

Medtronic

# 2024 Coding resource

Selected cardiothoracic procedures

<b>To healthcare providers</b> .....	1
<b>Medicare severity diagnosis related groups (MS-DRGs)</b> .....	2
<b>Hospital ICD-10 PCS potential codes</b> .....	3
Valve procedures .....	3
Operative perfusion .....	5
Extracorporeal membrane oxygenation .....	5
CABG procedures .....	6
<b>Physician procedure codes</b>	
Aortic valve procedures .....	7
Mitral valve procedures .....	9
Tricuspid valve procedures .....	9
Pulmonary valve procedures .....	10
Other valve procedures .....	10
Left atrial appendage procedures .....	11
Coronary artery bypass .....	11
Venous grafting only for coronary artery bypass .....	11
Extracorporeal membrane oxygenation .....	13

## To healthcare providers

This Coding Resource includes the MS-DRGs and commonly billed procedure codes for selected cardiac surgery procedures. This is not a comprehensive list of all available codes, and it is possible that there is a more appropriate code for any given procedure.

Medtronic provides this information for your convenience only. It does not constitute legal advice or a recommendation regarding clinical practice. Information provided is gathered from third-party sources and is subject to change without notice due to frequently changing laws, rules, and regulations. As a result, Medtronic does not represent or guarantee that this information is complete, accurate, or applicable to any particular patient or third-party payer or guarantees payment.

The provider has the responsibility to determine medical necessity and to submit appropriate documentation, codes and charges for care provided. Medtronic makes no guarantee that the use of this information will prevent differences of opinion or disputes with Medicare or other payers as to the correct form of billing or the amount that will be paid to providers of service. Please contact your Medicare contractor, other payers, reimbursement specialists and/or legal counsel for interpretation of coding, coverage and payment policies and any applicable laws or regulations that may apply.

This document provides assistance for FDA approved or cleared indications. Where reimbursement is sought for use of a product that may be inconsistent with, or not expressly specified in, the FDA cleared or approved labeling (e.g., instructions for use, operator's manual or package insert), consult with your billing advisors or payers on handling such billing issues. Some payers may have policies that make it inappropriate to submit claims for such items or related service.

## A few notes about coding systems and Medicare payment methodologies

### Hospital inpatient ICD-10 procedure coding and reimbursement

Hospitals assign ICD-10 codes for both diagnoses and procedures for inpatient admissions. For Medicare, inpatient hospital reimbursement is under the Medicare Severity Diagnosis Related Groups (MS-DRG) system. For each admission, the ICD-10 diagnosis and procedure codes are grouped into one of over 750 MS-DRGs. Regardless of the number of codes, only one MS-DRG is assigned to the admission. Each MS-DRG has a unique relative weight, which is then converted into the payment amount. Medicare has used the DRG system for hospital inpatient reimbursement since 1983.

### Physician CPT\*\* coding and reimbursement

Physicians use ICD-10 CM codes for diagnoses and CPT codes for procedures, regardless of whether the setting is inpatient or outpatient. The ICD-10 CM diagnosis codes are used for claims adjudication. However, for determining Medicare payment, only the CPT procedure codes are used. For Medicare, physician reimbursement is under the RBRVS system. Each CPT code is assigned a unique relative value unit, which is then converted into the payment amount. Medicare has used RBRVS for physician reimbursement since 1992.

### C codes

C codes do not apply to inpatient surgical procedures such as CABG or valve replacement procedures. C codes are used in conjunction with the Medicare prospective payment system for outpatient procedures (APCs).

CPT copyright 2023 American Medical Association (AMA). All rights reserved. CPT is a trademark of the American Medical Association. Applicable FARS/DFARS Restrictions Apply to Government Use. Fee schedules, relative values units, conversion factors and/or related components are not assigned by the AMA, are not part of CPT, and the AMA is not recommending their use. AMA does not directly or indirectly practice medicine or dispense medical services. AMA assumes no liability for data contained or not contained herein.

