Medtronic

Transcatheter aortic valve replacement

2025 coding and reimbursement

This information is provided for your consideration. It is the provider's responsibility to determine and submit appropriate codes, modifiers, and charges for the services rendered.

Physician coding and reimbursement

CY 2025 payment was calculated with the Conversion Factor (CF) of $32.3465. CMS CY2025 Medicare Physician Fee Schedule Final Rule. CMS may make adjustments to any or all of the data inputs from time to time without notice.

CPT[1] code	CPT description[1]	2025 work RVUs[2]	2025 total facility RVUs[2]	2025 Medicare Nat'l Unadj. Payment[2]	Modifier 62 payment for EACH provider. Payment is 62.5% of total payment†
33361	Transcatheter aortic valve replacement (TAVR/TAVI) with prosthetic valve; percutaneous femoral artery approach	22.47	35.51	$1,149	$718
33362	Transcatheter aortic valve replacement (TAVR/TAVI) with prosthetic valve; open femoral artery approach	24.54	38.75	$1,253	$783
33363	Transcatheter aortic valve replacement (TAVR/TAVI) with prosthetic valve; open axillary artery approach	25.47	40.13	$1,298	$811
33364	Transcatheter aortic valve replacement (TAVR/TAVI) with prosthetic valve; open iliac artery approach	25.97	40.03	$1,295	$809
33365	Transcatheter aortic valve replacement (TAVR/TAVI) with prosthetic valve; transaortic approach (e.g., median sternotomy, mediastinotomy)	26.59	41.80	$1,352	$845
33367	Transcatheter aortic valve replacement (TAVR/TAVI) with prosthetic valve; cardiopulmonary bypass support with percutaneous peripheral arterial and venous cannulation (e.g., femoral vessels) (list separately in addition to code for primary procedure)	11.88	17.87	$578	Do not use modifier 62
33368	Transcatheter aortic valve replacement (TAVR/TAVI) with prosthetic valve; cardiopulmonary bypass support with open peripheral arterial and venous cannulation (e.g., femoral, iliac, axillary vessels) (list separately in addition to code for primary procedure)	14.39	21.63	$700	Do not use modifier 62
33369	Transcatheter aortic valve replacement (TAVR/TAVI) with prosthetic valve; cardiopulmonary bypass support with central arterial and venous cannulation (e.g., aorta, right atrium, pulmonary artery) (list separately in addition to code for primary procedure)	19.00	28.55	$923	Do not use modifier 62

Add-on codes 33367–33369 for cardiopulmonary bypass during the TAVR/TAVI procedure, when performed, are billed by the cardiac surgeon only as applicable. These codes do not require appending modifier 62.

Diagnosis codes

ICD-10-CM code	Description
I35.0	Non-rheumatic aortic (valve) stenosis
I35.1	Non-rheumatic aortic (valve) insufficiency
I35.2	Non-rheumatic aortic (valve) stenosis with insufficiency
I35.8	Other non-rheumatic aortic valve disorders
I35.9	Non-rheumatic aortic valve disorder, unspecified
I06.0	Rheumatic aortic stenosis
I06.1	Rheumatic aortic insufficiency
I06.2	Rheumatic aortic stenosis with insufficiency
I06.8	Other rheumatic aortic valve diseases
I06.9	Rheumatic aortic valve disease, unspecified
I08.0	Rheumatic disorders of both mitral and aortic valves
I08.2	Rheumatic disorders of both aortic and tricuspid valves
I08.3	Combined rheumatic disorders of mitral, aortic, and tricuspid valves
T82.01xA	Breakdown (mechanical) of heart valve prosthesis, initial encounter
T82.02xA	Displacement of heart valve prosthesis, initial encounter
T82.03xA	Leakage of heart valve prosthesis, initial encounter
T82.09xA	Other mechanical complication of heart valve prosthesis, initial encounter
T82.221A	Breakdown (mechanical) of biological heart valve graft, initial encounter
T82.222A	Displacement of biological heart valve graft, initial encounter
T82.223A	Leakage of biological heart valve graft, initial encounter
T82.228A	Other mechanical complication of biological heart valve graft, initial encounter
T82.518A	Breakdown (mechanical) of other cardiac and vascular devices and implants, initial encounter
T82.538A	Leakage of other cardiac and vascular devices and implants, initial encounter
T82.598A	Other mechanical complication of other cardiac, and vascular devices and implants, initial encounter
T82.857A	Stenosis of cardiac prosthetic devices, implants and grafts, initial encounter
Z45.09	Encounter for adjustment and management of other cardiac device

