Lung volume reduction surgery (LVRS) is a palliative procedure for a group of patients with advanced emphysema. Hyper expansion of the lungs leads to expiratory airflow limitation; compromise functions of the diaphragm and chest wall, and impairs function of the right ventricle.

Patients with severe disease have high perioperative mortality. A careful anesthesia technique with an appropriate intraoperative monitoring and excellent analgesia (with or without thoracic epidural analgesia) is essential to a successful outcome.

The anesthetic management of patients undergoing LVRS requires a good understanding of both the pathophysiology of the disease and the surgical procedure. Support of a large multidisciplinary team is crucial.