

## Endovascular/Endoluminal Stent Grafts

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<b>Approved By:</b>	Highmark Health Options – Market Leadership
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<b>Application:</b>	All participating hospitals and providers
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### Disclaimer

Highmark Health Options medical policy is intended to serve only as a general reference resource regarding coverage for the services described. This policy does not constitute medical advice and is not intended to govern or otherwise influence medical decisions.

### POLICY STATEMENT

Highmark Health Options may provide coverage under medical surgical benefits of the Company's Medicaid products for medically necessary endovascular/endoluminal stent grafts.

This policy is designed to address medical necessity guidelines that are appropriate for the majority of individuals with a particular disease, illness, or condition. Each person's unique clinical circumstances warrant individual consideration, based upon review of applicable medical records.

The qualifications of the policy will meet the standards of the National Committee for Quality Assurance (NCQA) and the Delaware Department of Health and Social Services (DHSS) and all applicable state and federal regulations.

### DEFINITIONS

**Highmark Health Options (HHO)** – Managed care organization serving vulnerable populations that have complex needs and qualify for Medicaid. Highmark Health Options members include individuals and families with low income, expecting mothers, children, and people with disabilities. Members pay nothing to very little for their health coverage. Highmark Health Options currently services Delaware Medicaid: Delaware Healthy Children Program (DHCP) and Diamond State Health Plan Plus members.

**Endovascular/Endoluminal Grafts** – Minimally invasive alternatives to open surgical repair for treatment of traumatic aortic injury, thoracic aortic aneurysms (TAA), abdominal aortic aneurysms (AAAs), as well as iliac artery aneurysms. Open surgical repair has high morbidity and mortality, and endovascular/endoluminal grafts have the potential to reduce the operative risk associated with these repairs.

### PROCEDURES

1. A prior authorization is required.

## 2. Abdominal aortic aneurysm

The use of FDA approved endovascular/endoluminal stent-graft devices may be considered medically necessary as treatment of AAAs for ANY of the following indications:

- Aneurysms measuring 5.0 centimeters or greater; or
- Aneurysms measuring 4.5 to 5.0 centimeters that are rapidly expanding or are symptomatic; or
- A ruptured AAA when BOTH of the following criteria is met:
  - The individual must be sufficiently stable to undergo detailed CT examination for anatomic measurements; and
  - The aneurysm should be anatomically appropriate for endovascular repair.

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

Endovascular stent grafting reported for any other indication not meeting the criteria as indicated in this policy is considered not medically necessary.

Endovascular/endoluminal stent grafts not meeting the criteria as indicated in this policy is considered experimental/investigational and therefore noncovered because the safety and/or effectiveness of this service cannot be established by the available published peer-reviewed literature.

Placement and radiological guidance of endovascular stent-grafts are specific, more complex procedures as they involve the visceral vessels (superior mesenteric, celiac, or renal) and utilize a fenestrated prosthesis. These procedures are still being performed in clinical trial settings with no long-term outcomes available and therefore, are considered experimental/investigational, and are noncovered.

## 3. Iliac artery aneurysm

The use of FDA approved endovascular/endoluminal stent-graft devices for iliac artery aneurysms may be considered medically necessary for the treatment of iliac aneurysms equal to or greater than 30mm in diameter.

Endovascular/endotransluminal stent-graft devices not meeting the criteria as indicated in this policy is considered not medically necessary.

## 4. Thoracic aortic aneurysm

The use of United States Food and Drug Administration (FDA) approved endovascular/endoluminal stent-graft devices may be considered medically necessary for the treatment of:

- Acute, complicated (organ or limb ischemia or rupture) Type B thoracic aortic dissection; or
- Aneurysms 23-37 mm of inner aortic diameter; or
- Descending thoracic aortic aneurysms without dissection; or
- Isolated lesions of the thoracic aorta (e.g., aneurysms, rupture, tears, pseudoaneurysm dissection, penetrating ulcer, intramural hematoma, traumatic disruption).

Endovascular/endoluminal stent grafts not meeting the criteria as indicated in this policy is considered experimental/investigational and therefore, noncovered. because the safety and/or effectiveness of this service cannot be established by the available published peer-reviewed literature.

Associated advanced imaging radiological services for the above procedures are considered medically necessary.

Noninvasive physiologic study of implanted wireless pressure sensor in aneurysmal sac following endovascular repair, complete study including recording, analysis of pressure and waveform tracings, interpretation and report is considered experimental/investigational and therefore noncovered. because the safety and/or effectiveness of this service cannot be established by the available published peer-reviewed literature.

