

The Thornbury
Radiosurgery Centre

Information
for patients

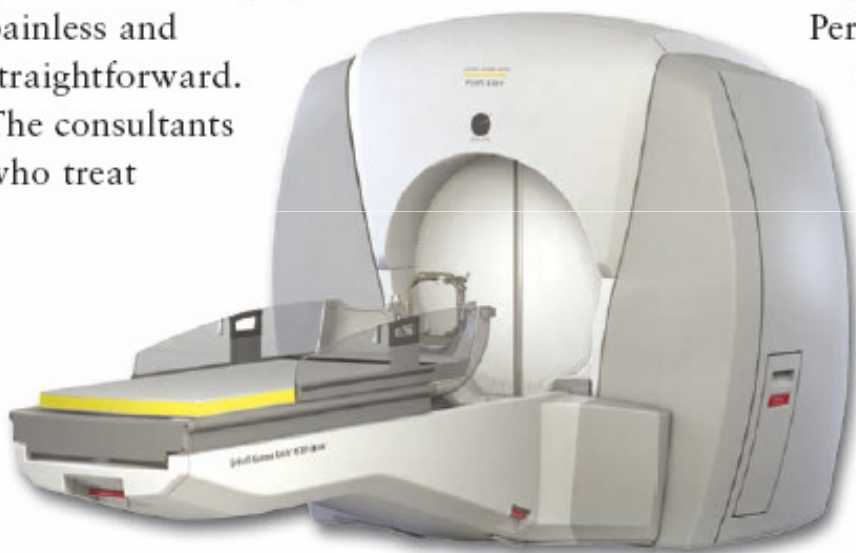
Gamma Knife® surgery is a well-established method of treating selected targets in the brain. Gamma Knife is not a knife in the normal sense of the word. No incisions are made in your head. Instead, very precisely focused beams of radiation are directed to the treatment area in the brain. Gamma Knife surgery offers a safe and effective treatment for more than 40,000 patients worldwide every year. The treatment procedure is simple, painless and straightforward. The consultants who treat

at the Gamma Knife Centre at BMI Thornbury have many years of experience and are supported by the facilities of an established private hospital. BMI Thornbury is part of BMI Healthcare which has nearly 60 hospitals nationwide and performs more complex surgery than any other private hospital provider in the country.

The Gamma Knife Centre at BMI Thornbury is committed to quality and provides the latest technology - the Leksell

Perflexion Gamma

Knife – supported by friendly, professional care.



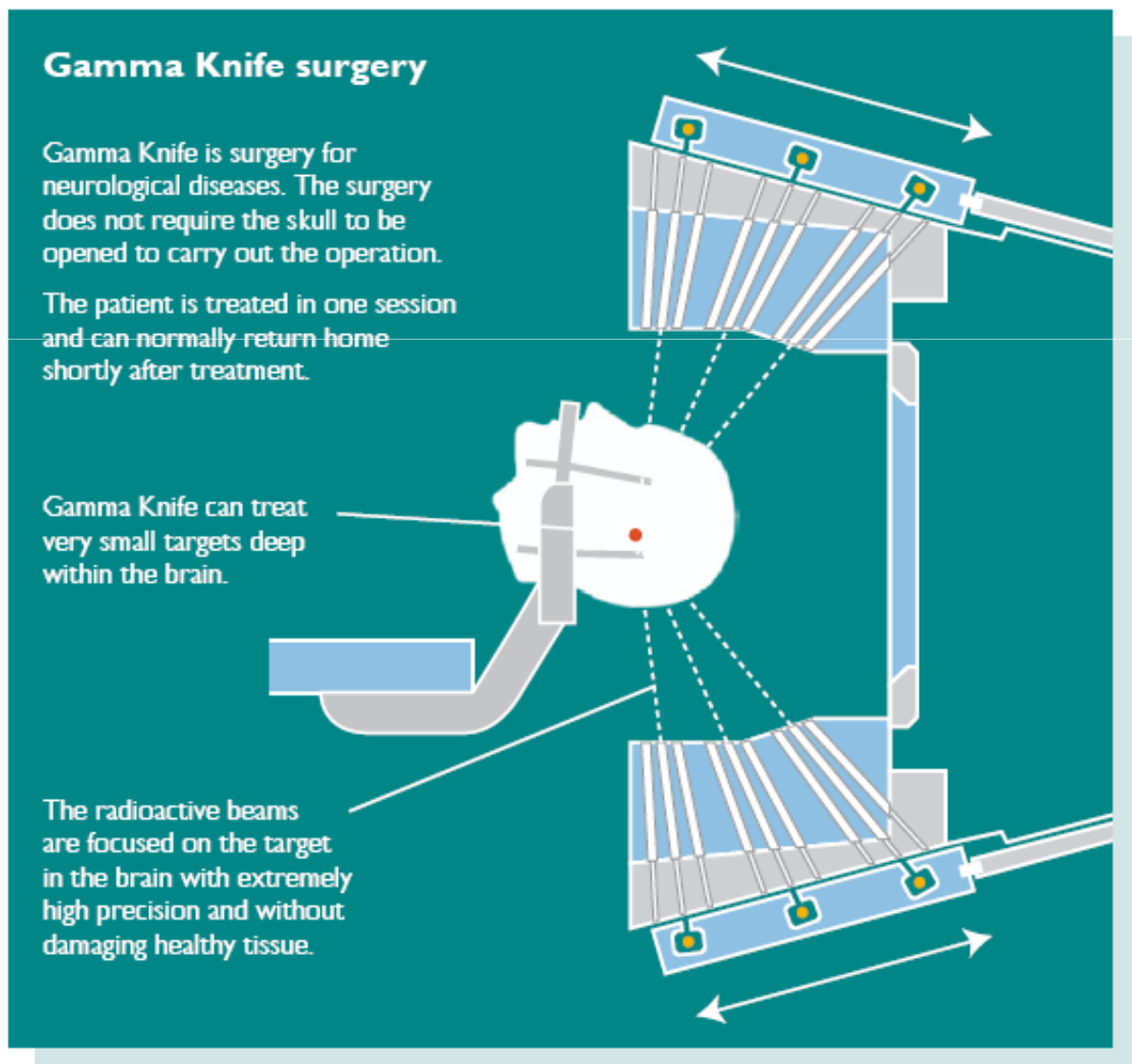
Treatment consists of four steps:

