STS National Database
Trusted. Transformed. Real-Time.

Category	Subcategory		Diagnosis	
Septal Defects	ASD	☐	10=PFO	☐
		☐	20= ASD, Secundum	☐
		☐	30= ASD, Sinus venosus	☐
		☐	40= ASD, Coronary sinus	☐
		☐	50= ASD, Common atrium (single atrium)	☐
		☐	2150= ASD, Postoperative interatrial communication	NA
	VSD	☐	71= VSD, Type 1 (Subarterial) (Supracristal) (Conal septal defect) (Infundibular)	☐
		☐	73= VSD, Type 2 (Perimembranous) (Paramembranous) (Conoventricular)	☐
		☐	75= VSD, Type 3 (Inlet) (AV canal type)	☐
		☐	77= VSD, Type 4 (Muscular)	☐
		☐	79= VSD, Type: Gerbode type (LV-RA communication)	☐
		☐	80= VSD, Multiple	☐
	AV Canal	☐	100= AVC (AVSD), Complete (CAVSD)	☐
		☐	110= AVC (AVSD), Intermediate (transitional)	☐
		☐	120= AVC (AVSD), Partial (incomplete) (PAVSD) (ASD, primum)	☐
	AP Window	☐	140= AP window (aortopulmonary window)	☐
		☐	150= Pulmonary artery origin from ascending aorta (hemitruncus)	☐
	Truncus Arteriosus	☐	160= Truncus arteriosus	☐
		☐	170= Truncal valve insufficiency	☐
		☐	2470= Truncal valve stenosis	NA
		☐	2010= Truncus arteriosus + Interrupted aortic arch	☐
Pulmonary Venous Anomalies	Partial Anomalous Pulmonary Venous Connection	☐	180= Partial anomalous pulmonary venous connection (PAPVC)	☐
		☐	190= Partial anomalous pulmonary venous connection (PAPVC), scimitar	☐
	Total Anomalous Pulmonary Venous Connection	☐	200=Total anomalous pulmonary venous connection (TAPVC), Type1 (supracardiac)	☐
		☐	210=Total anomalous pulmonary venous connection (TAPVC), Type 2 (cardiac)	☐
		☐	220=Total anomalous pulmonary venous connection (TAPVC), Type 3 (infracardiac)	☐
		☐	230=Total anomalous pulmonary venous connection (TAPVC), Type 4 (mixed)	☐
Cor Triatriatum		☐	250=Cor triatriatum	☐
Pulmonary Venous Stenosis		☐	260=Pulmonary venous stenosis	☐
		☐	2480=Pulmonary venous stenosis, Acquired	☐
		☐	2490=Pulmonary venous stenosis, Spontaneous	☐
Systemic Venous Anomalies	Anomalous Systemic Venous Connection	☐	270=Systemic venous anomaly	☐
	Systemic venous obstruction	☐	280=Systemic venous obstruction	☐
Right Heart Lesions	Tetralogy of Fallot	☐	290=TOF	☐
		☐	2140=TOF, Pulmonary stenosis	☐

		☐	300=TOF, AVC (AVSD)	☐
		☐	310=TOF, Absent pulmonary valve	☐
	Pulmonary Atresia	☐	320=Pulmonary atresia	☐
		☐	330=Pulmonary atresia, IVS	☐
		☐	340=Pulmonary atresia, VSD (Including TOF, PA)	☐
		☐	350=Pulmonary atresia, VSD-MAPCA	☐
		☐	360=MAPCA(s) (major aortopulmonary collateral[s]) (without PA-VSD)	☐
	Tricuspid Valve Disease and Ebstein's Anomaly	☐	370=Ebstein's anomaly	☐
		☐	380=Tricuspid regurgitation, non-Ebstein's related	☐
		☐	390=Tricuspid stenosis	☐
		☐	400=Tricuspid regurgitation and tricuspid stenosis	☐
		☐	410=Tricuspid valve, Other	☐
	RVOT Obstruction and/or Pulmonary Stenosis	☐	420=Pulmonary stenosis, Valvar	☐
		☐	430=Pulmonary artery stenosis (hypoplasia), Main (trunk)	☐
		☐	440=Pulmonary artery stenosis, Branch, Central (within the hilar bifurcation)	☐
		☐	450=Pulmonary artery stenosis, Branch, Peripheral (at or beyond the hilar bifurcation)	☐
		☐	470=Pulmonary artery, Discontinuous	☐
		☐	490=Pulmonary stenosis, Subvalvar	☐
		☐	500=DCRV	☐
	Pulmonary Valve Disease	☐	510=Pulmonary valve, Other	☐
		☐	530=Pulmonary insufficiency	☐
		☐	540=Pulmonary insufficiency and pulmonary stenosis	☐
Shunt failure	Shunt failure	☐	2130=Shunt Failure	NA
Conduit failure	Conduit failure	☐	520=Conduit failure	NA

Left Heart Lesions	Aortic Valve Disease	☐ 550=Aortic stenosis, Subvalvar	☐
		☐ 2500=Aortic stenosis, Subvalvar, Discrete	☐
		☐ 2510=Aortic stenosis, Subvalvar, IHSS	☐
		☐ 2520=Aortic stenosis, Subvalvar, Tunnel-like	☐
		☐ 560=Aortic stenosis, Valvar	☐
		☐ 570=Aortic stenosis, Supravalvar	☐
		☐ 590=Aortic valve atresia	☐
		☐ 600=Aortic insufficiency	☐
		☐ 610=Aortic insufficiency and aortic stenosis	☐
		☐ 620=Aortic valve, Other	☐
	Sinus of Valsalva Fistula/Aneurysm	☐ 630=Sinus of Valsalva aneurysm	☐
	LV to Aorta Tunnel	☐ 640=LV to aorta tunnel	☐
	Mitral Valve Disease	☐ 650=Mitral stenosis, Supravalvar mitral ring	☐
		☐ 660=Mitral stenosis, Valvar	☐
		☐ 670=Mitral stenosis, Subvalvar	☐
		☐ 680=Mitral stenosis, Subvalvar, Parachute	☐
		☐ 695=Mitral stenosis	☐
		☐ 700=Mitral regurgitation and mitral stenosis	☐
		☐ 710=Mitral regurgitation	☐
		☐ 720=Mitral valve, Other	☐
	Hypoplastic Left Heart Syndrome	☐ 730=Hypoplastic left heart syndrome (HLHS)	☐
	Shone's syndrome	☐ 2080=Shone's syndrome *{CANNOT BE PRIMARY DIAGNOSIS}*	☐
Cardiomyopathy		☐ 740=Cardiomyopathy (including dilated, restrictive, and hypertrophic)	☐
		☐ 750=Cardiomyopathy, End-stage congenital heart disease	☐
Pericardial Disease		☐ 760=Pericardial effusion	☐
		☐ 770=Pericarditis	☐
		☐ 780=Pericardial disease, Other	☐
Single Ventricle		☐ 790=Single ventricle, DILV	☐
		☐ 800=Single ventricle, DIRV	☐
		☐ 810=Single ventricle, Mitral atresia	☐
		☐ 820=Single ventricle, Tricuspid atresia	☐
		☐ 830=Single ventricle, Unbalanced AV canal	☐
		☐ 840=Single ventricle, Heterotaxia syndrome	☐
		☐ 850=Single ventricle, Other	☐
		☐ 851=Single ventricle + Total anomalous pulmonary venous connection (TAPVC)	☐
Transposition of the Great Arteries	Congenitally Corrected TGA	☐ 870=Congenitally corrected TGA	☐
		☐ 872=Congenitally corrected TGA, IVS	☐
		☐ 874=Congenitally corrected TGA, IVS-LVOTO	☐
		☐ 876=Congenitally corrected TGA, VSD	☐
		☐ 878=Congenitally corrected TGA, VSD-LVOTO	☐
	Transposition of the Great Arteries	☐ 880=TGA, IVS	☐
		☐ 890=TGA, IVS-LVOTO	☐
		☐ 900=TGA, VSD	☐
		☐ 910=TGA, VSD-LVOTO	☐

