

National Cancer Institute

at the National Institutes of Health

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## Gastrointestinal Carcinoid Tumors Treatment (PDQ®)

Patient Version

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## General Information About Gastrointestinal Carcinoid Tumors

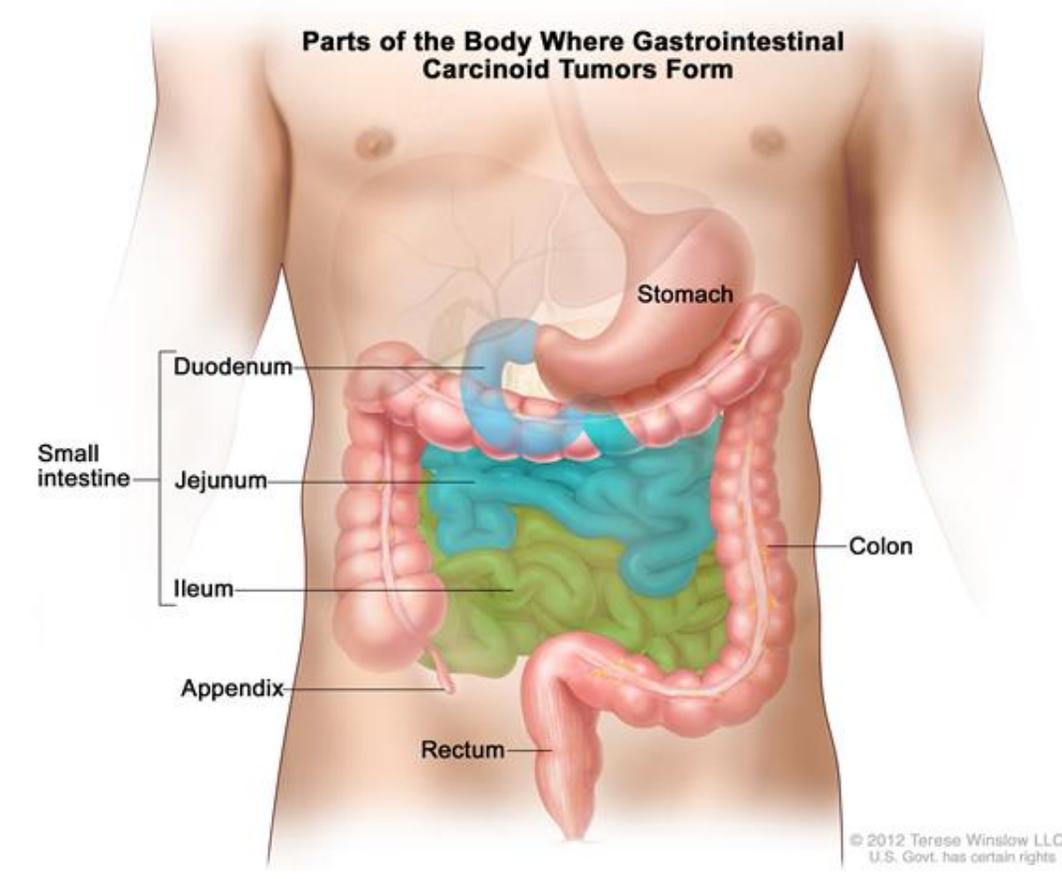
### Key Points for This Section

- A gastrointestinal carcinoid tumor is cancer that forms in the lining of the gastrointestinal tract.
- Health history can affect the risk of gastrointestinal carcinoid tumors.
- Some gastrointestinal carcinoid tumors have no signs or symptoms in the early stages.
- Carcinoid syndrome may occur if the tumor spreads to the liver or other parts of the body.
- Imaging studies and tests that examine the blood and urine are used to detect (find) and diagnose gastrointestinal carcinoid tumors.
- Certain factors affect prognosis (chance of recovery) and treatment options.

### **A gastrointestinal carcinoid tumor is cancer that forms in the lining of the gastrointestinal tract.**

The gastrointestinal (GI) tract is part of the body's digestive system. It helps to digest food, takes nutrients (vitamins, minerals, carbohydrates, fats, proteins, and water) from food to be used by the body and helps pass waste material out of the body. The GI tract is made up of these and other organs:

- Stomach.
- Small intestine (duodenum, jejunum, and ileum).
- Colon.
- Rectum.



