

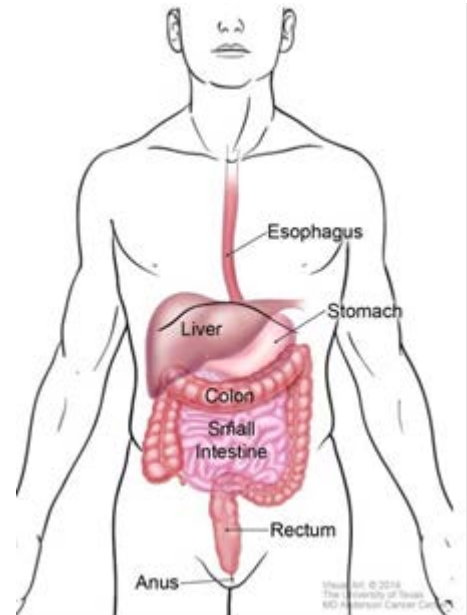
## Esophageal Cancer

The esophagus is a muscular tube that carries food and liquids from the mouth to the stomach (see image). When a person swallows, the wall of the esophagus contracts to push food down into the stomach.

Esophageal cancer develops when the cells of the esophagus grow and divide out of control to form a tumor or mass. These cancer cells can invade and destroy the tissue around them. The cancer cells can spread (metastasize) to other parts of the body. The lymph nodes, liver, lung and bone are the most common areas that esophageal cancer may spread to.

Esophageal cancer is more common in men than women. The exact causes are not known, but an increased risk of esophageal cancer is seen in patients who:

- Are older in age
- Have a history of alcohol or tobacco use
- Have reflux disease or gastroesophageal reflux disease (GERD)
- Have Barrett's esophagus. This condition occurs when long-term reflux of stomach acid injures the lining of the esophagus.



The esophagus & nearby organs  
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## Two Main Types of Esophageal Cancer

- **Squamous cell carcinoma** starts in the squamous cells that line the esophagus. It most often occurs in the upper and middle part of the esophagus. The major risk factors associated with this cancer include a history of smoking and/or alcohol use.
- **Adenocarcinomas** usually start in the glandular tissue of the esophagus. These cancers are most often found in the lower part of the esophagus, near the stomach. The major risk factors include GERD and Barrett's esophagus.

## Symptoms

Common symptoms include difficult or painful swallowing, weight loss, mid-chest pain, cough and hoarseness. Many times, symptoms are not noticed until the cancer is in advanced stages.

## Staging Esophageal Cancer

Staging tests are done to determine the size and location of the tumor in the esophagus and whether it has spread to other parts of the body. Staging is needed to plan the best treatment.

Your doctor may order a series of tests to help determine the stage of your cancer. Your doctor will discuss these tests with you.

There are four stages of esophageal cancer. Stage I is an early esophageal cancer. Stage IV is the most advanced stage when the cancer has spread to other parts of the body.

## Treatment

Treatment depends on the size, location and extent of the tumor, as well as your general health. Many different treatments and combinations of treatments may be used to manage the cancer and/or improve your quality of life. The main types of treatment are explained below.

## Surgery

Surgery is the most common treatment for early stage esophageal cancer that has not spread to lymph nodes or other parts of the body. There are four common surgeries. In all four surgeries, the surgeon will make two or more incisions and remove all or part of the esophagus, a portion of the stomach and nearby lymph nodes. The remaining stomach is pulled up into the chest or neck area and connected to the remaining esophagus. The four surgical procedures have similar cure rates and complication rates. In general, the type of surgery depends on the cancer's location and size. Your doctor will talk with you in detail about your surgery options.

To treat more advanced stages of cancer, surgery may be combined with radiation and/or chemotherapy treatment.

## Radiation Treatment

Radiation treatment, or radiation therapy, uses x-rays or other high-energy rays to kill cancer cells and shrink tumors. Radiation only affects cancer cells in the treated area. External beam radiation therapy is delivered from a machine outside the body.

Radiation is usually combined with chemotherapy. This combined treatment helps to prevent tumor growth and to reduce symptoms from the tumor, such as problems swallowing or bleeding.

### Side effects from radiation to the esophagus may include:

- Skin changes including: redness, irritation, scaling, ulceration, thickening, hair loss and change in skin color
- Inflammation of the esophagus causing pain/difficulty with swallowing, heartburn or a sticking sensation when swallowing food
- Loss of appetite, nausea, vomiting, weight loss and weakness
- Inflammation of the lung causing pain, fever, cough and problems breathing
- Inflammation of the heart causing chest pain and palpitations

- Bleeding, perforation or creation of a fistula (tract)
- Low blood counts leading to increased risk of infection and/or bleeding
- Tingling in the lower spine or legs when bending your neck

## Chemotherapy

Chemotherapy uses drugs to kill cancer cells. These drugs enter the bloodstream to reach all areas of the body, making this treatment useful for cancer that has spread. Your doctor may use one drug or a combination of drugs. Chemotherapy can be given several ways, such as through a vein (intravenously) or by mouth. Chemotherapy is usually given on an outpatient basis.

Since chemotherapy medicines affect some healthy cells as well as cancer cells, you may have side effects. Your doctor can prescribe medicines to help manage any side effects. You will receive information about the chemotherapy your doctor prescribes.

### Common side effects include:

- Nausea
- Diarrhea
- Tiredness
- Hair loss
- Low blood counts (may increase the risk for infections and bleeding)

Chemotherapy alone does not typically cure esophageal cancer. Chemotherapy may be combined with radiation as a primary treatment (instead of surgery) or may be given before surgery to shrink the tumor.

## Clinical Trials

Clinical trials are research studies to find the best treatment for esophageal cancer. New chemotherapy drugs and combinations are being studied in clinical trials as treatments for cancer that has spread and as a way to relieve symptoms. Your doctor will talk with you if you are eligible for a clinical trial.

## Other Therapies

Other treatments that may be used to treat esophageal cancer are available. Your doctor will talk with you if these treatments may help you.

- **Endoscopic Mucosal Resection (EMR)** is a highly effective treatment for small surface lesions. During the treatment, saline is injected in the esophageal wall to form a bubble under the lesion. The lesion is suctioned into a small cap and removed. This allows the doctor to remove the lesion without damaging the rest of the esophagus. You may need more than one EMR to completely remove the lesion.

- **Laser therapy** uses a high-intensity light to destroy cancer cells through a small tube. This may be used to remove a blockage in the esophagus caused by the tumor. Removing the blockage can help with symptoms such as swallowing problems.
- **Esophageal stents** are small flexible metal or plastic tubes that are placed over the tumor in the esophagus. Once placed, the stent can expand and open up the blocked part of the esophagus, allowing food and liquids to pass through easier.

## Nutrition

It is important to take in enough calories and protein to prevent weight loss and maintain energy and strength. You may have a hard time eating because of pain or problems swallowing. If you have pain, soft foods or liquid supplements may be easier to eat. If you are not able to take in enough calories and protein by mouth, you may need a feeding tube. Ask to speak with a dietitian for more information.

## Follow-up Care

Your doctor will check your progress with follow-up visits during and after treatment. These visits will help find any changes in your cancer. If the cancer returns, spreads to new areas, or grows, it should be treated as soon as possible. Routine follow-up visits may include physical exams, x-rays, CT scans and/or laboratory tests.

Ask your health care team if you have questions or concerns.