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Treating Small Intestine Cancer (Adenocarcinoma)

(Note: This information is about small intestine cancers called adenocarcinomas. To learn about other types of cancer that can start in the small intestine, see [Gastrointestinal Carcinoid Tumors](#)¹, [Gastrointestinal Stromal Tumors](#)², or [Non-Hodgkin Lymphoma](#)³.)

If you've been diagnosed with a small intestine cancer, your cancer care team will discuss your treatment options with you. It's important to weigh the benefits of each treatment option against the possible risks and side effects.

How is small intestine cancer treated?

The main types of treatment used for small intestine adenocarcinoma are:

- [Surgery for Small Intestine Cancer \(Adenocarcinoma\)](#)
- [Chemotherapy for Small Intestine Cancer \(Adenocarcinoma\)](#)
- [Radiation Therapy for Small Intestine Cancer \(Adenocarcinoma\)](#)

Common treatment approaches

Sometimes more than one type of treatment is used. Which treatment option(s) might be best for you depends on many factors, including the type, grade, and stage of the cancer, as well as your preferences and overall health.

- [Treatment Choices for Small Intestine Cancer \(Adenocarcinoma\), Based on Tumor Spread](#)

Who treats small intestine cancer?

Based on your treatment options, you might have different types of doctors on your treatment team, including:

- A **surgical oncologist**: a doctor who treats cancer with surgery
- A **radiation oncologist**: a doctor who uses radiation to treat cancer
- A **medical oncologist**: a doctor who uses chemotherapy and other medicines to treat cancer
- A **gastroenterologist**: a doctor that specializes in diseases and problems of the digestive system

You might have many other specialists on your treatment team as well, including physician assistants (PAs), nurse practitioners (NPs), nurses, psychologists, social workers, nutrition specialists, rehabilitation specialists, and other health professionals.

- [Health Professionals Associated With Cancer Care](#)⁴

Making treatment decisions

It's important to discuss all of your treatment options, including their goals and possible side effects, with your doctors to help make the decision that best fits your needs. Some important things to consider include:

- Your age and expected life span
- Any other serious health conditions you have
- The location and stage of your cancer
- The likelihood that treatment will cure your cancer, help you live longer, or help in some other way
- Your feelings about the possible side effects from treatment

You might feel that you need to decide quickly, but it's important to give yourself time to absorb the information you've learned. It's also very important to ask questions if there is anything you're not sure about.

If time permits, it is often a good idea to seek a second opinion. A second opinion can give you more information and help you feel more confident about the treatment plan you choose.

- [Questions to Ask Your Doctor About Small Intestine Cancer](#)⁵
- [Seeking a Second Opinion](#)⁶

Thinking about taking part in a clinical trial

Clinical trials are carefully controlled research studies that are done to get a closer look at promising new treatments or procedures. Clinical trials are one way to get state-of-the-art cancer treatment. In some cases they may be the only way to get access to newer treatments. They are also the best way for doctors to learn better methods to treat cancer. Still, they're not right for everyone.

If you would like to learn more about clinical trials that might be right for you, start by asking your doctor if your clinic or hospital conducts clinical trials.

- [Clinical Trials](#)⁷

Considering complementary and alternative methods

You may hear about alternative or complementary methods that your doctor hasn't mentioned to treat your cancer or relieve symptoms. These methods can include vitamins, herbs, and special diets, or other methods such as acupuncture or massage, to name a few.

Complementary methods refer to treatments that are used along with your regular medical care. Alternative treatments are used instead of a doctor's medical treatment. Although some of these methods might be helpful in relieving symptoms or helping you feel better, many have not been proven to work. Some might even be harmful.

Be sure to talk to your cancer care team about any method you are thinking about using. They can help you learn what is known (or not known) about the method, which can help you make an informed decision.

- [Complementary and Alternative Medicine](#)⁸

Help getting through cancer treatment

People with cancer need support and information, no matter what stage of illness they may be in. Knowing all of your options and finding the resources you need will help you make informed decisions about your care.

Whether you are thinking about treatment, getting treatment, or not being treated at all, you can still get supportive care to help with pain or other symptoms. Communicating with your cancer care team is important so you understand your diagnosis, what

treatment is recommended, and ways to maintain or improve your quality of life.

Different types of programs and support services may be helpful, and can be an important part of your care. These might include nursing or social work services, financial aid, nutritional advice, rehab, or spiritual help.

The American Cancer Society also has programs and services – including rides to treatment, lodging, and more – to help you get through treatment. Call our National Cancer Information Center at 1-800-227-2345 and speak with one of our trained specialists.

