PREMERA | BLUE CROSS

An Independent Licensee of the Blue Cross Blue Shield Association

MEDICAL POLICY – 7.01.601

Endovascular Stent Grafts for Abdominal Aortic Aneurysms

BCBSA Ref. Policy:	7.01.67
Effective Date:	Nov. 6, 2026
Last Revised:	Aug. 18, 2026
Replaces:	N/A

RELATED MEDICAL POLICIES:
N/A

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

Abdominal aortic aneurysms (AAAs) are a bulge or weak spot in the wall of the main blood vessel that carries blood from the heart to the lower body. If the aneurysm grows too large, it can burst and cause life-threatening bleeding. Instead of open surgery, doctors can use a minimally invasive procedure called endovascular aneurysm repair (EVAR). During EVAR, a thin tube called a catheter is inserted through a small cut in the groin and guided into the aorta. A stent graft, a fabric tube supported by a metal mesh, is placed inside the weakened area to strengthen the artery and allow blood to flow safely through it. This approach usually means smaller incisions, shorter recovery times, and less risk of complications compared to traditional open surgery. This policy discusses when this technique is considered medically necessary.

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

Procedure	Medical Necessity

Endovascular aneurysm repair (EVAR) using endoprostheses	**Endovascular aneurysm repair (EVAR) of infra-renal abdominal aortic or aorto-iliac aneurysms using endoprostheses (see Related information and Image 1) may be considered medically necessary when the following criteria are met:**
	• The endoprosthesis (including standard, fenestrated, or branched devices where indicated)* is approved by the US Food and Drug Administration (FDA)
	AND
	• One or more of the following:
	  ○ An aneurysmal diameter greater than 5.0 cm
	  ○ An aneurysmal diameter of 4.0 to 5.0 cm that has increased in size by 0.5 cm in the last 6 months
	  ○ A ruptured abdominal aortic aneurysm (AAA)**
	
	*See Related Information.
	
	**For treatment of ruptured AAA, individuals should be sufficiently stable to undergo imaging for anatomic evaluation, the aneurysm should be anatomically appropriate for endovascular aneurysm repair (EVAR), and appropriate expertise should be available.

Procedure	Investigational
Bifurcated-bifurcated aneurysm repair (34717, 34718)	**Bifurcated-bifurcated endoprosthesis repair of aorto-iliac aneurysms is considered investigational as a treatment of AAAs.**

Documentation Requirements
The patient's medical records submitted for review for endovascular aneurysm repair (EVAR) of infra-renal abdominal aortic or aorto-iliac aneurysms using endoprostheses should document that medical necessity criteria are met. The record should include the following: • Office visit notes that contain the relevant history and physical and the aneurysmal diameter. • FDA approved endoprosthesis (including standard, fenestrated, or branched devices) • One or more of the following: ○ An aneurysmal diameter greater than 5.0 cm

Documentation Requirements

- An aneurysmal diameter of 4.0 to 5.0 cm that has increased in size by 0.5 cm in the last six months.
- A ruptured abdominal aortic aneurysm (AAA).

Coding

Code	Description
CPT	
34701	Endovascular repair of infrarenal aorta by deployment of an aorto-aortic tube endograft including pre-procedure sizing and device selection, all nonselective catheterization(s), all associated radiological supervision and interpretation, all endograft extension(s) placed in the aorta from the level of the renal arteries to the aortic bifurcation, and all angioplasty/stenting performed from the level of the renal arteries to the aortic bifurcation; for other than rupture (e.g., for aneurysm, pseudoaneurysm, dissection, penetrating ulcer)
34702	Endovascular repair of infrarenal aorta by deployment of an aorto-aortic tube endograft including pre-procedure sizing and device selection, all nonselective catheterization(s), all associated radiological supervision and interpretation, all endograft extension(s) placed in the aorta from the level of the renal arteries to the aortic bifurcation, and all angioplasty/stenting performed from the level of the renal arteries to the aortic bifurcation; for rupture including temporary aortic and/or iliac balloon occlusion, when performed (e.g., for aneurysm, pseudoaneurysm, dissection, penetrating ulcer, traumatic disruption)
34703	Endovascular repair of infrarenal aorta and/or iliac artery(ies) by deployment of an aorto-uni-iliac endograft including pre-procedure sizing and device selection, all nonselective catheterization(s), all associated radiological supervision and interpretation, all endograft extension(s) placed in the aorta from the level of the renal arteries to the iliac bifurcation, and all angioplasty/stenting performed from the level of the renal arteries to the iliac bifurcation; for other than rupture (e.g., for aneurysm, pseudoaneurysm, dissection, penetrating ulcer)
34704	Endovascular repair of infrarenal aorta and/or iliac artery(ies) by deployment of an aorto-uni-iliac endograft including pre-procedure sizing and device selection, all nonselective catheterization(s), all associated radiological supervision and interpretation, all endograft extension(s) placed in the aorta from the level of the renal arteries to the iliac bifurcation, and all angioplasty/stenting performed from the level of the renal arteries to the iliac bifurcation; for rupture including temporary aortic and/or iliac balloon occlusion, when performed (e.g., for aneurysm, pseudoaneurysm, dissection, penetrating ulcer, traumatic disruption)