Gastrointestinal carcinoid tumors form in the lining of the gastrointestinal tract, most often in the appendix, small intestine, or rectum.

Gastrointestinal carcinoid tumors form from a certain type of neuroendocrine cell (a type of cell that is like a nerve cell and a hormone -making cell). These cells are scattered throughout the chest and abdomen but most are found in the GI tract. Neuroendocrine cells make hormones that help control digestive juices and the muscles used in moving food through the stomach and intestines. A GI carcinoid tumor may also make hormones and release them into the body.

GI carcinoid tumors are rare and most grow very slowly. Most of them occur in the appendix, small intestine, and rectum. Sometimes more than one tumor will form.

See the following PDQ summaries for more information related to GI and other types of carcinoid tumors:

- Non-Small Cell Lung Cancer Treatment.
- Pancreatic Neuroendocrine Tumors (Islet Cell Tumors) Treatment.
- Rectal Cancer Treatment.
- Small Intestine Cancer Treatment.
- Unusual Cancers of Childhood

### **Health history can affect the risk of gastrointestinal carcinoid tumors.**

Anything that increases a person's chance of developing a disease is called a risk factor. Having a risk factor does not mean that you will get cancer; not having risk factors doesn't mean that you will not get cancer. Talk to your doctor if you think you may be at risk.

Risk factors for GI carcinoid tumors include the following:

- Having a family history of multiple endocrine neoplasia type 1 (MEN1) syndrome or neurofibromatosis type 1 (NF1) syndrome.
- Having certain conditions that affect the stomach's ability to make stomach acid, such as atrophic gastritis, pernicious anemia, or Zollinger-Ellison syndrome.

### **Some gastrointestinal carcinoid tumors have no signs or symptoms in the early stages.**

Signs and symptoms may be caused by the growth of the tumor and/or the hormones the tumor makes. Some tumors, especially tumors of the stomach or appendix, may not cause signs or symptoms. Carcinoid tumors are often found during tests or treatments for other conditions.

Carcinoid tumors in the small intestine (duodenum, jejunum, and ileum), colon, and rectum sometimes cause signs or symptoms as they grow or because of the hormones they make. Other conditions may cause the same signs or symptoms. Check with your doctor if you have any of the following:

#### **Duodenum**

Signs and symptoms of GI carcinoid tumors in the duodenum (first part of the small intestine, that connects to the stomach) may include the following:

- Abdominal pain.
- Constipation.
- Diarrhea.
- Change in stool color.
- Nausea.
- Vomiting.
- Jaundice (yellowing of the skin and whites of the eyes).
- Heartburn.

#### **Jejunum and ileum**

Signs and symptoms of GI carcinoid tumors in the jejunum (middle part of the small intestine) and ileum (last part of the small intestine, that connects to the colon) may include the following:

- Abdominal pain.
- Weight loss for no known reason.
- Feeling very tired.
- Feeling bloated
- Diarrhea.
- Nausea.
- Vomiting.

#### **Colon**

Signs and symptoms of GI carcinoid tumors in the colon may include the following:

- Abdominal pain.
- Weight loss for no known reason.

## **Rectum**

Signs and symptoms of GI carcinoid tumors in the rectum may include the following:

- Blood in the stool.
- Pain in the rectum.
- Constipation.

## **Carcinoid syndrome may occur if the tumor spreads to the liver or other parts of the body.**

The hormones made by gastrointestinal carcinoid tumors are usually destroyed by liver enzymes in the blood. If the tumor has spread to the liver and the liver enzymes cannot destroy the extra hormones made by the tumor, high amounts of these hormones may remain in the body and cause carcinoid syndrome. This can also happen if tumor cells enter the blood. Signs and symptoms of carcinoid syndrome include the following:

- Redness or a feeling of warmth in the face and neck.
- Abdominal pain.
- Feeling bloated.
- Diarrhea.
- Wheezing or other trouble breathing.
- Fast heartbeat.

These signs and symptoms may be caused by gastrointestinal carcinoid tumors or by other conditions. Talk to your doctor if you have any of these signs or symptoms.