**Medtronic may not carry products used in all procedures.**

## FY 2024 final Medicare hospital inpatient MS-DRG rates

(Effective 10/1/2023 to 9/30/2024)

MS-DRG	Description	Relative Weight <sup>1</sup>	FY2024 Medicare National Unadjusted Amount <sup>1</sup>
<b>ENDOVASCULAR (TRANSCATHETER) VALVES</b>			
266	Endovascular Cardiac Valve Replacement and Supplement Procedures with MCC	6.2461	\$43,733
267	Endovascular Cardiac Valve Replacement and Supplement Procedures without MCC	4.8802	\$34,169
<b>SURGICAL (OPEN) VALVE REPLACEMENT</b>			
216	Cardiac valve and other major cardiothoracic procedure with cardiac catheterization with MCC	9.7053	\$67,953
217	Cardiac valve and other major cardiothoracic procedure with cardiac catheterization with CC	6.3653	\$44,567
218	Cardiac valve and other major cardiothoracic procedure with cardiac catheterization without CC/MCC	5.6967	\$39,886
219	Cardiac valve and other major cardiothoracic procedure without cardiac catheterization with MCC	7.7112	\$53,991
220	Cardiac valve and other major cardiothoracic procedure without cardiac catheterization with CC	5.2446	\$36,721
221	Cardiac valve and other major cardiothoracic procedure without cardiac catheterization without CC/MCC	4.6486	\$32,548
<b>VALVE IMPLANTATION WITH OTHER SIGNIFICANT CARDIOVASCULAR PROCEDURES</b>			
212	Concomitant aortic and mitral valve procedures	10.7707	\$75,412
<b>CORONARY ARTERY BYPASS (CABG)</b>			
231	Coronary bypass with PTCA with MCC	8.1152	\$56,819
232	Coronary bypass with PTCA without MCC	5.9486	\$41,650
233	Coronary bypass with cardiac catheterization with MCC	7.7996	\$54,610
234	Coronary bypass with cardiac catheterization without MCC	5.1979	\$36,394
235	Coronary bypass without cardiac catheterization with MCC	5.8806	\$41,174
236	Coronary bypass without cardiac catheterization without MCC	4.0412	\$28,295
<b>OTHER CARDIOTHORACIC PROCEDURES</b>			
228	Other cardiothoracic procedure with MCC	5.0387	\$35,279
229	Other cardiothoracic procedure with CC	3.1796	\$22,262
<b>OTHER ENDOVASCULAR VALVE PROCEDURES</b>			
319	Other endovascular cardiac valve procedures with MCC	4.3619	\$30,540
320	Other endovascular cardiac valve procedures without MCC	2.2260	\$15,586
<b>EXTRACORPOREAL MEMBRANE OXYGENATION (ECMO) CONTINUOUS</b>			
003	ECMO or tracheostomy with MV > 96 hours or principal diagnosis except face, mouth, and neck with major O.R. procedures	21.3203	\$149,276

# Hospital ICD-10 PCS potential codes

**Note:** The ICD-10 PCS codes shown are those that reflect the typical procedure, using known Medtronic devices where appropriate. Theoretical possibilities are not shown, e.g., approaches that are not common, device types that are not currently on the market. The general equivalence between ICD-9 procedures codes and ICD-10 PCS codes shown here is for illustrative purposes. Please refer to clinical documentation for appropriate ICD-10 PCS code selection.

Valve procedures		
Procedure Type	ICD-10 PCS Procedure Code	ICD-10 PCS Code Description
<b>ENDOVASCULAR (TRANSCATHETER) VALVE REPLACEMENT</b>		
Transcatheter aortic valve replacement (TAVR), bioprosthetic	02RF38Z	Replacement of Aortic Valve with Zooplastic Tissue, Percutaneous Approach
Transcatheter pulmonary valve replacement, bioprosthetic	02RH38L	Replacement of Pulmonary Valve with Zooplastic Tissue, In Existing Conduit, Percutaneous Approach
	02RH38M	Replacement of Pulmonary Valve with Zooplastic Tissue, Native Site, Percutaneous Approach
<b>OPEN HEART VALVULOPLASTY WITHOUT REPLACEMENT</b>		
Open heart valvuloplasty of aortic valve without replacement	027F0ZZ	Dilation of Aortic Valve, Open Approach
	02NF0ZZ	Release Aortic Valve, Open Approach
	02QF0ZZ	Repair Aortic Valve, Open Approach
Open heart valvuloplasty of mitral valve without replacement	027G0ZZ	Dilation of Mitral Valve, Open Approach
	02NG0ZZ	Release Mitral Valve, Open Approach
	02QG0ZZ	Repair Mitral Valve, Open Approach
Open heart valvuloplasty of pulmonary valve without replacement	027H0ZZ	Dilation of Pulmonary Valve, Open Approach
	02NH0ZZ	Release Pulmonary Valve, Open Approach
	02QH0ZZ	Repair Pulmonary Valve, Open Approach

