MEDICAL POLICY

Medical Policy Title	**Ovarian and Internal Iliac Vein Endovascular Occlusion as a Treatment of Pelvic Congestion Syndrome**
Policy Number	**4.01.10**
Current Effective Date	**September 18, 2025**
Next Review Date	**September 2026**

Our medical policies are based on the assessment of evidence based, peer-reviewed literature, and professional guidelines. Eligibility for reimbursement is based upon the benefits set forth in the member's subscriber contract. (Link to Product Disclaimer)

POLICY STATEMENT(S)

Endovascular occlusion of the ovarian and/or internal veins has not been medically proven to be effective and, therefore, is considered **investigational** for the treatment of pelvic congestion syndrome.

RELATED POLICIES

Corporate Medical Policy

7.01.47 Varicose Vein Treatments

11.01.03 Experimental or Investigational Services

POLICY GUIDELINE(S)

Not Applicable

DESCRIPTION

The American College of Obstetricians and Gynecologists (ACOG) defines chronic pelvic pain as "pain symptoms perceived to originate from pelvic organs/structures typically lasting more than six months. It is often associated with negative cognitive, behavioral, sexual and emotional consequences as well as with symptoms suggestive of lower urinary tract, sexual, bowel, pelvic floor, myofascial, or gynecological dysfunction." Therefore, diagnostic criteria may be difficult to discern, as well as multifactorial in nature.

Pelvic congestion syndrome (PCS) has also been known as pelvic venous disorder, pelvic venous insufficiency, pelvic venous incompetence, or pelvic venous reflux, with the nomenclature often being used interchangeably. PCS is proposed to be a cause of chronic pelvic pain, deriving from varicosities in the ovarian or internal iliac veins. It is described as a syndrome of variable pain location and intensity, associated with dyspareunia and postcoital pain, is aggravated by standing or exercise and typically occurs during the reproductive years. It is estimated that up to 47% of women have pelvic varicosities, and although common, not all women with pelvic varicosities experience chronic pelvic pain, and conversely, chronic pelvic pain is reported by women without evidence of pelvic congestion. The diagnosis of PCS is typically one of exclusion, utilizing different imaging methods such as

magnetic resonance imaging (MRI), computed tomography (CT), laparoscopy or contrast venography.

Conservative treatment options for PCS include psychotherapy, non-steroidal anti-inflammatories, and hormonal therapy. For patients who do not respond to these initial therapies, surgical ligation of the ovarian vein may be considered. Embolization and sclerotherapy are two treatments that have been proposed as less- invasive alternatives which consist of accessing the vasculature via catheter through the jugular or femoral arteries. Under imaging guidance, the catheter is directed through the femoral vein to the veins in question. Once in place, the vein will either be injected with medication (sclerotherapy), and/or coils, plugs, glue, liquid embolic agents, gelatin sponge or powder (Gelfoam) will be inserted to occlude the impacted veins (embolization). The procedure is typically performed on an outpatient basis.

Surgical procedures are not subject to regulation by the United States Food and Drug Administration (FDA); however, various products used in vein embolization (e.g., coils, vascular plugs, glue, liquid embolic agents, Gelfoam) and their delivery assist devices are subject to regulation. Several products have been cleared through the 510 (k) process for uterine fibroid embolization and/or embolization of hypervascular tumors and arteriovenous malformations (e.g., Embosphere Microspheres, Cook Incorporated Polyvinyl Alcohol Foam Embolization Particles, Contour Emboli PVA).

SUPPORTIVE LITERATURE

The literature regarding outcomes of individuals with PCS who receive pelvic vein embolization consists of randomized studies, comparative studies, case series, and systematic reviews. However, the literature has been described by the Journal of Vascular and Interventional Radiology (Black et al 2010) as, and still remains, "limited due to non-standardized reporting, incomplete follow-up, and the use of variable measures of outcome".

