

The ultimate in precision radiosurgery

Dedicated to treating complex brain conditions

The London Gamma Knife Centre
at The Wellington Hospital

part of **HCA**Healthcare UK

Welcome to The London Gamma Knife Centre at The Wellington Hospital

Through our unique partnership between The Wellington Hospital and Barts Health NHS Trust, we are now able to offer patients the latest generation of non-invasive treatment for brain conditions.

Reassuringly, the Gamma Knife® Icon is not a knife at all, but a precise and accurate way to deliver radiation to even the most complex brain tumours or abnormalities. This painless treatment, which has many advantages over traditional surgery, does not require a general anaesthetic and involves only a single day outpatient visit. Most patients experience only minimal side effects and return to their normal activities the following day.

We recognise all our patients as individuals. We aim to meet your needs and those of your family and friends according to your customs, spiritual beliefs, values and dignity. Above all else we are committed to the care and improvement of human life.



The Gamma Knife has a proven track record over 30 years and has become the gold standard for the treatment of many benign tumours which would previously have required surgery and also for multiple brain metastases previously considered untreatable.

Mr Ian Sabin,
Consultant Neurosurgeon,
The Wellington Hospital

Worldwide, more than
one million patients
have been treated with Gamma
Knife radiosurgery, of which
81% have been treated for
malignant or benign tumours.



What is Gamma Knife radiosurgery?

Radiosurgery is a safe, effective and non-invasive procedure using radiation to treat tumours and lesions of the brain. It can replace conventional surgery combined with radiation, or it can be used in conjunction with it. Radiation is delivered with precision to the abnormal tissue within the head, treating tumours, vascular malformations and some types of facial pain.

Benefits of Gamma Knife radiosurgery vs Surgery

- Treatment can usually be delivered in a single day
- Rapid return to work
- No surgical complications such as bleeding, infection or leakage of cerebrospinal-spinal fluid.

The Gamma Knife system was the first ever radiosurgery device and works by damaging the tumour cells so they can no longer grow. It has revolutionised the treatment of certain benign and malignant tumours in and around the brain, replacing the need for surgery in many cases. Unlike conventional radiotherapy, radiosurgery is only directed at the abnormal tissue and so it spares the normal brain tissue nearby.

What conditions can we treat?

- Metastases
- Meningioma
- Vestibular schwannoma
- Trigeminal neuralgia
- AVM
- Pituitary adenoma
- Functional disorders

No patient or radiosurgery treatment is exactly the same as another. The Gamma Knife Icon offers freedom to adapt and optimise treatment planning.

Mr Cormac Gavin,
Honorary Consultant Neurosurgeon,
St Bartholomew's NHS Hospital,
London



Why the Icon?

Although the Gamma Knife has now been in general use for over 30 years, technology has advanced tremendously during that time and the latest model reflects this. Because the state-of-the-art Icon delivers radiation with unbeaten precision and accuracy, it allows both patient and physician greater choice when planning scans and treatment.

In order to deliver beams of radiation with submillimetre accuracy, the patient's head must be held securely to avoid inaccuracy due to movement. The Icon offers more flexibility than earlier machines.

For earlier Gamma Knife models, a rigid frame had to be fixed to the patient's head with four pins under local anaesthetic.

The frame prevents head movement during treatment and allows precise delivery of radiation. The Icon adds the option of using a standard radiotherapy mask to immobilise the patient, although the frame remains an option where the extra precision is necessary.

We were the first
Icon centre in
London to use a
radiotherapy mask



Our multidisciplinary team

- Your consultant, who may specialise in neurosurgery, clinical oncology, or neuro-radiology, is your treatment specialist. After discussion with you, they will agree on and supervise your care and treatment.
- The Gamma Knife nurse works with the radiographers to provide support, education, advice and information to you and your family. They will meet you on the morning of your treatment and accompany you during the day.
- The Gamma Knife radiographers are specially trained in Gamma Knife treatment and patient care, working closely with your consultant and medical physicists to plan your treatment.
- The medical physicists are radiation scientists. They work closely with your consultant and radiographer to plan your treatment in detail. You will normally meet them during the frame fitting process.
- You may also meet MRI and angiography radiographers, and members of our administration team.



