



The Society of Thoracic Surgeons
Adult Cardiac Surgery Database V2.81
Congenital Diagnoses And Procedures Lists
 June 6, 2014

Table of contents:

Congenital Diagnoses (by category)	1
Congenital Procedures (by category)	13
Congenital Diagnoses (by code)	20
Congenital Procedures (by code)	33

Congenital Diagnoses (by category)			
Septal Defects	ASD	<input type="checkbox"/> PFO	<input type="checkbox"/>
		<input type="checkbox"/> ASD, Secundum	<input type="checkbox"/>
		<input type="checkbox"/> ASD, Sinus venosus	<input type="checkbox"/>
		<input type="checkbox"/> ASD, Coronary sinus	<input type="checkbox"/>
		<input type="checkbox"/> ASD, Common atrium (single atrium)	<input type="checkbox"/>
		<input type="checkbox"/> ASD, Postoperative interatrial communication	NA
	VSD	<input type="checkbox"/> VSD, Type 1 (Subarterial) (Supracristal) (Conal septal defect) (Infundibular)	<input type="checkbox"/>
		<input type="checkbox"/> VSD, Type 2 (Perimembranous) (Paramembranous) (Conoventricular)	<input type="checkbox"/>
		<input type="checkbox"/> VSD, Type 3 (Inlet) (AV canal type)	<input type="checkbox"/>
		<input type="checkbox"/> VSD, Type 4 (Muscular)	<input type="checkbox"/>
		<input type="checkbox"/> VSD, Type: Gerbode type (LV-RA communication)	<input type="checkbox"/>
		<input type="checkbox"/> VSD, Multiple	<input type="checkbox"/>
	AV Canal	<input type="checkbox"/> AVC (AVSD), Complete (CAVSD)	<input type="checkbox"/>
		<input type="checkbox"/> AVC (AVSD), Intermediate (transitional)	<input type="checkbox"/>
		<input type="checkbox"/> AVC (AVSD), Partial (incomplete) (PAVSD) (ASD, primum)	<input type="checkbox"/>
AP Window	<input type="checkbox"/> AP window (aortopulmonary window)	<input type="checkbox"/>	
	<input type="checkbox"/> Pulmonary artery origin from ascending aorta (hemitruncus)	<input type="checkbox"/>	
Truncus Arteriosus	<input type="checkbox"/> Truncus arteriosus	<input type="checkbox"/>	
	<input type="checkbox"/> Truncal valve insufficiency	<input type="checkbox"/>	
	<input type="checkbox"/> Truncus arteriosus + Interrupted aortic arch	<input type="checkbox"/>	
Pulmonary Venous Anomalies	Partial Anomalous Pulmonary Venous Connection	<input type="checkbox"/> Partial anomalous pulmonary venous connection (PAPVC)	<input type="checkbox"/>
		<input type="checkbox"/> Partial anomalous pulmonary venous connection (PAPVC), scimitar	<input type="checkbox"/>
	Total Anomalous Pulmonary Venous Connection	<input type="checkbox"/> Total anomalous pulmonary venous connection (TAPVC), Type 1 (supracardiac)	<input type="checkbox"/>
		<input type="checkbox"/> Total anomalous pulmonary venous connection (TAPVC), Type 2 (cardiac)	<input type="checkbox"/>
Cor Triatriatum		<input type="checkbox"/> Total anomalous pulmonary venous connection (TAPVC), Type 3 (infracardiac)	<input type="checkbox"/>
		<input type="checkbox"/> Total anomalous pulmonary venous connection (TAPVC), Type 4 (mixed)	<input type="checkbox"/>
Pulmonary Venous Stenosis		<input type="checkbox"/> Cor triatriatum	<input type="checkbox"/>
		<input type="checkbox"/> Pulmonary venous stenosis	<input type="checkbox"/>
Systemic Venous Anomalies	Anomalous Systemic Venous Connection	<input type="checkbox"/> Systemic venous anomaly	<input type="checkbox"/>
	Systemic venous obstruction	<input type="checkbox"/> Systemic venous obstruction	<input type="checkbox"/>
Right Heart Lesions	Tetralogy of Fallot	<input type="checkbox"/> TOF	<input type="checkbox"/>
		<input type="checkbox"/> TOF, Pulmonary stenosis	<input type="checkbox"/>
		<input type="checkbox"/> TOF, AVC (AVSD)	<input type="checkbox"/>

		<input type="checkbox"/> TOF, Absent pulmonary valve	<input type="checkbox"/>	
	Pulmonary Atresia	<input type="checkbox"/> Pulmonary atresia <input type="checkbox"/> Pulmonary atresia, IVS <input type="checkbox"/> Pulmonary atresia, VSD (Including TOF, PA) <input type="checkbox"/> Pulmonary atresia, VSD-MAPCA <input type="checkbox"/> MAPCA(s) (major aortopulmonary collateral[s]) (without PA-VSD)	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
	Tricuspid Valve Disease and Ebstein's Anomaly	<input type="checkbox"/> Ebstein's anomaly <input type="checkbox"/> Tricuspid regurgitation, non-Ebstein's related <input type="checkbox"/> Tricuspid stenosis <input type="checkbox"/> Tricuspid regurgitation and tricuspid stenosis <input type="checkbox"/> Tricuspid valve, Other	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
	RVOT Obstruction and/or Pulmonary Stenosis	<input type="checkbox"/> Pulmonary stenosis, Valvar <input type="checkbox"/> Pulmonary artery stenosis (hypoplasia), Main (trunk) <input type="checkbox"/> Pulmonary artery stenosis, Branch, Central (within the hilar bifurcation) <input type="checkbox"/> Pulmonary artery stenosis, Branch, Peripheral (at or beyond the hilar bifurcation) <input type="checkbox"/> Pulmonary artery, Discontinuous <input type="checkbox"/> Pulmonary stenosis, Subvalvar <input type="checkbox"/> DCRV	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
	Pulmonary Valve Disease	<input type="checkbox"/> Pulmonary valve, Other <input type="checkbox"/> Pulmonary insufficiency <input type="checkbox"/> Pulmonary insufficiency and pulmonary stenosis	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
Shunt failure	Shunt failure	<input type="checkbox"/> Shunt Failure	NA	
Conduit failure	Conduit failure	<input type="checkbox"/> Conduit failure	NA	
Left Heart Lesions	Aortic Valve Disease	<input type="checkbox"/> Aortic stenosis, Subvalvar <input type="checkbox"/> Aortic stenosis, Valvar <input type="checkbox"/> Aortic stenosis, Supraaortic <input type="checkbox"/> Aortic valve atresia <input type="checkbox"/> Aortic insufficiency <input type="checkbox"/> Aortic insufficiency and aortic stenosis <input type="checkbox"/> Aortic valve, Other	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
	Sinus of Valsalva Fistula/Aneurysm	<input type="checkbox"/> Sinus of Valsalva aneurysm	<input type="checkbox"/>	
	LV to Aorta Tunnel	<input type="checkbox"/> LV to aorta tunnel	<input type="checkbox"/>	
	Mitral Valve Disease	<input type="checkbox"/> Mitral stenosis, Supraaortic mitral ring <input type="checkbox"/> Mitral stenosis, Valvar <input type="checkbox"/> Mitral stenosis, Subvalvar <input type="checkbox"/> Mitral stenosis, Subvalvar, Parachute <input type="checkbox"/> Mitral stenosis <input type="checkbox"/> Mitral regurgitation and mitral stenosis <input type="checkbox"/> Mitral regurgitation <input type="checkbox"/> Mitral valve, Other	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
	Hypoplastic Left Heart Syndrome	<input type="checkbox"/> Hypoplastic left heart syndrome (HLHS)	<input type="checkbox"/>	
	Shone's syndrome	<input type="checkbox"/> Shone's syndrome {CANNOT BE PRIMARY DIAGNOSIS}	<input type="checkbox"/>	
	Cardiomyopathy		<input type="checkbox"/> Cardiomyopathy (including dilated, restrictive, and hypertrophic) <input type="checkbox"/> Cardiomyopathy, End-stage congenital heart disease	<input type="checkbox"/> <input type="checkbox"/>
	Pericardial Disease		<input type="checkbox"/> Pericardial effusion <input type="checkbox"/> Pericarditis <input type="checkbox"/> Pericardial disease, Other	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

Single Ventricle		<input type="checkbox"/> Single ventricle, DILV	<input type="checkbox"/>
		<input type="checkbox"/> Single ventricle, DIRV	<input type="checkbox"/>
		<input type="checkbox"/> Single ventricle, Mitral atresia	<input type="checkbox"/>
		<input type="checkbox"/> Single ventricle, Tricuspid atresia	<input type="checkbox"/>
		<input type="checkbox"/> Single ventricle, Unbalanced AV canal	<input type="checkbox"/>
		<input type="checkbox"/> Single ventricle, Heterotaxia syndrome	<input type="checkbox"/>
		<input type="checkbox"/> Single ventricle, Other	<input type="checkbox"/>
		<input type="checkbox"/> Single ventricle + Total anomalous pulmonary venous connection (TAPVC)	<input type="checkbox"/>
Transposition of the Great Arteries	Congenitally Corrected TGA	<input type="checkbox"/> Congenitally corrected TGA	<input type="checkbox"/>
		<input type="checkbox"/> Congenitally corrected TGA, IVS	<input type="checkbox"/>
		<input type="checkbox"/> Congenitally corrected TGA, IVS-LVOTO	<input type="checkbox"/>
		<input type="checkbox"/> Congenitally corrected TGA, VSD	<input type="checkbox"/>
		<input type="checkbox"/> Congenitally corrected TGA, VSD-LVOTO	<input type="checkbox"/>
	Transposition of the Great Arteries	<input type="checkbox"/> TGA, IVS	<input type="checkbox"/>
		<input type="checkbox"/> TGA, IVS-LVOTO	<input type="checkbox"/>
		<input type="checkbox"/> TGA, VSD	<input type="checkbox"/>
<input type="checkbox"/> TGA, VSD-LVOTO		<input type="checkbox"/>	
DORV		<input type="checkbox"/> DORV, VSD type	<input type="checkbox"/>
		<input type="checkbox"/> DORV, TOF type	<input type="checkbox"/>
		<input type="checkbox"/> DORV, TGA type	<input type="checkbox"/>
		<input type="checkbox"/> DORV, Remote VSD (uncommitted VSD)	<input type="checkbox"/>
		<input type="checkbox"/> DORV + AVSD (AV Canal)	<input type="checkbox"/>
		<input type="checkbox"/> DORV, IVS	<input type="checkbox"/>
DOLV		<input type="checkbox"/> DOLV	<input type="checkbox"/>
Thoracic Arteries and Veins	Coarctation of Aorta and Aortic arch hypoplasia	<input type="checkbox"/> Coarctation of aorta	<input type="checkbox"/>
		<input type="checkbox"/> Aortic arch hypoplasia	<input type="checkbox"/>
		<input type="checkbox"/> VSD + Aortic arch hypoplasia	<input type="checkbox"/>
		<input type="checkbox"/> VSD + Coarctation of aorta	<input type="checkbox"/>
	Coronary Artery Anomalies	<input type="checkbox"/> Coronary artery anomaly, Anomalous aortic origin of coronary artery (AAOCA)	<input type="checkbox"/>
		<input type="checkbox"/> Coronary artery anomaly, Anomalous pulmonary origin (includes ALCAPA)	<input type="checkbox"/>
		<input type="checkbox"/> Coronary artery anomaly, Fistula	<input type="checkbox"/>
		<input type="checkbox"/> Coronary artery anomaly, Aneurysm	<input type="checkbox"/>
		<input type="checkbox"/> Coronary artery anomaly, Other	<input type="checkbox"/>
	Interrupted Arch	<input type="checkbox"/> Interrupted aortic arch	<input type="checkbox"/>
		<input type="checkbox"/> Interrupted aortic arch + VSD	<input type="checkbox"/>
<input type="checkbox"/> Interrupted aortic arch + AP window (aortopulmonary window)		<input type="checkbox"/>	
Patent Ductus Arteriosus	<input type="checkbox"/> Patent ductus arteriosus	<input type="checkbox"/>	
Vascular rings and Slings	<input type="checkbox"/> Vascular ring	<input type="checkbox"/>	
	<input type="checkbox"/> Pulmonary artery sling	<input type="checkbox"/>	
Aortic Aneurysm	<input type="checkbox"/> Aortic aneurysm (including pseudoaneurysm)	<input type="checkbox"/>	
Aortic Dissection	<input type="checkbox"/> Aortic dissection	<input type="checkbox"/>	
Thoracic and Mediastinal Disease	Lung Disease	<input type="checkbox"/> Lung disease, Benign	<input type="checkbox"/>
		<input type="checkbox"/> Lung disease, Malignant	<input type="checkbox"/>
	Tracheal Stenosis	<input type="checkbox"/> Tracheal stenosis	<input type="checkbox"/>
		<input type="checkbox"/> Airway disease	<input type="checkbox"/>
	Pleural Disease	<input type="checkbox"/> Pleural disease, Benign	<input type="checkbox"/>
		<input type="checkbox"/> Pleural disease, Malignant	<input type="checkbox"/>
		<input type="checkbox"/> Pneumothorax	<input type="checkbox"/>
		<input type="checkbox"/> Pleural effusion	<input type="checkbox"/>