Physician billing requirements

All TAVR claims, i.e., for FDA-approved indications and for IDE clinical trials

Item and code instruction	
Diagnosis code (in addition to code for clinical indication)	Z00.6 – encounter for examination for normal comparison and control in clinical research program
Place of service	21 – inpatient hospital
CPT procedure codes	33361–33365 for TAVR procedure‡
Modifiers on CPT procedure code, e.g., 33361–33365	62 – two surgeons/co-surgeons Q0 (zero) – participation in a qualifying registry or qualified clinical study

Differences in submitting claims for FDA-approved indications versus IDE clinical trials

Item and code instruction			
Form type	**Item**	**FDA-approved indications**	**IDE clinical trials (Information is for illustration only)**
Paper form CMS-1500	Item 19 (Addt'l. claim information)	CT 01737528 (CT + Registry #)	CT 99999999 (CT + NCT #)
	Item 23 (used for IDE #)	N/A	G999999 (IDE #)
Electronic form 837p	Loop 2300 REF02 (REF01 = P4) (Addt'l. claim information)	01737528 (Registry #)	99999999 (NCT #)
	Segment 2300, REF02 (REF01 = LX) (used for IDE #)	N/A	G999999 (IDE #)

NCT: National clinical trial number **IDE:** Investigational device exemption **CT:** Clinical trial

Sources:

TAVR Claims Processing Instructions: https://med.noridianmedicare.com/web/jfa/topics/claim-submission/clinical-trials-coverage-and-billing-guide

CMS CHANGE REQUEST 8401. Centers for Medicare & Medicaid Services. https://www.cms.gov/regulations-and-guidance/guidance/transmittals/downloads/r2955cp.pdf. Accessed on November 5, 2024.

MLN Matters NCD(20.32) TAVR. MLN Matters. https://www.cms.gov/files/document/mm11660.pdf. Accessed on November 5, 2024.

CMS CHANGE REQUEST 11660. Centers for Medicare & Medicaid Services. https://www.cms.gov/files/document/R10179CP.pdf. Accessed on November 5, 2024.

† CMS has indicated for selected procedures the modifier 62 is required for payment.

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2. CY 2025 payment was calculated with the Conversion Factor (CF) of $32.3465. CMS CY 2025 Medicare Physician Fee Schedule Final Rule. Centers for Medicare & Medicaid Services. Available at: https://www.federalregister.gov/public-inspection/current. Accessed on November 5, 2024. CMS may make adjustments to any or all of the data inputs from time to time without notice.

Indications: The Medtronic Evolut™ PRO+, Evolut™ FX, and Evolut™ FX+ Systems are indicated for relief of aortic stenosis in patients with symptomatic heart disease due to severe native calcific aortic stenosis who are judged by a heart team, including a cardiac surgeon, to be appropriate for the transcatheter heart valve replacement therapy.

The Medtronic Evolut PRO+, Evolut FX, and Evolut FX+ Systems are indicated for use in patients with symptomatic heart disease due to failure (stenosed, insufficient, or combined) of a surgical or transcatheter bioprosthetic aortic valve who are judged by a heart team, including a cardiac surgeon, to be at high or greater risk for open surgical therapy (i.e., predicted risk of surgical mortality ≥8% at 30 days, based on the STS risk score and other clinical co-morbidities unmeasured by the STS risk calculator).