Prior to treatment

Consent

It is a legal requirement that we have your signed consent for Gamma Knife treatment. It is important that you understand what the proposed treatment involves. We will make sure you have the chance for a full discussion with your consultant so you are fully informed before signing the consent form. Please feel free to ask your specialist as many questions as you feel necessary.

Before treatment, all adult female patients up to the age of 65 will be required to sign a declaration of their pregnancy status*.

Pacemaker

If you have a pacemaker fitted please send any relevant documentation to The London Gamma Knife Centre. MRI scanning is normally required before planning treatment and this is usually not possible with a pacemaker in place. However, some modern pacemakers are MRI compatible but this, of course, would need to be confirmed in advance of treatment.

Pregnancy*

Radiation can harm an unborn baby, so female patients should be aware of the importance of not being pregnant on the day of treatment. If you think you may be pregnant, it is extremely important that you discuss this with a member of the Gamma Knife team.

What to bring

We suggest you:

- Bring an overnight bag
- Wear comfortable, loose fitting clothing that is 100% cotton, avoiding metallic decoration or metal zips where possible. An underwired bra can distort the images and should not be worn. Mascara can also distort the scans.
- Take any medication as normal on the morning of your treatment and bring it along with you too

The treatment process

Treatment will take place at The Platinum Medical Centre, at our dedicated Gamma Knife Unit on the ground floor.

The treatment consists of four steps:

1. **Stereotactic frame fitting**
(For some patients a mask will be used rather than a frame)
2. **Diagnostic imaging:**
CT, MRI or angiography
3. **Treatment planning**
4. **Treatment**



1. Stereotactic frame fitting

In order to pinpoint the area that will be treated by the Gamma Knife, a guiding device called a stereotactic frame is fitted. This is a lightweight aluminium frame which is attached to your head with four surgical pins (two on the forehead and two on the back of the head). They pierce the skin and rest on the skull, but do not pierce the skull. Four small injections of local anaesthetic will be administered to numb the skin where the pins are to be placed. No hair will be shaved from your head. The fitting of the frame takes approximately 10 minutes. You will experience a feeling of increasing pressure being applied to the head. However, this feeling will subside within 15 minutes.

Once the frame is fitted it remains in place for the duration of your treatment and is removed immediately once treatment has been completed.



2. Diagnostic imaging

All patients require an MRI scan (or a CT scan if for any reason you cannot have an MRI scan) which is used to plan the treatment.

- You will be required to remove your jewellery and any metal objects for the MRI scan
- In order to produce high quality pictures of your brain, your head frame will be secured so it cannot move. An injection of contrast will be given before the scan. The imaging will take around 20 minutes
- Throughout the examination, the staff will be able to see you and you will be able to communicate through an intercom

Angiography

Angiography is only necessary for patients who are having treatment for a vascular abnormality such as an arterio-venous malformation (AVM). In which case:

- You will be asked not to eat for a minimum of six hours and not to drink for a minimum of two hours prior to this procedure
- You will be asked to wear a hospital gown for the duration of the treatment

- The procedure will involve a local anaesthetic being injected into the groin to numb the surrounding area
- A small skin incision will be made to allow a tube (catheter) through the femoral artery in the groin
- Dye is added through the catheter — you may notice a feeling of warmth in your head or face during the injection, but this will pass quickly
- A series of X-ray images taken of the artery or arteries will be taken
- Once this procedure is finished, pressure will be applied at the site of the skin incision, for a minimum of 10 minutes, until it has closed
- Afterwards you will need to lie flat for between 4 to 6 hours which will coincide with your treatment time. You can usually expect to resume normal activities the following day

The treatment process

3. Treatment planning

After the diagnostic imaging is performed you will rest while the medical team plans your treatment.