	<input type="checkbox"/> Chylothorax	<input type="checkbox"/>
	<input type="checkbox"/> Empyema	<input type="checkbox"/>
Esophageal Disease	<input type="checkbox"/> Esophageal disease, Benign	<input type="checkbox"/>
	<input type="checkbox"/> Esophageal disease, Malignant	<input type="checkbox"/>
Mediastinal Disease	<input type="checkbox"/> Mediastinal disease	<input type="checkbox"/>
	<input type="checkbox"/> Mediastinal disease, Benign	<input type="checkbox"/>
	<input type="checkbox"/> Mediastinal disease, Malignant	<input type="checkbox"/>
Diaphragmatic Disease	<input type="checkbox"/> Diaphragm paralysis	<input type="checkbox"/>
	<input type="checkbox"/> Diaphragm disease, Other	<input type="checkbox"/>
Chest Wall	<input type="checkbox"/> Rib tumor, Benign	<input type="checkbox"/>
	<input type="checkbox"/> Rib tumor, Malignant	<input type="checkbox"/>
	<input type="checkbox"/> Rib tumor, Metastatic	<input type="checkbox"/>
	<input type="checkbox"/> Sternal tumor, Benign	<input type="checkbox"/>
	<input type="checkbox"/> Sternal tumor, Malignant	<input type="checkbox"/>
	<input type="checkbox"/> Sternal tumor, Metastatic	<input type="checkbox"/>
Pectus Excavatum, Carinatum	<input type="checkbox"/> Pectus carinatum	<input type="checkbox"/>
	<input type="checkbox"/> Pectus excavatum	<input type="checkbox"/>
Thoracic Outlet	<input type="checkbox"/> Thoracic outlet syndrome	<input type="checkbox"/>
Electrophysiological	<input type="checkbox"/> Arrhythmia	<input type="checkbox"/>
	<input type="checkbox"/> Arrhythmia, Atrial	<input type="checkbox"/>
	<input type="checkbox"/> Arrhythmia, Junctional	<input type="checkbox"/>
	<input type="checkbox"/> Arrhythmia, Ventricular	<input type="checkbox"/>
	<input type="checkbox"/> Arrhythmia, Heart block	<input type="checkbox"/>
	<input type="checkbox"/> Arrhythmia, Heart block, Acquired	<input type="checkbox"/>
	<input type="checkbox"/> Arrhythmia, Heart block, Congenital	<input type="checkbox"/>
	<input type="checkbox"/> Arrhythmia, Pacemaker, Indication for replacement	NA
Miscellaneous, Other	<input type="checkbox"/> Atrial Isomerism, Left {CANNOT BE PRIMARY DIAGNOSIS}	NA
	<input type="checkbox"/> Atrial Isomerism, Right {CANNOT BE PRIMARY DIAGNOSIS}	NA
	<input type="checkbox"/> Dextrocardia {CANNOT BE PRIMARY DIAGNOSIS}	NA
	<input type="checkbox"/> Levocardia {CANNOT BE PRIMARY DIAGNOSIS}	NA
	<input type="checkbox"/> Mesocardia {CANNOT BE PRIMARY DIAGNOSIS}	NA
	<input type="checkbox"/> Situs inversus {CANNOT BE PRIMARY DIAGNOSIS}	NA
	<input type="checkbox"/> Aneurysm, Ventricular, Right (including pseudoaneurysm)	<input type="checkbox"/>
	<input type="checkbox"/> Aneurysm, Ventricular, Left (including pseudoaneurysm)	<input type="checkbox"/>
	<input type="checkbox"/> Aneurysm, Pulmonary artery	<input type="checkbox"/>
	<input type="checkbox"/> Aneurysm, Other	<input type="checkbox"/>
	<input type="checkbox"/> Hypoplastic RV	<input type="checkbox"/>
	<input type="checkbox"/> Hypoplastic LV	<input type="checkbox"/>
	<input type="checkbox"/> Postoperative bleeding	NA
	<input type="checkbox"/> Mediastinitis	<input type="checkbox"/>
	<input type="checkbox"/> Endocarditis	<input type="checkbox"/>
	<input type="checkbox"/> Rheumatic heart disease {CANNOT BE PRIMARY DIAGNOSIS}	NA
	<input type="checkbox"/> Prosthetic valve failure	NA
	<input type="checkbox"/> Myocardial infarction	<input type="checkbox"/>
	<input type="checkbox"/> Cardiac tumor	<input type="checkbox"/>
	<input type="checkbox"/> Pulmonary AV fistula	<input type="checkbox"/>
	<input type="checkbox"/> Pulmonary embolism	<input type="checkbox"/>
	<input type="checkbox"/> Pulmonary vascular obstructive disease	<input type="checkbox"/>
<input type="checkbox"/> Pulmonary vascular obstructive disease (Eisenmenger's)	<input type="checkbox"/>	

- Primary pulmonary hypertension
- Persistent fetal circulation
- Meconium aspiration
- Kawasaki Disease
- Cardiac, Other
- Thoracic and/or mediastinal, Other
- Peripheral vascular, Other
- Complication of cardiovascular catheterization procedure NA
- Complication of cardiovascular catheterization procedure, Device embolization NA
- Complication of cardiovascular catheterization procedure, Device malfunction NA
- Complication of cardiovascular catheterization procedure, Perforation NA
- Complication of interventional radiology procedure NA
- Complication of interventional radiology procedure, Device embolization NA
- Complication of interventional radiology procedure, Device malfunction NA
- Complication of interventional radiology procedure, Perforation NA
- Foreign body, Intracardiac foreign body NA
- Foreign body, Intravascular foreign body NA
- Open sternum with closed skin NA
- Open sternum with open skin (includes membrane placed to close skin) NA
- Retained sternal wire causing irritation NA
- Syncope NA
- Trauma, Blunt
- Trauma, Penetrating
- Normal heart
- Miscellaneous, Other

STATUS POST (No "Status post – diagnoses" can be a primary diagnosis or fundamental diagnosis)

Septal Defects	ASD	<input type="checkbox"/> Status post - PFO, Primary closure
		<input type="checkbox"/> Status post - ASD repair, Primary closure
		<input type="checkbox"/> Status post - ASD repair, Patch
		<input type="checkbox"/> Status post - ASD repair, Device
		<input type="checkbox"/> Status post - ASD repair, Patch + PAPVC repair
		<input type="checkbox"/> Status post - ASD, Common atrium (single atrium), Septation
		<input type="checkbox"/> Status post - ASD creation/enlargement
		<input type="checkbox"/> Status post - ASD partial closure
		<input type="checkbox"/> Status post - Atrial septal fenestration
<input type="checkbox"/> Status post - Atrial fenestration closure		
VSD	<input type="checkbox"/> Status post - VSD repair, Primary closure	
	<input type="checkbox"/> Status post - VSD repair, Patch	
	<input type="checkbox"/> Status post - VSD repair, Device	
	<input type="checkbox"/> Status post - VSD, Multiple, Repair	
	<input type="checkbox"/> Status post - VSD creation/enlargement	
	<input type="checkbox"/> Status post - Ventricular septal fenestration	
AV Canal	<input type="checkbox"/> Status post - AVC (AVSD) repair, Complete (CAVSD)	
	<input type="checkbox"/> Status post - AVC (AVSD) repair, Intermediate (Transitional)	
	<input type="checkbox"/> Status post - AVC (AVSD) repair, Partial (Incomplete) (PAVSD)	
	<input type="checkbox"/> Status post - Valvuloplasty, Common atrioventricular valve	
	<input type="checkbox"/> Status post - Valvuloplasty converted to valve replacement in the same operation, Common atrioventricular valve	
	<input type="checkbox"/> Status post - Valve replacement, Common atrioventricular valve	

	AP Window	<input type="checkbox"/> Status post - AP window repair <input type="checkbox"/> Status post - Pulmonary artery origin from ascending aorta (hemitruncus) repair
	Truncus Arteriosus	<input type="checkbox"/> Status post - Truncus arteriosus repair <input type="checkbox"/> Status post - Valvuloplasty, Truncal valve <input type="checkbox"/> Status post - Valvuloplasty converted to valve replacement in the same operation, Truncal valve <input type="checkbox"/> Status post - Valve replacement, Truncal valve <input type="checkbox"/> Status post - Truncus + Interrupted aortic arch repair (IAA) repair
Pulmonary Venous Anomalies	Partial Anomalous Pulmonary Venous Connection	<input type="checkbox"/> Status post - PAPVC repair <input type="checkbox"/> Status post - PAPVC, Scimitar, Repair <input type="checkbox"/> 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	<input type="checkbox"/> Status post - TAPVC repair <input type="checkbox"/> Status post - TAPVC repair + Shunt - systemic-to-pulmonary
Cor Triatriatum		<input type="checkbox"/> Status post - Cor triatriatum repair
Pulmonary Venous Stenosis		<input type="checkbox"/> Status post - Pulmonary venous stenosis repair
Systemic Venous Anomalies	Anomalous Systemic Venous Connection	<input type="checkbox"/> Status post - Atrial baffle procedure (non-Mustard, non-Senning) <input type="checkbox"/> Status post - Anomalous systemic venous connection repair
	Systemic venous obstruction	<input type="checkbox"/> Status post - Systemic venous stenosis repair
	Tetralogy of Fallot	<input type="checkbox"/> Status post - TOF repair, No ventriculotomy <input type="checkbox"/> Status post - TOF repair, Ventriculotomy, Nontransannular patch <input type="checkbox"/> Status post - TOF repair, Ventriculotomy, Transannular patch <input type="checkbox"/> Status post - TOF repair, RV-PA conduit <input type="checkbox"/> Status post - TOF - AVC (AVSD) repair <input type="checkbox"/> Status post - TOF - Absent pulmonary valve repair
		Pulmonary Atresia/VSD
Right Heart Lesions	Tricuspid Valve Disease and Ebstein's Anomaly	<input type="checkbox"/> Status post - Valvuloplasty, Tricuspid <input type="checkbox"/> Status post - Valvuloplasty converted to valve replacement in the same operation, Tricuspid <input type="checkbox"/> Status post - Ebstein's repair <input type="checkbox"/> Status post - Valve replacement, Tricuspid (TVR) <input type="checkbox"/> Status post - Valve closure, Tricuspid (exclusion, univentricular approach) <input type="checkbox"/> Status post - Valve excision, Tricuspid (without replacement) <input type="checkbox"/> Status post - Valve surgery, Other, Tricuspid
		RVOT Obstruction, IVS Pulmonary Stenosis

