A guide for kidney cancer patients and carers across the UK

Many people with kidney cancer continue to lead fulfilling lives.
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...to our ‘Understanding Kidney Cancer Diagnosis’ booklet

To help you understand kidney cancer and the journey you are on, we have specifically designed this booklet for you to read at your leisure. We hope this booklet will help inform you and your loved ones when you need guidance and information about kidney cancer and your diagnosis. This provides easy to-understand scientific knowledge on kidney cancer, alongside practical information on living day-to-day with the disease and the range of emotions you may experience.

We understand that your experiences and treatments will be unique to you. We hope the information and insights provided in this booklet will help you make informed choices in all areas of your journey and help you find support if, and when, you require it.

If you require support or have any questions on any aspect of kidney cancer care please ring our Careline on 0800 002 9002. In addition, we also run the following support services:

- Free Counselling service; please call 0300 102 1001 or 01223 870 008 to arrange a consultation
- We provide a closed Facebook group; find this by searching ‘kcuksupportgroup’ in Facebook
- We present free to attend ‘Living with kidney cancer’ days in locations across the country
- And there are a number of local support groups around the UK please call 01223 870 008 to find out more

We are ‘here to listen, inform and support’
Every year in the UK, over 12,600 people learn that they have kidney cancer. The incidence of kidney cancer has been steadily increasing in the UK. The rise in the number of tumours detected following a scan for unrelated conditions may have contributed to the rise in the numbers. Kidney cancer is now the seventh most common cancer in the UK.

Kidney cancer and age
Kidney cancer more often affects older men, who usually appear healthy; three quarters (75%) of people diagnosed with kidney cancer are over 60 years old and nearly twice as many men are diagnosed than women. It is not unusual to discover a tumour on the kidney incidentally whilst the patient is having a scan for an unrelated condition. It is uncommon for people under 40 to be diagnosed with kidney cancer.

The risk of developing kidney cancer starts to rise around 45-49 years and is highest in people aged 80-88.

A risk factor is anything that increases a person’s chance of developing cancer. Although risk factors can influence the development of cancer, most do not directly cause cancer. Some people with several risk factors never develop cancer, while others with no known risk factors do. However, knowing your risk factors and talking about them with your doctor may help you make more informed lifestyle and health care choices.

The most common early symptom is blood in the urine. If kidney cancer is diagnosed at an early stage, there is a good chance of a cure by removal of the affected kidney to prevent the spread of the disease. The more the cancer has grown and spread throughout the body, the less chance that the treatment will cure the patient completely. However, treatment can often slow the progress of the cancer. Other symptoms can be less specific such as tiredness or pain. Some patients get no symptoms at all and the cancer is found incidentally.
Understanding Kidney Cancer – Diagnosis

Types of kidney cancer
The most common form of kidney cancer is renal cell carcinoma or RCC for short. About 90% of kidney cancers are RCCs. There are several different subtypes of RCC, which are named according to the type of cell that is affected or the appearance of the cancer cells under the microscope. The most common of these is clear cell, which account for about 75% of RCCs. Other subtypes include papillary, chromophobe, sarcomatoid and collecting duct carcinoma.

This booklet concentrates on RCC although some of the information should be helpful to any kidney cancer patient. More information about other types of kidney cancer, including transitional cell (urothelial), Wilms’ tumour, which affects young children, and hereditary kidney cancer syndromes such as von Hippel-Lindau, Birt-Hogg-Dubé and tuberous sclerosis, can be obtained from our website www.kcuk.org.uk or from Cancer Research UK www.cancerresearchuk.org or Macmillan Cancer Support www.macmillan.org.uk

Sub types of Renal Cell Carcinoma (RCC)
- Conventional or clear cell RCC – this can also be called non-papillary RCC and accounts for 75% of RCC cases. The cancer cells appear clear under the microscope and have large nuclei
- Papillary or chromophilic RCC accounts for about 10-15% of RCC cases. The tumours have characteristic papillae or nodules on the surface
- Chromophobe RCC accounts for about 5% of cases
- Collecting duct carcinoma
- Renal medullary carcinoma
- Mucinous tubular and spindle-cell carcinoma
- Renal translocation carcinomas
- Unclassified RCC, the latter five of which together make up the remaining 5-10% of RCC tumours
Receiving a diagnosis

The symptoms of kidney cancer
The most common symptom is blood in the urine[^5][^6][^7]. Doctors call this haematuria.

