

STOMACH CANCER

Stomach cancer is cancer that occurs in the stomach — the muscular sac located in the upper middle of your abdomen, just below your ribs. Your stomach receives and holds the food you eat and then helps to break down and digest it. Another term for stomach cancer is gastric cancer. These two terms most often refer to stomach cancer that begins in the mucus-producing cells on the inside lining of the stomach (adenocarcinoma). Adenocarcinoma is the most common type of stomach cancer.

Stomach cancer is common in asian countries.

Signs and symptoms of stomach cancer may include:

- Fatigue
- Feeling full after eating small amounts of food
- Heartburn that is severe and persistent
- Indigestion that is severe and unrelenting
- Nausea that is persistent and unexplained
- Vomiting that is persistent
- Weight loss that is unintentional

Causes

There is no specific cause for stomach cancer. There is a strong correlation between a diet high in smoked and salted foods and stomach cancer.

In general, cancer begins when an error (mutation) occurs in a cell's DNA. The mutation causes the cell to grow and divide at a rapid rate and to continue

living when a normal cell would die. The accumulating cancerous cells form a tumor that can invade nearby structures. And cancer cells can break off from the tumor to spread throughout the body.

Types of stomach cancer

The cells that form the tumor determine the type of stomach cancer. The type of cells in your stomach cancer helps determine your treatment options. Types of stomach cancer include:

- **Cancer that begins in the glandular cells (adenocarcinoma).** The glandular cells that line the inside of the stomach secrete a protective layer of mucus to shield the lining of the stomach from the acidic digestive juices. Adenocarcinoma accounts for the great majority of all stomach cancers.
- **Cancer that begins in immune system cells (lymphoma).** The walls of the stomach contain a small number of immune system cells that can develop cancer. Lymphoma in the stomach is rare.
- **Cancer that begins in hormone-producing cells (carcinoid cancer).** Hormone-producing cells can develop carcinoid cancer. Carcinoid cancer in the stomach is rare.
- **Cancer that begins in nervous system tissues.** A gastrointestinal stromal tumor (GIST) begins in specific nervous system cells found in your stomach. GIST is a rare form of stomach cancer.

Because the other types of stomach cancer are rare, when people use the term "stomach cancer" they generally are referring to adenocarcinoma.

Factors that increase your risk of stomach cancer include:

- A diet high in salty and smoked foods
- A diet low in fruits and vegetables

- Eating foods contaminated with aflatoxin fungus
- Family history of stomach cancer
- Infection with *Helicobacter pylori*
- Long-term stomach inflammation
- Pernicious anemia
- Smoking
- Stomach polyps

Diagnosis

Tests and procedures used to diagnose stomach cancer include:

- **UPPER GI ENDOSCOPY.** A thin tube containing a tiny camera is passed down your throat and into your stomach. Your doctor can look for signs of cancer. If any suspicious areas are found, a piece of tissue can be collected for analysis (biopsy).
- **Imaging tests.** Imaging tests used to look for stomach cancer include computerized tomography (CT) scans and a special type of X-ray exam sometimes called a barium swallow.

Determining the extent (stage) of stomach cancer

The stage of your stomach cancer helps your doctor decide which treatments may be best for you. Tests and procedures used to determine the stage of cancer include:

- **Imaging tests.** Tests may include a CT and positron emission tomography (PET).

- **Diagnostic laparoscopy/Exploratory surgery.** Your doctor may recommend surgery to look for signs that your cancer has spread beyond your stomach within your abdomen. Exploration is usually done laparoscopically. This means the surgeon makes several small incisions in your abdomen and inserts a special camera that transmits images to a monitor in the operating room.

Other staging tests may be used, depending on your situation.

