

**Subject:** Vein Embolization as a Treatment for Pelvic Congestion Syndrome and Varicocele**Document #:** SURG.00062**Status:** Reviewed**Publish Date:** 01/03/2024**Last Review Date:** 11/09/2023

## Description/Scope

This document addresses ovarian and internal iliac vein embolization as a treatment for pelvic congestion syndrome (PCS), and percutaneous testicular vein embolization for varicocele.

PCS, which is also referred to as pelvic venous incompetence (PVI), is a condition involving chronic pelvic pain (CPP) which is non-cyclic and of variable location and intensity. The CPP is usually aggravated by prolonged standing. The underlying etiology is thought to be related to varices of the ovarian veins, leading to pelvic congestion. As there are many etiologies for CPP, PCS is often a diagnosis of exclusion, when varices are identified using a variety of imaging methods, such as magnetic resonance imaging (MRI), computed tomography (CT) scanning or contrast venography. For those who do not respond to medical therapy with analgesics, embolization therapy of the ovarian and internal iliac veins has been proposed.

Testicular varicocele is a condition in which high hydrostatic pressure in the testicular veins (also called the spermatic veins) is thought to cause discomfort, pain and reduced fertility. Percutaneous embolization therapy has been used to treat varicocele as an alternative to surgical ligation (varicocelectomy) to improve symptoms, sperm count and sperm motility.

## Position Statement

### Investigational and Not Medically Necessary:

Embolization of the ovarian vein and internal iliac veins is considered **investigational and not medically necessary** as a treatment of pelvic congestion syndrome.

Embolization of the testicular (spermatic) veins is considered **investigational and not medically necessary** as a treatment of testicular varicocele.

## Rationale

### *Embolization Therapy for Treatment of Pelvic Congestion Syndrome (PCS)*

The literature regarding the clinical outcomes for embolization therapy for treatment of PCS is limited to primarily case series and one randomized comparative trial. Several older small case series report pain relief in 50-80% of individuals (Cordis, 1998; Sichlau, 1994; Tarazov, 1997).

Additional small retrospective case series and single center chart reviews have reported favorable short-term outcomes (averaging 12-24 months) for embolization therapy related to VAS scores and symptomatic improvements. However, some investigators acknowledge difficulty in assessing subsequent recurrence rates, due to complexities associated with the pathophysiology of venous reflux disease and ongoing debate around the most effective embolic materials and techniques, as well as uncertainties about the most appropriate candidate selection (Hocquet, 2014; Nasser, 2014).

Additional case series include Venbrux (2002) who performed bilateral ovarian vein embolization therapy on 56 individuals, followed 3 to 10 weeks later by embolization of the internal iliac veins. The procedures were considered a technical success in all individuals, although in 2 individuals the coils inadvertently migrated to the pulmonary circulation where they were retrieved without incident. Recurrences of varices were noted in 3 individuals. In terms of pain control, the mean VAS score fell from 7.8 to 2.7 over a 12-month period.

In another case series of 41 individuals who underwent ovarian vein embolization, Maleux and colleagues (2000) reported a technical success rate of 98%. Partial or complete pain relief was reported by 68.3% of individuals. However, there was no formal assessment of pain prior to the procedure.

Chung (2003) compared the efficacy of embolization (n=52) to that of hysterectomy and bilateral oophorectomy (n=27) or hysterectomy and unilateral oophorectomy (n=27). Individuals were also stratified according to stress scores into three subgroups with normal, moderate-high and very high stress levels. A significant improvement in pain symptoms was observed in the three treatment groups. Individuals with normal to moderate-high stress levels who received embolization experienced superior symptom relief, compared to individuals who underwent hysterectomy with unilateral or bilateral oophorectomy. However, individuals with very high stress levels did not derive as much treatment benefit as individuals with normal to moderate-high stress levels.