It may come and go and not every kidney cancer sufferer will have haematuria.

Sometimes you won’t be able to see it, but it can still be detected by a urine test. Most people with blood in their urine do not have kidney cancer. It can be a sign of an infection, kidney stones, prostate problems or bladder cancer. However, it should always be investigated to find out what has caused it.

Most kidney cancers are too small to feel, but occasionally you may feel a lump or mass in the area of your kidneys and you should tell your doctor straight away. You should also see your doctor about any persistent low back pain or pain in your side between your ribs and hipbone (sometimes called the flank or loin[^5][^6][^7]).

In the early stages of kidney cancer there may be no obvious symptoms[^6][^7]. Many kidney cancers are found simply by chance when someone is being given a scan for another reason. More than half of adult kidney tumours are detected when using an ultrasound scan to investigate other symptoms.

Sometimes abnormal red blood cell counts (anaemia) and high blood pressure, or hypertension, can be symptoms of kidney cancer[^5]. Occasionally some patients experience a condition called polycythaemia, or thickening of the blood, which can also be a symptom of kidney cancer. Symptoms of polycythaemia are a bad headache and redness of the skin[^8].

In about a third of patients, the kidney cancer will have already spread to other organs, such as the lungs, liver, brain and bones. These patients may experience symptoms of advanced kidney cancer, such as a persistent cough, coughing-up blood (or haemoptysis), abnormal liver function tests, headaches and visual disturbances, or bone pain[^6][^8]. You must see your doctor if you have any of these symptoms.
There are other symptoms, which can be more general and can also be caused by many other conditions, such as weight loss, tiredness and running a persistent temperature and sweating heavily, especially at night\(^6,7,8\).

**How doctors diagnose kidney cancer**

Currently, there are no screening programmes for kidney cancer in the UK. Doctors use their clinical experience (clinical suspicion), scans, and various tests to identify kidney cancer\(^7,9,10\).

**At your GP surgery**

Your family doctor or GP will probably carry out some initial tests. He or she will ask about your general health, examine you and ask for a urine sample. This will be analysed to see if it contains blood. You may also be asked for a blood sample. This will be tested to see how well your kidneys are working. He or she may also perform a physical examination to check for any lumps or swelling; however, small tumours are difficult to detect on a physical examination because the kidneys are deep inside the body.

Your GP may then refer you to a hospital specialist for further tests, especially if you have blood in your urine. There are special referral guidelines for GPs to help them decide who needs to be referred to a specialist urgently.

**At hospital**

The hospital specialist will want to know about your medical history, symptoms and any medications you are taking. If anyone else in the family has had kidney cancer you should mention this. You will have more blood and urine tests, such as a full blood count (FBC) and urea and electrolytes (U&Es), to test the function of your kidneys. If you want to know the results of your blood tests, please ask your doctor to explain them.

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**Typical signs and symptoms of kidney cancer**

- Blood in the urine, also called haematuria
- Persistent low back pain or pain in the side between the ribs and hipbone
- A lump or mass in the area of the kidneys
- Abnormal red blood cell counts (anaemia or rarely polycythaemia)
- High blood pressure or hypertension
- Tiredness
- Weight loss and/or loss of appetite
- Running a persistent temperature and sweating heavily, especially at night\(^5,6,7\)
Receiving a diagnosis

Ultrasound scan
The doctor will carry out an ultrasound scan, which is a real-time, moving test used to detect and differentiate between tumours and cysts on the kidney. This is a painless procedure that is carried out in the hospital scanning department, and only takes a few minutes to perform. You lie down and gel is spread on the right and left side of your abdomen. A small probe, which produces sound waves, is rubbed over the area. The sound wave echoes are detected by the probe and turned into a picture of the organs and structures inside your body by a computer.

Cystoscopy
If you have blood in your urine, your doctor might want to carry out a cystoscopy to check inside your bladder. The procedure can be done under local or general anaesthetic. A fine, flexible tube with a light in the end (called a cystoscope) is passed up your urethra and into your bladder where it acts like a telescope allowing the doctor to see inside.

If the initial investigations confirm you have kidney cancer, you will need more tests to help doctors see if it has spread and how best to treat it. However, some of the following tests may also be used when your doctor is still trying to determine whether you have kidney cancer or not.