## Valve procedures, cont'd.

Procedure Type	ICD-10 PCS Procedure Code	ICD-10 PCS Code Description
<b>OPEN VALVE REPLACEMENT</b>		
Replacement of aortic valve, bioprosthetic	02RF08Z	Replacement of Aortic Valve with Zooplastic Tissue, Open Approach
Replacement of aortic valve, mechanical	02RF0JZ	Replacement of Aortic Valve with Synthetic Substitute, Open Approach
Replacement of mitral valve, bioprosthetic	02RG08Z	Replacement of Mitral Valve with Zooplastic Tissue, Open Approach
Replacement of mitral valve, mechanical	02RG0JZ	Replacement of Mitral Valve with Synthetic Substitute, Open Approach
<b>OTHER VALVE PROCEDURES</b>		
Replacement of aortic root with valved conduit	02RF08Z	Replacement of Aortic Valve with Zooplastic Tissue, Open Approach
Annuloplasty	02UG0JZ	Supplement Mitral Valve with Synthetic Substitute, Open Approach
	02UJ0JZ	Supplement Tricuspid Valve with Synthetic Substitute, Open Approach
<b>OTHER VALVE PROCEDURES</b>		
Percutaneous balloon valvuloplasty	027F3ZZ	Dilation of Aortic Valve, Percutaneous Approach
	027G3ZZ	Dilation of Mitral Valve, Percutaneous Approach
	027H3ZZ	Dilation of Pulmonary Valve, Percutaneous Approach
	027J3ZZ	Dilation of Tricuspid Valve, Percutaneous Approach
Percutaneous mitral valve repair with implant	02UG3JZ	Supplement Mitral Valve with Synthetic Substitute, Percutaneous Approach
Decalcification of valve	02CF0ZZ	Extirpation of Matter from Aortic Valve, Open Approach
	02CG0ZZ	Extirpation of Matter from Mitral Valve, Open Approach
Revision of previous valve replacement (without placement of new valve)	02WF08Z	Revision of Zooplastic Tissue in Aortic Valve, Open Approach
	02WF38Z	Revision of Zooplastic Tissue in Aortic Valve, Percutaneous Approach
	02WF0JZ	Revision of Synthetic Substitute in Aortic Valve, Open Approach
	02WF3JZ	Revision of Synthetic Substitute in Aortic Valve, Percutaneous Approach
	02WG08Z	Revision of Zooplastic Tissue in Mitral Valve, Open Approach
	02WG38Z	Revision of Zooplastic Tissue in Mitral Valve, Percutaneous Approach
	02WG0JZ	Revision of Synthetic Substitute in Mitral Valve, Open Approach
	02WG3JZ	Revision of Synthetic Substitute in Mitral Valve, Percutaneous Approach
Other surgical valve corrections	02QF0ZZ	Repair Aortic Valve, Open Approach
	02QG0ZZ	Repair Mitral Valve, Open Approach
	02QH0ZZ	Repair Pulmonary Valve, Open Approach
	02QJ0ZZ	Repair Tricuspid Valve, Open Approach

## Operative Perfusion

Procedure Type	ICD-10 PCS Procedure Code	ICD-10 PCS Code Description
Cardiopulmonary Bypass	5A1221Z	Performance of Cardiac Output, Continuous

## Left atrial appendage Procedures

Procedure Type	ICD-10 PCS Procedure Code	ICD-10 PCS Code Description
Left atrial appendage exclusion	02L70CK	Occlusion of left atrial appendage with extraluminal device, open

