

Kidney Cancer: Targeted Therapy



What is targeted therapy?

Targeted therapy is a treatment that uses medicines to kill cancer cells or slow their growth. It's not the same as standard chemotherapy medicines. It sometimes works when standard chemo medicines do not. Targeted therapy works in different ways and causes different side effects.

Targeted therapy uses medicines that target certain parts of some cancer cells. They alter the cancer cells' ability to grow and survive. This treatment can block the growth and spread of cancer cells while limiting damage to healthy cells.

When might targeted therapy be used for kidney cancer?

Your healthcare provider may suggest this treatment if the cancer has spread beyond your kidney or comes back after other treatment.

There are different kinds of targeted therapy medicines. This treatment can be used together with immunotherapy (also called biologic therapy). Immunotherapy works with your body's own immune system to find and kill cancer cells.

Targeted therapy might be given after surgery if there's a high chance that the cancer will come back (recur). It can help lower this risk.

How is targeted therapy given for kidney cancer?

This treatment may be given by mouth, or right into your blood through an IV (intravenous) line.

Experts are still trying to figure out the best way to use targeted therapy medicines. They're often used one at a time. And if a medicine stops working, another might be tried. Some may be used in combination with a type of immunotherapy medicine.

Some kidney cancer cells are controlled by proteins in the cells, called tyrosine kinases, that help them grow. Some targeted therapies block these proteins so cancer cell growth slows or stops.

Kidney cancer cells also make a protein that fosters the growth of new blood vessels (called angiogenesis). These blood vessels are needed to get nutrients to the cancer cells so they can grow and divide. Blocking this process can keep tumors from growing.

Types of targeted therapy medicine

The 2 main types of targeted therapy medicines used for kidney cancer are tyrosine kinase inhibitors and monoclonal antibodies. These medicines include angiogenesis inhibitors (bevacizumab and TKIs), mTOR kinase inhibitors, and a HIF2a inhibitor. These are most commonly used:

- Sunitinib (by mouth)
- Sorafenib (by mouth)
- Pazopanib (by mouth)
- Cabozantinib (by mouth)
- Lenvatinib (by mouth)
- Bevacizumab (IV infusion)
- Axitinib (by mouth)

- Temsirolimus (IV infusion)
- Everolimus (by mouth)
- Tivozanib (by mouth)
- Belzutifan (by mouth)—used specifically for people with von Hippel-Lindau disease and kidney cancer. This is a HIF2a inhibitor.

What are possible side effects of targeted therapy?

Some of these medicines are taken by mouth at home. But like most types of cancer treatment, they can cause side effects. Some can be severe. Side effects depend on the type and dose of medicines you're taking. If you are treated with more than 1 medicine, you will most likely have more side effects.

Side effects tend to get better over time after treatment ends. They vary from person to person. Many of them can be treated to keep them from getting worse. It's important to tell your treatment team about any changes you notice while getting targeted therapy.

Possible side effects include:

- Appetite loss
- Mouth sores
- Extreme tiredness and weakness
- Headaches, muscle aches, joint aches, or bone pain
- Nausea and vomiting
- Skin rash or dryness, itching
- Pain, redness, swelling, and blistering of the skin on your palms and the soles of your feet (called hand-foot syndrome)
- Changes in skin or hair color
- Constipation
- Diarrhea
- Fluid buildup that may cause swelling
- Easy bleeding and bruising
- Low thyroid hormone levels

Serious side effects can include:

- High blood pressure
- High blood sugar
- Fast heartbeat
- Heart rhythm changes
- Slow wound healing

Other, less common, but severe side effects are possible, such as:

- Heart failure

- Bleeding and holes in the intestines
- Blood clots
- Trouble breathing
- Kidney damage
- Liver damage
- Lung damage

In rare cases, some of these side effects can be fatal. Because of the risk of severe side effects, these treatments are not an option for everyone. They're used to treat kidney cancer only in people who are in good overall health and who can cope with treatment-related problems.

Working with your healthcare provider

It's important to know which medicines you're taking. Write down the names of your medicines. Ask your healthcare team how they work and what side effects they might cause.

Talk with your healthcare providers about what symptoms to watch for and when to call them. For instance, many of these medicines can cause diarrhea. You may be told to drink a lot of fluids, not eat high-fiber foods, and call if you have 4 or more loose bowel movements a day for more than 2 days.

Make sure you know what number to call with questions or problems. Is there a different number to call after hours when the clinic is closed, or on weekends and holidays? Know when to call your healthcare provider, when to seek immediate medical care, and when to call 911.

It may be helpful to keep a diary of your side effects. Write down physical, thinking, and emotional changes. A written list will make it easier for you to remember your questions when you go to your appointments. It will also make it easier for you to work with your healthcare team to make a plan to manage your side effects.

© 2000-2027 The StayWell Company, LLC. All rights reserved. This information is not intended as a substitute for professional medical care. Always follow your healthcare professional's instructions
This information is not intended as a substitute for professional medical care. Always follow your Healthcare professional's instructions. Copyright Krames LLC.