointments. In this case you may have to attend every week day for up to two weeks.

Your treatment will usually be given as an outpatient.

Visiting us before your treatment

If you would like to visit the radiotherapy department before starting treatment, please call **0113 206 7603**. This visit can be very useful as you can find out more information about radiotherapy.



'I was so pleased to see the machines before my treatment and the staff were so helpful and really put my mind at rest.'

Who will I meet?

Therapeutic radiographers

Radiotherapy is given by therapeutic radiographers of any gender, who are highly trained in the accurate planning and delivery of radiotherapy treatment. You will see your radiographers at each treatment session and they will be happy to answer any questions you may have.

Student radiographers

The radiotherapy department is a training centre for therapeutic radiographers. They are supervised at all times. If you do not wish students to be present during your treatment please speak to a member of staff. This will not affect your treatment or care.

Others involved in your care

You may meet other staff whilst you are coming for radiotherapy. Everyone you meet will introduce themselves, tell you their job title and explain the role they have in your care.

Important advice before your treatment

Pregnancy

It is very important that patients of childbearing potential are **not** pregnant at the start of a course of radiotherapy and that they **do not become** pregnant during a course of radiotherapy because it can have an effect on the unborn child. Use an effective form of contraception, for example condoms, coil, depo injection or contraceptive pill.

For more information see the '**Contraception and pregnancy during cancer treatment**' leaflet. Please do not hesitate to ask your doctor or nurse if you have any questions or concerns about these issues.

Planning your treatment

A clinical oncologist or a member of their team will discuss your treatment with you at your outpatient visit. It is a good idea to bring a list of any questions you may have and an up to date list of all your medication. You will be asked to sign a form giving your consent to treatment before you can begin radiotherapy. You will then have up to three visits to the radiotherapy department before you start treatment.

During these visits we will gather all the information we need to accurately plan and deliver your treatment. Before your first appointment with us we will contact you by phone to let you know about the appointment. Directions to the hospital and transport arrangements will be discussed with you at this point.

Treatment position

The position you lie in to receive radiotherapy treatment will depend on what part of your spine is being treated. Patients receiving treatment to the lower two thirds of the spine will be asked to lie with their arms above their head (shown here in the photograph).

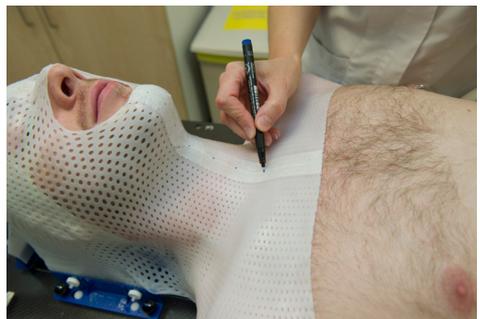


The radiographers will help you with this. The position is made more comfortable by using a custom made 'bean bag' to support your body.

Some patients find it difficult or uncomfortable to keep their arms above their head, especially if they have arthritis.

If you think that this might be a problem for you, please discuss this with your clinical oncologist. Painkillers ½-1 hour before each treatment can help. Your clinical oncologist can prescribe these if needed.

Patients receiving radiotherapy to the upper spine, and patients who are unable to keep their arms above their head, may be treated wearing a plastic mask. (Please see picture)



The mask is made in a room known as 'mould room'. Usually a sheet of plastic is warmed so that it goes floppy. It is then smoothed over your head and shoulders and goes hard as it cools down.

If you need a mask then you will wear this mask for your radiotherapy scans and during treatment.

If you have any concerns about the mask, please let your doctor or a member of the radiotherapy team know. We have a support team who will be able to help you.

Alternatively you can contact the support team on **0113 206 7616** or email: leedsth-tr.rtpatientsupport@nhs.net.

Your planning scans

During your first appointment you will need to have a scan taken on a machine called a CT scanner (please see first photo on page 7). Once you are in a suitable and comfortable position the radiographers will take a CT scan. This is used to accurately plan your radiotherapy treatment.

The scan will be taken with you lying in the same position as for your treatment. The radiographers will draw some marks on you, to be used as a reference for your treatment.

The whole process can take about an hour or less, although the scan itself will only take a few minutes. At the end of the scan the skin mark will be replaced by a small permanent mark (tattoo).