CT scan
Computerised tomography (CT) is a special type of X-ray examination and is conducted in the X-ray department of the hospital. A CT scan is used to check the size of the tumour and whether it has spread to other organs, such as the lungs and the other kidney.

Questions you may want to ask your doctor
• What tests are you going to do?
• What will happen and how long will it take?
• Will it be painful or uncomfortable whilst having the tests or procedures?
• Will there be any after-effects of treatments or interventions?
• Can I bring someone with me?
• How long will the results take?
• Who will give me the test results?
• Will they show if I have kidney cancer?
• Will they show if the cancer has spread?
• Once I have been diagnosed what happens next?
The CT scanning machine takes a series of X-ray pictures of your body from different angles. A computer puts these images together to give a detailed image of the inside of your body. You will need a full bladder for this examination, so you will not be able to go to the toilet beforehand. The machine is shaped rather like a ring doughnut. You lie on a couch, which slides backwards and forwards through the hole. The radiographer cannot stay in the room with you during the scan but will be able to see you on a monitor and talk to you through an intercom. You may be given an injection of a special dye, or contrast agent, into a vein in your arm to help blood vessels show up more clearly. A CT scan is painless but takes longer than an X-ray. The length of the whole procedure depends on how many pictures are taken, but expect to be on the couch for about 15 minutes. Some people feel a little claustrophobic during a scan. If you think you might, tell the radiographers before the day of your appointment.

**Biopsy**

Doctors can usually make a confident diagnosis from a CT scan alone. Sometimes a biopsy will also be carried out. Using ultrasound to locate the kidney, a thin needle is put through the skin and muscle into the kidney to remove a small sample of tissue. This is then examined under a microscope to check for signs of cancer. You will need to be observed for about 4 hours after the biopsy. You will be given a local anaesthetic to numb the skin.

**MRI scan**

Magnetic resonance imaging (MRI) is a type of scan that uses magnetism instead of X-rays to construct a detail picture of the inside of your body. MRI is used to check the size and extent of a tumour, and to determine whether or not the cancer has spread to other organs of the body. You may be given an injection of special dye or contrast agent into a vein in your arm to help the tumours show up more clearly on the MRI scan picture.
Receiving a diagnosis

Bone scan
You might be asked to have a bone scan to see whether the cancer has spread to your bones. If so, you will be injected with a mildly radioactive material, and then asked to wait for a couple of hours while it travels through the blood and collects in the bones. Areas where there is damage to the bone will show up as ‘hot spots’. These aren’t necessarily the result of cancer. If you have arthritis, for instance, this will also show up on the scan.

Chest X-ray
A chest X-ray may be carried out to check your general health and make sure that you are fit enough to have certain treatments or surgery. It will also be used to rule out cancer spread to the lungs or chest bones. However you may not have a chest X-ray if you have a CT scan that has included your chest on the scan.

You will be asked to go back to hospital for the results of your tests. This may take a little while and you will probably feel worried and upset during this time. Is there anyone you can share your feelings with? Is there a clinical nurse specialist you can talk to? It might be useful to use our support services such as the Careline.

0800 002 9002
KIDNEY CANCER CARELINE
Here to help
Staging and grading kidney cancers
Before your doctors can discuss treatment options with you, they need to know how far your cancer has progressed and how quickly the cancer is growing or spreading. This is called staging and grading.

Staging is used to describe how big a cancer is and how far it has already spread. Information from the tests and scans used to diagnose your cancer is used to determine the stage of your disease.

The TNM system is a common system used for staging tumours:\n
\[ T \] (tumour) plus a number indicates the size of the primary tumour and how far it has grown: The number refers to the stages described below:

- **T0** there is no evidence of primary tumour in the kidney
- **T1** the tumour is less than 7 cm in size and is completely contained within the kidney
  - **T1a** is a tumour less than 4 cm in size
  - **T1b** is a tumour between 4 and 7 cm in size
- **T2** the tumour is more than 7 cm in size and is completely contained within the kidney
  - **T2a** is a tumour more than 7 cm but less than 10 cm in size
  - **T2b** is a tumour more than 10 cm in size
Receiving a diagnosis

T3  the cancer has spread beyond the kidney to the tissues or organs around the kidney, for example a major vein or the adrenal gland

  T3a  is a tumour that has grown into the renal vein or the fat surrounding the kidney
  T3b  is a tumour that has grown into the vena cava below the diaphragm
  T3c  is a tumour that has grown into the vena cava, or the wall of the vena cava, above the diaphragm

