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2025 GOLD REPORT: ENDOBRONCHIAL VALVE (EBV)

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Highlights from **"Interventional Therapy in Stable COPD"** Chapter (PAGE 101-107)

The 2025 GOLD report summarizes the efficacy of Endobronchial Valves (EBV) to alleviate dyspnea, improve quality of life, and reports on survival data in severe emphysema 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).

2025 REPORT

PATIENT BENEFITS REPORTED IN CLINICAL STUDIES ON ENDOBRONCHIAL VALVE (EBV) TREATMENT (PAGE 104-105)

- ↑ **IMPROVED SURVIVAL**
  after successful treatment (4 retrospective studies)
- ↑ **PREFERRED TREATMENT**
  over LVRS or continued medical therapy
- ↑ **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
- ↓ **FEWER COMPLICATIONS AND COMPARABLE BENEFITS**
  to lung volume reduction surgery (LVRS)

CRITERIA TO REFER PATIENT FOR EBV ASSESSMENT

- Confirmed diagnosis of COPD
- Non-smoking or willing to quit smoking
- $FEV_1 \leq 50\%$ predicted
- Breathless (mMRC ≥ 2) 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"

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ENDOBRONCHIAL VALVES: PART OF THE STANDARD OF CARE

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.

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

SCREENING FOR COPD & LUNG CANCER SIMULTANEOUSLY

NEW The GOLD 2025 report also highlights the importance of chest-CT in stable COPD patients.

COPD patients with persistent exacerbations, symptoms out of proportion to disease severity on lung function testing or refractory to medical management, FEV_1 less than 45% predicted with significant hyperinflation and gas trapping, or for those who meet the criteria for lung cancer screening, chest-CT imaging should be considered.

Use of CT in Stable COPD

DIFFERENTIAL DIAGNOSIS	• Frequent exacerbations with excessive cough with sputum production, raising concern for bronchiectasis or atypical infection • Symptoms out of proportion to disease severity based on lung function testing
LUNG VOLUME REDUCTION	• Endobronchial valve therapy may be a therapeutic option for patients if they demonstrate postbronchodilator FEV_1 between 15% to 45% and evidence of hyperinflation • Lung volume reduction surgery may be a therapeutic option for patients with hyperinflation, sever upper lobe predominant emphysema and low exercise capacity after pulmonary rehabilitation
LUNG CANCER SCREENING	• Annual low-dose CT scan is recommended for lung cancer screening in patients with COPD due to smoking according to recommendations for the general population

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