Contraindications: The Medtronic Evolut PRO+, Evolut FX, and Evolut FX+ Systems are contraindicated in patients who cannot tolerate Nitinol (titanium or nickel), gold (for Evolut FX and Evolut FX+ Systems alone), an anticoagulation/antiplatelet regimen, or who have active bacterial endocarditis or other active infections.

Warnings: *General* Implantation of the Evolut PRO+, Evolut FX, and Evolut FX+ Systems should be performed only by physicians who have received Medtronic Evolut PRO+, Evolut FX, or Evolut FX+ training. This procedure should only be performed where emergency aortic valve surgery can be performed promptly. Mechanical failure of the delivery catheter system and/or accessories may result in patient complications. *Transcatheter aortic valve (bioprosthesis)* Accelerated deterioration due to calcific degeneration of the bioprostheses may occur in: children, adolescents, or young adults; patients with altered calcium metabolism (e.g., chronic renal failure or hyperthyroidism).

Precautions: *General* Clinical long-term durability has not been established for the bioprosthesis. Evaluate bioprosthesis performance as needed during patient follow-up. The safety and effectiveness of the Evolut PRO+, Evolut FX, and Evolut FX+ Systems have not been evaluated in the pediatric population. The safety and effectiveness of the bioprostheses for aortic valve replacement have not been evaluated in the following patient populations: Patients who do not meet the criteria for symptomatic severe native aortic stenosis as defined: (1) symptomatic severe high-gradient aortic stenosis – aortic valve area ≤ 1.0 cm^2 or aortic valve area index ≤ 0.6 cm^2/m^2, a mean aortic valve gradient ≥ 40 mm Hg, or a peak aortic-jet velocity ≥ 4.0 m/s; (2) symptomatic severe low-flow, low-gradient aortic stenosis – aortic valve area ≤ 1.0 cm^2 or aortic valve area index ≤ 0.6 cm^2/m^2, a mean aortic valve gradient < 40 mm Hg, and a peak aortic-jet velocity < 4.0 m/s; with untreated, clinically significant coronary artery disease requiring revascularization; with a preexisting prosthetic heart valve with a rigid support structure in either the mitral or pulmonic position if either the preexisting prosthetic heart valve could affect the implantation or function of the bioprosthesis or the implantation of the bioprosthesis could affect the function of the preexisting prosthetic heart valve; patients with liver failure (Child-Pugh Class C); with cardiogenic shock manifested by low cardiac output, vasopressor dependence, or mechanical hemodynamic support; patients who are pregnant or breastfeeding. Implanting an Evolut PRO+, Evolut FX, or Evolut FX+ bioprosthesis in a degenerated surgical bioprosthetic valve (transcatheter aortic valve in surgical aortic valve [TAV-in-SAV]) should be avoided in the following conditions: The degenerated surgical bioprosthetic valve presents with: a significant concomitant paravalvular leak (between the prosthesis and the native annulus), is not securely fixed in the native annulus, or is not structurally intact (e.g., wire form frame fracture); partially detached leaflet that in the aortic position may obstruct a coronary ostium; stent frame with a manufacturer-labeled inner diameter < 17 mm. Implanting the Evolut PRO+, Evolut FX, or Evolut FX+ bioprosthesis in a degenerated transcatheter bioprosthetic valve (transcatheter aortic valve in transcatheter aortic valve [TAV in TAV]) should be avoided in the following conditions:

–the degenerated TAV presents with a significant concomitant paravalvular leak (between the prosthesis and the native annulus),

–the degenerated TAV is not securely fixed in the native annulus, or is not structurally intact (for example, frame fracture) or