Kim (2006) reported outcomes of internal iliac embolotherapy for chronic pelvic pain caused by ovarian and pelvic varices from 1998 to 2003. A total of 97 individuals completed long-term follow-up (mean 45 months  $\pm$  18). Long-term follow-up showed that 83% of these individuals exhibited clinical improvement, 13% had no significant change, and 4% exhibited worsened condition.

Kwon (2007) reported findings for 67 individuals who underwent ovarian vein coil embolization. Evaluation after coil embolization was performed within 3-6 months (n=3), 6 months to 1 year (n=7), 1-2 years (n=13), 2-3 years (n=7), 3-4 years (n=7), 4-5 years (n=13), or 5-6 years (n=17). Outcome analysis showed 82% (55/67) experienced pain reduction after coil embolization, were satisfied with the procedure, and did not pursue any further treatment. Twelve individuals (18%, 12/67) responded that their pain level had not changed, or had become more severe; 9 individuals were treated surgically, and the remaining 3 individuals remained under continuous drug therapy.

Black (2010) commented on the paucity and quality of evidence supporting embolization treatment for PCS. In their publication, the authors outlined the research and reporting standards required to determine clinical efficacy of embolization for the treatment of PCS. The authors further proposed using pelvic venous insufficiency (PVI) to describe PCS because PVI is more specific to the pathophysiology and anatomy involved with compromised pelvic venous flow.

In 2013, Laborda reported the 5-year results of a prospective, single center case series of 202 individuals suffering from chronic pelvic pain (CPP) who were being treated for lower limb varices. Inclusion criteria were: lower limb varices and CPP of greater than 6 months.

duration; greater than 6 mm pelvic venous caliber on ultrasonography; and venous reflux or presence of communicating veins. Both ovarian and hypogastric veins were targeted for embolization. Pain level was assessed before and after treatment and during follow-up using a visual analog scale (VAS). Technical and clinical success and recurrence of leg varices were studied. The study participants completed a quality questionnaire, and clinical follow-up was performed at 1, 3, and 6 months and every year for 5 years. A total of 179 of 202 individuals (89%) completed the 5-year follow-up. The primary outcomes were pain improvement and individual post-procedure satisfaction. At baseline, the mean VAS was 7.34 (standard deviation [SD]: 0.7) and at 5 years the mean VAS was 0.78 (SD: 1.2). The decrease in the VAS score over time was statistically significant ( $p < 0.0001$ ). Mean individual satisfaction scores were 7.39 (SD: 1.5) on a 0 to 9 scale. There were 4 cases of coil migration (2%), which were considered to be a major complication; also groin hematoma occurred in 6 participants. Post-procedure abdominal pain was reported in 23 participants, and 24 participants (12.5%) experienced recurrence of their leg varices within the follow-up period. Notably, this study was limited by the lack of a control group for clinical outcomes comparison and no clearly defined diagnostic criteria for use in trial participant selection.

A systematic review by Maymoud (2016) was conducted using 20 case series (total  $n = 1081$ ) of vein embolization for PCS. There were no randomized trials, and only one study included a control group. The immediate technical success rate in the occlusion of the affected veins was 99%, and 17 studies reported at 1 to 3 months for a total of 641 participants. Results were reported as moderate to significant short-term, symptomatic relief in 88.1%, and 11.9% reported little or no relief. The total follow-up data varied between 7.3 months and 5 years. The authors concluded that in late follow-up, 86.6% reported relief of PCS symptoms and 13.6% experienced little or no relief.