- 1.** Attaching the frame
- 2.** Imaging: MRI, CT or Angiography
- 3.** Treatment planning
- 4.** Treatment

What is Gamma Knife surgery?

Gamma Knife surgery is a unique procedure that delivers extremely focused radiation beams to targets in the brain. The radiation source used is called cobalt.

The shape and dose of the radiation is optimised to hit only the target, without damaging surrounding healthy tissue.





Before treatment

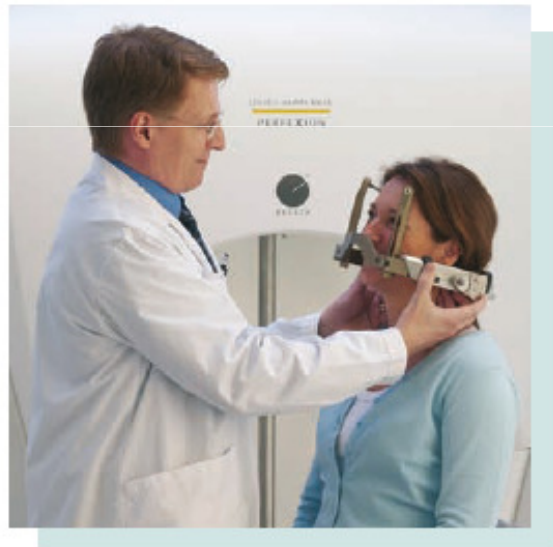
Before your treatment your consultant will inform you about the entire procedure. Gamma Knife surgery does not require cutting or shaving of your hair.

The first step is the application of the head frame, which remains in place until the treatment is completed.

1. Attaching the head frame

A key component in Gamma Knife surgery is the stereotactic head frame.

The frame enables your consultant to pinpoint accurately the target to be treated in your brain. This lightweight frame, which is attached to your head with four pins, ensures that the radiation beams can be directed with precision at the target. The frame also prevents your head from moving during the imaging and treatment procedures. A local anaesthetic is applied where the pins are to be attached.





2. Imaging

Once the head frame is in place, imaging of the treatment area is undertaken.

Imaging is performed using either magnetic resonance imaging (MRI), computed tomography (CT) or angiography. Imaging is required to determine the exact size, shape and position of the target in the brain.

During imaging, a coordinate box is placed on the head frame to provide reference points on the images for the treatment plan. After imaging, the coordinate box is removed.

3. Treatment planning

Once your images have been taken, you can rest while your consultant develops a precise and accurate treatment plan. Each treatment plan is unique; every patient's plan is individually designed to address the specific medical condition. Your consultant, together with other specialists in the team, makes the plan with a specially designed computer and calculates how the treatment should be performed.





4. Treatment

Once your treatment plan is completed, the actual treatment can start. You lie on the treatment couch with the head frame which is now attached to the Gamma Knife.

You remain awake during the entire procedure and you will be able to communicate with your consultant or nurse whenever you wish.

When the treatment begins, the couch moves into the dome section of the unit. The treatment is silent and totally painless.

The team monitors the procedure at all times. The treatment can take from as little as a few minutes to more than an hour, depending on the size and shape of the target.

After treatment

When your treatment is completed, the head frame is removed.

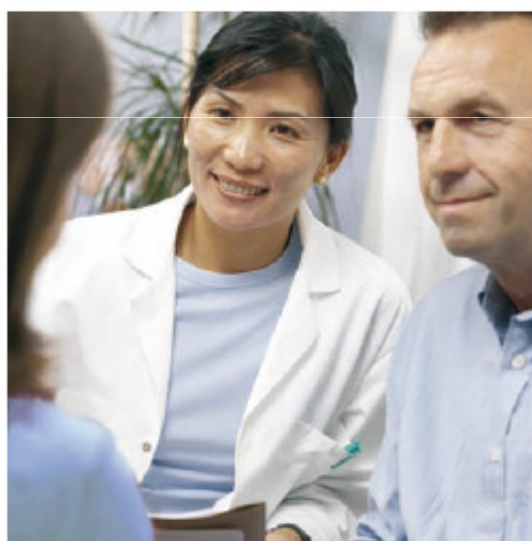
Some patients experience a mild headache or minor swelling where the head frame has been attached, but most report no problems.

Your consultant will tell you whether or not you should stay in hospital overnight for observation or if you can go home immediately. Either way, you should be able to return to your normal routines in a day or so.



What happens next?

The effects of your treatment occur over time. Radiation treatments are designed to stop the growth of tumours or dysfunctional tissue, which means that the effects will be seen over a period of weeks or months. Your consultant will stay in contact with you to assess your progress, which may include follow-up MRI, CT or angiography images.



If you would like more information

For more information about Gamma Knife treatment, ask your consultant or the team at the Gamma Knife Centre at BMI Thornbury for patient

organisations and websites relevant to your diagnosis. If you have any questions or concerns, contact the Gamma Knife Centre at BMI Thornbury on 01142 661133.



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