Hello, my name is Dr Michael Kosmin.

I'm a consultant clinical oncologist working with the Brain Tumour team at University College Hospital in London.

I work with my neurosurgical colleagues at Queens Square and I am part of the team delivering A Gamma Knife treatments at the unit at Queens Square.

What the Gamma Knife is able to do is really focus radiotherapy tightly into the areas where we need where we need to deliver it to - the brain.

It doesn't treat any other parts of the body, and what the machine is able to do is focus radiation into these targets, whatever they may be, and damage the tissues there that are causing you damage as a patient.

So the idea really is to use radiotherapy or radiation to attack and damage the cells that are causing your disease.

And often that doesn't happen straight away.

It's not like having an operation where something's physically removed, it is in fact something that stays present.

But what we're trying to do is damage the DNA which is within the cells that are causing your disease and stop it from being able to multiply and divide so that it can stop growing and causing you more or worsening symptoms.

The way that radiotherapy does that is quite complicated.

There are multiple mechanisms that are involved in that, but essentially it's to do with damaging the DNA, and usually the tumours or targets that we treat are less effective at recovering from that damage than the healthy tissues nearby, which recover better.

The management of brain tumours involves a lot of specialists with different skill sets, and usually a patient with a brain tumour will need to have a formal diagnosis made of the type of disease that they have.

And so that will usually require a surgeon to take a sample of the tumour either within the brain or if it is a disease that's present elsewhere in the body that's spread to the brain.

It may be easier and safer to take a sample from somewhere else in the body.

Once that sample is analysed the disease can be named and a patient can be informed of the type of condition that they have.

We will often see patients after the treatment to ensure that they've managed it well.

They haven't run into too many problems or side effects.

And also, we would want to see a patient after treatment with a scan done to show whether or not the treatment's been successful.

And depending on why you've come for your Gamma Knife treatment, there will then be a number of pods that you may take afterwards.

If you're being looked after by another team of doctors, we may hand you back to their care and ask them to continue to look after you in a similar way to how they were before you came to see us in the first place.

And then they would contact us back in future if any of your follow up scans with them showed any concerns or there were any questions that they or you needed answers to.

There may also be some other patients that we are the team that looks after them before, during and after the Gamma Knife treatment.

And so we would be making the arrangements for follow up appointments and scans and things like that to make sure that everything that you need as part of your follow up for treatment can go ahead.

Another thing I'd like to say about Gamma Knife is that occasionally patients need more than one treatment and patients can come back and have a second or even more courses of Gamma Knife treatment depending on the reason and the disease and how well the patient's doing.

And that that again is a reason why patients get referred back to us if they've been to see us before.

Patients of any age can get brain tumours.
And when we think about brain tumours, we think really in two main types of brain tumours.
We're thinking about tumours that have started within the brain, which we call primary brain tumours.
So they're not associated with disease elsewhere in the body usually.

And the second group is other types of diseases, usually cancers, that then spread and send deposits to the brain.
So they're called secondary or metastatic brain tumours, and they're treated very differently.

And the other way in which we think about brain tumours is thinking about those that are cancerous or malignant or those that are benign.

And we use the term benign.

It's not a particularly good term because often these tumours can have quite devastating effects, but they tend not to be cancerous in the way in which they grow or spread.

The nature of the decision making about whether or not to use surgery or radiotherapy really is, is a patient specific decision that's made with you as the patient, but also with us as the specialists knowing the best way to use the tools that we have to get the best outcomes for you.

So we don't really think about radiotherapy instead of surgery.

We think about them in combination sometimes or we think about radiotherapy where surgery isn't technically possible.

So a patient who has Gamma Knife will feel a bit sore for a few days and a bit tired.

There are some rare side effects or more unusual side effects that your doctors will talk to you about.

But on the whole, patients tolerate the treatment very well.

It's quite unpleasant to have medical treatments and we're well aware of that and we're here to support you through that.

But on the whole, patients who have treatment, if they need it again for whatever reason, they will be very happy to have Gamma Knife treatment for a second time.

What patients will often say is that you wouldn't want to have it if you didn't need it, but if you do need it, it will go well and it will go fine.

And again, it's not something they would recommend people to have unnecessarily, but if they knew someone who needed to have it, they would want to reassure them that they'll get through it fine.

And although having a treatment like Gamma Knife is quite daunting, the benefits of having the treatment is that it will control this disease usually and has good results often, which in itself is far less daunting a prospect to have the treatment than it might be to have the disease itself causing a deterioration in your health.

So I think when a patient comes to see a doctor, it's really important that it's an open discussion that there's an opportunity for me as the doctor to ask the questions that I need the answers to, to make the right decisions for you.

But also it's really important that you're fully involved in the discussions as well and that your questions are answered and that you're fully engaged with the plan when it when it moves forward.

So in that sense, I think any questions are fair questions.

Often patients coming to see us for treatments are scared and anxious.

They've been given some bad news about their disease and what the implications of that are and they come to see us wanting to know what the plan is and how the situation is going to be sorted out.

In terms of what you should ask, I think it's important to understand what's going to happen on the day where you need to be, what to expect, will things hurt, who you're going to see etcetera.

And but I also think there'll be some important questions to ask about how does this specific treatment fit in with the wider plan for managing your condition.

And you know, what role will the Gamma Knife team have moving forwards?

How much of a role we'll take?

Will we take, how much of a role will your other oncology team or other medical team take in looking after you moving forwards?

And that may be somewhat different under different circumstances and certainly at different centres where there may be slightly different pathways that patients go through.

So I think it's important to know what to expect from the treatment, thinking about side effects and other things that we would of course be telling you about, but also thinking about afterwards who to contact if there's an issue and what should I contact you about versus what should I contact my other doctors about those types of questions.

And really making sure that before you leave, once the treatment's finished, you have the answers to those questions and you know what to do if you need help.