Treatments For Advanced Kidney Cancer

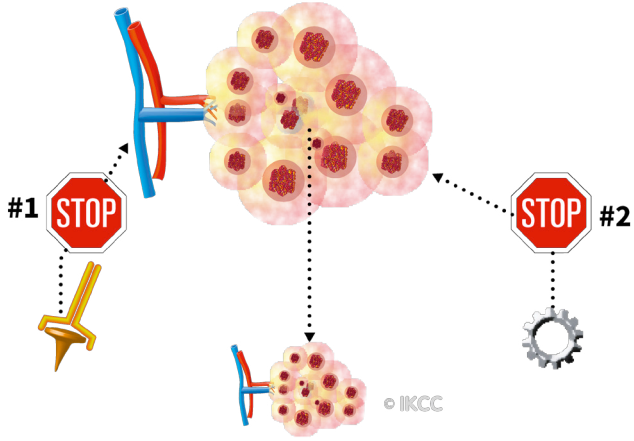
IKCC
International Kidney Cancer Coalition

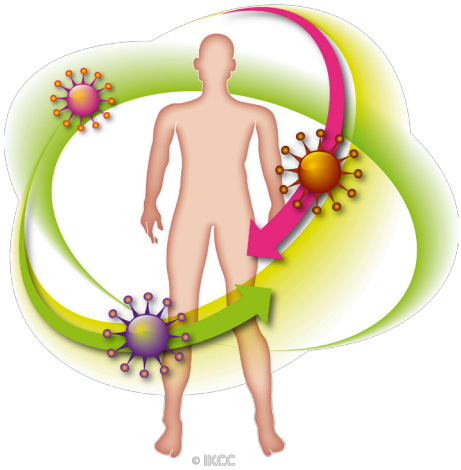
Targeted Therapy

Chemotherapy is not used in kidney cancer. Targeted therapy is based on medications (usually pills) that stop blood supply to the cancer, which slows or stops the growth of the tumour, and sometimes causes it to shrink. (see graphic #1). These medications target specific signals within the cancer, and are also called “targeted therapies”. Other names for this group of drugs are “anti-angiogenic therapies” and “tyrosine kinase inhibitors”. While these medications are not chemotherapy, they do have side effects. The tyrosine kinase inhibitors used to treat kidney cancer are: axitinib, cabozantinib, lenvatinib, pazopanib, sorafenib, sunitinib. Another medication, bevacizumab, is an intravenous targeted therapy.

Medications that block cancer’s growth

A second group of medicines for kidney cancer work by blocking a different signal (“mTOR inhibitors”). The mTOR inhibitors (see graphic #2) used to treat kidney cancer are everolimus and temsirolimus.





Immunotherapy with cytokines

Before 2006, immunotherapy with cytokines such as interleukin-2 (IL-2) and alpha-interferon was commonly used to treat kidney cancer that had spread to other parts of the body (metastatic kidney cancer).
These drugs worked for some people by activating killer T cells, which are the part of the body’s immune system that destroys cancer cells. New kinds of i mmune therapies are becoming available and are being tested in clinical trials.

Immunotherapy with checkpoint antibodies

Checkpoint antibodies, also called immuno-oncology (IO) therapy (e.g. CTLA-4, PD-1, PD-L1) are the most recent development in the immune therapy of kidney cancer.

Immune cells are controlled by a committee of checkpoints which very finely balance the immune system. Too little regulation and the immune system goes overactive and attacks the body; too much and immune functions are impaired and infections and cancers can establish themselves.

Sometimes cancer cells co-opt this system and use checkpoints inappropriately to stop your immune system recognising cancer cells. Checkpoint inhibitors are drugs (in this case antibodies) that in turn block these checkpoints so that the immune system is freed

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up to fight cancer cells.

Think treatment, think trial

Many clinical trials are underway around the world that are either specifically for kidney cancer, or that include kidney cancer in the selection criteria. For more information see: www.ikcc.org.

What's my prognosis?

This can be a difficult question for you and your doctor to discuss. There are a number of questions that you can ask your doctor, and a number of things to keep in mind.

When one hears about the statistics of a cancer, or the benefit of a treatment, it is important to remember that these are statistics based upon the experience of often hundreds of patients. What will happen to you, a single person, can only be very vaguely inferred from these statistics. Some peoples' cancers are very aggressive and treatment fails them. Other people have very slow-growing cancers, or have substantial benefits from taking a drug. One way that your doctor might give you some estimate of what your future might hold is to talk about worst-case and best-case scenarios.

It is also important to remember that no-one has a crystal ball, and that any prediction of the future can only be a best guess. As you develop a relationship with your doctor and health care team over time, this will also allow you to get a better understanding of how your particular cancer journey is unfolding. Many of the issues discussed above can influence prognosis, and understanding these can be important to help predict what your future might hold.

Good to know!

Immune system
The complex group of organs, tissues and cells that defends the body against infections and other diseases.

Immunotherapy
Immunotherapy describes medicines that can activate the immune system to treat various diseases, including cancer.
Immunotherapy includes cytokines like interleukin-2 and checkpoint antibodies or "Immuno-oncology (IO)" agents like PD-1 or PD-L1 antibodies.
The terms "immunotherapy" and "IO agents" are sometimes used to mean the same thing.

Targeted therapy
A type of treatment that uses drugs or other substances, such as monoclonal antibodies, to prevent growth of cancer cells and blood vessels.

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