UW Medicine
UNIVERSITY OF WASHINGTON MEDICAL CENTER

Gastric Cancer

Diagnostic tests and your treatment options

This handout explains gastric cancer and how it is diagnosed. It describes treatment options, and gives instructions on how to prepare for and what to expect from gastrectomy surgery.

What is gastric cancer?

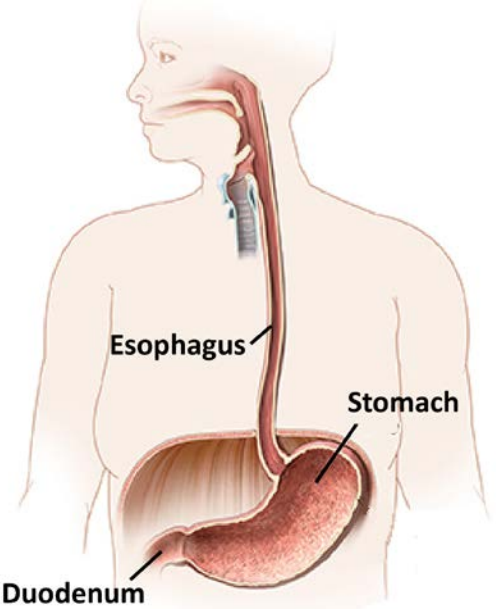
Gastric cancer is a disease that starts in the cells of your stomach tissue. It is also called stomach cancer.

Gastric cancer usually grows very slowly over many years. It can affect different parts of the stomach.

About the Stomach

Your stomach is one of the organs in your digestive system. It is shaped like a sac. It sits in your belly, between your *esophagus* and your *duodenum*, the first part of your small intestine.

When you swallow food, it goes through your esophagus and into your stomach. While the food is in your stomach, *gastric juices* start working to digest it.



The stomach is in your belly, between your esophagus and your duodenum.

Types of Gastric Cancer

The most common type of gastric cancer is *adenocarcinoma*. About 90% (90 out of 100) of all gastric cancers are adenocarcinomas.

Other types of gastric cancer include *gastrointestinal stromal tumors* (GIST) and *carcinoid tumors*. Other types of stomach cancer are more rare. They include *squamous cell carcinoma*, *small cell carcinoma*, and *leiomyosarcoma*.

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What are the symptoms of gastric cancer?

Symptoms of gastric cancer include:

- Stomach pain or discomfort
- Nausea
- Bloating
- Loss of appetite
- Weight loss

How is it diagnosed?

If you have stomach pain or problems eating, your doctor will first:

- Give you a physical exam
- Ask you for details about your health history
- Ask about your risks for cancer, such as tobacco or alcohol use.

The final diagnosis is made during a test called an *upper endoscopy*.

Upper Endoscopy

An upper endoscopy looks at the inside of your *gastrointestinal* (GI) track. An endoscopy gives a clear view of the inside of your stomach. For this test:

- You will have *sedation* (medicine to make you sleepy and relaxed).
- A tube called an *endoscope* will be inserted into your mouth and down into your esophagus. The endoscope has a light and a tiny camera on the end that will take images of your stomach tissue.
- These images are projected onto a monitor in the exam room for your doctor to see.
- If needed, your doctor can take a tissue sample (*biopsy*) and send it to the lab to be tested for cancer.

Other Tests

If your doctor finds cancer during the upper endoscopy, or believes you may have cancer, other tests can help us diagnose and treat you. These extra tests include:

- **Computed tomography (CT) scan.** A CT scan uses X-rays and computer technology to take detailed pictures of your stomach.

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- **Positron emission tomography (PET) scan.** For this imaging scan, a small amount of radioactive *tracer* will be injected into your vein. The scan will show "hot spots" (problem areas) in your stomach.
- **Endoscopic ultrasound imaging (EUS).** Your doctor will place a thin, flexible tube called an *endoscope* into your mouth and move it down into your throat and esophagus. The endoscope has a tiny ultrasound probe at the end. This will allow your doctor to see the structures of your GI tract.
- **Diagnostic laparoscopy:** This is a very short day surgery that will tell your doctor more about the extent of the cancer. Stomach cancer can spread to the lining of the belly (*peritoneal cavity*). Other types of imaging may not show this spread. During this surgery, we may also do *washings*. This means we will mix fluid in your belly and then remove the fluid. This fluid will be sent to the lab to be checked for microscopic cancer cells.