		<input type="checkbox"/> Status post - PA, reconstruction (plasty), Main (trunk) <input type="checkbox"/> Status post - PA, reconstruction (plasty), Branch, Central (within the hilar bifurcation) <input type="checkbox"/> Status post - PA, reconstruction (plasty), Branch, Peripheral (at or beyond the hilar bifurcation) <input type="checkbox"/> Status post - DCRV repair
	Pulmonary Valve Disease	<input type="checkbox"/> Status post - Valvuloplasty, Pulmonic <input type="checkbox"/> Status post - Valvuloplasty converted to valve replacement in the same operation, Pulmonic <input type="checkbox"/> Status post - Valve replacement, Pulmonic (PVR) <input type="checkbox"/> Status post - Valve excision, Pulmonary (without replacement) <input type="checkbox"/> Status post - Valve closure, Semilunar <input type="checkbox"/> Status post - Valve surgery, Other, Pulmonic
Conduit operations	Conduit operations	<input type="checkbox"/> Status post - Conduit placement, RV to PA <input type="checkbox"/> Status post - Conduit placement, LV to PA <input type="checkbox"/> Status post - Conduit placement, Ventricle to aorta <input type="checkbox"/> Status post - Conduit placement, Other
	Conduit Stenosis / Insufficiency	<input type="checkbox"/> Status post - Conduit reoperation
Left Heart Lesions	Aortic Valve Disease	<input type="checkbox"/> Status post - Valvuloplasty, Aortic <input type="checkbox"/> Status post - Valvuloplasty converted to valve replacement in the same operation, Aortic <input type="checkbox"/> Status post - Valvuloplasty converted to valve replacement in the same operation, Aortic – with Ross procedure <input type="checkbox"/> Status post - Valvuloplasty converted to valve replacement in the same operation, Aortic – with Ross-Konno procedure <input type="checkbox"/> Status post - Valve replacement, Aortic (AVR) <input type="checkbox"/> Status post - Valve replacement, Aortic (AVR), Mechanical <input type="checkbox"/> Status post - Valve replacement, Aortic (AVR), Bioprosthetic <input type="checkbox"/> Status post - Valve replacement, Aortic (AVR), Homograft <input type="checkbox"/> Status post - Aortic root replacement, Bioprosthetic <input type="checkbox"/> Status post - Aortic root replacement, Mechanical <input type="checkbox"/> Status post - Aortic root replacement, Homograft <input type="checkbox"/> Status post - Aortic root replacement, Valve sparing <input type="checkbox"/> Status post - Ross procedure <input type="checkbox"/> Status post - Konno procedure <input type="checkbox"/> Status post - Ross-Konno procedure <input type="checkbox"/> Status post - Other annular enlargement procedure <input type="checkbox"/> Status post - Aortic stenosis, Subvalvar, Repair <input type="checkbox"/> Status post - Aortic stenosis, Subvalvar, Repair, With myectomy for IHSS <input type="checkbox"/> Status post - Aortic stenosis, Supravalvar, Repair <input type="checkbox"/> Status post - Valve surgery, Other, Aortic
	Sinus of Valsalva Aneurysm	<input type="checkbox"/> Status post - Sinus of Valsalva, Aneurysm repair
	LV to Aorta Tunnel	<input type="checkbox"/> Status post - LV to aorta tunnel repair
	Mitral Valve Disease	<input type="checkbox"/> Status post - Valvuloplasty, Mitral <input type="checkbox"/> Status post - Valvuloplasty converted to valve replacement in the same operation, Mitral <input type="checkbox"/> Status post - Mitral stenosis, Supravalvar mitral ring repair <input type="checkbox"/> Status post - Valve replacement, Mitral (MVR) <input type="checkbox"/> Status post - Valve surgery, Other, Mitral
	Hypoplastic Left Heart and Related malformations	<input type="checkbox"/> Status post - Norwood procedure <input type="checkbox"/> Status post - HLHS biventricular repair <input type="checkbox"/> Status post - Conduit insertion right ventricle to pulmonary artery + Intraventricular tunnel left ventricle to neo-aorta + arch reconstruction (Rastelli and Norwood type arch reconstruction) (Yasui)

Hybrid		<input type="checkbox"/> Status post - Hybrid Approach "Stage 1", Application of RPA & LPA bands <input type="checkbox"/> Status post - Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA) <input type="checkbox"/> Status post - Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA) + application of RPA & LPA bands <input type="checkbox"/> 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) <input type="checkbox"/> Status post - Hybrid approach "Stage 2", Aortopulmonary amalgamation + Superior Cavopulmonary anastomosis(es) + PA Debanding + Without aortic arch repair <input type="checkbox"/> Status post – Hybrid Approach, Transcardiac balloon dilatation <input type="checkbox"/> Status post – Hybrid Approach, Transcardiac transcatheter device placement
Cardiomyopathy		<input type="checkbox"/> Status post - Transplant, Heart <input type="checkbox"/> Status post - Transplant, Heart and lung <input type="checkbox"/> Status post - Partial left ventriculectomy (LV volume reduction surgery) (Batista)
Pericardial Disease		<input type="checkbox"/> Status post - Pericardial drainage procedure <input type="checkbox"/> Status post - Pericardiectomy <input type="checkbox"/> Status post - Pericardial procedure, Other
Single Ventricle		<input type="checkbox"/> Status post - Fontan, Atrio-pulmonary connection <input type="checkbox"/> Status post - Fontan, Atrio-ventricular connection <input type="checkbox"/> Status post - Fontan, TCPC, Lateral tunnel, Fenestrated <input type="checkbox"/> Status post - Fontan, TCPC, Lateral tunnel, Nonfenestrated <input type="checkbox"/> Status post - Fontan, TCPC, External conduit, Fenestrated <input type="checkbox"/> Status post - Fontan, TCPC, External conduit, Nonfenestrated <input type="checkbox"/> Status post - Fontan, TCPC, Intra/extracardiac conduit, Fenestrated <input type="checkbox"/> Status post - Fontan, TCPC, Intra/extracardiac conduit, Nonfenestrated <input type="checkbox"/> Status post - Fontan revision or conversion (Re-do Fontan) <input type="checkbox"/> Status post - Fontan, Other <input type="checkbox"/> Status post - Fontan + Atrioventricular valvuloplasty <input type="checkbox"/> Status post - Ventricular septation
Transposition of the Great Arteries	Congenitally Corrected TGA	<input type="checkbox"/> Status post - Congenitally corrected TGA repair, Atrial switch and ASO (double switch) <input type="checkbox"/> Status post - Congenitally corrected TGA repair, Atrial switch and Rastelli <input type="checkbox"/> Status post - Congenitally corrected TGA repair, VSD closure <input type="checkbox"/> Status post - Congenitally corrected TGA repair, VSD closure and LV to PA conduit <input type="checkbox"/> Status post - Congenitally corrected TGA repair, Other
	Transposition of the Great Arteries	<input type="checkbox"/> Status post - Arterial switch operation (ASO) <input type="checkbox"/> Status post - Arterial switch operation (ASO) and VSD repair <input type="checkbox"/> Status post - Arterial switch procedure + Aortic arch repair <input type="checkbox"/> Status post - Arterial switch procedure and VSD repair + Aortic arch repair <input type="checkbox"/> Status post - Senning <input type="checkbox"/> Status post - Mustard <input type="checkbox"/> Status post - Atrial baffle procedure, Mustard or Senning revision <input type="checkbox"/> Status post - Rastelli <input type="checkbox"/> Status post - REV <input type="checkbox"/> Status post - Aortic root translocation over left ventricle (Including Nikaidoh procedure) <input type="checkbox"/> Status post - TGA, Other procedures (Kawashima, LV-PA conduit, other)
DORV		<input type="checkbox"/> Status post - DORV, Intraventricular tunnel repair
DOLV		<input type="checkbox"/> Status post - DOLV repair
Thoracic Arteries and Veins	Coarctation of Aorta and Aortic arch hypoplasia	<input type="checkbox"/> Status post - Coarctation repair, End to end <input type="checkbox"/> Status post - Coarctation repair, End to end, Extended <input type="checkbox"/> Status post - Coarctation repair, Subclavian flap <input type="checkbox"/> Status post - Coarctation repair, Patch aortoplasty

	<input type="checkbox"/> Status post - Coarctation repair, Interposition graft <input type="checkbox"/> Status post - Coarctation repair, Other <input type="checkbox"/> Status post - Coarctation repair + VSD repair <input type="checkbox"/> Status post - Aortic arch repair <input type="checkbox"/> Status post - Aortic arch repair + VSD repair	
Coronary Artery Anomalies	<input type="checkbox"/> Status post - Coronary artery fistula ligation <input type="checkbox"/> Status post - Anomalous origin of coronary artery from pulmonary artery repair <input type="checkbox"/> Status post - Coronary artery bypass <input type="checkbox"/> Status post - Anomalous aortic origin of coronary artery (AAOCA) repair <input type="checkbox"/> Status post - Coronary artery procedure, Other	
Interrupted Arch	<input type="checkbox"/> Status post - Interrupted aortic arch repair	
Patent Ductus Arteriosus	<input type="checkbox"/> Status post - PDA closure, Surgical <input type="checkbox"/> Status post - PDA closure, Device	
Vascular Rings and Slings	<input type="checkbox"/> Status post - Vascular ring repair <input type="checkbox"/> Status post - Aortopexy <input type="checkbox"/> Status post - Pulmonary artery sling repair	
Aortic Aneurysm	<input type="checkbox"/> Status post - Aortic aneurysm repair	
Aortic Dissection	<input type="checkbox"/> Status post - Aortic dissection repair	
Thoracic and Mediastinal Disease	Lung Disease	<input type="checkbox"/> Status post - Lung biopsy <input type="checkbox"/> Status post - Transplant, lung(s) <input type="checkbox"/> Status post - Lung procedure, Other
	Tracheal Stenosis	<input type="checkbox"/> Status post - Tracheal procedure
	Chest Wall	<input type="checkbox"/> Status post - Muscle flap, Trunk (i.e. intercostal, pectus, or serratus muscle) <input type="checkbox"/> Status post - Muscle flap, Trunk (i.e. latissimus dorsi) <input type="checkbox"/> Status post - Removal, Sternal wire <input type="checkbox"/> Status post - Rib excision, Complete <input type="checkbox"/> Status post - Rib excision, Partial <input type="checkbox"/> Status post - Sternal fracture, Open treatment <input type="checkbox"/> Status post - Sternal resection, Radical resection of the sternum <input type="checkbox"/> Status post - Sternal resection, Radical resection of the sternum with mediastinal lymphadenectomy <input type="checkbox"/> Status post - Tumor of chest wall, Excision including ribs <input type="checkbox"/> Status post - Tumor of chest wall, Excision including ribs, With reconstruction <input type="checkbox"/> Status post - Tumor of soft tissue of thorax, Excision of deep subfascial or intramuscular tumor <input type="checkbox"/> Status post - Tumor of soft tissue of thorax, Excision of subcutaneous tumor <input type="checkbox"/> Status post - Tumor of soft tissue of thorax, Radical resection
	Neck	<input type="checkbox"/> Status post - Hyoid myotomy and suspension <input type="checkbox"/> Status post - Muscle flap, Neck <input type="checkbox"/> Status post - Procedure on neck <input type="checkbox"/> Status post - Tumor of soft tissue of neck, Excision of deep subfascial or intramuscular tumor <input type="checkbox"/> Status post - Tumor of soft tissue of neck, Excision of subcutaneous tumor <input type="checkbox"/> Status post - Tumor of soft tissue of neck, Radical resection
	Pectus Excavatum, Carinatum	<input type="checkbox"/> Status post - Pectus bar removal <input type="checkbox"/> Status post - Pectus bar repositioning <input type="checkbox"/> Status post - Pectus repair, Minimally invasive repair (Nuss), With thoracoscopy <input type="checkbox"/> Status post - Pectus repair, Minimally invasive repair (Nuss), Without thoracoscopy <input type="checkbox"/> Status post - Pectus repair, Open repair
	Thoracic Outlet	<input type="checkbox"/> Status post - Division of scalenus anticus, With resection of a cervical rib <input type="checkbox"/> Status post - Division of scalenus anticus, Without resection of a cervical rib <input type="checkbox"/> Status post - Rib excision, Excision of a cervical rib