In a systematic review by Daniels et al (2016) with a search of databases dating from inception to November of 2013, authors aimed to critically review the effectiveness of embolization of incompetent pelvic veins. No language or study design restrictions were applied in the search criteria. Of the studies identified, 140 full texts were retrieved, and 22 articles were included in the final review. Of those included, 20 were case series, one study was unable to be reliably assessed after translation, and only one was a randomized trial, which was deemed poor quality by the authors (Chung and Huh, 2003), as it compared embolization to hysterectomy and was likely subject to several biases. Authors state that all estimates of effectiveness come from what they believe to be prospective case series of 1,308 women, with early relief of pain noted in approximately 75% of 162 women in six case series, which was sustained. One-third of the studies that were selected did not clearly describe intended outcome measures or the collection process, had no report of symptoms at two time points, and few stated the impacts on menstruation and fertility. Although the data supported the safety and efficacy of embolization, the quality of the evidence is poor.

In a retrospective study of 617 patients diagnosed with pelvic venous disorders, DeGregorio et al (2020) aimed to determine the efficacy and safety of pelvic vein embolization. A total of 520 women were included in the analysis. Inclusion criteria involved a diagnosis of varicose veins in the pelvis

with a diameter of 6 mm or more based on doppler ultrasound (US), and symptoms greater than six months. Patients underwent embolization of the four main pelvic veins when possible, and follow-up consisted of VAS survey and doppler US. Technical success was defined as embolization of the four main pelvic veins and occurred in 84.4% of patients. Of the total patients treated, 261 women underwent embolization using coils and 259 with Amplatzer vascular plugs (AVP). The average follow-up time frame was 58.7 months and a total of 484 patients (93.07%) completed five years of follow-up. VAS improved from 7.63 to 0.91 at the five-year mark. Results showed 26 patients (5%) experienced symptom recurrence. There were nine cases of coil migration (1.9 %). The authors state late migration of metallic devices to the lung can be seen in routine chest radiographs and could be an important concern. Discussion remains as to the homogeneity of endovascular therapeutic modalities, the selection of the embolic agents, and the number of veins needed to be treated.

A systematic review conducted by Hanna et al (2024) evaluated the efficacy of embolotherapy, primarily coil and plug embolization, for the treatment of PCS. A total of 25 studies were included with a combined total of 2038 patients. Across the included studies, technical success rates exceeded 95%, indicating that embolization procedures were reliably performed. Symptom improvement was reported in 70–90% of patients, with many experiencing significant reductions in chronic pelvic pain within three to six months post-procedure. The review also noted low complication rates, typically under 5%, with most adverse events being minor and self-limiting. Follow-up durations ranged from six months to two years, and long-term data suggested sustained symptom relief in the majority of treated patients. The authors emphasized the need for standardized outcome measures and larger randomized trials to strengthen the evidence base.

To date, no randomized controlled trials have been published comparing endovascular occlusion for PCS with a relevant comparator or sham/placebo treatment. Hindering the development of clinical trials with sound methodology are the varying definitions of pelvic pain, as well as the lack of specified explicit diagnostic criteria for PCS. Several consensus panels have been funded over time attempting to identify research priorities (Black et al, 2010; Champaneria et al, 2016; Khilnani et al, 2019) to address these limitations. International panels have met to create a discriminative classification instrument for PCS, but to date, the tools have not been validated or widely accepted.

There is insufficient evidence to conclude that there is a cause-effect relationship between venous congestion and chronic pelvic pain. Randomized controlled trials using well-defined eligibility criteria and relevant comparators or sham/placebo treatments are needed to determine the effects of the treatment on health outcomes.

PROFESSIONAL GUIDELINE(S)

In a 2020 practice bulletin on chronic pelvic pain, the American College of Obstetricians and Gynecologists (ACOG) does not address embolization for treating chronic pelvic pain. ACOG states that PCS is a proposed cause of chronic pelvic pain related to pelvic venous insufficiency, and although venous congestion appears to be associated with chronic pelvic pain, evidence is insufficient to conclude that there is a cause-and-effect relationship. Furthermore, there is no consensus on the

definition of this condition, and the diagnostic criteria are variable. Further research is needed to establish consistency in diagnosis and homogeneity of studies.

