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## Risks of Cancer Surgery

Before you decide to have surgery or any other procedure, it's important that you understand the risks. Any type of medical procedure has risks. Different procedures have different kinds of risks and side effects. Be sure to discuss the details of your case with your health care team, who can give you a better idea about what your risks might be. It is important that the expected benefits of the surgery outweigh the possible risks.

### Preventing side effects of cancer surgery

Your surgical team will take many steps to reduce your risk of side effects and complications. This includes things like shaving and cleaning the area before cutting the skin to avoid infection, use of special leg pumps and low-dose blood thinners to avoid blood clots, and breathing treatments (respiratory therapy) to help prevent pneumonia. Ask your doctor about the possible complications of your surgery and what can and will be done to help prevent them.

### Possible side effects of cancer surgery

Possible complications during surgery may be caused by the surgery itself, drugs used, and your overall health. Generally speaking, the more complex the surgery is, the greater the risk of side effects.

Minor operations and taking tissue samples (biopsies) usually have less risk than a bigger surgery. Pain at the surgery site is the most common problem. Infections at the site and reactions to the drugs used to numb the area (local anesthesia) are also possible.

Some side effects are possible during and after surgery. Generally, these side effects are not expected to be life threatening. They can include:

- Bleeding
- Blood clots
- Damage to nearby tissues
- Drug reactions
- Damage to other organs
- Pain
- Infections
- Slow recovery of other body functions

## **Bleeding**

Bleeding is part of any surgery and is usually controlled. Bleeding can happen either inside the body (internally) or outside the body (externally). Bleeding can occur if a blood vessel was not sealed off during surgery or if a wound opens up.

Doctors try to limit the risk of bleeding by being very careful when working near blood vessels. They also look out for other factors that can make it easier to bleed such as checking lab tests to make sure a person's blood can clot normally. Serious bleeding may require another operation to find the source of the bleeding and stop it. This kind of bleeding may also require a blood transfusion to replace the blood that's been lost.

## **Blood clots**

Blood clots can form in the deep veins of the legs after surgery, especially if a person stays in bed for a long time. Such a clot can become a serious problem if it breaks loose and travels to another part of the body, such as a lung. This is a big reason why you'll be encouraged to get out of bed to sit, stand, and walk as soon as possible.

## **Damage to nearby tissues**

Internal organs and blood vessels can be damaged during surgery. Again, doctors are careful to do as little damage as possible.

## **Drug reactions**

Some people have reactions to the drugs used (anesthesia) or other medicines needed during surgery. Although rare, these can be serious because they can cause dangerously low blood pressure. Your heart rate, breathing rate, blood pressure, and other signs will be watched closely throughout the surgery to prevent, look for, or correct

this.

### **Damage to other organs**

Surgery can lead to problems with other organs, such as the lungs, heart, or kidneys. These problems are very rare but can be life-threatening. They are more likely to happen to people who already have problems with these organs. This is why doctors get a complete medical history and do tests to look for possible risks before surgery is done.

### **Pain**

Almost everyone has some pain after surgery. Pain is normal, but it should not be allowed to slow down your recovery. There are many ways to deal with and help control surgical pain. Medicines for pain can range from acetaminophen (Tylenol) to anti-inflammatory medicines or stronger drugs, like morphine.

See [Cancer Pain](#)<sup>1</sup> for more information on pain medicines..

### **Infections**

Because getting an [infection](#)<sup>2</sup> is serious, you may be asked to help prevent infection by washing with a special soap for a few days before surgery. This soap is especially good at killing bacteria, and can help to prepare your skin for surgery. This is one way you can help prevent an infection from happening. Even though you do things like this before surgery, and the surgical team takes great care to prevent infection, an infection at the site of the incision (cut) is a possible problem. Antibiotics, either as a pill or given through a vein in your arm (IV), are able to treat most infections.

A lung infection (pneumonia) can occur, especially in patients with reduced lung function, such as people who have a chronic lung illness or people who smoke. Doing deep breathing exercises as soon as possible after surgery helps lessen this risk.