## **Imaging studies and tests that examine the blood and urine are used to detect (find) and diagnose gastrointestinal carcinoid tumors.**

The following tests and procedures may be used:

- **Physical exam and history** : An exam of the body to check general signs of health, including checking for signs of disease, such as lumps or anything else that seems unusual. A history of the patient's health habits and past illnesses and treatments will also be taken.
- **Blood chemistry studies** : A procedure in which a blood sample is checked to measure the amounts of certain substances, such as hormones, released into the blood by organs and tissues in the body. An unusual (higher or lower than normal) amount of a substance can be a sign of disease in the organ or tissue that produces it. The blood sample is checked to see if it contains a hormone produced by carcinoid tumors. This test is used to help diagnose carcinoid syndrome.
- **Tumor marker test** : A procedure in which a sample of blood, urine, or tissue is checked to

measure the amounts of certain substances, such as chromogranin A, made by organs, tissues, or tumor cells in the body. Chromogranin A is a tumor marker. It has been linked to neuroendocrine tumors when found in increased levels in the body.

- **Twenty-four-hour urine test:** A test in which urine is collected for 24 hours to measure the amounts of certain substances, such as 5-HIAA or serotonin (hormone). An unusual (higher or lower than normal) amount of a substance can be a sign of disease in the organ or tissue that makes it. This test is used to help diagnose carcinoid syndrome.
- **MIBG scan :** A procedure used to find neuroendocrine tumors, such as carcinoid tumors. A very small amount of radioactive material called MIBG (metaiodobenzylguanidine) is injected into a vein and travels through the bloodstream. Carcinoid tumors take up the radioactive material and are detected by a device that measures radiation.
- **CT scan (CAT scan):** A procedure that makes a series of detailed pictures of areas inside the body, taken from different angles. The pictures are made by a computer linked to an x-ray machine. A dye may be injected into a vein or swallowed to help the organs or tissues show up more clearly. This procedure is also called computed tomography, computerized tomography, or computerized axial tomography.
- **MRI (magnetic resonance imaging):** A procedure that uses a magnet, radio waves, and a computer to make a series of detailed pictures of areas inside the body. This procedure is also called nuclear magnetic resonance imaging
- **PET scan (positron emission tomography scan):** A procedure to find malignant tumor cells in the body. A small amount of radionuclide glucose (sugar) is injected into a vein. The PET scanner rotates around the body and makes a picture of where glucose is being used in the body. Malignant tumor cells show up brighter in the picture because they are more active and take up more glucose than normal cells.
- **Endoscopic ultrasound (EUS):** A procedure in which an endoscope is inserted into the body, usually through the mouth or rectum. An endoscope is a thin, tube-like instrument with a light and a lens for viewing. A probe at the end of the endoscope is used to bounce high-energy sound waves (ultrasound) off internal tissues or organs, such as the stomach, small intestine, colon, or rectum, and make echoes. The echoes form a picture of body tissues called a sonogram. This procedure is also called endosonography.
- **Upper endoscopy :** A procedure to look at organs and tissues inside the body to check for abnormal areas. An endoscope is inserted through the mouth and passed through the esophagus into the stomach. Sometimes the endoscope also is passed from the stomach into the small intestine. An endoscope is a thin, tube-like instrument with a light and a lens for viewing. It may also have a tool to remove tissue or lymph node samples, which are checked under a microscope for signs of disease.
- **Colonoscopy :** A procedure to look inside the rectum and colon for polyps, abnormal areas, or cancer. A colonoscope is inserted through the rectum into the colon. A colonoscope is a thin, tube-

like instrument with a light and a lens for viewing. It may also have a tool to remove polyps or tissue samples, which are checked under a microscope for signs of cancer.

- **Capsule endoscopy** : A procedure used to see all of the small intestine. The patient swallows a capsule that contains a tiny camera. As the capsule moves through the gastrointestinal tract, the camera takes pictures and sends them to a receiver worn on the outside of the body.
- **Biopsy** : The removal of cells or tissues so they can be viewed under a microscope to check for signs of cancer. Tissue samples may be taken during endoscopy and colonoscopy.

### **Certain factors affect prognosis (chance of recovery) and treatment options.**

The prognosis (chance of recovery) and treatment options depend on the following:

- Where the tumor is in the gastrointestinal tract.
- The size of the tumor.
- Whether the cancer has spread from the stomach and intestines to other parts of the body, such as the liver or lymph nodes.
- Whether the patient has carcinoid syndrome or has carcinoid heart syndrome.
- Whether the cancer can be completely removed by surgery.
- Whether the cancer is newly diagnosed or has recurred.