DORV		☐	930=DORV, VSD type	☐
		☐	940=DORV, TOF type	☐
		☐	950=DORV, TGA type	☐
		☐	960=DORV, Remote VSD (uncommitted VSD)	☐
		☐	2030=DORV + AVSD (AV Canal)	☐
		☐	975=DORV, IVS	☐
DOLV		☐	980=DOLV	☐
Thoracic Arteries and Veins	Coarctation of Aorta and Aortic arch hypoplasia	☐	990=Coarctation of aorta	☐
		☐	1000=Aortic arch hypoplasia	☐
		☐	92=VSD + Aortic arch hypoplasia	☐
		☐	94=VSD + Coarctation of aorta	☐
	Coronary Artery Anomalies	☐	1010=Coronary artery anomaly, Anomalous aortic origin of coronary artery (AAOCA)	☐
		☐	1020=Coronary artery anomaly, Anomalous pulmonary origin (includes ALCAPA)	☐
		☐	1030=Coronary artery anomaly, Fistula	☐
		☐	1040=Coronary artery anomaly, Aneurysm	☐
		☐	2420=Coronary artery anomaly, Ostial atresia	☐
		☐	1050=Coronary artery anomaly, Other	☐
	Interrupted Arch	☐	1070=Interrupted aortic arch	☐
		☐	2020=Interrupted aortic arch + VSD	☐
		☐	2000=Interrupted aortic arch + AP window (aortopulmonary window)	☐
	Patent Ductus Arteriosus	☐	1080=Patent ductus arteriosus	☐
	Vascular rings and Slings	☐	1090=Vascular ring	☐
		☐	1100=Pulmonary artery sling	☐
	Aortic Aneurysm	☐	1110=Aortic aneurysm (including pseudoaneurysm)	☐
	Aortic Dissection	☐	1120=Aortic dissection	☐
Thoracic and Mediastinal Disease	Lung Disease	☐	1130=Lung disease, Benign	☐
		☐	1140=Lung disease, Malignant	☐
	Tracheal	☐	1160=Tracheal stenosis	☐
		☐	2430=Tracheomalacia	☐
		☐	1170=Airway disease, Other	☐
	Pleural Disease	☐	1430=Pleural disease, Benign	☐
		☐	1440=Pleural disease, Malignant	☐
		☐	1450=Pneumothorax	☐
		☐	1460=Pleural effusion	☐
		☐	1470=Chylothorax	☐
		☐	1480=Empyema	☐
	Esophageal Disease	☐	1490=Esophageal disease, Benign	☐
		☐	1500=Esophageal disease, Malignant	☐
	Mediastinal Disease	☐	1505=Mediastinal disease	☐
		☐	1510=Mediastinal disease, Benign	☐
		☐	1520=Mediastinal disease, Malignant	☐
	Diaphragmatic Disease	☐	1540=Diaphragm paralysis	☐
		☐	1550=Diaphragm disease, Other	☐

Thoracic and Mediastinal Disease	Chest Wall	☐ 2160=Rib tumor, Benign	☐
		☐ 2170=Rib tumor, Malignant	☐
		☐ 2180=Rib tumor, Metastatic	☐
		☐ 2190=Sternal tumor, Benign	☐
		☐ 2200=Sternal tumor, Malignant	☐
		☐ 2210=Sternal tumor, Metastatic	☐
	Pectus Excavatum, Carinatum	☐ 2220=Pectus carinatum	☐
		☐ 2230=Pectus excavatum	☐
	Thoracic Outlet	☐ 2240=Thoracic outlet syndrome	☐
Electrophysiological		☐ 1180=Arrhythmia	☐
		☐ 2440=Arrhythmia, Atrial, Atrial fibrillation	☐
		☐ 2450=Arrhythmia, Atrial, Atrial flutter	☐
		☐ 2460=Arrhythmia, Atrial, Other	☐
		☐ 2050=Arrhythmia, Junctional	☐
		☐ 2060=Arrhythmia, Ventricular	☐
		☐ 1185=Arrhythmia, Heart block	☐
		☐ 1190=Arrhythmia, Heart block, Acquired	☐
		☐ 1200=Arrhythmia, Heart block, Congenital	☐
		☐ 1220=Arrhythmia, Pacemaker, Indication for replacement	NA
		☐ 2530= Short QT syndrome	☐
		☐ 2540= Long QT syndrome (Ward Romano syndrome)	☐
		☐ 2550= Wolff-Parkinson-White syndrome (WPW syndrome)	☐
Miscellaneous, Other		☐ 1230=Atrial Isomerism, Left *{CANNOT BE PRIMARY DIAGNOSIS}*	NA
		☐ 1240=Atrial Isomerism, Right *{CANNOT BE PRIMARY DIAGNOSIS}*	NA
		☐ 2090=Dextrocardia *{CANNOT BE PRIMARY DIAGNOSIS}*	NA
		☐ 2100=Levocardia *{CANNOT BE PRIMARY DIAGNOSIS}*	NA
		☐ 2110=Mesocardia *{CANNOT BE PRIMARY DIAGNOSIS}*	NA
		☐ 2120=Situs inversus *{CANNOT BE PRIMARY DIAGNOSIS}*	NA
		☐ 1250=Aneurysm, Ventricular, Right (including pseudoaneurysm)	☐
		☐ 1260=Aneurysm, Ventricular, Left (including pseudoaneurysm)	☐
		☐ 1270=Aneurysm, Pulmonary artery	☐
		☐ 1280=Aneurysm, Other	☐
		☐ 1290=Hypoplastic RV	☐
		☐ 1300=Hypoplastic LV	☐
		☐ 2070=Postoperative bleeding	NA
		☐ 1310=Mediastinitis	☐
		☐ 1320=Endocarditis	☐
		☐ 1325=Rheumatic heart disease *{CANNOT BE PRIMARY DIAGNOSIS}*	☐
		☐ 1330=Prosthetic valve failure	NA
		☐ 1340=Myocardial infarction	☐
		☐ 1350=Cardiac tumor	☐
		☐ 1360=Pulmonary AV fistula	☐
		☐ 1370=Pulmonary embolism	☐
		☐ 1385=Pulmonary vascular obstructive disease	☐
		☐ 1390=Pulmonary vascular obstructive disease (Eisenmenger's)	☐
		☐ 1400=Primary pulmonary hypertension	☐
		☐ 1410=Persistent fetal circulation	☐
		☐ 1420=Meconium aspiration	☐

		☐ 2250=Kawasaki Disease	☐
		☐ 1560=Cardiac, Other	☐
		☐ 1570=Thoracic and/or mediastinal, Other	☐
		☐ 1580=Peripheral vascular, Other	☐
		☐ 2260=Complication of cardiovascular catheterization procedure	NA
		☐ 2270=Complication of cardiovascular catheterization procedure, Device embolization	NA
		☐ 2280=Complication of cardiovascular catheterization procedure, Device malfunction	NA
		☐ 2290=Complication of cardiovascular catheterization procedure, Perforation	NA
		☐ 2300=Complication of interventional radiology procedure	NA
		☐ 2310=Complication of interventional radiology procedure, Device embolization	NA
		☐ 2320=Complication of interventional radiology procedure, Device malfunction	NA
		☐ 2330=Complication of interventional radiology procedure, Perforation	NA
		☐ 2340=Foreign body, Intracardiac foreign body	NA
		☐ 2350=Foreign body, Intravascular foreign body	NA
		☐ 2360=Open sternum with closed skin	NA
		☐ 2370=Open sternum with open skin (includes membrane placed to close skin)	NA
		☐ 2380=Retained sternal wire causing irritation	NA
		☐ 2390=Syncope	NA
		☐ 2400=Trauma, Blunt	☐
		☐ 2410=Trauma, Penetrating	☐
		☐ 2560=Cardio-respiratory failure not secondary to known structural heart disease	☐
		☐ 2570=Myocarditis	☐
		☐ 2580=Common AV valve insufficiency	☐
		☐ 2590=Protein-losing enteropathy	☐
		☐ 2600=Plastic bronchitis	☐
		☐ 7000=Normal heart	☐
		☐ 7777=Miscellaneous, Other	☐
Septal Defects	ASD	☐ 4010=Status post - PFO, Primary closure	
		☐ 4020=Status post - ASD repair, Primary closure	
		☐ 4030=Status post - ASD repair, Patch	
		☐ 4040=Status post - ASD repair, Device	
		☐ 6110=Status post - ASD repair, Patch + PAPVC repair	
		☐ 4050=Status post - ASD, Common atrium (single atrium), Septation	
		☐ 4060=Status post - ASD creation/enlargement	
		☐ 4070=Status post - ASD partial closure	
		☐ 4080=Status post - Atrial septal fenestration	
		☐ 4085=Status post - Atrial fenestration closure	
	VSD	☐ 4100=Status post - VSD repair, Primary closure	
		☐ 4110=Status post - VSD repair, Patch	
		☐ 4120=Status post - VSD repair, Device	
		☐ 4130=Status post - VSD, Multiple, Repair	
		☐ 4140=Status post - VSD creation/enlargement	
		☐ 4150=Status post - Ventricular septal fenestration	
	AV Canal	☐ 4170=Status post - AVC (AVSD) repair, Complete (CAVSD)	
		☐ 4180=Status post - AVC (AVSD) repair, Intermediate (Transitional)	