Code	Description
34705	Endovascular repair of infrarenal aorta and/or iliac artery(ies) by deployment of an aorto-bi-iliac endograft including pre-procedure sizing and device selection, all nonselective catheterization(s), all associated radiological supervision and interpretation, all endograft extension(s) placed in the aorta from the level of the renal arteries to the iliac bifurcation, and all angioplasty/stenting performed from the level of the renal arteries to the iliac bifurcation; for other than rupture (e.g., for aneurysm, pseudoaneurysm, dissection, penetrating ulcer)
34706	Endovascular repair of infrarenal aorta and/or iliac artery(ies) by deployment of an aorto-bi-iliac endograft including pre-procedure sizing and device selection, all nonselective catheterization(s), all associated radiological supervision and interpretation, all endograft extension(s) placed in the aorta from the level of the renal arteries to the iliac bifurcation, and all angioplasty/stenting performed from the level of the renal arteries to the iliac bifurcation; for rupture including temporary aortic and/or iliac balloon occlusion, when performed (e.g., for aneurysm, pseudoaneurysm, dissection, penetrating ulcer, traumatic disruption)
34707	Endovascular repair of iliac artery by deployment of an ilio-iliac tube endograft including pre-procedure sizing and device selection, all nonselective catheterization(s), all associated radiological supervision and interpretation, and all endograft extension(s) proximally to the aortic bifurcation and distally to the iliac bifurcation, and treatment zone angioplasty/stenting, when performed, unilateral; for other than rupture (e.g., for aneurysm, pseudoaneurysm, dissection, arteriovenous malformation)
34708	Endovascular repair of iliac artery by deployment of an ilio-iliac tube endograft including pre-procedure sizing and device selection, all nonselective catheterization(s), all associated radiological supervision and interpretation, and all endograft extension(s) proximally to the aortic bifurcation and distally to the iliac bifurcation, and treatment zone angioplasty/stenting, when performed, unilateral; for rupture including temporary aortic and/or iliac balloon occlusion, when performed (e.g., for aneurysm, pseudoaneurysm, dissection, arteriovenous malformation, traumatic disruption)
34709	Placement of extension prosthesis(es) distal to the common iliac artery(ies) or proximal to the renal artery(ies) for endovascular repair of infrarenal abdominal aortic or iliac aneurysm, false aneurysm, dissection, penetrating ulcer, including pre-procedure sizing and device selection, all nonselective catheterization(s), all associated radiological supervision and interpretation, and treatment zone angioplasty/stenting, when performed, per vessel treated (List separately in addition to code for primary procedure)
34710	Delayed placement of distal or proximal extension prosthesis for endovascular repair of infrarenal abdominal aortic or iliac aneurysm, false aneurysm, dissection, endoleak, or endograft migration, including pre-procedure sizing and device selection, all nonselective catheterization(s), all associated radiological supervision and interpretation, and treatment zone angioplasty/stenting, when performed; initial vessel treated

Code	Description
34711	Delayed placement of distal or proximal extension prosthesis for endovascular repair of infrarenal abdominal aortic or iliac aneurysm, false aneurysm, dissection, endoleak, or endograft migration, including pre-procedure sizing and device selection, all nonselective catheterization(s), all associated radiological supervision and interpretation, and treatment zone angioplasty/stenting, when performed; each additional vessel treated (List separately in addition to code for primary procedure)
34717	Endovascular repair of iliac artery at the time of aorto-iliac artery endograft placement by deployment of an iliac branched endograft including pre-procedure sizing and device selection, all ipsilateral selective iliac artery catheterization(s), all associated radiological supervision and interpretation, and all endograft extension(s) proximally to the aortic bifurcation and distally in the internal iliac, external iliac, and common femoral artery(ies), and treatment zone angioplasty/stenting, when performed, for rupture or other than rupture (e.g., for aneurysm, pseudoaneurysm, dissection, arteriovenous malformation, penetrating ulcer, traumatic disruption), unilateral (List separately in addition to code for primary procedure)
34718	Endovascular repair of iliac artery, not associated with placement of an aorto-iliac artery endograft at the same session, by deployment of an iliac branched endograft, including pre-procedure sizing and device selection, all ipsilateral selective iliac artery catheterization(s), all associated radiological supervision and interpretation, and all endograft extension(s) proximally to the aortic bifurcation and distally in the internal iliac, external iliac, and common femoral artery(ies), and treatment zone angioplasty/stenting, when performed, for other than rupture (e.g., for aneurysm, pseudoaneurysm, dissection, arteriovenous malformation, penetrating ulcer), unilateral
34841	Endovascular repair of visceral aorta (e.g., aneurysm, pseudoaneurysm, dissection, penetrating ulcer, intramural hematoma, or traumatic disruption) by deployment of a fenestrated visceral aortic endograft and all associated radiological supervision and interpretation, including target zone angioplasty, when performed; including one visceral artery endoprosthesis (superior mesenteric, celiac or renal artery)
34842	Endovascular repair of visceral aorta (e.g., aneurysm, pseudoaneurysm, dissection, penetrating ulcer, intramural hematoma, or traumatic disruption) by deployment of a fenestrated visceral aortic endograft and all associated radiological supervision and interpretation, including target zone angioplasty, when performed; including two visceral artery endoprostheses (superior mesenteric, celiac and/or renal artery[s])
34843	Endovascular repair of visceral aorta (e.g., aneurysm, pseudoaneurysm, dissection, penetrating ulcer, intramural hematoma, or traumatic disruption) by deployment of a fenestrated visceral aortic endograft and all associated radiological supervision and interpretation, including target zone angioplasty, when performed; including three visceral artery endoprostheses (superior mesenteric, celiac and/or renal artery[s])
34844	Endovascular repair of visceral aorta (e.g., aneurysm, pseudoaneurysm, dissection, penetrating ulcer, intramural hematoma, or traumatic disruption) by deployment of a fenestrated visceral aortic endograft and all associated radiological supervision and

Code	Description
	interpretation, including target zone angioplasty, when performed; including four or more visceral artery endoprostheses (superior mesenteric, celiac and/or renal artery[s])
34845	Endovascular repair of visceral aorta and infrarenal abdominal aorta (e.g., aneurysm, pseudoaneurysm, dissection, penetrating ulcer, intramural hematoma, or traumatic disruption) with a fenestrated visceral aortic endograft and concomitant unibody or modular infrarenal aortic endograft and all associated radiological supervision and interpretation, including target zone angioplasty, when performed; including one visceral artery endoprosthesis (superior mesenteric, celiac or renal artery)
34846	Endovascular repair of visceral aorta and infrarenal abdominal aorta (e.g., aneurysm, pseudoaneurysm, dissection, penetrating ulcer, intramural hematoma, or traumatic disruption) with a fenestrated visceral aortic endograft and concomitant unibody or modular infrarenal aortic endograft and all associated radiological supervision and interpretation, including target zone angioplasty, when performed; including two visceral artery endoprostheses (superior mesenteric, celiac and/or renal artery[s])
34847	Endovascular repair of visceral aorta and infrarenal abdominal aorta (e.g., aneurysm, pseudoaneurysm, dissection, penetrating ulcer, intramural hematoma, or traumatic disruption) with a fenestrated visceral aortic endograft and concomitant unibody or modular infrarenal aortic endograft and all associated radiological supervision and interpretation, including target zone angioplasty, when performed; including three visceral artery endoprostheses (superior mesenteric, celiac and/or renal artery[s])
34848	Endovascular repair of visceral aorta and infrarenal abdominal aorta (e.g., aneurysm, pseudoaneurysm, dissection, penetrating ulcer, intramural hematoma, or traumatic disruption) with a fenestrated visceral aortic endograft and concomitant unibody or modular infrarenal aortic endograft and all associated radiological supervision and interpretation, including target zone angioplasty, when performed; including four or more visceral artery endoprostheses (superior mesenteric, celiac and/or renal artery[s])

Note: CPT codes, descriptions and materials are copyrighted by the American Medical Association (AMA). HCPCS codes, descriptions and materials are copyrighted by Centers for Medicare Services (CMS).

