2023 GOLD Report: Endobronchial Valve (EBV)

Highlights from "Interventional Therapy in Stable COPD" Chapter (page 82–92)

The 2023 GOLD report summarizes the efficacy of Endobronchial Valves (EBV) to alleviate dyspnea, improve quality of life, and extend survival in COPD patients in the "Interventional & Surgical Therapies for COPD" section.

EBV is used in Endoscopic Lung Volume Reduction (ELVR) procedures, also often called Bronchoscopic Lung Volume Reduction (BLVR).

2023 REPORT

PATIENT BENEFITS REPORTED IN CLINICAL STUDIES ON ENDOBRONCHIAL VALVE (EBV) TREATMENT (PAGE 85–86)

- ↑ **Improved survival** found in 4 separate studies — NEW
- ↑ **Preferred treatment** over LVRS or continued medical therapy — NEW
- ↑ **Improved FEV_1, 6MWD, and health status** at 6 and 12 months*
- ↓ **Decreased exacerbations**
- ↓ **Decreased respiratory failure episodes**
- ↓ **May delay need for lung transplant** or optimize the patient's condition if transplant needed — NEW
- ↓ **Fewer complications and comparable benefits** to lung volume reduction surgery (LVRS)

NEW Study results added to 2023 GOLD Report, and did not appear in previous reports.

CRITERIA TO REFER PATIENT FOR EBV ASSESSMENT

- Confirmed diagnosis of COPD
- Non-smoking or willing to quit smoking
- $FEV_1 \leq 50\%$ predicted
- Breathless despite optimal medical management

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

*Quality and quantity of data was rated "Evidence Level A"

Endobronchial Valves (EBV) have achieved the highest evidence rating possible under GOLD's standards — Evidence A. In addition, EBV has the highest level of evidence in the Bronchoscopic intervention category, which is the least invasive of all the therapy categories listed in the table below (page 87).

Interventional Therapy in Stable COPD

Lung Volume Reduction Surgery	• Lung volume reduction surgery improves survival in severe emphysema patients with an upper-lobe emphysema and low post-rehabilitation exercise capacity **(Evidence A)**
Bullectomy	• In selected patients, bullectomy is associated with decreased dyspnea, improved lung function, and exercise tolerance **(Evidence C)**
Transplantation	• In appropriately selected patients with very severe COPD, lung transplantation has been shown to improve quality of life and functional capacity **(Evidence C)**
Bronchoscopic Interventions	• In select patients with advanced emphysema, bronchoscopic interventions reduce end-expiratory lung volume and improve exercise tolerance, health status, and lung function at 6–12 months following treatment. **Endobronchial valves (Evidence A)**; Lung coils **(Evidence B)**; Vapor ablation **(Evidence B)**
Bronchoscopic Interventions Under Study	• Phase III trials are currently being conducted to determine the efficacy of treatments for patients with refractory exacerbations and chronic bronchitis using cryospray, rheoplasty, and targeted lung denervation technology

References

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