In 2021 Senchal reported the results of a retrospective case series study involving 327 participants with pelvic venous disorders with chronic pelvic pain and a diagnosis of chronic pelvic vein incompetence treated with vein embolization using ethylene vinyl alcohol copolymer. Participants were followed at 1, 6, and 12 months, and yearly thereafter for 5 years. Assessments included clinical evaluation, pain and symptom assessment, QoL scoring, and Doppler ultrasound. The specific pelvic veins embolized were based on the assessment of reflux and leakage from the pelvis to the lower limbs. Some participants underwent angioplasty for nutcracker syndrome or May–Thurner syndrome (MTS). Intravascular or surgical treatment of symptomatic varicose limb veins were carried out in additional, separate procedures. The primary indication for embolization was PCS in 312 (95%) participants and lower leg varicose veins in 15 (5%). Overall, 614 embolization procedures were performed, with 249 (76%) in the left ovarian vein and 85 (26%) in the right ovarian vein. Additionally, embolizations were done in 510 tributary veins of the right internal iliac vein and 624 tributary veins of the left internal iliac vein. A total of 69 angioplasties with stent placement were carried out. Repeat treatment in a previously embolized vein occurred in 14 participants (4.6%) due to symptom recurrence. Postoperative complications were reported in 20 participants, including four major complications: an allergic bronchospasm, a false common femoral artery aneurysm, one asymptomatic migration of the embolic substance, and one infectious syndrome. Another 16 minor complications were reported, including a panic attack, seven delayed allergies, a severe vagal reaction, four cases of phlebitis, and four dyspnea cases. One participant with salpingitis underwent operative treatment at 1-month. No additional complications were reported during long-term follow-up. Follow-up questionnaires were completed by 306 participants (93.57%) 1 year after treatment. Pelvic pain was still present in 114 (37%) participants, but with mean VAS-recorded intensity decreased from 7.0 ( $\pm 2.4$ ) pre-operatively to 1.2 ( $\pm 1.9$ ) at 1 year ( $p < 0.001$ ). Pre-operative dysmenorrhea, dyspareunia, and postcoital pain had been present in 260 ( $\pm 79\%$ ), 164 ( $\pm 50\%$ ), and 226 ( $\pm 69\%$ ) participants, respectively, and was still present postoperatively in 58 ( $\pm 19\%$ ), 57 ( $\pm 19\%$ ), and 34 ( $\pm 11\%$ ) participants at 1 year ( $p < 0.001$ ). One-year ultrasound investigation was available in 307 (93.88%) participants, with statistically significant improvements ( $p < 0.001$ ) reported for parameters measured. The final endpoint telephone interview was completed by 288 participants at a mean 39 ( $\pm 18.5$ ) months. The mean pelvic pain level was reported to have significantly improved (7.0 preoperative vs. 2.0 post-operative,  $p < 0.001$ ). Elimination or improvement of pain was achieved in 266 (92.3%) participants. Complete clinical success was reported in 155 participants (53.8%) and partial success was recorded in 101 (35%). No clinical change was observed in 29 (10.1%) participants and worsening was noted in three (1.0%). Quality of life was reported to have deteriorated in three participants due to vulvar or inguinal pain. Significant improvements in each specific quality of life symptom category was reported, including postcoital pain, right inferior limb pain, and left inferior limb pain ( $p < 0.001$  for all). Almost all participants (276/288; 97.5%) reported an improvement in VAS-measured QoL at the final time point by a mean of 6.7, with only seven participants (2.5%) reporting no amelioration. No isolated data were presented for the use of embolization for PCS alone in this trial. Thus the performance of that procedure cannot be discerned as a result of this study. Although these results are promising, the study had several limitations including the lack of a control group, lack of standard ultrasound evaluation criteria, use of a VAS scale to measure QoL, and 12% attrition. The authors noted that “prospective randomized studies are needed to confirm these encouraging results.”

Sozutok (2022) reported on the results of a retrospective case series study involving 144 participants who underwent ovarian vein embolization with metallic coil, vascular plug, and/or 1-3% aethoxysklerol transformed into foam for the treatment of PCS. Coils alone were used in 47 participants (32.6%), while the addition of a vascular plug or 1-3% aethoxysklerol were used in the remaining 97 (67.3%). Follow-up was 100% ( $n = 144$ ) at 3 months, 68% ( $n = 99$ ) at 6 months, a 58% ( $n = 84$ ) at 12 months. Complete vascular occlusion was achieved in all the procedures, and the rate of technical success was 100%. As measured by reduction in pain scores at the 3 month follow-up, treatment was considered very successful in 37 participants (25.6%), successful in 55 (38.1%), and unsuccessful in 52 (35.3%). Mean pain score changed from a baseline of 35.4 preoperatively to 14.6 at 3 months, 12.2 at 6-months, and 14.1 at the 12-months. Coil-alone treatment resulted in significantly more successful treatments compared to treatments using a vascular plug or 1-3% aethoxysklerol in addition to the coil ( $p = 0.036$ ). These results are promising, but limited by the high attrition rate as well as significant methodological flaws including low power, lack of a control group, and lack of blinding.