### **Stages of Gastrointestinal Carcinoid Tumors**

#### **Key Points for This Section**

- After a gastrointestinal carcinoid tumor has been diagnosed, tests are done to find out if cancer cells have spread within the stomach and intestines or to other parts of the body.
- There are three ways that cancer spreads in the body.
- Cancer may spread from where it began to other parts of the body.
- The plan for cancer treatment depends on where the carcinoid tumor is found and whether it can be removed by surgery.

### **After a gastrointestinal carcinoid tumor has been diagnosed, tests are done to find out if cancer cells have spread within the stomach and intestines or to other parts of the body.**

Staging is the process used to find out how far the cancer has spread. The information gathered from the staging process determines the stage of the disease. The results of tests and procedures used to diagnose gastrointestinal (GI) carcinoid tumors may also be used for staging. See the General Information section for a description of these tests and procedures. A bone scan may be done to check if there are rapidly dividing cells, such as cancer cells, in the bone. A very small amount of radioactive material is injected into a vein and travels through the bloodstream. The radioactive material collects in the bones and is

detected by a scanner.

## **There are three ways that cancer spreads in the body.**

Cancer can spread through tissue, the lymph system, and the blood:

- Tissue. The cancer spreads from where it began by growing into nearby areas.
- Lymph system. The cancer spreads from where it began by getting into the lymph system. The cancer travels through the lymph vessels to other parts of the body.
- Blood. The cancer spreads from where it began by getting into the blood. The cancer travels through the blood vessels to other parts of the body.

## **Cancer may spread from where it began to other parts of the body.**

When cancer spreads to another part of the body, it is called metastasis. Cancer cells break away from where they began (the primary tumor) and travel through the lymph system or blood.

- Lymph system. The cancer gets into the lymph system, travels through the lymph vessels, and forms a tumor (metastatic tumor) in another part of the body.
- Blood. The cancer gets into the blood, travels through the blood vessels, and forms a tumor (metastatic tumor) in another part of the body.

The metastatic tumor is the same type of tumor as the primary tumor. For example, if a gastrointestinal (GI) carcinoid tumor spreads to the liver, the tumor cells in the liver are actually GI carcinoid tumor cells. The disease is metastatic GI carcinoid tumor, not liver cancer.

## **The plan for cancer treatment depends on where the carcinoid tumor is found and whether it can be removed by surgery.**

For many cancers it is important to know the stage of the cancer in order to plan treatment. However, the treatment of gastrointestinal carcinoid tumors is not based on the stage of the cancer. Treatment depends mainly on whether the tumor can be removed by surgery and if the tumor has spread.

Treatment is based on whether the tumor:

- Can be completely removed by surgery.
- Has spread to other parts of the body.
- Has come back after treatment. The tumor may come back in the stomach or intestines or in other parts of the body.
- Has not gotten better with treatment.

## **Treatment Option Overview**

### **Key Points for This Section**

- There are different types of treatment for patients with gastrointestinal carcinoid tumors.
- Four types of standard treatment are used:
  - Surgery

- Radiation therapy
- Chemotherapy
- Hormone therapy
- Treatment for carcinoid syndrome may also be needed.
- New types of treatment are being tested in clinical trials.
  - Targeted therapy
- Patients may want to think about taking part in a clinical trial.
- Patients can enter clinical trials before, during, or after starting their cancer treatment.
- Follow-up tests may be needed.

## **There are different types of treatment for patients with gastrointestinal carcinoid tumors.**

Different types of treatment are available for patients with gastrointestinal carcinoid tumor. Some treatments are standard (the currently used treatment), and some are being tested in clinical trials. A treatment clinical trial is a research study meant to help improve current treatments or obtain information on new treatments for patients with cancer. When clinical trials show that a new treatment is better than the standard treatment, the new treatment may become the standard treatment. Patients may want to think about taking part in a clinical trial. Some clinical trials are open only to patients who have not started treatment.

### **Four types of standard treatment are used:**

#### **Surgery**

Treatment of GI carcinoid tumors usually includes surgery. One of the following surgical procedures may be used:

- **Endoscopic resection:** Surgery to remove a small tumor that is on the inside lining of the GI tract. An endoscope is inserted through the mouth and passed through the esophagus to the stomach and sometimes, the duodenum. An endoscope is a thin, tube-like instrument with a light, a lens for viewing, and a tool for removing tumor tissue.
- **Local excision:** Surgery to remove the tumor and a small amount of normal tissue around it.
- **Resection:** Surgery to remove part or all of the organ that contains cancer. Nearby lymph nodes may also be removed.
- **Cryosurgery:** A treatment that uses an instrument to freeze and destroy carcinoid tumor tissue. This type of treatment is also called cryotherapy. The doctor may use ultrasound to guide the instrument.

