

Stereotactic radiosurgery for the treatment of benign conditions

Your doctor has recommended that you have stereotactic radiosurgery for a benign brain condition. This factsheet provides information to answer some of the questions you may have about the treatment. If there is anything you are not clear about, please speak to a doctor, nurse, or radiographer involved with your treatment.

How are some benign brain conditions treated?

Benign conditions can be treated by stereotactic radiosurgery, neurosurgery, or a combination of these treatments. The Royal Marsden specialises in radiotherapy and is one of the leading hospitals for treatment with stereotactic radiosurgery.

What is stereotactic radiosurgery?

Stereotactic radiosurgery is a highly accurate way of giving localised radiation treatment to the brain. Radiation is directed at the tumour from many different angles. To achieve accuracy, a special face mask called an immobilisation shell is worn which helps to keep your head still. Stereotactic radiosurgery can be given in a number of doses over the course of one, three or five days. The choice of the number of doses will be made by the team treating you, according to the size and location of the target for treatment.

What will the preparation for treatment with radiosurgery involve?

Immobilisation shell and computed tomography (CT) scan

We will create an immobilisation shell that you wear during treatment. This is made in the CT scanner before your scan and is not painful or uncomfortable. Occasionally we may make the shell in a separate room (Mould Room). The shell is put on during treatment to make sure that you lie in the same position each time you have treatment.

You will have a CT scan wearing this shell so that we have an image of you in the exact position you will be in for treatment. We use this scan to assist in the planning of your treatment.

Magnetic Resonance Imaging (MRI)

You will also have a special 3D MRI scan of the brain to give us a detailed view of the area for treatment. This scan is performed using an injection of contrast (gadolinium) and helps us to plan your treatment.



What will happen during radiosurgery?

The treatment will usually be given in one, three, or five consecutive days, however during the planning process this may change. If this is the case we will call you and let you know. Having radiotherapy is painless and it is safe to eat or drink before treatment and immediately afterwards. You should be fit to travel home afterwards, but we advise that you have an escort with you. Anyone who has brain radiosurgery should not drive a car for a period of time so you will need someone to take you home. The length of time you cannot drive will have been discussed with you at your clinic attendance.

Steroids

To minimise the risk of side effects, we will prescribe a corticosteroid (generally dexamethasone) regime tailored specifically to your needs.

What are the possible benefits of treatment?

The aim of the treatment is to stop the area from growing any further and improve any symptoms you have been experiencing.

What are the expected side effects of treatment?

Possible side effect	Advice
Fatigue	This is usually mild but may last for a week or two after treatment. Take rest where necessary and drink plenty of fluids to keep your body well hydrated.
Headaches, nausea or sickness	You have been prescribed steroids to minimise the risk of this happening. Please contact your key worker within working hours, or The Royal Marsden Macmillan Hotline (24 hours) for further support.
Seizures	Seizures caused by radiosurgery are rare. If this is anticipated, you will be prescribed anti-seizure medication. The chances of this are less than 5% (5 in 100 people).
Skin soreness	Most patients do not experience a skin reaction in the area being treated, however some may develop a tender scalp after the treatment and the severity of the reaction varies from person to person. You can moisturise the skin over your forehead and face using your own moisturiser, or a mild unperfumed cream. Currently there is no evidence that any one cream has benefits over any others, but some people prefer to use products with fewer chemicals in so you may wish to look for a product that is SLS free (sodium laurel sulphate).
Hair loss	You may lose some hair in the area being treated with radiotherapy, although this will be minimal. This will happen after a few weeks and is usually temporary. Avoid using a hairdryer or heated rollers. Do not use hair spray, colouring agents, or perming solutions. These can be used after your course of treatment is finished and after any possible skin reaction received has resolved.



Late side effects

Occasionally radiosurgery may cause some damage to the area of the brain where the disease was lying. The type of late side effects that occur can vary depending on the area being treated and can occur six to 18 months after treatment. In most cases, the chance of any late side effects occurring is less than 5% (5 in 100 people). Your individual risk of late side effects will be discussed with you and will be included on your consent form.

Seizures

Damage to the nerves surrounding the target may result in abnormal electrical activity within these nerves.

Stroke

The blood vessels around the target may become weakened and can increase the chance of bleeding within the brain.

Radiation necrosis

Damage to the healthy brain around the target can cause localised swelling and (irreversible damage to healthy brain tissue). The symptoms of radiation necrosis can be similar to your original symptoms, and may also include headaches, nausea, fatigue, and dizziness. This can often be treated effectively with steroids, and rarely requires surgery to treat the necrosis.

What will happen to me after radiosurgery?

You will generally have an appointment to come back to the hospital for an MRI scan three months after treatment, and then an outpatient clinic one to two weeks after this scan. Following this, the clinical team will decide if you will continue to be seen at The Royal Marsden, or return to your original hospital for ongoing care.

Additional information

Transport

Hospital transport can be arranged for patients meeting certain criteria. Please contact the transport department on 0207 811 8180 for further information.

Contact details

The Royal Marsden Macmillan Hotline:

020 8915 6899

(available 24 hours a day, 7 days a week)

For further contact details – please see our separate contact sheet