Related Information

To monitor for leaking of the graft after implantation, individuals will typically undergo routine imaging with computed tomography or ultrasonography every 6 to 12 months, or more frequently if perivascular leaks or aneurysm enlargement are detected.

Definition of Terms

Abdominal aortic aneurysm: bulge or enlargement of the lower part of the aorta, the main artery that carries blood from the heart through the abdomen, caused by a weakening of the artery wall.

Aorto-iliac aneurysm: bulge or enlargement of the abdominal aorta and/or iliac arteries due to weakened vessel walls.

Bifurcated aneurysm repair: surgical procedure in which a prosthetic graft is placed across the abdominal aorta to replace a weakened or enlarged section, with the graft's two branches connecting to the iliac arteries to restore normal blood flow and prevent rupture.

Bifurcated-bifurcated aneurysm repair: endovascular technique for treatment of selected aorto-iliac aneurysms in which a second bifurcated stent-graft configuration is used to preserve blood flow to the internal iliac artery while excluding aneurysmal segments of the abdominal aorta and iliac arteries.

Branched endoprosthesis: stent-graft with multiple internal branches designed to maintain blood flow to vital organs and bypassing an abdominal aortic aneurysm.

Fenestrated endoprosthesis: custom-made stent-graft with small, precisely placed openings called fenestrations that allow blood to continue flowing to vital branch arteries including for example the kidneys and intestines, while sealing off an abdominal aortic aneurysm. It is used when a standard stent blocks these vessels, typically for complex aneurysms near major branch arteries.

Infra-renal abdominal aortic aneurysm: bulge or enlargement in the aorta just below the kidneys, greater than or equal to 3 cm in diameter, the most common type of abdominal aortic aneurysm.

Standard endoprosthesis: endovascular stent-graft used for treatment of infrarenal abdominal aortic aneurysms (AAAs) when anatomy is suitable for a standard device configuration.

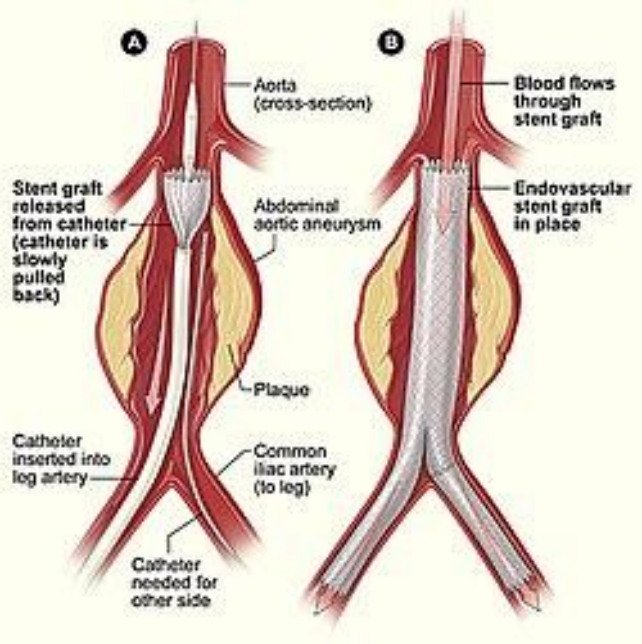


Image 1. Endovascular Aneurysm Repair with Stent Graft.[58]

Evidence Review

Description

Endovascular stent grafts can be used as minimally invasive alternatives to open surgical repair for treatment of abdominal aortic aneurysms (AAAs). Open surgical repair of AAAs has high morbidity and mortality, and endovascular grafts have the potential to reduce the operative risk associated with AAA repair.

Background

Management of a clinically significant abdominal aortic aneurysm (AAA) consists of surgical excision with the placement of a sutured woven graft or endovascular grafting.[1] Surgical excision is associated with a perioperative mortality rate between 1% and 5%. Perioperative morbidity and mortality are highest in older female patients with cardiac, pulmonary, or kidney disease; the most common cause of death is multisystem organ failure. Due to the high mortality rate, endovascular prostheses were developed as a less risky and minimally invasive, catheter-based alternative to open surgical excision of AAAs. These devices are deployed across the aneurysm

such that the aneurysm is effectively "excluded" from the circulation, with subsequent restoration of normal blood flow.

The main potential advantage of endovascular grafts for an AAA is that they offer a less invasive and less risky approach to the repair of abdominal aneurysms. While the use of an endovascular approach has the potential to reduce the relatively high perioperative morbidity and mortality associated with open AAA repair, use of endovascular grafts also has potential disadvantages. In particular, there are concerns about the durability of the anchoring system, aneurysm expansion, and other late complications related to the prosthetic graft. Aneurysm expansion may result from perivascular leaks, also known as endoleaks, which are a unique complication of endoprostheses. Perivascular leaks may result from an incompetent seal at one of the graft attachment sites, blood flow in aneurysm tributaries (these tributaries are ligated during open surgery), or perforation of graft fabric.[2,3,4,5]

Several types of grafts are currently in use: straight grafts, in which both ends are anchored to the infrarenal aorta, and bifurcated grafts, in which the proximal end is anchored to the infrarenal aorta, and the distal ends are anchored to the iliac arteries. Fenestrated grafts have also been investigated. These grafts are designed with openings in the wall that can be placed across the renal or celiac arteries while still protecting vessel patency through these critical arteries. Also, extensions can be placed from inside the main endograft body into the visceral arteries to create a hemostatic seal.