Permanent mark next to a five pence coin

You may need up to four permanent skin marks; they will be used each day for treatment. They help to reproduce your treatment with accuracy and help to ensure you are in the same position each day. It also means that you can wash without worrying about your marks coming off.

A second scan, an MRI scan, is also usually required to help plan your radiotherapy. This can take place on the same day after the CT scan described above, or on a different day. We will try to arrange for the two scans to happen on the same day when it is possible to do so. Therefore please allow 2-3 hours for the entire duration of your hospital visit.

The MRI scan can take up to one hour. You will need to undress and put on a gown.

You will lie in the same position as you did during your CT scan.

Both scans are not diagnostic scans and will not be reported on.

Before your first treatment is delivered, you will have an appointment on one of our treatment machines. This appointment will be approximately two weeks after the CT and MRI scans. The purpose of this appointment is to make sure you are comfortable in the treatment position. It is also to ensure that the treatment we have planned will be delivered accurately and safely.

If the radiographers and consultant are happy with the radiotherapy plan, the first treatment will be given on that same day. If the radiotherapy plan needs further discussion, the treatment staff will explain this to you, and what happens next.

Having your treatment

When you arrive for your treatment you should go to the radiotherapy reception desk at the entrance of the radiotherapy department. On the first occasion you will be given all your appointments and escorted to the waiting area for your machine.



The radiographers will explain what will happen and answer any questions that you may have.

Whenever possible you will be treated at the time of day that suits you, but this cannot always be arranged or guaranteed. There may be occasions when you may have a longer stay in the department or be asked to attend at a different time, for example to see your oncologist.

You may need to undress and put on a gown; the radiographers discuss this with you when you first attend the department. The radiographers will position you and adjust the treatment couch and machine to the correct positions.

As well as delivering your radiotherapy the radiographers will always take a number of 'scans' before and after your treatment. Using these scans we may make small adjustments to the position of the couch and machine which you may notice.

These scans do not monitor your condition but are purely used to check treatment accuracy.

You will be asked to stay as still as possible during the treatment but you should breathe and swallow normally. Once you are in the correct position the radiographers will leave the room to switch on the machine. You will only be alone for a few moments at a time. The radiographers will be watching you on a closed circuit TV (CCTV) monitor during treatment. The CCTV camera is not recording or saving any images. There is also an intercom system so the radiographers can talk to you. If you would like to listen to music, please let us know.

The treatment only takes a few minutes but for each session you will be in the treatment room for up to an hour. The machine stops automatically after your prescribed dose of treatment has been given. The radiographers can stop the machine at any time if needed. The treatment machine makes a buzzing sound when switched on. You do not feel anything.



The radiographers may need to come in and out part way through each treatment. After the treatment is complete the radiographers will come back into the room and help you off the couch.

On some days the radiotherapy department may be busy and there may be a delay before your treatment. We will keep you informed of any delays, please see the delay signs in the waiting areas. It may be a good idea to bring something to eat and drink with you, including any supplement drinks you have been asked to have and any medication you may need.

There is a restaurant and café available on Level 0.

Your treatments will generally be on the same machine, although there may be days when this machine is being serviced and your treatment will be in a different room.

The radiographers will monitor your side-effects throughout your treatment course and arrange for you to see a doctor in the Princess Royal Suite if needed.

It is possible that during your course of treatment an appointment may be cancelled due to machine maintenance work, bank holidays or in rare cases, machine breakdowns. As the date of your final treatment may be changed it is important that you speak to the radiotherapy team before booking a holiday immediately following your treatment.

It is very important that you do not miss treatment days as it may make your treatment less effective. If you feel you are unable to attend for any reason please telephone us so that we can discuss this with you. If you have any queries about your appointment times please discuss these with the radiotherapy co-ordinators on your treatment unit.

For appointment queries please telephone the radiotherapy reception desk 0113 206 8940 for further advice.

Side-effects of treatment

Side-effects can be divided into short term (acute) effects that happen during or soon after treatment, and long term effects occurring months or years later. Some side-effects are common, whilst others are rare.

The area and amount of treatment given to you will affect which side-effects are most likely to happen to you. Your oncologist will discuss this with you. If you develop any radiotherapy side-effects you will be given advice and support by your healthcare team.

Short Term Side-Effects (during or up to 12 weeks after your treatment)

Skin reaction

The skin in the treated area may start to redden or darken about 10 days after the start of radiotherapy treatment.