How is gastric cancer treated?

The types of treatment your doctor advises will depend on:

- Where the tumor is in your stomach
- Whether cancer has spread to your lymph nodes or other organs
- Your symptoms and overall health

Here are treatments your doctor may suggest:

- **Gastrectomy.** In this surgery, part or all of your stomach is removed.
- **Chemotherapy.** If your cancer will respond to surgery, your doctor may want to give you chemotherapy drugs before surgery to help reduce the size of a tumor. This can improve the chances of the surgery being successful.
- **Radiation therapy**: This treatment is rarely given for gastric cancer. It may be used if cancer is found where the stomach meets the esophagus. It may be needed to treat direct spread to nearby organs that are touched by the cancer.

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What is a gastrectomy?

A *gastrectomy* is surgery to remove part or all of the stomach. It is most often done to remove a tumor or treat severe ulcers.

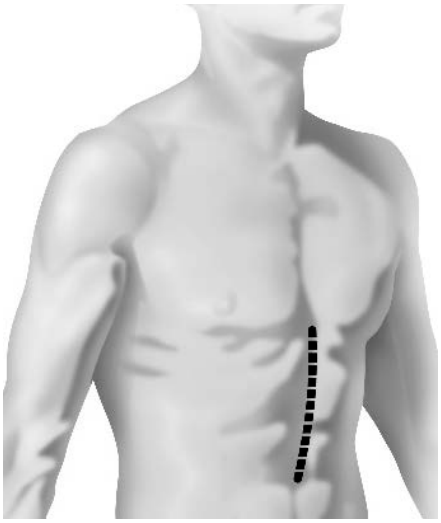
- A *total gastrectomy* is surgery to remove all of your stomach. Most patients have *roux-en-y reconstruction* for this surgery. In roux-en-y, the surgeon attaches your esophagus to a portion of your small bowel. This allows you to keep eating and digesting food.
- A *subtotal gastrectomy* removes only the part of your stomach that is affected by cancer. In this surgery, your esophagus and small bowel are reconnected to the part of your stomach that is healthy.

At University of Washington Medical Center (UWMC), surgeons often use *laparoscopic surgery* to do a gastrectomy.

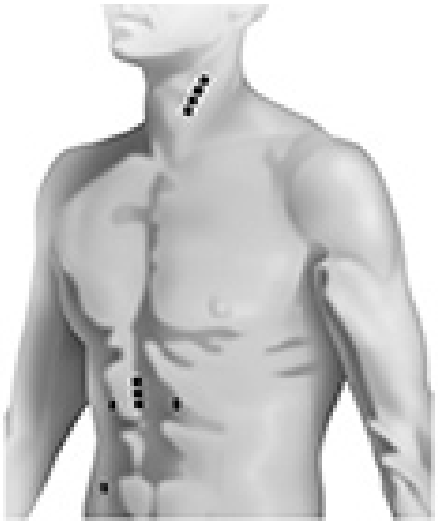
What is laparoscopic surgery?

Laparoscopic surgery is a type of *minimally invasive* surgery. It makes smaller incisions than *open* surgery (see drawings below). Laparoscopic surgery may decrease pain, speed your recovery, and help you go home from the hospital earlier. Surgeons at UWMC are experts in this type of surgery.

In laparoscopic surgery, your surgeon will make about 5 small incisions, each one less than 1 cm (½ inch) long. They will insert special surgical instruments and a fiber optic camera through these incisions to do the gastrectomy.



In open surgery, the surgeon makes long incisions.



In laparoscopic surgery, the surgeon makes several tiny incisions.

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Your surgeon will talk with you about what type of surgery is right for you. We use laparoscopy for most patients with gastric cancer, but it may not be the best option for everyone.

What are the risks of a gastrectomy?

All surgeries involve some risk. With a gastrectomy, these problems may occur in the first week, while you are still in the hospital:

- Leakage of stomach contents where the stomach was cut and treated
- Bowel blockage
- Infection
- Bleeding

Any of these problems could require another surgery.