- **Radiofrequency ablation:** The use of a special probe with tiny electrodes that release high-energy radio waves (similar to microwaves) that kill cancer cells. The probe may be inserted through the skin or through an incision (cut) in the abdomen.
- **Liver transplant:** Surgery to remove the whole liver and replace it with a healthy donated liver.
- **Hepatic artery embolization:** A procedure to embolize (block) the hepatic artery, which is the main blood vessel that brings blood into the liver. Blocking the flow of blood to the liver helps kill cancer cells growing there.

## **Radiation therapy**

Radiation therapy is a cancer treatment that uses high-energy x-rays or other types of radiation to kill cancer cells. There are two types of radiation therapy. External radiation therapy uses a machine outside the body to send radiation toward the cancer. Internal radiation therapy uses a radioactive substance sealed in needles, seeds, wires, or catheters that are placed directly into or near the cancer. The way the radiation therapy is given depends on the type and stage of the cancer being treated.

Radiopharmaceutical therapy is a type of radiation therapy. Radiation is given to the tumor using a drug that has a radioactive substance, such as iodine I 131, attached to it. The radioactive substance kills the tumor cells.

## **Chemotherapy**

Chemotherapy is a cancer treatment that uses drugs to stop the growth of cancer cells, either by killing the cells or by stopping the cells from dividing. When chemotherapy is taken by mouth or injected into a vein or muscle, the drugs enter the bloodstream and can reach cancer cells throughout the body (systemic chemotherapy). When chemotherapy is placed directly into the cerebrospinal fluid, an organ, or a body cavity such as the abdomen, the drugs mainly affect cancer cells in those areas (regional chemotherapy).

Chemoembolization of the hepatic artery is a type of regional chemotherapy that may be used to treat a gastrointestinal carcinoid tumor that has spread to the liver. The anticancer drug is injected into the hepatic artery through a catheter (thin tube). The drug is mixed with a substance that embolizes (blocks) the artery, and cuts off blood flow to the tumor. Most of the anticancer drug is trapped near the tumor and only a small amount of the drug reaches other parts of the body. The blockage may be temporary or permanent, depending on the substance used to block the artery. The tumor is prevented from getting the oxygen and nutrients it needs to grow. The liver continues to receive blood from the hepatic portal vein, which carries blood from the stomach and intestine.

The way the chemotherapy is given depends on the type and stage of the cancer being treated.

## **Hormone therapy**

Hormone therapy with a somatostatin analogue is a treatment that stops extra hormones from being made. GI carcinoid tumors are treated with octreotide or lanreotide which are injected under the skin or into the muscle. Octreotide and lanreotide may also have a small effect on stopping tumor growth.

## **Treatment for carcinoid syndrome may also be needed.**

Treatment of carcinoid syndrome may include the following:

- Hormone therapy with a somatostatin analogue stops extra hormones from being made. Carcinoid syndrome is treated with octreotide or lanreotide to lessen flushing and diarrhea. Octreotide and lanreotide may also help slow tumor growth.
- Interferon therapy stimulates the body's immune system to work better and lessens flushing and diarrhea. Interferon may also help slow tumor growth.
- Taking medicine for diarrhea.
- Taking medicine for skin rashes.
- Taking medicine to breathe easier.
- Taking medicine before having anesthesia for a medical procedure.

Other ways to help treat carcinoid syndrome include avoiding things that cause flushing or difficulty breathing such as alcohol, nuts, certain cheeses and foods with capsaicin, such as chili peppers. Avoiding stressful situations and certain types of physical activity can also help treat carcinoid syndrome.

For some patients with carcinoid heart syndrome, a heart valve replacement may be done.

## **New types of treatment are being tested in clinical trials.**

This summary section describes treatments that are being studied in clinical trials. It may not mention every new treatment being studied. Information about clinical trials is available from the NCI Web site.

### **Targeted therapy**

Targeted therapy is a type of treatment that uses drugs or other substances to identify and attack specific cancer cells without harming normal cells. Several types of targeted therapy are being studied in the treatment of GI carcinoid tumors.