	<input type="checkbox"/> Status post - Rib excision, Excision of a cervical rib, With sympathectomy <input type="checkbox"/> Status post - Rib excision, Excision of first rib <input type="checkbox"/> Status post - Rib excision, Excision of first rib, With sympathectomy
Electrophysiological	<p>Thorax</p> <input type="checkbox"/> Status post - Procedure on thorax <input type="checkbox"/> Status post - Pacemaker implantation, Permanent <input type="checkbox"/> Status post - Pacemaker procedure <input type="checkbox"/> Status post - Explantation of pacing system <input type="checkbox"/> Status post - ICD (AICD) implantation <input type="checkbox"/> Status post - ICD (AICD) ([automatic] implantable cardioverter defibrillator) procedure <input type="checkbox"/> Status post - Arrhythmia surgery - atrial, Surgical Ablation <input type="checkbox"/> Status post - Arrhythmia surgery - ventricular, Surgical Ablation
Interventional Cardiology Procedures	<input type="checkbox"/> Status post - Cardiovascular catheterization procedure, Diagnostic <input type="checkbox"/> Status post - Cardiovascular catheterization procedure, Diagnostic, Angiographic data obtained <input type="checkbox"/> Status post - Cardiovascular catheterization procedure, Diagnostic, Electrophysiology alteration <input type="checkbox"/> Status post - Cardiovascular catheterization procedure, Diagnostic, Hemodynamic alteration <input type="checkbox"/> Status post - Cardiovascular catheterization procedure, Diagnostic, Hemodynamic data obtained <input type="checkbox"/> Status post - Cardiovascular catheterization procedure, Diagnostic, Transluminal test occlusion <input type="checkbox"/> Status post - Cardiovascular catheterization procedure, Therapeutic <input type="checkbox"/> Status post - Cardiovascular catheterization procedure, Therapeutic, Adjunctive therapy <input type="checkbox"/> Status post - Cardiovascular catheterization procedure, Therapeutic, Balloon dilation <input type="checkbox"/> Status post - Cardiovascular catheterization procedure, Therapeutic, Balloon valvotomy <input type="checkbox"/> Status post - Cardiovascular catheterization procedure, Therapeutic, Coil implantation <input type="checkbox"/> Status post - Cardiovascular catheterization procedure, Therapeutic, Device implantation <input type="checkbox"/> Status post - Cardiovascular catheterization procedure, Therapeutic, Device implantation attempted <input type="checkbox"/> Status post - Cardiovascular catheterization procedure, Therapeutic, Electrophysiological ablation <input type="checkbox"/> Status post - Cardiovascular catheterization procedure, Therapeutic, Intravascular foreign body removal <input type="checkbox"/> Status post - Cardiovascular catheterization procedure, Therapeutic, Perforation (establishing interchamber and/or intervessel communication) <input type="checkbox"/> Status post - Cardiovascular catheterization procedure, Therapeutic, Septostomy <input type="checkbox"/> Status post - Cardiovascular catheterization procedure, Therapeutic, Stent insertion <input type="checkbox"/> Status post - Cardiovascular catheterization procedure, Therapeutic, Stent re-dilation <input type="checkbox"/> Status post - Cardiovascular catheterization procedure, Therapeutic, Transcatheter Fontan completion <input type="checkbox"/> Status post - Cardiovascular catheterization procedure, Therapeutic, Transcatheter implantation of valve
Palliative Procedures	<input type="checkbox"/> Status post - Shunt, Systemic to pulmonary, Modified Blalock-Taussig Shunt (MBTS) <input type="checkbox"/> Status post - Shunt, Systemic to pulmonary, Central (shunt from aorta) <input type="checkbox"/> 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) <input type="checkbox"/> Status post - Shunt, Systemic to pulmonary, Other <input type="checkbox"/> Status post - Shunt, Ligation and takedown <input type="checkbox"/> Status post - Shunt, Reoperation <input type="checkbox"/> Status post - PA banding (PAB) <input type="checkbox"/> Status post - PA debanding <input type="checkbox"/> Status post - Damus-Kaye-Stansel procedure (DKS) (creation of AP anastomosis without arch reconstruction) <input type="checkbox"/> Status post - Bidirectional cavopulmonary anastomosis (BDCPA) (bidirectional Glenn)

	<input type="checkbox"/> Status post - Glenn (unidirectional cavopulmonary anastomosis) (unidirectional Glenn) <input type="checkbox"/> Status post - Bilateral bidirectional cavopulmonary anastomosis (BBDCPA) (bilateral bidirectional Glenn) <input type="checkbox"/> Status post - HemiFontan <input type="checkbox"/> Status post - Superior cavopulmonary anastomosis(es) (Glenn or HemiFontan) + Atrioventricular valvuloplasty <input type="checkbox"/> Status post - Superior Cavopulmonary anastomosis(es) + PA reconstruction <input type="checkbox"/> Status post - Hepatic vein to azygous vein connection, Direct <input type="checkbox"/> Status post - Hepatic vein to azygous vein connection, Interposition graft <input type="checkbox"/> Status post - Kawashima operation (superior cavopulmonary connection in setting of interrupted IVC with azygous continuation) <input type="checkbox"/> Status post - Palliation, Other
Mechanical Support	<input type="checkbox"/> Status post - ECMO cannulation <input type="checkbox"/> Status post - ECMO decannulation <input type="checkbox"/> Status post - ECMO procedure <input type="checkbox"/> Status post - Intraaortic balloon pump (IABP) insertion <input type="checkbox"/> Status post - Right/left heart assist device procedure <input type="checkbox"/> Status post - VAD explantation <input type="checkbox"/> Status post - VAD implantation <input type="checkbox"/> Status post - VAD change out
Anesthetic procedures	<input type="checkbox"/> Status post - Echocardiography procedure, Sedated transesophageal echocardiogram <input type="checkbox"/> Status post - Echocardiography procedure, Sedated transthoracic echocardiogram <input type="checkbox"/> Status post - Non-cardiovascular, Non-thoracic procedure on cardiac patient with cardiac anesthesia <input type="checkbox"/> Status post - Radiology procedure on cardiac patient, Cardiac Computerized Axial Tomography (CT Scan) <input type="checkbox"/> Status post - Radiology procedure on cardiac patient, Cardiac Magnetic Resonance Imaging (MRI) <input type="checkbox"/> Status post - Radiology procedure on cardiac patient, Diagnostic radiology <input type="checkbox"/> Status post - Radiology procedure on cardiac patient, Non-Cardiac Computerized Tomography (CT) on cardiac patient <input type="checkbox"/> Status post - Radiology procedure on cardiac patient, Non-cardiac Magnetic Resonance Imaging (MRI) on cardiac patient <input type="checkbox"/> Status post - Radiology procedure on cardiac patient, Therapeutic radiology
Miscellaneous Procedures	<input type="checkbox"/> Status post - Aneurysm, Ventricular, Right, Repair <input type="checkbox"/> Status post - Aneurysm, Ventricular, Left, Repair <input type="checkbox"/> Status post - Aneurysm, Pulmonary artery, Repair <input type="checkbox"/> Status post - Cardiac tumor resection <input type="checkbox"/> Status post - Pulmonary AV fistula repair/occlusion <input type="checkbox"/> Status post - Ligation, Pulmonary artery <input type="checkbox"/> Status post - Pulmonary embolectomy, Acute pulmonary embolus <input type="checkbox"/> Status post - Pulmonary embolectomy, Chronic pulmonary embolus <input type="checkbox"/> Status post - Pleural drainage procedure <input type="checkbox"/> Status post - Pleural procedure, Other <input type="checkbox"/> Status post - Ligation, Thoracic duct <input type="checkbox"/> Status post - Decortication <input type="checkbox"/> Status post - Esophageal procedure <input type="checkbox"/> Status post - Mediastinal procedure <input type="checkbox"/> Status post - Bronchoscopy <input type="checkbox"/> Status post - Diaphragm plication <input type="checkbox"/> Status post - Diaphragm procedure, Other <input type="checkbox"/> Status post - VATS (video-assisted thoracoscopic surgery) <input type="checkbox"/> Status post - Minimally invasive procedure <input type="checkbox"/> Status post - Bypass for noncardiac lesion <input type="checkbox"/> Status post - Delayed sternal closure

- Status post - Mediastinal exploration
- Status post - Sternotomy wound drainage
- Status post - Intravascular stent removal
- Status post - Thoracotomy, Other
- Status post - Cardiotomy, Other
- Status post - Cardiac procedure, Other
- Status post - Thoracic and/or mediastinal procedure, Other
- Status post - Peripheral vascular procedure, Other
- Status post - Miscellaneous procedure, Other
- Status post - Other procedure

Congenital Procedures (by category)

Septal Defects	ASD	<input type="checkbox"/> PFO, Primary closure <input type="checkbox"/> ASD repair, Primary closure <input type="checkbox"/> ASD repair, Patch <input type="checkbox"/> ASD repair, Device <input type="checkbox"/> ASD repair, Patch + PAPVC repair <input type="checkbox"/> ASD, Common atrium (single atrium), Septation <input type="checkbox"/> ASD creation/enlargement <input type="checkbox"/> ASD partial closure <input type="checkbox"/> Atrial septal fenestration <input type="checkbox"/> Atrial fenestration closure
	VSD	<input type="checkbox"/> VSD repair, Primary closure <input type="checkbox"/> VSD repair, Patch <input type="checkbox"/> VSD repair, Device <input type="checkbox"/> VSD, Multiple, Repair <input type="checkbox"/> VSD creation/enlargement <input type="checkbox"/> Ventricular septal fenestration
	AV Canal	<input type="checkbox"/> AVC (AVSD) repair, Complete (CAVSD) <input type="checkbox"/> AVC (AVSD) repair, Intermediate (Transitional) <input type="checkbox"/> AVC (AVSD) repair, Partial (Incomplete) (PAVSD) <input type="checkbox"/> Valvuloplasty, Common atrioventricular valve <input type="checkbox"/> Valvuloplasty converted to valve replacement in the same operation, Common atrioventricular valve <input type="checkbox"/> Valve replacement, Common atrioventricular valve
	AP Window	<input type="checkbox"/> AP window repair <input type="checkbox"/> Pulmonary artery origin from ascending aorta (hemitruncus) repair
	Truncus Arteriosus	<input type="checkbox"/> Truncus arteriosus repair <input type="checkbox"/> Valvuloplasty, Truncal valve <input type="checkbox"/> Valvuloplasty converted to valve replacement in the same operation, Truncal valve <input type="checkbox"/> Valve replacement, Truncal valve <input type="checkbox"/> Truncus + Interrupted aortic arch repair (IAA) repair
Pulmonary Venous Anomalies	Partial Anomalous Pulmonary Venous Connection	<input type="checkbox"/> PAPVC repair <input type="checkbox"/> PAPVC, Scimitar, Repair <input type="checkbox"/> PAPVC repair, Baffle redirection to left atrium with systemic vein translocation (Warden) (SVC sewn to right atrial appendage)
	Total Anomalous Pulmonary Venous Connection	<input type="checkbox"/> TAPVC repair <input type="checkbox"/> TAPVC repair + Shunt - systemic-to-pulmonary
Cor Triatriatum		<input type="checkbox"/> Cor triatriatum repair
Pulmonary Venous Stenosis		<input type="checkbox"/> Pulmonary venous stenosis repair
Systemic Venous Anomalies	Anomalous Systemic Venous Connection	<input type="checkbox"/> Atrial baffle procedure (non-Mustard, non-Senning) <input type="checkbox"/> Anomalous systemic venous connection repair
	Systemic venous obstruction	<input type="checkbox"/> Systemic venous stenosis repair
	Tetralogy of Fallot	<input type="checkbox"/> TOF repair, No Ventriculotomy <input type="checkbox"/> TOF repair, Ventriculotomy, Nontransannular patch <input type="checkbox"/> TOF repair, Ventriculotomy, Transannular patch <input type="checkbox"/> TOF repair, RV-PA conduit <input type="checkbox"/> TOF - AVC (AVSD) repair

