02-33000-29

Original Effective Date: 04/15/03

Reviewed: 09/24/26

Revised: 10/15/26

Subject: Endovascular Stent Grafts for Disorders of the Thoracic Aorta

THIS MEDICAL COVERAGE GUIDELINE IS NOT AN AUTHORIZATION, CERTIFICATION, EXPLANATION OF BENEFITS, OR A GUARANTEE OF PAYMENT, NOR DOES IT SUBSTITUTE FOR OR CONSTITUTE MEDICAL ADVICE. ALL MEDICAL DECISIONS ARE SOLELY THE RESPONSIBILITY OF THE PATIENT AND PHYSICIAN. BENEFITS ARE DETERMINED BY THE GROUP CONTRACT, MEMBER BENEFIT BOOKLET, AND/OR INDIVIDUAL SUBSCRIBER CERTIFICATE IN EFFECT AT THE TIME SERVICES WERE RENDERED. THIS MEDICAL COVERAGE GUIDELINE APPLIES TO ALL LINES OF BUSINESS UNLESS OTHERWISE NOTED IN THE PROGRAM EXCEPTIONS SECTION.

Position Statement	Billing/Coding	Reimbursement	Program Exceptions	Definitions	Related Guidelines
Other	References	Updates			

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. 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. Type B aortic dissections are classified by acuity (termed as complicated or uncomplicated) and chronicity. Type A dissections (involving the ascending aorta) are treated surgically. There is more controversy regarding the optimal treatment of type B dissections (ie, limited to the descending aorta). In general, chronic, stable type B dissections are managed medically, although some surgeons have recommended a more aggressive approach for younger patients in otherwise good health. When serious complications arise from a type B dissection (ie, shock or visceral ischemia), surgical intervention is usually indicated. Endovascular intervention has supplanted open repair or medical management alone as first-line treatment for complicated type B aortic dissection as a result of accumulated data indicating reduced morbidity and mortality. Emergent repair of thoracic artery rupture is indicated in many cases in which there is free bleeding into the mediastinum and/or complete transection of the aortic wall. In some cases of aortic rupture, where the aortic media and adventitia are intact, watchful waiting with delayed surgical intervention is a treatment option. With the advent of thoracic endovascular aortic repair (TEVAR), the decision-making for intervention may be altered, because there may be a greater tendency to intervene in borderline cases due to the potential for fewer adverse events with TEVAR.

TEVAR is an alternative to open surgery. It 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. 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 TAAs.

Summary and Analysis of Evidence: The evidence for endovascular repair of type B (descending) TAAs includes nonrandomized comparative studies and systematic reviews. The available nonrandomized comparative studies have consistently reported reduced short-term mortality and morbidity compared with surgical repair. Although these types of studies are subject to selection bias and other methodologic limitations, the consistency of the findings of equivalent or reduced short-term mortality and fewer early complications across populations with different characteristics supports the conclusion that thoracic TEVAR is a safer procedure in the short term. The likely short-term benefits of TEVAR are mitigated by less favorable longer-term outcomes, but longer-term mortality appears to be roughly similar for patients undergoing TEVAR or open surgery. The evidence is sufficient to determine that the technology results in an improvement in the net health outcome. Individuals with uncomplicated type B (descending) thoracic aortic dissections who receive endovascular repair, the evidence includes randomized controlled trials (RCTs) , systematic reviews, and retrospective cohort studies. In the INSTEAD trial there were no statistically significant differences between the endovascular and medical groups for OS at 1 year or at 5 years. At 5 years of follow-up, aorta-specific mortality (7% versus 19%) was significantly lower for endovascular versus medical treatment. In the ADSORB trial, there were significantly fewer events of the composite outcome of incomplete/no false lumen thrombosis, aortic dilation, or aortic rupture in the endovascular group in the per protocol analysis but the trial had several limitations and was not designed for mortality outcomes. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome. The evidence for individuals with complicated type B (descending) thoracic aortic dissections who receive endovascular repair, the evidence includes systematic reviews and nonrandomized comparative studies. Systematic reviews of the available nonrandomized comparative studies consistently indicate benefits in early morbidity and mortality with TEVAR relative to open repair, as well as similar or superior long-term survival outcomes compared to open repair or medical management alone. Although these studies carry inherent limitations and the interventions carry complication risks that do not completely overlap, the accrued evidence favors use of TEVAR over open repair in suitable patients. The evidence is sufficient to determine that the technology results in an improvement in the net health outcome. For individuals who have traumatic descending aortic tears or rupture who receive endovascular repair, the evidence includes nonrandomized comparative studies and systematic reviews. Systematic reviews of the available nonrandomized comparative studies consistently indicate benefit in early mortality and similar or superior long term survival outcomes with TEVAR relative to open repair, with low rates of complications requiring reintervention with long-term follow-up. The evidence is sufficient to determine that the technology results in an improvement in the net health outcome. Ascending aortic disorders treated with endovascular repair, the evidence includes small case series. The use of TEVAR to treat ascending aortic pathologies, including dissections, aneurysms, and other disorders, the evidence is limited to small series that have assessed heterogeneous patient populations. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