## Extracorporeal membrane oxygenation (ECMO)

Procedure Type	ICD-10-PCS Procedure Code	ICD-10-PCS Code Description
Continuous	5A1522F	Extracorporeal Oxygenation, Membrane, Central
	5A1522G	Extracorporeal Oxygenation, Membrane, Peripheral Veno-arterial
	5A1522H	Extracorporeal Oxygenation, Membrane, Peripheral Veno-venous
Intraoperative	5A15A2F	Extracorporeal Oxygenation, Membrane, Central, Intraoperative
	5A15A2G	Extracorporeal Oxygenation, Membrane, Peripheral Veno-arterial, Intraoperative
	5A15A2H	Extracorporeal Oxygenation, Membrane, Peripheral Veno-venous, Intraoperative

## Ascending Aorta Graft

Procedure Type	ICD-10 PCS Procedure Code	ICD-10 PCS Code Description
Ascending aortic graft, synthetic	02RW0JZ	Replacement of Thoracic Aorta, Descending with Synthetic Substitute, Open Approach

# ICD-10 codes for CABG procedures

There are several hundred ICD-10-PCS codes for CABG. They can be used alone or in combination with other CABG codes to describe the complete procedure.

All CABG codes begin with 021 for bypass of heart and great vessels. The remaining digits identify:

- **Body Part:** number of coronary arteries being bypassed to
- **Approach:** open, percutaneous, percutaneous endoscopic
- **Device:** graft material used
  - zooplastic tissue, e.g., bioprosthetic
  - autologous venous tissue, e.g., saphenous vein
  - autologous arterial tissue, e.g., radial artery, internal thoracic artery
  - synthetic substitute, e.g., ePTFE graft
  - nonautologous tissue substitute, e.g., cadaver vein
- **Qualifier:** the vessel being bypassed from

When multiple coronary arteries are bypassed, separate codes are assigned for each coronary artery that uses a different device or qualifier.

Section	0 – Medical and surgical		
Body System	2 – Heart and Great Vessels		
Operation	1 – Bypass: Altering the route of passages of the contents of a tubular body part		
Body part	Approach	Device	Qualifier
0 – Coronary artery, one artery 1 – Coronary artery, two arteries 2 – Coronary artery, three arteries 3 – Coronary artery, four or more arteries	0 – open	8 – Zooplastic tissue 9 – Autologous Venous tissue A – Autologous Arterial tissue J – Synthetic Substitute K – Nonautologous tissue substitute	3 – Coronary Artery 8 – Internal Mammary, Right 9 – Internal Mammary, Left C – Thoracic Artery F – Abdominal Artery W – Aorta
0 – Coronary artery, one artery 1 – Coronary artery, two arteries 2 – Coronary artery, three arteries 3 – Coronary artery, four or more arteries	0 – open	Z – No device	3 – Coronary Artery 8 – Internal Mammary, Right 9 – Internal Mammary, Left C – Thoracic Artery F – Abdominal Artery

**Example:** CABG, open, aortocoronary artery bypass from aorta to right coronary artery, left main coronary artery, and left anterior descending coronary artery via saphenous vein graft

ICD-10 PCS Procedure Code	ICD-10 PCS Code Description
021209W	Bypass Coronary Artery, Three Arteries from Aorta with Autologous Venous Tissue, Open Approach

**Example:** CABG, open, aortocoronary artery bypass from aorta to obtuse marginal and right coronary artery via saphenous vein grafts, left internal mammary artery to left anterior descending coronary artery, gastroepiploic artery to left circumflex coronary artery

ICD-10 PCS Procedure Code	ICD-10 PCS Code Description
021109W	Bypass Coronary Artery, Two Arteries from Aorta with Autologous Venous Tissue, Open Approach
02100Z9	Bypass Coronary Artery, One Artery from Left Internal Mammary, Open Approach
02100ZF	Bypass Coronary Artery, One Artery from Abdominal Artery, Open Approach



