



The Society of Thoracic Surgeons Congenital Heart Surgery Database

Data Collection Form Version 3.22

May 24, 2013

ADMINISTRATIVE

Participant ID:	STS Trial Link Number:
-----------------	------------------------

DEMOGRAPHICS

Patient ID (software generated)	Patient Nat. ID (SSN):	MRN:	
Last Name:	First Name:	Middle Name:	
Region:	Postal Code:	Country:	
Birth City:	Birth Region:	Birth Country:	
Mother's Name Known: <input type="checkbox"/> Yes <input type="checkbox"/> No			
(If Yes →)	Mother's Last Name:	Mother's First Name:	Mother's Middle Name:
Mother's National ID Number (SSN) Known: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused			
(If Yes →)	Mother's National ID Number (SSN):		
DOB: (mm/dd/yyyy) ___/___/_____	Birth Weight Known: <input type="checkbox"/> Yes <input type="checkbox"/> No	(If Yes →) Birth Weight (kg):	
Gender: <input type="checkbox"/> M <input type="checkbox"/> F <input type="checkbox"/> Ambiguous	Premature Birth: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		
Gestational Age at Birth Known: <input type="checkbox"/> Yes <input type="checkbox"/> No	(If Yes →)	Gestational age at birth (in weeks):	
Multiple Gestation: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Antenatal Diagnosis of Congenital Heart Disease: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		
Race (select all that apply):	Caucasian: <input type="checkbox"/> Yes <input type="checkbox"/> No	Black/African American: <input type="checkbox"/> Yes <input type="checkbox"/> No	Am Indian/Alaskan Native: <input type="checkbox"/> Yes <input type="checkbox"/> No
	Asian: <input type="checkbox"/> Yes <input type="checkbox"/> No	Other: <input type="checkbox"/> Yes <input type="checkbox"/> No	
	Native Hawaiian/Pacific Islander: <input type="checkbox"/> Yes <input type="checkbox"/> No		
Hispanic or Latino Ethnicity: <input type="checkbox"/> Yes <input type="checkbox"/> No			
Date of Last Follow-Up: (mm/dd/yyyy) ___/___/_____			
Last follow-up NYHA Classification: <input type="checkbox"/> Not Assessed <input type="checkbox"/> NYHA 1 <input type="checkbox"/> NYHA 2 <input type="checkbox"/> NYHA 3 <input type="checkbox"/> NYHA 4			
Mortality Status at Last Follow-Up: <input type="checkbox"/> Alive <input type="checkbox"/> Dead			
Mortality Date: (mm/dd/yyyy) ___/___/_____			

NONCARDIAC CONGENITAL ANATOMIC ABNORMALITIES (select all that apply)

