

Chapter 4: Learn about kidney cancer

This chapter is part of a series of materials. For more information, and to access further materials, please visit www.KEYTRUDA.co.uk

For patients being treated with KEYTRUDA[®] (pembrolizumab) in combination with axitinib for advanced renal cell carcinoma

Your healthcare team should have provided you with materials to help you identify any side effects you may experience on your treatment. Ensure you read the Patient Safety Information Brochure and carry your Patient Alert Card with you at all times.

It is important to be aware of side effects. Telling your healthcare professional straight away as soon as you notice any symptoms may stop them from becoming more serious.

DO NOT ATTEMPT TO DIAGNOSE OR TREAT SIDE EFFECTS YOURSELF.

If you get any side effects, talk to your doctor, pharmacist or nurse. This includes any possible side effects not listed in the package leaflet. You can also report side effects directly via the Yellow Card Scheme at: <https://yellowcard.mhra.gov.uk/> or search for MHRA Yellow Card in the Google Play or Apple App Store. Adverse events should also be reported to Merck Sharp & Dohme Limited (tel: 01992 467272). By reporting side effects you can help provide more information on the safety of this medicine.

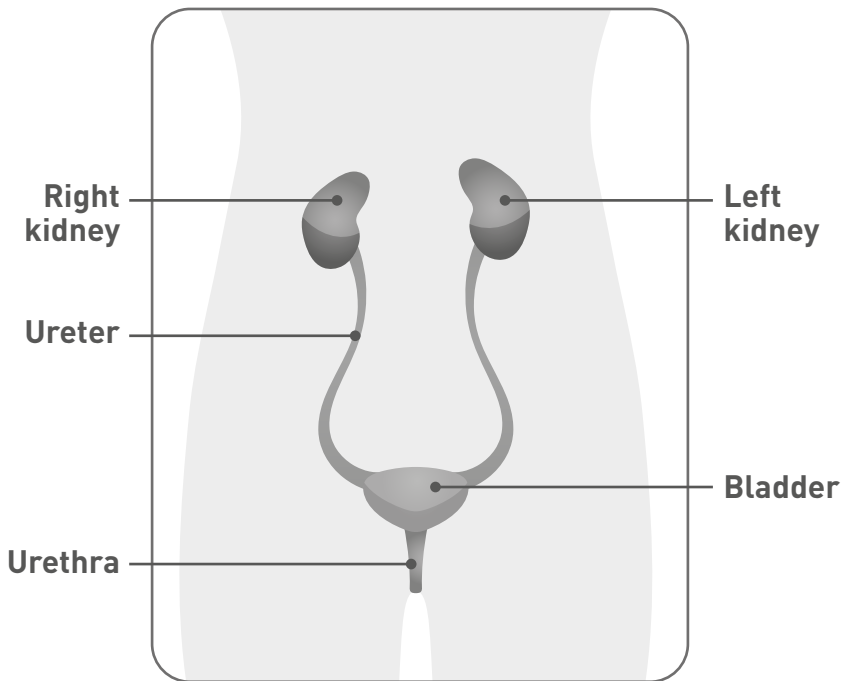


Learn about kidney cancer



What are kidneys?

Your kidneys are 2 bean-shaped organs located above your waist on either side of your spine. They filter your blood to remove waste products and make urine (wee).



Learn about kidney cancer

What is kidney cancer?

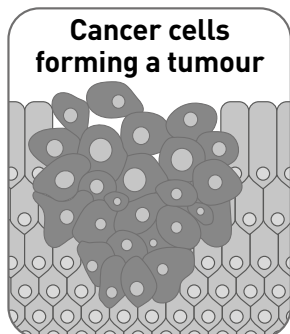
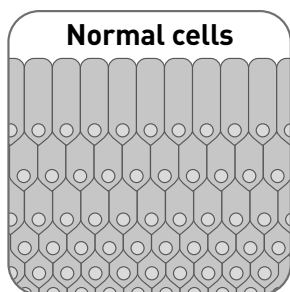
Kidney cancer is the result of kidney cells which have grown uncontrollably and group together to form a tumour. Cells are the tiny building blocks of our kidneys and other parts of our bodies.

Sometimes things go wrong inside a cell and it becomes abnormal. Abnormal cells normally “talk” to other cells in the body to signal that they should die but, due to DNA damage in the abnormal cell, this doesn’t happen.

DNA, which controls everything inside the cell, can become damaged because of environmental, dietary and genetic factors. The body normally repairs damaged DNA but in cancer cells, this does not occur.

The abnormal cell turns into a cancer cell which then grows and multiplies too much.

When lots of cancer cells grow and multiply, they can form a lump called a tumour. A lump where cancer first starts is called a **primary tumour**.



Doctors and other healthcare professionals often use complex medical names to describe words linked to cancer. You may overhear words such as:

- **Renal** – Latin for kidney
- **Carcinoma** – Latin for cancer or tumour
- **Nephrons** – These are tiny tubes which filter your blood to remove waste. In your kidneys, there are many thousands of nephrons
- **Malignant** – This means the cells are cancerous

Learn about kidney cancer

Who is at risk for kidney cancer?

