PREMERA | BLUE CROSS

An Independent Licensee of the Blue Cross Blue Shield Association

MEDICAL POLICY – 7.01.55

Prostate Artery Embolization for Benign Prostatic Hyperplasia

BCBSA Ref. Policy:	7.01.55
Effective Date:	**Jul. 2, 2026**
Last Revised:	Mar. 10, 2026
Replaces:	N/A

RELATED MEDICAL POLICIES:

2.01.544	Transurethral Water Vapor Thermal Therapy and Transurethral Water Jet Ablation for Benign Prostatic Hyperplasia
7.01.175	Temporarily Implanted Nitinol Device (iTind) for Benign Prostatic Hyperplasia
7.01.598	Prostatic Urethral Lift

Select a hyperlink below to be directed to that section.

POLICY CRITERIA | DOCUMENTATION REQUIREMENTS | CODING
RELATED INFORMATION | EVIDENCE REVIEW | REFERENCES | HISTORY

∞ Clicking this icon returns you to the hyperlinks menu above.

Introduction

Benign prostatic hyperplasia is the medical term for an enlarged prostate. This condition is common as people age and can make it hard to pass urine. Some treatments focus on reducing symptoms with medicines or surgery. Prostate artery embolization is a newer procedure that aims to shrink the prostate by blocking some of its blood supply. It is less invasive than surgery, but researchers are still studying how well it works and how long the benefits last. Because of this, its safety and effectiveness are not yet clear. Prostate artery embolization procedures are considered investigational (unproven). There's not enough evidence to show they are effective.

Note: The Introduction section is for your general knowledge and is not to be taken as policy coverage criteria. The rest of the policy uses specific words and concepts familiar to medical professionals. It is intended for providers. A provider can be a person, such as a doctor, nurse, psychologist, or dentist. A provider also can be a place where medical care is given, like a hospital, clinic, or lab. This policy informs them about when a service may be covered.

Policy Coverage Criteria

Surgery	Investigational
Prostate artery embolization	**Prostate artery embolization is considered investigational as a treatment for benign prostatic hyperplasia.**

Coding

Code	Description
CPT	
37243	Vascular embolization or occlusion, inclusive of all radiological supervision and interpretation, intraprocedural roadmapping, and imaging guidance necessary to complete the intervention; for tumors, organ ischemia, or infarction (use to report prostate artery embolization)

Note: CPT codes, descriptions and materials are copyrighted by the American Medical Association (AMA).

Related Information

N/A.

Evidence Review

Description

Prostate arterial embolization (PAE) has been investigated as a minimally invasive alternative to transurethral resection of the prostate (TURP), considered the traditional standard treatment for benign prostatic hyperplasia (BPH). PAE differs from other minimally invasive surgical therapies in treatment approach (endovascular vs transurethral) and mechanism (embolic), and thus requires different considerations. An interventional radiologist injects microspheres through a catheter to the blood vessels around the prostate, reducing the blood supply to multiple

different areas. No surgical intervention is required for this procedure and recovery times are often less than that of TURP.

Background

Benign prostatic hyperplasia (BPH) is a common condition in older men, affecting to some degree 40% of men in their 50s, 70% of those between ages 60 and 69, and almost 80% of those ages 70 years and older.[1] BPH is a histologic diagnosis defined as an increase in the total number of stromal and glandular epithelial cells within the transition zone of the prostate gland. In some men, BPH results in prostate enlargement which can, in turn, lead to benign prostate obstruction and bladder outlet obstruction, which are often associated with lower urinary tract symptoms (LUTS) including urinary frequency, urgency, irregular flow, weak stream, straining, and waking up at night to urinate. LUTS are the most commonly presenting urological complaint and can have a significant impact on quality of life (QOL).

BPH does not necessarily require treatment. The decision on whether to treat BPH is based on an assessment of the impact of symptoms on QOL along with the potential side effects of treatment. Options for treatment include watchful waiting, medication, and minimally invasive surgical procedures. Patients with persistent symptoms despite medical treatment may be considered for surgical treatment. The traditional standard treatment for BPH is transurethral resection of the prostate (TURP). TURP is generally considered the reference standard for comparisons of BPH procedures. A variety of minimally invasive surgical approaches are available as an alternative to TURP for management of LUTS in men with BPH. These methods include water vapor thermal therapy, prostatic urethral lift, and temporary implanted prostatic devices. Each of these approaches is discussed in detail in separate evidence reviews (see **Related Policies**).

