



## Frequently Asked Questions about Kidney Cancer

The underlined terms are listed in the glossary.

Here is an overview of the most frequently asked questions about kidney cancer. You can read more information about the topics discussed here in the various sections of EAU Patient Information on Kidney Cancer.

This section offers general information and situations can vary in different countries. If you have any questions or concerns about your health, please contact your doctor.

### General questions

#### What is kidney cancer?

Kidney cancer is a malignant cell growth (a tumour) in the kidneys. Its medical name is renal cell carcinoma. A tumour in the kidney can also be benign. Kidney cancer is a general term. There are many variations

of tumours in the kidney and stages of the disease. If the tumour is limited to the kidney and has not spread, this is called localized kidney cancer. In locally-advanced kidney cancer, the tumour has grown out of the kidneys into surrounding tissue and invaded veins, the adrenal gland, or lymph nodes. Doctors speak of metastatic disease if the cancer has spread either to distant lymph nodes or other organs.

Men are more likely to be diagnosed with kidney cancer than women. Most people are diagnosed between the ages of 60 and 70.

#### What are the symptoms of kidney cancer?

Kidney cancer in most cases is asymptomatic, which means that there are no clear symptoms to indicate it. Most kidney tumours are found during routine ultrasound or similar imaging procedures for other conditions, such as back pain.

As the tumour grows, you may feel constant pain in the affected side. You may feel a mass in the side of

your body, from the ribs to the hip, or you may have blood in the urine.

Other symptoms that you may experience are:

- High blood pressure
- Fever and night sweats
- Loss of appetite
- Weight loss
- Anaemia

These symptoms are referred to as paraneoplastic syndromes and are a reaction your body can have to any type of cancer.

The symptoms can point to various conditions. They are not necessarily a sign of cancer. If you have any of these symptoms, contact your doctor to find out what causes them.

### **Which tests are done to diagnose kidney cancer?**

Because there are several types of kidney tumours, the doctor does a series of tests to better understand your specific situation. These tests include a medical history and scans. Sometimes a family history is also taken. A CT scan or MRI scan will reveal the size of the tumour and if it has invaded local veins, lymph nodes, or surrounding organs. This is important to determine further treatment. The doctor may also perform a physical examination and take blood and urine for testing.

### **How are kidney tumours classified?**

Kidney tumours are classified according to their stage, subtype, and the grade of aggressiveness of the tumour cells. These three elements are the basis for your possible treatment pathway.

Tumour stage indicates how advanced the tumour is, and whether or not the tumour has spread to distant lymph nodes or other organs. This is based on the Tumour Node Metastasis (TNM) classification. The urologist looks at the size and invasiveness of the tumour (T) and determines how advanced it is, based

on 4 stages. Whether any lymph nodes are affected (N) or if the cancer has spread to any other parts of your body (M) is also checked.

There are various subtypes of kidney tumours. Most kidney tumours are renal cell carcinomas (about 80-85%). Of these, the most common subtype is clear cell renal cell carcinoma (80%), 10% are papillary renal cell carcinomas, and 5% chromophobe renal cell carcinomas. The remaining 5% of renal cell carcinomas include collecting duct renal cell carcinoma (or Duct-Bellini-Carcinoma) and a variety of uncommon and hereditary carcinomas.

Your doctor will also evaluate how aggressive the tumour cells are. The Fuhrman nuclear grade is the most commonly used system to determine this. The pathologist classifies your tumour in 1 of 4 grades.

### **How should I prepare for a consultation?**

Preparing for a consultation can be very useful. It will help you and your doctor to better address your questions and concerns. Here are some things you can try:

- Write down the questions you would like to ask the doctor. This will help you remember things that you want to ask. Writing down questions can also help you organize your thoughts
- If you can, take someone with you to the visit. It is good to have someone to discuss what the doctor said and you probably remember different things
- Ask for information about your specific type of cancer and possible treatment options
- If the doctor uses words you do not understand, ask for an explanation

# Questions about treatment

## How is kidney cancer treated?

All decisions about the right treatment pathway for you are taken after careful consideration of tumour classification, your prognosis, and the availability of treatment options in your hospital. The most important factor for selecting treatment is the stage of the disease.

Kidney cancer can be treated by:

- Partial nephrectomy
- Radical nephrectomy
- Cytoreductive nephrectomy
- Active surveillance
- Radiofrequency ablation
- Cryotherapy
- Antiangiogenic therapy
- Immunotherapy
- Chemotherapy
- Radiation therapy

## What is partial nephrectomy and when is it recommended?

Partial nephrectomy is a type of surgery for kidney cancer in which only the tumour is removed, leaving the healthy kidney tissue untouched. It is recommended whenever possible. Generally it is performed if the tumour is limited to the kidney.

After partial nephrectomy for kidney cancer, your doctor will plan regular follow-up visits with you. Follow-up lasts at least 5 years. Common tests during follow-up visits are abdominal CT scans, ultrasound, chest x-ray, and urine and blood analyses.