# Physician CPT codes

Aortic valve procedures			
CPT® Code	Code Description	2024	
		Total Facility RVUs <sup>2</sup>	Physician Facility Fee Schedule Medicare National Unadjusted Amount <sup>2</sup>
<b>Transcatheter aortic valve replacement (TAVR)</b>			
33361	Transcatheter aortic valve replacement (TAVR/TAVI) with prosthetic valve; percutaneous femoral artery approach	35.42	\$1,160
33362	Transcatheter aortic valve replacement (TAVR/TAVI) with prosthetic valve; open femoral artery approach	38.60	\$1,264
33363	Transcatheter aortic valve replacement (TAVR/TAVI) with prosthetic valve; open axillary artery approach	40.06	\$1,312
33364	Transcatheter aortic valve replacement (TAVR/TAVI) with prosthetic valve; open iliac artery approach	39.88	\$1,306
33365	Transcatheter aortic valve replacement (TAVR/TAVI) with prosthetic valve; transaortic approach (eg, median sternotomy, mediastinotomy)	41.73	\$1,366
33366	Transcatheter aortic valve replacement (TAVR/TAVI) with prosthetic valve; transapical exposure (eg, left thoractomy)	45.92	\$1,504
<b>Cardiopulmonary bypass with TAVR</b>			
+33367	Transcatheter aortic valve replacement (TAVR/TAVI) with prosthetic valve; cardiopulmonary bypass support with percutaneous peripheral arterial and venous cannulation (eg femoral vessels) (List separately in addition to code for primary procedure)	17.79	\$583
+33368	Transcatheter aortic valve replacement (TAVR/TAVI) with prosthetic valve; cardiopulmonary bypass support with open peripheral arterial and venous cannulation (eg, femoral, iliac, axillary vessels) (List separately in addition to code for primary procedure)	21.56	\$706
+33369	Transcatheter aortic valve replacement (TAVR/TAVI) with prosthetic valve; cardiopulmonary bypass support with central arterial and venous cannulation (eg, aorta, right atrium, pulmonary artery) (List separately in addition to code for primary procedure)	28.46	\$932
<b>Cerebral embolic protection with TAVR</b>			
+33370	Transcatheter placement and subsequent removal of cerebral embolic protection device(s), including arterial access, catheterization, imaging, and radiological supervision and interpretation, percutaneous (List separately in addition to code for primary procedure)	33.90	\$128

Index procedure codes 33361-33366 are paid at 62.5% of the fee schedule amount for each provider.

Medtronic may not carry products used in all procedures.

## Valvuloplasty

33390	Valvuloplasty, aortic valve, open with cardiopulmonary bypass; simple (eg, valvotomy, debridement, debulking, and/or simple commissural resuspension)	56.48	\$1,849
33391	Valvuloplasty, aortic valve, open with cardiopulmonary bypass; complex (eg, leaflet extension, leaflet resection, leaflet reconstruction, or annuloplasty)	66.94	\$2,192

## Surgical (open) aortic valve replacement

33405	Replacement, aortic valve, open with cardiopulmonary bypass; with prosthetic valve other than homograft or stentless valve	66.76	\$2,186
33406	"Replacement, aortic valve, open with cardiopulmonary bypass; with allograft valve (freehand)"	84.81	\$2,777
33410	Replacement, aortic valve, open with cardiopulmonary bypass; with stentless tissue valve	74.68	\$2,445

## Other surgical aortic valve procedures

33440	Replacement, aortic valve; by translocation of autologous pulmonary valve and transventricular aortic annulus enlargement of the left ventricular outflow tract with valved conduit replacement of pulmonary valve (Ross-Konno procedure)	99.41	\$3,255
33411	Replacement, aortic valve; with aortic annulus enlargement, noncoronary cusp	98.40	\$3,222
33412	Replacement, aortic valve; with transventricular aortic annulus enlargement (Konno procedure)	91.94	\$3,011
33413	Replacement, aortic valve; by translocation of autologous pulmonary valve with allograft replacement of pulmonary valve (Ross procedure)	94.24	\$3,086
33414	Repair of left ventricular outflow tract obstruction by patch enlargement of the outflow tract	63.21	\$2,070
33415	Resection or incision of subvalvular tissue for discrete subvalvular aortic stenosis	59.62	\$1,952
33416	Ventriculomyotomy (-myectomy) for idiopathic hypertrophic subaortic stenosis (eg, asymmetric septal hypertrophy)	59.55	\$1,950
33417	Aortoplasty (gusset) for supra-avalvular stenosis	49.33	\$1,615

## Mitral valve procedures

CPT Code	Code Description	2024	
		Total Facility RVUs <sup>2</sup>	Physician Facility Fee Schedule Medicare National Unadjusted Amount <sup>2</sup>

