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Small Intestine Cancer Early Detection, Diagnosis, and Staging

Know the signs and symptoms of small intestine cancer. Find out how small intestine cancer is tested for, diagnosed, and staged.

Detection and Diagnosis

Catching cancer early often allows for more treatment options. Some early cancers may have signs and symptoms that can be noticed, but that is not always the case.

- [Can Small Intestine Cancer \(Adenocarcinoma\) Be Found Early?](#)
- [Signs and Symptoms of Small Intestine Cancer \(Adenocarcinoma\)](#)
- [Tests for Small Intestine Cancer \(Adenocarcinoma\)](#)

Stages and Outlook (Prognosis)

After a cancer diagnosis, staging provides important information about the extent of cancer in the body and anticipated response to treatment.

- [Small Intestine Cancer \(Adenocarcinoma\) Stages](#)
- [Survival Rates for Small Intestine Cancer \(Adenocarcinoma\)](#)

Questions to Ask About Small Intestine Cancer

Get some questions you can ask your cancer care team to help you better understand your cancer diagnosis and treatment options.

- [Questions to Ask Your Doctor About Small Intestine Cancer](#)

Can Small Intestine Cancer (Adenocarcinoma) Be Found Early?

- [For people at high risk](#)
-



When a doctor takes your medical history, you will be asked about your symptoms, possible [risk factors](#)⁴, family history, and other medical conditions. The doctor will then examine you, focusing on your abdomen looking for any swelling or sounds of the bowel trying to overcome a blockage.

Blood tests

If your doctor suspects a small intestine cancer, they will likely order some blood tests, such as:

- A **complete blood count (CBC)**, which measures the levels of red blood cells, white blood cells, and platelets. Small intestine cancer often causes bleeding into the intestines, which can lead to a low red blood cell count (anemia).
- **Blood chemistry tests** to look for signs that a cancer might have spread to the liver, or other problems.

Imaging tests

Imaging tests use x-rays, magnetic fields, or radioactive substances to create pictures of the inside of the body. Imaging tests might be done for a number of reasons, including:

- To help determine if symptoms are being caused by a tumor
- To learn how far cancer has spread
- To help determine if treatment is working
- To look for signs that the cancer has come back

Most patients who have or may have a small intestine tumor will have one or more of these tests.

Barium x-ray tests

For these tests, a liquid containing barium (a chalky substance) is put into the body to coat the lining of the gastrointestinal (GI) tract, and then x-rays are taken. The barium helps outline any abnormal areas in the esophagus, stomach, and intestines, making them more visible. These x-rays are most often used to look for tumors in the upper or lower parts of the GI tract, but they are less helpful in finding small intestine tumors. Barium tests were used more often before endoscopy was available (see below).

abnormal area is removed and looked at under a microscope.

There are different ways to take biopsy samples of an intestinal tumor.

- A biopsy can be done during an **endoscopy**. When a tumor is found, the doctor can use biopsy forceps (pincers or tongs) through the tube to take small samples of the tumor. The samples are very small, but doctors can usually make an accurate diagnosis. Bleeding after a biopsy is a rare but potentially serious problem. If bleeding becomes a problem, doctors can sometimes inject drugs that constrict blood vessels through the endoscope and into the tumor to stop the bleeding.
- For some patients, **surgery** is needed to biopsy a tumor in the intestines. This may be done if the tumor cannot be reached with an endoscope.
- Sometimes CT scans or other imaging tests are used to guide a thin, hollow **needle** to biopsy tumors in other organs (like the liver) to see if they are cancer.

Lab tests of biopsy samples

Doctors can usually tell if a biopsy sample contains cancer (adenocarcinoma) cells by looking at it under a microscope. But other tests might be done on the samples as well.

For example, the cancer cells might be tested for certain gene changes that could affect treatment options. Changes in mismatch repair (MMR) genes, or another genetic change known as microsatellite instability (MSI), make it more likely that the cancer might respond to treatment with immunotherapy drugs called [checkpoint inhibitors](#)⁷.

Hyperlinks

1. www.cancer.org/cancer/types/gastrointestinal-carcinoid-tumor.html
2. www.cancer.org/cancer/types/gastrointestinal-stromal-tumor.html
3. www.cancer.org/cancer/types/non-hodgkin-lymphoma.html
4. www.cancer.org/cancer/types/small-intestine-cancer/causes-risks-prevention/risk-factors.html
5. www.cancer.org/cancer/diagnosis-staging/tests/imaging-tests/ct-scan-for-cancer.html
6. www.cancer.org/cancer/diagnosis-staging/tests/imaging-tests/mri-for-cancer.html

has spread, and if so, how far. This process is called **staging**. The stage of a cancer describes the extent of the cancer in the body. It helps determine how serious the cancer is and [how best to treat](#)⁴ it. Doctors also use a cancer's stage when talking about survival statistics.