		☐ 4190=Status post - AVC (AVSD) repair, Partial (Incomplete) (PAVSD)
		☐ 6300=Status post - Valvuloplasty, Common atrioventricular valve
		☐ 6250=Status post - Valvuloplasty converted to valve replacement in the same operation, Common atrioventricular valve
		☐ 6230=Status post - Valve replacement, Common atrioventricular valve
	AP Window	☐ 4210=Status post - AP window repair
		☐ 4220=Status post - Pulmonary artery origin from ascending aorta (hemitruncus) repair
	Truncus Arteriosus	☐ 4230=Status post - Truncus arteriosus repair
		☐ 4240=Status post - Valvuloplasty, Truncal valve
		☐ 6290=Status post - Valvuloplasty converted to valve replacement in the same operation, Truncal valve
		☐ 4250=Status post - Valve replacement, Truncal valve
		☐ 6220=Status post - Truncus + Interrupted aortic arch repair (IAA) repair
Pulmonary Venous Anomalies	Partial Anomalous Pulmonary Venous Connection	☐ 4260=Status post - PAPVC repair
		☐ 4270=Status post - PAPVC, Scimitar, Repair
		☐ 6120=Status post - PAPVC repair, Baffle redirection to left atrium with systemic vein translocation (Warden) (SVC sewn to right atrial appendage)
	Total Anomalous Pulmonary Venous Connection	☐ 4280=Status post - TAPVC repair
		☐ 6200=Status post - TAPVC repair + Shunt - systemic-to-pulmonary
Cor Triatriatum		☐ 4290=Status post - Cor triatriatum repair
Pulmonary Venous Stenosis		☐ 4300=Status post - Pulmonary venous stenosis repair
Systemic Venous Anomalies	Anomalous Systemic Venous Connection	☐ 4310=Status post - Atrial baffle procedure (non-Mustard, non-Senning)
		☐ 4330=Status post - Anomalous systemic venous connection repair
	Systemic venous obstruction	☐ 4340=Status post - Systemic venous stenosis repair
Right Heart Lesions	Tetralogy of Fallot	☐ 4350=Status post - TOF repair, No ventriculotomy
		☐ 4360=Status post - TOF repair, Ventriculotomy, Nontransanular patch
		☐ 4370=Status post - TOF repair, Ventriculotomy, Transanular patch
		☐ 7330=Status post - TOF repair, Ventriculotomy, Transanular patch, plus native valve reconstruction
		☐ 7340=Status post - TOF repair, Ventriculotomy, Transanular patch, with monocusp or other surgically fashioned RVOT valve
		☐ 4380=Status post - TOF repair, RV-PA conduit
		☐ 4390=Status post - TOF - AVC (AVSD) repair
		☐ 4400=Status post - TOF - Absent pulmonary valve repair
	Pulmonary Atresia/VSD	☐ 4420=Status post - Pulmonary atresia - VSD (including TOF, PA) repair
		☐ 6700=Status post - Pulmonary atresia - VSD - MAPCA repair, Complete single stage repair (1-stage that includes bilateral pulmonary unifocalization + VSD closure + RV to PA connection [with or without conduit])
		☐ 6710=Status post - Pulmonary atresia - VSD - MAPCA repair, Status post prior complete unifocalization (includes VSD closure + RV to PA connection [with or without conduit])
		☐ 6720=Status post - Pulmonary atresia - VSD - MAPCA repair, Status post prior incomplete unifocalizarion (includes completion of pulmonary unifocalization + VSD closure + RV to PA connection [with or without conduit])
		☐ 6730=Status post - Unifocalization MAPCA(s), Bilateral pulmonary unifocalization - Complete unifocalization (all usable MAPCA[s] are incorporated)

		☐	6740=Status post - Unifocalization MAPCA(s), Bilateral pulmonary unifocalization - Incomplete unifocalization (not all usable MAPCA[s] are incorporated)
		☐	6750=Status post - Unifocalization MAPCA(s), Unilateral pulmonary unifocalization
		☐	4440=Status post – Unifocalization MAPCA(s)
		☐	4450=Status post - Occlusion of MAPCA(s)
	Tricuspid Valve Disease and Ebstein's Anomaly	☐	4460=Status post - Valvuloplasty, Tricuspid
		☐	6280=Status post - Valvuloplasty converted to valve replacement in the same operation, Tricuspid
		☐	4465=Status post - Ebstein's repair
		☐	4470=Status post - Valve replacement, Tricuspid (TVR)
		☐	4480=Status post - Valve closure, Tricuspid (exclusion, univentricular approach)
		☐	4490=Status post - Valve excision, Tricuspid (without replacement)
		☐	4500=Status post - Valve surgery, Other, Tricuspid
	RVOT Obstruction, IVS Pulmonary Stenosis	☐	4510=Status post - RVOT procedure
		☐	4520=Status post - 1 1/2 ventricular repair
		☐	4530=Status post - PA, reconstruction (plasty), Main (trunk)
		☐	4540=Status post - PA, reconstruction (plasty), Branch, Central (within the hilar bifurcation)
		☐	4550=Status post - PA, reconstruction (plasty), Branch, Peripheral (at or beyond the first lobar branch)
		☐	7350=Status post - PA, reconstruction (plasty), Branch, Peripheral (at or beyond the first lobar branch, proximal to first segmental branch)
		☐	7360=Status post - PA, reconstruction (plasty), Branch, Peripheral (at or beyond the first lobar branch, beyond the first segmental branch)
		☐	4570=Status post - DCRV repair
		☐	7370=Status post - RV Rehabilitation, Endocardial Resection
	Pulmonary Valve Disease	☐	4590=Status post - Valvuloplasty, Pulmonic
		☐	6270=Status post - Valvuloplasty converted to valve replacement in the same operation, Pulmonic
		☐	4600=Status post - Valve replacement, Pulmonic (PVR)
		☐	4630=Status post - Valve excision, Pulmonary (without replacement)
		☐	4640=Status post - Valve closure, Semilunar
		☐	4650=Status post - Valve surgery, Other, Pulmonic
Conduit operations	Conduit operations	☐	4610=Status post - Conduit placement, RV to PA
		☐	4620=Status post - Conduit placement, LV to PA
		☐	5774=Status post - Conduit placement, Ventricle to aorta
		☐	5772=Status post - Conduit placement, Other
	Conduit Stenosis / Insufficiency	☐	4580=Status post - Conduit reoperation
		☐	4660=Status post - Valvuloplasty, Aortic
		☐	6240=Status post - Valvuloplasty converted to valve replacement in the same operation, Aortic
		☐	6310=Status post - Valvuloplasty converted to valve replacement in the same operation, Aortic – with Ross procedure
		☐	6320=Status post - Valvuloplasty converted to valve replacement in the same operation, Aortic – with Ross-Konno procedure
		☐	4670=Status post - Valve replacement, Aortic (AVR)
		☐	4680=Status post - Valve replacement, Aortic (AVR), Mechanical
		☐	4690=Status post - Valve replacement, Aortic (AVR), Bioprosthetic