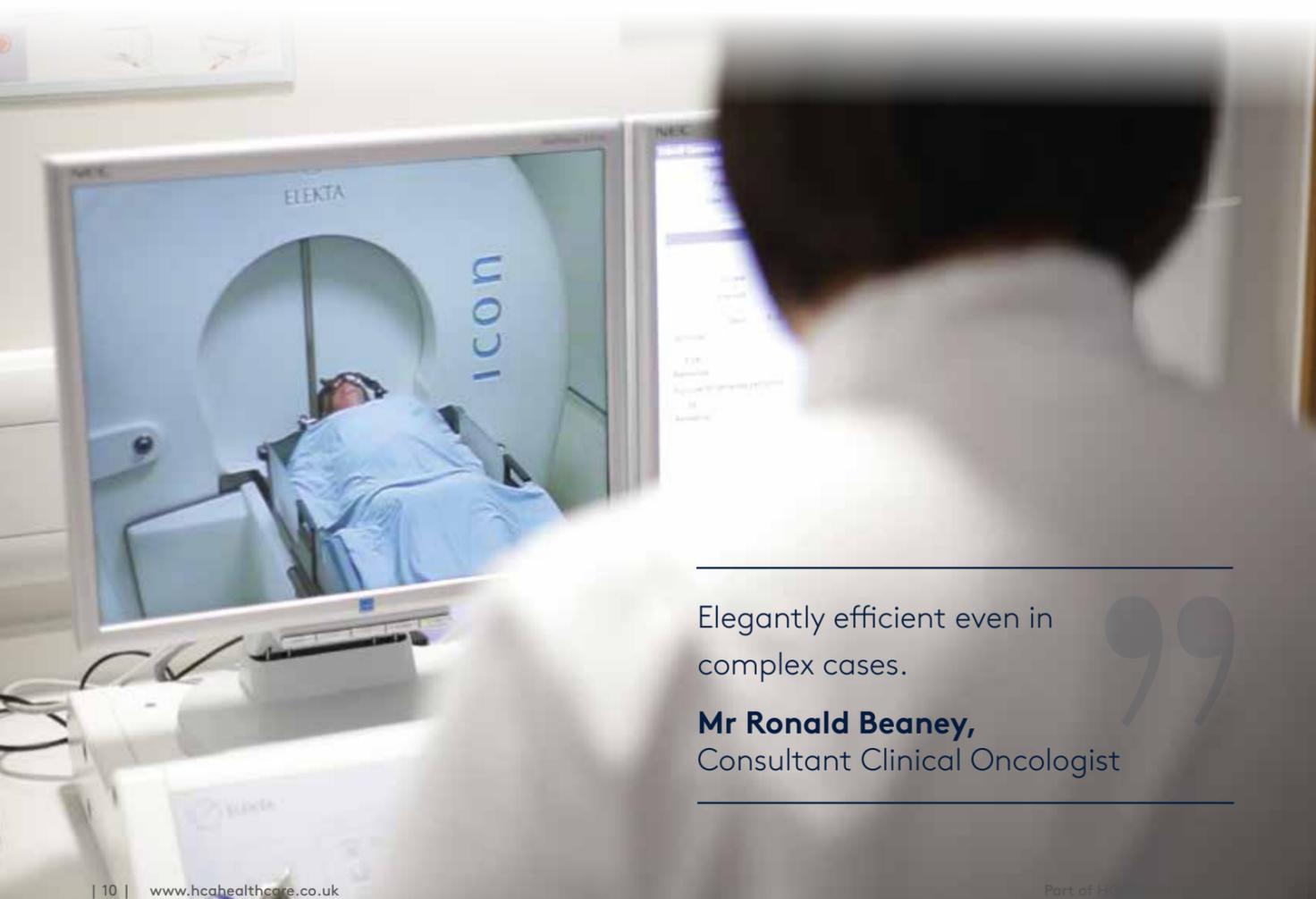
The images taken will be transferred to the Gamma Knife planning station for examination, and the treatment area will be mapped out. The team will calculate the exact dose, treatment time and head position(s) required.