### Percutaneous mitral valve repair with implant

33418	Transcatheter mitral valve repair, percutaneous approach, including transeptal puncture when performed; initial prosthesis	52.84	\$1,730
33419	Transcatheter mitral valve repair, percutaneous approach, including transeptal puncture when performed; additional prosthesis(es) during same session (List separately in additiona to code for primary procedure)	12.38	\$405

### Valvuloplasty

33425	Valvuloplasty, mitral valve, with cardiopulmonary bypass	80.23	\$2,627
-------	--	-------	---------

### Annuloplasty

33426	Valvuloplasty, mitral valve, with cardiopulmonary bypass; with prosthetic ring	70.08	\$2,295
33427	Valvuloplasty, mitral valve, with cardiopulmonary bypass; radical reconstruction, with or without ring	71.66	\$2,346

### Surgical (open) mitral valve replacement

33430	Replacement, mitral valve, with cardiopulmonary bypass	82.37	\$2,697
-------	--	-------	---------

## Tricuspid valve procedures

CPT Code	Code Description	2024	
		Total Facility RVUs <sup>2</sup>	Physician Facility Fee Schedule Medicare National Unadjusted Amount <sup>2</sup>

### Valvuloplasty

33463	Valvuloplasty, tricuspid valve; without ring insertion	90.29	\$2,956
-------	--	-------	---------

### Annuloplasty

33464	Valvuloplasty, tricuspid valve; with ring insertion	71.63	\$2,345
-------	---	-------	---------

### Surgical (open) tricuspid valve replacement

33465	Replacement, tricuspid valve, with cardiopulmonary bypass	80.89	\$2,649
-------	---	-------	---------

## Pulmonary valve procedures

CPT Code	Code Description	2024	
		Total Facility RVUs <sup>2</sup>	Physician Facility Fee Schedule Medicare National Unadjusted Amount <sup>2</sup>

### Surgical (open) pulmonary valve replacement

33475	Replacement, pulmonary valve	68.21	\$2,233
-------	------------------------------	-------	---------

### Transcatheter pulmonary valve replacement

33477	Transcatheter pulmonary valve implantation, percutaneous approach, including pre-stenting of the valve delivery site, when performed.	38.37	\$1,256
-------	---	-------	---------

## Other valve procedures

CPT Code	Code Description	2024	
		Total Facility RVUs <sup>2</sup>	Physician Facility Fee Schedule Medicare National Unadjusted Amount <sup>2</sup>

### Revision of previous valve replacement (without placement of new valve)

33496	Repair of non-structural prosthetic valve dysfunction with cardiopulmonary bypass (separate procedure)	48.87	\$1,600
-------	--	-------	---------

### Ascending aorta graft

33858	Ascending aorta graft, with cardiopulmonary bypass, includes valve suspension, when performed; for aortic dissection	99.45	\$3,256
33859	Ascending aorta graft, with cardiopulmonary bypass, includes valve suspension, when performed; for aortic disease other than dissection (eg, aneurysm)	71.49	\$2,341
33863	Ascending aorta graft, with cardiopulmonary bypass, with or without valve suspension; with aortic root replacement using composite prosthesis and coronary reconstruction	92.18	\$3,018
33864	Ascending aorta graft, with cardiopulmonary bypass with valve suspension, with coronary reconstruction and valve sparing aortic root remodeling (e.g., David procedure, Yacoub procedure)	94.14	\$3,083

## Left atrial appendage procedure

CPT Code	Code Description	2024	
		Total Facility RVUs <sup>2</sup>	Physician Facility Fee Schedule Medicare National Unadjusted Amount <sup>2</sup>

### Left atrial appendage exclusion

+33268	Exclusion of the left atrial appendage, open, performed at the time of other sternotomy or thoracotomy procedure (s), any method (e.g., excision, isolation via stapling, oversewing, ligation, plication, clip) (List separately in addition to code for primary procedure)	3.79	\$124
--------	--	------	-------

## Coronary artery bypass

CPT Code	Code Description	2024	
		Total Facility RVUs <sup>2</sup>	Physician Facility Fee Schedule Medicare National Unadjusted Amount <sup>2</sup>