Prostate arterial embolization (PAE) is a minimally invasive treatment option that works by reducing blood supply to prostatic arteries. PAE differs from other minimally invasive surgical therapies in treatment approach (endovascular vs transurethral) and mechanism (embolic) and thus requires different considerations.[2] An interventional radiologist injects microspheres through a catheter to the blood vessels around the prostate, reducing the blood supply to multiple different areas. No surgical intervention is required for this procedure and recovery times are often less than that of TURP. PAE requires significant clinician training and is associated with some common side effects such as post-PAE syndrome, blood in urine or semen, rare cases of prostatic or bladder spasms.

Summary of Evidence

For individuals who have benign prostatic hyperplasia (BPH) and lower urinary tract symptoms (LUTS) who receive prostate artery embolization (PAE), the evidence includes systematic reviews, randomized controlled trials (RCTs) and noncomparative studies. The outcomes of interest are symptoms, functional outcomes, quality of life, and procedure-related morbidity. A Cochrane meta-analysis of seven RCTs comparing PAE with transurethral resection of the prostate (TURP) or a sham procedure in men with LUTS due to BPH reported similar improvements in symptom scores and quality of life across procedures over both short-term (≤12 months) and long-term (13-24 months) follow-up. There remained significant uncertainty about major adverse events (very low-certainty evidence), but PAE was associated with a higher likelihood of retreatment (moderate-certainty evidence). The long-term effect on erectile function was minimal (low-certainty evidence), and PAE may continue to lower the incidence of ejaculatory disorders (low-certainty evidence). A qualitative systematic review of five RCTs and two observational studies found that PAE and TURP resulted in comparable symptom and quality of life improvements at 12 months. TURP offered greater increases in urine flow and prostate volume reduction, while PAE had shorter hospital stays and fewer complications. Three RCTs, published following the systematic reviews, have assessed the efficacy of PAE relative to conventional therapies for BPH. One RCT conducted in Switzerland (2024) reported that TURP demonstrated superior efficacy to PAE in improving LUTS and urinary flow rates at 5-years of follow-up, although erectile function outcomes favored PAE. Another RCT from Australia (2024) indicated that PAE, when utilized as a first-line therapy, resulted in greater reductions in prostate volume, improved symptom scores, and enhanced quality of life relative to medical therapy, with a lower incidence of adverse events. The third RCT, performed in France (2023), found that PAE was more effective than combined medical therapy for patients with moderate LUTS, yielding greater improvements in both symptoms and erectile function, with no major adverse events and a decreased need for retreatment. All three trials were open-label and characterized by high loss to follow-up and significant patient crossover between study arms. A retrospective, single-center study of 317 men with moderate to severe BPH found bilateral PAE had lower recurrence rates than a unilateral approach at over 2-years of follow-up. There is a paucity of direct comparative data between PAE and other minimally invasive therapies for BPH, such as transurethral water vapor thermal therapy, water jet ablation, prostatic urethral lift, and temporarily implanted nitinol devices; these modalities are addressed in separate evidence reviews. Future studies should specifically assess outcomes related to repeat interventions and unilateral PAE procedures. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

Ongoing and Unpublished Clinical Trials

Some currently unpublished trials that might influence this review are listed in **Table 1**.

Table 1. Summary of Key Trials

NCT No.	Trial Name	Planned Enrollment	Completion Date
Ongoing			
NCT07242807	Evaluation of Clinical and Functional Outcomes After Minimally Invasive Prostate Interventions: A Multicenter Prospective REDCap Registry (MIST Study)	2000	Dec 2030
NCT04084938	Prostatic Artery Embolization vs Transurethral Resection of the Prostate or Open Prostatectomy in Patients With Symptomatic Benign Prostatic Hyperplasia	140	Dec 2027
NCT04807010	PROARTE -PROstate ARTery to Reduce the Symptoms of Benign Prostatic Hyperplasia	108	Aug 2026
NCT04245566	Prostatic Artery Embolization vs. Pharmacotherapy for Lower Urinary Tract Symptoms Secondary to Benign Prostatic Hyperplasia: a Multicenter Randomized Controlled Trial	425	Dec 2025
NCT05531240	Transurethral Prostate Resection (TURP) vs. Prostate Artery Embolization (PAE): Open Multicentric Randomized Study for Evaluation of Outcomes, Complications, and Health Economics	104	Dec 2025

NCT: national clinical trial. [a] Denotes industry-sponsored or cosponsored trial.

Practice Guidelines and Position Statements

The purpose of the following information is to provide reference material. Inclusion does not imply endorsement or alignment with the policy conclusions.

