

## MEDICAL MONDAYS | News Notes

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NASHVILLE LUNG SURGERY

TOPIC: Lung & Esophageal Advances

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### WHAT IS A PULMONARY NODULE?

A solitary pulmonary nodule (SPN) is a single abnormality in the [lung](#) that is smaller than 3 cm in diameter. Generally, a pulmonary nodule must grow to at least 1 cm in diameter before it can be seen on a chest X-ray.

An SPN is surrounded by normal lung tissue and is not associated with any other abnormality in the lung or nearby lymph nodes (small, bean-shaped structures found throughout the body).

People with SPNs usually do not experience symptoms. SPNs are usually noticed by chance on a chest X-ray that has been taken for another reason (referred to as an incidental finding). SPNs are a common abnormality seen on chest X-rays that often needs further evaluation. Approximately 150,000 cases are detected every year as incidental findings, either on X-rays or CT scans.

Most SPNs are benign (noncancerous); however, they may represent an early stage of primary [lung cancer](#) or may indicate that [cancer](#) is metastasizing (spreading) from another part of the body to the affected lung.

Determining whether the SPN seen on the chest X-ray or chest [CT scan](#) is benign or malignant (cancerous) is important. Prompt diagnosis and treatment of early [lung cancer](#) that looks like an SPN may be the only chance to cure the [cancer](#).

### ADVANCING THE TIMELINESS OF LUNG CANCER

#### Lung Nodule Clinic at Nashville Lung Surgery

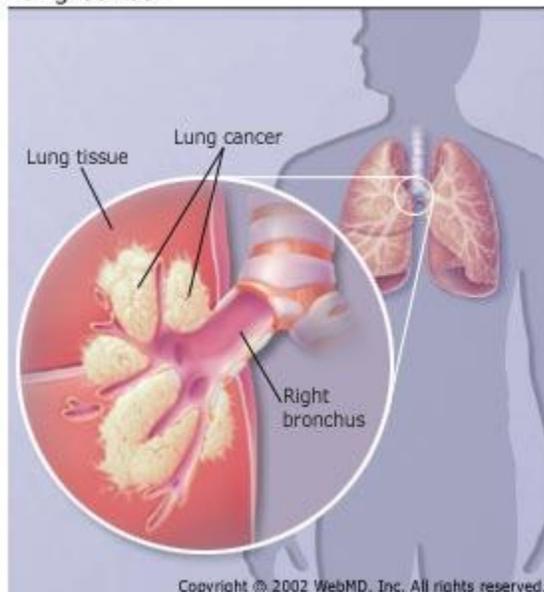
This new program focuses on education and awareness of the region's PCPs emphasizing the early detection and timeliness to care for the lung nodule or lung cancer patient. Many times, especially in rural communities, both diagnosis and treatment are often delayed. Now, with the new Lung Nodule Clinic at Nashville Lung Surgery [Saint Thomas West] as well as Henry County Medical Center, Dr. Ninan and his team are committed to advancing the timeliness of care. Dr. Ninan believes early detection is vital to changing the face of lung cancer in our communities. He and his team are committed to seeing patients within ten days of referral. Additionally, for the patient's convenience,

he will perform the endoscopy and most tests local to the patient--then perform the surgical operation at Saint Thomas West.

## WHAT IS LUNG CANCER?

It's cancer that starts in your lungs and can spread to other parts of your body. Although it's the top cause of [cancer](#) deaths for U.S. men and women, it's also one of the most preventable kinds, by not [smoking](#) and avoiding other people's secondhand smoke.

Lung Cancer



The disease almost always starts in the spongy, pinkish gray walls of the [lungs'](#) airways (called bronchi or bronchioles) or air sacs (called alveoli). There are more than 20 kinds. The two main types are non-small cell lung cancer and small-cell lung [cancer](#). At first, you may not have any symptoms.

### Non-Small Cell Lung Cancer

Adenocarcinoma is the most common kind of this. It makes up 40% of all lung cancer cases. It mainly happens in people who smoke (or who used to). And it's also the No. 1 type of lung cancer among non-smokers.

More women get it than men. People with this type tend to be younger than those with other kinds.

Adenocarcinoma can spread to the lymph nodes, bones, or other organs such as the liver.

Squamous cell carcinoma usually starts in the lung's largest branches, which doctors call the "central bronchi."

This type accounts for 30% of lung cancers, and it's more common in men and people who smoke. It may form a cavity within the tumor. It often involves the larger airways. It may make you cough up some blood.

Squamous cell carcinoma can also spread to the lymph nodes, bones, and other organs such as the liver.

Large-cell carcinomas are a group of cancers with large cells that tend to start along the lungs' outer edges. They're rarer than adenocarcinoma or squamous cell carcinoma, making up 10%-15% of lung cancers. This type of tumor can grow faster and often spreads to nearby lymph nodes and distant parts of the body.

### **Small Cell Lung Cancer**

This is the most aggressive form of the disease. It usually starts in the lungs' large, central bronchi. Almost all people who get it are smokers. It spreads quickly, often before symptoms appear. Many times, it spreads to the [liver](#), bone, and [brain](#).

The outlook for someone with lung cancer depends on a lot of things, including what type they have, their overall health, and how advanced the disease is when doctors find it.

### **CAUSES OF LUNG CANCER**

[Smoking](#) is the biggest reason. It's responsible for about 85% of all cases.

Quitting cuts the risk. Former smokers are still slightly more likely to get it than nonsmokers.

There are also other reasons. Some genetic glitches may put some people at higher risk.

Secondhand tobacco smoke is also a [cause](#). People who live with someone who smokes are 20% to 30% more likely to get lung cancer than those who live in a smoke-free home.