Overall, the body of evidence addressing the use of embolization therapy for treatment of PCS is weak, with the majority of the available trials having methodological limitations including short follow-up times, significant attrition, and lack of objective measures.

#### *Embolization for Gonadal Venous Insufficiency and Testicular Varicocele*

Percutaneous embolization for gonadal venous insufficiency and testicular varicocele has very limited evidence demonstrating safety and efficacy as compared to surgical repair. In 2018, Makris published a systematic review assessing clinical outcomes for embolization treatment with different embolic materials for the management of testicular varicoceles. Study methodological quality was also analyzed. A total of 23 retrospective and 7 prospective clinical studies were included with a total of 3505 individuals. Although the technical success rates appeared high (above 90%) for all embolic materials used without significant differences, recurrence rates varied. Use of glue appeared to have the lowest recurrence rates, and sclerosant agents alone showed the highest rates. Recurrence rates were 4.2% for glue (11-3.08%; SD: 5.9) and 11.03% for sclerosants alone (18.8-5.15%; SD: 6.06) within an average follow-up period of 16.13 and 25.48 months respectively. Coils alone ( $n = 898$ ) had an average recurrence rate of 9.1% (17.8-1.4%; SD: 5.79) with a mean follow-up of 39.3 months. After an average of 12 months, the addition of sclerosants ( $n = 1628$ ) as an adjunct to coils did not improve recurrence rates (8.44%, 16.5-5.1%; SD: 3.4). At 1 year, glue appeared to be the most effective in preventing recurrence with coils being the second most effective. No differences were reported regarding the safety profile of the various embolic materials.

In 2021, Broe published the results of a retrospective-prospective case series study involving 62 participants with painful varicocele treated with coil spermatic vein embolization. The retrospective outcomes assessed were overall procedure success and pain measured with the Modified Early Warning Score (MEWS). Additionally, pain impact was prospectively assessed using the PIQ 6

questionnaire at both the pre- and post-treatment time points. There were two reported cases of treatment failure requiring subsequent surgical ligation. A single case of clinically significant recurrence at time of follow-up was also reported, resulting in an overall success rate of 95% at a median follow-up of nine months. Post-procedure pain measured by the MEWS tool was reported to be low. Adverse events included mild phlebitis treated successfully with NSAIDs (15%) and wound seroma (1%). No major vascular or embolic complications were reported. In total, 31 participants (50%) had completed both pre- and post-procedure PIQ-6 questionnaires and were included in the prospective aspect of the study. The results showed a reduction of 8.774 points in mean total PIQ-6 score at the final endpoint (t score -8.09,  $p < 0.0001$ ). All components on the PIQ-6 showed a statistically significant reduction post-treatment, with the largest reductions seen in the 'pain frequency' and 'impact on leisure activities' subscales ( $p < 0.05$  for both). The significant loss to follow-up in the prospective aspect of this study limits the utility of this data.