Other infections can develop within the body, especially if the stomach or intestines were opened during the operation, or if a catheter to drain urine was used and left in place for a while. Doctors and nurses check for infection and monitor any changes in your temperature, skin or wounds to try to prevent this. But if it happens, antibiotics will be needed.

### **Slow recovery of other body functions**

Some body functions, such as bowel activity, can be slow to recover and can sometimes become serious, too. Your energy level can drop, too. Getting out of bed and walking around as soon as possible after surgery can help lower this risk.

## Possible long-term side effects of cancer surgery

Ask if there could be any long-term effects from the surgery. Long-term side effects depend on the type of surgery done. You might want to ask about effects on your ability to have a baby or father a child ([fertility](#)<sup>3</sup>) if surgery is being done on or around your reproductive organs. People who have colorectal cancer surgery may need an opening in the belly to which the end of the colon is attached (a [colostomy](#)<sup>4</sup>). Men having their prostate removed (radical prostatectomy) are at risk for losing control of their urine ([incontinence](#)<sup>5</sup>) or becoming unable to get or keep an erection (impotence). Your doctor should talk to you about the possible long-term effects of surgery before the operation.

## Can surgery cause cancer to spread?

You may have heard that surgery for cancer can cause the cancer to spread. It's very rare for surgery to cause cancer to spread. Advances in equipment used during surgery and more detailed imaging tests have helped make this risk very low. Still, there are some important situations when this can happen. Doctors who have a lot of experience in treating cancer with surgery are very careful to avoid these situations.

In the past, larger needles were used to take a piece of the tumor (biopsy) to look at under a microscope in the lab. Back then, the chance of spread or "seeding" from the biopsy was higher. Now, it's more likely that a small needle is used to remove a piece of the tissue (called a *needle biopsy*). With the smaller needle, the chances of a biopsy causing a cancer to spread or "seed" are very low. Still, some liver (hepatic), kidney (renal), and other tumors have a very small risk of this happening during a biopsy procedure.

Most types of cancers can be safely sampled by what is called an *incisional biopsy*, where the surgeon cuts through the skin to remove a small part of the tumor. But there are a few exceptions, such as certain tumors in the eyes or in the testicles. Doctors may treat these types of cancer first, without taking a biopsy, or may recommend removing (resecting) the entire tumor if it's likely to be cancer. Sometimes, a needle biopsy can be used safely, and then if the tumor is found to be cancer, the whole tumor is removed.

Needle biopsies can't be used for some tumors. In these cases, the tumor may need to be partially or totally removed. There are a few kinds of tumors that do have a low risk of cancer spread from the resection procedure. Examples include parathyroid and

gallbladder tumors, and some sarcomas. However, this only rarely happens due to the advances in equipment and imaging tests.

A common myth about cancer is that it will spread if it's exposed to air during surgery. Some people may believe this because they often feel worse after surgery than they did before. But it's normal to feel this way when recovering from any surgery. Another reason people may believe this is because during surgery the doctor may find more cancer than was expected from scans and x-rays. This can happen, but it's not because of the surgery – the cancer was already there – it just didn't show up on the tests that were done. Cancer does not spread because it has been exposed to air. If you delay or refuse surgery because of this myth, you may be harming yourself by not getting effective treatment.

## Hyperlinks

1. [www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/pain.html](http://www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/pain.html)
2. [www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/low-blood-counts/infections.html](http://www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/low-blood-counts/infections.html)
3. [www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/fertility-and-sexual-side-effects/how-cancer-treatment-affects-fertility.html](http://www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/fertility-and-sexual-side-effects/how-cancer-treatment-affects-fertility.html)
4. [www.cancer.org/treatment/treatments-and-side-effects/treatment-types/surgery/ostomies/colostomy.html](http://www.cancer.org/treatment/treatments-and-side-effects/treatment-types/surgery/ostomies/colostomy.html)
5. [www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/stool-or-urine-changes/bladder-incontinence.html](http://www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/stool-or-urine-changes/bladder-incontinence.html)

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