Kidney cancer is the 7th most common cancer in the UK. Over 11,000 people are diagnosed with kidney cancer each year.

Kidney cancer affects people from different backgrounds, ages, and ethnic groups. However, there are certain things that can increase your chance of developing kidney cancer:



Sex: Kidney cancer is more common in men than women.



Age: Kidney cancer risk increases with age.



Environmental factors: Smoking, unhealthy diet, obesity and long term use of a type of painkillers called non steroidal anti inflammatory drugs (NSAIDS) is linked to kidney cancer. NSAIDS include ibuprofen, naproxen, phenacetin and celebrex.



Genetic factors: Some people inherit genes that increase their risk of developing certain cancers. von Hippel-Lindau syndrome, Birt-Hogg-Dubé syndrome, tuberous sclerosis, hereditary leiomyomatosis renal cell cancer and Wilms tumour are inherited conditions that may increase your risk of kidney cancer.

Learn about kidney cancer



Family history: Having a direct family member who has been diagnosed with kidney cancer increases the risk of developing kidney cancer.



Medical conditions: High blood pressure, chronic kidney disease, previous kidney transplant and Type 1 diabetes have been linked with increasing the risk of developing kidney cancer.

Types of kidney cancer

There are different types of kidney cancer. The type of cancer depends on which type of cell the cancer starts in and this cancer can affect how doctors treat it.

The most common type of kidney cancer is called **Renal Cell Carcinoma (RCC)**. 9 out of 10 kidney cancers are classed as RCC.



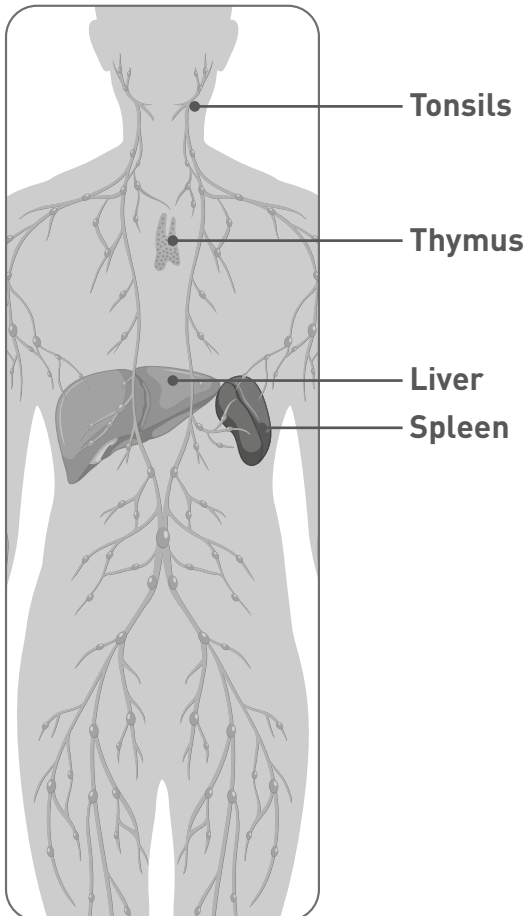
Healthcare professionals may refer to different sub-types of RCC. Different treatments are available for different sub-types of RCC.

Learn about kidney cancer

How can kidney cancer spread?

While primary tumours start to grow in the kidney itself, sometimes, some of the cancer cells can break off and travel to another part of the body

The most common way that kidney cancer cells can travel around the body is using the body's **lymphatic system**. Below are some examples of the parts of the body that make up the lymphatic system.



What is the lymphatic system?

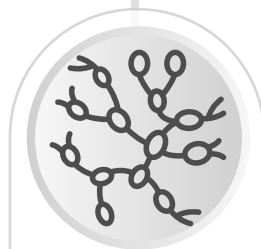
Throughout your body you have a series of connected tubes and vessels which carry a fluid called **lymph**. This system is similar to your arteries and veins, but instead of carrying blood, the lymph contains cells which fight infections.

Learn about kidney cancer

The lymphatic system also has areas called **nodes** which can be found all around the body. These are small bean-shaped structures (smaller than the kidneys) which normally get rid of bacteria and viruses by using tiny filters.

If kidney cancer cells break off from the primary tumour, they can get stuck in the lymph nodes and start to grow. Lymph nodes are usually the first place that doctors will check to see if the cancer has spread.

However, sometimes kidney cancer cells will also start to grow in other parts of the body, such as the lungs or in bones. If this happens it is called **advanced kidney cancer** or **metastasis**, and will require different types of treatment.



Lymph nodes are usually the first place that doctors will check to see if the cancer has spread.

References

1. Cancer Research UK. Available at <https://www.cancerresearchuk.org/> (Accessed September 2020)
2. NHS. Kidney Cancer. Available at <https://www.nhs.uk/conditions/kidney-cancer/> (Accessed September 2020)