## **Patients may want to think about taking part in a clinical trial.**

For some patients, taking part in a clinical trial may be the best treatment choice. Clinical trials are part of the cancer research process. Clinical trials are done to find out if new cancer treatments are safe and effective or better than the standard treatment.

Many of today's standard treatments for cancer are based on earlier clinical trials. Patients who take part in a clinical trial may receive the standard treatment or be among the first to receive a new treatment.

Patients who take part in clinical trials also help improve the way cancer will be treated in the future. Even when clinical trials do not lead to effective new treatments, they often answer important questions and help move research forward.

## **Patients can enter clinical trials before, during, or after starting their cancer treatment.**

Some clinical trials only include patients who have not yet received treatment. Other trials test treatments

for patients whose cancer has not gotten better. There are also clinical trials that test new ways to stop cancer from recurring (coming back) or reduce the side effects of cancer treatment.

Clinical trials are taking place in many parts of the country. See the Treatment Options section that follows for links to current treatment clinical trials. These have been retrieved from NCI's listing of clinical trials.

### **Follow-up tests may be needed.**

Some of the tests that were done to diagnose the cancer or to find out the stage of the cancer may be repeated. Some tests will be repeated in order to see how well the treatment is working. Decisions about whether to continue, change, or stop treatment may be based on the results of these tests. This is sometimes called re-staging.

Some of the tests will continue to be done from time to time after treatment has ended. The results of these tests can show if your condition has changed or if the cancer has recurred (come back). These tests are sometimes called follow-up tests or check-ups.

## **Treatment Options for Gastrointestinal Carcinoid Tumors**

### **Carcinoid Tumors in the Stomach**

Treatment of gastrointestinal (GI) carcinoid tumors in the stomach may include the following:

- Endoscopic surgery (resection) for small tumors.
- Surgery (resection) to remove part or all of the stomach. Nearby lymph nodes for larger tumors, tumors that grow deep into the stomach wall, or tumors that are growing and spreading quickly may also be removed.

For patients with GI carcinoid tumors in the stomach and MEN1 syndrome, treatment may also include:

- Surgery to remove tumors in the duodenum (first part of the small intestine, that connects to the stomach).
- Hormone therapy.

Check for U.S. clinical trials from NCI's list of cancer clinical trials that are now accepting patients with localized gastrointestinal carcinoid tumor and regional gastrointestinal carcinoid tumor. For more specific results, refine the search by using other search features, such as the location of the trial, the type of treatment, or the name of the drug. Talk with your doctor about clinical trials that may be right for you. General information about clinical trials is available from the NCI Web site.

### **Carcinoid Tumors in the Small Intestine**

It is not clear what the best treatment is for GI carcinoid tumors in the duodenum (first part of the small intestine, that connects to the stomach). Treatment may include the following:

- Endoscopic surgery (resection) for small tumors.
- Surgery (local excision) to remove the tumor, for slightly larger tumors.
- Surgery resection to remove the tumor and nearby lymph nodes.

Treatment of GI carcinoid tumors in the jejunum (middle part of the small intestine) and ileum (last part of the small intestine, that connects to the colon) may include the following:

- Surgery (resection) to remove the tumor and the membrane that connects the intestines to the back of the abdominal wall. Nearby lymph nodes are also removed.
- A second surgery to remove the membrane that connects the intestines to the back of the abdominal wall, if any tumor remains or the tumor continues to grow.
- Hormone therapy.

Check for U.S. clinical trials from NCI's list of cancer clinical trials that are now accepting patients with localized gastrointestinal carcinoid tumor and regional gastrointestinal carcinoid tumor. For more specific results, refine the search by using other search features, such as the location of the trial, the type of treatment, or the name of the drug. Talk with your doctor about clinical trials that may be right for you. General information about clinical trials is available from the NCI Web site.

## **Carcinoid Tumors in the Appendix**

Treatment of GI carcinoid tumors in the appendix may include the following:

- Surgery (resection) to remove the appendix.
- Surgery (resection) to remove the right side of the colon including the appendix. Nearby lymph nodes are also removed.

Check for U.S. clinical trials from NCI's list of cancer clinical trials that are now accepting patients with localized gastrointestinal carcinoid tumor and regional gastrointestinal carcinoid tumor. For more specific results, refine the search by using other search features, such as the location of the trial, the type of treatment, or the name of the drug. Talk with your doctor about clinical trials that may be right for you. General information about clinical trials is available from the NCI Web site.

