CyberKnife
Pre-treatment information for patients

Hermitage Medical Clinic
A Community Hospital for our Patients’ Needs
Treatment pathway

This booklet is designed to give you some information on your CyberKnife treatment pathway and help answer any questions you may have. The CyberKnife treatment pathway involves a number of different appointments, from initial consultation through to follow-up. Each appointment has a specific purpose and is discussed in this booklet. There is also space to help you manage your appointments, as well as space to jot down any questions you may wish to ask when you attend.

Consultation

At this session the Radiation Oncologist will discuss the CyberKnife treatment with you, discuss any possible side-effects and answer any questions you may have.
At this session you will also be asked to sign a consent form, this form indicates you understand the treatment and are happy to proceed. You have the right to withdraw your consent at any stage.

**Planning CT scan/Immobilisation**

During this session you will have any immobilisation equipment made that is required for your treatment. Immobilisation equipment is used to ensure you remain in a stable, comfortable position for the duration of your treatment. Ensuring you are comfortable is very important, please feel free to discuss or mention to the Radiation Therapists anything which can be done to improve this.

Once the immobilisation has been made the next stage is a CT scan. This scan is used by the doctors to decide the area we are going to treat and to help plan your treatment. For this CT scan you will be in the exact position you will be in for all your treatment sessions. The CT scan session will take approximately 30 minutes, with the actual CT scan taking approximately 10 minutes.

The Radiation Therapist will also be happy to show you the CyberKnife machine at this stage if possible.

**MRI scan**

An MRI scan will be required either before or after the planning CT scan/immobilisation session. This scan is used by the doctor to help decide the area we are going to treat and to help plan your treatment. As part of your MRI scan a contrast agent may be administered, this helps the doctor to see the area better. Before your MRI scan you will be required to answer a quick safety questionnaire and may be required to have a blood test. All this will be explained to you during your appointment.

**Treatment**

Before your treatment session the Radiation Therapist will run through what the treatment involves and answer any questions you may have.

For the treatment session you will be in the same position as your CT scan
with the same immobilisation. Each treatment session can take up to 1 hour so it is important that you are as comfortable as possible before the treatment starts.

During your treatment session when the Radiation Therapists aren’t in the treatment room with you, they will be watching from outside using the in-room cameras. There is also an intercom system built into the treatment room, this means you are able to talk to the Radiation Therapists during your treatment if you need to.

The CyberKnife robot will pass over you, stopping at various points to deliver treatment. Although the CyberKnife may appear to pass close to you it will never touch you. CyberKnife treatment is completely painless.

Ideally treatment is delivered without interruptions, however if at any stage you require a break please continue to remain as still as possible and slowly raise your hand. The Radiation Therapists will be in shortly to move the machine out of the way and allow you to sit up. Please do not attempt to sit up at any stage during your treatment.

During the treatment there is no need to hold your breath. Just try to relax and breathe normally. Some patients will even fall asleep during treatment. You may wish to bring along your own CD to the treatment session and listen to music during the treatment.

If your treatment course is split over more than one treatment session you will find each session is the same.

**Follow-up**

Approximately 4-6 weeks following your final treatment session the Radiation Oncologist will arrange a consultation to assess how you are feeling following your treatment. If you have any immediate questions following your treatment you do not have to wait for this appointment, simply contact the Radiotherapy Department using the number provided and they will be happy to help.
Personal treatment planner

Consultation session: date/time
Planning CT scan/Immobilisation session: date/time
MRI scan: date/time
First treatment session: date/time
Follow-up: date/time

Questions I would like to ask:
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Frequently asked questions about your treatment

What is Cyberknife?
Cyberknife is a specialised, robotic, Radiation Therapy system used for the treatment of tumours and other medical conditions. Cyberknife is a pain-free, non-surgical treatment.

How does Cyberknife work?
The robotic Cyberknife system delivers high doses of radiation with extreme accuracy anywhere in the body. The Cyberknife has X-ray cameras which constantly monitor the position of the treatment target. The information from these x-rays is then used to adjust the position of the radiation beam. This ensures the radiation beam is always precisely targeting the treatment area and minimising radiation dose to surrounding tissues.

What are the side-effects of Cyberknife treatment?
Due to the high accuracy of the Cyberknife and the low radiation dose received by normal tissue side-effects are generally minimal. The Radiation Oncologist will discuss any potential side-effects during your consultation session.

Will I feel or see anything during my treatment?
CyberKnife treatment is completely painless and you will not feel anything during your treatment. In order to deliver the treatment accurately the CyberKnife will move to various positions. So although you won't see the radiation beam itself you will notice the machine moving, the machine however will never touch you.

What if I cough or sneeze during the treatment?
During your treatment the Radiation Therapists will continually monitor you using the in-room cameras, if they notice that you have moved position due to coughing or sneezing they will simply pause the treatment. X-ray images will then be taken to ensure you are back in exactly the right position before treatment delivery is re-started.
What if I feel uncomfortable during the treatment?
Ideally the CyberKnife treatment is delivered continuously without breaks, however if you feel you need a break the treatment can be paused to allow for this. Please do not attempt to sit up during your treatment, slowly raise your hand and the Radiation Therapists will pause the treatment. When the Radiation Therapists are initially positioning you for treatment please feel free to tell them if you don’t feel comfortable so adjustments can be made. We also ask you go to the toilet before treatment starts to avoid needing to go during treatment delivery.

What should I wear for my CT scan/MRI scan/Treatment session?
To attend each appointment you can wear your normal clothes. For the actual session we will need to get to the treatment area so we may ask you to remove your clothing in this area and put on a gown. We will also ask you to remove any thing which is in or near the treatment area. For the MRI scan there are certain things which must be removed, this will be discussed before your scan.

How many treatment sessions will I have?
CyberKnife treatment is normally delivered over 1 – 5 sessions. The number of sessions you will require is dependent on a number of different factors. The Radiation Oncologist will discuss this with you during your consultation session.

Can I go home after treatment?
Once the treatment has been delivered you are free to go home and continue as normal. Tiredness may be an issue so you may want to consider this when making any arrangements.

The radiation used for treatment is only present when the CyberKnife machine is on, this means once treatment has been delivered you are free to interact with people as normal, including pregnant ladies and young children.
If you have any questions about your treatment please call the Radiotherapy Department on

01 – 645 9045