Left Heart Lesions	Aortic Valve Disease	☐	4700=Status post - Valve replacement, Aortic (AVR), Homograft
		☐	4715=Status post - Aortic root replacement, Bioprosthetic
		☐	4720=Status post - Aortic root replacement, Mechanical
		☐	4730=Status post - Aortic root replacement, Homograft
		☐	4735=Status post - Aortic root replacement, Valve sparing
		☐	4740=Status post - Ross procedure
		☐	4750=Status post - Konno procedure
		☐	4760=Status post - Ross-Konno procedure
		☐	4770=Status post - Other annular enlargement procedure
		☐	4780=Status post - Aortic stenosis, Subvalvar, Repair
		☐	6100=Status post - Aortic stenosis, Subvalvar, Repair, With myectomy for IHSS
		☐	4790=Status post - Aortic stenosis, Supravalvar, Repair
		☐	4800=Status post - Valve surgery, Other, Aortic
		☐	7380=Status post - Extended Ventricular Septoplasty (modified Konno, VSD creation and patch enlargement of LVOT, sparing aortic valve) for tunnel type sub aortic stenosis
	Sinus of Valsalva Aneurysm	☐	4810=Status post - Sinus of Valsalva, Aneurysm repair
	LV to Aorta Tunnel	☐	4820=Status post - LV to aorta tunnel repair
	Mitral Valve Disease	☐	4830=Status post - Valvuloplasty, Mitral
		☐	6260=Status post - Valvuloplasty converted to valve replacement in the same operation, Mitral
		☐	4840=Status post - Mitral stenosis, Supravalvar mitral ring repair
		☐	4850=Status post - Valve replacement, Mitral (MVR)
		☐	4860=Status post - Valve surgery, Other, Mitral
	Hypoplastic Left Heart and Related malformations	☐	4870=Status post - Norwood procedure
		☐	4880=Status post - HLHS biventricular repair
		☐	7390=Status post - LV Endocardial Fibroelastosis resection
		☐	6755=Status post - Conduit insertion right ventricle to pulmonary artery + Intraventricular tunnel left ventricle to neoaorta + arch reconstruction (Rastelli and Norwood type arch reconstruction) (Yasui)
Hybrid		☐	6160=Status post - Hybrid Approach "Stage 1", Application of RPA & LPA bands
		☐	6170=Status post - Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA)
		☐	6180=Status post - Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA) + application of RPA & LPA bands
		☐	6140=Status post - Hybrid approach "Stage 2", Aortopulmonary amalgamation + Superior Cavopulmonary anastomosis(es) + PA Debanding + Aortic arch repair (Norwood [Stage 1] + Superior Cavopulmonary anastomosis(es) + PA Debanding)
		☐	6150=Status post - Hybrid approach "Stage 2", Aortopulmonary amalgamation + Superior Cavopulmonary anastomosis(es) + PA Debanding + Without aortic arch repair
		☐	6760=Status post – Hybrid Approach, Transcardiac balloon dilatation
		☐	6770=Status post – Hybrid Approach, Transcardiac transcatheter device placement
Cardiomyopathy		☐	1590=Status post - Transplant, Heart
		☐	1610=Status post - Transplant, Heart and lung
		☐	4910=Status post - Partial left ventriculectomy (LV volume reduction surgery) (Batista)
Pericardial Disease		☐	4920=Status post - Pericardial drainage procedure
		☐	4930=Status post - Pericardiectomy

		☐	4940=Status post - Pericardial procedure, Other
Single Ventricle		☐	4950=Status post - Fontan, Atrio-pulmonary connection
		☐	4960=Status post - Fontan, Atrio-ventricular connection
		☐	4970=Status post - Fontan, TCPC, Lateral tunnel, Fenestrated
		☐	4980=Status post - Fontan, TCPC, Lateral tunnel, Nonfenestrated
		☐	5000=Status post - Fontan, TCPC, External conduit, Fenestrated
		☐	5010=Status post - Fontan, TCPC, External conduit, Nonfenestrated
		☐	6780=Status post - Fontan, TCPC, Intra/extracardiac conduit, Fenestrated
		☐	6790=Status post - Fontan, TCPC, Intra/extracardiac conduit, Nonfenestrated
		☐	7310=Status post - Fontan, TCPC, External conduit, hepatic veins to pulmonary artery, Fenestrated
		☐	7320=Status post - Fontan, TCPC, External conduit, hepatic veins to pulmonary artery, Nonfenestrated
		☐	5025=Status post - Fontan revision or conversion (Re-do Fontan)
		☐	5030=Status post - Fontan, Other
		☐	6340=Status post - Fontan + Atrioventricular valvuloplasty
		☐	5035=Status post - Ventricular septation
Transposition of the Great Arteries	Congenitally Corrected TGA	☐	5050=Status post - Congenitally corrected TGA repair, Atrial switch and ASO (double switch)
		☐	5060=Status post - Congenitally corrected TGA repair, Atrial switch and Rastelli
		☐	5070=Status post - Congenitally corrected TGA repair, VSD closure
		☐	5080=Status post - Congenitally corrected TGA repair, VSD closure and LV to PA conduit
		☐	5090=Status post - Congenitally corrected TGA repair, Other
	Transposition of the Great Arteries	☐	5110=Status post - Arterial switch operation (ASO)
		☐	5120=Status post - Arterial switch operation (ASO) and VSD repair
		☐	5123=Status post - Arterial switch procedure + Aortic arch repair
		☐	5125=Status post - Arterial switch procedure and VSD repair + Aortic arch repair
		☐	5130=Status post - Senning
		☐	5140=Status post - Mustard
		☐	5145=Status post - Atrial baffle procedure, Mustard or Senning revision
		☐	5150=Status post - Rastelli
		☐	5160=Status post - REV
		☐	6190=Status post - Aortic root translocation over left ventricle (Including Nikaidoh procedure)
		☐	6210=Status post - TGA, Other procedures (Kawashima, LV-PA conduit, other)
		☐	7400=Status post - Double root translocation
DORV		☐	5180=Status post - DORV, Intraventricular tunnel repair
		☐	7410=Status post - DORV repair, No Ventriculotomy
		☐	7420=Status post - DORV repair, Ventriculotomy, Nontransannular patch
		☐	7430=Status post - DORV repair, Ventriculotomy, Transannular patch
		☐	7440=Status post - DORV repair, RV-PA conduit
		☐	7450=Status post - DORV - AVC (AVSD) repair
DOLV		☐	5200=Status post - DOLV repair
Thoracic Arteries and Veins	Coarctation of Aorta and Aortic arch hypoplasia	☐	5210=Status post - Coarctation repair, End to end
		☐	5220=Status post - Coarctation repair, End to end, Extended
		☐	7460=Status post - Coarctation repair, Descending aorta anastomosed to Ascending aorta

		☐ 5230=Status post - Coarctation repair, Subclavian flap
		☐ 5240=Status post - Coarctation repair, Patch aortoplasty
		☐ 5250=Status post - Coarctation repair, Interposition graft
		☐ 7470=Status post - Coarctation repair, Extra-anatomic Bypass graft
		☐ 5260=Status post - Coarctation repair, Other
		☐ 5275=Status post - Coarctation repair + VSD repair
		☐ 5280=Status post - Aortic arch repair
		☐ 5285=Status post - Aortic arch repair + VSD repair
	Coronary Artery Anomalies	☐ 5290=Status post - Coronary artery fistula ligation
		☐ 5291=Status post - Anomalous origin of coronary artery from pulmonary artery repair
		☐ 5300=Status post - Coronary artery bypass
		☐ 5305=Status post - Anomalous aortic origin of coronary artery (AAOCA) repair
		☐ 5310=Status post - Coronary artery procedure, Other
	Interrupted Arch	☐ 5320=Status post - Interrupted aortic arch repair
	Patent Ductus Arteriosus	☐ 5330=Status post - PDA closure, Surgical
		☐ 5340=Status post - PDA closure, Device
	Vascular Rings and Slings	☐ 5360=Status post - Vascular ring repair
		☐ 5365=Status post - Aortopexy
		☐ 5370=Status post - Pulmonary artery sling repair
	Aortic Aneurysm	☐ 5380=Status post - Aortic aneurysm repair
	Aortic Dissection	☐ 5390=Status post - Aortic dissection repair
Thoracic and Mediastinal Disease	Lung Disease	☐ 5400=Status post - Lung biopsy
		☐ 1600=Status post - Transplant, lung(s)
		☐ 5420=Status post - Lung procedure, Other
	Tracheal Stenosis	☐ 5440=Status post - Tracheal procedure
	Chest Wall	☐ 6800=Status post - Muscle flap, Trunk (i.e. intercostal, pectus, or serratus muscle)
		☐ 6810=Status post - Muscle flap, Trunk (i.e. latissimus dorsi)
		☐ 6820=Status post - Removal, Sternal wire
		☐ 6830=Status post - Rib excision, Complete
		☐ 6840=Status post - Rib excision, Partial
		☐ 6850=Status post - Sternal fracture, Open treatment
		☐ 6860=Status post - Sternal resection, Radical resection of the sternum
		☐ 6870=Status post - Sternal resection, Radical resection of the sternum with mediastinal lymphadenectomy
		☐ 6880=Status post - Tumor of chest wall, Excision including ribs
		☐ 6890=Status post - Tumor of chest wall, Excision including ribs, With reconstruction
		☐ 6900=Status post - Tumor of soft tissue of thorax, Excision of deep subfascial or intramuscular tumor
		☐ 6910=Status post - Tumor of soft tissue of thorax, Excision of subcutaneous tumor
		☐ 6920=Status post - Tumor of soft tissue of thorax, Radical resection
	Neck	☐ 6930=Status post - Hyoid myotomy and suspension
		☐ 6940=Status post - Muscle flap, Neck
		☐ 6950=Status post - Procedure on neck
		☐ 6960=Status post - Tumor of soft tissue of neck, Excision of deep subfascial or intramuscular tumor
		☐ 6970=Status post - Tumor of soft tissue of neck, Excision of subcutaneous tumor
		☐ 6980=Status post - Tumor of soft tissue of neck, Radical resection
		☐ 6990=Status post - Pectus bar removal

