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Clinical Spotlight:
Improving Patient Quality of Life with Zephyr® Valves

Treating Physician:
Amit "Bobby" Mahajan, MD, FCCP, DAABIP
Inova Fairfax Hospital, VA

Patient: Male, 73 years old
Referred by: Self

Patient Profile

Quality of Life Goal	Being able to walk without difficulty, work in woodworking shop, do yardwork, help brother put up fence posts	
Condition	• COPD, chronic AFib, HTN, iron deficiency	
Smoking History	• None	
Management Medications	• Albuterol • Breo • Incruse • Lipitor • Zithromax • Bumex	• Klonopin • Jantoven • Metoprolol • Pantoprazole • Prednisone • Cialis
Oxygen Use	• 3–4 LPM NC	
Baseline FEV_1	• 23% (730 mL)	
Symptoms	• Multiple episodes of bronchitis • Collapsed lung • Perception of extreme difficulty breathing in and out	

Procedure Details:

- Had pulmonary rehab prior to treatment
- Four Zephyr valves placed in LLL
- Collateral ventilation negative
- StratX® shows 100% fissure on the left and 61% destruction in the targeted lobe, with 1982 mL inspiratory volume
- Three-day hospitalization, no pneumothorax or exacerbation

Patient Outcome:

- Not as short of breath
- Getting more air in
- Restarted pulmonary rehab and expected to regain better breathing
- Oxygen use has been reduced to 2 LPM NC
- Able to get up and walk around without feeling extreme shortness of breath

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.

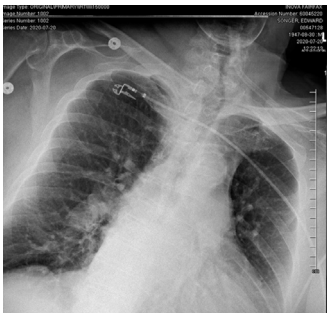
zephyr® valve

Pre and Post Lung Function Chart:

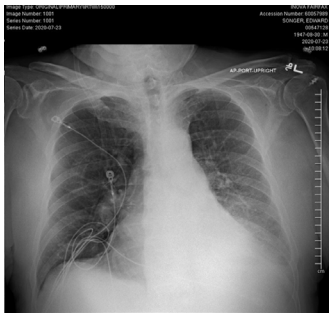
ASSESSMENT	PRE-PROCEDURE	POST-PROCEDURE (3 MONTHS)
FEV_1	730 mL	850 mL
FEV_1 (% pred)	23%	27%
RV	4510 mL	3470 mL
RV (% pred)	175%	130%
TLC (% pred)	110%	86%
6MWD	221 m	262 m

Pre and Post Imaging:

PRE-PROCEDURE



POST-PROCEDURE



SIGNIFICANT IMPROVEMENT IN FEV_1, DECREASE IN TLC AND RV, AND INCREASE IN 6MWD

How it Works:

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. Keeping air from getting trapped in the diseased parts of the lung allows the healthier parts of the lungs to expand and take in more air.

This results in patients being able to breathe easier and have less shortness of breath. The Zephyr Endobronchial Valve is removable, preserving future therapy options.

About the Zephyr Valve:

The Zephyr Valve is a one-way valve designed to reduce hyperinflation of the lungs caused by emphysema/COPD. Patients treated report significant improvements in lung function, exercise tolerance, and quality of life.[1]

For more information visit www.Pulmonx.com

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.

Pulmonx Corporation
700 Chesapeake Drive
Redwood City, CA 94063

GLO-EN-735-v1 (v1.1) – October 2020 – Clinical Spotlight Dr. Mahajan VA, 73 y/o male

Brief Statement: 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; FEV_1 <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.

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Clinical Spotlight:
Improving Patient Quality of Life with Zephyr® Valves

Treating Physician:

Benjamin Seides, MD

Central DuPage Hospital, IL

Patient: Female, 62 years old

Referred by: Linda M. Lam, DO, pulmonologist

Patient Profile

Quality of Life Goal	Wants to be more active, keep up with kids and grandkids
Condition	• Advanced stage emphysema/COPD
Smoking History	• 40 packs/day (quit in 2015)
Management Medications	• Stiolto • Flovent • Xopenex
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
- Four valves placed in left upper lobe (LUL)
- Collateral ventilation negative
- Patient tolerated the procedure well, no adverse events
- 3 days in-patient for monitoring

Patient Outcome:

- Patient had excellent response
- 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

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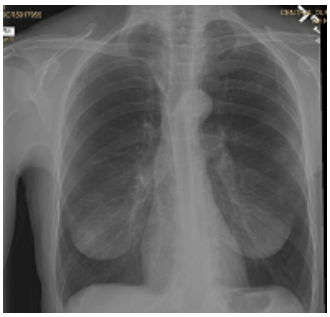
zephyr® valve

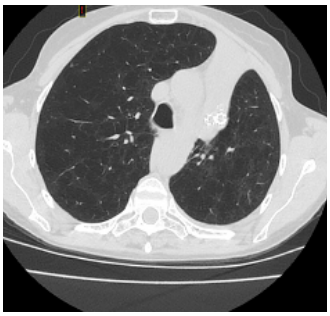
Pre and Post Lung Function Chart:

ASSESSMENT	PRE-PROCEDURE	POST-PROCEDURE (3 MONTHS)
FEV_1	0.68 mL	1.04 mL
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

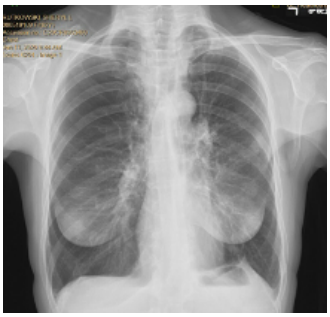
Pre and Post Imaging:

PRE-PROCEDURE





POST-PROCEDURE



MARKED REDUCTION IN VOLUME IN THE TREATED LUNG

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GLO-EN-674-v1 – September 2020 – Clinical Spotlight Dr. Seides IL, 62 y/o female

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