

Clinical Spotlight Improving Patient Quality of Life with Zephyr[®] Valves Patient: Male, 65 years old

Patient Profile

Quality of	Be able to breathe without struggling and	
Life Goal	move around without difficulty	
Condition	Diffuse homogeneous emphysema	
Smoking History	• 30 pack-years	
Management Medications	 Maximal medical therapy with a LAMA, LABA, ICS, prednisone 5mg daily, and roflumilast 	
Oxygen Use	• 3L/min	
Baseline FEV ₁	24% predicted	
Symptoms	Shortness of breathIncapacitating dyspnea	
Special Notes	 Comorbidities: Chronic hypoxia, lupus, rheumatoid arthritis, diastolic heart failure, and pulmonary hypertension (TTE: PASP 59 mm Hg., RHC:PAP 35/21/26) 	

Procedure Details:

- Collateral ventilation negative (confirmed with Chartis[®] Pulmonary Assessment System)
- Six Zephyr Valves placed in left upper lobe (LUL)
- Total procedure time—25 mins

Pre and Post-Procedure Imaging:

PRE-PROCEDURE



Evidence of hyperinflation with flattening of the diaphragm

POST-PROCEDURE



Atelectasis of LUL with elevation of left hemidiaphragm



Pre and Post-Procedure Lung Function Chart:

ASSESSMENT	PRE-PROCEDURE	POST-PROCEDURE (3 MONTHS)
FEV ₁ (% pred)	24%	31%
RV (% pred)	235%	129%
TLC (% pred)	126%	95%
DLCO (% pred)	46%	53%
6MWD	160 m	320 m
Oxygen usage	3L/min	2L/min

Case was completed by Dr. Jonathan Kurman at Medical College of Wisconsin, Wauwatosa, WI

Patient Outcomes:

- 33% decrease in oxygen use
- 100% increase in 6MWD
- 30% increase in FEV,
- Post-treatment StratX[®] Lung Report shows 100% Target lobar volume reduction (TLVR) with 1532 mL inspiratory volume
- Disease symptoms are more controlled
- Overall improvement in quality of life
- Able to handle everyday tasks around the house

100% INCREASE IN 6MWD, 30% INCREASE IN FEV1, AND 33% DECREASE IN OXYGEN USE

How the Zephyr Valve Works:

The Zephyr Valve is a one-way valve designed to reduce hyperinflation of the lungs caused by severe emphysema/COPD. In a minimally invasive bronchoscopic procedure, an average of four tiny valves are placed in the airways to block off the diseased parts of the lungs where air gets trapped, causing hyperinflation and severe shortness of breath. The Zephyr Valve reduces lung hyperinflation by allowing trapped air to escape and preventing new air from entering that diseased lobe. This allows the healthier parts of the lung to function better and results in patients being able to breathe more easily and experience less shortness of breath.¹

The Zephyr Endobronchial Valve is removable, and thus preserves future therapy options.

Zephyr Valve Patient Benefits & Risks:

Patients treated report significant improvements in lung function, exercise tolerance, and quality of life.¹

Complications of the Zephyr Endobronchial Valve treatment can include but are not limited to pneumothorax, worsening of COPD symptoms, hemoptysis, pneumonia, dyspnea and, in rare cases, death.

For more information visit www.Pulmonx.com/treat-copd

If you have a patient to refer, visit **Pulmonx.com/zephyr-centers** to find a treatment center in your area.

1. Criner, GJ, Sue, R, Wright, S, Dransfield, M, Rivas-Perez H, Wiese, T, Sciurba, FC, Shah, PL, Wahidi, MM, de Oliveira, HG, & Morrissey, B. A multicenter randomized controlled trial of Zephyr endobronchial valve treatment in heterogeneous emphysema (LIBERATE). Am J Respir Crit Care Med, 2018; 198(9), 1151–1164 and data on file for Zephyr Valve.

