

This leaflet is written to give you information and answer questions you may have about your surgery. If you have any further questions, please speak to your doctor or the clinical nurse specialist.

What is cryoablation?

Your doctor has recommended cryoablation to you as treatment for your kidney tumour. Cryoablation is a technique that destroys tissue, in this case through freezing. In order to produce the freeze, needles are placed into the kidney, using image guidance (e.g. ultrasound & CT scanning). A mixture of gases is then used to freeze and thaw the tips of the needles. Temperatures lower than -100 degrees Celsius are produced but this only travels a small distance (a few centimetres) within your body. Most of the normal kidney tissue is not affected.

Cryoablation has been available since the late 1990s and has been used successfully in Europe and America. It is now being used increasingly in England, and is now available at UCLH.

What are the benefits of cryoablation?

Cryoablation can be an effective treatment for primary kidney cancers. If necessary the procedure can be repeated. You can resume your normal activities within a few days.

How is it done?

Cryoablation is performed in The Radiology Department and is performed under general anaesthetic.

One of the consultant radiologists will locate the abnormality in your kidney using ultrasound and the CT scanner. They will then guide the ablation needles into the correct area of your kidney before freezing the tumour to destroy it. Multiple needles will need to be inserted during the same procedure to treat all of your tumour. The body then absorbs this treated area, leaving a scar at the site of the tumour.

Are there any risks?

One of the doctors looking after you will have proposed you undergo this procedure. Thousands of cryoablations have been performed worldwide, however there are unfortunately always risks involved but these will have been minimised by making sure the procedure is appropriate in your circumstances.

The risks are:

- Post-ablation syndrome, which occurs in about 1 in 4 patients. This is a flu-like illness that happens 3-5 days after treatment, and lasts for a few days at most.
- Bleeding from the needle insertion site
- Kidney infection after the treatment
- Injury to the kidney

The radiologist who discusses the procedure with you will also give you an estimate of the risks. In general we quote the risk of a serious complication from cryoablation as 2-3 patients in 100 (2-3%) and the risk of death as less than 1 in 200 (less than 0.5%).

Are there alternative treatments?

Surgery is an alternative either with removal of the whole kidney (nephrectomy) or the tumour and part of the kidney (partial nephrectomy).

Studies show that cryoablation and laparoscopic partial nephrectomy (LPN) are both very effective at treating kidney cancer, but that cryoablation takes less time, involves less loss of blood and a lower risk of complications.

It may be that your doctors have decided that you are not well enough to undergo surgery and cryoablation which is less invasive is a better alternative.

There are also other forms of ablation therapy such as radiofrequency and microwave. We can tell you about these.

Where is the treatment performed?

Cryotherapy treatment is performed by the interventional Oncology team at University College London Hospital (UCLH)

Interventional Oncology Service
Radiology Department
3rd Floor East
250 Euston Road
London NW1 2PG

Pre-operative assessment

We will ask you to come for a pre-operative assessment appointment. At this appointment we will ask you about your medical history and carry out any necessary clinical examinations and investigations to make sure you are well enough for the procedure to go ahead. You may need an ECG and a blood test. We will check the functioning of your kidneys. The nurse will explain the procedure to you and give you instructions about eating and drinking before your procedure. This is a good opportunity for you to ask us any questions about the procedure.

We will also give you written information that tells you about eating and drinking before your procedure, what to bring with you, the admission process and what will happen on the day.

The nurse will ask you about any medicines or tablets you are taking – either prescribed by a doctor or bought over the counter in a pharmacy. It helps us if you bring written details of your medicines with you to this appointment. We will tell you whether you need to stop taking any of your medicines before your procedure. When you come into the hospital for the procedure itself, please bring all your actual medicines with you.

Consent

We will give you a copy of the consent form. Please read this carefully. If you have any further questions, please ask a member of the surgical team on the day of your procedure before signing the consent form.