- [Palliative Care](#)⁹
- [Find Support Programs and Services in Your Area](#)¹⁰

Choosing to stop treatment or choosing no treatment at all

For some people, when treatments have been tried and are no longer controlling the cancer, it could be time to weigh the benefits and risks of continuing to try new treatments. Whether or not you continue treatment, there are still things you can do to help maintain or improve your quality of life.

Some people, especially if the cancer is advanced, might not want to be treated at all. There are many reasons you might decide not to get cancer treatment, but it's important to talk to your doctors and you make that decision. Remember that even if you choose not to treat the cancer, you can still get supportive care to help with pain or other symptoms.

- [If Cancer Treatments Stop Working](#)¹¹

The treatment information given here is not official policy of the American Cancer Society and is not intended as medical advice to replace the expertise and judgment of your cancer care team. It is intended to help you and your family make informed decisions, together with your doctor. Your doctor may have reasons for suggesting a treatment plan different from these general treatment options. Don't hesitate to ask him or her questions about your treatment options.

Surgery for Small Intestine Cancer (Adenocarcinoma)

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Surgery is typically the main treatment for small intestine cancer. For some people, it might be the only treatment they need. At this time, surgery is the only treatment that can cure a cancer of the small intestine.

When might surgery be used?

- For people whose cancer is only in or near the place where it started (that is, in the small intestine and perhaps nearby organs), surgery is typically done to try to remove all of the cancer.
- If the cancer has spread too far to be removed completely, surgery might be done to help prevent or relieve problems that could be caused by the tumor growing large enough to block the intestine (or other problems).

The type of operation will depend on a number of factors, including the size and location of the tumor, and whether a person has any serious health problems.

Segmental resection

This operation removes (resects) the segment of intestine that has the tumor, as well as some of the normal tissue on either side of the tumor. The 2 cut ends of intestine are then attached back together. Some nearby tissue containing lymph nodes is also removed. Tumors in the end of the ileum (the last part of the small intestine) may require removing the right side of the colon (the first part of the large intestine). This surgery is called a *hemicolectomy*.

Usually this surgery is done through a long cut made in the abdomen. Another option for some smaller cancers might be “keyhole” (laparoscopic) surgery, in which the operation is done through several small cuts using long, thin surgical tools.

After surgery, it can take a few days before a person can eat and drink normally.

Removing a small piece of intestine usually doesn't cause long-term problems with eating or bowel movements, but there are more likely to be issues if part of the colon is removed as well.

Pancreaticoduodenectomy (Whipple procedure)

This extensive operation can be used to treat cancers of the duodenum (the first part of the small intestine), although it is more often used to treat [pancreatic cancer](#)⁴. It removes the duodenum, part of the pancreas, part of the stomach, and nearby lymph nodes. The gallbladder and part of the common bile duct are also removed, and the remaining bile duct is then attached to the small intestine so that bile from the liver can continue to enter the small intestine.

This is a complex operation that carries a fairly high risk of complications, which can sometimes even be fatal. Because of this, it's important that it is done by a surgeon (and at a center) that has a lot of experience with it. Still, even in the best hands, many patients have side effects from the surgery. These can include:

- Leaking from the various connections that the surgeon has to make
- Infections
- Bleeding
- Trouble with the stomach emptying itself after eating
- Trouble digesting some foods
- Changes in bowel habits
- Significant weight loss

Palliative surgery

If the cancer can't be removed completely because it has spread too far, surgery might still be a good option to help prevent or relieve some symptoms from the cancer. This is known as *palliative surgery*. Often, these operations are done to relieve a blocked intestine, to decrease pain, nausea, and vomiting, and allow the patient to eat normally.

If possible, the surgeon will remove enough of the tumor and nearby intestine to allow digested food to pass through.

Bypass surgery: Another option might be for the surgeon to leave the tumor in place and to reroute normal parts of the small intestine around the tumor to prevent or relieve a blockage.

Stent or tube placement: If major surgery isn't a good option for some reason, sometimes an endoscope can be used to pass a fairly rigid tube (called a *stent*) down the digestive tract and into the blocked part of the intestine. The stent is left in place to help keep the intestine open and allow digested food to pass.

If this can't be done, a thin, flexible tube may be placed through the skin and into the stomach to drain it. The tube can be left in place to help prevent problems with nausea and vomiting.

For more general information about surgery, see [Cancer Surgery](#)⁵.

Hyperlinks

1. www.cancer.org/cancer/gastrointestinal-carcinoid-tumor.html
2. www.cancer.org/cancer/gastrointestinal-stromal-tumor.html
3. www.cancer.org/cancer/non-hodgkin-lymphoma.html
4. www.cancer.org/cancer/pancreatic-cancer.html
5. www.cancer.org/treatment/treatments-and-side-effects/treatment-types/surgery.html

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Chamberlain RS, Krishnaraj M, Shah SA. Chapter 54: Cancer of the Small Bowel. In: DeVita VT, Lawrence TS, Rosenberg SA, eds. *DeVita, Hellman, and Rosenberg's Cancer: Principles and Practice of Oncology*. 10th ed. Philadelphia, Pa: Lippincott Williams & Wilkins; 2015.