It may become dry and itchy. Avoid hair removal where possible, including shaving, waxing, cream and lasers unless advised otherwise by your consultant, nurse or radiographer.

Before you go in for your treatment the radiographer will explain what will happen to your skin and how to look after it. They will also give you a leaflet to take home. If you are concerned about your skin reaction please talk to your radiographers or contact the review clinic nursing staff in the Princess Royal Suite, telephone: **0113 206 7587**.

Tiredness (fatigue)

Nearly all patients having radiotherapy will feel tired.

Be prepared to take things easy during treatment and allow for extra rests. There is a Macmillan information leaflet available and if you would like a copy, or support with your fatigue please ask a member of staff.

Fatigue usually improves in the weeks to months after treatment.

There are things you can do to help yourself:

- Gentle exercise can help reduce the symptoms of fatigue.
- Having enough to drink can prevent tiredness from dehydration.
- Small meals or snacks eaten more often than three times a day may be easier to face.
- Try to get a good night's sleep where possible, a daytime nap may help.
- Try to 'pace' yourself, listen to what your body is telling you, rest if you need to.
- Pick out the things that you enjoy, and try to ask for help with daily tasks if needed.
- Little and often is the rule of thumb.

Back Pain

With this type of radiotherapy, some patients can experience pain in the part of the spine that has been treated. You may have to take painkillers to ease this pain before it settles down.

Some patients will be given a short course of steroids (usually a drug called dexamethasone) to take during and for a short number of days after a course of SABR to the spine.

The purpose of these steroid tablets is to reduce the risk of developing acute back pain because of the radiotherapy.

Please read the information leaflet enclosed with any medications; this will explain any side-effects you may experience when taking them. If you are at all concerned about any side-effects you are experiencing please talk to your pharmacist, nurse specialist or GP.

If you experience severe back pain despite taking pain killers,

- If already in the radiotherapy department: please speak to your radiotherapy treatment team.
- From home: 8.00am to 6.00pm Monday to Friday please call **0113 206 7587**.
- From home: Out of hours weekdays and weekends and bank holidays. Please call **0113 243 3144** and ask to speak to the Oncology Nurse Bleep Holder.

Loss of appetite and nausea

Your appetite may vary during your treatment. Try to eat well and drink about two litres of fluid every day during your treatment. There is a leaflet available on this topic, please ask a member of staff if you would like a copy. If you are experiencing significant nausea (feeling very sick), please let us know. Anti-sickness tablets can be prescribed.

Bowel symptoms

Radiotherapy may irritate your bowel. It is important to tell us if you have loose motions (loose poo) or diarrhoea. You may develop the urge to open your bowels (to have a poo) without passing anything.

Shortness of breath

Occasionally radiotherapy to the lung can produce inflammation in the lungs called pneumonitis. This inflammation can cause symptoms of increased shortness of breath, wheezing, fever and cough.

This can happen 4-12 weeks after the treatment has finished. It can often be mistaken for a chest infection but it is not helped by antibiotics. Pneumonitis is rare when treating the spine, but if you get these symptoms please contact your Clinical Oncologist and/or the radiotherapy department.

If inflammation in the lungs is suspected, your Clinical Oncologist may start you on steroid tablets to reduce the inflammation.

Discomfort swallowing

If your oesophagus (gullet/food pipe) is close to the area of spine being treated, it may become inflamed during and shortly after your course of radiotherapy. If this happens, you may experience food 'sticking' in your gullet at mealtimes, heartburn or pain when swallowing. If you experience this side-effect you will be given information, advice and medicines to help manage the symptoms. You may find that a soft or liquid diet is easier to swallow. Cooling down hot drinks and soup may also be helpful. It may be 2-3 weeks after finishing treatment before these symptoms start to improve.

Later Side-Effects (after three months)

Back pain, vertebrae and rib fractures

Spinal SABR can weaken the bones in your back, or vertebrae. If a vertebra is weakened by spinal SABR, it can fracture (break) or crush (collapse). This is called a vertebral compression fracture. Vertebral compression fractures can be very painful. It may be necessary to take painkillers to control the pain.

Sometimes the pain caused by a vertebral compression fracture may subside after approximately 8 weeks. Other patients may need to take painkillers permanently to control the pain. If the pain is very severe, a small number of patients may need an operation to help ease the pain.

