

Ewing Sarcoma: Surgery



Surgery is often a key part of treatment for Ewing sarcoma. Different kinds of surgery may be done. The type depends on things, such as where the cancer is, the size of the tumor, how much it's spread, the child's age, and how surgery would change how the body works.

When is surgery used for Ewing sarcoma?

Surgery is often part of the main treatment for Ewing sarcoma. It's most commonly done after chemotherapy (and sometimes radiation) has been used to try to shrink the tumor. A smaller tumor might be easier to remove. Sometimes surgery is used to remove tumors that have spread to other parts of the body, too.

Surgery for Ewing sarcoma can be very complex, such as when tumors are in bones of the skull, hips, or spine. It also can have major side effects and long-term changes in how the body works. It's important to have surgery done by healthcare providers who have a lot of experience treating this cancer.

Types of surgery for Ewing sarcoma

The use of surgery and the type done depends on the part of the body affected by cancer. Some tumors in soft tissue or certain bones can be removed without changing how the body moves or works. But tumors in the main bones of the arms or legs often can't be removed without affecting how the limb works.

In the past, limbs were removed (amputated) when the tumor and an edge (margin) of healthy tissue around it couldn't be removed. Today, limb-sparing surgery can often be done instead of amputation. This means the surgeon replaces the removed part of the bone with either a bone graft from another part of the body or from another person, with a prosthesis made of metal or plastic, or both. Sometimes children with prostheses need more surgery as they age. This is because the prosthesis may need to be replaced as their bones grow.

Still, limb-sparing surgery isn't always a choice. The tumor may be big and in a bone that's hard to replace, such as the pelvis or spine. Or the tumor may have grown into key nerves and blood vessels. If limb-sparing surgery isn't a choice, your child's healthcare provider may suggest radiation or amputation.

Possible risks, complications, and side effects of surgery

All surgery has risks. Some of the risks of any major surgery include:

- Reactions to anesthesia
- Bleeding
- Blood clots in the legs or lungs
- Damage to nearby organs
- Infection
- Pain during recovery

Risks from surgery for Ewing sarcoma

Along with the risks above, surgery for Ewing sarcoma can sometimes cause other problems. These depend on where the surgery was done and can include:

- Loose or broken bone grafts or prostheses (after limb-sparing surgery)
- Wound healing problems, especially if chemotherapy is part of treatment

- Scars and other changes in the way your child looks

Surgery on an arm or leg might affect how it works. Physical rehabilitation (rehab) after surgery is important. It can help make sure as much function as possible is recovered.

As noted above, growing children who have limb-sparing surgery might need more surgery as they get older. This may be done to replace the prosthesis with a larger one.

Getting ready for surgery

Before the surgery, you'll meet with the surgeon to talk about the procedure. At this time, you can ask any questions and talk about any concerns you may have. This is also a good time to review the possible side effects of the surgery and to talk about its risks. You might ask how the surgery will affect the way the treated area works. You might also want to ask about rehab and when you can expect your child to return to normal activities. After you've discussed all the details with the surgeon, you'll sign a consent form that says that the healthcare provider can do the surgery.

On the day of surgery, you should arrive at the hospital admission area a couple of hours before the time the surgery is supposed to start. There, you'll do the needed paperwork and then go to a preoperative (preop) area. In this area, your child will put on a hospital gown. During this time, the healthcare providers will ask about any medicine allergies and discuss the upcoming surgery. Try not to get frustrated by the repetition. These questions are repeated to help prevent mistakes.

In the preop area, an anesthesiologist or a nurse anesthetist will also do an evaluation. They will explain the anesthesia that will be used during surgery. Answer all the questions thoroughly and honestly. This will help prevent complications. Also ask any questions you have about the anesthesia.

The surgeon will also see you in the preoperative area. You can ask any last-minute questions you have. This can help put your mind at ease.

What to expect during surgery

When it's time for the surgery, your child will be taken into the operating room. There will be many people there. They include the anesthesiologist, surgeon, and nurses. To make sure of sterility, everyone will wear a medical gown and a face mask. Once in the room, medical staff will move your child onto the operating table. Then the anesthesiologist or nurse will put an IV (intravenous) line into your child's arm. Sometimes the IV is started in the preop area instead. EKG wires with small, sticky pads on the end will be attached to your child's chest to watch heart rate and rhythm. A blood pressure cuff will be wrapped around your child's arm. When all the preparation is complete, the anesthesia will be given through the IV and your child will fall asleep.

During surgery, a Foley catheter may be put through your child's urethra and into the bladder. This is a hollow tube used to drain urine. A breathing tube will be placed in your child's windpipe so a machine can control their breathing.

What's removed during surgery and where the cuts (incisions) are depend on the type of surgery. This is based on where the tumor is.

After the surgery is done, medical staff will move your child to the recovery room. You might be able to be there, too. The staff will closely watch your child. When your child is fully awake and stable, the staff will transfer them to a regular hospital room.

What to expect after surgery

When they first wake up, your child might have some pain. The healthcare providers will give pain relievers as needed for comfort. The pain medicines will also help your child get up and walk soon after surgery. This is important for recovery.

It will take some time for your child to get back to eating normally and having regular bowel movements. The Foley catheter might still be in your child's bladder to drain urine. It allows healthcare providers to measure urine output. This helps keep track of your child's fluid status. The catheter will be taken out before you go home.

How long your child stays in the hospital depends on the type of surgery done. Your child can slowly return to normal activities. But you should always follow the instructions you get from your child's healthcare provider.

After surgery, your child may feel weak or tired for a while. The amount of time it takes to heal from a surgery is different for each person. Your child's healthcare provider will give you instructions about if and when the incisions can get wet and how to care for the site. They'll also teach you how and when to use prescription medicines. And they'll talk about your child's diet and what activities are OK.

When to get medical care

Your child's treatment team will talk with you about problems you should watch for once you go home. Call right away if your child has any of these:

- Fever of 100.4°F (38°C) or higher, or as advised by the healthcare provider
- Chills
- Cough or shortness of breath
- Fast, irregular heartbeat; new chest pain
- Signs of infection around the incision, such as redness, drainage, warmth, and pain
- Drainage from the incision site
- Incision opens up or the edges pull apart
- Any abnormal bleeding or bleeding that soaks the bandage
- Trouble passing urine or changes in how your child's urine looks or smells
- Swelling in the hand, arm, or chest that gets worse or isn't getting better a week or two after surgery
- Pain, redness, swelling, or warmth in an arm or leg

Know what problems to watch for and when you need to call your child's healthcare provider. Also be sure you know what number to call to get help when the office is closed.

Talk with your child's healthcare team

If you have any questions about your child's surgery, talk with the healthcare team. They can help you know what to expect before, during, and after the surgery.

Understand the next steps of treatment before you go home. Also have a rehab plan in place. Which cancer treatment provider does your child need to see and when? Will they get radiation or chemo after surgery? When will it start?

Talk with the healthcare providers about what signs to look for and when to call them. For instance, surgery can lead to infection. Know what number to call with problems or questions.

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