

# Clinical Policy: Ventriculectomy and Cardiomyoplasty

Reference Number: CP.MP.56

[Revision Log](#)

Last Review Date: 02/20

See [Important Reminder](#) at the end of this policy for important regulatory and legal information.

## Description

Guidelines to determine medical necessity for ventriculectomy and cardiomyoplasty procedures as a treatment for severe chronic heart failure.

## Policy/Criteria

It is the policy of health plans affiliated with Centene Corporation® that ventriculectomy (Batista procedure) and cardiomyoplasty procedures are considered **experimental and/or investigational** and are therefore not medically necessary.

## Background

Heart failure is the final common path of myocardial dysfunction in most types of cardiac disease. Treatment options for heart failure include both medical and surgical therapy and surgical treatment, including ventricular assist devices (VADs), coronary revascularization, valve repair or replacement, total artificial heart, and heart transplantation. Heart transplantation has become the standard treatment for eligible patients with severe, irreversible biventricular failure unresponsive to medical or surgical treatment. Several surgical approaches have been explored as alternative treatments for patients with end-stage heart failure.

Surgical options to reduce the size of the enlarged left ventricle and improve cardiac function include partial left ventriculectomy, also known as the Batista procedure. Partial left ventriculectomy involves removing an elliptical section of the ventricle to improve cardiac output in patients who have severe chronic heart failure. Multiple studies have found minor improvements in measures of heart function and clinical status in the short term, with high mortality rates, high recurrences of symptomatic heart failure, and fatal arrhythmias (Stolf et al., 1998; Startling et al., 2000; Franco-Cereceda et al., 2001). As such, this procedure has fallen out of use (Fang, 2015).

Dynamic cardiomyoplasty is a surgical procedure in which a latissimus dorsi muscle flap is transposed into the chest and wrapped around the ventricles of the failing heart. This skeletal muscle flap is then electrically stimulated to contract in synchrony with ventricular systole. Over time, pacing of the skeletal muscle may produce morphologic, molecular and functional changes in the skeletal muscle, including notable reduction in muscle fatigue with repeated stimulation. Cardiomyoplasty has been found to be of some benefit to stage III heart failure patients; however, these patients could be well-managed with other interventions with less risk. Additionally, stage IV patients who have fewer effective interventions available had unacceptably high post-operative mortality risk (Leier, 1996) after cardiomyoplasty. Due to these considerations, this operation is very rarely used (Fang, 2015).

## Coding Implications

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CPT® Codes	Description
33426	Valvuloplasty, mitral valve, with cardiopulmonary bypass; with prosthetic ring
33542	Myocardial resection (e.g., ventricular aneurysmectomy)
33548	Surgical ventricular restoration procedure, includes prosthetic patch, when performed (e.g., ventricular remodeling, SVR, SAVER, Dor procedures)

Reviews, Revisions, and Approvals	Date	Approval Date
Policy Developed		05/13
References reviewed and updated	04/14	05/14
References reviewed and updated	03/15	03/15
Converted to new template	02/16	03/16
References reviewed and updated		
References reviewed and updated	03/17	03/17
References reviewed and updated	02/18	02/18
References reviewed and updated	01/19	02/19
References reviewed and updated. Specialist reviewed.	01/20	02/20
CPT codes added: 33426, 33542, 33548.	04/20	

**References**

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2. Fang JC. Surgical management of heart failure. In: UpToDate, Colucci WS, Aldea GS, Verrier E (Ed), UpToDate, Waltham, MA. Accessed 1/6/2020.
3. Franco-Cereceda A, McCarthy PM, Blackstone EH, et al. Partial left ventriculectomy for dilated cardiomyopathy: is this an alternative to transplantation? *J Thorac Cardiovasc Surg.* 2001; 121 (5):879
4. Hayes Health Technology Brief. Surgical Ventricular Restoration for Heart Failure. Lansdale, PA: Hayes, Inc.; 2014 Winifred S. Hayes, Inc. Dec 28, 2010. Archived Jan 28, 2014.
5. Leier CV. Cardiomyoplasty: is it time to wrap it up? *J Am Coll Cardiol.* 1996;28(5):1181.
6. National Institute for Clinical Excellence (NICE). "Partial left ventriculectomy (the Batista procedure)." *Interventional procedure guidance* 41. 25 February 2004

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8. Stolf NA, Moreira LF, Bocchi EA, et al. Determinants of midterm outcome of partial left ventriculectomy in dilated cardiomyopathy. Ann Thorac Surg. 1998; 66 (5):1585
9. Yancy CW, Jessup M, Bozkurt B, Butler J, Casey Jr DE, et al. 2013 ACCF/AHA Guideline for the management of heart failure: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines American College of Cardiology Web site.  
[http://www.onlinejacc.org/content/62/16/e147?\\_ga=2.101453121.1981483712.1517416457-1894143881.1517416457](http://www.onlinejacc.org/content/62/16/e147?_ga=2.101453121.1981483712.1517416457-1894143881.1517416457)

#### **Important Reminder**

This clinical policy has been developed by appropriately experienced and licensed health care professionals based on a review and consideration of currently available generally accepted standards of medical practice; peer-reviewed medical literature; government agency/program approval status; evidence-based guidelines and positions of leading national health professional organizations; views of physicians practicing in relevant clinical areas affected by this clinical policy; and other available clinical information. The Health Plan makes no representations and accepts no liability with respect to the content of any external information used or relied upon in developing this clinical policy. This clinical policy is consistent with standards of medical practice current at the time that this clinical policy was approved. “Health Plan” means a health plan that has adopted this clinical policy and that is operated or administered, in whole or in part, by Centene Management Company, LLC, or any of such health plan’s affiliates, as applicable.

The purpose of this clinical policy is to provide a guide to medical necessity, which is a component of the guidelines used to assist in making coverage decisions and administering benefits. It does not constitute a contract or guarantee regarding payment or results. Coverage decisions and the administration of benefits are subject to all terms, conditions, exclusions and limitations of the coverage documents (e.g., evidence of coverage, certificate of coverage, policy, contract of insurance, etc.), as well as to state and federal requirements and applicable Health Plan-level administrative policies and procedures.

This clinical policy is effective as of the date determined by the Health Plan. The date of posting may not be the effective date of this clinical policy. This clinical policy may be subject to applicable legal and regulatory requirements relating to provider notification. If there is a discrepancy between the effective date of this clinical policy and any applicable legal or regulatory requirement, the requirements of law and regulation shall govern. The Health Plan retains the right to change, amend or withdraw this clinical policy, and additional clinical policies may be developed and adopted as needed, at any time.

This clinical policy does not constitute medical advice, medical treatment or medical care. It is not intended to dictate to providers how to practice medicine. Providers are expected to exercise professional medical judgment in providing the most appropriate care, and are solely responsible for the medical advice and treatment of members. This clinical policy is not intended to

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recommend treatment for members. Members should consult with their treating physician in connection with diagnosis and treatment decisions.

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**Note: For Medicaid members**, when state Medicaid coverage provisions conflict with the coverage provisions in this clinical policy, state Medicaid coverage provisions take precedence. Please refer to the state Medicaid manual for any coverage provisions pertaining to this clinical policy.

**Note: For Medicare members**, to ensure consistency with the Medicare National Coverage Determinations (NCD) and Local Coverage Determinations (LCD), all applicable NCDs and LCDs should be reviewed prior to applying the criteria set forth in this clinical policy. Refer to the CMS website at <http://www.cms.gov> for additional information.

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