The earliest stage small intestine cancers are called stage 0 (carcinoma in situ), and then range from stages I (1) through IV (4). As a rule, the lower the number, the less the cancer has spread. A higher number, such as stage IV, means cancer has spread more. Although each person's cancer experience is unique, cancers with similar stages tend to have a similar outlook and are often treated in much the same way.

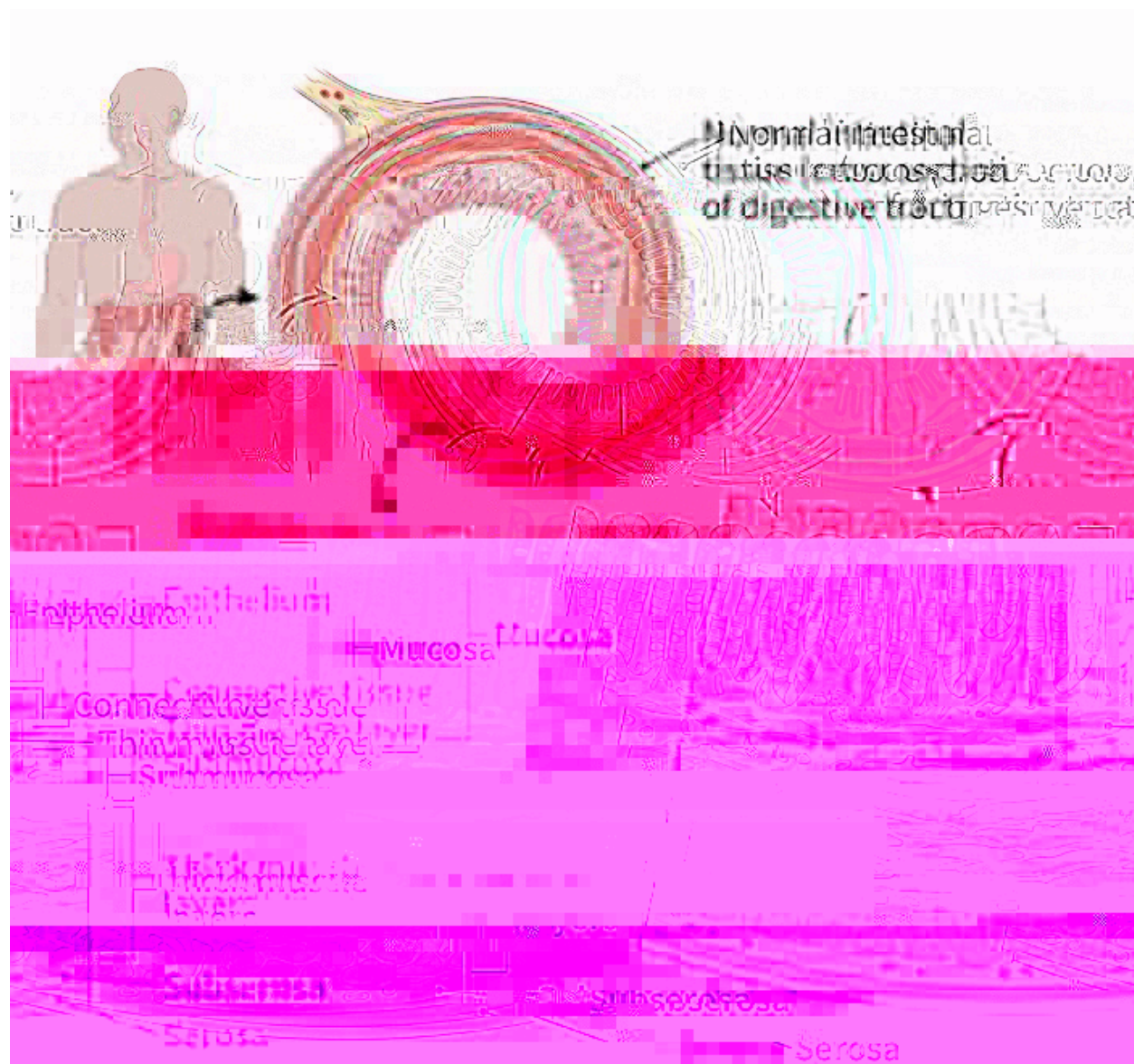
How is the stage determined?

Small intestine cancers are typically given a **clinical stage** based on the results of any [exams, biopsies, and imaging tests](#) that might have been done. If [surgery](#)⁵ has been done, the **pathologic stage** (also called the *surgical stage*) can also be determined.

Small intestine cancers typically start in the inner lining of the intestine. As they grow, they can spread into deeper layers. These layers include:

- **Mucosa:** This is the innermost layer. It has 3 parts: the top layer of cells (called the *epithelium*), a thin layer of connective tissue (called the *lamina propria*), and a thin layer of muscle (called the *muscularis mucosa*).

Submucosa: muscularis mucosae, lamina propria, submucosa, muscularis propria, serosa



The AJCC TNM staging system

The staging system most often used for small intestine cancer is the American Joint Committee on Cancer (AJCC) **TNM** system, which is based on 3 key pieces of information:

- The extent (size) of the main **tumor (T)**: How far has the cancer grown into the layers of the wall of the small intestine? Has the cancer reached nearby structures or organs?
- The spread to nearby lymph **nodes (N)**: Has the cancer spread to nearby lymph nodes?