Guidelines or position statements will be considered for inclusion if they were issued by, or jointly by, a US professional society, an international society with US representation, or National

Institute for Health and Care Excellence (NICE). Priority will be given to guidelines that are informed by a systematic review, include strength of evidence ratings, and include a description of management of conflict of interest.

American Urological Association

In 2021, the American Urological Association (AUA) published guidelines on the surgical evaluation and treatment of LUTS attributed to BPH.[28] An amendment to these guidelines was published in 2023.[13]

The following recommendations are related to PAE based on a systematic review by Sandhu et al (2024)[13] to support these updated AUA guidelines:

- PAE may be offered for the treatment of LUTS/BPH. PAE should be performed by clinicians trained in this interventional radiology procedure following a discussion of the potential risks and benefits. (Conditional Recommendation: Evidence level: Grade C)

Society of Interventional Radiology et al

In a 2019 multi-society, evidence-based position statement regarding PAE for the treatment of lower urinary tract symptoms due to BPH, the Society of Interventional Radiology (SIR) states that PAE is a safe and effective treatment, has good short and intermediate term efficacy and is a treatment option for the following:[29]

- For appropriately selected men with BPH and moderate to severe LUTS. (Level of Evidence: B; strong recommendation)
- In patients with BPH and moderate to severe LUTS who have very large prostate glands (> 80 cm^3), without an upper limit of prostate size. (C; moderate recommendation)
- In patients with BPH and acute or chronic urinary retention in the setting of preserved bladder function as a method of achieving catheter independence. (C; moderate recommendation)
- In patients with BPH and moderate to severe LUTS who wish to preserve erectile and/or ejaculatory function. (C; weak recommendation)
- In patients with hematuria of prostatic origin as a method of achieving cessation of bleeding. (D; strong recommendation)

- In patients with BPH and moderate to severe LUTS who are deemed not to be surgical candidates for any of the following reasons: advanced age, multiple comorbidities, coagulopathy, or inability to stop anticoagulation or antiplatelet therapy. (E; moderate recommendation)
- PAE should be included in the individualized patient centered discussions regarding treatment options. (E; strong recommendation)

These recommendations were based on a review of 6 meta-analyses published between 2016 to 2019. SIR also gives a strong recommendation that interventional radiologists, given their knowledge of arterial anatomy, advanced microcatheter techniques, and expertise in embolization procedures, are the specialists best suited for the performance of PAE.

National Institute for Health and Care Excellence

In 2018, the NICE issued the following guidance on PAE for LUTS caused by BPH:[30]

"1.1 Current evidence on the safety and efficacy of prostate artery embolisation for benign prostatic hyperplasia is adequate to support the use of this procedure provided that standard arrangements are in place for clinical governance, consent and audit.

1.2 Patient selection should be done by a urologist and an interventional radiologist.

1.3 This technically demanding procedure should only be done by an interventional radiologist with specific training and expertise in prostatic artery embolisation."

Medicare National Coverage

There is no national coverage determination.

Regulatory Status

Prostate surgeries are procedures and, therefore, not regulated by the FDA. However, devices and instruments used during the surgery may require FDA approval. Refer to the following website for additional information:

http://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfPMN/pmn.cfm. (Accessed February 4, 2026)