T4  the cancer has spread beyond the tissues or organs around the kidney to more distant organs in the body

N  (nodes) plus a number indicates that the cancer has spread to nearby lymph nodes. The number refers to the number of affected lymph nodes:

  N0  cancer has not been detected in any lymph nodes
  N1  cancer has spread to one nearby lymph node only
  N2  cancer has spread to more than one nearby lymph node

M  (metastases) plus a number refers to places elsewhere in the body where the cancer has spread. M0 means there are no distant metastases and M1 means distant metastases are present

Your doctor will combine these figures to give an overall staging, eg T2 N0 M0, which means the cancer is bigger than 7 cm but still confined to the kidney, there is no involvement of lymph nodes and there are no metastases.
Another staging classification which is sometimes used for kidney cancer is a number system; the cancer is simply said to be stage 1, 2, 3 or 4 (or stage I, II, III, or IV). Again, the stages reflect how large the primary tumour has become, and whether the cancer has spread to lymph nodes or other areas of the body. A stage 4 tumour is often referred to as an advanced cancer. The number system used for kidney cancer is as follows;

**Stage 1**
The cancer is confined to the kidney and is less than 7 cm in size.

**Stage 2**
The cancer is bigger than 7 cm but still confined to the kidney.

**Stage 3**
The cancer has started to spread outside the kidney to the adrenal gland or a major vein nearby. The cancer may have spread to no more than one nearby lymph node.

**Stage 4**
The cancer has spread to nearby tissues or organs and more than one nearby lymph node contains cancer cells OR the cancer has spread to other parts of the body further away.

Finding the stage of a cancer helps doctors to advise on what is the best treatment and gives them a reasonable indication of the outlook (prognosis) for your cancer. It also describes the cancer in a standard language which is useful when doctors discuss patients, and when patients are involved in clinical trials. When discussing your treatment options, your doctor will also take into account how well you are overall.
Doctors grade cancers to indicate how quickly or slowly a cancer is likely to grow and spread. Cells from a sample of the cancer (a biopsy) are looked at under the microscope or tested in other ways. By looking at certain features of the cells the cancer can be graded as low, intermediate or high grade; this system is called the Fuhrman system:\cite{12,13}:

**Grade 1** or low-grade cells are usually slow growing, look quite similar to normal cells, tend to be less aggressive and are less likely to spread.

**Grade 2** or intermediate grade cells grow more quickly, look abnormal, are moderately aggressive and could spread.

**Grade 3** or high-grade cells are likely to grow more quickly, look very abnormal, tend to be more aggressive and are more likely to spread.

**Grade 4** or high-grade cells look very abnormal, grow very quickly, are extremely aggressive and are very likely to spread.

**Discussing treatment options**

Ideally, a team of specialists, called a multi-disciplinary team (MDT), will be responsible for your care and treatment in the cancer unit. The team will include an urologist (a doctor who specialises in diagnosing and surgically treating urinary, bladder and kidney problems) and, if your cancer has spread, a medical oncologist who specialises in the medical treatment of cancer. Preferably, both will have experience of treating kidney cancer. The urologist and, if appropriate, the medical oncologist will be responsible for your treatment and will discuss your treatment plan with you.
Other members of the team may include a clinical nurse specialist (specialist nurse), a dietician, a physiotherapist (for postoperative complications), an occupational therapist and a psychologist or counsellor. The team might also include a clinical oncologist (a doctor specialising in radiotherapy treatment for cancer) if you are scheduled to have radiotherapy for cancer that has spread.

Your doctors will tell you which treatment they think would be best for you. Sometimes they may offer you a choice of treatments. In any case, you should be sure you have been given enough information, and understood it, before you give permission for the treatment to start. Don’t be embarrassed about asking people to explain things again. And remember to ask about any aspects that are worrying you.

**You should be told**
- What type of treatment the doctors are advising
- How and when this would be carried out
- The advantages and disadvantages of this type of treatment
- Any possible other treatments that might be available
- Any significant risks or side effects of the treatment

It may be useful to write down a list of questions to take with you to the appointment. It is also a good idea to have a relative or friend with you when you are discussing your treatment options. They will be able to take notes or help you remember what was said. If you feel you can’t make a decision straightaway, ask for more time to decide.

