zephyr®
by pulmonx

CASE STUDY

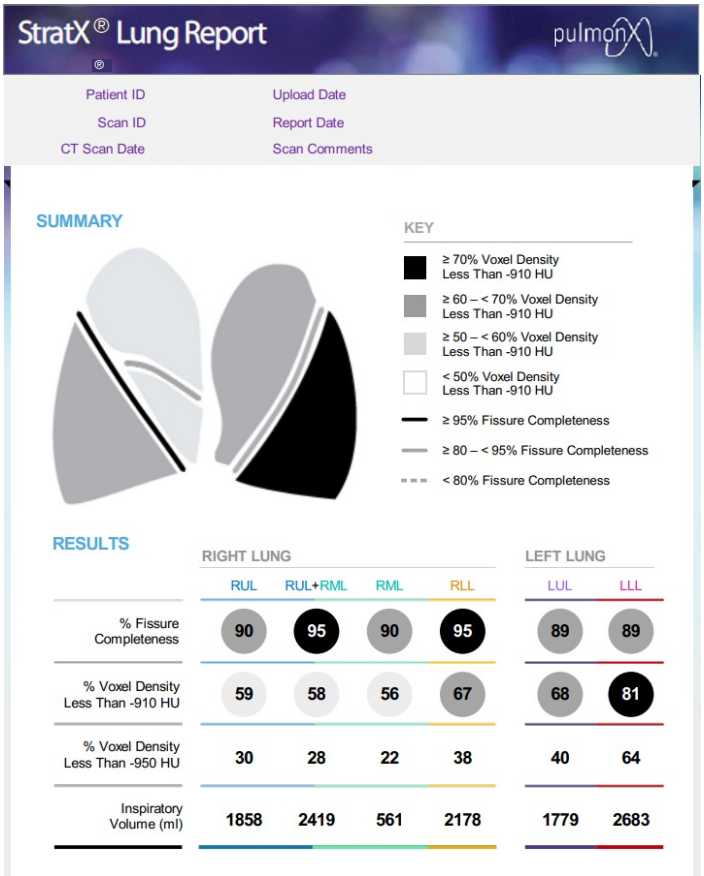
PATIENT WITH HOMOGENOUS EMPHYSEMA AND MULTIPLE COMORBIDITIES

Physician: Jamie Bessich, MD — NYU Langone

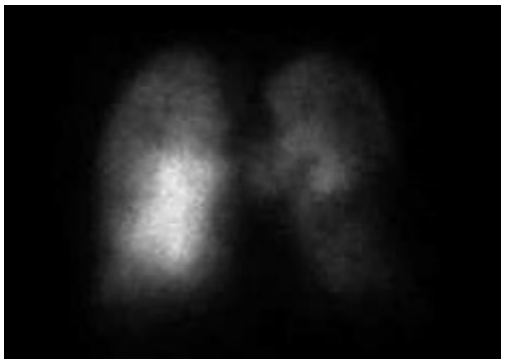
Medical History	
Gender	Male
Age (years)	76
Smoking History	50 pack-years
Comorbidities	Diabetes, hyper-lipidemia, falls resulting in multiple hospitalizations
Quality of Life Impact	Could only walk 10 steps on a flat plane.

Treatment Details		
Lobe LLL	4.0LP in LB6a 4.0LP in LB6b 5.5LP in LB7/8	4.0 in LB9a 4.0 in LB9b 4.0 in LB10
Chartis® System Assessment	Collateral ventilation negative	
Post Notes	Patient reported feeling excellent after procedure, only dyspneic with significant exertion, no longer requiring O2 supplementation in the daytime	
Post Report	100% TLVR, 2683mL decrease in LLL	
Notes	Post-op pneumothorax more than four days post-operatively, with hemothorax caused by tube thoracostomy locally	

StratX® Report

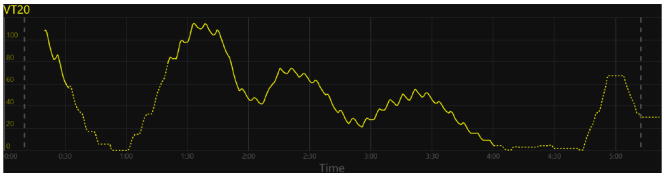


Perfusion Scan Image and Perfusion Values



	Left	Right
Upper	7.8%	10.6%
Middle	12.8%	37.8%
Lower	6.4%	24.6%
Total	27%	73%

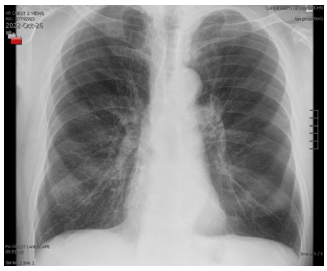
Chartis® System Scan



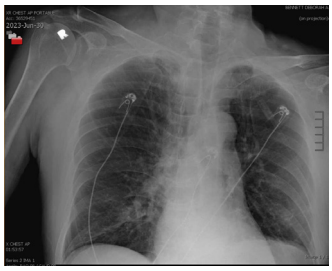
Treating Physician's Thoughts

"Experience with surgical lung volume reduction naturally biases us to upper lobe targets. This was my first lower lobe BLVR case and, although I was initially a bit skeptical, the results were excellent."

Chest X-ray: Pre- and Post-treatment



PRE-TREATMENT



2 DAYS POST-TREATMENT

Variable	Pre-procedure	Post-procedure
FEV_1 (% pred)	26%	45%
RV (% pred)	195%	188%
TLC (% pred)	119%	120%
DLCO (% pred)	24%	28%
6MWD (m)	88 m	N/A
Oxygen (L)	3 L/min	0 L/min

Oxygen Use:
100%
DECREASE*

*Results not typical.

FEV_1:
73%
INCREASE

Potential Complications:

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

This is a single case study, individual results may vary.

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; 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.

Important Safety Information: The Chartis® System is indicated for use by bronchoscopists during a bronchoscopy in adult patients with emphysema, a form of Chronic Obstructive Pulmonary Disease (COPD), in a bronchoscopy suite. The system, composed of the Chartis Catheter and Chartis Console, is designed to measure pressure and flow in order to calculate resistance to airflow and quantify collateral ventilation in isolated lung compartments. The Chartis Catheter is used through the working channel of a bronchoscope and connects to the Chartis Console. The Chartis Console is capital equipment that is reusable and displays the patient information. The Chartis System is contraindicated in the presence of active infection or major bleeding diathesis. There are no known interfering substances. Use is restricted to a trained physician. Prior to use, please reference the Chartis System Instructions for Use/ User Manual 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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