The Society for Vascular Surgery and American Venous Forum published a clinical practice guideline for the care of patients with varicose veins and related chronic venous disorders in 2011; reaffirmed in 2023. The guidelines include the recommendations related to treatment of pelvic congestion syndrome. Medical management is not included among recommendations; the guideline states that "Pharmacologic agents to suppress ovarian function, such as medroxyprogesterone or gonadotropin-releasing hormone, may offer short-term pain relief, but their long-term effectiveness has not been proven." Additionally, the guidelines recommend:

- Treatment of pelvic congestion syndrome and pelvic varices with coil embolization, plugs, or transcatheter sclerotherapy, used alone or together (grade 2B: weak recommendation, moderate quality of evidence).
- If less invasive treatment is not available or has failed, surgical ligation and excision of ovarian veins to treat reflux is recommended (grade 2B: weak recommendation, moderate quality of evidence).

REGULATORY STATUS

Various products (e.g., coils, vascular plugs, glue, liquid embolic agents, Gelfoam) and/or delivery-assist devices could be used to embolize the vein(s) and therefore could be subject to FDA regulation.

The United States Food and Drug Administration (FDA) regulates medical devices. All products and/or delivery-assist devices that could be used to embolize the vein(s), including related components require FDA approval before marketing and use in the United States to ensure they are safe and effective for human use. Refer to the FDA Medical Device website. Available from: https://www.fda.gov/medical-devices [accessed 2025 Aug 5]

The FDA lists the most serious type of medical device recalls as well as early alert communications about corrective actions being taken by companies that the FDA believes are likely to be the most serious type of recalls. Available from: Medical Device Recalls | FDA [accessed 2025 Aug 5]

CODE(S)

- Codes may not be covered under all circumstances.
- Code list may not be all inclusive (AMA and CMS code updates may occur more frequently than policy updates).
- (E/I)=Experimental/Investigational
- (NMN)=Not medically necessary/appropriate

CPT Codes

Code	Description
37241 (*E/I)	Vascular embolization or occlusion, inclusive of all radiological supervision and interpretation, intraprocedural roadmapping, and imaging guidance necessary to complete the intervention; venous, other than hemorrhage (e.g., congenital or acquired venous malformations, venous and capillary hemangiomas, varices, varicoceles). *E/I for the ICD-10-CM diagnosis codes listed below.
75894 (*E/I)	Transcatheter therapy, embolization, any method, radiological supervision and interpretation. *E/I for the ICD-10-CM diagnosis codes listed below.

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HCPCS Codes

Code	Description
Not Applicable	

ICD10 Codes

Code	Description
I86.2	Pelvic varices
N94.89	Other specified conditions associated with female genital organs and menstrual cycle
R10.2	Pelvic and perineal pain

REFERENCES

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Strong SM, et al. A retrospective cohort study of patient risk factors and pelvic venous reflux patterns on treatment outcomes with pelvic vein embolisation. Vasc Endovascular Surg. 2024 Oct;58(7):733-174.

SEARCH TERMS

Not Applicable

CENTERS FOR MEDICARE AND MEDICAID SERVICES (CMS)

Based upon review, ovarian and internal iliac vein endovascular occlusion as a treatment of pelvic congestion syndrome is not specifically addressed in a National or Local Medicare coverage determination or policy. However, there is currently a National Coverage Determination (NCD) for Therapeutic Embolization (20.28).

NCD - Therapeutic Embolization (20.28) [accessed 2025 Jul 18]

PRODUCT DISCLAIMER

- Services are contract dependent; if a product does not cover a service, medical policy criteria do not apply.
- If a commercial product (including an Essential Plan or Child Health Plus product) covers a specific service, medical policy criteria apply to the benefit.
- If a Medicaid product covers a specific service, and there are no New York State Medicaid guidelines (eMedNY) criteria, medical policy criteria apply to the benefit.
- If a Medicare product (including Medicare HMO-Dual Special Needs Program (DSNP) product) covers a specific service, and there is no national or local Medicare coverage decision for the service, medical policy criteria apply to the benefit.
- If a Medicare HMO-Dual Special Needs Program (DSNP) product DOES NOT cover a specific service, please refer to the Medicaid Product coverage line.

POLICY HISTORY/REVISION

Committee Approval Dates

11/18/21, 09/15/22, 09/21/23, 09/19/24, 09/18/25

Date	Summary of Changes
09/18/25	• Annual review; policy intent unchanged.
01/01/25	• Summary of changes tracking implemented.
03/15/22	• Original effective date