You may want a second opinion; especially if you feel your doctor does not have enough experience in treating kidney cancer or if you are told little beneficial treatment is available. Most doctors will be willing to refer you to another specialist, but it may take a little while to organise. As this may delay the start of your treatment you need to feel sure it will be worthwhile.
Receiving a diagnosis

There is more information about how to get a second opinion on the NHS Choices website www.nhs.uk/chq/pages/910.aspx

You may find the decision to go ahead relatively easy, if the treatment you are being offered aims to cure your cancer. But if, instead, the aim of the treatment is to control the cancer for a period of time, it may be more difficult to decide.

You might want to think about your quality of life while you are having treatment. Will you have to travel back and forth to hospital? What are the side effects of treatment? Can the side effects be treated?

As well as talking things over with the people who mean most to you, you may find it helpful to talk to a counsellor or a specialist nurse. If you choose not to have treatment you can still be given help to control any symptoms you have. This is called palliative care and can be offered to help patients through their entire cancer journey. Palliative care also gives people support with social, spiritual and psychological issues. Carers and family may also be offered emotional and spiritual support as well.

**Being told you have kidney cancer is always a shock**
People react in different ways. Some want to find out as much as they can about their treatment and their long-term prospects. Others don’t want to think about the future, preferring to take each day as it comes without worrying about what may or may not lie ahead.
As doctors know only too well, it can be very difficult to predict what will happen because every patient is an individual. Of course, the earlier your cancer is detected and the sooner treatment begins, the better your chances of long-term survival. Even if your cancer has spread, making it more difficult to treat, it is possible for the symptoms to be kept well under control for years. And in some rare cases patients may go into remission for no apparent reason.

**What happens next?**

Once a diagnosis has been made you will be referred to either a surgical team or an Oncology team and in many cases a specialist clinical nurse.

You may find it useful to read one of these booklets depending on your diagnosis.

You can download a copy from our website or call **01223 870 008** to request one.
Support and information

Money matters
At Kidney Cancer UK we operate a social grant programme and details can be found on our website. Or call 01223 870 008.

A Specialist nurse or benefits advisor will also help you claim any benefits you are entitled to. A number of means tested and non means-tested benefits might be available, depending on your circumstances. Many hospital departments also have a social worker who can provide helpful information.

Family and friends
People who are close to you may find it difficult to discuss your illness. You may be afraid that if you talk to people about how you really feel they will be upset, or disappointed at your lack of stoicism, or embarrassed because they don’t know what to say. But it is important to be able to express your feelings when you need to. It can also be difficult talking to children about cancer. How much should you tell them? How honest should you be?

Other support
Sometimes it can be easier to talk things through with someone outside the family. This could be a specialist adviser or someone who has gone through a similar situation and knows how you are feeling. Kidney Cancer UK offers a dedicated free to call telephone Careline (0800 002 9002), where you can talk to people with experience of kidney cancer. If you leave a message out of hours someone will call you back.

You can also apply to join our very popular closed Facebook group by searching ‘kcuksupportgroup’.

You could also join a local support group if there is one in your area call 01223 870 008 to find out.
Self-help
Regular exercise can help you feel better both physically and emotionally. Ask your doctor or nurse what kind of exercise would be suitable for you. Many people find that alternative therapies, such as massage, aromatherapy, meditation or visualisation, can also lift the spirits, ease tension and restore a feeling of wellbeing. You could look at our website www.kcuk.org.uk under patient information where we have many free useful resources.

Where to find more information and support
Kidney Cancer UK and Kidney Cancer Scotland are the UK’s leading specialist kidney cancer charities. We offer information and support to kidney cancer patients, their families and carers not only via a comprehensive website and closed facebook support group, but also regular nationwide Living with Kidney Cancer Days. We also assist with establishing local patient groups, bringing patients together to share their experiences.

Call Kidney Cancer UK 01223 870 008 (9am – 5pm Monday to Friday)
Call Kidney Cancer Scotland 0141 428 3494 (9am – 5pm Monday to Friday)
Or visit www.kcuk.org.uk

Maggie’s Centres
Maggie’s offer free practical, emotional and social support to people with cancer and their families and friends. www.maggiescentres.org

Macmillan Cancer Support
Call Macmillan nurses on 0808 808 0000 (9am – 8pm, Mon – Fri) or visit www.macmillan.org.uk

Marie Curie Cancer Care runs hospices throughout the UK and provides a nationwide Marie Curie nursing service. Marie Curie nurses provide free nursing care to cancer patients and those with other terminal illnesses in their own homes. Call the help line for patients and carers on 0800 716 146 or visit www.mariecurie.org.uk

Help, information and support can also be found at local hospital-based support groups. Please ask your doctor or nurse for more information.
References


**Glossary**

**Advanced cancer**
This usually means a cancer has spread from where it started to another part of the body. ‘Locally advanced’ cancer usually means the cancer has grown outside the organ that it started in and into nearby body tissues.