Stages of stomach cancer

The stages of adenocarcinoma stomach cancer include:

- **Stage I.** At this stage, the tumor is limited to the layer of tissue that lines the inside of the stomach. Cancer cells may also have spread to a limited number of nearby lymph nodes.
- **Stage II.** The cancer at this stage has spread deeper, growing into the muscle layer of the stomach wall. Cancer may also have spread to more of the lymph nodes.
- **Stage III.** At this stage, the cancer may have grown through all the layers of the stomach and spread to nearby structures. Or it may be a smaller cancer that has spread more extensively to the lymph nodes.
- **Stage IV.** This stage indicates that the cancer has spread to distant areas of the body.

Treatment

Your treatment options for stomach cancer depend on the stage of your cancer, your overall health and your preferences.

Surgery

The goal of surgery is to remove all of the stomach cancer and a margin of healthy tissue, when possible. Options include:

- **Removing early-stage tumors from the stomach lining.** Very small cancers limited to the inside lining of the stomach may be removed using endoscopy in a procedure called endoscopic mucosal resection. The endoscope is a lighted tube with a camera that's passed down your throat into your stomach. The doctor uses special tools to remove the cancer and a margin of healthy tissue from the stomach lining.
- **Removing a portion of the stomach (laparoscopic/open subtotal gastrectomy).** During subtotal gastrectomy, the surgeon removes only the portion of the stomach affected by cancer.
- **Removing the entire stomach (laparoscopic/open total gastrectomy).** Total gastrectomy involves removing the entire stomach and some surrounding tissue. The esophagus is then connected directly to the small intestine to allow food to move through your digestive system.
- In case patient presents to doctor in advanced stage of cancer or if it is not operable during first attempt ,then patient is given chemotherapy or radiation in order to downsize the tumor and then surgery is performed depending upon response to treatment

Radiation therapy

Radiation therapy uses high-powered beams of energy, such as X-rays and protons, to kill cancer cells. The energy beams come from a machine that moves around you as you lie on a table.

Radiation therapy can be used before surgery (neoadjuvant radiation) to shrink a stomach tumor so that it's more easily removed. Radiation therapy can also be used after surgery (adjuvant radiation) to kill any cancer cells that might remain around your stomach. Radiation is often combined with chemotherapy.

In cases of advanced cancer, radiation therapy may be used to relieve side effects caused by a large tumor.

Chemotherapy

Chemotherapy is a drug treatment that uses chemicals to kill cancer cells. Chemotherapy drugs travel throughout your body, killing cancer cells that may have spread beyond the stomach.

Chemotherapy can be given before surgery (neoadjuvant chemotherapy) to help shrink a tumor so that it can be more easily removed. Chemotherapy is also used after surgery (adjuvant chemotherapy) to kill any cancer cells that might remain in the body. Chemotherapy is often combined with radiation therapy. Chemotherapy may be used alone in people with advanced stomach cancer to help relieve signs and symptoms.

Targeted drugs

Targeted therapy uses drugs that attack specific abnormalities within cancer cells. Targeted drugs used to treat stomach cancer include:

- **Trastuzumab (Herceptin)** for stomach cancer cells that produce too much HER2.
- **Ramucirumab (Cyramza)** for advanced stomach cancer that hasn't responded to other treatments.
- **Imatinib (Gleevec)** for a rare form of stomach cancer called gastrointestinal stromal tumor.
- **Sunitinib (Sutent)** for gastrointestinal stromal tumors.
- **Regorafenib (Stivarga)** for gastrointestinal stromal tumors.

Tests of your cancer cells can tell your doctor whether these treatments are likely to work for you.

Supportive (palliative) care

Palliative care is specialized medical care that focuses on providing relief from pain and other symptoms of a serious illness. Palliative care specialists work with you, your family and your other doctors to provide an extra layer of support that complements your ongoing care. Palliative care can be used while undergoing other aggressive treatments, such as surgery, chemotherapy or radiation therapy.

When palliative care is used along with all of the other appropriate treatments, people with cancer may feel better and live longer.

Palliative care is provided by a team of doctors, nurses and other specially trained professionals. Palliative care teams aim to improve the quality of life for people with cancer and their families. This form of care is offered alongside curative or other treatments you may be receiving.