BlueCross BlueShield of Arizona
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MEDICAL COVERAGE GUIDELINES
SECTION: SURGERY

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LUNG VOLUME REDUCTION SURGERY

Coverage for services, procedures, medical devices and drugs are dependent upon benefit eligibility as outlined in the member's specific benefit plan. This Medical Coverage Guideline must be read in its entirety to determine coverage eligibility, if any.

The section identified as "Description" defines or describes a service, procedure, medical device or drug and is in no way intended as a statement of medical necessity and/or coverage.

The section identified as "Criteria" defines criteria to determine whether a service, procedure, medical device or drug is considered medically necessary or experimental or investigational.

State or federal mandates, e.g., FEP program, may dictate that any drug, device or biological product approved by the U.S. Food and Drug Administration (FDA) may not be considered experimental or investigational and thus the drug, device or biological product may be assessed only on the basis of medical necessity.

Medical Coverage Guidelines are subject to change as new information becomes available.

For purposes of this Medical Coverage Guideline, the terms "experimental" and "investigational" are considered to be interchangeable.

Description:

Lung volume reduction is a surgical treatment for severe emphysema. It involves the removal of peripheral emphysematous lung tissue, generally from both upper lobes, and may be performed thoracoscopically using laser technology or by excision.

Lung volume reduction surgery (LVRS) is palliative, not curative. The procedure is designed to relieve dyspnea and improve functional capacity and quality of life. Individuals continue to have severe emphysema, and most will show further progression of their disease over time.

LUNG VOLUME REDUCTION SURGERY (cont.)

Criteria:

- Lung volume reduction surgery for the treatment of emphysema is considered ***medically necessary*** with documentation of **ALL** of the following:

  1. Predominantly upper lobe emphysema with hyperinflation and heterogeneity (i.e., target areas for removal)
  2. Forced expiratory volume in one second (FEV-1)

     - Age less than 70: FEV no more than 45% of predicted
     - Age 70 or older: FEV between 15% and 45% of predicted

  3. Marked restriction in activities of daily living despite maximal medical therapy
  4. Acceptable nutrition status (i.e., 70%–130% of ideal body weight)
  5. Ability to participate in a vigorous pulmonary rehabilitation program
  6. No coexisting major medical problems that would significantly increase operative risk
  7. Willingness to undertake risk of morbidity and mortality associated with LVRS
  8. Abstinence from cigarette smoking for 4 months prior to initial interview and throughout evaluation for surgery

- Lung volume reduction surgery for the treatment of emphysema that does not meet the previously listed criteria is considered ***experimental or investigational*** based upon:

  1. Insufficient scientific evidence to permit conclusions concerning the effect on health outcomes, and
  2. Insufficient evidence to support improvement of the net health outcome, and
  3. Insufficient evidence to support improvement of the net health outcome as much as, or more than, established alternatives.

Resources:

1. 7.01.71 BCBS Association Medical Policy Reference Manual. Lung Volume Reduction Surgery for Severe Emphysema. Re-issue date 06/12/2014, issue date 07/16/1999.

2. California Technology Assessment Forum. Lung Volume Reduction Surgery for Severe Emphysema. *Blue Shield of California Foundation.* 06/09/2004.

3. Centers for Medicare & Medicaid Services. National Coverage Analysis. 01/05/2004 2004.

4. Fein AM, Branman SS, Casaburi R, et al. Lung volume reduction surgery. *Am J Respir Crit Care Med.* 1996 Oct 1996;154(4 Pt 1):1151-1152.

5. InterQual® Care Planning Criteria, Procedures Adult. Lung Volume Reduction Surgery (LVRS).