Summary of Evidence

For individuals who have abdominal aortic aneurysms (AAAs) eligible for open repair who receive endovascular stent grafts, the evidence includes randomized controlled trials (RCTs) and systematic reviews of RCTs and cohort studies. Relevant outcomes are overall survival (OS), morbid events, and treatment-related mortality and morbidity. Evidence from a patient-level meta-analysis of 4 RCTs comparing endovascular aneurysm repair (EVAR) with open repair for elective treatment of AAAs has indicated that neither approach is clearly superior to the other. While EVAR is associated with an early reduction in mortality, outcomes at 5 years or longer have generally shown greater reintervention rates and endovascular mortality and comparable OS rates for EVAR and open repair. Thus, the early advantage of EVAR is offset by a higher rate of late complications over the long-term. Based on these data, EVAR may be considered as an alternative to open surgery in patients who are candidates for both procedures. The evidence is sufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have ruptured AAAs who receive endovascular stent grafts, the evidence includes RCTs, systematic reviews of RCTs, and nonrandomized comparative studies. Relevant outcomes are OS, morbid events, and treatment-related mortality and morbidity. For patients with ruptured AAAs, evidence from three major RCTs and two meta-analyses has indicated that short- and intermediate-term survival (up to one year) following EVAR is comparable with open repair, while perioperative complications are reduced with EVAR. Evidence from a large nonrandomized matched comparison demonstrated that EVAR is associated with a perioperative mortality benefit up to 4 years post-surgery, at the cost of the increased likelihood of the need for reintervention. The evidence is sufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have AAAs ineligible for open repair who receive endovascular stent grafts, the evidence includes RCTs and retrospective analyses. Relevant outcomes are OS, morbid events, and treatment-related mortality and morbidity. At least two RCTs have compared EVAR with no surgical intervention for patients ineligible for open repair, either because of aneurysm size or prohibitive surgical risk. These trials did not report superior outcomes with EVAR and thus do not support the use of EVAR in this population. One retrospective database analysis suggests a likely benefit to EVAR in patients deemed unfit for open AAA repair, which may be reserved for those with lower Gagne Indices, larger AAA diameters, and lack of frailty, while a propensity score-matched analysis indicates a long-term survival benefit with EVAR relative to conservative management in patients with AAA deemed unfit for open repair based on cardiopulmonary exercise testing. 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 ongoing and 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			

NCT No.	Trial Name	Planned Enrollment	Completion Date
NCT01937949[a]	Clinical Outcomes and Quality of Life Measures in Patients Treated for Complex Abdominal Aortic Aneurysms With Fenestrated Stent Grafts	200	May 2030
NCT03298477[a]	Prospective, Multicenter, Single Arm Safety and Effectiveness Confirmatory Study of Endovascular Abdominal Aortic Aneurysm Repair Using the Nellix System IDE Study (EVAS 2 Confirmatory IDE Study)	98	Aug 2025
NCT02489539[a]	Assessment of the GORE EXCLUDER Conformable AAA Endoprosthesis in the Treatment of Abdominal Aortic Aneurysms	175	Dec 2027
NCT03180996[a]	A Prospective, Global, Multicentre, Real World Outcome Study of Fenestrated Endovascular Aneurysm Repair Using the Fenestrated Anaconda Device	160	Dec 2030
NCT03446287	Clinical Outcomes and Quality of Life Measures in Patients Treated With Open Surgical Repair for Complex Aortic Aneurysms	150	Dec 2026
Unknown			
NCT02996396[a]	Multicenter, Observational, Registry to Assess Outcomes of Patients Treated With the CE Nellix System for Endovascular Abdominal Aortic Aneurysm Repair	300	Nov 2024
NCT04220177[a]	Prospective, Open-label, Multicenter, Non-randomized Clinical Study to Determine the Safety and Efficacy of SETA LATECBA Stent Graft for Endovascular Repair Therapy (EVAR) in Subjects With Abdominal Aortic Aneurysm (AAA)	42	Mar 2022
Unpublished			
NCT01726257[a]	Prospective, Multicenter, Single Arm Safety and Effectiveness Study of Endovascular Abdominal Aortic Aneurysm Repair Using the Nellix System: A Pivotal and Continued Access Study	333	Dec 2022
NCT03966521	The British Society of Endovascular Therapy ConformabLe EndoVascular Repair (BSET-CLEVAR) Registry	105	Dec 2022

NCT: national clinical trial. [a] Denotes an 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 the 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 College of Cardiology and American Heart Association

In 2022, the American College of Cardiology and the American Heart Association (ACC/AHA) published a guideline for the management of aortic disease, including abdominal aortic aneurysm (AAA).[52] Recommendations from the guideline regarding AAA repair are listed in **Table 2**.

Table 2. Guideline on Management of Patients with Aortic Disease: Abdominal Aortic Aneurysm Repair

Recommendation	COR	LOE
In patients with nonruptured AAA with low to moderate operative risk and suitable anatomy, a shared decision-making process weighing the risks and benefits of endovascular versus open repair is recommended.	I	A
In patients with nonruptured AAA with high operative risk, endovascular repair is reasonable to reduce risk of 30-day morbidity, mortality, or both.	IIa	B-NR
In patients with nonruptured AAA with moderate to high operative risk and suitable anatomy for an FDA-approved fenestrated endovascular device, endovascular repair is reasonable over open repair to reduce risk of perioperative complications.	IIa	B-NR
In patients with ruptured AAA with suitable anatomy, endovascular repair is recommended over open repair to reduce risk of morbidity and mortality.	I	B-R

AAA: abdominal aortic aneurysm; COR: class of recommendation; FDA: Food and Drug Administration; LOE: level of evidence; NR: nonrandomized; R: randomized.

In 2024, ACC/AHA, along with other supporting organizations, published an update to their 2016 guidelines on the management of peripheral artery disease.[53] Recommendations on the management of AAAs or related to endovascular aneurysm repair (EVAR) are summarized in (**Table 3**).