- None
- Major abnormality of head, Choanal atresia
- Major abnormality of head, Cleft lip
- Major abnormality of head, Cleft palate
- Major abnormality of head
- Major abnormality of brain, Hydrocephalus
- Major abnormality of brain, Macrocephaly
- Major abnormality of brain, Microcephaly
- Major abnormality of brain
- Major abnormality of spinal cord, Myelomeningocele
- Major abnormality of spinal cord, Spina bifida
- Major abnormality of spinal cord
- Major abnormality of spine, Scoliosis
- Major abnormality of spine
- Major abnormality of larynx - trachea - or bronchus, Laryngomalacia
- Major abnormality of larynx - trachea - or bronchus, Congenital tracheal stenosis
- Major abnormality of larynx - trachea - or bronchus, Tracheomalacia
- Major abnormality of larynx - trachea - or bronchus, Tracheoesophageal fistula (TEF)
- Major abnormality of larynx - trachea - or bronchus, Bronchomalacia
- Major abnormality of larynx - trachea - or bronchus
- Major abnormality of lung, Congenital lobar emphysema (CLE)
- Major abnormality of lung, Cystic congenital adenomatous malformation of the lung (CAM)
- Major abnormality of lung, Cystic fibrosis
- Major abnormality of lung, Pulmonary lymphangiectasia
- Major abnormality of lung
- Major abnormality of abdominal wall, Congenital diaphragmatic hernia (CDH)
- Major abnormality of abdominal wall, Gastroschisis
- Major abnormality of abdominal wall, Omphalocele
- Major abnormality of gastrointestinal system, Biliary atresia
- Major abnormality of gastrointestinal system, Duodenal atresia
- Major abnormality of gastrointestinal system, Duodenal stenosis
- Major abnormality of gastrointestinal system, Jejunal atresia
- Major abnormality of gastrointestinal system, Jejunal stenosis
- Major abnormality of gastrointestinal system, Ileal atresia
- Major abnormality of gastrointestinal system, Ileal stenosis
- Major abnormality of gastrointestinal system, Intestinal malrotation
- Major abnormality of gastrointestinal system, Hirschsprung's disease (Congenital aganglionic megacolon)
- Major abnormality of gastrointestinal system, Stenosis of large intestine
- Major abnormality of gastrointestinal system, Atresia of large intestine
- Major abnormality of gastrointestinal system, Atresia of rectum
- Major abnormality of gastrointestinal system, Stenosis of rectum
- Major abnormality of gastrointestinal system, Anal Atresia (imperforate anus)
- Major abnormality of gastrointestinal system
- Major abnormality of kidney - ureter - or bladder
- Other
(If NCAA is Other ↓)

Major Noncardiac Abnormality- Other- Specify

CHROMOSOMAL ABNORMALITIES

- | | |
|--|--|
| <input type="checkbox"/> No chromosomal abnormality identified | <input type="checkbox"/> 5p |
| <input type="checkbox"/> 11p15.5 | <input type="checkbox"/> 6p12 |
| <input type="checkbox"/> 11q | <input type="checkbox"/> 7q11 |
| <input type="checkbox"/> 12p1.21 | <input type="checkbox"/> 7q11.23 |
| <input type="checkbox"/> 12p12.1 | <input type="checkbox"/> 7q32 |
| <input type="checkbox"/> 12q24 | <input type="checkbox"/> 7q34 |
| <input type="checkbox"/> 15q21.1 | <input type="checkbox"/> 8q12 |
| <input type="checkbox"/> 1q42.1 | <input type="checkbox"/> TGFBR1 or 2 |
| <input type="checkbox"/> 20p12 | <input type="checkbox"/> Trisomy 08 |
| <input type="checkbox"/> 22q11 deletion | <input type="checkbox"/> Trisomy 09 |
| <input type="checkbox"/> 2p21 | <input type="checkbox"/> Trisomy 13 |
| <input type="checkbox"/> 3p22 | <input type="checkbox"/> Trisomy 18 |
| <input type="checkbox"/> 45X0 | <input type="checkbox"/> Trisomy 21 |
| <input type="checkbox"/> 47,XXY | <input type="checkbox"/> Other chromosomal abnormality |
| <input type="checkbox"/> 4p | <i>(If ChromAb is Other chromosomal abnormality ↓)</i> |
| <input type="checkbox"/> 4p16 | |

Chromosomal Abnormality - Other - Specify

SYNDROMES (select all that apply)

