

Photodynamic therapy added to lung-sparing surgery improves survival for mesothelioma patients

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(Medical Xpress) -- Among patients with malignant pleural mesothelioma, treatment with lung-sparing surgery in combination with photodynamic therapy (PDT) yielded unusually long survival rates, with median survival rates up to two or more years longer than is reported with traditional treatments, according to new research from the Perelman School of Medicine at the University of Pennsylvania. The research is published in the latest issue of the *Annals of Thoracic Surgery*.

"While I don't consider anything short of a cure as a victory against mesothelioma, I am encouraged by our results," said Joseph Friedberg, MD, co-director of the Penn Mesothelioma and Pleural Program (PMPP) and lead author of the new study. "Based on our new findings, we are redoubling our clinical and translational research efforts to find a way to further improve and refine this multimodality treatment approach for mesothelioma."

Mesothelioma is one of the most aggressive and deadliest forms of cancer and is usually caused by exposure to asbestos. Exposure to asbestos typically precedes development of the cancer by anywhere from 10 to 50 years, but once diagnosed, only about 40 percent of U.S. mesothelioma patients survive one year.

The current study builds off of previous research from the PMPP team

that showed lung-sparing surgery plus photodynamic therapy, a light-based [cancer treatment](#), provided superior results for patients with mesothelioma over traditional treatment, which generally involves [radical surgery](#) that includes removing the lung, in combination with chemotherapy and whole chest radiation.

In the new study, 38 mesothelioma patients underwent the lung-sparing surgery and PDT for mesothelioma. The decision to perform lung-sparing [surgery](#) was made preoperatively in every case. Thirty seven of 38 patients had advanced stage (III/IV) cancer. At a median follow-up of 34.4 months from the time of operation and PDT, the median overall survival for all 38 patients was 31.7 months. The authors report that the subtype of the cancer was a significant factor with the 31 patients with the epithelial subtype demonstrating a median overall survival of 41.2 months.

The researchers note that although essentially all mesothelioma patients experience disease recurrence, even with aggressive treatment, they are focused on extending the patient's life and improving their quality of life. They believe that having both lungs contributes to quality of life and also puts [patients](#) in a better position to tolerate additional treatments for their recurrence.

"We are working together as a team, not just in the clinic but in the laboratory as well, to find the best way to combine our respective expertise," said Friedberg. "Our goal is an innovative combined treatment that represents a new level of a multipronged attack on this horrendous cancer."

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