If the tumour is close to the ribs there is a chance that the radiotherapy may weaken the ribs and cause them to break (fracture). Not all rib fractures are painful, but some patients need to take pain killers for a long period of time if their rib fracture hurts.

Damage to the spinal cord or cauda equina

Spinal SABR can damage the nerves in the spinal cord or the cauda equina ('tail' of the spinal cord). We take great care when planning and delivering your treatment to minimise this risk. The risk is very small (affecting fewer than 10 people for every 1000 treated) but it would be very serious if it were to happen. Symptoms depend on which part of the spinal cord and which nerves are damaged. Symptoms can include limb weakness, difficulty walking, numbness, loss of bladder and bowel control and death.

Damage to the oesophagus or bowel

Spinal SABR can damage the oesophagus (gullet) or bowel. The risk is small but it could be serious if it were to happen. Possible symptoms of damage to the bowel include a permanent change in bowel habit, bleeding from the bowel or diarrhoea.

Other rare but potentially serious or life threatening complications include a stricture (permanent narrowing) of the oesophagus or bowel, perforation (hole) in the oesophagus or bowel or severe bleeding from the oesophagus or bowel. An operation may be needed to treat any serious damage to the bowel or oesophagus.

Damage to the trachea (windpipe)

Spinal SABR can damage the trachea (windpipe) or the main airways (air tubes) into each lung. This can cause a cough or chest infections. It is unlikely that treatment will cause a hole to develop in the trachea but this would be a life threatening complication.

Lung scarring

Spinal SABR could cause permanent scarring to a small area of the lung. This could make you more short of breath or cause a cough. The risk of this happening is small.

Research at Leeds Cancer Centre

Leeds Cancer Centre is a major centre for cancer research. You may be asked if you would like to help with some of the clinical studies. You are under no obligation to take part in any trials, and your treatment will not be affected in any way if you do not wish to take part.

If you do take part in a clinical trial you may meet a research nurse or radiographer who will be helping to run the trial.

Further information and support

If you have any questions please ask your hospital team. We all have our own ways of coping with difficulties.

Some people have a close network of family and friends who provide emotional support. Others would rather seek help from people who are not involved with their illness.

The following are also available as sources of information and support that you may wish to use.

Clinical Nurse Specialists (CNS)

Your CNS is available to discuss any aspect of your treatment with you. You will be seen by a CNS before your treatment. This is to offer support and advice about the practicalities and effects of your treatment and answer any questions you may want to ask.

Your CNS will also assess and discuss any physical, psychological, social, occupational and spiritual needs that you may have. They can refer you to other services if needed, for instance, benefits advice.

You should be given a 'key worker' as a contact for support through your treatment; this is usually your CNS.

Macmillan Specialist Radiographer and Macmillan Radiotherapy Nurse Specialist

Sometimes people need more help if they are feeling depressed, very anxious or are having problems with their treatment. If this is the case you may benefit from seeing the Macmillan radiographer or nurse specialist.

Your oncologist, radiographer or nurse can refer you at any point before or during your treatment.

Local Support Services

Leeds Cancer Support

Leeds Cancer Support complements care provided by your clinical team. We offer access to information and a wide range of support, in a welcoming environment for you, your family and friends.

We can be found in the information lounges in Bexley Wing and also in the purpose built Sir Robert Ogden Macmillan Centre (behind the Thackray Medical Museum).

The Sir Robert Ogden Macmillan Centre

This centre offers a variety of free health & wellbeing and supportive therapies for patients, their family members and carers. These include hypnotherapy, mindfulness coaching, acupuncture (for hot flushes) and pilates.

Contact numbers for Leeds Cancer Support

Information Lounge Level -2 Radiotherapy Department

Open from 8.00am - 6.00pm Tel: **(0113) 206 7603**

Information Centre Level 1 Outpatients Department

Open from 9.00am - 4.00pm. Tel: **(0113) 206 8816**

Sir Robert Ogden Macmillan Centre

Open from 9.00am - 4.00pm. Tel: **(0113) 206 6498**

All the above services can be emailed on:

leedsth-tr.cancersupport@nhs.net

Maggie's Centre

If you or someone you love has cancer you may have lots of questions. Maggie's is a warm, welcoming place where you can meet people who are experiencing similar things to you.

You may also be able to find support groups specific to your needs and get advice and information from their professional staff.

You don't need an appointment and all support is free.