Right Heart Lesions		<input type="checkbox"/> TOF - Absent pulmonary valve repair
	Pulmonary Atresia/VSD	<input type="checkbox"/> Pulmonary atresia - VSD (including TOF, PA) repair <input type="checkbox"/> 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]) <input type="checkbox"/> Pulmonary atresia - VSD – MAPCA repair, Status post prior complete unifocalization (includes VSD closure + RV to PA connection [with or without conduit]) <input type="checkbox"/> 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]) <input type="checkbox"/> Unifocalization MAPCA(s), Bilateral pulmonary unifocalization - Complete unifocalization (all usable MAPCA[s] are incorporated) <input type="checkbox"/> Unifocalization MAPCA(s), Bilateral pulmonary unifocalization - Incomplete unifocalization (not all usable MAPCA[s] are incorporated) <input type="checkbox"/> Unifocalization MAPCA(s), Unilateral pulmonary unifocalization <input type="checkbox"/> Unifocalization MAPCA(s) <input type="checkbox"/> Occlusion of MAPCA(s)
	Tricuspid Valve Disease and Ebstein's Anomaly	<input type="checkbox"/> Valvuloplasty, Tricuspid <input type="checkbox"/> Valvuloplasty converted to valve replacement in the same operation, Tricuspid <input type="checkbox"/> Ebstein's repair <input type="checkbox"/> Valve replacement, Tricuspid (TVR) <input type="checkbox"/> Valve closure, Tricuspid (exclusion, univentricular approach) <input type="checkbox"/> Valve excision, Tricuspid (without replacement) <input type="checkbox"/> Valve surgery, Other, Tricuspid
	RVOT Obstruction, IVS Pulmonary Stenosis	<input type="checkbox"/> RVOT procedure <input type="checkbox"/> 1 1/2 ventricular repair <input type="checkbox"/> PA, reconstruction (plasty), Main (trunk) <input type="checkbox"/> PA, reconstruction (plasty), Branch, Central (within the hilar bifurcation) <input type="checkbox"/> PA, reconstruction (plasty), Branch, Peripheral (at or beyond the hilar bifurcation) <input type="checkbox"/> DCRV repair
	Pulmonary Valve Disease	<input type="checkbox"/> Valvuloplasty, Pulmonic <input type="checkbox"/> Valvuloplasty converted to valve replacement in the same operation, Pulmonic <input type="checkbox"/> Valve replacement, Pulmonic (PVR) <input type="checkbox"/> Valve excision, Pulmonary (without replacement) <input type="checkbox"/> Valve closure, Semilunar <input type="checkbox"/> Valve surgery, Other, Pulmonic
Conduit operations	Conduit operations	<input type="checkbox"/> Conduit placement, RV to PA <input type="checkbox"/> Conduit placement, LV to PA <input type="checkbox"/> Conduit placement, Ventricle to aorta <input type="checkbox"/> Conduit placement, Other
	Conduit Stenosis / Insufficiency	<input type="checkbox"/> Conduit reoperation
Left Heart Lesions	Aortic Valve Disease	<input type="checkbox"/> Valvuloplasty, Aortic <input type="checkbox"/> Valvuloplasty converted to valve replacement in the same operation, Aortic <input type="checkbox"/> Valvuloplasty converted to valve replacement in the same operation, Aortic – with Ross procedure <input type="checkbox"/> Valvuloplasty converted to valve replacement in the same operation, Aortic – with Ross-Konno procedure <input type="checkbox"/> Valve replacement, Aortic (AVR) <input type="checkbox"/> Valve replacement, Aortic (AVR), Mechanical <input type="checkbox"/> Valve replacement, Aortic (AVR), Bioprosthetic <input type="checkbox"/> Valve replacement, Aortic (AVR), Homograft <input type="checkbox"/> Aortic root replacement, Bioprosthetic <input type="checkbox"/> Aortic root replacement, Mechanical

		<input type="checkbox"/> Aortic root replacement, Homograft <input type="checkbox"/> Aortic root replacement, Valve sparing <input type="checkbox"/> Ross procedure <input type="checkbox"/> Konno procedure <input type="checkbox"/> Ross-Konno procedure <input type="checkbox"/> Other annular enlargement procedure <input type="checkbox"/> Aortic stenosis, Subvalvar, Repair <input type="checkbox"/> Aortic stenosis, Subvalvar, Repair, With myectomy for IHSS <input type="checkbox"/> Aortic stenosis, Supravalvar, Repair <input type="checkbox"/> Valve surgery, Other, Aortic
	Sinus of Valsalva Aneurysm	<input type="checkbox"/> Sinus of Valsalva, Aneurysm repair
	LV to Aorta Tunnel	<input type="checkbox"/> LV to aorta tunnel repair
	Mitral Valve Disease	<input type="checkbox"/> Valvuloplasty, Mitral <input type="checkbox"/> Valvuloplasty converted to valve replacement in the same operation, Mitral <input type="checkbox"/> Mitral stenosis, Supravalvar mitral ring repair <input type="checkbox"/> Valve replacement, Mitral (MVR) <input type="checkbox"/> Valve surgery, Other, Mitral
	Hypoplastic Left Heart and Related malformations	<input type="checkbox"/> Norwood procedure <input type="checkbox"/> HLHS biventricular repair <input type="checkbox"/> Conduit insertion right ventricle to pulmonary artery + Intraventricular tunnel left ventricle to neo-aorta + arch reconstruction (Rastelli and Norwood type arch reconstruction) (Yasui)
Hybrid		<input type="checkbox"/> Hybrid Approach "Stage 1", Application of RPA & LPA bands <input type="checkbox"/> Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA) <input type="checkbox"/> Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA) + application of RPA & LPA bands <input type="checkbox"/> Hybrid approach "Stage 2", Aortopulmonary amalgamation + Superior Cavopulmonary anastomosis(es) + PA Debanding + Aortic arch repair (Norwood [Stage 1] + Superior Cavopulmonary anastomosis(es) + PA Debanding) <input type="checkbox"/> Hybrid approach "Stage 2", Aortopulmonary amalgamation + Superior Cavopulmonary anastomosis(es) + PA Debanding + Without aortic arch repair <input type="checkbox"/> Hybrid Approach, Transcardiac balloon dilatation <input type="checkbox"/> Hybrid Approach, Transcardiac transcatheter device placement
Cardiomyopathy		<input type="checkbox"/> Transplant, Heart <input type="checkbox"/> Transplant, Heart and lung <input type="checkbox"/> Partial left ventriculectomy (LV volume reduction surgery) (Batista)
Pericardial Disease		<input type="checkbox"/> Pericardial drainage procedure <input type="checkbox"/> Pericardiectomy <input type="checkbox"/> Pericardial procedure, Other
Single Ventricle		<input type="checkbox"/> Fontan, Atrio-pulmonary connection <input type="checkbox"/> Fontan, Atrio-ventricular connection <input type="checkbox"/> Fontan, TCPC, Lateral tunnel, Fenestrated <input type="checkbox"/> Fontan, TCPC, Lateral tunnel, Nonfenestrated <input type="checkbox"/> Fontan, TCPC, External conduit, Fenestrated <input type="checkbox"/> Fontan, TCPC, External conduit, Nonfenestrated <input type="checkbox"/> Fontan, TCPC, Intra/extracardiac conduit, Fenestrated <input type="checkbox"/> Fontan, TCPC, Intra/extracardiac conduit, Nonfenestrated <input type="checkbox"/> Fontan revision or conversion (Re-do Fontan) <input type="checkbox"/> Fontan, Other <input type="checkbox"/> Fontan + Atrioventricular valvuloplasty <input type="checkbox"/> Ventricular septation
Transposition of the Great	Congenitally Corrected	<input type="checkbox"/> Congenitally corrected TGA repair, Atrial switch and ASO (double switch)

Arteries	TGA	<input type="checkbox"/> Congenitally corrected TGA repair, Atrial switch and Rastelli <input type="checkbox"/> Congenitally corrected TGA repair, VSD closure <input type="checkbox"/> Congenitally corrected TGA repair, VSD closure and LV to PA conduit <input type="checkbox"/> Congenitally corrected TGA repair, Other
	Transposition of the Great Arteries	<input type="checkbox"/> Arterial switch operation (ASO) <input type="checkbox"/> Arterial switch operation (ASO) and VSD repair <input type="checkbox"/> Arterial switch procedure + Aortic arch repair <input type="checkbox"/> Arterial switch procedure and VSD repair + Aortic arch repair <input type="checkbox"/> Senning <input type="checkbox"/> Mustard <input type="checkbox"/> Atrial baffle procedure, Mustard or Senning revision <input type="checkbox"/> Rastelli <input type="checkbox"/> REV <input type="checkbox"/> Aortic root translocation over left ventricle (Including Nikaidoh procedure) <input type="checkbox"/> TGA, Other procedures (Kawashima, LV-PA conduit, other)
DORV		<input type="checkbox"/> DORV, Intraventricular tunnel repair
DOLV		<input type="checkbox"/> DOLV repair
Thoracic Arteries and Veins	Coarctation of Aorta and Aortic arch hypoplasia	<input type="checkbox"/> Coarctation repair, End to end <input type="checkbox"/> Coarctation repair, End to end, Extended <input type="checkbox"/> Coarctation repair, Subclavian flap <input type="checkbox"/> Coarctation repair, Patch aortoplasty <input type="checkbox"/> Coarctation repair, Interposition graft <input type="checkbox"/> Coarctation repair, Other <input type="checkbox"/> Coarctation repair + VSD repair <input type="checkbox"/> Aortic arch repair <input type="checkbox"/> Aortic arch repair + VSD repair
	Coronary Artery Anomalies	<input type="checkbox"/> Coronary artery fistula ligation <input type="checkbox"/> Anomalous origin of coronary artery from pulmonary artery repair <input type="checkbox"/> Coronary artery bypass <input type="checkbox"/> Anomalous aortic origin of coronary artery (AAOCA) repair <input type="checkbox"/> Coronary artery procedure, Other
	Interrupted Arch	<input type="checkbox"/> Interrupted aortic arch repair
	Patent Ductus Arteriosus	<input type="checkbox"/> PDA closure, Surgical <input type="checkbox"/> PDA closure, Device
	Vascular Rings and Slings	<input type="checkbox"/> Vascular ring repair <input type="checkbox"/> Aortopexy <input type="checkbox"/> Pulmonary artery sling repair
	Aortic Aneurysm	<input type="checkbox"/> Aortic aneurysm repair
	Aortic Dissection	<input type="checkbox"/> Aortic dissection repair
	Lung Disease	<input type="checkbox"/> Lung biopsy <input type="checkbox"/> Transplant, lung(s) <input type="checkbox"/> Lung procedure, Other
Tracheal Stenosis	<input type="checkbox"/> Tracheal procedure	
Chest Wall	<input type="checkbox"/> Muscle flap, Trunk (i.e. intercostal, pectus, or serratus muscle) <input type="checkbox"/> Muscle flap, Trunk (i.e. latissimus dorsi) <input type="checkbox"/> Removal, Sternal wire <input type="checkbox"/> Rib excision, Complete <input type="checkbox"/> Rib excision, Partial <input type="checkbox"/> Sternal fracture, Open treatment	