References

1. UpToDate. Epidemiology and pathophysiology of benign prostatic hyperplasia. Literature review current through: Jan 2026. Accessed at: **https://www.uptodate.com/contents/epidemiology-and-pathophysiology-of-benign-prostatic-hyperplasia**. Accessed February 4, 2026.
2. Mouli S, Salem R, McClure TD. Prostate Artery Embolization for Benign Prostatic Hyperplasia. J Urol. Jul 2024; 212(1): 216-219. PMID 38703386
3. Rosen RC, Catania JA, Althof SE, et al. Development and validation of four-item version of Male Sexual Health Questionnaire to assess ejaculatory dysfunction. Urology. May 2007; 69(5): 805-9. PMID 17482908
4. Cappelleri JC, Rosen RC. The Sexual Health Inventory for Men (SHIM): a 5-year review of research and clinical experience. Int J Impot Res. 2005; 17(4): 307-19. PMID 15875061
5. Sønksen J, Barber NJ, Speakman MJ, et al. Prospective, randomized, multinational study of prostatic urethral lift versus transurethral resection of the prostate: 12-month results from the BPH6 study. Eur Urol. Oct 2015; 68(4): 643-52. PMID 25937539
6. Sarma AV, Wei JT. Clinical practice. Benign prostatic hyperplasia and lower urinary tract symptoms. N Engl J Med. Jul 19 2012; 367(3): 248-57. PMID 22808960
7. O'leary MP. Validity of the "bother score" in the evaluation and treatment of symptomatic benign prostatic hyperplasia. Rev Urol. 2005; 7(1): 1-10. PMID 16985801
8. Barry MJ, Williford WO, Chang Y, et al. Benign prostatic hyperplasia specific health status measures in clinical research: how much change in the American Urological Association symptom index and the benign prostatic hyperplasia impact index is perceptible to patients?. J Urol. Nov 1995; 154(5): 1770-4. PMID 7563343
9. Roehrborn CG, Wilson TH, Black LK. Quantifying the contribution of symptom improvement to satisfaction of men with moderate to severe benign prostatic hyperplasia: 4-year data from the CombAT trial. J Urol. May 2012; 187(5): 1732-8. PMID 22425127
10. Barry MJ, Fowler FJ, O'Leary MP, et al. Measuring disease-specific health status in men with benign prostatic hyperplasia. Measurement Committee of The American Urological Association. Med Care. Apr 1995; 33(4 Suppl): AS145-55. PMID 7536866
11. Jung JH, McCutcheon KA, Borofsky M, et al. Prostatic arterial embolization for the treatment of lower urinary tract symptoms in men with benign prostatic hyperplasia. Cochrane Database Syst Rev. Mar 29 2022; 3(3): CD012867. PMID 35349161
12. Ini' C, Vasile T, Foti PV, et al. Prostate Artery Embolization as Minimally Invasive Treatment for Benign Prostatic Hyperplasia: An Updated Systematic Review. J Clin Med. Apr 25 2024; 13(9). PMID 38731058
13. Sandhu JS, Bixler BR, Dahm P, et al. Management of Lower Urinary Tract Symptoms Attributed to Benign Prostatic Hyperplasia (BPH): AUA Guideline Amendment 2023. J Urol. Jan 2024; 211(1): 11-19. PMID 37706750
14. Abt D, Müllhaupt G, Hechelhammer L, et al. Prostatic Artery Embolisation Versus Transurethral Resection of the Prostate for Benign Prostatic Hyperplasia: 2-yr Outcomes of a Randomised, Open-label, Single-centre Trial. Eur Urol. Jul 2021; 80(1): 34-42. PMID 33612376
15. Pisco JM, Bilhim T, Costa NV, et al. Randomised Clinical Trial of Prostatic Artery Embolisation Versus a Sham Procedure for Benign Prostatic Hyperplasia. Eur Urol. Mar 2020; 77(3): 354-362. PMID 31831295

16. Insausti I, Sáez de Ocáriz A, Galbete A, et al. Randomized Comparison of Prostatic Artery Embolization versus Transurethral Resection of the Prostate for Treatment of Benign Prostatic Hyperplasia. J Vasc Interv Radiol. Jun 2020; 31(6): 882-890. PMID 32249193

17. Radwan A, Farouk A, Higazy A, et al. Prostatic artery embolization versus transurethral resection of the prostate in management of benign prostatic hyperplasia. Prostate Int. Sep 2020; 8(3): 130-133. PMID 33102395

18. Abt D, Hechelhammer L, Müllhaupt G, et al. Comparison of prostatic artery embolisation (PAE) versus transurethral resection of the prostate (TURP) for benign prostatic hyperplasia: randomised, open label, non-inferiority trial. BMJ. Jun 19 2018; 361: k2338. PMID 29921613

19. Carnevale FC, Iscaife A, Yoshinaga EM, et al. Transurethral Resection of the Prostate (TURP) Versus Original and PErFecTED Prostate Artery Embolization (PAE) Due to Benign Prostatic Hyperplasia (BPH): Preliminary Results of a Single Center, Prospective, Urodynamic-Controlled Analysis. Cardiovasc Intervent Radiol. Jan 2016; 39(1): 44-52. PMID 26506952

20. Gao YA, Huang Y, Zhang R, et al. Benign prostatic hyperplasia: prostatic arterial embolization versus transurethral resection of the prostate--a prospective, randomized, and controlled clinical trial. Radiology. Mar 2014; 270(3): 920-8. PMID 24475799

21. Ray AF, Powell J, Speakman MJ, et al. Efficacy and safety of prostate artery embolization for benign prostatic hyperplasia: an observational study and propensity-matched comparison with transurethral resection of the prostate (the UK-ROPE study). BJU Int. Aug 2018; 122(2): 270-282. PMID 29645352

