Cohere Medical Policy - Pulmonary Artery Denervation (PADN)

Clinical Policy for Medical Necessity Review

Version: 3
Cohere Health UMC Approval Date: July 24, 2025
Last Annual Review: July 24, 2025
Revision: Not Applicable
Next Annual Review: July 24, 2026

Important Notices

Notices & Disclaimers:

GUIDELINES ARE SOLELY FOR COHERE'S USE IN PERFORMING MEDICAL NECESSITY REVIEWS AND ARE NOT INTENDED TO INFORM OR ALTER CLINICAL DECISION-MAKING OF END USERS.

Cohere Health, Inc. ("**Cohere**") has published these clinical guidelines to determine the medical necessity of services (the "**Guidelines**") for informational purposes only, and solely for use by Cohere's authorized "**End Users**". These Guidelines (and any attachments or linked third-party content) are not intended to be a substitute for medical advice, diagnosis, or treatment directed by an appropriately licensed healthcare professional. These Guidelines are not in any way intended to support clinical decision-making of any kind; their sole purpose and intended use is to summarize certain criteria Cohere may use when reviewing the medical necessity of any service requests submitted to Cohere by End Users. Always seek the advice of a qualified healthcare professional regarding any medical questions, treatment decisions, or other clinical guidance. The Guidelines, including any attachments or linked content, are subject to change at any time without notice.

Other Notices:

Policy Information:

Specialty Area: Cardiovascular Disease
Policy Name: Cohere Medical Policy - Pulmonary Artery Denervation (PADN)
Type: [**X**] Adult (18+ yo) | [**X**] Pediatric (0-17 yo)

Table of Contents

Medical Necessity Criteria

Service: Pulmonary Artery Denervation (PADN)

Cohere Health takes an evidence-based approach to reviewing imaging and procedure requests, meaning that sufficient clinical information must be provided at the time of submission to determine medical necessity. Documentation must include a recent and detailed history, physical examination related to the onset or change in symptoms, relevant lab results, prior imaging, and details of previous treatments. Advanced imaging or procedures should be requested after a recent clinical evaluation by the treating provider, which may include referral to a specialist.

- When a specific clinical indication is not explicitly addressed in the Cohere Health medical policy, medical necessity will be determined based on established clinical best practices, as supported by evidence-based literature, peer-reviewed sources, professional society guidelines, and state or national recommendations, unless otherwise directed by the health plan.
- Requests submitted without clinical documentation, or those that do not align with the provided clinical information—such as mismatched procedure, laterality, body part, or CPT code—may be denied for lack of medical necessity due to insufficient or inconsistent clinical information.
- When there are multiple diagnostic or therapeutic procedures requested simultaneously or within the past three months, each will be reviewed independently. Clinical documentation must clearly justify all of the following:
    - The medical necessity of each individual request
    - Why prior imaging or procedures were inconclusive or why additional/follow-up studies are needed
    - How the results will impact patient management or treatment decisions
- Requests involving adjacent or contiguous body parts may be considered not medically necessary if the documentation demonstrates that the patient's primary symptoms can be adequately assessed with a single study or procedure.

Description

Pulmonary artery denervation (PADN) is a minimally invasive, catheter-based procedure to reduce pulmonary artery pressure in patients with pulmonary arterial hypertension (PAH).[1] The most common method of PADN is catheter-directed thermal ablation.

Medical Necessity Criteria

Indications

Pulmonary artery denervation (PADN) is considered appropriate if **ANY** of the following is **TRUE**[2,3]:

- This procedure is clinically unproven and not medically necessary. There is inconclusive evidence of its effectiveness.

Non-Indications

Pulmonary artery denervation (PADN) is not considered appropriate if **ANY** of the following is **TRUE**[2,3]:

- This is not applicable, as there are no indications.

Level of Care Criteria

Inpatient or Outpatient

Procedure Codes (CPT/HCPCS)

CPT/HCPCS Code	Code Description
0793T	Percutaneous transcatheter thermal ablation of nerves innervating the pulmonary arteries, including right heart catheterization, pulmonary artery angiography, and all imaging guidance
0632T	Percutaneous transcatheter ultrasound ablation of nerves innervating the pulmonary arteries, including right heart catheterization, pulmonary artery angiography, and all imaging guidance

Medical Evidence

Pulmonary arterial hypertension (PAH) is a disease with a poor prognosis and high mortality that leads to right ventricular failure and sudden cardiac death. Chin et al. (2024) outlined the current treatment algorithm for PAH, with maximal medical therapy now involving four drugs.[2] Current therapy, consisting of a combination of pharmacological treatments, yields mixed results.[4] Pulmonary artery denervation (PADN) is a relatively new, minimally invasive endovascular catheter-based interventional procedure for treating patients with PAH.[1] Most clinical studies and reviews agree that larger clinical trials are needed to define and confirm the efficacy of PADN.[1,2,5]

Abouzid et al. (2025) conducted a meta-analysis to evaluate patients with pulmonary hypertension and the hemodynamic parameters of PADN (e.g., mean right atrial pressure [mRAP], mean pulmonary artery pressure [mPAP], and pulmonary vascular resistance [PVR]). The authors stated that while PADN may be effective, additional research is needed. Specifically, long-term results are required to understand the hemodynamic parameters' impact, safety, and efficacy. Patient selection criteria also warrant further research to ensure proper treatment.[6]

Salazar et al. (2023) and Constatine et al. (2021) also stated that additional randomized controlled trials (RCTs) are needed to establish a recommendation for the use of PADN.[7,8] Vorla et al. (2023) published an abstract outlining the results of a meta-analysis of 8 studies (including 7 RCTs) and 577 patients. The authors noted the small sample size of trials.[9]

Zhang et al. (2022) performed an RCT on the effect of PADN among 128 patients with stable group 1 PAH. While results were positive, larger RCTs that include patients without an optimal response to treatment with combination pharmacotherapy are needed. Future studies should also include patients with various etiologies of PAH (e.g., idiopathic, hereditary, connective tissue disease, congenital heart disease, portal hypertension). (ClinicalTrials.gov NCT03282266).[10]

References

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Policy Revision History/Information

Original Date: September 21, 2023		
Review History		
Version 2	04/26/2025	Policy criteria reviewed and updated per medical literature.
Version 3	07/24/2025	Annual Review. No changes to the indications or non-indications. Literature review - added 5 references to the Medical Evidence section (Abouzid et al., 2025; Salazar et al., 2023; Vorla et al., 2023; Zhang et al., 2022; Constantine et al., 2021).