Open Monday to Friday 9.00 am - 5.00pm. Tel: **(0113) 457 8364**

Address: St James's Hospital (next to the multi storey car park), Alma Street, Leeds LS9 7BE

Email: leeds@maggiescentres.org

Website: maggiescentres.org

National Support Organisations

Macmillan Cancer Support

Freephone: **0808 808 0000**, 8am to 8pm seven days a week.

A textphone service for deaf and hard of hearing people on **18001 0808 808 0000**

Website: www.macmillan.org.uk

Live Through This

A cancer support and advocacy charity for the LGBTIQ+ community.

Email: contact@livethroughthis.co.uk

Website: <https://livethroughthis.co.uk>

Stopping smoking

NHS Free Smoking Helpline: **0300 123 1044**

Monday to Friday 9am to 8pm, Saturday and Sunday 11am to 4pm.

Website: www.nhs.uk/smokefree

Car Parking

When you are coming for radiotherapy planning and treatment your parking is free in the on-site multi-storey car park. Please ask for more information at the radiotherapy main reception desk.

Hotel Bexley Wing

Patients having radiotherapy or chemotherapy sometimes use the hotel if they have a long way to travel. The hotel is located on the 8th floor of Bexley Wing and offers 19 twin rooms and 1 single room. All have en-suite, tea and coffee making facilities, a mini fridge, towels, hairdryer and digital television. There are two rooms with wheel chair access and a wet room. Patients are able to stay free of charge. There is a charge for relatives if they are staying in their own room.

Meals can be purchased (at breakfast and lunch) if you are able to make your way to the restaurant in the Bexley atrium. At other times you will need to have something you have brought from home or purchased.

There is a very small fridge for your personal use. There are **no staff after 4pm until the next morning in this facility.**

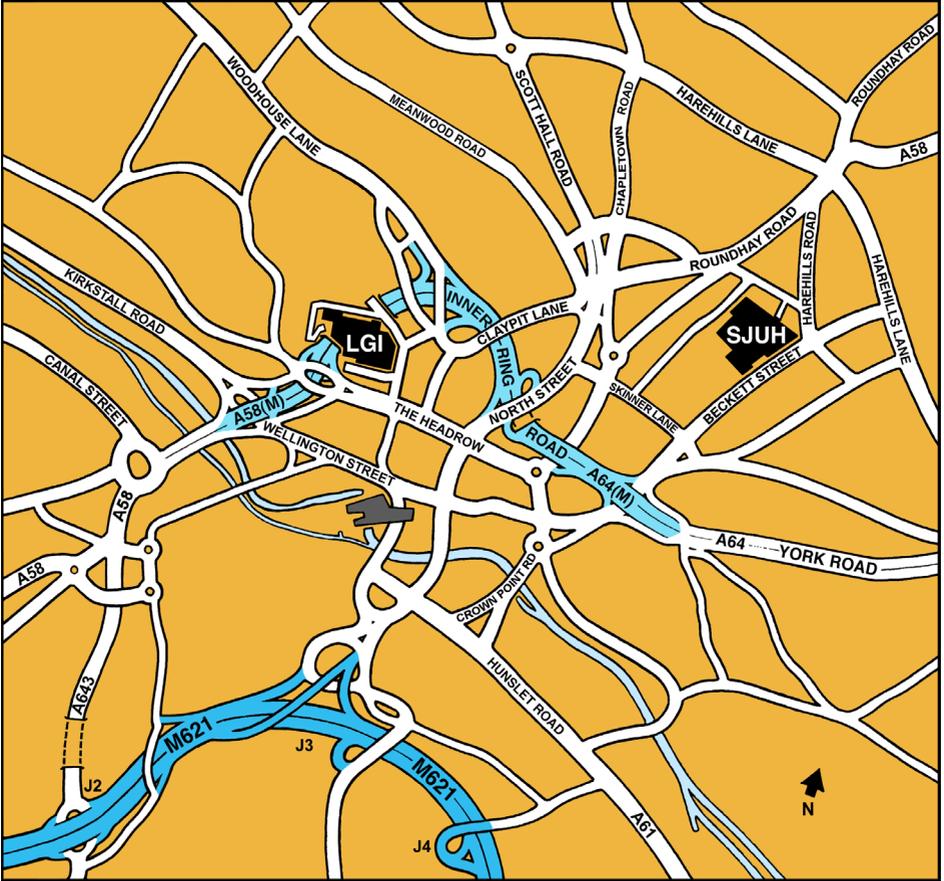
For further details please contact the Hotel Co-ordinator on **0113 206 7687**. Out of hours please contact the Non-Surgical Oncology Nurse Practitioner through main switch board on **0113 243 3144**.