Table 3. Guidelines on Management of Peripheral Artery Disease

Recommendation	COR	LOE
In patients with asymptomatic PAD, it is reasonable to perform revascularization procedures (endovascular or surgical) to reconstruct diseased arteries if needed for the safety, feasibility, or effectiveness of other procedures (e.g., transfemoral aortic valve replacement, mechanical circulatory support, endovascular aortic aneurysm repair).	2a	B-NR
In patients with asymptomatic PAD, revascularization procedures (endovascular or surgical) should not be performed solely to prevent progression of disease.	3: Harm	B-NR
In patients with functionally limiting claudication and hemodynamically significant aortoiliac or femoropopliteal disease with inadequate response to GDMT (including structured exercise), endovascular revascularization is effective to improve walking performance and QOL.	1	A
In patients with functionally limiting claudication and hemodynamically significant aortoiliac or femoropopliteal disease with inadequate response to GDMT (including structured exercise), surgical revascularization is reasonable if perioperative risk is acceptable and technical factors suggest advantages over endovascular approaches.	2a	B-NR

COR: class of recommendation; GDMT: guideline-directed management and therapy; LOE: level of evidence; PAD: peripheral artery disease; QOL: quality-of-life.

Society of Interventional Radiology

In 2010, the Society of Interventional Radiology developed guidelines on the use of endovascular aneurysm repair (EVAR) that were endorsed by the Cardiovascular and Interventional Radiological Society of Europe and the Canadian Interventional Radiology Association.[54] These guidelines indicated that:

- "Indications for EVAR are currently the same as open repair…."
- "Patient preference for EVAR versus open repair should be considered when appropriate…."
- "Endovascular abdominal aortic aneurysm repair should be considered as having an intermediate to high cardiac risk that ranges from 3% to 7%."

- There has been increasing use of EVAR for ruptured aneurysms. "Achieving optimal EVAR results for ruptured AAA requires establishment of a treatment protocol involving the emergency department, the endovascular team, anesthesiology, and the operating room personnel."
- "Lifelong imaging surveillance of patients after EVAR is critical for

  (i) The detection and, if possible, the characterization of endoleaks;

  (ii) Evidence of expansion or shrinkage of the residual AAA sac through measurement of aneurysm size, volume calculation, and identification of substantial changes in aneurysm dimensions;

  (iii) Detection of mechanical changes in the stent-graft, such as migration, kinking, or fracture; and

  (iv) Evaluation of the long-term performance of the endoprosthesis."

Society for Vascular Surgery

In 2018, the Society for Vascular Surgery published guidelines for the treatment of AAAs.[55] As in previous publications, these guidelines indicated that open surgery and EVAR are options for patients with aneurysms that meet the current treatment threshold. These guidelines also made the following recommendations (**Table 4**).

Table 4. Guidelines on Management of Patients With Aneurysms

Recommendation	QOE	LOR
EVAR is progressively replacing open surgery as the treatment of choice, and accounts for more than half of all elective AAA repairs in the United States		
Emergent EVAR should be considered for treatment of a ruptured AAA, if anatomically feasible	Moderate	Strong
EVAR may be considered for high-risk patients unfit for surgical repair	Low	Weak
For patients with ruptured aneurysm, immediate repair is recommended	High	Strong

AAA: abdominal aortic aneurysm; EVAR: endovascular aneurysm repair; LOR: level of recommendation; QOE: quality of evidence.

National Institute for Health and Care Excellence

Recommendations for the diagnosis and management of AAAs were published by the National Institute for Health and Care Excellence (NICE) in March 2020.[57] Recommendations for repairing unruptured aneurysms include:

- "1.5.1: Consider aneurysm repair for people with an unruptured abdominal aortic aneurysm (AAA), if it is:
    - Symptomatic
    - Asymptomatic, larger than 4.0 cm, and has grown by more than 1 cm in 1 year (measured inner-to-inner maximum anterior-posterior aortic diameter on ultrasound)
    - Asymptomatic and 5.5 cm or larger (measured inner-to-inner maximum anterior-posterior aortic diameter on ultrasound)."
- "1.5.4: Consider endovascular aneurysm repair (EVAR) for people with unruptured AAAs who meet the criteria in recommendation 1.5.1 and who have abdominal copathology, such as a hostile abdomen, horseshoe kidney or a stoma, or other considerations, specific to and discussed with the person, that may make EVAR the preferred option"
- "1.5.5: Consider EVAR or conservative management for people with unruptured AAAs meeting the criteria in recommendation 1.5.1 who have anaesthetic risks and/or medical comorbidities that would contraindicate open surgical repair."

Recommendations for repairing ruptured aneurysms include:

- "1.6.1: Consider endovascular aneurysm repair (EVAR) or open surgical repair for people with a ruptured infrarenal abdominal aortic aneurysm (AAA). Be aware that:
    - EVAR provides more benefit than open surgical repair for most people, especially men over 70 and women of any age
    - Open surgical repair is likely to provide a better balance of benefits and harms in men under 70."
- "1.6.2: Consider open surgical repair for people with a ruptured AAA if standard EVAR is unsuitable."

US Preventive Services Task Force Recommendations

Recommendations from the US Preventive Services Task Force (USPSTF) on AAA screening were updated on December 10, 2019.[56] The USPSTF notes the following in their section on "Current Practice" as it relates to this topic:

- "The standard of care for elective repair is that patients with an AAA of 5.5 cm or larger in diameter should be referred for surgical intervention with either open repair or EVAR. This recommendation is based on RCTs conducted in men. The AAA size needed for surgical intervention in women may differ. As a result, guidelines from the Society for Vascular Surgery recommend repairing AAAs between 5.0 and 5.4 cm in diameter in women. However, concerns about poorer surgical outcomes in women, who have more complex anatomy and smaller blood vessels, have led some to caution against lowering the threshold for surgical intervention in women."

Medicare National Coverage

There is no national coverage determination.

Regulatory Status

A large number of endovascular grafts have been approved by the US Food and Drug Administration (FDA) through the premarket approval (PMA) process for the treatment of AAAs (**Table 5**). The original PMA dates are shown. Most stents have undergone device modification, name changes, and have approved supplements to the original PMA.

FDA product code MIH.

