

## [A Closer Look At Mesothelioma Types: Pleural Mesothelioma \(Part 1 of 3\)](#)

(Posted by Tom Lamb at [www.AsbestosHUB.com](http://www.AsbestosHUB.com) on October 2, 2009; see <http://bit.ly/25th0x>)

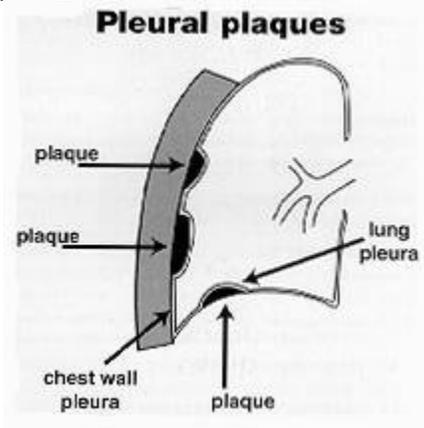
In the U.S. current statistics show between 2,000-3,000 people are diagnosed with malignant pleural mesothelioma each year. However, 10,000 Americans die each year from all asbestos-related diseases, according to statistics compiled by the Environmental Working Group. And, mesothelioma was not tracked as a specific cause of death by federal health officials until 1999, EWG points out, so actual totals for mesothelioma may be much higher.

Roughly 80% of malignant pleural mesothelioma cases start as pleural plaques. Pleural plaques are smooth, white, raised irregular areas of fibrous collagen tissue that develop on the pleura and vary in size from small to large. Pleural plaques are not considered pre-malignant, but they are an indication of exposure to asbestos (and thus indicate an increased risk of its associated diseases). They do not require treatment, but their presence should prompt regular medical check-ups.

To date, treatment options for mesothelioma have been limited as only a small number of patients respond to surgical intervention; however, recent efforts have focused on exploring new combinations of therapies for treating malignant pleural mesothelioma and extending survival.

### **Surgery**

There have been some encouraging preliminary results in comparing surgery to conventional chemotherapy. At the American Society of Clinical Oncology meeting in Chicago in 2007, results were presented of a multi-center Phase II feasibility study of trimodal therapy for malignant pleural mesothelioma. Patients had four cycles of cisplatin and premetred chemotherapy, followed by an extrapleural pneumonectomy (explained in detail below), followed by hemithoracic radiation. Median survival time for the group was 16.6 months.



### ***Extrapleural Pneumonectomy***

Extrapleural pneumonectomy (EPP) is a surgical procedure that involves the removal of the lung along with its coverings. Of all treatment approaches attempted, extrapleural pneumonectomy has been most consistently associated with long-term disease-free survival. Also, with the lung removed, a higher amount of radiation can be delivered.

Once the patient is under complete general anesthesia, an incision is made extending from below the shoulder blade, around the side along the curvature of the ribs to the front of the chest on the side of the diseased lung (thoracotomy). Next, the surgeon collapses the diseased lung, cuts off its major blood

vessels, and the lung's main bronchial tube (air tube) will be clamped and cut and the lung removed. The pleura is then removed from the chest wall.

## Systemic Therapy

### *Pemetrexed (Alimta) and Combinations*

	<b>Pemetrexed</b>	<b>Pemetrexed plus Cisplatin</b>	<b>Pemetrexed plus Carboplatin</b>
Age Range	69 (39 - 87)	62 (24 - 78)	66 (35-89)
One year survival rate	58.6	63.1	64.0
Time to progression (months)	6.0	7.0	6.9

### *Vinorelbine Plus Platinum*

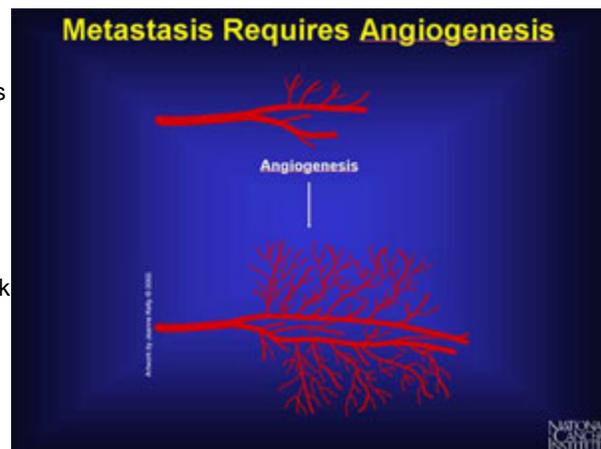
Investigators in Denmark have explored the use of combining vinorelbine rather than pemetrexed in combinations with platinum agents cisplatin and carboplatin. The vinorelbine and cisplatin group were mostly in advanced states (stage III or IV) and had a median survival rate of 11.6 months. The vinorelbine plus carboplatin group median survival rate exceeds nine months for stage III and IV patients in the study.

## Other Targeted Therapies

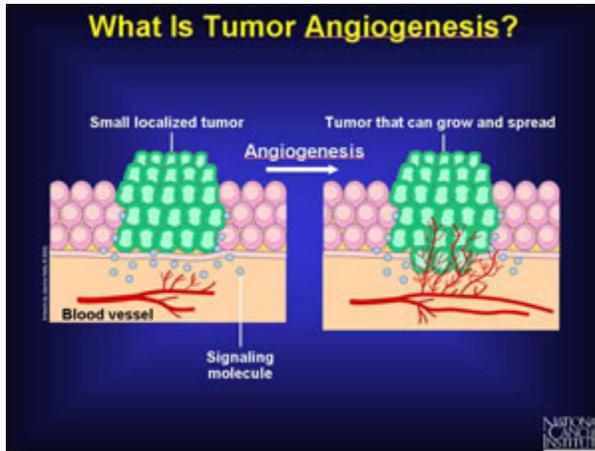
### *Angiogenesis Inhibitors*

Cancer cells have the ability to spread, called metastasis, which means they can penetrate into lymphatic and blood vessels, circulate through the bloodstream, and then invade and grow in normal tissues elsewhere. Cancer researchers studying the conditions necessary for cancer metastasis have discovered that one of the critical events required is the growth of a new network of blood vessels. This process of forming new blood vessels is called angiogenesis.

Tumor angiogenesis is the proliferation of a network of blood vessels that penetrates into cancerous growths, supplying nutrients and oxygen and removing waste products. Tumor angiogenesis starts with cancerous tumor cells releasing molecules that send signals to surrounding normal tissue. The signal activates genes that make proteins to encourage growth of new blood vessels.



Scientists studying tumor growth found that cancer cells grew into tiny tumors but failed to link up to the organ's blood vessels. Without angiogenesis, tumor growth stopped.



A drug trial using a combination of gemcitabine and cisplatin plus bevacizumab as angiogenesis inhibitors showed, unfortunately, that this drug combination did not show any significant improvement in progression-free survival.

Other trials with targeted drugs in an attempt to use angiogenesis inhibitors as a way to stop cancer progression are underway.

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Attorney [Tom Lamb](#) represents people in personal injury and wrongful death cases involving mesothelioma or other asbestos cancers. The above article was posted originally on his blog, **Asbestos HUB** – with active links and readers' comments.

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