Refreshments

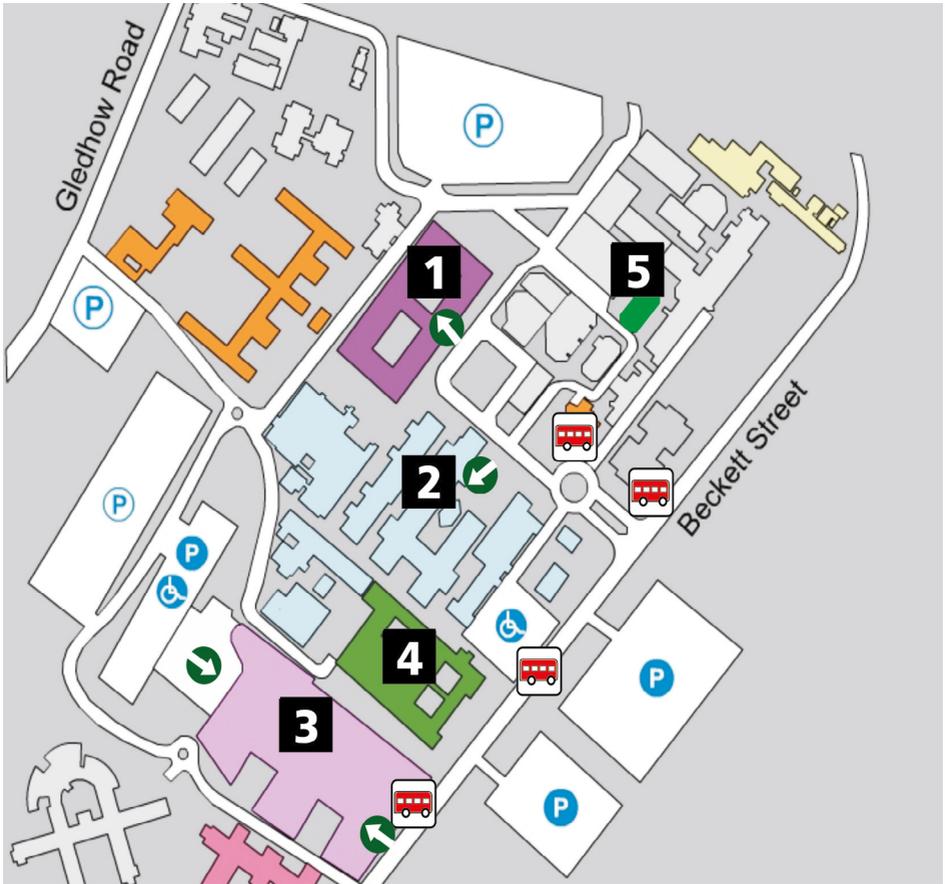
There is a restaurant and coffee shop available on Level 0, which are open daily. They serve drinks, light snacks and hot meals. Vending machines are also available in the main radiotherapy waiting room and Level 0. There is also a shop on Level 0 with books, papers and snacks.



How to find us



St James's University Hospital - site plan



- | | | | |
|----------|---------------------|--|------------------|
| 1 | Gledhow Wing | | Entrances |
| 2 | Lincoln Wing | | Visitor parking |
| 3 | Bexley Wing | | Disabled parking |
| 4 | Chancellors Wing | | Staff parking |
| 5 | Robert Ogden Centre | | Bus stops |



What did you think of your care?

Scan the QR code or visit bit.ly/nhsleedsfft

Your views matter



The printing of this leaflet has been funded thanks to donations and gifts in Wills to Leeds Hospitals Charity

leedshospitalscharity.org.uk



© The Leeds Teaching Hospitals NHS Trust • 3rd edition (Ver 1)
Developed by: Dr P Dickinson and Dr L Murray Clinical oncologists and Helen Melling and Esther Biesmans - Radiotherapy Advanced Practitioners
Produced by: Medical Illustration Services • MID code: 20221202_006/EP

LN004454
Publication date
02/2023
Review date
02/2026