Cusack JC, Overman MJ. Treatment of small bowel neoplasms. UpToDate. Accessed at www.uptodate.com/contents/treatment-of-small-bowel-neoplasms on January 18, 2018.

Doyon L, Greenstein A, Greenstein A. Chapter 76: Cancer of the Small Bowel. In: Niederhuber JE, Armitage JO, Doroshow JH, Kastan MB, Tepper JE, eds. *Abeloff's Clinical Oncology*. 5th ed. Philadelphia, Pa: Elsevier; 2014.

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Chemotherapy for Small Intestine Cancer (Adenocarcinoma)

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Chemotherapy (chemo) uses drugs to kill cancer cells. Often, these drugs are injected into a vein (IV) or given by mouth. They enter the bloodstream and can reach cancer cells anywhere in the body.

Unfortunately, small intestine adenocarcinoma does not seem to be very sensitive to chemo, so it is not often part of the main treatment for this cancer. Still, it may be used in some situations:

- If the cancer has spread (metastasized) to other parts of the body
- After the tumor is removed with surgery (called **adjuvant treatment**), to try to lower the chance that the cancer will come back. It's not yet clear how well this works or small intestine cancer.
- As **intraoperative chemotherapy** for cancer that has spread to the inner lining of the abdomen (called the *peritoneum*). For this treatment, chemo is put directly into the abdomen right after surgery. The chemo is often heated first to help it work better. This is known as *hyperthermic intraoperative chemotherapy (HIPEC)*.

Which chemo drugs might be used?

Some of the chemo drugs that can be used include:

- Capecitabine
- 5-fluorouracil (5-FU)
- Oxaliplatin
- Irinotecan

5-FU is often given with a vitamin-like drug called leucovorin, which helps it work better.

Because small intestine cancer is rare, it has been hard to study which chemo drugs work best. Some of the drug combinations that seem to work in advanced small intestine cancer include:

- Capecitabine and oxaliplatin (called CAPOX)
- 5-FU and leucovorin with oxaliplatin (FOLFOX)
- 5-FU and leucovorin with irinotecan (FOLFIRI).

Possible side effects

Chemo drugs kill cancer cells but also damage some normal cells, which can lead to [side effects](#)⁴. These depend on the type and dose of drugs, and the length of treatment. Common short-term side effects might include:

- Nausea and vomiting
- Loss of appetite
- Loss of hair
- Mouth sores
- Diarrhea

Chemo can also damage the blood-making cells of the bone marrow, so you may have low blood cell counts. This can lead to:

- An increased risk of infection (from a shortage of white blood cells)
- Bleeding or bruising after minor cuts or injuries (from a shortage of blood platelets)
- Fatigue (tiredness) or shortness of breath (from a shortage of red blood cells)

Along with these, some other side effects can be seen with certain medicines, for example:

- Capecitabine or 5-FU (when given as an infusion) can cause **hand-foot syndrome**. This starts out as redness in the hands and feet, which can then progress to pain and sensitivity in the palms and soles. If it worsens, blistering or skin peeling can occur, sometimes leading to open, painful sores. These symptoms gradually get better when the drug is stopped or the dose is lowered, so it's important to tell your doctor when symptoms first come up.
- Oxaliplatin can often cause **neuropathy** (nerve damage). Symptoms can include

numbness, tingling, and even pain in the hands and feet. It can also make you very sensitive to hot and cold, especially in the throat and esophagus (the tube connecting the throat to the stomach), which can make swallowing liquids painful. More information about neuropathy can be found in [Peripheral Neuropathy Caused by Chemotherapy](#)⁵.

- Many of these drugs commonly cause **diarrhea**, but it can be particularly bad with irinotecan. If you get diarrhea while being treated with irinotecan, it needs to be treated right away – at the first loose stool – to prevent severe dehydration.

Most side effects tend to go away after treatment is finished. But some, such as hand and foot numbness, might last for a long time. Talk to your cancer care team about any side effects you have, because there are often ways to lessen chemo side effects. For example, drugs can be given to help prevent or reduce nausea and vomiting.

For more information about chemo and its side effects, see [Chemotherapy](#)⁶.