**Biopsy**
Removal of a small piece of body tissue so that the cells can be looked at under a microscope.

**Birt-Hogg-Dubé (BHD) syndrome**
A rare inherited genetic condition that is characterised by skin lesions on the face and neck. It is caused by a genetic mutation in the folliculing gene. Patients may also develop lung cysts or experience a collapsed lung, and a few develop kidney cancer.

**Bone scan**
A diagnostic test using a mildly radioactive material to see whether the cancer has spread to your bones.

**Catheter**
Tube that is passed into the body to drain fluid.

**Cells**
Every part of the body is made up of specialised, individual cells. Cancer starts with one cell becoming cancerous.

**Chromophobe RCC**
A subtype of renal cell carcinoma, which accounts for 5% of RCC cases.

**Clear cell RCC**
The most common subtype of renal cell carcinoma, which accounts for 75% of RCC cases. The cancer cells appear clear under the microscope and have large nuclei.

**Clinical Nurse Specialist (CNS)**
An advanced practice nurse with a graduate qualification; clinical experts in the diagnosis and treatment of illness.

**Clinical Oncologist**
A doctor who specialises in radiotherapy treatment for cancer.

**Clinical trial**
A rigorously controlled research study that finds new ways to prevent, diagnose or treat disease. Clinical trials test new treatments in people with cancer to make sure they are safe and effective at treating cancer.

**Collecting duct carcinoma**
A subtype of renal cell carcinoma, which develops in the cells that line the collecting ducts in the kidney cortex.
Computerised Tomography (CT)
A special type of X-ray examination where a series of X-ray pictures of your body are taken from different angles and put together by a computer to give a detailed image of the inside of your body.

Contrast agent
A special dye which is given during an X-ray, CT or IVU/IVP as an injection or in a drink. Contrast agents are opaque to X-rays and are used to give soft tissues and blood vessels contrast on an X-ray so that they can been seen.

Cryoablation
Cryotherapy (Cryoablation) kills the cancer cells by freezing the tumour.

Cyberknife (gamma knife) cystoscopy
An investigation of the bladder. A surgeon puts a tube (or cystoscope) into the bladder and uses it to look inside the bladder and urethra to check if there is anything wrong.

Diagnosis
Finding out what is wrong.

Dialysis
An artificial way of filtering waste products and excess water from your blood when your kidneys can’t.

Fuhrman system
A system used for grading renal cell cancer to indicate how quickly or slowly the cancer is likely to grow and spread.

Full Blood Count (FBC)
A blood test which provides important information about the type, number and appearance of cells in the blood, especially red blood cells, white blood cells, and clotting cells.

Grade
Doctors grade cancers to indicate how quickly or slowly a cancer is likely to grow and spread. Cells from a sample of the cancer (a biopsy) are looked at under the microscope or tested in other ways.

Haematuria
The presence of blood in the urine.

Haemoptysis
Coughing-up blood.

Hypercalcaemia
High levels of calcium in the blood.

Hypertension
High blood pressure.

Lymph nodes or glands
Glands which fight infection and filter body fluid (lymph).
Magnetic Resonance Imaging (MRI)
A type of scan that uses magnetism instead of X-rays to construct a detail picture of the inside of your body.

Medical Oncologist
A doctor who specialises in the medical treatment of cancer.

Metastases or secondaries
Areas of cancer spread.

Multidisciplinary Team (MDT)
A group of health care and social care professionals who provide different services for patients in a co-ordinated way. Members of the team may vary and will depend on the patient’s needs and the condition or disease being treated.

Neuropathic pain
Pain that comes from problems with the signalling from nerves.

Oncology and Oncologist
The study and treatment of cancer. An oncologist is a doctor who specialises in the diagnosis and treatment of cancer.

Papillary (or chromophilic) RCC
A subtype of renal cell carcinoma, which accounts for about 10-15% of RCC cases. The tumours have characteristic papillae or nodules on the surface.

