



## MASSACHUSETTS

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### Medical Policy

## Diagnosis and Treatment of Chronic Cerebrospinal Venous Insufficiency in Multiple Sclerosis

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### Policy Number: 352

BCBSA Reference Number: 8.01.56A (For Plan internal use only)

### Related Policies

None

### Policy

#### Commercial Members: Managed Care (HMO and POS), PPO, and Indemnity

The identification and subsequent treatment of chronic cerebrospinal venous insufficiency in patients with multiple sclerosis is considered **NOT MEDICALLY NECESSARY**.

### Prior Authorization Information

#### Inpatient

- For services described in this policy, precertification/preauthorization **IS REQUIRED** for all products if the procedure is performed **inpatient**.

#### Outpatient

- For services described in this policy, see below for products where prior authorization **might be required** if the procedure is performed **outpatient**.

	Outpatient
Commercial Managed Care (HMO and POS)	This is <b>not</b> a covered service.
Commercial PPO and Indemnity	This is <b>not</b> a covered service.

### CPT Codes / HCPCS Codes / ICD Codes

The following codes are included below for informational purposes. Inclusion or exclusion of a code does not constitute or imply member coverage or provider reimbursement. Please refer to the member's contract benefits in effect at the time of service to determine coverage or non-coverage as it applies to an individual member.

Providers should report all services using the most up-to-date industry-standard procedure, revenue, and diagnosis codes, including modifiers where applicable.

## CPT Codes

There is no specific code CPT for this test.

## Description

MS is generally considered a chronic inflammatory demyelinating disease of the central nervous system (brain, spinal cord, optic nerve) believed to be triggered by an autoimmune response to myelin. However, in part due to the periventricular predilection of the lesions of MS, vascular etiologies (CCSVI) have also been considered. The core foundation of this vascular theory is that venous drainage from the brain is abnormal due to outflow obstruction in the draining jugular vein and/or azygos veins. This abnormal venous drainage, which is characterized by special ultrasound criteria, is said to cause intracerebral flow disturbance or outflow problems that lead to periventricular deposits. In the CCSVI theory, these deposits have a similarity to the iron deposits seen around the veins in the legs of patients with chronic deep vein thrombosis. Balloon dilatation, with or without stenting, has been proposed as a means to treat the outflow problems, thereby alleviating CCSVI and MS complaints.

The following 5 criteria were defined by Zamboni et al as features of CCSVI.<sup>1</sup> To make the diagnosis of CCSVI, at least 2 of the 5 criteria need to be present:

1. Reflux constantly present (for a duration >0.8 s) in the supine and upright positions at the level of an internal jugular or vertebral vein. This parameter was evaluated during a short breath-hold following normal breathing and not under Valsalva maneuver.
2. Reflux at the level of veins of the deep cerebral system (for a duration >0.5 s). This was evaluated with the patient in the sitting and supine positions, and venous flow was enhanced by inviting the patient to breath in.
3. Stenosis (<0.3 cm), valve abnormalities and septa on B-mode imaging.
4. Absence of flow at the level of the internal jugular or vertebral vein, despite numerous deep inspirations.
5. No increase in the diameter of the internal jugular vein when changing from an upright to a supine position (lack of  $\Delta$ -).

## Summary

Chronic cerebrospinal venous insufficiency (CCSVI) may be associated with multiple sclerosis (MS), although this is controversial and an active area of research. Correction of CCSVI has been attempted via percutaneous venoplasty. The intent of this procedure is to relieve MS symptoms by improving venous drainage of the central nervous system. Correction of CCSVI by this method may be referred to as the "Liberation Procedure."

The association of CCSVI with MS is uncertain. The rate of CCSVI in MS patients varies widely in the literature for unclear reasons, from 0% to 100%. Some studies report higher rates of CCSVI in patients with MS compared with non-MS patients, but others do not. If there is an association between MS and CCSVI, it is not known whether this is a causative factor for MS or a secondary result of the disease. It also appears that CCSVI can occur in other disorders and is not specific for MS.

Treatment of CCSVI with endovascular interventions has been attempted. Some currently available studies report improvement in patient-reported symptoms following treatment, but this evidence is not sufficient to establish efficacy. A prospective, double-blind, sham-controlled randomized controlled trial (RCT) of venous angioplasty in MS patients (N=20) with CCSVI published in 2014 showed no significant differences in venous outflow characteristics between the treated and control groups, nor any significant improvements in clinical disease scores among treated patients compared with controls. The results of this RCT are limited by the small number of patients. However, the failure to show a beneficial effect of venous angioplasty on blood flow or symptoms supports a lack of efficacy for this treatment.

Adverse events occur at a low overall rate, but serious adverse events can occur, and the U.S. Food and Drug Administration (FDA) issued an alert in 2012 concerning the potential for serious adverse events with treatment of CCSVI.

## Policy History

Date	Action
1/2023	Medicare information removed. See MP #132 Medicare Advantage Management for local coverage determination and national coverage determination reference.
11/2022	Annual policy review. Policy updated with literature review through October 2022. No references added. Policy statements unchanged.
2/2020	Policy updated with literature review through February 1, 2020, no references added. Policy statements unchanged.
10/2015	Annual policy review. Policy statement changed from investigational to not medically necessary. Effective 10/1/2015.
9/2014	Annual policy review. New references added.
6/2013	Annual policy review. New references added.
5/1/12	New policy describing ongoing non-coverage.

## Information Pertaining to All Blue Cross Blue Shield Medical Policies

Click on any of the following terms to access the relevant information:

[Medical Policy Terms of Use](#)

[Managed Care Guidelines](#)

[Indemnity/PPO Guidelines](#)

[Clinical Exception Process](#)

[Medical Technology Assessment Guidelines](#)

## References

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