Hyperlinks

1. www.cancer.org/cancer/gastrointestinal-carcinoid-tumor.html
2. www.cancer.org/cancer/gastrointestinal-stromal-tumor.html
3. www.cancer.org/cancer/non-hodgkin-lymphoma.html
4. www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects.html
5. www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/peripheral-neuropathy.html
6. www.cancer.org/treatment/treatments-and-side-effects/treatment-types/chemotherapy.html

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Radiation Therapy for Small Intestine Cancer (Adenocarcinoma)

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Radiation therapy uses high-energy radiation to kill cancer cells. It may be an option for those whose cancer cannot be removed completely with surgery and is causing problems such as pain or bleeding into the intestines. Radiation might also be used after surgery to try to kill any remaining cancer cells (known as *adjuvant therapy*), although it's not yet clear how helpful this is.

External-beam radiation therapy is the type of radiation used most often for small intestine cancer. For this treatment, radiation beams are aimed at the tumor from a machine outside the body.

Before treatment starts, the radiation team will take careful measurements to find the correct angles for aiming the radiation beams and the proper dose of radiation. This planning session, called *simulation*, usually includes getting [imaging tests](#)⁴ such as CT or MRI scans.

Radiation therapy is much like getting an x-ray, but the radiation is much stronger. The treatment itself is painless. It lasts only a few minutes, although the setup time – getting you into place for treatment – usually takes longer. You might get radiation treatment for

several days in a row.

Possible side effects

The main [side effects](#)⁵ of radiation therapy to the intestines include:

- Fatigue (tiredness)
- Nausea and vomiting
- Diarrhea
- Skin changes in the area where the radiation beams passed through, which can range from mild redness to blistering and peeling

For more information about radiation therapy and its side effects, see [Radiation Therapy](#)⁶.

Hyperlinks

1. www.cancer.org/cancer/gastrointestinal-carcinoid-tumor.html
2. www.cancer.org/cancer/gastrointestinal-stromal-tumor.html
3. www.cancer.org/cancer/non-hodgkin-lymphoma.html
4. www.cancer.org/treatment/understanding-your-diagnosis/tests/imaging-radiology-tests-for-cancer.html
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6. www.cancer.org/treatment/treatments-and-side-effects/treatment-types/radiation.html

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Treatment Choices for Small Intestine Cancer (Adenocarcinoma), Based on Tumor Spread

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The treatment of small intestine cancer depends mainly on whether or not the cancer can be removed completely with surgery. Cancers that can be removed completely are called *resectable*, while those that cannot are called *unresectable*.

Resectable cancers

Resectable cancers are treated with [surgery](#) to remove the cancer and some healthy surrounding tissue. The type of surgery will depend on where the cancer is:

- If the cancer is in the duodenum (the first part of the small intestine), an extensive operation called a Whipple procedure (or pancreaticoduodenectomy) is typically done.
- If the cancer is in another part of the small intestine, a segmental resection (removing the part of the intestine containing the tumor) is more likely to be done.
- If the cancer is near the end of the small intestine, part of the large intestine (colon) might need to be removed as well.

If the cancer has grown through the wall of the intestine or spread to nearby lymph nodes, the doctor may recommend adjuvant [chemotherapy](#) (chemo) or [radiation therapy](#) after surgery to try to kill any cancer cells that may have been left behind but were too small to see. The hope is that this treatment will help keep the cancer from coming back (recurring). It's not yet clear if adjuvant treatment can help people with small intestine cancer live longer.

Some doctors are also testing if giving chemo or radiation *before* surgery (known as *neoadjuvant therapy*) might be helpful. The hope is that this might shrink the tumor and make surgery easier, but so far it's not clear how helpful this treatment might be.

Unresectable cancers

A small intestine cancer may be unresectable if it has grown into nearby tissues or if it has spread to other organs and tissues (or if a person isn't healthy enough for major surgery).

Some people with unresectable cancers still have [surgery](#) to treat blocked intestines. This might include removing a large part of the tumor, or bypassing the tumor in some way. This type of **palliative surgery** can often help prevent or relieve symptoms like nausea, vomiting, and abdominal pain.

Whether or not surgery is done, [chemotherapy](#) is typically part of treatment. If the cancer is in the lining of the abdomen, chemo might be given right into the abdominal space just after surgery (known as *intraperitoneal chemotherapy*). [Radiation therapy](#) can also be used to treat cancer that has spread, especially to the brain or bones (such as the spine).

Another treatment option for some people might be immunotherapy, which uses medicines to boost the body's own immune response against the cancer. For people whose cancer cells have certain gene changes, such as mismatch repair (MMR) gene mutations or microsatellite instability (MSI), treatment with medicines called [checkpoint inhibitors](#)⁴, such as pembrolizumab (Keytruda), might be helpful.

Because there is no generally accepted standard treatment for these advanced cancers, taking part in a [clinical trial](#)⁵ is also a good option.

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