## **Carcinoid Tumors in the Colon**

Treatment of GI carcinoid tumors in the colon may include the following:

- Surgery (resection) to remove part of the colon and nearby lymph nodes, in order to remove as much of the cancer as possible.

Check for U.S. clinical trials from NCI's list of cancer clinical trials that are now accepting patients with localized gastrointestinal carcinoid tumor and regional gastrointestinal carcinoid tumor. For more specific results, refine the search by using other search features, such as the location of the trial, the type of treatment, or the name of the drug. Talk with your doctor about clinical trials that may be right for you. General information about clinical trials is available from the NCI Web site.

## **Carcinoid Tumors in the Rectum**

Treatment of GI carcinoid tumors in the rectum may include the following:

- Endoscopic surgery (resection) for tumors that are smaller than 1 centimeter.
- Surgery (resection) for tumors that are larger than 2 centimeters or that have spread to the muscle layer of the rectal wall. This may be either:
  - surgery to remove part of the rectum; or
  - surgery to remove the anus, the rectum, and part of the colon through an incision made in the abdomen.

It is not clear what the best treatment is for tumors that are 1 to 2 centimeters. Treatment may include the following:

- Endoscopic surgery (resection).
- Surgery to remove part of the rectum.
- Surgery to remove the anus, the rectum, and part of the colon through an incision made in the abdomen.

Check for U.S. clinical trials from NCI's list of cancer clinical trials that are now accepting patients with localized gastrointestinal carcinoid tumor and regional gastrointestinal carcinoid tumor. For more specific results, refine the search by using other search features, such as the location of the trial, the type of treatment, or the name of the drug. Talk with your doctor about clinical trials that may be right for you. General information about clinical trials is available from the NCI Web site.

## **Metastatic Gastrointestinal Carcinoid Tumors**

### **Distant metastases**

Treatment of distant metastases of GI carcinoid tumors is usually palliative therapy to relieve symptoms and improve quality of life. Treatment may include the following:

- Surgery (resection) to remove as much of the tumor as possible.
- Hormone therapy.
- Radiopharmaceutical therapy.
- Radiation therapy for cancer that has spread to the bone, brain, or spinal cord.
- A clinical trial of a new treatment.

### **Liver metastases**

Treatment of cancer that has spread to the liver may include the following:

- Surgery resection to remove the tumor from the liver.
- Hepatic artery embolization.
- Cryosurgery.
- Radiofrequency ablation.
- Liver transplant.

Check for U.S. clinical trials from NCI's list of cancer clinical trials that are now accepting patients with

metastatic gastrointestinal carcinoid tumor. For more specific results, refine the search by using other search features, such as the location of the trial, the type of treatment, or the name of the drug. Talk with your doctor about clinical trials that may be right for you. General information about clinical trials is available from the NCI Web site.

## Recurrent Gastrointestinal Carcinoid Tumors

Treatment of recurrent GI carcinoid tumors may include the following:

- Surgery to remove part or all of the tumor.
- A clinical trial of a new treatment.

Check for U.S. clinical trials from NCI's list of cancer clinical trials that are now accepting patients with recurrent gastrointestinal carcinoid tumor. For more specific results, refine the search by using other search features, such as the location of the trial, the type of treatment, or the name of the drug. Talk with your doctor about clinical trials that may be right for you. General information about clinical trials is available from the NCI Web site.

## To Learn More About Gastrointestinal Carcinoid Tumors

For more information from the National Cancer Institute about gastrointestinal carcinoid tumors, see the following:

- [Gastrointestinal Carcinoid Tumor Home Page](#)
- [Cryosurgery in Cancer Treatment: Questions and Answers](#)
- [Targeted Cancer Therapies](#)

For general cancer information and other resources from the National Cancer Institute, see the following:

- [Cancer Staging](#)
- [Chemotherapy and You: Support for People With Cancer](#)
- [Radiation Therapy and You: Support for People With Cancer](#)
- [Coping with Cancer: Supportive and Palliative Care](#)
- [Questions to Ask Your Doctor About Cancer](#)
- [Cancer Library](#)
- [Information For Survivors/Caregivers/Advocates](#)

## Changes to This Summary (05/23/2014)

The PDQ cancer information summaries are reviewed regularly and updated as new information becomes available. This section describes the latest changes made to this summary as of the date above.

Editorial changes were made to this summary.