### Venous grafting only for coronary artery bypass

33510	Coronary artery bypass, vein only; single coronary venous graft	56.88	\$1,862
33511	Coronary artery bypass, vein only; two coronary venous grafts	62.46	\$2,045
33512	Coronary artery bypass, vein only; three coronary venous grafts	71.15	\$2,330
33513	Coronary artery bypass, vein only; four coronary venous grafts	72.65	\$2,379
33514	Coronary artery bypass, vein only; five coronary venous grafts	76.38	\$2,501
33516	Coronary artery bypass, vein only; six or more coronary venous grafts	79.05	\$2,588

## Coronary artery bypass, cont'd.

CPT Code	Code Description	2024	
		Total Facility RVUs <sup>2</sup>	Physician Facility Fee Schedule Medicare National Unadjusted Amount <sup>2</sup>

### Combined arterial-venous grafting for coronary artery bypass

+33517	Coronary artery bypass, using venous graft(s) and arterial graft(s); single vein graft (List separately in addition to code for primary procedure)	5.48	\$179
+33518	Coronary artery bypass, using venous graft(s) and arterial graft(s); two venous grafts (List separately in addition to code for primary procedure)	12.00	\$393
+33519	Coronary artery bypass, using venous graft(s) and arterial graft(s); three venous grafts (List separately in addition to code for primary procedure)	15.88	\$520
+33521	Coronary artery bypass, using venous graft(s) and arterial graft(s); four venous grafts (List separately in addition to code for primary procedure)	19.03	\$623
+33522	Coronary artery bypass, using venous graft(s) and arterial graft(s); five venous grafts (List separately in addition to code for primary procedure)	21.39	\$700
+33523	Coronary artery bypass, using venous graft(s) and arterial graft(s); six or more venous grafts (List separately in addition to code for primary procedure)	24.07	\$788

### Arterial grafting for coronary artery bypass

33533	Coronary artery bypass, using arterial graft(s); single arterial graft	55.09	\$1,804
33534	Coronary artery bypass, using arterial graft(s); two coronary arterial grafts	64.69	\$2,118
33535	Coronary artery bypass, using arterial graft(s); three coronary arterial grafts	71.87	\$2,353
33536	Coronary artery bypass, using arterial graft(s); four or more coronary arterial grafts	77.44	\$2,536

### Other CABG-related procedures

+33508	Endoscopy, surgical, including video-assisted harvest of vein(s) for coronary artery bypass procedure	0.47	\$15
33509	Harvest of upper extremity artery, 1 segment, for coronary artery bypass procedure, endoscopic	5.05	\$165
+33530	Reoperation, coronary artery bypass procedure or valve procedure, more than one month after original operation (List separately in addition to code for primary procedure)	15.32	\$502
+33572	Coronary endarterectomy, open, any method, of left anterior descending, circumflex, or right coronary artery performed in conjunction with coronary artery bypass graft procedure, each vessel (List separately in addition to primary procedure)	6.75	\$221
33999	Unlisted procedure, cardiac surgery	Carrier priced <sup>3</sup>	Carrier priced <sup>3</sup>
+35500	Harvest of upper extremity vein, one segment, for lower extremity or coronary artery bypass procedure (List separately in addition to code for primary procedure)	9.28	\$304
35600	Harvest of upper extremity artery, one segment, for coronary artery bypass procedure	5.44	\$178
93799	Unlisted cardiovascular service or procedure	Carrier priced <sup>3</sup>	Carrier priced <sup>3</sup>

## Extracorporeal membrane oxygenation

CPT Code	Procedure Description	2024	
		Total Facility RVUs <sup>2</sup>	Physician Facility Fee Schedule Medicare National Unadjusted Amount <sup>2</sup>
<b>Initiation of ECMO</b>			
33946	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; initiation, veno-venous	9.07	\$297
33947	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; initiation, veno-arterial	10.04	\$329
<b>Daily Management</b>			
33948	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; daily management, each day, veno-venous	6.97	\$228
33949	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; daily management, each day, veno-arterial	6.81	\$223
<b>Insertion of peripheral cannula(e)</b>			
33951	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; insertion of peripheral (arterial and/or venous) cannula(e), percutaneous, birth through 5 years of age (includes fluoroscopic guidance, when performed)	12.31	\$403
33952	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; insertion of peripheral (arterial and/or venous) cannula(e), percutaneous, 6 years and older (includes fluoroscopic guidance, when performed)	12.50	\$409