Thoracic and Mediastinal Disease		<input type="checkbox"/> Sternal resection, Radical resection of the sternum <input type="checkbox"/> Sternal resection, Radical resection of the sternum with mediastinal lymphadenectomy <input type="checkbox"/> Tumor of chest wall, Excision including ribs <input type="checkbox"/> Tumor of chest wall, Excision including ribs, With reconstruction <input type="checkbox"/> Tumor of soft tissue of thorax, Excision of deep subfascial or intramuscular tumor <input type="checkbox"/> Tumor of soft tissue of thorax, Excision of subcutaneous tumor <input type="checkbox"/> Tumor of soft tissue of thorax, Radical resection
	Neck	<input type="checkbox"/> Hyoid myotomy and suspension <input type="checkbox"/> Muscle flap, Neck <input type="checkbox"/> Procedure on neck <input type="checkbox"/> Tumor of soft tissue of neck, Excision of deep subfascial or intramuscular tumor <input type="checkbox"/> Tumor of soft tissue of neck, Excision of subcutaneous tumor <input type="checkbox"/> Tumor of soft tissue of neck, Radical resection
	Pectus Excavatum, Carinatum	<input type="checkbox"/> Pectus bar removal <input type="checkbox"/> Pectus bar repositioning <input type="checkbox"/> Pectus repair, Minimally invasive repair (Nuss), With thoracoscopy <input type="checkbox"/> Pectus repair, Minimally invasive repair (Nuss), Without thoracoscopy <input type="checkbox"/> Pectus repair, Open repair
	Thoracic Outlet	<input type="checkbox"/> Division of scalenus anticus, With resection of a cervical rib <input type="checkbox"/> Division of scalenus anticus, Without resection of a cervical rib <input type="checkbox"/> Rib excision, Excision of a cervical rib <input type="checkbox"/> Rib excision, Excision of a cervical rib, With sympathectomy <input type="checkbox"/> Rib excision, Excision of first rib <input type="checkbox"/> Rib excision, Excision of first rib, With sympathectomy
	Thorax	<input type="checkbox"/> Procedure on thorax
		<input type="checkbox"/> Pacemaker implantation, Permanent <input type="checkbox"/> Pacemaker procedure <input type="checkbox"/> Explantation of pacing system <input type="checkbox"/> ICD (AICD) implantation <input type="checkbox"/> ICD (AICD) ([automatic] implantable cardioverter defibrillator) procedure <input type="checkbox"/> Arrhythmia surgery - atrial, Surgical Ablation <input type="checkbox"/> Arrhythmia surgery - ventricular, Surgical Ablation
Electrophysiological		<input type="checkbox"/> Cardiovascular catheterization procedure, Diagnostic <input type="checkbox"/> Cardiovascular catheterization procedure, Diagnostic, Angiographic data obtained <input type="checkbox"/> Cardiovascular catheterization procedure, Diagnostic, Electrophysiology alteration <input type="checkbox"/> Cardiovascular catheterization procedure, Diagnostic, Hemodynamic alteration <input type="checkbox"/> Cardiovascular catheterization procedure, Diagnostic, Hemodynamic data obtained <input type="checkbox"/> Cardiovascular catheterization procedure, Diagnostic, Transluminal test occlusion <input type="checkbox"/> Cardiovascular catheterization procedure, Therapeutic <input type="checkbox"/> Cardiovascular catheterization procedure, Therapeutic, Adjunctive therapy <input type="checkbox"/> Cardiovascular catheterization procedure, Therapeutic, Balloon dilation <input type="checkbox"/> Cardiovascular catheterization procedure, Therapeutic, Balloon valvotomy <input type="checkbox"/> Cardiovascular catheterization procedure, Therapeutic, Coil implantation <input type="checkbox"/> Cardiovascular catheterization procedure, Therapeutic, Device implantation <input type="checkbox"/> Cardiovascular catheterization procedure, Therapeutic, Device implantation attempted <input type="checkbox"/> Cardiovascular catheterization procedure, Therapeutic, Electrophysiological ablation
Interventional Cardiology Procedures		

	<ul style="list-style-type: none"> <input type="checkbox"/> Cardiovascular catheterization procedure, Therapeutic, Intravascular foreign body removal <input type="checkbox"/> Cardiovascular catheterization procedure, Therapeutic, Perforation (establishing interchamber and/or intervessel communication) <input type="checkbox"/> Cardiovascular catheterization procedure, Therapeutic, Septostomy <input type="checkbox"/> Cardiovascular catheterization procedure, Therapeutic, Stent insertion <input type="checkbox"/> Cardiovascular catheterization procedure, Therapeutic, Stent re-dilation <input type="checkbox"/> Cardiovascular catheterization procedure, Therapeutic, Transcatheter Fontan completion <input type="checkbox"/> Cardiovascular catheterization procedure, Therapeutic, Transcatheter implantation of valve
Palliative Procedures	<ul style="list-style-type: none"> <input type="checkbox"/> Shunt, Systemic to pulmonary, Modified Blalock-Taussig Shunt (MBTS) <input type="checkbox"/> Shunt, Systemic to pulmonary, Central (shunt from aorta) <input type="checkbox"/> 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) <input type="checkbox"/> Shunt, Systemic to pulmonary, Other <input type="checkbox"/> Shunt, Ligation and takedown <input type="checkbox"/> Shunt, Reoperation <input type="checkbox"/> PA banding (PAB) <input type="checkbox"/> PA debanding <input type="checkbox"/> Damus-Kaye-Stansel procedure (DKS) (creation of AP anastomosis without arch reconstruction) <input type="checkbox"/> Bidirectional cavopulmonary anastomosis (BDCPA) (bidirectional Glenn) <input type="checkbox"/> Glenn (unidirectional cavopulmonary anastomosis) (unidirectional Glenn) <input type="checkbox"/> Bilateral bidirectional cavopulmonary anastomosis (BBDCPA) (bilateral bidirectional Glenn) <input type="checkbox"/> HemiFontan <input type="checkbox"/> Superior cavopulmonary anastomosis(es) (Glenn or HemiFontan) + Atrioventricular valvuloplasty <input type="checkbox"/> Superior Cavopulmonary anastomosis(es) + PA reconstruction <input type="checkbox"/> Hepatic vein to azygous vein connection, Direct <input type="checkbox"/> Hepatic vein to azygous vein connection, Interposition graft <input type="checkbox"/> Kawashima operation (superior cavopulmonary connection in setting of interrupted IVC with azygous continuation) <input type="checkbox"/> Palliation, Other
Mechanical Support	<ul style="list-style-type: none"> <input type="checkbox"/> ECMO cannulation <input type="checkbox"/> ECMO decannulation <input type="checkbox"/> ECMO procedure <input type="checkbox"/> Intraaortic balloon pump (IABP) insertion <input type="checkbox"/> Right/left heart assist device procedure <input type="checkbox"/> VAD explantation <input type="checkbox"/> VAD implantation <input type="checkbox"/> VAD change out
Anesthetic procedures	<ul style="list-style-type: none"> <input type="checkbox"/> Echocardiography procedure, Sedated transesophageal echocardiogram <input type="checkbox"/> Echocardiography procedure, Sedated transthoracic echocardiogram <input type="checkbox"/> Non-cardiovascular, Non-thoracic procedure on cardiac patient with cardiac anesthesia <input type="checkbox"/> Radiology procedure on cardiac patient, Cardiac Computerized Axial Tomography (CT Scan) <input type="checkbox"/> Radiology procedure on cardiac patient, Cardiac Magnetic Resonance Imaging (MRI) <input type="checkbox"/> Radiology procedure on cardiac patient, Diagnostic radiology <input type="checkbox"/> Radiology procedure on cardiac patient, Non-Cardiac Computerized Tomography (CT) on cardiac patient <input type="checkbox"/> Radiology procedure on cardiac patient, Non-cardiac Magnetic Resonance Imaging (MRI) on cardiac patient <input type="checkbox"/> Radiology procedure on cardiac patient, Therapeutic radiology
Miscellaneous Procedures	<ul style="list-style-type: none"> <input type="checkbox"/> Aneurysm, Ventricular, Right, Repair

- Aneurysm, Ventricular, Left, Repair
- Aneurysm, Pulmonary artery, Repair
- Cardiac tumor resection
- Pulmonary AV fistula repair/occlusion
- Ligation, Pulmonary artery
- Pulmonary embolectomy, Acute pulmonary embolus
- Pulmonary embolectomy, Chronic pulmonary embolus
- Pleural drainage procedure
- Pleural procedure, Other
- Ligation, Thoracic duct
- Decortication
- Esophageal procedure
- Mediastinal procedure
- Bronchoscopy
- Diaphragm plication
- Diaphragm procedure, Other
- VATS (video-assisted thoracoscopic surgery)
- Minimally invasive procedure
- Bypass for noncardiac lesion
- Delayed sternal closure
- Mediastinal exploration
- Sternotomy wound drainage
- Intravascular stent removal
- Thoracotomy, Other
- Cardiotomy, Other
- Cardiac procedure, Other
- Thoracic and/or mediastinal procedure, Other
- Peripheral vascular procedure, Other
- Miscellaneous procedure, Other
- Organ procurement
- Other procedure

Operation Canceled or Aborted

Canceled operation
Aborted operation

- Operation canceled before skin incision
- Operation aborted after skin incision

Congenital Diagnoses (by harvest code)	
Code	Description
10	PFO
20	ASD, Secundum
30	ASD, Sinus venosus
40	ASD, Coronary sinus
50	ASD, Common atrium (single atrium)
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
92	VSD + Aortic arch hypoplasia
94	VSD + Coarctation of aorta
100	AVC (AVSD), Complete (CAVSD)
110	AVC (AVSD), Intermediate (transitional)
120	AVC (AVSD), Partial (incomplete) (PAVSD) (ASD, primum)
140	AP window (aortopulmonary window)
150	Pulmonary artery origin from ascending aorta (hemitruncus)
160	Truncus arteriosus
170	Truncal valve insufficiency
180	Partial anomalous pulmonary venous connection (PAPVC)
190	Partial anomalous pulmonary venous connection (PAPVC), scimitar
200	Total anomalous pulmonary venous connection (TAPVC), Type 1 (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)
250	Cor triatriatum
260	Pulmonary venous stenosis
270	Systemic venous anomaly
280	Systemic venous obstruction
290	TOF
300	TOF, AVC (AVSD)
310	TOF, Absent pulmonary valve
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)
370	Ebstein's anomaly
380	Tricuspid regurgitation, non-Ebstein's related

Congenital Diagnoses (by harvest code)

Code	Description
390	Tricuspid stenosis
400	Tricuspid regurgitation and tricuspid stenosis
410	Tricuspid valve, Other
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
510	Pulmonary valve, Other
520	Conduit failure
530	Pulmonary insufficiency
540	Pulmonary insufficiency and pulmonary stenosis
550	Aortic stenosis, Subvalvar
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
630	Sinus of Valsalva aneurysm
640	LV to aorta tunnel
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
730	Hypoplastic left heart syndrome (HLHS)
740	Cardiomyopathy (including dilated, restrictive, and hypertrophic)
750	Cardiomyopathy, End-stage congenital heart disease
760	Pericardial effusion
770	Pericarditis
780	Pericardial disease, Other
790	Single ventricle, DILV
800	Single ventricle, DIRV
810	Single ventricle, Mitral atresia
820	Single ventricle, Tricuspid atresia
830	Single ventricle, Unbalanced AV canal