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 thoracic aorta, including pre-procedure sizing and device selection, nonselective catheterization(s), all associated radiological supervision and interpretation; by deployment of an aorto-aortic tube endograft covering the left subclavian artery and all aortic tube endograft extension(s) proximally in the aortic arch and ascending aorta and distally to the celiac artery, when performed
33881	Endovascular repair of thoracic aorta, including pre-procedure sizing and device selection, nonselective catheterization(s), all associated radiological supervision and interpretation; by deployment of an aorto-aortic tube endograft not involving coverage of the left subclavian artery origin and all endograft extension(s) placed from the level of the left subclavian carotid artery to the celiac artery
33882	Endovascular repair of the thoracic aorta by deployment of a branched endograft multipiece system involving an aorto-aortic tube device with a fenestration for the left subclavian artery stent graft(s) and all aortic tube endograft extension(s) placed from the level of the left common carotid artery to the celiac artery, including pre-procedure sizing and device selection, all target zone angioplasty, all nonselective catheterization(s) and left subclavian artery selective catheterization(s), and all associated radiological supervision and interpretation
33883	Delayed placement of proximal extension prosthesis(es) not involving coverage of the left subclavian artery origin, after endovascular repair of the thoracic aorta, including pre-procedure sizing and device selection, nonselective catheterization(s), all associated radiological supervision and interpretation, and treatment zone angioplasty/stenting, when performed
33886	Delayed placement of distal extension prosthesis(es) from the level of the left subclavian artery to the celiac artery, after endovascular repair of descending thoracic aorta, including pre-procedure sizing and device selection, all nonselective catheterization(s), all associated 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.

If this Medical Coverage Guideline contains a step therapy requirement, in compliance with Florida law 627.42393, members or providers may request a step therapy protocol exemption to this requirement if

based on medical necessity. The process for requesting a protocol exemption can be found at Coverage Protocol Exemption Request.

DEFINITIONS:

No guideline specific definitions apply.

RELATED GUIDELINES:

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

OTHER:

None Applicable

REFERENCES:

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COMMITTEE APPROVAL:

This Medical Coverage Guideline (MCG) was approved by the Florida Blue Medical Policy and Coverage Committee on 09/24/26.

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.
08/15/20	Review; position statements maintained and references updated.
08/15/22	Review: Position statements maintained; references updated.
05/25/23	Update to Program Exceptions section.
01/01/24	Position statements maintained.
10/15/24	Review: Position statements maintained, description and references updated.
10/15/25	Annual review: Position statements maintained; references updated.
01/01/26	Annual CPT/HCPCS Coding Update. Code 33882 added; 33880-33886 revised; 33884, 33889, 75956-75959 deleted.
10/15/26	Annual review: Position statements maintained and references updated.