–the risk of coronary obstruction or sinus sequestration after Evolut PRO+, Evolut FX, or Evolut FX+ implantation is high. The safety and effectiveness of the bioprostheses for aortic valve replacement have not been evaluated in patient populations presenting with the following: Blood dyscrasias as defined as leukopenia (WBC < 1,000 cells/mm^3), thrombocytopenia (platelet count < 50,000 cells/mm^3), history of bleeding diathesis or coagulopathy, or hypercoagulable states; congenital unicuspid valve; mixed aortic valve disease (aortic stenosis and aortic regurgitation with predominant aortic regurgitation [3-4+]); moderate to severe (3-4+) or severe (4+) mitral or severe (4+) tricuspid regurgitation; hypertrophic obstructive cardiomyopathy; new or untreated echocardiographic evidence of intracardiac mass, thrombus, or vegetation; native aortic annulus size < 18 mm or > 30 mm per the baseline diagnostic imaging or a surgical bioprosthetic or failed transcatheter aortic annulus size < 17 mm or > 30 mm; transarterial access unable to accommodate an 18 Fr introducer sheath or the 14 Fr equivalent Evolut PRO+ inline sheath when using model D-EVPROP2329US or Evolut FX Delivery Catheter System with inline sheath when using model D-EVOLUTFX-2329 or transarterial access unable to accommodate a 22 Fr introducer sheath or the 18 Fr equivalent Evolut PRO+ inline sheath when using model D-EVPROP34US or Evolut FX Delivery Catheter System with inline sheath when using model D-EVOLUTFX-34; prohibitive left ventricular outflow tract calcification; sinus of Valsalva anatomy that would prevent adequate coronary perfusion; significant aortopathy requiring ascending aortic replacement; moderate to severe mitral stenosis; severe ventricular dysfunction with left ventricular ejection fraction (LVEF) < 20%; symptomatic carotid or vertebral artery disease; and severe basal septal hypertrophy with an outflow gradient.

Before Use Exposure to glutaraldehyde may cause irritation of the skin, eyes, nose, and throat. Avoid prolonged or repeated exposure to the vapors. Damage may result from forceful handling of the catheter. Prevent kinking of the catheter when removing it from the packaging. The bioprosthesis size must be appropriate to fit the patient's anatomy. Proper sizing of the devices is the responsibility of the physician. Refer to the Instructions for Use for available sizes. Failure to implant a device within the sizing matrix could lead to adverse effects such as those listed below. Patients must present with transarterial access vessel diameters of ≥ 5 mm when using models D-EVPROP2329US/D-EVOLUTFX-2329 or ≥ 6 mm when using models D-EVPROP34US/D-EVOLUTFX-34, or patients must present with an ascending aortic (direct aortic) access site ≥ 60 mm from the basal plane for both systems. Implantation of the bioprosthesis should be avoided in patients with aortic root angulation (angle between plane of aortic valve annulus and horizontal plane/vertebrae) of > 30° for right subclavian/axillary access or > 70° for femoral and left subclavian/axillary access. For subclavian access, patients with a patent left internal mammary artery (LIMA) graft must present with access vessel diameters that are either ≥ 5.5 mm when using models D-EVPROP2329US/D-EVOLUTFX-2329 or ≥ 6.5 mm when using models D-EVPROP34US/D-EVOLUTFX-34. Use caution when using the subclavian/axillary approach in patients with a patent LIMA graft or patent RIMA graft. For direct aortic access, ensure the access site and trajectory are free of patent RIMA or a preexisting patent RIMA graft. For transfemoral access, use caution in patients who present with multiplanar curvature of the aorta, acute angulation of the aortic arch, an ascending aortic aneurysm, or severe calcification in the aorta and/or vasculature. If ≥ 2 of these factors are present, consider an alternative access route to prevent vascular complications. Limited clinical data are available for transcatheter aortic valve replacement in patients with a congenital bicuspid aortic valve who are deemed to be at low surgical risk. Anatomical characteristics should be considered when using the valve in this population. In addition, patient age should be considered as long-term durability of the valve has not been established.