Congenital Diagnoses (by harvest code)	
Code	Description
840	Single ventricle, Heterotaxia syndrome
850	Single ventricle, Other
851	Single Ventricle + Total anomalous pulmonary venous connection (TAPVC)
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
880	TGA, IVS
890	TGA, IVS-LVOTO
900	TGA, VSD
910	TGA, VSD-LVOTO
930	DORV, VSD type
940	DORV, TOF type
950	DORV, TGA type
960	DORV, Remote VSD (uncommitted VSD)
975	DORV, IVS
980	DOLV
990	Coarctation of aorta
1000	Aortic arch hypoplasia
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
1050	Coronary artery anomaly, Other
1070	Interrupted aortic arch
1080	Patent ductus arteriosus
1090	Vascular ring
1100	Pulmonary artery sling
1110	Aortic aneurysm (including pseudoaneurysm)
1120	Aortic dissection
1130	Lung disease, Benign
1140	Lung disease, Malignant
1160	Tracheal stenosis
1170	Airway disease
1180	Arrhythmia
1185	Arrhythmia, Heart block
1190	Arrhythmia, Heart block, Acquired
1200	Arrhythmia, Heart block, Congenital
1220	Arrhythmia, Pacemaker, Indication for replacement
1230	Atrial Isomerism, Left
1240	Atrial Isomerism, Right

Congenital Diagnoses (by harvest code)

Code	Description
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
1310	Mediastinitis
1320	Endocarditis
1325	Rheumatic heart disease
1330	Prosthetic valve failure
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
1430	Pleural disease, Benign
1440	Pleural disease, Malignant
1450	Pneumothorax
1460	Pleural effusion
1470	Chylothorax
1480	Empyema
1490	Esophageal disease, Benign
1500	Esophageal disease, Malignant
1505	Mediastinal disease
1510	Mediastinal disease, Benign
1520	Mediastinal disease, Malignant
1540	Diaphragm paralysis
1550	Diaphragm disease, Other
1560	Cardiac, Other
1570	Thoracic and/or mediastinal, Other
1580	Peripheral vascular, Other
1590	Status post - Transplant, Heart
1600	Status post - Transplant, Lung(s)
1610	Status post - Transplant, Heart and lung
2000	Interrupted aortic arch + AP window (aortopulmonary window)
2010	Truncus arteriosus + Interrupted aortic arch
2020	Interrupted aortic arch + VSD
2030	DORV + AVSD (AV Canal)

Congenital Diagnoses (by harvest code)

Code	Description
2040	Arrhythmia, Atrial
2050	Arrhythmia, Junctional
2060	Arrhythmia, Ventricular
2070	Postoperative bleeding
2080	Shone's syndrome
2090	Dextrocardia
2100	Levocardia
2110	Mesocardia
2120	Situs inversus
2130	Shunt failure
2140	TOF, Pulmonary stenosis
2150	ASD, Postoperative interatrial communication
2160	Rib tumor, Benign
2170	Rib tumor, Malignant
2180	Rib tumor, Metastatic
2190	Sternal tumor, Benign
2200	Sternal tumor, Malignant
2210	Sternal tumor, Metastatic
2220	Pectus carinatum
2230	Pectus excavatum
2240	Thoracic outlet syndrome
2250	Kawasaki disease
2260	Complication of cardiovascular catheterization procedure
2270	Complication of cardiovascular catheterization procedure, Device embolization
2280	Complication of cardiovascular catheterization procedure, Device malfunction
2290	Complication of cardiovascular catheterization procedure, Perforation
2300	Complication of interventional radiology procedure
2310	Complication of interventional radiology procedure, Device embolization
2320	Complication of interventional radiology procedure, Device malfunction
2330	Complication of interventional radiology procedure, Perforation
2340	Foreign body, Intracardiac foreign body
2350	Foreign body, Intravascular foreign body
2360	Open sternum with closed skin
2370	Open sternum with open skin (includes membrane placed to close skin)
2380	Retained sternal wire causing irritation
2390	Syncope
2400	Trauma, Blunt
2410	Trauma, Penetrating
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

Congenital Diagnoses (by harvest code)

Code	Description
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
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
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)
4210	Status post - AP window repair
4220	Status post - Pulmonary artery origin from ascending aorta (hemitruncus) repair
4230	Status post - Truncus arteriosus repair
4240	Status post - Valvuloplasty, Truncal valve
4250	Status post - Valve replacement, Truncal valve
4260	Status post - PAPVC repair
4270	Status post - PAPVC, Scimitar, Repair
4280	Status post - TAPVC repair
4290	Status post - Cor triatriatum repair
4300	Status post - Pulmonary venous stenosis repair
4310	Status post - Atrial baffle procedure (non-Mustard, non-Senning)
4330	Status post - Anomalous systemic venous connection repair
4340	Status post - Systemic venous stenosis repair
4350	Status post - TOF repair, No ventriculotomy
4360	Status post - TOF repair, Ventriculotomy, Nontransanular patch
4370	Status post - TOF repair, Ventriculotomy, Transanular patch
4380	Status post - TOF repair, RV-PA conduit
4390	Status post - TOF - AVC (AVSD) repair
4400	Status post - TOF - Absent pulmonary valve repair
4420	Status post - Pulmonary atresia - VSD (including TOF, PA) repair
4440	Status post - Unifocalization MAPCA(s)
4450	Status post - Occlusion of MAPCA(s)
4460	Status post - Valvuloplasty, 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

Congenital Diagnoses (by harvest code)

Code	Description
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 hilar bifurcation)
4570	Status post - DCRV repair
4580	Status post - Conduit reoperation
4590	Status post - Valvuloplasty, Pulmonic
4600	Status post - Valve replacement, Pulmonic (PVR)
4610	Status post - Conduit placement, RV to PA
4620	Status post - Conduit placement, LV to PA
4630	Status post - Valve excision, Pulmonary (without replacement)
4640	Status post - Valve closure, Semilunar
4650	Status post - Valve surgery, Other, Pulmonic
4660	Status post - Valvuloplasty, Aortic
4670	Status post - Valve replacement, Aortic (AVR)
4680	Status post - Valve replacement, Aortic (AVR), Mechanical
4690	Status post - Valve replacement, Aortic (AVR), Bioprosthetic
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
4790	Status post - Aortic stenosis, Supravalvar, Repair
4800	Status post - Valve surgery, Other, Aortic
4810	Status post - Sinus of Valsalva, Aneurysm repair
4820	Status post - LV to aorta tunnel repair
4830	Status post - Valvuloplasty, Mitral
4840	Status post - Mitral stenosis, Supravalvar mitral ring repair
4850	Status post - Valve replacement, Mitral (MVR)
4860	Status post - Valve surgery, Other, Mitral
4870	Status post - Norwood procedure
4880	Status post - HLHS biventricular repair
4910	Status post - Partial left ventriculectomy (LV volume reduction surgery) (Batista)
4920	Status post - Pericardial drainage procedure
4930	Status post - Pericardiectomy
4940	Status post - Pericardial procedure, Other

Congenital Diagnoses (by harvest code)

Code	Description
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
5025	Status post - Fontan revision or conversion (Re-do Fontan)
5030	Status post - Fontan, Other
5035	Status post - Ventricular septation
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
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
5180	Status post - DORV, Intraventricular tunnel repair
5200	Status post - DOLV repair
5210	Status post - Coarctation repair, End to end
5220	Status post - Coarctation repair, End to end, Extended
5230	Status post - Coarctation repair, Subclavian flap
5240	Status post - Coarctation repair, Patch aortoplasty
5250	Status post - Coarctation repair, Interposition 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
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
5320	Status post - Interrupted aortic arch repair
5330	Status post - PDA closure, Surgical
5340	Status post - PDA closure, Device

Congenital Diagnoses (by harvest code)

Code	Description
5360	Status post - Vascular ring repair
5365	Status post - Aortopexy
5370	Status post - Pulmonary artery sling repair
5380	Status post - Aortic aneurysm repair
5390	Status post - Aortic dissection repair
5400	Status post - Lung biopsy
5420	Status post - Lung procedure, Other
5440	Status post - Tracheal procedure
5450	Status post - Pacemaker implantation, Permanent
5460	Status post - Pacemaker procedure
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
5590	Status post - Shunt, Systemic to pulmonary, Modified Blalock-Taussig Shunt (MBTS)
5600	Status post - Shunt, Systemic to pulmonary, Central (shunt from aorta)
5610	Status post - Shunt, Systemic to pulmonary, Other
5630	Status post - Shunt, Ligation and takedown
5640	Status post - PA banding (PAB)
5650	Status post - PA debanding
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
5710	Status post - Palliation, Other
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
5772	Status post - Conduit placement, Other
5774	Status post - Conduit placement, Ventricle to aorta
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

Congenital Diagnoses (by harvest code)

Code	Description
5870	Status post - Bronchoscopy
5880	Status post - Diaphragm plication
5890	Status post - Diaphragm procedure, Other
5900	Status post - Intraaortic balloon pump (IABP) insertion
5910	Status post - ECMO procedure
5920	Status post - Right/left heart assist device procedure
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
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
6095	Status post - Shunt, Reoperation
6100	Status post - Aortic stenosis, Subvalvar, Repair, With myectomy for IHSS
6110	Status post - ASD repair, Patch + PAPVC repair
6120	Status post - PAPVC repair, Baffle redirection to left atrium with systemic vein translocation (Warden) (SVC sewn to right atrial appendage)
6130	Status post - Superior Cavopulmonary anastomosis(es) + PA reconstruction
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
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
6190	Status post - Aortic root translocation over left ventricle (Including Nikaidoh procedure)
6200	Status post - TAPVC repair + Shunt - systemic-to-pulmonary
6210	Status post - TGA, Other procedures (Kawashima, LV-PA conduit, other)
6220	Status post - Truncus + Interrupted aortic arch repair (IAA) repair
6230	Status post - Valve replacement, Common atrioventricular valve
6240	Status post - Valvuloplasty converted to valve replacement in the same operation, Aortic
6250	Status post - Valvuloplasty converted to valve replacement in the same operation, Common atrioventricular valve
6260	Status post - Valvuloplasty converted to valve replacement in the same operation, Mitral
6270	Status post - Valvuloplasty converted to valve replacement in the same operation, Pulmonic
6280	Status post - Valvuloplasty converted to valve replacement in the same operation, Tricuspid
6290	Status post - Valvuloplasty converted to valve replacement in the same operation, Truncal valve

Congenital Diagnoses (by harvest code)

Code	Description
6300	Status post - Valvuloplasty, Common atrioventricular valve
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
6330	Status post - Superior cavopulmonary anastomosis(es) (Glenn or HemiFontan) + Atrioventricular valvuloplasty
6340	Status post - Fontan + Atrioventricular valvuloplasty
6350	Status post - Explantation of pacing system
6360	Status post - ECMO cannulation
6370	Status post - ECMO decannulation
6380	Status post - VAD implantation
6390	Status post - VAD explantation
6410	Status post - Cardiovascular catheterization procedure, Therapeutic
6420	Status post - Echocardiography procedure, Sedated transesophageal echocardiogram
6430	Status post - Echocardiography procedure, Sedated transthoracic echocardiogram
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
6500	Status post - Cardiovascular catheterization procedure, Diagnostic
6510	Status post - Cardiovascular catheterization procedure, Diagnostic, Hemodynamic data obtained
6520	Status post - Cardiovascular catheterization procedure, Diagnostic, Angiographic data obtained
6530	Status post - Cardiovascular catheterization procedure, Diagnostic, Transluminal test occlusion
6540	Status post - Cardiovascular catheterization procedure, Diagnostic, Hemodynamic alteration
6550	Status post - Cardiovascular catheterization procedure, Diagnostic, Electrophysiology alteration
6570	Status post - Cardiovascular catheterization procedure, Therapeutic, Balloon dilation
6580	Status post - Cardiovascular catheterization procedure, Therapeutic, Septostomy
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
6620	Status post - Cardiovascular catheterization procedure, Therapeutic, Stent insertion
6630	Status post - Cardiovascular catheterization procedure, Therapeutic, Stent re-dilation
6640	Status post - Cardiovascular catheterization procedure, Therapeutic, Perforation (establishing interchamber and/or intervessel communication)
6650	Status post - Cardiovascular catheterization procedure, Therapeutic, Transcatheter Fontan completion
6660	Status post - Cardiovascular catheterization procedure, Therapeutic, Transcatheter implantation of valve
6670	Status post - Cardiovascular catheterization procedure, Therapeutic, Adjunctive therapy
6690	Status post - Cardiovascular catheterization procedure, Therapeutic, Electrophysiological ablation
6700	Status post - Pulmonary atresia - VSD - MAPCA repair, Complete single stage repair (1-stage that includes