## What is radical nephrectomy and when is it recommended?

Radical nephrectomy is a type of surgery for kidney cancer in which the affected kidney is removed. It is generally recommended if the tumour has grown outside of the kidney. It could also be recommended in cases where it is not possible to remove the tumour and leave part of the kidney intact. Most people can live with only one functioning kidney without major complications.

After radical nephrectomy for kidney cancer, your doctor will plan regular follow-up visits with you. Routine follow-up lasts at least 5 years, and often longer. Common tests during follow-up visits are abdominal CT scans, ultrasound, chest x-ray, and urine and blood analyses.

## What is cytoreductive nephrectomy and when is it recommended?

Cytoreductive nephrectomy is a surgery recommended for metastatic kidney cancer. The aim is to remove as much of the tumour as possible. In order to do this, it may be necessary to remove the kidney as well as surrounding organs such as the spleen or the pancreas, or parts of the intestines or the liver.

## What is active surveillance and when is it recommended?

Active surveillance is a form of treatment in which the doctor actively monitors the tumour. It is recommended if surgery is not the best option for you and you have a tumour in your kidney which is smaller than 4 cm.

If the tumour is aggressive, you need further treatment and surveillance is not an option for you. If you are a good candidate for active surveillance, your doctor will set up a strict visiting schedule.

On each visit, the urologist asks questions about any noticeable changes in your health, performs a physical examination, and discusses the results of your blood tests. Before each visit you get a CT or an ultrasound scan of your abdomen to monitor the growth of the tumour. An x-ray of your chest is also done to check your lungs.

In most cases, a follow-up visit is needed every 3 months in the first year after diagnosis. In the following 2 years the visits are scheduled every 6 months, and then once a year.

## **What is radiofrequency ablation and when is it recommended?**

Radiofrequency ablation (RFA) uses the heat produced by high-frequency radio waves to kill the cancer cells.

Your doctor may suggest RFA treatment if you have a small kidney tumour (less than 4 cm) and surgery is not the best option for you. This is an effective and safe treatment for small kidney tumours but there is a risk that tumour cells are left in the kidney after RFA. This increases the risk of recurrence. RFA can be performed more than once in case of recurrence or if the first treatment was unsuccessful.

After RFA, follow-up visits are scheduled every 3 months. During these, CT scan or MRI are used to monitor your kidney and detect possible tumour recurrence on time.

## **What is cryotherapy and when is it recommended?**

Cryotherapy, also known as cryoablation, uses a liquefied gas, most commonly liquid nitrogen or argon, to kill tumour cells by freezing them.

Your doctor may suggest cryotherapy if you have a small kidney tumour (less than 4 cm) and surgery is not the best option for you. Cryotherapy is an effective and safe treatment for small kidney tumours but there is a risk that tumour cells are left in the kidney after the procedure. This increases the risk of recurrence. Cryotherapy can be performed more than once in case of recurrence or if the first treatment was unsuccessful.

After cryotherapy, follow-up visits are scheduled every 3 months. During these, CT scan or MRI are used to monitor your kidney and detect possible tumour recurrence on time.

## **What is antiangiogenic therapy and when is it recommended?**

These are a group of drugs which slow down tumour growth or possibly even shrink the tumour. They

prevent the formation of new blood vessels which feed the cancer and allow it to grow. Antiangiogenic therapy is often referred to as targeted therapy because it mainly affects the cancer cells.

It is recommended in metastatic disease. It may be the best treatment option for you if you cannot undergo surgery or if the tumour cannot be removed. In other cases, antiangiogenic therapy is recommended before surgery to shrink the tumour so that it can be removed with surgery afterwards.

## **What are the side effects of antiangiogenic therapy?**

Because these drugs influence the formation of new blood vessels throughout the body, they cause many side effects. The thyroid, the heart and the skin are affected most commonly.

These drugs slow down wound healing, so you cannot start this treatment until your wounds from surgery have healed completely.

Another common side effect is fatigue. This means you feel more tired than usual, you are out of energy, and it does not get better after you sleep. You may also experience pain in your joints, muscles and chest. Most people experience fatigue for six months up to a year after treatment. Fatigue can be a side effect of the drugs but it may also be caused by the tumour or the metastases.

It is common that you feel nauseous or sick during treatment. You may also have diarrhoea or constipation. If you have any of these symptoms let your medical team know. Your doctor may give you medicine to control these symptoms.

## **What is immunotherapy and when is it recommended?**

Immunotherapy is a type of drug treatment which boosts the immune system to fight tumour cells.

Immunotherapy is rarely used to treat kidney cancer. In metastatic kidney cancer it can be used in combination with the antiangiogenic drug bevacizumab.

## What are the side effects for immunotherapy?

Immunotherapy can cause several side effects. The most common include fatigue and flu-like symptoms, such as fever and chills, headaches, and pain in the muscles and joints. Nearly everyone undergoing immunotherapy has these side effects at first. It usually gets better as your course of treatment continues. These symptoms appear 2 to 4 hours after your injection and last for about 12 hours. Paracetamol can help to relieve these symptoms.