How do I prepare for surgery?

- To prepare your lungs for surgery and to prevent pneumonia:
  - Walk an extra mile a day for 2 weeks before your surgery.
  - Use an *incentive spirometer* to exercise your lungs. We will give you this device at your clinic visit before your surgery and show you how to use it. Use your spirometer every day before your operation. Do 3 sets of 10 breaths every day.
- If you smoke, you should stop smoking several weeks before surgery. If you have trouble quitting, talk with your doctor about medicines or other methods that can help you quit.
- Tell your clinic nurse if you have any special needs. Ask to talk with a social worker about any special needs that you may have before or after your surgery.
- You will stay in the hospital 4 to 5 days after surgery. Plan to have a responsible adult take you home from the hospital. This person can drive you in their car, or ride with you on or bus or taxi. **You cannot drive yourself home or take public transport by yourself.**
- Also plan for a responsible adult to help you at home for the first week or longer as you recover.

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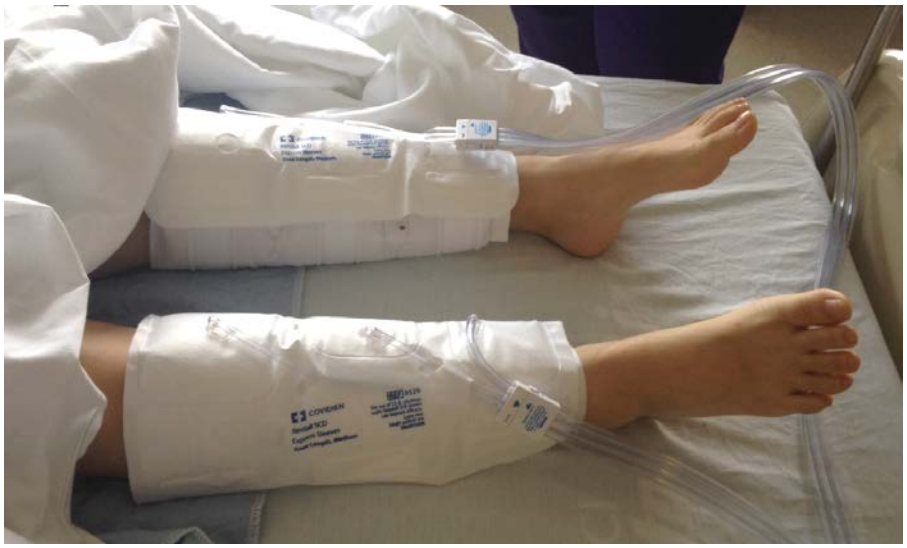
What can I expect after surgery?

You will wake up in the recovery room. You will feel sleepy. You will have:

- An **oxygen mask** to give you extra oxygen. This will be changed to *nasal cannula* (nasal prongs) when your lungs are ready.
- An **intravenous (IV) tube** in your vein, which will be used to give you medicine for pain and nausea.
- A **catheter tube** inserted into your bladder to drain your urine. Most patients have this catheter for 2 to 3 days after surgery.
- A **nasogastric tube** is a tube that is inserted through your nose into your stomach to help drain stomach contents.
- **Sequential compression devices (SCDs)** on your legs to help with blood flow. You will feel these wraps fill with air and then deflate from time to time. SCDs help keep blood clots from forming while you are not as active as usual.



Sequential compression devices help keep blood clots from forming.

You **may** also have:

- At least 1 **drain** (tube) in your belly. Drains remove extra fluid that builds up after surgery. We will remove these drains when your drainage lessens.
- An **epidural catheter** in your back to give you pain medicine.

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- A **jejunostomy tube** inserted through your skin into your small intestine. You will receive high-nutrition liquid food through this feeding tube.

Pain Control

- Most people have *patient-controlled analgesia* (PCA) for 1 to 3 days after a gastrectomy. PCA is a pump that allows you to get pain medicine when you need it.
- The anesthesiologist may also talk with you about an epidural catheter for pain control after surgery.
- When you go home, use the pain medicine your doctor prescribed for you. It is important to take it before your pain is severe.

Incentive Spirometer

Use your incentive spirometer (IS) 10 times every hour while you are awake. This will strengthen your lungs and help prevent lung infection (*pneumonia*) and other problems after surgery.