Congenital Diagnoses (by harvest code)

Code	Description
	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 unifocalization (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
6755	Status post - Conduit insertion right ventricle to pulmonary artery + Intraventricular tunnel left ventricle to neo-aorta + Arch reconstruction (Rastelli and Norwood type arch reconstruction) (Yasui)
6760	Status post - Hybrid Approach, Transcardiac balloon dilation
6770	Status post - Hybrid Approach, Transcardiac transcatheter device placement
6780	Status post - Fontan, TCPC, Intra/extracardiac conduit, Fenestrated
6790	Status post - Fontan, TCPC, Intra/extracardiac conduit, Nonfenestrated
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 sternum
6870	Status post - Sternal resection, Radical resection of 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
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
7000	Normal heart
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
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

Congenital Diagnoses (by harvest code)

Code	Description
7060	Status post - Rib excision, Excision of cervical rib
7070	Status post - Rib excision, Excision of cervical rib, With sympathectomy
7080	Status post - Rib excision, Excision of first rib
7090	Status post - Rib excision, Excision of first rib, With sympathectomy
7100	Status post - Procedure on thorax
7110	Status post - Cardiovascular catheterization procedure, Therapeutic, Device implantation attempted
7120	Status post - Cardiovascular catheterization procedure, Therapeutic, Intravascular foreign body removal
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)
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)
7170	Status post - VAD change out
7180	Status post - Intravascular stent removal
7777	Miscellaneous, Other
11777	Status post - Other procedure

Congenital Procedures (by harvest code)	
Code	Description
10	PFO, Primary closure
20	ASD repair, Primary closure
30	ASD repair, Patch
40	ASD repair, Device
50	ASD, Common atrium (single atrium), Septation
60	ASD creation/enlargement
70	ASD partial closure
80	Atrial septal fenestration
85	Atrial fenestration closure
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
170	AVC (AVSD) repair, Complete (CAVSD)
180	AVC (AVSD) repair, Intermediate (Transitional)
190	AVC (AVSD) repair, Partial (Incomplete) (PAVSD)
210	AP window repair
220	Pulmonary artery origin from ascending aorta (hemitruncus) repair
230	Truncus arteriosus repair
240	Valvuloplasty, Truncal valve
250	Valve replacement, Truncal valve
260	PAPVC repair
270	PAPVC, Scimitar, Repair
280	TAPVC repair
290	Cor triatriatum repair
300	Pulmonary venous stenosis repair
310	Atrial baffle procedure (non-Mustard, non-Senning)
330	Anomalous systemic venous connection repair
340	Systemic venous stenosis repair
350	TOF repair, No ventriculotomy
360	TOF repair, Ventriculotomy, Nontransannular patch
370	TOF repair, Ventriculotomy, Transannular patch
380	TOF repair, RV-PA conduit
390	TOF - AVC (AVSD) repair
400	TOF - Absent pulmonary valve repair
420	Pulmonary atresia - VSD (including TOF, PA) repair
440	Unifocalization MAPCA(s)
450	Occlusion of MAPCA(s)

Congenital Procedures (by harvest code)	
Code	Description
460	Valvuloplasty, 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
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 hilar bifurcation)
570	DCRV repair
580	Conduit reoperation
590	Valvuloplasty, Pulmonic
600	Valve replacement, Pulmonic (PVR)
610	Conduit placement, RV to PA
620	Conduit placement, LV to PA
630	Valve excision, Pulmonary (without replacement)
640	Valve closure, Semilunar
650	Valve surgery, Other, Pulmonic
660	Valvuloplasty, Aortic
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
790	Aortic stenosis, Supravalvar, Repair
800	Valve surgery, Other, Aortic
810	Sinus of Valsalva, Aneurysm repair
820	LV to aorta tunnel repair
830	Valvuloplasty, Mitral
840	Mitral stenosis, Supravalvar mitral ring repair
850	Valve replacement, Mitral (MVR)
860	Valve surgery, Other, Mitral

Congenital Procedures (by harvest code)	
Code	Description
870	Norwood procedure
880	HLHS biventricular repair
890	Transplant, Heart
900	Transplant, Heart and lung
910	Partial left ventriculectomy (LV volume reduction surgery) (Batista)
920	Pericardial drainage procedure
930	Pericardiectomy
940	Pericardial procedure, Other
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
1025	Fontan revision or conversion (Re-do Fontan)
1030	Fontan, Other
1035	Ventricular septation
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
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
1150	Rastelli
1160	REV
1180	DORV, Intraventricular tunnel repair
1200	DOLV repair
1210	Coarctation repair, End to end
1220	Coarctation repair, End to end, Extended
1230	Coarctation repair, Subclavian flap
1240	Coarctation repair, Patch aortoplasty
1250	Coarctation repair, Interposition graft
1260	Coarctation repair, Other
1275	Coarctation repair + VSD repair
1280	Aortic arch repair
1285	Aortic arch repair + VSD repair

Congenital Procedures (by harvest code)	
Code	Description
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 from aorta (AAOCA) repair
1310	Coronary artery procedure, Other
1320	Interrupted aortic arch repair
1330	PDA closure, Surgical
1340	PDA closure, Device
1360	Vascular ring repair
1365	Aortopexy
1370	Pulmonary artery sling repair
1380	Aortic aneurysm repair
1390	Aortic dissection repair
1400	Lung biopsy
1410	Transplant, lung(s)
1420	Lung procedure, Other
1440	Tracheal procedure
1450	Pacemaker implantation, Permanent
1460	Pacemaker procedure
1470	ICD (AICD) implantation
1480	ICD (AICD) ([automatic] implantable cardioverter defibrillator) procedure
1490	Arrhythmia surgery - atrial, Surgical Ablation
1500	Arrhythmia surgery - ventricular, Surgical Ablation
1540	Cardiovascular catheterization procedure, Therapeutic, Balloon dilation
1550	Cardiovascular catheterization procedure, Therapeutic, Stent insertion
1560	Cardiovascular catheterization procedure, Therapeutic, Device implantation
1580	Cardiovascular catheterization procedure, Therapeutic, Coil implantation
1590	Shunt, Systemic to pulmonary, Modified Blalock-Taussig Shunt (MBTS)
1600	Shunt, Systemic to pulmonary, Central (shunt from aorta)
1610	Shunt, Systemic to pulmonary, Other
1630	Shunt, Ligation and takedown
1640	PA banding (PAB)
1650	PA debanding
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
1710	Palliation, Other
1720	Aneurysm, Ventricular, Right, Repair
1730	Aneurysm, Ventricular, Left, Repair
1740	Aneurysm, Pulmonary artery, Repair

Congenital Procedures (by harvest code)

Code	Description
1760	Cardiac tumor resection
1772	Conduit placement, Other
1774	Conduit placement, Ventricle to aorta
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
1900	Intraaortic balloon pump (IABP) insertion
1910	ECMO procedure
1920	Right/left heart assist device procedure
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
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
2095	Shunt, Reoperation
2100	Aortic stenosis, Subvalvar, Repair, With myectomy for IHSS
2110	ASD repair, Patch + PAPVC repair
2120	PAPVC repair, Baffle redirection to left atrium with systemic vein translocation (Warden) (SVC sewn to right atrial appendage)
2130	Superior Cavopulmonary anastomosis(es) + PA reconstruction
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
2160	Hybrid Approach "Stage 1", Application of RPA & LPA bands

Congenital Procedures (by harvest code)	
Code	Description
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
2190	Aortic root translocation over left ventricle (Including Nikaidoh procedure)
2200	TAPVC repair + Shunt - systemic-to-pulmonary
2210	TGA, Other procedures (Kawashima, LV-PA conduit, other)
2220	Truncus + Interrupted aortic arch repair (IAA) repair
2230	Valve replacement, Common atrioventricular valve
2240	Valvuloplasty converted to valve replacement in the same operation, Aortic
2250	Valvuloplasty converted to valve replacement in the same operation, Common atrioventricular valve
2260	Valvuloplasty converted to valve replacement in the same operation, Mitral
2270	Valvuloplasty converted to valve replacement in the same operation, Pulmonic
2280	Valvuloplasty converted to valve replacement in the same operation, Tricuspid
2290	Valvuloplasty converted to valve replacement in the same operation, Truncal valve
2300	Valvuloplasty, Common atrioventricular valve
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
2330	Superior cavopulmonary anastomosis(es) (Glenn or HemiFontan) + Atrioventricular valvuloplasty
2340	Fontan + Atrioventricular valvuloplasty
2350	Explantation of pacing system
2360	ECMO cannulation
2370	ECMO decannulation
2380	VAD implantation
2390	VAD explantation
2410	Cardiovascular catheterization procedure, Therapeutic
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
2500	Cardiovascular catheterization procedure, Diagnostic
2510	Cardiovascular catheterization procedure, Diagnostic, Hemodynamic data obtained
2520	Cardiovascular catheterization procedure, Diagnostic, Angiographic data obtained
2530	Cardiovascular catheterization procedure, Diagnostic, Transluminal test occlusion
2540	Cardiovascular catheterization procedure, Diagnostic, Hemodynamic alteration
2550	Cardiovascular catheterization procedure, Diagnostic, Electrophysiology alteration
2580	Cardiovascular catheterization procedure, Therapeutic, Septostomy
2590	Cardiovascular catheterization procedure, Therapeutic, Balloon valvotomy
2630	Cardiovascular catheterization procedure, Therapeutic, Stent re-dilation

Congenital Procedures (by harvest code)	
Code	Description
2640	Cardiovascular catheterization procedure, Therapeutic, Perforation (establishing interchamber and/or intervessel communication)
2650	Cardiovascular catheterization procedure, Therapeutic, Transcatheter Fontan completion
2660	Cardiovascular catheterization procedure, Therapeutic, Transcatheter implantation of valve
2670	Cardiovascular catheterization procedure, Therapeutic, Adjunctive therapy
2690	Cardiovascular catheterization procedure, Therapeutic, Electrophysiological ablation.
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
2755	Conduit insertion right ventricle to pulmonary artery + Intraventricular tunnel left ventricle to neo-aorta + Arch reconstruction (Rastelli and Norwood type arch reconstruction) (Yasui)
2760	Hybrid Approach, Transcardiac balloon dilation
2770	Hybrid Approach, Transcardiac transcatheter device placement
2780	Fontan, TCPC, Intra/extracardiac conduit, Fenestrated
2790	Fontan, TCPC, Intra/extracardiac conduit, Nonfenestrated
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 sternum
2870	Sternal resection, Radical resection of 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
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
2990	Pectus bar removal

Congenital Procedures (by harvest code)

Code	Description
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
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 cervical rib
3070	Rib excision, Excision of cervical rib, With sympathectomy
3080	Rib excision, Excision of first rib
3090	Rib excision, Excision of first rib, With sympathectomy
3100	Procedure on thorax
3110	Cardiovascular catheterization procedure, Therapeutic, Device implantation attempted
3120	Cardiovascular catheterization procedure, Therapeutic, Intravascular foreign body removal
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)
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)
3170	VAD change out
3180	Intravascular stent removal
7777	Other procedure
7800	Operation canceled before skin incision
7810	Operation aborted after skin incision