



Study Shows Revolutionary New Treatment from Pulmonx is Consistently Effective in Treating Emphysema

Use of Chartis® technology to plan Zephyr® treatment achieves dramatic improvements for emphysema patients in minimally-invasive, 20-minute procedure

May 18, 2011, Denver, CO (ATS) – Pulmonx Inc. has announced new clinical data from its Chartis multi-center study ¹, presented at the American Thoracic Society’s 2011 International Conference. This definitive data clearly demonstrates that by using the Chartis® Pulmonary Assessment System to plan Zephyr® valve treatments physicians can consistently treat a broad spectrum of emphysema patients.

Emphysema patients suffer from hyperinflation--an increase in volume of the diseased portions of their lungs which then compresses the healthier areas. This results in breathlessness and disability. Many patients cannot carry out even the most basic activities of everyday living, and may require supplemental oxygen. Zephyr® valves can reduce volume in the diseased portion of the lungs thereby improving the ability of the healthier portions of the lungs to function and relieving the patient’s symptoms.

Randomized controlled clinical studies have demonstrated the safety of valve therapy and the ability of valve therapy to deliver significant improvements in lung function. The key challenge in applying valve therapy to a broad population of emphysema patients has been the ability of physicians to plan valve treatments to account for variations in the anatomy of the lungs of individual patients. All patients have minor anatomical variations, but some patients have extra airflow pathways between the lobes of their lungs outside the normal bronchial channels. This condition is known as “collateral ventilation” and the presence of large amounts of collateral ventilation can prevent the valves from working effectively.

The Chartis system quickly and reliably detects the presence of collateral ventilation and thus allows a physician to plan EBV treatment in a way that accounts for the variations in the patient’s individual anatomy. This is a key breakthrough that will enable physicians to offer this highly effective and minimally invasive treatment option to many more patients with the knowledge that they are likely to consistently achieve significant benefit.

“Using the Chartis system to plan EBV treatment can result in very significant benefits for emphysema patients, in terms of improvement in lung function and quality of life,” said Professor Felix Herth, MD, PhD., FCCP, Chairman and Head of Pneumology and Respiratory Care at Thoraxklinik, University of Heidelberg, Germany. “I really believe that we have the opportunity to expand this therapy, now that we have proven the effectiveness of the Chartis and EBV in reducing hyperinflation, and I would expect to see Chartis and EBV treatment become a standard-of-care in the management of emphysema,” he continued.

The Chartis study enrolled 97 emphysema patients with a wide variety of underlying disease. All patients underwent a Chartis examination to assess collateral ventilation. All patients were treated with Zephyr® endobronchial valves in one single lobe, and follow-up tests were done at 30 days. In this study the

¹Use of Chartis® System to Optimize Subject Selection for Endobronchial Lung Volume Reduction (ELVR) in Subjects with Heterogeneous Emphysema.



Chartis system predicted patient response with more than 80% accuracy. Most importantly, patients who were predicted to respond experienced substantial improvement in lung function, exercise tolerance, and quality of life following treatment with the Zephyr EBV compared to patients who were not predicted to respond.

“This data represents a significant breakthrough in the treatment of emphysema,” said Michael A. Baker, President and CEO of Pulmonx. “With the Zephyr EBV, we are able to offer patients a minimally-invasive and clinically-validated treatment option that will improve their breathing and significantly increase their quality of life. Physicians can now confidently plan EBV treatments with the best possible clinical outcomes in a broad population of emphysema patients.”

About Emphysema

Emphysema is a form of chronic obstructive pulmonary disease (COPD) that occurs when the air sacs in the lungs are gradually destroyed, leading to shortness of breath even while at rest. Globally over 30 million patients have been diagnosed with emphysema. COPD is a major cause of disability and a major public health problem. The World Health Organization ranks it as the fourth leading cause of death today and it is expected to become the third leading cause of death worldwide by 2030s. Most patients suffering from emphysema currently have few options for treatment. Emphysema is a major economic problem and a burden on the global healthcare system, due to millions of work days missed, expensive and minimally effective therapies and frequent hospitalizations related to the disease.

About The Chartis Multi-Center Study

This European study enrolled 97 patients at 6 sites in Germany, Netherlands, and Sweden between May 2010 and March 2011. A broad range of severe emphysema patients were allowed to enroll. At this time, the full data set is not yet available. However, the interim data completed for 57 patients shows a median volume reduction of 62% in predicted responders vs. 4% in predicted non-responders. The Chartis system accurately predicted response in over 80% of all patients. Predicted responders experienced clinically significant improvements in all of the measured study endpoints—a 19% improvement in FEV1, a standard measure of lung function, a 15% improvement in their 6-minute walk distance, and an 11 point improvement in their reported quality of life, while predicted non-responders experienced little benefit on average.

About the Chartis and Zephyr Technologies

The Pulmonx Chartis System provides new information about specific areas of the patient’s lung, enabling more informed treatment planning. The Pulmonx Zephyr EBV is the subject of numerous peer-reviewed studies, and has already been used to treat thousands of patients worldwide. The Chartis system with Zephyr valves have been available as a system in Europe and other countries since late-2009.



About Pulmonx

Pulmonx, based in Redwood City, CA and Peseux, Switzerland, is focused on developing and marketing minimally-invasive medical devices and technologies for the diagnosis and treatment of pulmonary disorders. The Chartis System and Zephyr EBV is the first effective diagnostic and therapeutic solution to the problem of emphysema-induced hyperinflation. www.pulmonx.com.

Zephyr® EBV is an Investigational Device in the United States. Limited by U.S. law to Investigational Use. Chartis® system is for use/sale outside the U.S. only.

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