Some other chemicals are risky, too. People who work with [asbestos](#) or are exposed to uranium dust or the radioactive gas radon are more likely to get lung cancer, especially if they smoke.

Lung tissue that was scarred by a disease or infection, such as [scleroderma](#) or [tuberculosis](#), becomes at risk for tumors in that tissue. Doctors call this a scar carcinoma.

Some researchers think that diet may also influence your risk. But that's not clear yet.

## WHAT IS ESOPHAGEAL CANCER?

**Esophageal cancer** occurs when **cancer** cells develop in the **esophagus**, a tube-like structure that runs from your throat to your **stomach**. Food goes from the **mouth** to the **stomach** through the esophagus. The **cancer** starts at the inner layer of the esophagus and can spread throughout the other layers of the esophagus and to other parts of the body (metastasis).

There are two main types of esophageal cancer. One type is **squamous cell carcinoma**. Squamous cells line the inner esophagus, and **cancer** developing from squamous cells can occur along the entire esophagus. The other type is called **adenocarcinoma**. This is **cancer** that develops from gland cells. To develop adenocarcinoma of the esophagus, squamous cells that normally line the esophagus are replaced by gland cells. This typically occurs in the lower esophagus near the stomach and is believed to be largely related to acid exposure to the lower esophagus.

### What Are the Symptoms of Esophageal Cancer?

Early on there may be no symptoms. In more advanced cancers, symptoms of esophageal cancer include:

- Difficulty or pain when swallowing
- **Weight loss**
- Pain in the chest, behind the breastbone
- **Coughing**
- Hoarseness
- **Indigestion** and **heartburn**

### What Are Risk Factors for Esophageal Cancer?

There are a number of factors which increase a person's risk of developing esophageal cancer. They include:

- Gastroesophageal reflux disease (**GERD**), in which contents and acid from the stomach back up into the esophagus, significantly increase the risk of adenocarcinoma of the esophagus.
- **Smoking** or other use of **tobacco**.
- Heavy alcohol use.
- **Barrett's esophagus**, a condition that affects the lower part of the esophagus and can lead to esophageal cancer. Barrett's esophagus may be caused by GERD. Over time, stomach acid in the esophagus can cause changes in the cells that increase risk for adenocarcinoma.

In addition, certain groups -- men and the elderly -- are at greater risk for esophageal cancer. Risk of adenocarcinoma of the esophagus is higher in white men but squamous cell carcinoma of the esophagus is more common in Asian men and men of color.

## How Is Esophageal Cancer Diagnosed?

To diagnose esophageal cancer, your doctor will review your symptoms, medical history, and examine you. In addition, he or she may order certain [blood](#) tests and X-rays.

Tests for esophageal cancer may include:

- [Barium swallow](#) X-ray, in which you drink a liquid that coats your esophagus. This makes the esophagus stand out on the X-ray so that your doctor can identify certain problems.
- Endoscopy: the doctor passes an endoscope, a thin, lighted tube, down your throat into your esophagus to examine it. Endoscopic [ultrasound](#) uses sound waves to provide more information about the extent of tumor involvement in nearby tissues.
- [Biopsy](#): during an endoscopy, the doctor can take cells or tissue from your esophagus. The cells are examined under a microscope for the presence of cancer.

Other tests, including computed tomography (CT) scans, [positron emission tomography](#) (PET) scan, thoracoscopy, and [laparoscopy](#), may be performed to determine if the cancer has spread, or metastasized, outside of the esophagus. This process is called "staging." The doctor needs this information in order to plan your treatment.

## **CAN CANCER OF THE ESOPHAGUS BE FOUND EARLY?**

Looking for a disease in someone without symptoms is called *screening*. The goal of screening is to find a disease like cancer in an early, more curable stage, in order to help people live longer, healthier lives.

In the United States, screening the general public for esophageal cancer is not recommended by any professional organization at this time. This is because no screening test has been shown to lower the risk of dying from esophageal cancer in people who are at average risk.

However, people who have a high risk of esophageal cancer, such as those with Barrett's esophagus, are often followed closely to look for early cancers and pre-cancers.

### Testing people at high risk

Many experts recommend that people with a high risk of esophageal cancer, such as those with Barrett's esophagus, have upper endoscopy regularly. For this test, the doctor looks at the inside of the esophagus through a flexible lighted tube called an *endoscope* (see "[How is cancer of the esophagus diagnosed?](#)"). The doctor may remove small samples of tissue (biopsies) from the area of Barrett's so that they can be checked for dysplasia (pre-cancer cells) or cancer cells.

Doctors aren't certain how often the test should be repeated, but most recommend testing more often if areas of dysplasia are found. This testing is repeated even more often if there is high-grade dysplasia (the cells appear very abnormal).

If the area of Barrett's is large and/or there is high-grade dysplasia, treatment of the abnormal area might be advised because of the high risk that an adenocarcinoma is either already present (but was not found) or will develop within a few years. Treatment options for high-grade dysplasia might include [surgery](#) to remove part of the esophagus with the abnormal area, endoscopic mucosal resection (EMR), photodynamic therapy (PDT), and radiofrequency ablation (RFA). These last 3 options are discussed in the "[Endoscopic treatments for cancer of the esophagus](#)" section of this document. The outlook for these patients is relatively good after treatment.

Careful monitoring and treatment (if needed) may help prevent some esophageal cancers from developing. It may also detect some cancers early, when they are more likely to be treated successfully.

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### REASONS TO CHOOSE DR. NINAN:

- Proudly caring for Middle Tennesseans for over 15 years
- Successfully performed over 9,000 major thoracic operations
- Availability for new patients within one week of referral
- Keenly focused on minimally-invasive approaches to traditional surgical intervention
- Believes individualized time with the patient and their family is invaluable for understanding all treatment options



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