During Use If a misload is detected during fluoroscopic inspection, do not attempt to reload the bioprosthesis. Discard the entire system. Inflow crown overlap that has not ended before the 4th node within the capsule increases the risk of an infold upon deployment in constrained anatomies, particularly with moderate-severe levels of calcification and/or bicuspid condition. Do not attempt to direct load the valve. After the procedure, administer appropriate antibiotic prophylaxis as needed for patients at risk for prosthetic valve infection and endocarditis. After the procedure, administer anticoagulation and/or antiplatelet therapy per physician/clinical judgment. Excessive contrast media may cause renal failure. Prior to the procedure, measure the patient's creatinine level. During the procedure, monitor contrast media usage. Conduct the procedure under fluoroscopy. Fluoroscopic procedures are associated with the risk of radiation damage to the skin, which may be painful, disfiguring, and long-term. For TAV in TAV procedures, failed valve size and patient anatomy must be considered before implantation of the Evolut PRO+, Evolut FX, or Evolut FX+ bioprosthesis to ensure patient safety (for example, to avoid coronary obstruction).

Potential adverse events: Potential risks associated with the implantation of the Evolut PRO+, Evolut FX, or Evolut FX+ transcatheter aortic valve may include, but are not limited to, the following: • death • myocardial infarction, cardiac arrest, cardiogenic shock, or cardiac tamponade • coronary occlusion, obstruction, or vessel spasm (including acute coronary closure) • cardiovascular injury (including rupture, perforation, tissue erosion, or dissection of vessels, ascending aorta trauma, ventricle, myocardium, or valvular structures that may require intervention) • emergent surgical or transcatheter intervention (e.g., coronary artery bypass, heart valve replacement, valve explant, percutaneous coronary intervention [PCI], balloon valvuloplasty) • prosthetic valve dysfunction (regurgitation or stenosis) due to fracture; bending (out-of-round configuration) of the valve frame; underexpansion of the valve frame; calcification; pannus; leaflet wear, tear, prolapse, or retraction; poor valve coaptation; suture breaks or disruption; leaks; mal-sizing (prosthesis-patient mismatch); malposition (either too high or too low)/malplacement – prosthetic valve migration/embolization • prosthetic valve endocarditis • prosthetic valve thrombosis • delivery catheter system malfunction resulting in the need for additional recrossing of the aortic valve and prolonged procedural time • delivery catheter system component embolization • stroke (ischemic or hemorrhagic), transient ischemic attack (TIA), or other neurological deficits • individual organ (e.g., cardiac, respiratory, renal [including acute kidney failure]) or multi-organ insufficiency or failure • major or minor bleeding that may require transfusion or intervention (including life-threatening or disabling bleeding) • vascular access-related complications (e.g., dissection, perforation, pain, bleeding, hematoma, pseudoaneurysm, irreversible nerve injury, compartment syndrome, arteriovenous fistula, or stenosis) • mitral valve regurgitation or injury • conduction system disturbances (e.g., atrioventricular node block, left bundle-branch block, asystole), which may require a permanent pacemaker • infection (including septicemia) • hypotension or hypertension • hemolysis • peripheral ischemia • General surgical risks applicable to transcatheter aortic valve implantation: • bowel ischemia • abnormal lab values (including electrolyte imbalance) • allergic reaction to antiplatelet agents, contrast medium, or anesthesia • exposure to radiation through fluoroscopy and angiography • permanent disability.

Please reference the Evolut PRO+, Evolut FX, and Evolut FX+ Instructions for Use for more information regarding indications, warnings, precautions, and potential adverse events.

Caution: Federal Law (USA) restricts these devices to the sale by or on the order of a physician.

The commercial name of the Evolut™ PRO+ device is Medtronic Evolut™ PRO+ System, the commercial name of the Evolut™ FX device is Medtronic Evolut™ FX System, and the commercial name of the Evolut™ FX+ device is Medtronic Evolut™ FX+ System.

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US-CV-2500384 v2.0
10/2025