Transcatheter placement of wireless physiologic sensor in aneurysmal sac during endovascular repair, including radiological supervision and interpretation and instrument calibration, and collection of pressure data not meeting the criteria as indicated in this policy is considered experimental/investigational and therefore noncovered because the safety and/or effectiveness of this service cannot be established by the available published peer-reviewed literature.

5. Post-payment audit statement

The medical record must include documentation that reflects the medical necessity criteria and is subject to audit by Highmark Health Options at any time pursuant to the terms of your provider agreement.

6. Place of service: inpatient/outpatient

Experimental/investigational (E/I) services are not covered regardless of place of service.

Endovascular/endoluminal stent grafts is typically an outpatient procedure which is only eligible for coverage as an inpatient procedure in special circumstances, including, but not limited to, the presence of a comorbid condition that would require monitoring in a more controlled environment such as the inpatient setting.

## CODING REQUIREMENTS

CPT code	Description
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).

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).
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 preprocedural 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 preprocedural 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.
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.
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).
34712	Transcatheter delivery of enhanced fixation device(s) to the endograft (i.e., anchor, screw, tack) and all associated radiological supervision and interpretation.
34713	Percutaneous access and closure of femoral artery for delivery of endograft through a large sheath (12 French or larger), including ultrasound guidance, when performed, unilateral (list separately in addition to code for primary procedure).
34714	Open femoral artery exposure with creation of conduit for delivery of endovascular prosthesis or for establishment of cardiopulmonary bypass, by groin incision, unilateral (list separately in addition to code for primary procedure).
34715	Open axillary/subclavian artery exposure for delivery of endovascular prosthesis by infraclavicular or supraclavicular incision, unilateral (list separately in addition to code for primary procedure).
34716	Open axillary/subclavian artery exposure with creation of conduit for delivery of endovascular prosthesis or for establishment of cardiopulmonary bypass, by infraclavicular or supraclavicular incision, unilateral (list separately in addition to code for primary procedure).
34808	Endovascular placement of iliac artery occlusion device (list separately in addition to code for primary procedure).
34813	Placement of femoral-femoral prosthetic graft during endovascular aortic aneurysm repair (list separately in addition to code for primary procedure).
34830	Open repair of infrarenal aortic aneurysm or dissection, plus repair of associated arterial trauma, following unsuccessful endovascular repair; tube prosthesis.
34831	Open repair of infrarenal aortic aneurysm or dissection, plus repair of associated arterial trauma, following unsuccessful endovascular repair; aorto-bi-iliac prosthesis.
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 or renal artery).
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 or renal artery).
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 interpretation, including target zone angioplasty, when performed, including four visceral artery endoprostheses (superior mesenteric, celiac or renal artery).
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 endoprosthesis (superior mesenteric, celiac or renal artery).
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 endoprosthesis (superior mesenteric, celiac or renal artery).
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 visceral artery endoprosthesis (superior mesenteric, celiac or renal artery).
33880	Endovascular repair of descending thoracic aorta (e.g., aneurysm, pseudoaneurysm, dissection, penetrating ulcer, intramural hematoma, or traumatic disruption); involving coverage of left subclavian artery origin, initial endoprosthesis plus descending thoracic aortic extension(s), if required, to level of celiac artery origin
33881	Endovascular repair of descending thoracic aorta (e.g., aneurysm, pseudoaneurysm, dissection, penetrating ulcer, intramural hematoma, or traumatic disruption); not involving coverage of left subclavian artery origin, initial endoprosthesis plus descending thoracic aortic extension(s), if required, to level of celiac artery origin.
33883	Placement of proximal extension prosthesis for endovascular repair of descending thoracic aorta (e.g., aneurysm, pseudoaneurysm, dissection, penetrating ulcer, intramural hematoma, or traumatic disruption); initial extension.
33884	Placement of proximal extension prosthesis for endovascular repair of descending thoracic aorta (e.g., aneurysm, pseudoaneurysm, dissection, penetrating ulcer, intramural hematoma, or traumatic disruption); each additional proximal extension (list separately in addition to code for primary procedure).
33886	Placement of distal extension prosthesis(s) delayed after endovascular repair of descending thoracic aorta.
33889	Open subclavian to carotid artery transposition performed in conjunction with endovascular repair of descending thoracic aorta, by neck incision, unilateral.
33891	Bypass graft, with other than vein, transcervical retropharyngeal carotid-carotid, performed in conjunction with endovascular repair of descending thoracic aorta, by neck incision.
37799	Unlisted procedure, vascular surgery.
75956	Endovascular repair of descending thoracic aorta (e.g., aneurysm, pseudoaneurysm, dissection, penetrating ulcer, intramural hematoma, or traumatic disruption); involving coverage of left subclavian artery origin, initial endoprosthesis plus descending thoracic aortic extension(s), if required, to level of celiac artery origin, radiological supervision and interpretation.
75957	Endovascular repair of descending thoracic aorta (e.g., aneurysm, pseudoaneurysm, dissection, penetrating ulcer, intramural hematoma, or traumatic disruption); not involving coverage of left subclavian artery origin, initial endoprosthesis plus descending thoracic

