Gastroesophageal Dx and Staging

Introduction

If you or someone close to you has recently been diagnosed with esophageal cancer, this video is intended for you. I'm Dr Jonathan Salo and I'm a GI Cancer Surgeon

On the left side, you have … and, on the right side, the first image is ….

The second image has been …

In this video you'll learn about:

- Definitions of cancer Terms
- Staging of gastric and esophageal cancer
- Diagnostic Tests

Anatomy

The esophagus is a hollow muscular tube which connects the throat to the stomach.

Food passes from the esophagus into the stomach, and then into the small bowel.

The gastroesophageal junction or *GE Junction* is located where the esophagus and stomach meet. Cancers in this region are usually treated similar to esophageal cancers

Symptoms

For many patients, the first symptom they have is difficulty swallowing or pain in swallowing. The difficulty swallowing can be due to a lump, also known as a tumor. For other patients, the symptoms may be chronic heartburn or signs of bleeding.

Cancer Terms

Let‘s start with some definitions. A **tumor** is an abnormal growth. Tumors can be either benign or malignant

A **benign** tumor of the esophagus may grow over time and cause obstruction and make it difficult to swallow, but it won't ever spread anywhere else

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A **malignant** tumor of the esophagus has the potential to spread elsewhere in the body. This could be to the nearby lymph nodes, the lungs, or the liver.

Cancer is another term for a malignant tumor Unfortunately, the majority of tumors found in the esophagus are cancer. We will use the term cancer and tumor interchangeably.

EGD

In most cases, the diagnosis of esophageal cancer is made by endoscopy, also called and EGD for esophago-gastroduodenoscopy

Under sedation, a flexible scope is passed through the mouth into the esophagus, which allows viewing the inside of the esophagus.

If a tumor is found in the esophagus, a small portion can be removed, which is called a **biopsy**

The biopsy is examined by a pathologist, who will determine whether the tumor is benign or whether it is a cancer

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Staging

If the biopsy shows cancer, the next step is staging. Staging is the process of finding out the size of the tumor and whether or not there has been spread to the lymph nodes or other places in the body.

Once the stage has been determined, it will be possible to determine the best therapy

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In order to determine the stage, we will focus on three different areas:

The first is the *tumor*. How large is the tumor? And more importantly, how deeply has it grown into the wall of the esophagus?

The second is whether there is spread to the *lymph nodes*.

The third is whether there is *metastasis* or spread to other parts of the body

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Some drawings will help. The wall of the esophagus or stomach has multiple layers, shown here.

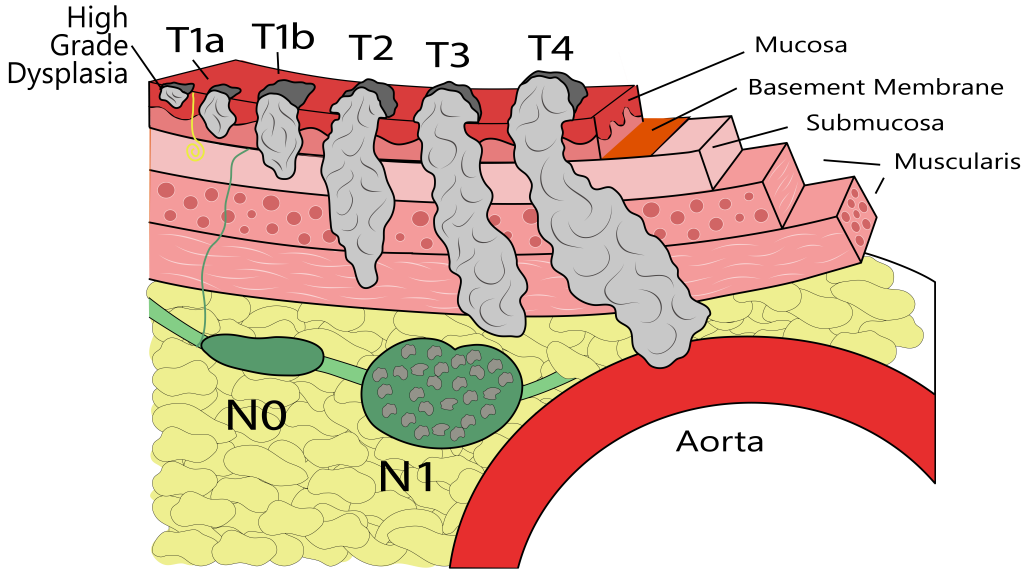

Figure 1: Esophagus Tumors

Surrounding the esophagus and stomach are lymph nodes. The purpose of lymph nodes is to filter the blood and help fight infections, but in some cases cancers in the esophagus can spread to the lymph nodes

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In its earliest stages, cancer of the esophagus or stomach starts on the inner, or most superficial layer, called with mucosa.

With time, however, the cancer can continue to grow and invade deeper into the wall of the esophagus or stomach. The deeper the cancer invades into the wall, the more likely it is that cancer cells can spread elsewhere

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If cancer cells spread to the lymph nodes, there is a chance that some cells will break off and spread to the liver or lungs.

Metastasis is spread to other parts of the body such as liver, lungs, or bone.

To review, the stage consists of 3 parts:

- T for Tumor
- N for Nodes
- M for Metastasis

Tumor

- T1 tumor involves the top layers of the esophagus
- T2 tumor invades into the muscular layer
- T3 tumor invades all the way through the muscular layer
- T4 tumor invades into nearby structures such as the aorta or the airway

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This may sound confusing, but as a general rule, if someone with esophageal cancer has difficulty swallowing, the tumor is usually a T3.

There are of course exceptions, but this is a general guideline

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Nodes

- N0 – No lymph nodes involved
- N+ - Lymph nodes involved with cancer

Metastasis

The M classification refers to metastasis Metastasis = spread of cancer to other organs such as the lungs, liver, or bone

- M0 – No signs of spread to other organs
- M1 – Spread to other organs

Diagnostic Tests

Next we will talk about some of the diagnostic tests that are used for staging.

When you meet with your doctors, one the first things they will do is to come up with a plan for testing that is tailored to you and your particular tumor. So we will talk about these tests in general terms, but not all tests are needed for all patients

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Scans

A CT scan is usually the first test for staging. This will show whether there is any signs of metastasis or spread to other organs such as the lung, liver, or bone

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PET Scan

A PET scan is a specialized scan which combines a CT scan with an injection of a small amount of tracer which lights up areas of cancer.

EUS

In cases where it is important to know about the exact size of the tumor, an endoscopic ultrasound exam can be done. This procedure is similar to an EGD, but the endoscope has an ultrasound sensor on the end of the scope which produces an image of the tumor

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In some cases, particularly for cancers in the stomach, it is important to look for signs of spread in the abdominal cavity. In some situations, cancers can spread in the abdominal cavity but the areas are so small they don't show up on a CT scan. In these cases, a laparoscopy is helpful.

Laparoscopy

Laparoscopy is a surgical procedure done under a general anesthetic. Several incisions ¼" long are made, and a telescope is inserted into the abdominal cavity. This allows an examination of the abdominal cavity to look for signs of spread.

The procedure is usually done as an outpatient, so you can go home the same day.

The next video in our series discusses treatment options

Esophageal Cancer Treatment Options

We hope you have found this video helpful. This videos and others like it are designed to

educate patients and families about esophageal cancer

and equip them for their discussions with their esophageal cancer care team.

As always, these videos are no substitute for expert medical advice.

Feel free to leave a comment or a question, or if you have suggestions for future videos.