Also in 2021, Wong reported the results of a retrospective-prospective case series study involving 40 participants under the age of 18. All participants had left-sided varicocele causing testicular discrepancy or symptoms and were treated with embolization using a combination of sclerosant with or without coils. The retrospective follow-up used electronic records at 6-8 weeks post treatment. The prospective component of the study involved record review and telephone interview at a mean of 4.2 years. Technical success, defined as testicular vein occlusion on completion venogram, was achieved in 90% of participants. A total of 4 participants were not included due to abandoned procedures, leaving 36 participants in the final analysis. Embolization was performed with coils alone in 18 participants and coils plus sclerosant in the remaining 18. Follow-up data for the retrospective follow-up was available for 32 participants at a mean of 2.86 months ( $\pm 3.01$ , range 0.70-13.38). Short term (3-6 months) clinical success was reported in 30 participants (93.75%), with 2 (6.25%) experiencing early clinical failure. No complications or adverse events were reported. A total of 25 participants had both a pre- and post-procedure doppler ultrasound with varicocele grading. The authors reported a statistically significant reduction in mean peri-testicular vein size (3.7mm at baseline vs. 2.56 mm at follow-up ( $p < 0.00017$ )). Long term follow-up was available for 33 participants, of whom 31 (93.94%) were described as having long term clinical success. The 2 participants who had been reported as having early treatment failure were reported to have symptom improvement at the long term follow-up interview. No participants underwent surgical repair in the post-treatment period. The authors concluded that clinical success at early follow-up was high, 93.75%, as was late follow-up success of 93.94%. However, on the intention-to-treat analysis the late clinical success was reported to be 77.5%.

Overall, the published peer-reviewed evidence addressing the use of embolization to treat testicular varicocele is weak, being limited by low quality studies with low power, retrospective designed with no control groups or blinding.

#### *Authoritative Organization Recommendations*

In 2014, the Practice Committee of the American Society for Reproductive Medicine, in conjunction with the Society for Male Reproduction and Urology, issued an updated opinion report on varicocele and infertility. This document discusses the evaluation and management of testicular varicoceles in infertile couples and provided the following:

None of these methods (surgical repair and percutaneous embolization) has proven superior to the other in its ability to improve fertility, although there are differences in recurrence rates...Results are variable and depend on the experience and skill of the interventional radiologist performing the procedure.

The most recent version of the American College of Obstetricians and Gynecologists (ACOG) practice bulletin addressing chronic pelvic pain does not mention the use of embolization (ACOG, 2020).

In 2023, the Cardiovascular and Interventional Radiological Society of Europe (CIRSE) published their standards of practice on varicocele embolization. The workgroup recommends that treatment of clinical varicoceles should be offered to individuals with the following indications:

1. Palpable varicocele;
2. Testicular pain due to varicocele;
3. To prevent or reverse testicular atrophy in adolescent males;
4. Couples with documented infertility (in which the woman has normal fertility or potentially correctable infertility);
5. One or more abnormal semen parameters or sperm function test results;
6. Elevated sperm DNA fragmentation (DNAF);
7. To improve testicular function in hypogonadal men.

However, these recommendations are based on review articles and one meta-analysis, not on primary research evidence.

Finally, the Society of Interventional Radiology (SIR) has not published any official guideline or recommendation documents regarding the use of vein embolization for the treatment of conditions related to vascular pelvic pain conditions.

#### *Summary*

To summarize the current state of the published evidence, randomized studies are needed to determine whether embolization of the internal iliac or gonadal veins is an effective treatment for PCS or testicular varicocele. Given that no randomized trials have been performed in this area, the safety and effectiveness of vein embolization as a treatment for PCS or testicular venous insufficiency (varicocele) cannot be reliably distinguished from other management approaches, including medical therapy or watchful waiting.

## **Background/Overview**

PCS is often associated with dyspareunia and postcoital pain and typically affects young multiparous individuals. The underlying etiology is thought to be related to varices of the ovarian veins, leading to pelvic congestion. Approximately 10-15% of individuals may have pelvic varicose veins but not all will have symptoms. As there are many etiologies of CPP, PCS is often a diagnosis of exclusion, that is confirmed when other conditions have been ruled-out. The presence of pelvic varices associated with the syndrome may be identified using a variety of imaging methods, such as MRI, CT scanning or contrast venography.