Table 5. Abdominal Aortic Stent Grafts Approved by the FDA

Stent Name	PMA Applicant	Approved	PMA No.
AneuRx Prosthesis System (AneuRx AAAdvantage Stent Graft)	Medtronic Vascular	1999	P990020
Ancure Aortoiliac System	Guidant Endovascular Technologies	2002	P990017
Gore Excluder	W.L. Gore & Associates	2002	P020004

Stent Name	PMA Applicant	Approved	PMA No.
Zenith AAA Endovascular Graft	Cook	2003	P020018
Endologix Powerlink (Afx Endovascular AAA system)	Endologix	2004	P040002
Talent Abdominal Stent Graft System	Medtronic	2008	P070027
Endurant II AAA Stent Graft System	Medtronic	2010	P100021
Ovation Abdominal Stent Graft System	Endologix	2012	P120006
Aorfix AAA Flexible Stent Graft System	Lombard Medical	2013	P110032
Incraft AAA Stent Graft System	Cordis	2018	P150002
TREO Abdominal Stent-Graft System	Bolton Medical	2020	P190015
Alto Abdominal Stent Graft System	Endologix, LLC	2023	P120006

FDA: Food and Drug Administration; PMA: premarket approval.

References

1. Atkins AD, Atkins MD. Branched and Fenestrated Aortic Endovascular Grafts. Methodist Debakey Cardiovasc J. 2023; 19(2): 15-23. PMID 36910555
2. Blum U, Voshage G, Lammer J, et al. Endoluminal stent-grafts for infrarenal abdominal aortic aneurysms. N Engl J Med. Jan 02 1997; 336(1): 13-20. PMID 8970935
3. Ernst CB. Current therapy for infrarenal aortic aneurysms. N Engl J Med. Jan 02 1997; 336(1): 59-60. PMID 8970942
4. White RA, Donayre CE, Walot I, et al. Modular bifurcation endoprosthesis for treatment of abdominal aortic aneurysms. Ann Surg. Sep 1997; 226(3): 381-9; discussion 389-91. PMID 9339944
5. Zarins CK, White RA, Schwarten D, et al. AneuRx stent graft versus open surgical repair of abdominal aortic aneurysms: multicenter prospective clinical trial. J Vasc Surg. Feb 1999; 29(2): 292-305; discussion 306-8. PMID 9950987
6. EVAR trial participants. Endovascular aneurysm repair and outcome in patients unfit for open repair of abdominal aortic aneurysm (EVAR trial 2): randomised controlled trial. Lancet. Jun 2005; 365(9478): 2187-92. PMID 15978926
7. EVAR trial participants. Endovascular aneurysm repair versus open repair in patients with abdominal aortic aneurysm (EVAR trial 1): randomised controlled trial. Lancet. Jun 2005; 365(9478): 2179-86. PMID 15978925
8. Blankensteijn JD, de Jong SE, Prinssen M, et al. Two-year outcomes after conventional or endovascular repair of abdominal aortic aneurysms. N Engl J Med. Jun 09 2005; 352(23): 2398-405. PMID 15944424
9. Greenhalgh RM, Brown LC, Kwong GP, et al. Comparison of endovascular aneurysm repair with open repair in patients with abdominal aortic aneurysm (EVAR trial 1), 30-day operative mortality results: randomised controlled trial. Lancet. Sep 2004; 364(9437): 843-8. PMID 15351191
10. Prinssen M, Verhoeven EL, Buth J, et al. A randomized trial comparing conventional and endovascular repair of abdominal aortic aneurysms. N Engl J Med. Oct 14 2004; 351(16): 1607-18. PMID 15483279

11. Anderson PL, Arons RR, Moskowitz AJ, et al. A statewide experience with endovascular abdominal aortic aneurysm repair: rapid diffusion with excellent early results. J Vasc Surg. Jan 2004; 39(1): 10-9. PMID 14718804

12. Hua HT, Cambria RP, Chuang SK, et al. Early outcomes of endovascular versus open abdominal aortic aneurysm repair in the National Surgical Quality Improvement Program-Private Sector (NSQIP-PS). J Vasc Surg. Mar 2005; 41(3): 382-9. PMID 15838467

13. Lee WA, Carter JW, Upchurch G, et al. Perioperative outcomes after open and endovascular repair of intact abdominal aortic aneurysms in the United States during 2001. J Vasc Surg. Mar 2004; 39(3): 491-6. PMID 14981436

14. Paravastu SC, Jayarajasingam R, Cottam R, et al. Endovascular repair of abdominal aortic aneurysm. Cochrane Database Syst Rev. Jan 23 2014; 2014(1): CD004178. PMID 24453068

15. Powell JT, Sweeting MJ, Ulug P, et al. Meta-analysis of individual-patient data from EVAR-1, DREAM, OVER and ACE trials comparing outcomes of endovascular or open repair for abdominal aortic aneurysm over 5 years. Br J Surg. Feb 2017; 104(3): 166-178. PMID 28160528

16. Loufopoulos G, Tasoudis P, Koudounas G, et al. Long-Term Outcomes of Open Versus Endovascular Treatment for Abdominal Aortic Aneurysm: Systematic Review and Meta-Analysis With Reconstructed Time-to-Event Data. J Endovasc Ther. Aug 2025; 32(4): 946-956. PMID 37855415

17. AlOthman O, Bobat S. Comparison of the Short and Long-Term Outcomes of Endovascular Repair and Open Surgical Repair in the Treatment of Unruptured Abdominal Aortic Aneurysms: Meta-Analysis and Systematic Review. Cureus. Aug 12 2020; 12(8): e9683. PMID 32923276

18. Antoniou GA, Juszczak MT, Antoniou SA, et al. Editor's Choice - Fenestrated or Branched Endovascular versus Open Repair for Complex Aortic Aneurysms: Meta-Analysis of Time to Event Propensity Score Matched Data. Eur J Vasc Endovasc Surg. Feb 2021; 61(2): 228-237. PMID 33288434

19. Bulder RMA, Bastiaannet E, Hamming JF, et al. Meta-analysis of long-term survival after elective endovascular or open repair of abdominal aortic aneurysm. Br J Surg. Apr 2019; 106(5): 523-533. PMID 30883709

20. Chen ZG, Tan SP, Diao YP, et al. The long-term outcomes of open and endovascular repair for abdominal aortic aneurysm: A meta-analysis. Asian J Surg. Oct 2019; 42(10): 899-906. PMID 30914154