Research

University College London is one of the top academic centres in the world. As such, it is likely that you will be invited to participate in an ongoing research trial. This may involve new treatment techniques or new ways of imaging or assessing tumours. Involvement in research is entirely voluntary, and you will be provided with full details of any trials which may be suitable.

Admission and the day of your procedure

The consultant radiologist will see you to talk to you about your procedure and to answer any remaining questions you may have. Once you have understood all the information, including the benefits and the risk of complications, the radiologist will ask you to sign a consent form to give your agreement for the procedure to go ahead.

The anaesthetist will also see you before the procedure and talk to you about the sedation or anaesthetic. If you have any questions or concerns, this is the time to ask.

Who will perform the procedure?

Ablation is performed by a consultant radiologist who has a particular expertise in guiding needles using imaging. There are several consultant radiologists, members of the Interventional Oncology Service, who deliver this treatment. The team works with other doctors involved in your care.

Interventional Radiologists team

Mr Ramachandran	Lead Consultant radiologist
Mr Illing	Consultant radiologist
Mr Walkden	Consultant radiologist

How long will the procedure take?

This is variable depending on the complexity and size of the tumour. Generally the ablation itself will take 60 to 90 minutes but on occasion it may take longer.

What happens after the treatment?

When you wake from your anaesthetic, you will be in the recovery area. The nurse will regularly check your pulse rate and blood pressure. Once you are comfortable and your blood pressure is stable, you will be taken to the ward for an overnight stay.

On the ward, you will gradually be allowed to drink water. If you are able to tolerate good amounts and don't feel sick, then you will be able to have a hot drink and something light to eat.

You may have an intravenous drip in your arm, which will be removed before you go home. Your nurse will offer you pain relief to help with any discomfort. By the next day most people require painkillers no stronger than paracetamol. When you get out of bed for the first time a nurse will need to be with you in case you feel faint or dizzy.

The day after treatment, you will have another CT scan of the treated region and will be reviewed by the team before discharge.

What happens when I go home?

Normally, you will be able to go home the day after your procedure. Before you go home we will discuss your follow-up treatment with you. You should expect to be off work for 1 week after the treatment.

You will receive follow-up CT or MRI appointments at 3, 6 and 12 months after treatment.

What else should I look out for?

You should contact your GP if you experience

- shortness of breath or pain on breathing in
- pain that is not controlled by regular painkillers (e.g. Paracetamol)
- increasing fever or pain more than 1 week after the procedure

If you have any cause for concern following discharge such as bleeding or abdominal pain, please contact our clinical nurse specialist.

Outside regular office hours, contact your GP and, in case of an emergency, contact your local emergency services.

Useful sources of information and support

Additional information available

[Kidney Cancer UK](#)

Provides information and support for kidney cancer patients and their carers
www.kcuk.org 0844 870 7054

[James Whale Fund for Kidney Cancer](#)

Helps to increase knowledge and awareness of kidney cancer
www.jameswhalefund.org 0844 474 5050

[Kidney Cancer Support Network](#)

Helps patients' family and friends to join together for information and advice
www.kidneycancersupportnetwork.co.uk 0120 989 0326

[Cancer Research UK](#)

www.cancerhelp.org.uk 080 800 4040

[Macmillan Cancer Support](#)

Information on living with the practical, emotional and financial effects of cancer
www.macmillan.org.uk 080 880 8000

[Marie Curie Cancer Care](#)

www.mariecurie.org.uk 020 7235 3325

[London Cancer](#)

www.londoncancer.org

**Please contact the key worker if you wish to discuss
any aspects of your treatment**

Interventional oncology nurse specialist UCLH contact details:

Analie Morales 07904 674 635

Email: ios@uclh.nhs.uk

Website: www.uclh.nhs.uk

Clinical nurse specialist renal surgery:

Royal Free London

David Cullen 07775 687 823

Jonah Rusere 07935 450 617

Email: rfh.renalcancernursing@nhs.net