## Extracorporeal membrane oxygenation, cont'd.

CPT Code	Procedure Description	2024	
		Total Facility RVUs <sup>2</sup>	Physician Facility Fee Schedule Medicare National Unadjusted Amount <sup>2</sup>
33953	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; insertion of peripheral (arterial and/or venous) cannula(e), open, birth through 5 years of age	13.75	\$450
33954	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; insertion of peripheral (arterial and/or venous) cannula(e), open, 6 years and older	13.92	\$456

### Insertion of central cannula(e)

33955	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; insertion of central cannula(e) by sternotomy or thoracotomy, birth through 5 years of age	24.08	\$788
33956	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; insertion of central cannula(e) by sternotomy or thoracotomy, 6 years and older	24.46	\$801

### Reposition peripheral cannula(e)

33957	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; reposition peripheral (arterial and/or venous) cannula(e), percutaneous, birth through 5 years of age (includes fluoroscopic guidance, when performed)	5.36	\$176
33958	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; reposition peripheral (arterial and/or venous) cannula(e), percutaneous, 6 years and older (includes fluoroscopic guidance, when performed)	5.36	\$176
33959	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; reposition peripheral (arterial and/or venous) cannula(e), open, birth through 5 years of age (includes fluoroscopic guidance, when performed)	6.83	\$224
33962	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; reposition peripheral (arterial and/or venous) cannula(e), open, 6 years and older (includes fluoroscopic guidance, when performed)	6.83	\$224

### Reposition central cannula(e)

33963	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; reposition of central cannula(e) by sternotomy or thoracotomy, birth through 5 years of age (includes fluoroscopic guidance, when performed)	13.59	\$445
-------	---	-------	-------



33964	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; reposition central cannula(e) by sternotomy or thoracotomy, 6 years and older (includes fluoroscopic guidance, when performed)	14.35	\$470
-------	---	-------	-------

### Removal of peripheral cannula(e)

33965	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; removal of peripheral (arterial and/or venous) cannula(e), percutaneous, birth through 5 years of age	5.36	\$227
33966	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; removal of peripheral (arterial and/or venous) cannula(e), percutaneous, 6 years and older	6.94	6.94
33969	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; removal of peripheral (arterial and/or venous) cannula(e), open, birth through 5 years of age	7.93	\$260
33984	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; removal of peripheral (arterial and/or venous) cannula(e), open, 6 years and older	8.30	\$272

### Removal of central cannula(e)

33985	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; removal of central cannula(e) by sternotomy or thoracotomy, birth through 5 years of age	14.92	\$489
33986	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; removal of central cannula(e) by sternotomy or thoracotomy, 6 years and older	15.32	\$502

### References

- <sup>1</sup> FY 2024 IPPS Final Rule Home Page. Centers for Medicare & Medicaid Services. Available at: <https://www.cms.gov/medicare/payment/prospective-payment-systems/acute-inpatient-pps/fy-2024-ipp-final-rule-home-page>. Accessed on January 10, 2024.
- <sup>2</sup> CY 2024 payment was calculated with the Conversion Factor (CF) of \$ 32.7442. CMS CY 2024 Medicare Physician Fee Schedule Final Rule. Available at: <https://www.cms.gov/medicare/medicare-fee-service-payment/physicianfeesched/pfs-federal-regulation-notices/cms-1784-f>. Accessed on January 10, 2024. CMS may make adjustments to any or all of the data inputs from time to time without notice.
- <sup>3</sup> Carrier-priced code. Carriers will establish RVUs and payment amounts for these services, generally on a case-by-case basis following review of documentation, such as an operative report. 69 Fed. Reg. #219, November 15, 2004.

## Medtronic

710 Medtronic Parkway  
 Minneapolis, MN 55432-5604  
 USA  
 Tel: 763.514.4000  
 Fax: 763.514.4879

24-hour Technical Support  
 Toll-free: +1.800.328.2518

[medtronic.com](https://www.medtronic.com)

©2024 Medtronic. Medtronic, Medtronic logo, and Engineering the extraordinary are trademarks of Medtronic. <sup>TM</sup>Third-party brands are trademarks of their respective owners. All other brands are trademarks of a Medtronic company.

UC202408944 EN ©2024 Medtronic.  
 Minneapolis, MN. All Rights Reserved.  
 Printed in the USA. 01/2024