4. Treatment

You will now be taken to the treatment room and positioned on the Gamma Knife couch. The stereotactic frame or mask will be fixed onto the treatment couch. As the team leave the room you will hear a beeping noise to let you know that your treatment is about to begin.

The treatment is not painful and you will not feel or see anything. You can listen to music during treatment if you wish.

You will be constantly monitored by the team on closed circuit television and via an intercom. You can talk to the team during your treatment and you can request that the session be stopped at any time.



Elegantly efficient even in complex cases.

Mr Ronald Beaney,
Consultant Clinical Oncologist

Post-treatment

Immediately following treatment the stereotactic frame is removed and small dressings will be placed over the forehead pin sites. If you are allergic to Elastoplast please let us know.

Many patients feel very tired following the treatment. However, this is most likely due to the demands of the day itself, such as early start, unfamiliar surroundings and procedures, and general anxiety.

If you were on any restrictions, prior to Gamma Knife treatment, they will continue.

Discharge

You will be discharged on the same day, unless you:

- Have had an angiogram – in which case you will stay in hospital as a precaution due to the possible risk of bleeding from the wound in your groin
- Are at any risk of seizures following treatment
- Experience any adverse side effects

If you should need admission, neurological observations will be performed during the night.

Follow-up

Following discharge, either your treating or referring consultant's secretary will contact you to arrange a follow-up appointment. Your general practitioner will be provided with a summary of your treatment.

On the day of your treatment you will receive a quality assurance questionnaire and shortly afterwards you will get a follow-up call from the Gamma Knife nurse.

We always welcome your suggestions and comments as they are used to monitor the quality of the service provided by the Gamma Knife Centre, and wherever possible will be used to make further improvements.

Driving

The DVLA imposes some restrictions after Gamma Knife treatment which may involve a temporary ban on driving. Please ask your doctor if this applies to you.

Paying for your treatment

Self-funded treatment

If you choose to pay for your own care, we accept all major credit cards, cash, bank transfers and personal cheques with a banker's card. A self-pay package price is available on request.

Private medical insurance

If you have private medical insurance, we advise you to confirm with your insurer that your treatment is covered and get authorisation before making an appointment. This will include obtaining a pre-authorisation code from your insurer.

Government-sponsored patients

If you're being sponsored by an international embassy, you'll need to ensure we are provided with a letter of guarantee before your appointment to cover your treatment.

Corporate-sponsored patients

If you have agreed for your company to cover the cost of your treatment, you'll need to provide a letter of guarantee authorising payment.

Before treatment you will be asked to read and complete the HCA UK Registration Guide along with the Admission/Registration Form. These documents set out the contractual arrangements for your treatment, and therefore form your contract with The London Gamma Knife Centre at The Wellington Hospital. At the end of the treatment, depending on how your account is being settled, there may be some extra charges to pay. For insured or government sponsored patients this will usually be extra costs not covered by contractual arrangements, such as visitor meals, telephone calls or take-home medication.

Please note that any tests required outside of the Gamma Knife package, such as blood tests, will be charged separately.

How to refer

If you would like an appointment at The London Gamma Knife Centre, get in touch today. Self-pay packages are available on request. Covered by all major insurance companies.

Call: 020 3214 3500

Email: gammaknife@hcahealthcare.co.uk

Our group

Connect with us



The Wellington Hospital
The Princess Grace Hospital
The Portland Hospital
The Lister Hospital
The Harley Street Clinic
The Christie Private Care
London Bridge Hospital
Leaders in Oncology Care (LOC)
HCA UK at University College Hospital
HCA UK at The Wilmslow
GP Services

020 3214 3500

www.hcahealthcare.co.uk

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