	Pectus Excvatum, Carinatum	☐	7005=Status post - Pectus bar repositioning
		☐	7010=Status post - Pectus repair, Minimally invasive repair (Nuss), With thoracoscopy
		☐	7020=Status post - Pectus repair, Minimally invasive repair (Nuss), Without thoracoscopy
		☐	7030=Status post - Pectus repair, Open repair
	Thoracic Outlet	☐	7040=Status post - Division of scalenus anticus, With resection of a cervical rib
		☐	7050=Status post - Division of scalenus anticus, Without resection of a cervical rib
		☐	7060=Status post - Rib excision, Excision of a cervical rib
		☐	7070=Status post - Rib excision, Excision of a cervical rib, With sympathectomy
		☐	7080=Status post - Rib excision, Excision of first rib
		☐	7090=Status post - Rib excision, Excision of first rib, With sympathectomy
	Thorax	☐	7100=Status post - Procedure on thorax
Electrophysiological		☐	5450=Status post - Pacemaker implantation, Permanent
		☐	5460=Status post - Pacemaker procedure
		☐	6350=Status post - Explantation of pacing system
		☐	5470=Status post - ICD (AICD) implantation
		☐	5480=Status post - ICD (AICD) ([automatic] implantable cardioverter defibrillator) procedure
		☐	5490=Status post - Arrhythmia surgery - atrial, Surgical Ablation
		☐	5500=Status post - Arrhythmia surgery - ventricular, Surgical Ablation
Interventional Cardiology Procedures		☐	6500=Status post - Cardiovascular catheterization procedure, Diagnostic
		☐	6520=Status post - Cardiovascular catheterization procedure, Diagnostic, Angiographic data obtained
		☐	6550=Status post - Cardiovascular catheterization procedure, Diagnostic, Electrophysiology alteration
		☐	6540=Status post - Cardiovascular catheterization procedure, Diagnostic, Hemodynamic alteration
		☐	6510=Status post - Cardiovascular catheterization procedure, Diagnostic, Hemodynamic data obtained
		☐	6530=Status post - Cardiovascular catheterization procedure, Diagnostic, Transluminal test occlusion
		☐	6410=Status post - Cardiovascular catheterization procedure, Therapeutic
		☐	6670=Status post - Cardiovascular catheterization procedure, Therapeutic, Adjunctive therapy
		☐	6570=Status post - Cardiovascular catheterization procedure, Therapeutic, Balloon dilation
		☐	6590=Status post - Cardiovascular catheterization procedure, Therapeutic, Balloon valvotomy
		☐	6600=Status post - Cardiovascular catheterization procedure, Therapeutic, Coil implantation
		☐	6610=Status post - Cardiovascular catheterization procedure, Therapeutic, Device implantation
		☐	7110=Status post - Cardiovascular catheterization procedure, Therapeutic, Device implantation attempted
		☐	6690=Status post - Cardiovascular catheterization procedure, Therapeutic, Electrophysiological ablation
		☐	7120=Status post - Cardiovascular catheterization procedure, Therapeutic, Intravascular foreign body removal
		☐	6640=Status post - Cardiovascular catheterization procedure, Therapeutic, Perforation (establishing interchamber and/or intervessel communication)
		☐	6580=Status post - Cardiovascular catheterization procedure, Therapeutic, Septostomy

		☐ 6620=Status post - Cardiovascular catheterization procedure, Therapeutic, Stent insertion
		☐ 6630=Status post - Cardiovascular catheterization procedure, Therapeutic, Stent re-dilation
		☐ 6650=Status post - Cardiovascular catheterization procedure, Therapeutic, Transcatheter Fontan completion
		☐ 6660=Status post - Cardiovascular catheterization procedure, Therapeutic, Transcatheter implantation of valve
Palliative Procedures		☐ 5590=Status post - Shunt, Systemic to pulmonary, Modified Blalock-Taussig Shunt (MBTS)
		☐ 5600=Status post - Shunt, Systemic to pulmonary, Central (shunt from aorta)
		☐ 7130=Status post - Shunt, Systemic to pulmonary, Central (shunt from aorta) Central shunt with an end-to-side connection between the transected main pulmonary artery and the side of the ascending aorta (i.e. Mee shunt)
		☐ 7230=Status post – Shunt, Systemic to pulmonary, Potts – Smith type (descending aorta to pulmonary artery)
		☐ 5610=Status post - Shunt, Systemic to pulmonary, Other
		☐ 5630=Status post - Shunt, Ligation and takedown
		☐ 6095=Status post - Shunt, Reoperation
		☐ 5640=Status post - PA banding (PAB)
		☐ 5650=Status post - PA debanding
		☐ 7200=Status post - PA band adjustment
		☐ 5660=Status post - Damus-Kaye-Stansel procedure (DKS) (creation of AP anastomosis without arch reconstruction)
		☐ 5670=Status post - Bidirectional cavopulmonary anastomosis (BDCPA) (bidirectional Glenn)
		☐ 5680=Status post - Glenn (unidirectional cavopulmonary anastomosis) (unidirectional Glenn)
		☐ 5690=Status post - Bilateral bidirectional cavopulmonary anastomosis (BBDCPA) (bilateral bidirectional Glenn)
		☐ 5700=Status post - HemiFontan
		☐ 6330=Status post - Superior cavopulmonary anastomosis(es) (Glenn or HemiFontan) + Atrioventricular valvuloplasty
		☐ 6130=Status post - Superior Cavopulmonary anastomosis(es) + PA reconstruction
		☐ 7300=Status post - Takedown of superior cavopulmonary anastomosis
		☐ 7140=Status post - Hepatic vein to azygous vein connection, Direct
		☐ 7150=Status post - Hepatic vein to azygous vein connection, Interposition graft
		☐ 7160=Status post - Kawashima operation (superior cavopulmonary connection in setting of interrupted IVC with azygous continuation)
		☐ 5710=Status post - Palliation, Other
Mechanical Support		☐ 6360=Status post - ECMO cannulation
		☐ 6370=Status post - ECMO decannulation
		☐ 5910=Status post - ECMO procedure
		☐ 5900=Status post - Intraaortic balloon pump (IABP) insertion
		☐ 5920=Status post - Right/left heart assist device procedure
		☐ 6390=Status post - VAD explantation
		☐ 6380=Status post - VAD implantation
		☐ 7170=Status post - VAD change out
Anesthetic procedures		☐ 6420=Status post - Echocardiography procedure, Sedated transesophageal echocardiogram
		☐ 6430=Status post - Echocardiography procedure, Sedated transthoracic echocardiogram

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	☐	6435=Status post - Non-cardiovascular, Non-thoracic procedure on cardiac patient with cardiac anesthesia
	☐	6440=Status post - Radiology procedure on cardiac patient, Cardiac Computerized Axial Tomography (CT Scan)
	☐	6450=Status post - Radiology procedure on cardiac patient, Cardiac Magnetic Resonance Imaging (MRI)
	☐	6460=Status post - Radiology procedure on cardiac patient, Diagnostic radiology
	☐	6470=Status post - Radiology procedure on cardiac patient, Non-Cardiac Computerized Tomography (CT) on cardiac patient
	☐	6480=Status post - Radiology procedure on cardiac patient, Non-cardiac Magnetic Resonance Imaging (MRI) on cardiac patient
	☐	6490=Status post - Radiology procedure on cardiac patient, Therapeutic radiology

Miscellaneous Procedures	☐	5720=Status post - Aneurysm, Ventricular, Right, Repair
	☐	5730=Status post - Aneurysm, Ventricular, Left, Repair
	☐	5740=Status post - Aneurysm, Pulmonary artery, Repair
	☐	5760=Status post - Cardiac tumor resection
	☐	5780=Status post - Pulmonary AV fistula repair/occlusion
	☐	5790=Status post - Ligation, Pulmonary artery
	☐	5802=Status post - Pulmonary embolectomy, Acute pulmonary embolus
	☐	5804=Status post - Pulmonary embolectomy, Chronic pulmonary embolus
	☐	5810=Status post - Pleural drainage procedure
	☐	5820=Status post - Pleural procedure, Other
	☐	5830=Status post - Ligation, Thoracic duct
	☐	5840=Status post - Decortication
	☐	5850=Status post - Esophageal procedure
	☐	5860=Status post - Mediastinal procedure
	☐	5870=Status post - Bronchoscopy
	☐	5880=Status post - Diaphragm plication
	☐	5890=Status post - Diaphragm procedure, Other
	☐	5930=Status post - VATS (video-assisted thoracoscopic surgery)
	☐	5940=Status post - Minimally invasive procedure
	☐	5950=Status post - Bypass for noncardiac lesion
	☐	5960=Status post - Delayed sternal closure
	☐	5970=Status post - Mediastinal exploration
	☐	5980=Status post - Sternotomy wound drainage
	☐	7180=Status post - Intravascular stent removal
	☐	7220= Status post – Removal of transcatheter delivered device from heart
	☐	7210= Status post – Removal of transcatheter delivered device from blood vessel
	☐	5990=Status post - Thoracotomy, Other
	☐	6000=Status post - Cardiotomy, Other
	☐	6010=Status post - Cardiac procedure, Other
	☐	6020=Status post - Thoracic and/or mediastinal procedure, Other
	☐	6030=Status post - Peripheral vascular procedure, Other
	☐	6040=Status post - Miscellaneous procedure, Other
	☐	11777=Status post - Other procedure