## About This PDQ Summary

## About PDQ

Physician Data Query (PDQ) is the National Cancer Institute's (NCI's) comprehensive cancer information database. The PDQ database contains summaries of the latest published information on cancer prevention, detection, genetics, treatment, supportive care, and complementary and alternative medicine. Most summaries come in two versions. The health professional versions have detailed information written in technical language. The patient versions are written in easy-to-understand, nontechnical language. Both versions have cancer information that is accurate and up to date and most versions are also available in Spanish.

PDQ is a service of the NCI. The NCI is part of the National Institutes of Health (NIH). NIH is the federal government's center of biomedical research. The PDQ summaries are based on an independent review of the medical literature. They are not policy statements of the NCI or the NIH.

## Purpose of This Summary

This PDQ cancer information summary has current information about the treatment of gastrointestinal carcinoid tumors. It is meant to inform and help patients, families, and caregivers. It does not give formal guidelines or recommendations for making decisions about health care.

## Reviewers and Updates

Editorial Boards write the PDQ cancer information summaries and keep them up to date. These Boards are made up of experts in cancer treatment and other specialties related to cancer. The summaries are reviewed regularly and changes are made when there is new information. The date on each summary ("Date Last Modified") is the date of the most recent change.

The information in this patient summary was taken from the health professional version, which is reviewed regularly and updated as needed, by the PDQ Adult Treatment Editorial Board.

## Clinical Trial Information

A clinical trial is a study to answer a scientific question, such as whether one treatment is better than another. Trials are based on past studies and what has been learned in the laboratory. Each trial answers certain scientific questions in order to find new and better ways to help cancer patients. During treatment clinical trials, information is collected about the effects of a new treatment and how well it works. If a clinical trial shows that a new treatment is better than one currently being used, the new treatment may become "standard." Patients may want to think about taking part in a clinical trial. Some clinical trials are open only to patients who have not started treatment.

Clinical trials are listed in PDQ and can be found online at NCI's Web site. Many cancer doctors who take part in clinical trials are also listed in PDQ. For more information, call the Cancer Information Service 1-800-4-CANCER (1-800-422-6237).

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## **Disclaimer**

The information in these summaries should not be used to make decisions about insurance reimbursement. More information on insurance coverage is available on Cancer.gov on the Coping with Cancer: Financial, Insurance, and Legal Information page.

## **Contact Us**

More information about contacting us or receiving help with the Cancer.gov Web site can be found on our Contact Us for Help page. Questions can also be submitted to Cancer.gov through the Web site’s Contact Form.

## **Get More Information From NCI**

### ***Call 1-800-4-CANCER***

For more information, U.S. residents may call the National Cancer Institute's (NCI's) Cancer Information Service toll-free at 1-800-4-CANCER (1-800-422-6237) Monday through Friday from 8:00 a.m. to 8:00 p.m., Eastern Time. A trained Cancer Information Specialist is available to answer your questions.

### ***Chat online***

The NCI's LiveHelp® online chat service provides Internet users with the ability to chat online with an Information Specialist. The service is available from 8:00 a.m. to 11:00 p.m. Eastern time, Monday through Friday. Information Specialists can help Internet users find information on NCI Web sites and answer questions about cancer.

### ***Write to us***

For more information from the NCI, please write to this address:

NCI Public Inquiries Office  
9609 Medical Center Dr.  
Room 2E532 MSC 9760  
Bethesda, MD 20892-9760

### ***Search the NCI Web site***

The NCI Web site provides online access to information on cancer, clinical trials, and other Web sites and organizations that offer support and resources for cancer patients and their families. For a quick search, use the search box in the upper right corner of each Web page. The results for a wide range of search terms will include a list of "Best Bets," editorially chosen Web pages that are most closely related to the search term entered.

There are also many other places to get materials and information about cancer treatment and services. Hospitals in your area may have information about local and regional agencies that have information on finances, getting to and from treatment, receiving care at home, and dealing with problems related to cancer treatment.

### ***Find Publications***

The NCI has booklets and other materials for patients, health professionals, and the public. These publications discuss types of cancer, methods of cancer treatment, coping with cancer, and clinical trials. Some publications provide information on tests for cancer, cancer causes and prevention, cancer statistics, and NCI research activities. NCI materials on these and other topics may be ordered online or printed directly from the NCI Publications Locator. These materials can also be ordered by telephone from the Cancer Information Service toll-free at 1-800-4-CANCER (1-800-422-6237).