

## Title:

Malagnant Mesothelioma

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## Summary:

Malignant mesothelioma is an uncommon, but no longer rare, cancer that is difficult to diagnose and poorly responsive to therapy.

## Keywords:

mesothelioma

## Article Body:

Malignant mesothelioma is an uncommon, but no longer rare, cancer that is difficult to diagnose and poorly responsive to therapy. Malignant mesothelioma is the most serious of all asbestos-related diseases.

A layer of specialized cells called mesothelial cells lines the chest cavity, abdominal cavity, and the cavity around the heart. These cells also cover the outer surface of most internal organs. The tissue formed by these cells is called mesothelium.

The mesothelium helps protect the organs by producing a special lubricating fluid that allows organs to move around. For example, this fluid makes it easier for the lungs to move inside the chest during breathing. The mesothelium of the chest is called the pleura and the mesothelium of the abdomen is known as the peritoneum. The mesothelium of the pericardial cavity (the "sac-like" space around the heart) is called the pericardium.

Tumors of the mesothelium can be benign (noncancerous) or malignant (cancerous). A malignant tumor of the mesothelium is called a malignant mesothelioma. Because most mesothelial tumors are cancerous, malignant mesothelioma is often simply called mesothelioma.

Mesothelioma was recognized as a tumor of the pleura, peritoneum and pericardium in the late 1700's. However it was not until much later, in 1960, that this particular type of tumor was described in more detail and even more importantly, its association with asbestos exposure was recognized. The first report linking mesothelioma to asbestos exposure was written by J.C.Wagner, and described 32 cases of workers in the "Asbestos Hills" in South Africa. Since then the relationship between mesothelioma and asbestos exposure has been confirmed in studies around the world.

The incidence of mesothelioma in the United States remains very low, with 14 cases occurring per million people per year. Despite these numbers the noticed threefold increase in mesothelioma in males between 1970 and 1984, is directly associated with environmental and occupational exposure to asbestos, mostly in areas of asbestos product plants and shipbuilding facilities.

Although the disease is much more commonly seen in 60-year old men, it has been described in women and early childhood as well. The cause of the disease is not so well understood in these latter two groups, but there is some evidence of possible asbestos exposure for some of these cases as well

Mesothelioma is one of the deadliest diseases known to man; the average life span of an inflicted person from the time of diagnosis until death is less than 24 months. It's a disease that strikes approximately 3,000 United States citizens each and every year; hard working people who have labored for a lifetime to provide for their families, doing the work that keeps this country running and a great place to live. They worked in factories, at shipyards, in mines, for the US military, as engineers, as pipefitters, as steel workers, as auto mechanics, and in so many other professions. They came home to their loved ones exhausted and covered in dirt and dust; tired, but content that they had a job and were providing for their family. Content that they were putting food on the table and a house over their loved one's heads. Content that they were working to make a better life for their families in this generation and the next...

But what they didn't know was that while they were working so hard, they were not only slowly killing themselves, but those that they were working so hard to help; their family, their loved ones.

What is the mesothelium?

The mesothelium is a membrane that covers and protects most of the internal organs of the body. It is composed of two layers of cells: One layer immediately surrounds the organ; the other forms a sac around it. The mesothelium produces a lubricating fluid that is released between these layers, allowing moving organs (such as the beating heart and the expanding and contracting lungs) to glide easily against adjacent structures.

The mesothelium has different names, depending on its location in the body. The peritoneum is the mesothelial tissue that covers most of the organs in the abdominal cavity. The pleura is the membrane that surrounds the lungs and lines the wall of the chest cavity. The pericardium covers and protects the heart. The mesothelial tissue surrounding the male internal reproductive organs is called the tunica vaginalis testis. The tunica serosa uteri covers the internal reproductive organs in women

What Is My Diagnosis?

There are three types of mesothelioma. Pleural mesothelioma is a cancer of the lining of the lung (pleura), peritoneal mesothelioma is a cancer of the lining of the abdominal cavity (peritoneum), and pericardial mesothelioma is a cancer of the lining surrounding the heart (pericardium). Sub-types (or cell types) of mesothelioma are epithelioid (the most common, and considered the most amenable to treatment), sarcomatous (a much more aggressive form), and biphasic or mixed (a combination of both of the other cell types).

The structural appearance of cells under the microscope determine the cell or sub-type of mesothelioma. Epithelioid is the least aggressive; sarcomatoid, the most aggressive. The biphasic or mixed cell type shows structural elements of both of the other two.