Use your incentive spirometer 10 times every hour while you are awake.

To use the IS:

- Place the mouthpiece in your mouth and seal your lips around it. Slowly inhale. Your breath will raise a small ball.
- Inhaling more deeply will make the ball stay up longer. Try to get the ball as high as you can. Then exhale slowly through your mouth.
- Rest for few seconds and then repeat.
- After you are done with your set of 10 deep breaths, cough to clear your lungs. You can hold or hug a pillow across your incision sites when you cough to ease the pain.
- If you feel dizzy at any time, stop and rest.

Nutrition

You cannot eat anything by mouth on the day of your surgery. You will receive fluids through your IV to keep you hydrated.

As your intestines recover from your surgery, you will pass gas. After this happens, you will be able to drink clear liquids. When you can drink clear liquids and not have nausea, your doctor will add regular foods back into your diet.

Your dietitian will plan a special diet for you that will meet your energy needs.

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Feeding Tube

If you have a feeding tube (*jejunostomy*), it may be used to give you more calories until you can eat. If you need tube feedings at home, we will help arrange for a company to provide the supplies. A visiting nurse will follow your progress. You may have the feeding tube for up to 3 months.

Activity

Every day you will become more active. Moving around is very important to prevent lung infection and blood clots in your legs.

Your nurse will help you sit on the edge of your bed on the day of your surgery. The next day, you will get up and sit in a chair. You will also begin to walk. Two days after your surgery, you will walk in the hall. As your strength returns, we will encourage you to do more.

Bowel Movements

- It will be several days after your surgery before you have your first bowel movement. After you go home, your bowels may still be different than normal.
- If you have diarrhea that does not go away after 2 or 3 days, or if you have nausea or vomiting, call your nurse.
- Avoid getting constipated. Please read the handout "Constipation After Your Operation."

Self-care at Home

Incision Care

Check your incision every day. Tell your doctor if you have any of the signs of infection listed on the last page of this handout.

Shower

- You may shower every day.
- Do **not** take a bath, sit in a hot tub, or go swimming until your incision is fully healed. This will take about 2 weeks.

Activity

- For **6 weeks** after your surgery, do **not** lift anything that weighs more than 15 pounds (1 gallon of water weighs about 9 pounds). Your incision will heal more quickly if you do not put stress on your belly muscles.

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- Walking every day will help speed your recovery. Slowly increase how far you walk.
- You may resume sexual activity when you feel comfortable doing so. If you have any questions about this, talk with your doctor or nurse.

Vitamin B12 Injections

Your body needs vitamin B12 to produce healthy red blood cells and keep your nervous system healthy. After a gastrectomy, your body can no longer absorb vitamin B12.

You will need to get monthly B12 shots from your primary care provider for the rest of your life.

Return to Work

How much time you take off work depends on what you do for a living. Most people take 6 weeks to a few months off to recover after a gastrectomy.

Return to work when you feel ready. Some patients choose to start back part-time, then work more as their energy allows.

When to Call

Call your nurse or doctor if you have:

- Bleeding or drainage that soaks your dressing
- A fever higher than 100.5°F (38°C)
- Shaking and chills
- Any sign of infection in your incision:
  - Redness
  - Increasing pain
  - Swelling
  - Drainage that smells bad
  - A change in the type or amount of drainage
- Nausea or vomiting
- Concerns that cannot wait until your follow-up visit

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First Follow-up Visit

At your first clinic visit after your surgery, your nurse and doctor will:

- Talk with you about how you are doing at home.
- Check your incision.
- Remove your surgical staples.
- Ask how your appetite is, what your calorie intake is, and how your bowels are working. If you are getting liquid tube feedings, they will ask you how that is going and will check your weight.
- Ask how your pain is, what pain medicines you are taking, what activities you are doing, and when you plan to return to work.

Questions?

Your questions are important. Call your doctor or healthcare provider if you have questions or concerns.

Weekdays from 8 a.m. to 4 p.m., call the Surgical Specialties Nurse Advice Line at 206.598.4549.

After hours and on weekends and holidays, call 206.598.6190 and ask to page the resident on call for Surgery.

Or, ask to page your surgeon:

Dr. _____

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