21. Li B, Khan S, Salata K, et al. A systematic review and meta-analysis of the long-term outcomes of endovascular versus open repair of abdominal aortic aneurysm. J Vasc Surg. Sep 2019; 70(3): 954-969.e30. PMID 31147117

22. Yokoyama Y, Kuno T, Takagi H. Meta-analysis of phase-specific survival after elective endovascular versus surgical repair of abdominal aortic aneurysm from randomized controlled trials and propensity score-matched studies. J Vasc Surg. Oct 2020; 72(4): 1464-1472.e6. PMID 32330598

23. Biancari F, Catania A, D'Andrea V. Elective endovascular vs. open repair for abdominal aortic aneurysm in patients aged 80 years and older: systematic review and meta-analysis. Eur J Vasc Endovasc Surg. Nov 2011; 42(5): 571-6. PMID 21820922

24. Ulug P, Sweeting MJ, von Allmen RS, et al. Morphological suitability for endovascular repair, non-intervention rates, and operative mortality in women and men assessed for intact abdominal aortic aneurysm repair: systematic reviews with meta-analysis. Lancet. Jun 24 2017; 389(10088): 2482-2491. PMID 28455148

25. Krisna Pertiwi PF, Sudarma IW, Prana Jagannatha GN, et al. Outcomes of advanced EVAR versus open surgery in the management of complex abdominal aortic aneurysm repair: A systematic review and meta-analysis. Asian Cardiovasc Thorac Ann. Sep 2024; 32(6-7): 375-387. PMID 38887046

26. Vigezzi GP, Barbati C, Blandi L, et al. Efficacy and Safety of Endovascular Fenestrated and Branched Grafts Versus Open Surgery in Thoracoabdominal Aortic Aneurysm Repair: An Updated Systematic Review, Meta-analysis, and Meta-regression. Ann Surg. Jun 01 2024; 279(6): 961-972. PMID 38214159

27. Lederle FA, Freischlag JA, Kyriakides TC, et al. Long-term comparison of endovascular and open repair of abdominal aortic aneurysm. N Engl J Med. Nov 22 2012; 367(21): 1988-97. PMID 23171095

28. Lederle FA, Kyriakides TC, Stroupe KT, et al. Open versus Endovascular Repair of Abdominal Aortic Aneurysm. N Engl J Med. May 30 2019; 380(22): 2126-2135. PMID 31141634

29. De Bruin JL, Baas AF, Buth J, et al. Long-term outcome of open or endovascular repair of abdominal aortic aneurysm. N Engl J Med. May 20 2010; 362(20): 1881-9. PMID 20484396

30. Greenhalgh RM, Brown LC, Powell JT, et al. Endovascular versus open repair of abdominal aortic aneurysm. N Engl J Med. May 20 2010; 362(20): 1863-71. PMID 20382983

31. Brown LC, Thompson SG, Greenhalgh RM, et al. Incidence of cardiovascular events and death after open or endovascular repair of abdominal aortic aneurysm in the randomized EVAR trial 1. Br J Surg. Jul 2011; 98(7): 935-42. PMID 21484775

32. Becquemin JP, Pillet JC, Lescalie F, et al. A randomized controlled trial of endovascular aneurysm repair versus open surgery for abdominal aortic aneurysms in low- to moderate-risk patients. J Vasc Surg. May 2011; 53(5): 1167-1173.e1. PMID 21276681

33. Krenzien F, Matia I, Wiltberger G, et al. Outcome after open surgery repair in endovascular-suitable patients with ruptured abdominal aortic aneurysms. Vasa. Nov 2013; 42(6): 442-8. PMID 24220121

34. van Beek SC, Reimerink JJ, Vahl AC, et al. Outcomes after open repair for ruptured abdominal aortic aneurysms in patients with friendly versus hostile aortoiliac anatomy. Eur J Vasc Endovasc Surg. Apr 2014; 47(4): 380-7. PMID 24485844

35. Sweeting MJ, Balm R, Desgranges P, et al. Individual-patient meta-analysis of three randomized trials comparing endovascular versus open repair for ruptured abdominal aortic aneurysm. Br J Surg. Sep 2015; 102(10): 1229-39. PMID 26104471

36. Badger S, Forster R, Blair PH, et al. Endovascular treatment for ruptured abdominal aortic aneurysm. Cochrane Database Syst Rev. May 26 2017; 5(5): CD005261. PMID 28548204

37. Antonopoulos CN, Moulakakis KG, Rorris FP, et al. Individual Patient Data Meta-Analysis of 10-Year Follow-Up after Endovascular and Open Repair for Ruptured Abdominal AorticAneurysms. Ann Vasc Surg. Jul 2023; 93: 319-328. PMID 36690248

38. Powell JT, Sweeting MJ, Thompson MM, et al. Endovascular or open repair strategy for ruptured abdominal aortic aneurysm: 30 day outcomes from IMPROVE randomised trial. BMJ. Jan 13 2014; 348: f7661. PMID 24418950

39. Braithwaite B, Cheshire NJ, Greenhalgh RM, et al. Endovascular strategy or open repair for ruptured abdominal aortic aneurysm: one-year outcomes from the IMPROVE randomized trial. Eur Heart J. Aug 14 2015; 36(31): 2061-2069. PMID 25855369

40. Reimerink JJ, Hoornweg LL, Vahl AC, et al. Endovascular repair versus open repair of ruptured abdominal aortic aneurysms: a multicenter randomized controlled trial. Ann Surg. Aug 2013; 258(2): 248-56. PMID 23549424

41. Desgranges P, Kobeiter H, Katsahian S, et al. Editor's Choice - ECAR (Endovasculaire ou Chirurgie dans les Anévrysmes aorto-iliaques Rompus): A French Randomized Controlled Trial of Endovascular Versus Open Surgical Repair of Ruptured Aorto-iliac Aneurysms. Eur J Vasc Endovasc Surg. Sep 2015; 50(3): 303-10. PMID 26001320

42. Edwards ST, Schermerhorn ML, O'Malley AJ, et al. Comparative effectiveness of endovascular versus open repair of ruptured abdominal aortic aneurysm in the Medicare population. J Vasc Surg. Mar 2014; 59(3): 575-82. PMID 24342064