		PROCEDURES
Septal Defects	ASD	☐ 10= PFO, Primary closure
		☐ 20= ASD repair, Primary closure
		☐ 30= ASD repair, Patch
		☐ 40= ASD repair, Device
		☐ 2110= ASD repair, Patch + PAPVC repair
		☐ 50= ASD, Common atrium (single atrium), Septation
		☐ 60= ASD creation/enlargement
		☐ 70= ASD partial closure
		☐ 80= Atrial septal fenestration
		☐ 85= Atrial fenestration closure
	VSD	☐ 100= VSD repair, Primary closure
		☐ 110= VSD repair, Patch
		☐ 120= VSD repair, Device
		☐ 130= VSD, Multiple, Repair
		☐ 140= VSD creation/enlargement
		☐ 150= Ventricular septal fenestration
	AV Canal	☐ 170= AVC (AVSD) repair, Complete (CAVSD)
		☐ 180= AVC (AVSD) repair, Intermediate (Transitional)
		☐ 190= AVC (AVSD) repair, Partial (Incomplete) (PAVSD)
		☐ 2300= Valvuloplasty, Common atrioventricular valve
		☐ 2250= Valvuloplasty converted to valve replacement in the same operation, Common atrioventricular valve
		☐ 2230= Valve replacement, Common atrioventricular valve
	AP Window	☐ 210= AP window repair
		☐ 220= Pulmonary artery origin from ascending aorta (hemitruncus) repair
	Truncus Arteriosus	☐ 230= Truncus arteriosus repair
		☐ 240= Valvuloplasty, Truncal valve
		☐ 2290= Valvuloplasty converted to valve replacement in the same operation, Truncal valve
		☐ 250= Valve replacement, Truncal valve
		☐ 2220= Truncus + Interrupted aortic arch repair (IAA) repair
Pulmonary Venous Anomalies	Partial Anomalous Pulmonary Venous Connection	☐ 260= PAPVC repair
		☐ 270= PAPVC, Scimitar, Repair
		☐ 2120= PAPVC repair, Baffle redirection to left atrium with systemic vein translocation (Warden) (SVC sewn to right atrial appendage)
	Total Anomalous Pulmonary Venous Connection	☐ 280= TAPVC repair
		☐ 2200= TAPVC repair + Shunt - systemic-to-pulmonary
Cor Triatriatum		☐ 290= Cor triatriatum repair
Pulmonary Venous Stenosis		☐ 300= Pulmonary venous stenosis repair
Systemic Venous Anomalies	Anomalous Systemic Venous Connection	☐ 310= Atrial baffle procedure (non-Mustard, non-Senning)
		☐ 330= Anomalous systemic venous connection repair
	Systemic venous obstruction	☐ 340= Systemic venous stenosis repair
	Tetralogy of Fallot	☐ 350= TOF repair, No Ventriculotomy
		☐ 360= TOF repair, Ventriculotomy, Nontransanular patch
		☐ 370= TOF repair, Ventriculotomy, Transanular patch

Right Heart Lesions		
		☐ 3330= TOF repair, Ventriculotomy, Transanular patch, plus native valve reconstruction
		☐ 3340= TOF repair, Ventriculotomy, Transanular patch, with monocusp or other surgically fashioned RVOT valve
		☐ 380= TOF repair, RV-PA conduit
		☐ 390= TOF - AVC (AVSD) repair
		☐ 400= TOF - Absent pulmonary valve repair
	Pulmonary Atresia/VSD	☐ 420= Pulmonary atresia - VSD (including TOF, PA) repair
		☐ 2700= Pulmonary atresia - VSD – MAPCA repair, Complete single stage repair (1 stage that includes bilateral pulmonary unifocalization + VSD closure + RV to PA connection [with or without conduit])
		☐ 2710= Pulmonary atresia - VSD – MAPCA repair, Status post prior complete unifocalization (includes VSD closure + RV to PA connection [with or without conduit])
		☐ 2720= Pulmonary atresia - VSD – MAPCA repair, Status post prior incomplete unifocalization (includes completion of pulmonary unifocalization + VSD closure + RV to PA connection [with or without conduit])
		☐ 2730= Unifocalization MAPCA(s), Bilateral pulmonary unifocalization - Complete unifocalization (all usable MAPCA[s] are incorporated)
		☐ 2740= Unifocalization MAPCA(s), Bilateral pulmonary unifocalization - Incomplete unifocalization (not all usable MAPCA[s] are incorporated)
		☐ 2750= Unifocalization MAPCA(s), Unilateral pulmonary unifocalization
		☐ 440= Unifocalization MAPCA(s)
		☐ 450= Occlusion of MAPCA(s)
	Tricuspid Valve Disease and Ebstein's Anomaly	☐ 460= Valvuloplasty, Tricuspid (do not use this code if tricuspid valve malfunction is secondary to Ebstein's anomaly. Use 465= Ebstein's repair)
		☐ 2280= Valvuloplasty converted to valve replacement in the same operation, Tricuspid
		☐ 465= Ebstein's repair
		☐ 470= Valve replacement, Tricuspid (TVR)
		☐ 480= Valve closure, Tricuspid (exclusion, univentricular approach)
		☐ 490= Valve excision, Tricuspid (without replacement)
		☐ 500= Valve surgery, Other, Tricuspid
	RVOT Obstruction, IVS Pulmonary Stenosis	☐ 510= RVOT procedure
		☐ 520= 1 1/2 ventricular repair
		☐ 530= PA, reconstruction (plasty), Main (trunk)
		☐ 540= PA, reconstruction (plasty), Branch, Central (within the hilar bifurcation)
		☐ 550= PA, reconstruction (plasty), Branch, Peripheral (at or beyond the first lobar branch)
		☐ 3350= PA, reconstruction (plasty), Branch, Peripheral (at or beyond the first lobar branch, proximal to first segmental branch)
		☐ 3360= PA, reconstruction (plasty), Branch, Peripheral (at or beyond the first lobar branch, beyond the first segmental branch)
		☐ 570= DCRV repair
		☐ 3370= RV Rehabilitation, Endocardial Resection
	Pulmonary Valve Disease	☐ 590= Valvuloplasty, Pulmonic
		☐ 2270= Valvuloplasty converted to valve replacement in the same operation, Pulmonic
		☐ 600= Valve replacement, Pulmonic (PVR)

