# Medical Policy

Blue Cross Blue Shield Blue Care Network of Michigan

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**Category: Surgery**

**Title: Chronic Pulmonary Thromboendarterectomy**

**Procedure Code(s): 33910**

## Description / Background

Chronic thromboembolic obstruction of the major pulmonary arteries (main, lobar, and segmental levels) is a potential long-term consequence of acute pulmonary embolism. Chronic obstruction of the large pulmonary arteries by persistent (> 6 months) emboli is a potentially treatable cause of pulmonary hypertension and right-sided heart failure. Fibrotic masses in major pulmonary arteries may result when pulmonary emboli fail to resolve normally, ultimately leading to pulmonary hypertension. Other factors, such as age of the embolus or defects in the fibrinolytic system, may also be important. In many cases there is no documented history of embolization. Early diagnosis is difficult since the patients are rarely symptomatic until the development of pulmonary hypertension and right-sided heart failure. Even then diagnosis can be difficult. Diagnosis depends on a high index of suspicion, ventilation/perfusion scans, and careful and experienced interpretation of pulmonary angiograms.

Chronic pulmonary thromboendarterectomy is a technique for surgical removal of the obstructing thromboemboli, as a curative alternative to lung transplantation. The surgery involves cardiopulmonary bypass, and since the obstruction is typically bilateral, the surgical approach requires a median sternotomy. Removal of the organized thrombus requires meticulous dissection in a bloodless field, which in turn requires profound hypothermia with periods of cardiac arrest. In addition, a vena cava filter is usually placed to prevent recurrence of emboli.



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## CPT/HCPCS Level II Codes and Description

33910 Pulmonary artery embolectomy, with cardiopulmonary bypass
33915 Pulmonary artery embolectomy, without cardiopulmonary bypass
33916 Pulmonary artery endarterectomy with or without embolectomy, with cardiopulmonary bypass
75940 Percutaneous placement of IVC filter, with radiological supervision and interpretation
L8670 Vascular graft material, synthetic, implant

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## Diagnoses/Medical Conditions

- Acute cor pulmonale
- Primary pulmonary hypertension
- Other chronic pulmonary heart diseases (includes secondary pulmonary hypertension)
- Congestive heart failure (includes right heart failure secondary to left heart failure)

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## Medical Policy Statement

The safety and effectiveness of pulmonary thromboendarterectomy have been established. It may be considered a useful therapeutic treatment for chronic thromboembolic obstruction due to fibrosed pulmonary emboli involving the pulmonary arteries.

### Rationale

Pulmonary thromboendarterectomy is a viable, curative alternative to lung transplantation for the treatment of chronic pulmonary thromboembolism.

### Medical Policy Position Summary (Non-clinical summary statement for customer use)

The safety and effectiveness of pulmonary thromboendarterectomy have been established. It may be considered a useful therapeutic treatment for chronic thromboembolic obstruction due to fibrosed pulmonary emboli involving the pulmonary arteries.

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## Inclusionary and Exclusionary Guidelines (Clinically based guidelines that may support individual consideration and pre-authorization decisions)

Typical patient selection criteria for this procedure include patients with congestive heart failure, due to chronic thromboembolic pulmonary disease, who fall within the New York Heart Association classification of CHF patients as Class III or IV. The following table identifies the New York Heart Association CHF classifications:

- Class I - Patients with documented heart disease of any type who are completely symptom-free



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- Class II - Slight limitation of physical activity because symptoms (shortness of breath, chest pain) occur only with more than ordinary physical activity
- Class III - Marked limitation of physical activity because symptoms occur even with ordinary physical activity (e.g., eating meals)
- Class IV - Severe limitation of physical activity because symptoms occur even at rest (e.g., in a sitting or lying position)

Patients should also have a mean pulmonary artery pressure above 30-mm Hg or a pulmonary vascular resistance of greater than 300 dynes/sec/cm.

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## Related Policies

N/A

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## Medicare Information

No National Policy or Local Medical Review Policy available.

*(The above Medicare information is current as of the review date for this policy. However, the coverage issues and policies maintained by the Centers for Medicare & Medicare Services [CMS, formerly HCFA] are updated and/or revised periodically. Therefore, the most current CMS information may not be contained in this document. For the most current information, the reader should contact an official Medicare source.)*

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## References


- http://www.chestnet.org/publications/Pulmonary.Perspectives/vol16n1c.html CHRONIC THROMBOEMBOLIC PULMONARY HYPERTENSION: A BRIEF REVIEW, Pulmonary Perspectives, March 1999.
- Blue Cross Blue Shield Association Medical Policy # 7.01.65, “Chronic Pulmonary Thromboendarterectomy”, last update 4/98.
- Fedullo, Peter F.MD, “Chronic Thromboembolic Pulmonary Hypertension”, Clinics in Chest Medicine Volume 22 , Number 3, September 2001.
- Blue Cross Blue Shield of Massachusetts Medical Policy #77, “Chronic Pulmonary Endarterectomy”.




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## Joint BCBSM/BCN Medical Policy History

| Date | Rationale |
|---|---|
| 7/1/02 | Joint medical policy established |
| 11/18/03 | See comment below |

Next Review: This is an established policy and no longer subject to periodic review

## Pre-Consolidation Medical Policy History

| Original Policy Date | | Comments |
|---|---|---|
| BCN | N/A | Revised: N/A |
| BCBSM | 4/30/98 | Revised: N/A |

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