For those who fail medical therapy (for example, analgesics, vasoconstrictors and hormonal therapies), surgical ligation of the ovarian vein may be considered. More recently, catheter-based embolization therapy of the ovarian and internal iliac veins has been proposed. Catheter-based therapies may be performed on an inpatient or outpatient basis depending on the veins that are accessed and the technique that is used. Ovarian and internal iliac vein embolization is a therapy used to block blood flow to the veins that are causing pelvic congestion. It is performed by accessing the venous system via a catheter and injecting or deploying an inert material (for example, coils, solutions, plugs) to obstruct the affected veins. The embolization procedure may require multiple sessions. For example, one method involves use of gel foam and coils for embolization of the ovarian vein(s). This may be followed 3 to 10 weeks later by embolization of the internal iliac veins to reduce the risk of recurrence. Occasionally, the coils may migrate to another internal organ system, such as the pulmonary circulation, necessitating a retrieval procedure.

## Definitions

**Dysmenorrhea:** Recurrent pelvic pain associated with menses and described as a painful cramping sensation in the lower abdomen, often accompanied by other symptoms, such as sweating, tachycardia, headaches, nausea, vomiting, diarrhea, and tremulousness. Primary dysmenorrhea begins at or shortly after menarche and is usually not accompanied by pelvic pathologic conditions. Secondary dysmenorrhea arises later in life and is usually associated with other pelvic conditions.

**Dyspareunia:** This term refers to painful sexual intercourse, due to medical or psychological causes. The symptom is significantly more common in women than in men, affecting up to one-fifth of women at some point in their lives. An extreme form, in which the woman's pelvic floor musculature contracts involuntarily, is termed vaginismus.

**Embolization:** A procedure in which targeted blood vessels are obstructed by delivering inert material (for example, coils, gels, foam) into the circulatory system.

**Multiparous:** The clinical term used for individuals with a history of one or more previous live births.

**Pelvic congestion syndrome (PCS):** A syndrome involving venous congestion and chronic pelvic pain that is generally associated with the veins in the pelvic area (for example, the ovarian veins).

**Varices:** Enlarged or twisted blood vessels.

**Varicocele:** A condition in which the testicular veins are enlarged within the scrotum caused by dilatation of the pampiniform plexus of spermatic veins and blood pooling. This condition results from incompetence of blood vessel leaflets, which leads to retrograde blood flow and increased pressure in the scrotal venous complex. This can result in testicular atrophy and decreased sperm quantity.

## Coding

*The following codes for treatments and procedures applicable to this document are included below for informational purposes. Inclusion or exclusion of a procedure, diagnosis or device code(s) does not constitute or imply member coverage or provider reimbursement policy. Please refer to the member's contract benefits in effect at the time of service to determine coverage or non-coverage of these services as it applies to an individual member.*

### When services are Investigational and Not Medically Necessary:

#### CPT

37241	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 (eg, congenital or acquired venous malformations, venous and capillary hemangiomas, varices, varicoceles)
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#### ICD-10 Procedure

06L03DZ	Occlusion of inferior vena cava with intraluminal device, percutaneous approach [includes right ovarian vein, right testicular vein]
06L04DZ	Occlusion of inferior vena cava with intraluminal device, percutaneous endoscopic approach [includes right ovarian vein, right testicular vein]
06LB3DZ	Occlusion of left renal vein with intraluminal device, percutaneous approach [includes left ovarian vein, left testicular vein]
06LB4DZ	Occlusion of left renal vein with intraluminal device, percutaneous endoscopic approach [includes left ovarian vein, left testicular vein]
06LH3DZ	Occlusion of right hypogastric vein with intraluminal device, percutaneous approach [includes internal iliac vein]
06LH4DZ	Occlusion of right hypogastric vein with intraluminal device, percutaneous endoscopic approach [includes internal iliac vein]
06LY3DZ	Occlusion of lower vein with intraluminal device, percutaneous approach
06LY4DZ	Occlusion of lower vein with intraluminal device, percutaneous endoscopic approach