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700 Chesapeake Drive Redwood City, CA 94063 © 2022–Present Pulmonx Corporation or its affiliates. All rights reserved. All trademarks herein are the property of Pulmonx Corporation and its affiliates. GL0-EN-1318-v1–February 2022 Clinical Spotlight Dr. Kurman WI, 65 y/o male **Important Safety Information:** The Pulmonx Zephyr[®] Endobronchial Valves are implantable bronchial valves indicated for the bronchoscopic treatment of adult patients with hyperinflation associated with severe emphysema in regions of the lung that have little to no collateral ventilation. The Zephyr Valve is contraindicated for: Patients for whom bronchoscopic procedures are contraindicated; those with evidence of active pulmonary infection; known allergies to Nitinol (nickel-titanium) or its constituent metals (nickel or titanium); known allergies to silicone, or with large bullae encompassing greater than 30% of either lung; Patients who have not quit smoking. The Zephyr Valve should be used with caution and only after careful consideration in treating patients with: Prior lung transplant, LVRS, median sternotomy, or lobectomy; Congestive heart failure or recent myocardial infarction; FEV₁ <15% of predicted value. Use is restricted to a trained physician. Prior to use, please reference the Zephyr Endobronchial Valve System Instructions for more information on indications, contraindications, warnings, all precautions, and adverse events.

Caution: Federal law restricts this device to sale by or on the order of a physician.



Clinical Spotlight

Improving Patient Quality of Life with Zephyr[®] Valves Patient: Female, 62 years old

Patient Profile		
Quality of Life Goal	Wants to be more active, keep up with kids and grandkids	
Condition	 Diagnosed with COPD/emphysema 12 years ago 	
Smoking History	• 40 pack years (quit in 2015)	
Management Medications	Stiolto RespimatFloventXopenex	
Oxygen Use	• None	
Baseline FEV_1	• 32% predicted	
Symptoms	 Shortness of breath Dyspnea on exertion Difficult activities of daily living Difficulty walking 	
Special Notes	 Increase in symptoms despite maximum medical therapy in years leading up to Zephyr Valve treatment 	

Procedure Details:

- Pulmonary rehab prior to treatment
- Collateral ventilation negative (confirmed with Chartis®)
- Four valves placed in left upper lobe (LUL)
- Patient tolerated the procedure well, no adverse events
- Three-night hospital stay for monitoring

Patient Outcome:

Patient had excellent response with:

- Marked improvement in exertional capacity, including long walks
- No hospitalizations since treatment
- Breathing is easier, less shortness of breath
- · Remains on daily maintenance medications
- Overall improvement in quality of life

Complications of the Zephyr Endobronchial Valve treatment can include but are not limited to pneumothorax, worsening of COPD symptoms, hemoptysis, pneumonia, dyspnea and, in rare cases, death.



Pre and Post-Procedure Lung Function Chart:

ASSESSMENT	PRE-PROCEDURE	POST-PROCEDURE (3 MONTHS)
FEV ₁	0.68 L	1.04 L
\mathbf{FEV}_1 (% pred)	32%	49%
RV	584 mL	358 mL
RV (% pred)	386%	237%
TLC	786 mL	568 mL
TLC (% pred)	195%	141%
DLCO (% pred)	40%	45%
6MWD	335 m	457 m

Case was completed by Dr. Benjamin Seides at Central DuPage Hospital, Winfield, IL

Patient was referred by Dr. Linda M. Lam (Pulmonary, Critical Care)

Pre and Post-Procedure Imaging:

PRE-PROCEDURE

POST-PROCEDURE







MARKED REDUCTION IN VOLUME IN THE TREATED LUNG

Individual results may vary.

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700 Chesapeake Drive Redwood City, CA 94063 © 2021–Present Pulmonx Corporation or its affiliates. All rights reserved. All trademarks are property of their respective owners. US-EN-674-v2– August 2021 – Clinical Spotlight Dr. Seides IL, 62 v/o female Important Safety Information: The Pulmonx Zephyr® Endobronchial Valves are implantable bronchial valves indicated for the bronchoscopic treatment of adult patients with hyperinflation associated with severe emphysema in regions of the lung that have little to no collateral ventilation. Complications can include but are not limited to pneumothorax (tear in the lung), worsening of COPD symptoms, hemoptysis, pneumonia, and, in rare cases, death. The Zephyr Valve is contraindicated in patients who have not quit smoking. Please talk with your physician about other contraindications, warnings, precautions, and adverse events. Only a trained physician can decide whether a particular patient is an appropriate candidate for treatment with the Zephyr Valve.