Other side effects of the treatment can be more severe. They include changes in your blood counts, nausea, vomiting, diarrhoea, and depression or anxiety. The doctor will closely monitor your health.

## What is chemotherapy and when is it recommended?

Chemotherapy is a type of drug treatment which consists of one or more chemicals that are toxic to cells. It attacks any cell in the body that divides rapidly, which includes tumour cells but also hair-growth cells and bone marrow, among others. It is generally administered through an IV.

Chemotherapy is generally not effective for kidney cancer. For metastatic kidney cancer, chemotherapy with 5-fluorouracil can have an effect in combination with immunotherapy after complete removal of the primary tumour.

## What is radiation therapy and when is it recommended?

Radiation therapy damages and kills the cancerous tissue. Kidney tumours are generally not very responsive to radiation therapy. Because of this, the therapy is only recommended to relieve symptoms caused by the primary tumour or metastases that cannot be removed by surgery. Radiation therapy for kidney cancer is generally recommended as part of a palliative care approach.

## What is a clinical trial?

If you have metastatic kidney cancer, your doctor may suggest you participate in a clinical trial. This is a type of study where new drugs are evaluated. It could also be a study on the sequence or dose of existing drug treatments.

Your doctor will provide all information you might need before participating in a trial. Your symptoms and general condition will be monitored more often and more closely than during regular treatment.

It is important to know that you can stop your participation in a clinical trial at any time. You will not need to explain your reasons.

# Questions about support

## What is the impact of kidney cancer on my life?

Getting diagnosed with cancer has a great impact on your life and the lives of your loved ones. It can cause feelings of anxiety, uncertainty, fear or even depression. Undergoing treatment for cancer is intense and will affect your work and social life. To find support, approach your doctor or nurse. They will be able to give you contact information about patient organizations or others who can help you with psychological support, or practical matters such as financial advice.

You may worry about your prognosis, the impact of treatment on your financial situation, or other issues. It is common to worry about the cancer coming back. Most people who have been diagnosed with cancer, or their loved ones, will probably have these worries and thoughts. If you feel worried, contact your doctor and find out the risks of cancer recurrence. You can also ask the doctor about psychological support if you feel you need to have someone to talk to. A patient organization can also offer support.

During treatment you will be away from your work. Talk to your boss about the best way for you to get back to work. Perhaps you could work part time, or in a different function.

Discuss with your health care team the possible financial consequences of your treatment. They might be able to direct you to people or places where you can get advice about your economic situation or even financial help.

Surgery and cancer treatment can affect your sexuality. For example, men may experience erectile dysfunction as a side effect of antiangiogenic therapy. Feelings of depression and fatigue can also have a negative effect on your sexual life. It is important that you talk to your partner about your feelings. There are many ways in which you can be intimate. If you do not want to be sexually active, be near each other,

touch each other, give and take hugs, and just sit or lay down close to each other.

## What if my kidney cancer cannot be cured?

Sometimes recovery from kidney cancer is not possible. When treatment is no longer successful you may be offered palliative care to make you more comfortable.

Palliative care is a concept of care with the goal to optimize your quality of life if you cannot recover from your illness. During palliative care you and your loved ones are supported by a multidisciplinary team. Together you address physical, psychological, social, and spiritual questions. Palliative care includes controlling your symptoms and medical treatment for pain management.

The palliative care team can provide care in the hospital or at your home. Another option is hospice care. A hospice is an institution which provides care during the final phase of your life.

## I have a family member or friend who has kidney cancer, how can I help?

A cancer diagnosis not only affects the patient, but also the people around them. You can offer support in many different ways. Sometimes you can help with practical things like laundry, gardening, or grocery shopping.

It may also be helpful to go to the doctor together. You could offer to drive to the visit or help formulate questions to ask during consultation. Being there for the consult can also be good. You may remember different things or focus on other details, which you can later discuss together. You could also ask the doctor how the treatment may impact your lives in terms of caregiving and psychological effects. Patient organizations can also help with more practical matters and financial support.

## **I have a family member or friend who has kidney cancer, where can I get support?**

The cancer diagnosis and treatment can be very emotional. Cancer treatment is intense and your life may change suddenly. Questions about prognosis, effects of the treatment, and even the possibility of dying may come up. As family or friends you can be there and listen. You don't need to have the answers.

If you feel you need somebody to talk to, approach your family doctor or the medical team to get support. Patient organizations also offer support for family members or friends of people who have been diagnosed with cancer.

### **This information was updated in May 2014.**

This leaflet is part of EAU Patient Information on Kidney Cancer. It contains general information about this disease. If you have any specific questions about your individual medical situation you should consult your doctor or other professional healthcare provider. No leaflet can replace a personal conversation with your doctor.

This information was produced by the European Association of Urology (EAU) in collaboration with the EAU Section of Uro-Oncology (ESOU), the Renal Cell Carcinoma Working Group of the Young Academic Urologists (YAU), and the European Association of Urology Nurses (EAUN).

The content of this leaflet is in line with the EAU Guidelines.

You can find this and other information on urological diseases at our website: <http://patients.uroweb.org>

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