43. Filardo G, Powell JT, Martinez MA, et al. Surgery for small asymptomatic abdominal aortic aneurysms. Cochrane Database Syst Rev. Feb 08 2015; 2015(2): CD001835. PMID 25927098

44. Cao P, De Rango P, Verzini F, et al. Comparison of surveillance versus aortic endografting for small aneurysm repair (CAESAR): results from a randomised trial. Eur J Vasc Endovasc Surg. Jan 2011; 41(1): 13-25. PMID 20869890

45. Ouriel K, Clair DG, Kent KC, et al. Endovascular repair compared with surveillance for patients with small abdominal aortic aneurysms. J Vasc Surg. May 2010; 51(5): 1081-7. PMID 20304589

46. Ulug P, Powell JT, Martinez MA, et al. Surgery for small asymptomatic abdominal aortic aneurysms. Cochrane Database Syst Rev. Jul 01 2020; 7(7): CD001835. PMID 32609382

47. De Rango P, Verzini F, Parlani G, et al. Quality of life in patients with small abdominal aortic aneurysm: the effect of early endovascular repair versus surveillance in the CAESAR trial. Eur J Vasc Endovasc Surg. Mar 2011; 41(3): 324-31. PMID 21145269

48. Greenhalgh RM, Brown LC, Powell JT, et al. Endovascular repair of aortic aneurysm in patients physically ineligible for open repair. N Engl J Med. May 20 2010; 362(20): 1872-80. PMID 20382982

49. Sweeting MJ, Patel R, Powell JT, et al. Endovascular Repair of Abdominal Aortic Aneurysm in Patients Physically Ineligible for Open Repair: Very Long-term Follow-up in the EVAR-2 Randomized Controlled Trial. Ann Surg. Nov 2017; 266(5): 713-719. PMID 28742684

50. Khoury MK, Heid CA, Rectenwald JE, et al. Understanding who benefits from endovascular aortic repair in those deemed unfit for open repair. J Vasc Surg. Aug 2022; 76(2): 419-427.e3. PMID 35227800

51. Shahin Y, Dixon S, Kerr K, et al. Endovascular aneurysm repair offers a survival advantage and is cost-effective compared with conservative management in patients physiologically unfit for open repair. J Vasc Surg. Feb 2023; 77(2): 386-395.e3. PMID 36152982

52. Isselbacher EM, Preventza O, Hamilton Black Iii J, et al. 2022 ACC/AHA Guideline for the Diagnosis and Management of Aortic Disease: A Report of the American Heart Association/American College of Cardiology Joint Committee on Clinical Practice Guidelines. J Am Coll Cardiol. Dec 13 2022; 80(24): e223-e393. PMID 36334952

53. Gornik HL, Aronow HD, Goodney PP, et al. 2024 ACC/AHA/AACVPR/APMA/ABC/SCAI/SVM/SVN/SVS/SIR/VESS Guideline for the Management of Lower Extremity Peripheral Artery Disease: A Report of the American College of Cardiology/American Heart Association Joint Committee on Clinical Practice Guidelines. Circulation. Jun 11 2024; 149(24): e1313-e1410. PMID 38743805

54. Walker TG, Kalva SP, Yeddula K, et al. Clinical practice guidelines for endovascular abdominal aortic aneurysm repair: written by the Standards of Practice Committee for the Society of Interventional Radiology and endorsed by the Cardiovascular and Interventional Radiological Society of Europe and the Canadian Interventional Radiology Association. J Vasc Interv Radiol. Nov 2010; 21(11): 1632-55. PMID 20884242

55. Chaikof EL, Dalman RL, Eskandari MK, et al. The Society for Vascular Surgery practice guidelines on the care of patients with an abdominal aortic aneurysm. J Vasc Surg. Jan 2018; 67(1): 2-77.e2. PMID 29268916

56. Owens DK, Davidson KW, Krist AH, et al. Screening for Abdominal Aortic Aneurysm: US Preventive Services Task Force Recommendation Statement. JAMA. Dec 10 2019; 322(22): 2211-2218. PMID 31821437

57. National Institute for Health and Care Excellence (NICE). Abdominal aortic aneurysm: diagnosis and management. NICE guideline [NG156]. March 19, 2020. **https://www.nice.org.uk/guidance/ng156**. Accessed June 10, 2026.

58. Endovascular Aneurysm Repair with Stent Graft. **https://vascular.org/patients-and-referring-physicians/conditions/endovascular-repair-abdominal-aortic-aneurysms**. Accessed July 14, 2026

History

Date	Comments
12/01/25	New policy, approved November 11, 2025, effective for dates of service on or after March 4, 2026, following 90-day provider notification. Add to Surgery section. Policy created with literature review through March 17, 2025; references added. The use of endoprostheses approved by the FDA as a treatment of abdominal aortic aneurysms (AAAs) may be considered medically necessary when criteria are met.
08/01/26	Annual Review, approved July 14, 2026, effective for dates of service on or after November 6, 2026 following 90-day provider notification. Policy updated with

Date	Comments
	literature review through March 18, 2026; references added. Added policy statement for endovascular aneurysm repair (EVAR) of infra-renal abdominal aortic or aorto-iliac aneurysms using endoprostheses when medical necessity criteria are met, added policy statement "bifurcated-bifurcated endoprosthesis repair of aorto-iliac aneurysms is considered investigational as treatment of abdominal aortic aneurysms", removed policy statement "an aneurysmal diameter that measures twice the size of the normal infrarenal aorta." Updated Related information section to include Definition of Terms and Image 1. Endovascular Aneurysm Repair with Stent Graft. Added CPT code 34709, deleted CPT codes 36200, and 36245. Minor edits to formatting, policy intent unchanged.
08/18/26	Minor correction to policy criteria due to missing content.

Disclaimer: This medical policy is a guide in evaluating the medical necessity of a particular service or treatment. The Company adopts policies after careful review of published peer-reviewed scientific literature, national guidelines and local standards of practice. Since medical technology is constantly changing, the Company reserves the right to review and update policies as appropriate. Member contracts differ in their benefits. Always consult the member benefit booklet or contact a member service representative to determine coverage for a specific medical service or supply. CPT codes, descriptions and materials are copyrighted by the American Medical Association (AMA). ©2026 Premera All Rights Reserved.

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.