Percutaneous
A medical procedure carried out or occurring through the skin.

Physical examination
The process by which a doctor investigates the body of a person for signs of disease.

Polycythaemia
Thickening of the blood caused by an increase in red blood cells due to an abnormality in the bone marrow, or a decrease in the volume of plasma, the fluid which carries the red blood cells.

Primary cancer (primary tumour)
Where the cancer started. The type of cell that has become cancerous will be the primary cancer; for example, if a biopsy from the liver or lung contains cancerous kidney cells, then the primary cancer is kidney cancer.

Prognosis
The likely outlook for someone with a disease.
Quality of life
This means looking at how a treatment is affecting your life, not just the effect on your cancer.

Recurrence
Cancer that has come back again after treatment.

Remission
If a cancer is in remission, there is no sign of it on scans or when the doctor examines you. Doctors use the word ‘remission’ instead of cure when talking about cancer because they cannot be sure that there are no cancer cells at all in the body.

Renal Cell Carcinoma (RCC)
A type of kidney cancer that originates in the lining of the proximal convoluted tubule, the very small tubes in the kidney that filter the blood and remove waste products. RCC accounts for 90% of kidney cancers.

Secondary cancer
Cancer that has spread to another part of the body from the place where it started (primary cancer). Secondary cancers (tumours) are the same type of cancer as the primary cancer. Also called secondaries or metastases.

Staging
A system used by doctors to describe how big a cancer is and how far it has already spread.

Tuberous sclerosis
A genetic disorder characterised by abnormalities of the skin, brain, kidney and heart.

Tumour
A swelling or lesion formed by an abnormal growth of cells. Tumour is not synonymous with cancer and a tumour can be benign (not cancerous) or malignant (cancerous).

TNM staging
A system for staging cancer based on the presence of tumours (T), lymph node involvement (N) and metastases (M).

Transitional Cell Carcinoma (TCC)
A type of cancer that develops in the lining of the bladder, urethra and renal pelvis.

Ultrasound scan
A real-time, moving test which uses sound waves to detect and differentiate between tumours and cysts. A small probe producing sound waves is rubbed over the area of interest and the sound wave echoes are detected by the probe and turned into a picture of the organs and structures inside your body by a computer.
Urea and Electrolytes (U&E)
A blood test which tests the function of the kidneys.

Ureter
The thin tube or duct that carries urine from the kidney to the bladder, where it is stored. There are two ureters, one attached to each kidney.

Urology and urologist
The study and treatment of the urinary tract in women and the urogenital system in men. An urologist is a doctor who specialises in the diagnosis and treatment of diseases of the urinary and sex organs in males and the urinary organs in females.

Wilms’ tumour
A very rare kidney cancer which affects children.

X-ray
A type of electromagnetic radiation used to make images. The image is recorded on a film, called a radiograph. The parts of your body appear light or dark due to the different rates that your tissues absorb the X-rays. Calcium in bones absorbs X-rays the most, so bones look white on the radiograph. Fat and other soft tissues absorb less and look grey. Air absorbs least, so lungs look black.
**Help our cause**

We receive no government funding and are dependent on raising money from other sources. Contributions made to Kidney Cancer Scotland will stay in that country. Please include Gift Aid to your donation. You can download the Gift Aid form from our website or contact us on **01223 870 008**.

If you would like to make a donation, you can do so in the following ways:

1. Make a donation online by visiting [www.kcuk.org.uk/donate/](http://www.kcuk.org.uk/donate/)
2. Send a cheque made payable to ‘Kidney Cancer UK’ or ‘Kidney Cancer Scotland’ to: 
   Freepost KIDNEY CANCER UK (no need to add our postal address)
3. Send a donation to our bank account with your name as a reference
   - **Kidney Cancer UK (Barclays)**
     Sort code 20-17-35 Account 80098094
   - **Kidney Cancer Scotland (RBS)**
     Sort code 83-20-22 Account 11896991
4. Make a credit or debit payment (except Diners) on the phone, by calling **01223 870 008**.
5. Make a legacy. Please contact us about the best way to do this.

If you would like to offer your support in other ways, we would be very pleased to hear from you.

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Kidney Cancer UK and Kidney Cancer Scotland

Our mission is to help reduce the harm caused by kidney cancer by increasing knowledge and awareness, providing patient information and by supporting research into the causes, prevention and treatment of the disease.

‘Here to listen, inform & support’

We are social

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