02-33000-29

Original Effective Date: 04/15/03

Reviewed: 07/26/18

Revised: 08/15/18

Subject: Endovascular Stent Grafts for Disorders of the Thoracic Aorta

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DESCRIPTION:

Aortic aneurysms are arterial dilations associated with age, atherosclerosis, and hypertension, as well as some congenital connective tissue disorders. The likelihood of significant sequelae from aortic aneurysm depends on the location, size, and underlying disease state. Left untreated, these aneurysms tend to enlarge over time, increasing the risk of rupture or dissection. Of greatest concern is the tendency for aortic aneurysms to rupture, with severe consequences including death. Another significant adverse occurrence of aortic aneurysm is aortic dissection, in which an intimal tear permits blood to enter the potential space between the intima and the muscular wall of the aorta. Stable dissections may be managed medically; however, dissections that impinge on the true lumen of the aorta or occlude branching vessels are a surgical emergency.

Aortic dissection can be subdivided into type A, which involves the aortic arch, and type B, which is confined to the descending aorta. Type A dissections are usually treated surgically, while type B dissections are usually treated medically, with surgery indicated for serious complications, such as visceral ischemia, impending rupture, intractable pain, or sudden reduction in aortic size. Dissections associated with obstruction and ischemia can also be subdivided into an obstruction caused by an intimal tear at branch vessel orifices, or by compression of the true lumen by the pressurized false lumen. It has been proposed that endovascular therapy can repair the latter group of dissections by redirecting flow into the true lumen. The success of endovascular stent grafts of abdominal aortic aneurysms has created interest in applying the same technology to the aneurysms and dissections of the descending or thoracoabdominal aorta.

Thoracic endovascular aneurysm repair (TEVAR) involves the percutaneous placement of a stent graft in the descending thoracic or thoracoabdominal aorta. It is a less invasive alternative than open surgery for the treatment of thoracic aortic aneurysms, dissections, or rupture, and thus has the potential to reduce the morbidity and mortality of open surgery. Endovascular stenting may also be an alternative to medical therapy for treating thoracic aortic aneurysms or thoracic aorta dissections.

TEVAR has been proposed for prophylactic treatment of aneurysms that meet criteria for surgical intervention, as well as for patients in need of emergency surgery for rupture or complications related to dissection. The standard open surgery technique for thoracic aortic aneurysm (TAA) is open operative repair with graft replacement of the diseased segment. This procedure requires lateral thoracotomy, use of cardiopulmonary bypass, lengthy surgical procedures, and is associated with a variety of peri- and postoperative complications, with spinal cord ischemia considered the most devastating.

TEVAR is performed through a small groin incision to access the femoral artery, followed by delivery of catheters across the diseased portion of the aorta. A tubular stent graft composed of fabric and metal is then deployed under fluoroscopic guidance. The stent graft is then fixed to the proximal and distal portions of the aorta. Approximately 15% of patients do not have adequate femoral access; for them, the procedure can be performed using a retroperitoneal approach. A number of endovascular grafts have been approved by the U.S. Food and Drug Administration (FDA) for use in thoracic aortic aneurysms.

POSITION STATEMENT:

Endovascular stent grafts using FDA-approved devices **meet the definition of medical necessity** for the following conditions:

- Descending thoracic aortic aneurysms according to FDA-approved specifications
- Acute, complicated (organ or limb ischemia or rupture) type B (descending) thoracic aortic dissection.
- Traumatic descending aortic tears or rupture.

Endovascular stent grafts are considered **experimental or investigational** for the treatment of descending aortic disorders that do not meet the above criteria, including but not limited to uncomplicated aortic dissection. The evidence is insufficient to determine the effects of the technology on health outcomes.

Endovascular stent grafts are considered **experimental or investigational** for the treatment of ascending aortic disorders, including but not limited to thoracic aortic arch aneurysms. The evidence is insufficient to determine the effects of the technology on health outcomes.

BILLING/CODING INFORMATION:

CPT Coding:

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
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

REIMBURSEMENT INFORMATION:

Refer to section entitled **POSITION STATEMENT**.

PROGRAM EXCEPTIONS:

Federal Employee Program (FEP): Follow FEP guidelines.

State Account Organization (SAO): Follow SAO guidelines.

Medicare Advantage products:

No National Coverage Determination (NCD) and/or Local Coverage Determination (LCD) were found at the time of the last guideline reviewed date.

DEFINITIONS:

No guideline specific definitions apply.

RELATED GUIDELINES:

Endovascular Grafts for Abdominal Aortic Aneurysm, 02-33000-22

OTHER:

None Applicable

REFERENCES:

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2. Blue Cross Blue Shield AssociationMedical Policy Reference Manual, 7.01.86 Endovascular Stent Grafts for Disorders of the Thoracic Aorta, 05/18.
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7. U.S. Food and Drug Administration (FDA), accessed at fda.gov.

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COMMITTEE APPROVAL:

This Medical Coverage Guideline (MCG) was approved by the Florida Blue Medical Policy & Coverage Committee on 07/26/18.

GUIDELINE UPDATE INFORMATION:

04/15/03	New Medical Coverage Guideline.
04/15/04	Review and revision to guideline; consisting of updated references and no change to investigational status.
04/15/05	Review and revision to guideline; consisting of updated references.
05/15/05	Revision to guideline; consisting of formatting changes.
01/01/06	Annual HCPCS coding update consisting of the deletion of 0033T – 0040T and the addition of 33880 – 33891 and 75956 – 75959.
03/15/06	Review and revision of guideline consisting of updated references and addition of coverage criteria.
08/15/07	Review and revision of guideline consisting of updated references and reformatted guideline.
06/15/09	Biennial review: position statement maintained, description section and updated references.
05/15/11	Biennial review: position statement and references updated.
05/11/14	Revision: Program Exceptions section updated.
11/15/16	Revision; title, description, position statement, coding, and references updated.
08/15/18	Revision; description, position statements, and references updated.