CyberKnife
Delivering the future, today!

Hermitage Medical Clinic
A Community Hospital for our Patients’ Needs
CyberKnife offers a painless, non-invasive treatment solution for people suffering from cancerous/non-cancerous tumours and other medical conditions.

CyberKnife is the world’s only radiosurgery system that uses advanced robotics to treat tumours anywhere in the body.
Pain-free: The treatment is painless, non-invasive and doesn’t require anesthesia.

No recovery time: CyberKnife treatments are performed on an outpatient basis. Following treatment patients continue with their day as normal.

Unrivalled precision: CyberKnife has the ability to treat tumours and other medical conditions with pinpoint accuracy, ensuring optimal dose to the target and minimal dose to normal tissue.

Supreme accuracy: Continuous tumour tracking ensures treatment is always focused on the target. This allows patients to breathe normally and relax comfortably during treatment.

Minimal side-effects: Due to the low radiation dose received by normal tissue associated side-effects are minimal.

Unlimited reach: The CyberKnife offers a treatment solution for tumours and other medical conditions which may be considered inoperable or untreatable with conventional methods.
Introducing CyberKnife: The next generation in treatment, now available in Ireland!

Although the word CyberKnife conjures up images of scalpels and surgery, the CyberKnife involves no cutting, is non-invasive and painless.

Tracking cameras monitor the patient’s breathing pattern and automatically correct the position of the radiation beam.

To ensure the radiation beam is always focused on the target, x-rays continually track its position and correct for any movement.

The sophisticated tracking systems allow patients to relax and breathe normally during treatment. Treatment is painless, non-invasive and delivered on an out-patient basis.

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High dose radiation beams are used to treat tumours and other medical conditions. Maximum dose is always focused on the target, avoiding normal, healthy tissue.

The robotic arm ensures radiation beams are delivered with pinpoint accuracy.

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What is CyberKnife?
CyberKnife is a specialised, robotic, radiosurgery system used for the treatment of cancerous / non-cancerous tumours and other medical conditions. CyberKnife is a painless, non-invasive treatment option for patients.

How does CyberKnife work?
The robotic radiosurgery CyberKnife system delivers high doses of radiation with extreme accuracy anywhere in the body. The CyberKnife has X-ray cameras which constantly track 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 focused on the target, minimising radiation dose to surrounding tissues.
What can be treated using CyberKnife?
CyberKnife can be used to treat both cancerous and non-cancerous tumours, as well as other medical conditions, anywhere in the body. This includes the brain, spine, lung, prostate, liver, pancreas and kidney. CyberKnife can potentially be used to treat tumours considered inoperable, untreatable with conventional methods or patients who have already received traditional radiation therapy.

What are the side-effects of CyberKnife treatment?
Side-effects from CyberKnife treatment are generally minimal. This is due to the high accuracy of the CyberKnife system, meaning radiation dose received by normal tissue is low. The consultant will discuss any potential side-effects before CyberKnife treatment is delivered.

How many patients have been treated using CyberKnife?
As of 2013 more than 200,000 patients have been treated worldwide with CyberKnife.

How is the CyberKnife different from traditional radiation therapy?
Traditional radiotherapy typically delivers low dose radiation in many sessions to an area which includes both tumour and healthy tissue. This is necessary to account for potential tumour motion, ensuring the tumour is always within the treatment area. The normal tissue included in the treatment area is susceptible to damage from the radiation, increasing possible side-effect. The CyberKnife is designed to deliver the radiation dose with extreme accuracy, targeting just the tumour and minimal healthy tissue. This accuracy allows a very high radiation dose to be delivered to the treatment area, often given in only 1-5 days. Traditional Radiation Therapy still has a role to play in a lot of oncology cases and a consultant will be happy to discuss treatment options with you.

Can I be treated using CyberKnife?
Whether CyberKnife is a suitable treatment option will depend on a number of factors. A consultant will be happy to discuss CyberKnife and other treatment options with you.

Where can I get more information?
For more information on CyberKnife you can visit our website www.hermitageclinic.ie. To arrange a consultation or discuss treatment options please contact the Radiotherapy Department on (01) 645 9045.
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