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		☐ 630= Valve excision, Pulmonary (without replacement)
		☐ 640= Valve closure, Semilunar
		☐ 650= Valve surgery, Other, Pulmonic
Conduit operations	Conduit operations	☐ 610= Conduit placement, RV to PA
		☐ 620= Conduit placement, LV to PA
		☐ 1774= Conduit placement, Ventricle to aorta
		☐ 1772= Conduit placement, Other
	Conduit Stenosis / Insufficiency	☐ 580= Conduit reoperation
Left Heart Lesions	Aortic Valve Disease	☐ 660= Valvuloplasty, Aortic
		☐ 2240= Valvuloplasty converted to valve replacement in the same operation, Aortic
		☐ 2310= Valvuloplasty converted to valve replacement in the same operation, Aortic – with Ross procedure
		☐ 2320= Valvuloplasty converted to valve replacement in the same operation, Aortic – with Ross-Konno procedure
		☐ 670= Valve replacement, Aortic (AVR)
		☐ 680= Valve replacement, Aortic (AVR), Mechanical
		☐ 690= Valve replacement, Aortic (AVR), Bioprosthetic
		☐ 700= Valve replacement, Aortic (AVR), Homograft
		☐ 715= Aortic root replacement, Bioprosthetic
		☐ 720= Aortic root replacement, Mechanical
		☐ 730= Aortic root replacement, Homograft
		☐ 735= Aortic root replacement, Valve sparing
		☐ 740= Ross procedure
		☐ 750= Konno procedure
		☐ 760= Ross-Konno procedure
		☐ 770= Other annular enlargement procedure
		☐ 780= Aortic stenosis, Subvalvar, Repair
		☐ 2100= Aortic stenosis, Subvalvar, Repair, With myectomy for IHSS
		☐ 790= Aortic stenosis, Supravalvar, Repair
		☐ 800=Valve surgery, Other, Aortic
		☐ 3380= Extended Ventricular Septoplasty (modified Konno, VSD creation and patch enlargement of LVOT, sparing aortic valve) for tunnel type sub aortic stenosis
	Sinus of Valsalva Aneurysm	☐ 810= Sinus of Valsalva, Aneurysm repair
	LV to Aorta Tunnel	☐ 820= LV to aorta tunnel repair
	Mitral Valve Disease	☐ 830= Valvuloplasty, Mitral
		☐ 2260= Valvuloplasty converted to valve replacement in the same operation, Mitral
		☐ 840= Mitral stenosis, Supravalvar mitral ring repair
		☐ 850= Valve replacement, Mitral (MVR)
		☐ 860= Valve surgery, Other, Mitral
	Hypoplastic Left Heart and Related malformations	☐ 870= Norwood procedure
		☐ 880= HLHS biventricular repair
		☐ 3390= LV Endocardial Fibroelastosis resection
		☐ 2755= Conduit insertion right ventricle to pulmonary artery + Intraventricular tunnel left ventricle to neoaorta + arch reconstruction (Rastelli and Norwood type arch reconstruction) (Yasui)

Hybrid		☐ 2160= Hybrid Approach "Stage 1", Application of RPA & LPA bands
		☐ 2170= Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA)
		☐ 2180= Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA) + application of RPA & LPA bands
		☐ 2140= Hybrid approach "Stage 2", Aortopulmonary amalgamation + Superior Cavopulmonary anastomosis(es) + PA Debanding + Aortic arch repair (Norwood [Stage 1] + Superior Cavopulmonary anastomosis(es) + PA Debanding)
		☐ 2150= Hybrid approach "Stage 2", Aortopulmonary amalgamation + Superior Cavopulmonary anastomosis(es) + PA Debanding + Without aortic arch repair
		☐ 2760= Hybrid Approach, Transcardiac balloon dilatation
		☐ 2770= Hybrid Approach, Transcardiac transcatheter device placement
Cardiomyopathy		☐ 890= Transplant, Heart
		☐ 900= Transplant, Heart and lung
		☐ 910= Partial left ventriculectomy (LV volume reduction surgery) (Batista)
Pericardial Disease		☐ 920= Pericardial drainage procedure
		☐ 930= Pericardiectomy
		☐ 940= Pericardial procedure, Other
Single Ventricle		☐ 950= Fontan, Atrio-pulmonary connection
		☐ 960= Fontan, Atrio-ventricular connection
		☐ 970= Fontan, TCPC, Lateral tunnel, Fenestrated
		☐ 980= Fontan, TCPC, Lateral tunnel, Nonfenestrated
		☐ 1000= Fontan, TCPC, External conduit, Fenestrated
		☐ 1010= Fontan, TCPC, External conduit, Nonfenestrated
		☐ 2780= Fontan, TCPC, Intra/extracardiac conduit, Fenestrated
		☐ 2790= Fontan, TCPC, Intra/extracardiac conduit, Nonfenestrated
		☐ 3310 = Fontan, TCPC, External conduit, hepatic veins to pulmonary artery, Fenestrated
		☐ 3320 = Fontan, TCPC, External conduit, hepatic veins to pulmonary artery, Nonfenestrated
		☐ 1025= Fontan revision or conversion (Re-do Fontan)
		☐ 1030= Fontan, Other
		☐ 2340= Fontan + Atrioventricular valvuloplasty
		☐ 1035= Ventricular septation
Transposition of the Great Arteries	Congenitally Corrected TGA	☐ 1050=Congenitally corrected TGA repair, Atrial switch and ASO (double switch)
		☐ 1060= Congenitally corrected TGA repair, Atrial switch and Rastelli
		☐ 1070= Congenitally corrected TGA repair, VSD closure
		☐ 1080= Congenitally corrected TGA repair, VSD closure and LV to PA conduit
		☐ 1090= Congenitally corrected TGA repair, Other
	Transposition of the Great Arteries	☐ 1110= Arterial switch operation (ASO)
		☐ 1120= Arterial switch operation (ASO) and VSD repair
		☐ 1123= Arterial switch procedure + Aortic arch repair
		☐ 1125= Arterial switch procedure and VSD repair + Aortic arch repair
		☐ 1130= Senning
		☐ 1140= Mustard
		☐ 1145= Atrial baffle procedure, Mustard or Senning revision

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Category	Subcategory	Procedures
		☐ 1150= Rastelli
		☐ 1160= REV
		☐ 2190= Aortic root translocation over left ventricle (Including Nikaidoh procedure)
		☐ 2210= TGA, Other procedures (Kawashima, LV-PA conduit, other)
		☐ 3400= Double root translocation
DORV		☐ 1180= DORV, Intraventricular tunnel repair
		☐ 3410= DORV repair, No Ventriculotomy
		☐ 3420= DORV repair, Ventriculotomy, Nontransannular patch
		☐ 3430= DORV repair, Ventriculotomy, Transannular patch
		☐ 3440= DORV repair, RV-PA conduit
		☐ 3450= DORV - AVC (AVSD) repair
DOLV		☐ 1200= DOLV repair
Thoracic Arteries and Veins	Coarctation of Aorta and Aortic arch hypoplasia	☐ 1210= Coarctation repair, End to end
		☐ 1220= Coarctation repair, End to end, Extended
		☐ 3460= Coarctation repair, Descending aorta anastomosed to Ascending aorta
		☐ 1230= Coarctation repair, Subclavian flap
		☐ 1240= Coarctation repair, Patch aortoplasty
		☐ 1250= Coarctation repair, Interposition graft
		☐ 3470= Coarctation repair, Extra-anatomic Bypass graft
		☐ 1260= Coarctation repair, Other
		☐ 1275= Coarctation repair + VSD repair
		☐ 1280= Aortic arch repair
		☐ 1285= Aortic arch repair + VSD repair
	Coronary Artery Anomalies	☐ 1290= Coronary artery fistula ligation
		☐ 1291= Anomalous origin of coronary artery from pulmonary artery repair
		☐ 1300= Coronary artery bypass
		☐ 1305= Anomalous aortic origin of coronary artery (AAOCA) repair
		☐ 1310= Coronary artery procedure, Other
	Interrupted Arch	☐ 1320= Interrupted aortic arch repair
	Patent Ductus Arteriosus	☐ 1330= PDA closure, Surgical
		☐ 1340= PDA closure, Device
	Vascular Rings and Slings	☐ 1360= Vascular ring repair
		☐ 1365= Aortopexy
		☐ 1370= Pulmonary artery sling repair
	Aortic Aneurysm	☐ 1380= Aortic aneurysm repair
	Aortic Dissection	☐ 1390= Aortic dissection repair
	Lung Disease	☐ 1400= Lung biopsy
		☐ 1410= Transplant, lung(s)
		☐ 1420= Lung procedure, Other
	Tracheal Stenosis	☐ 1440= Tracheal procedure
	Chest Wall	☐ 2800= Muscle flap, Trunk (i.e. intercostal, pectus, or serratus muscle)
		☐ 2810= Muscle flap, Trunk (i.e. latissimus dorsi)
		☐ 2820= Removal, Sternal wire
		☐ 2830= Rib excision, Complete
		☐ 2840= Rib excision, Partial
		☐ 2850= Sternal fracture, Open treatment
		☐ 2860= Sternal resection, Radical resection of the sternum