22. Qiu Z, Zhang C, Wang X, et al. Clinical evaluation of embolization of the superior vesical prostatic artery for treatment of benign prostatic hyperplasia: a single-center retrospective study. Wideochir Inne Tech Maloinwazyjne. Dec 2017; 12(4): 409-416. PMID 29362657

23. Müllhaupt G, Hechelhammer L, Graf N, et al. Prostatic Artery Embolisation Versus Transurethral Resection of the Prostate for Benign Prostatic Obstruction: 5-year Outcomes of a Randomised, Open-label, Noninferiority Trial. Eur Urol Focus. Sep 2024; 10(5): 788-795. PMID 38531756

24. Brown N, Kiosoglous A, Castree S, et al. The 'Prostate Embolisation AS first-line therapY compAred to meDication in treatment naïVe men with prostAte eNlargement, a randomised ControllEd trial' (P-EASY ADVANCE): a randomised controlled trial of prostate embolisation vs medication for BPH. BJU Int. Dec 2024; 134 Suppl 2(Suppl 2): 38-46. PMID 39139009

25. Sapoval M, Thiounn N, Descazeaud A, et al. Prostatic artery embolisation versus medical treatment in patients with benign prostatic hyperplasia (PARTEM): a randomised, multicentre, open-label, phase 3, superiority trial. Lancet Reg Health Eur. Aug 2023; 31: 100672. PMID 37415648

26. Brown N, Firouzmand S, Kiosoglous A, et al. Prostate artery EmbolisAtion Safety and efficacY: Preliminary and foLlow-Up urodynamic Studies (P-EASY PLUS). BJU Int. Oct 2025; 136 Suppl 2(Suppl 2): S54-S61. PMID 40501328

27. Carnevale FC, Moreira AM, de Assis AM, et al. Prostatic Artery Embolization for the Treatment of Lower Urinary Tract Symptoms Due to Benign Prostatic Hyperplasia: 10 Years' Experience. Radiology. Aug 2020; 296(2): 444-451. PMID 32484416

28. American Urological Association (AUA). Management of Lower Urinary Tract Symptoms Attributed to Benign Prostatic Hyperplasia: AUA Guideline (Published 2021; Amended 2023). Accessed at: **https://www.auanet.org/guidelines-and-quality/guidelines/benign-prostatic-hyperplasia-(bph)-guideline**. Accessed February 4, 2026.

29. McWilliams JP, Bilhim TA, Carnevale FC, et al. Society of Interventional Radiology Multisociety Consensus Position Statement on Prostatic Artery Embolization for Treatment of Lower Urinary Tract Symptoms Attributed to Benign Prostatic Hyperplasia: From the Society of Interventional Radiology, the Cardiovascular and Interventional Radiological Society of Europe, Société Française de Radiologie, and the British Society of Interventional Radiology: Endorsed by the Asia Pacific Society of Cardiovascular and Interventional Radiology, Canadian Association for Interventional Radiology, Chinese College of Interventionalists, Interventional Radiology Society of Australasia, Japanese Society of Interventional Radiology, and Korean Society of Interventional Radiology. J Vasc Interv Radiol. May 2019; 30(5): 627-637.e1. PMID 30926185

30. National Institute for Health and Care Excellence (NICE). Prostate artery embolisation for lower urinary tract symptoms caused by benign prostatic hyperplasia (HealthTech guidance; Reference number: HTG469; Published: 25 April 2018). Accessed at: **https://www.nice.org.uk/guidance/htg469**. Accessed February 4, 2026.

31. Centers for Medicare & Medicaid Services. NCD: Therapeutic Embolization (20.28). Accessed at: **https://www.cms.gov/medicare-coverage-database/view/ncd.aspx?NCDId=52**. Accessed February 4, 2026.

History

Date	Comments
04/01/26	New policy, approved March 10, 2026, effective for dates of service on or after July 2, 2026, following 90-day provider notification. Policy created with literature review through December 5, 2025. Prostate artery embolization is considered investigational as a treatment for benign prostatic hyperplasia. Add to Surgery section.

Scope: Medical policies are systematically developed guidelines that serve as a resource for Company staff when determining coverage for specific medical procedures, drugs or devices. Coverage for medical services is subject to the limits and conditions of the member benefit plan. Members and their providers should consult the member benefit booklet or contact a customer service representative to determine whether there are any benefit limitations applicable to this service or supply. This medical policy does not apply to Medicare Advantage.