- The spread (**metastasis**) to distant sites (**M**): Has the cancer spread to distant parts of the body? The most common sites of spread are the liver and the inner lining of the abdomen (peritoneal cavity).

Numbers or letters after T, N, and M provide more details about each of these factors. Higher numbers mean the cancer is more advanced.

Once the T, N, and M categories have been determined, this information is combined in a process called **stage grouping** to assign an overall stage. For more information see [Cancer Staging⁶](#).

The system described below is the most recent AJCC system, effective January 2018. It is only used for staging adenocarcinoma of the small intestine.

Small intestine cancer staging can be complex. If you have any questions about the stage of your cancer or what it means, ask your doctor to explain it to you in a way you understand.

Stages of small intestine adenocarcinoma

AJCC Stage	Stage grouping	Stage description*
0	Tis N0 M0	The cancer is only in the epithelium (the top layer of cells of the mucosa). It has not grown into the deeper tissue layers (Tis). It has not spread to nearby lymph nodes (N0) or distant parts of the body (M0).
I	T1 or T2 N0 M0	The cancer has grown into deeper layers (the lamina propria or the submucosa) (T1) OR it has grown through the submucosa into the muscularis propria (T2). The cancer has not spread to nearby lymph nodes (N0) or to distant parts of the body (M0).
IIA	T3	The cancer has grown through the muscularis propria and into the subserosa. It has not started to grow into any nearby organs or structures

What is a 5-year relative survival rate?

A **relative survival rate** compares people with the same type and stage of small intestine cancer to people in the overall population. For example, if the **5-year relative survival rate** for a specific stage of small intestine cancer is 80%, it means that people who have that cancer are, on average, about 80% as likely as people who don't have that cancer to live for at least 5 years after being diagnosed.

Where do these numbers come from?

The American Cancer Society relies on information from the Surveillance, Epidemiology, and End Results (SEER) database, maintained by the National Cancer Institute (NCI), to provide survival statistics for different types of cancer.

The SEER database tracks 5-year relative survival rates for small intestine cancer in the United States, based on how far the cancer has spread. The SEER database, however, does not group cancers by [AJCC TNM stages](#) (stage 1, stage 2, stage 3, etc.). Instead, it groups cancers into localized, regional, and distant stages:

- **Localized:** The cancer is limited to the wall of the small intestine.
- **Regional:** The cancer has spread outside the wall of the small intestine into nearby structures or lymph nodes.
- **Distant:** The cancer has spread to distant parts of the body such as the liver or peritoneum (the inner lining of the abdomen).

5-year relative survival rates for small intestine cancer

(These numbers are based on people diagnosed with small intestine cancer between 2012 and 2018.)

SEER* Stage	5-Year Relative Survival Rate
Localized	84%
Regional	78%
Distant	42%
All SEER stages combined	69%

*SEER= Surveillance, Epidemiology, and End Results

- [When deciding on a treatment plan](#)
- [During treatment](#)
- [After treatment](#)

It's important to have honest, open discussions with your cancer care team. Ask any question, no matter how minor it might seem. For instance, consider these questions:

When you're told you have a small intestine cancer

- What [type of small intestine cancer](#)¹ do I have? How might this affect my treatment and outlook?
- Where is the cancer located?
- What is the [stage](#) (extent) of my cancer, and what does that mean for me?
- Will I need any other [tests](#) before we consider treatment options?
- Will I need to see any other types of doctors?
- If I'm concerned about costs and insurance coverage for my diagnosis and treatment, who can help me?

When deciding on a treatment plan

- How much experience do you have treating this type of cancer?
- What are my [treatment options](#)²?
- What do you recommend and why?
- What is the goal of the treatment?
- Should I get a [second opinion](#)³? How do I do that? Can you recommend someone?
- Based on what you've learned about my cancer, what is my outlook?
- How quickly do we need to decide on treatment?
- What should I do to be ready for treatment?
- How long will treatment last? What will it be like? Where will it be done?
- What risks or side effects are there to the treatments you suggest?
- Will treatment affect my daily activities?
- How likely is it that the cancer will come back after treatment? Is there anything I can do to lower this risk?

During treatment

1. www.cancer.org/cancer/types/small-intestine-cancer/about/what-is-small-intestine-cancer.html
2. www.cancer.org/cancer/types/small-intestine-cancer/treating/by-tumor-spread.html
3. www.cancer.org/cancer/managing-cancer/finding-care/seeking-a-second-opinion.html
4. www.cancer.org/cancer/types/small-intestine-cancer/after-treatment/follow-up.html
5. www.cancer.org/cancer/managing-cancer/making-treatment-decisions/clinical-trials.html
6. www.cancer.org/cancer/managing-cancer/finding-care/the-doctor-patient-relationship.html

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