Thoracic and Mediastinal Disease		☐ 2870= Sternal resection, Radical resection of the sternum with mediastinal lymphadenectomy ☐ 2880= Tumor of chest wall, Excision including ribs ☐ 2890= Tumor of chest wall, Excision including ribs, With reconstruction ☐ 2900= Tumor of soft tissue of thorax, Excision of deep subfascial or intramuscular tumor ☐ 2910= Tumor of soft tissue of thorax, Excision of subcutaneous tumor ☐ 2920= Tumor of soft tissue of thorax, Radical resection
	Neck	☐ 2930= Hyoid myotomy and suspension ☐ 2940= Muscle flap, Neck ☐ 2950= Procedure on neck ☐ 2960= Tumor of soft tissue of neck, Excision of deep subfascial or intramuscular tumor ☐ 2970= Tumor of soft tissue of neck, Excision of subcutaneous tumor ☐ 2980= Tumor of soft tissue of neck, Radical resection
	Pectus Excavatum, Carinatum	☐ 2990= Pectus bar removal ☐ 3000= Pectus bar repositioning ☐ 3010= Pectus repair, Minimally invasive repair (Nuss), With thoracoscopy ☐ 3020= Pectus repair, Minimally invasive repair (Nuss), Without thoracoscopy ☐ 3030= Pectus repair, Open repair
	Thoracic Outlet	☐ 3040= Division of scalenus anticus, With resection of a cervical rib ☐ 3050= Division of scalenus anticus, Without resection of a cervical rib ☐ 3060= Rib excision, Excision of a cervical rib ☐ 3070= Rib excision, Excision of a cervical rib, With sympathectomy ☐ 3080= Rib excision, Excision of first rib ☐ 3090= Rib excision, Excision of first rib, With sympathectomy
	Thorax	☐ 3100= Procedure on thorax
Electrophysiological		☐ 1450= Pacemaker implantation, Permanent ☐ 1460= Pacemaker procedure ☐ 2350= Explantation of pacing system ☐ 1470= ICD (AICD) implantation ☐ 1480= ICD (AICD) ([automatic] implantable cardioverter defibrillator) procedure ☐ 1490= Arrhythmia surgery - atrial, Surgical Ablation ☐ 1500= Arrhythmia surgery - ventricular, Surgical Ablation
Interventional Cardiology Procedures		☐ 2500= Cardiovascular catheterization procedure, Diagnostic ☐ 2520= Cardiovascular catheterization procedure, Diagnostic, Angiographic data obtained ☐ 2550= Cardiovascular catheterization procedure, Diagnostic, Electrophysiology alteration ☐ 2540= Cardiovascular catheterization procedure, Diagnostic, Hemodynamic alteration ☐ 2510= Cardiovascular catheterization procedure, Diagnostic, Hemodynamic data obtained ☐ 2530= Cardiovascular catheterization procedure, Diagnostic, Transluminal test occlusion ☐ 2410= Cardiovascular catheterization procedure, Therapeutic

		☐ 2670= Cardiovascular catheterization procedure, Therapeutic, Adjunctive therapy
		☐ 1540= Cardiovascular catheterization procedure, Therapeutic, Balloon dilation
		☐ 2590= Cardiovascular catheterization procedure, Therapeutic, Balloon valvotomy
		☐ 1580= Cardiovascular catheterization procedure, Therapeutic, Coil implantation
		☐ 1560= Cardiovascular catheterization procedure, Therapeutic, Device implantation
		☐ 3110= Cardiovascular catheterization procedure, Therapeutic, Device implantation attempted
		☐ 2690= Cardiovascular catheterization procedure, Therapeutic, Electrophysiological ablation
		☐ 3120= Cardiovascular catheterization procedure, Therapeutic, Intravascular foreign body removal
		☐ 2640= Cardiovascular catheterization procedure, Therapeutic, Perforation (establishing interchamber and/or intervessel communication)
		☐ 2580= Cardiovascular catheterization procedure, Therapeutic, Septostomy
		☐ 1550= Cardiovascular catheterization procedure, Therapeutic, Stent insertion
		☐ 2630= Cardiovascular catheterization procedure, Therapeutic, Stent re-dilation
		☐ 2650= Cardiovascular catheterization procedure, Therapeutic, Transcatheter Fontan completion
		☐ 2660= Cardiovascular catheterization procedure, Therapeutic, Transcatheter implantation of valve
Palliative Procedures		☐ 1590= Shunt, Systemic to pulmonary, Modified Blalock-Taussig Shunt (MBTS)
		☐ 1600= Shunt, Systemic to pulmonary, Central (shunt from aorta)
		☐ 3130= Shunt, Systemic to pulmonary, Central (shunt from aorta) Central shunt with an end-to-side connection between the transected main pulmonary artery and the side of the ascending aorta (i.e. Mee shunt)
		☐ 3230= Shunt, Systemic to pulmonary, Potts – Smith type (descending aorta to pulmonary artery)
		☐ 1610= Shunt, Systemic to pulmonary, Other
		☐ 1630= Shunt, Ligation and takedown
		☐ 2095= Shunt, Reoperation
		☐ 1640= PA banding (PAB)
		☐ 1650= PA debanding
		☐ 3200= PA band adjustment
		☐ 1660= Damus-Kaye-Stansel procedure (DKS) (creation of AP anastomosis without arch reconstruction)
		☐ 1670= Bidirectional cavopulmonary anastomosis (BDCPA) (bidirectional Glenn)
		☐ 1680= Glenn (unidirectional cavopulmonary anastomosis) (unidirectional Glenn)
		☐ 1690= Bilateral bidirectional cavopulmonary anastomosis (BBDCPA) (bilateral bidirectional Glenn)
		☐ 1700= HemiFontan
		☐ 2330= Superior cavopulmonary anastomosis(es) (Glenn or HemiFontan) + Atrioventricular valvuloplasty
		☐ 2130= Superior Cavopulmonary anastomosis(es) + PA reconstruction
		☐ 3300 = Takedown of superior cavopulmonary anastomosis
		☐ 3140= Hepatic vein to azygous vein connection, Direct

		☐ 3150= Hepatic vein to azygous vein connection, Interposition graft
		☐ 3160= Kawashima operation (superior cavopulmonary connection in setting of interrupted IVC with azygous continuation)
		☐ 1710= Palliation, Other
Mechanical Support		☐ 2360= ECMO cannulation
		☐ 2370= ECMO decannulation
		☐ 1910= ECMO procedure
		☐ 1900= Intraaortic balloon pump (IABP) insertion
		☐ 1920= Right/left heart assist device procedure
		☐ 2390= VAD explantation
		☐ 2380= VAD implantation
		☐ 3170= VAD change out
Anesthetic procedures		☐ 2420= Echocardiography procedure, Sedated transesophageal echocardiogram
		☐ 2430= Echocardiography procedure, Sedated transthoracic echocardiogram
		☐ 2435= Non-cardiovascular, Non-thoracic procedure on cardiac patient with cardiac anesthesia
		☐ 2440= Radiology procedure on cardiac patient, Cardiac Computerized Axial Tomography (CT Scan)
		☐ 2450= Radiology procedure on cardiac patient, Cardiac Magnetic Resonance Imaging (MRI)
		☐ 2460= Radiology procedure on cardiac patient, Diagnostic radiology
		☐ 2470= Radiology procedure on cardiac patient, Non-Cardiac Computerized Tomography (CT) on cardiac patient
		☐ 2480= Radiology procedure on cardiac patient, Non-cardiac Magnetic Resonance Imaging (MRI) on cardiac patient
		☐ 2490= Radiology procedure on cardiac patient, Therapeutic radiology

Miscellaneous Procedures		☐ 1720= Aneurysm, Ventricular, Right, Repair
		☐ 1730= Aneurysm, Ventricular, Left, Repair
		☐ 1740= Aneurysm, Pulmonary artery, Repair
		☐ 1760= Cardiac tumor resection
		☐ 1780= Pulmonary AV fistula repair/occlusion
		☐ 1790= Ligation, Pulmonary artery
		☐ 1802= Pulmonary embolectomy, Acute pulmonary embolus
		☐ 1804= Pulmonary embolectomy, Chronic pulmonary embolus
		☐ 1810= Pleural drainage procedure
		☐ 1820= Pleural procedure, Other
		☐ 1830= Ligation, Thoracic duct
		☐ 1840= Decortication
		☐ 1850= Esophageal procedure
		☐ 1860= Mediastinal procedure
		☐ 1870= Bronchoscopy
		☐ 1880= Diaphragm plication
		☐ 1890= Diaphragm procedure, Other
		☐ 1930= VATS (video-assisted thoracoscopic surgery)
		☐ 1940= Minimally invasive procedure
		☐ 1950= Bypass for noncardiac lesion
		☐ 1960= Delayed sternal closure
		☐ 1970= Mediastinal exploration
		☐ 1980= Sternotomy wound drainage
		☐ 3180= Intravascular stent removal
		☐ 3220= Removal of transcatheter delivered device from heart
		☐ 3210= Removal of transcatheter delivered device from blood vessel
		☐ 1990= Thoracotomy, Other
		☐ 2000= Cardiotomy, Other
		☐ 2010= Cardiac procedure, Other
		☐ 2020= Thoracic and/or mediastinal procedure, Other
		☐ 2030= Peripheral vascular procedure, Other
		☐ 2040= Miscellaneous procedure, Other
		☐ 2050= Organ procurement
		☐ 7777= Other procedure