	aortic extension(s), if required, to level of celiac artery origin, radiological supervision and interpretation.
75958	Placement of proximal extension prosthesis for endovascular repair of descending thoracic aorta (e.g., aneurysm, pseudoaneurysm, dissection, penetrating ulcer, intramural hematoma, or traumatic disruption), radiological supervision and interpretation.
75959	Placement of distal extension prosthesis(s) (delayed) after endovascular repair of descending thoracic aorta, as needed, to level of celiac origin, radiological supervision and interpretation.
76706	Ultrasound, abdominal aorta, real time with image documentation, screening study for abdominal aortic aneurysm (AAA).

**COVERED DIAGNOSIS CODES FOR PROCEDURE CODES: 34701, 34702, 34703, 34704, 34705, 34706, 34707, 34708, 34709, 34710, 34711, 34712, 34713, 34714, 34715, 34716, 34808, 34813, 34830, 34831**

Codes						
I71.3	I71.4	I71.5	I71.6	I71.02	I71.03	I72.3
Q25.43						

**COVERED DIAGNOSIS CODES FOR PROCEDURE CODES: 33880, 33881, 33883, 33884, 33886, 33889, 33891, 75956, 75957, 75958 AND 75959**

Codes						
I71.01	I71.03	I71.1	I71.2	I71.5	I71.6	Q25.43
S25.00XA	S25.00XD	S25.00XD	S25.00XS	S25.00XS	S25.01XA	S25.01XD
S25.01XS	S25.02XA	S25.02XD	S25.02XS	S25.09XA	S25.09XD	S25.09XS

## REIMBURSEMENT

Participating facilities will be reimbursed per their Highmark Health Options contract.

## POLICY SOURCES

**The Society for Vascular Surgery – 2019.**

The Society for Vascular Surgery recommends repair for all patients of acceptable perioperative risk with a AAA  $\geq 5.5$  cm in diameter as well as all patients with saccular and symptomatic aneurysms. These guidelines also suggest repair for women at a diameter of 5.0 to 5.4 cm. AAA indicates abdominal aortic aneurysm.

<b>Aneurysm Size, cm</b>	<b>Annual Rupture Risk (%/y)</b>
<4	0
4–5	0.5–5
5–6	3–15
6–7	10–20
7–8	20–40
>8	30–50

AAA indicates abdominal aortic aneurysm.

### **Society for Vascular Surgery – 2018.**

In 2018, the Society for Vascular Surgery published guidelines for the treatment of AAAs. 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:

<b>Recommendation</b>	<b>QOE</b>	<b>LOR</b>
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

### **American College of Cardiology Foundation et al – 2010.**

In 2010, the American College of Cardiology Foundation, American Heart Association, and 8 other medical specialty societies published joint guidelines on the diagnosis and management of descending thoracic and thoracoabdominal aortic aneurysms. The guidelines offered the following recommendations.

<b>Recommendation</b>	<b>COR</b>	<b>LOE</b>
For patients with chronic dissection, particularly if associated with a connective tissue disorder, but without significant comorbid disease, and a descending thoracic aortic diameter exceeding 5.5 cm, open repair is recommended	I	B
For patients with degenerative or traumatic aneurysms of the descending thoracic aorta exceeding 5.5 cm, saccular aneurysms, or postoperative pseudoaneurysms, endovascular stent grafting should be strongly considered when feasible	I	B
For patients with thoracoabdominal aneurysms, in whom endovascular stent graft options are limited and surgical morbidity is elevated, elective surgery is recommended if the aortic diameter exceeds 6.0 cm, or less if a connective tissue disorder such as Marfan or Loeys-Dietz syndrome is present	I	C
For patients with thoracoabdominal aneurysms and with end-organ ischemia or significant stenosis from atherosclerotic visceral artery disease, an additional revascularization procedure is recommended	I	B

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**POLICY UPDATE HISTORY**

<Date>	<Event>
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