

What Is Surgery for Cancer?

Surgery, when used to treat cancer, is a procedure in which a surgeon removes cancer from your body. It works best for solid tumors that are contained in one area. Surgery may be open, with one large cut, or minimally invasive, with a few small cuts. Anesthesia keeps you from feeling pain during the procedure.

This page is for anyone who has been told surgery is part of their cancer treatment. It covers how surgery works, its risks, and what to expect before and after.

The simple version

Surgery, when used to treat cancer, is a procedure in which a surgeon removes cancer from your body. Surgeons are medical doctors with special training in surgery.

Surgery works best for solid tumors that are contained in one area. It is a local treatment. That means it treats only the part of your body with the cancer. It is not used for leukemia (a type of blood cancer), or for cancers that have spread.

How surgery is performed

Surgeons often use small, thin knives, called scalpels, and other sharp tools to cut the body. Surgery often means cutting through skin, muscles, and sometimes bone. After surgery, these cuts can be painful and take some time to heal.

Anesthesia keeps you from feeling pain during surgery. Anesthesia means drugs or other substances that cause you to lose feeling or awareness. There are three types:

- **Local anesthesia** causes loss of feeling in one small area of the body.
- **Regional anesthesia** causes loss of feeling in a part of the body, such as an arm or leg.
- **General anesthesia** causes loss of feeling and a complete loss of awareness that seems like a very deep sleep.

Some treatments do not use scalpels. Cryosurgery uses extreme cold to destroy abnormal tissue. Lasers are powerful beams of light that cut through tissue. Hyperthermia exposes tissue to high temperatures. Photodynamic therapy uses drugs that react to light.

Types of surgery

There are many types of surgery. They differ by purpose, by the part of the body, by how much tissue must come out, and sometimes by what the patient prefers. Surgery may be open or minimally invasive:

- In **open surgery**, the surgeon makes one large cut to remove the tumor, some healthy tissue, and maybe some nearby lymph nodes.
- In **minimally invasive surgery**, the surgeon makes a few small cuts instead of one large one. They insert a long, thin tube with a tiny camera, called a laparoscope, into one of the cuts. The camera shows the inside of the body on a monitor. Special tools go through the other cuts to remove the tumor and some healthy tissue.

Minimally invasive surgery uses smaller cuts, so it takes less time to recover from than open surgery.

How surgery works against cancer

Surgery can do several jobs, depending on your type of cancer and how advanced it is:

- **Remove the entire tumor** when the cancer is contained in one area.
- **Debulk a tumor** by removing some, but not all, of it. This is used when removing the entire tumor might damage an organ or the body. Removing part of a tumor can help other treatments work better.
- **Ease cancer symptoms** by removing tumors that are causing pain or pressure.

Sometimes surgery is the only treatment you need. More often, you will also have other cancer treatments.

Risks of surgery

Surgeons are highly trained and will do everything they can to prevent problems. Sometimes problems still occur. Common ones are:

- **Pain.** After surgery, most people have pain in the part of the body that was operated on. Your doctor or nurse can help you manage it. Talk with them before surgery about pain control, and afterward tell them if your pain is not controlled.
- **Infection.** To help prevent infection, follow your nurse's instructions about caring for the area where you had surgery. If you develop an infection, your doctor can prescribe a medicine (an antibiotic) to treat it.

Other risks include bleeding, damage to nearby tissues, and reactions to the anesthesia. Talk to your doctor about the possible risks for your type of surgery.

What to expect

Before surgery, a nurse may call to tell you how to prepare. They will also tell you about tests you need, such as blood tests, a chest x-ray, or an electrocardiogram (ECG). You may not be able to eat or drink for a certain period before surgery. Follow these instructions closely, or your surgery may need to be rescheduled.

During surgery, once you are under anesthesia, the surgeon removes the cancer. Usually some healthy tissue around it comes out too. That helps improve the chances that all the cancer has been removed. The surgeon might also remove lymph nodes or other nearby tissues. Those are checked under a microscope to see whether the cancer has spread.

After surgery, the nurse will tell you how to control pain. They will tell you which activities to do and avoid, how to care for your wound, how to spot signs of infection, and when you can return to work. You will have at least one more visit with the surgeon a week or two after you go home.

Ask when the pathology report from the operation will be ready and when you will go through it together. That report adds detail the biopsy could not, including the margins and any lymph nodes that were removed. It is also fair to ask how often the surgeon and the hospital do your particular operation.

Eating and working after surgery

Surgery increases your need for good nutrition. If you are weak or underweight, you may need a high-protein, high-calorie diet before surgery. Some surgeries change how your body uses food. That is especially true of surgery of the mouth, stomach, intestines, or throat. If you have trouble eating, you may be given nutrients through a feeding tube or IV. A dietitian can help.

You will need to take time off work to have and recover from surgery. It may be one day, or many weeks. How long depends on the type of anesthesia, the type and extent of the surgery, and the kind of work you do. If you expect a longer recovery, talk with your employer about medical leave.

When to get help sooner

- **Call 911 or go to an emergency department if** your wound splits open, if bleeding soaks through a dressing and will not stop with pressure, or if you get sudden chest pain or breathlessness after an operation. Do not drive yourself.
- **Call 911 or go to the nearest emergency department if** you have black or tarry stool, blood in vomit or vomit that looks like coffee grounds, you suddenly cannot urinate at all, or you are suddenly confused or hard to wake. Do not drive yourself.
- **Call your care team right away if** the wound looks darker or drier than before, if red streaks spread out from it, or if pain relief at home has stopped working well enough for you to move around.
- **Call your care team the same day if** the wound area grows more red, swollen or painful, if drainage thickens or turns tan, green or yellow, if it smells bad, or if your temperature reaches

100.4°F (38°C) or higher and you are not on chemotherapy (see the next bullet if you are).

- **If you are on chemotherapy, or have had a dose in the past few weeks, call your care team right away, day or night, for a temperature of 100.4°F (38°C) or higher.** Call right away too for chills, a sore throat, mouth sores, burning when you urinate, or redness at the wound or a catheter site, even with a normal temperature. A normal temperature is not a reason to wait. CDC calls a fever during chemotherapy a medical emergency. If you cannot reach your team, go to the emergency department and say you are on chemotherapy.

Source: [MedlinePlus — Surgical wound care, open](https://medlineplus.gov/ency/patientinstructions/000040.htm) (medlineplus.gov/ency/patientinstructions/000040.htm) and [CDC — Fever and Cancer Treatment](https://cdc.gov/cancer-preventing-infections/patients/fever.html) (cdc.gov/cancer-preventing-infections/patients/fever.html)

Source: National Cancer Institute (cancer.gov/about-cancer/treatment/types/surgery)

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