#### ICD-10 Diagnosis

I86.1	Scrotal varices (varicocele)
I86.2	Pelvic varices [when indicated as ovarian and internal iliac vein varices]
I87.2	Venous insufficiency [when specified as gonadal or pelvic venous insufficiency]
N94.89	Other specified conditions associated with female genital organs and menstrual cycle [when indicated as chronic pelvic pain, pelvic congestion syndrome]
R10.2	Pelvic and perineal pain

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1. American College of Obstetricians and Gynecologists Committee on Practice Bulletin - Gynecology. Chronic Pelvic Pain: ACOG Practice Bulletin, Number 218. *Obstet Gynecol.* 2020; 135(3):e98-e109.
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**The use of specific product names is illustrative only. It is not intended to be a recommendation of one product over another, and is not intended to represent a complete listing of all products available.**

## Document History

Status	Date	Action	
Reviewed	11/09/2023	Medical Policy & Technology Assessment Committee (MPTAC) review. Updated Rationale and References Sections.	
Reviewed	11/10/2022	MPTAC review. References were updated.	
Reviewed	11/11/2021	MPTAC review. The Rationale, Background, and References sections were updated.	
Revised	11/05/2020	MPTAC review. An INV and NMN statement for embolization for varicocele has been added to the Position Statement section. The Scope, Rationale, Definitions, References and Index sections were updated. The title has changed from: Ovarian and Internal Iliac Vein Embolization as a Treatment of Pelvic Congestion Syndrome to: Vein Embolization as a Treatment for Pelvic Congestion Syndrome and Varicocele. Updated Coding section; added ICD-10-CM I86.1 and ICD-10-PCS codes.	
Reviewed	02/20/2020	MPTAC review. References were updated.	
Reviewed	03/21/2019	MPTAC review. References were updated.	
Reviewed	03/22/2018	MPTAC review. The document header wording was updated from “Current Effective Date” to “Publish Date.” References were updated.	
Reviewed	05/04/2017	MPTAC review. The Rationale and References were updated.	
Reviewed	05/05/2016	MPTAC review. Rationale and References were updated. Removed ICD-9 codes from Coding section.	
Reviewed	05/07/2015	MPTAC review. References were updated.	
Reviewed	05/15/2014	MPTAC review. The Rationale and References were updated.	
	01/01/2014	Updated Coding section with 01/01/2014 CPT changes; removed 37204 deleted 12/31/2013, and 75894.	
Reviewed	05/09/2013	MPTAC review. The Rationale, Definitions and References were updated.	
Reviewed	05/10/2012	MPTAC review. The Rationale and References were updated.	
Reviewed	05/19/2011	MPTAC review. References were updated.	
Reviewed	05/13/2010	MPTAC review. References were updated.	
Reviewed	05/21/2009	MPTAC review. The Rationale and References were updated.	
Reviewed	05/15/2008	MPTAC review. Description clarified by removing surgical ligation. References updated.	
	02/21/2008	The phrase "investigational/not medically necessary" was clarified to read "investigational and not medically necessary." This change was approved at the November 29, 2007 MPTAC meeting.	
Reviewed	05/17/2007	MPTAC review. References updated.	
Reviewed	06/08/2006	MPTAC review. The Rationale and References were updated.	
	11/22/2005	Added reference for Centers for Medicare and Medicaid Services (CMS) – National Coverage Determination (NCD).	
Revised	07/14/2005	MPTAC review. Revision based on Pre-merger Anthem and Pre-merger WellPoint Harmonization.	
Pre-Merger Organizations	Last Review Date	Document Number	Title
Anthem, Inc.	10/28/2004	SURG.00062	Ovarian and Internal Iliac Vein Embolization as a Treatment of Pelvic Congestion Syndrome
WellPoint Health Networks, Inc.	06/24/2004	3.09.09	Ovarian and Internal Iliac Vein Embolization as a Treatment of Pelvic Congestion Syndrome

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