- | | |
|---|--|
| <input type="checkbox"/> No syndromic abnormality identified | <input type="checkbox"/> Long QT syndrome (Ward Romano syndrome) |
| <input type="checkbox"/> Alagille syndrome (intrahepatic biliary duct agenesis) | <input type="checkbox"/> Marfan syndrome |
| <input type="checkbox"/> Apert syndrome | <input type="checkbox"/> Marfan-like syndrome |
| <input type="checkbox"/> Brugada syndrome (Sudden unexplained nocturnal death syndrome) (SUNDS) | <input type="checkbox"/> Mucopolysaccharidosis type IH (Hurler syndrome) |
| <input type="checkbox"/> Cardiofaciocutaneous syndrome | <input type="checkbox"/> Mucopolysaccharidosis type IH/S (Hurler-Scheie syndrome) |
| <input type="checkbox"/> Carpenter syndrome | <input type="checkbox"/> Mucopolysaccharidosis type II (Hunter syndrome) |
| <input type="checkbox"/> Cat-eye syndrome | <input type="checkbox"/> Mucopolysaccharidosis type IS (Scheie syndrome) |
| <input type="checkbox"/> CHARGE Association | <input type="checkbox"/> Noonan syndrome |
| <input type="checkbox"/> Cornelia de Lange syndrome | <input type="checkbox"/> Patau syndrome (Trisomy 13) |
| <input type="checkbox"/> Costello syndrome | <input type="checkbox"/> Pierre Robin syndrome |
| <input type="checkbox"/> Cri-du-chat syndrome | <input type="checkbox"/> Prune Belly syndrome |
| <input type="checkbox"/> Deletion 10p syndrome | <input type="checkbox"/> Rethore syndrome (Trisomy 9) |
| <input type="checkbox"/> Deletion 8p syndrome | <input type="checkbox"/> Fetal Rubella syndrome (Congenital rubella syndrome) |
| <input type="checkbox"/> DiGeorge syndrome (velocardiofacial syndrome) (conotruncal anomaly face syndrome) (22q11 deletion) | <input type="checkbox"/> Rubinstein-Taybi syndrome |
| <input type="checkbox"/> Down syndrome (Trisomy 21) | <input type="checkbox"/> Short QT syndrome |
| <input type="checkbox"/> Edwards syndrome (Trisomy 18) | <input type="checkbox"/> Sickle cell disease |
| <input type="checkbox"/> Ehlers-Danlos Syndrome | <input type="checkbox"/> Sickle cell trait |
| <input type="checkbox"/> Ellis-van Creveld syndrome | <input type="checkbox"/> Situs inversus |
| <input type="checkbox"/> Fetal alcohol syndrome (FAS) | <input type="checkbox"/> Smith-Lemli-Opitz syndrome |
| <input type="checkbox"/> Fetal drug exposure | <input type="checkbox"/> Turner syndrome (45XO) |
| <input type="checkbox"/> Goldenhar syndrome | <input type="checkbox"/> VACTERL syndrome (VACTER/VATER/VATERR syndrome) |
| <input type="checkbox"/> Heterotaxy syndrome | <input type="checkbox"/> VACTERL-H syndrome (VATER association with hydrocephalus) (Briard-Evans syndrome) |
| <input type="checkbox"/> Heterotaxy syndrome, Asplenia syndrome | <input type="checkbox"/> Von Willebrand disease (vWD) |
| <input type="checkbox"/> Heterotaxy syndrome, Polysplenia syndrome | <input type="checkbox"/> Warkany syndrome (Trisomy 8) |
| <input type="checkbox"/> Holt-Oram syndrome | <input type="checkbox"/> Williams syndrome (Williams-Beuren syndrome) |
| <input type="checkbox"/> Jacobsen syndrome | <input type="checkbox"/> Wolff-Parkinson-White syndrome (WPW syndrome) |
| <input type="checkbox"/> Kabuki syndrome | <input type="checkbox"/> Wolf-Hirschhorn syndrome |
| <input type="checkbox"/> Kartagener syndrome (Siewert syndrome) (Primary ciliary dyskinesia) | <input type="checkbox"/> Other syndromic abnormality |
| <input type="checkbox"/> Klinefelter syndrome (XXY Syndrome) | <i>(If Other Syndromic abnormality, Specify ↓)</i> |
| <input type="checkbox"/> LEOPARD syndrome | |
| <input type="checkbox"/> Loeys-Dietz syndrome | |
-
- Syndrome – Other – Specify

HOSPITALIZATION

Hospital Name: _____

Hospital Zip Code: _____ Hospital State: _____ Hospital National Provider Identifier: _____

Payor – (Select all that apply)

Government Health Insurance: Yes No (If Yes, select all that apply: ↓)

Medicare: Yes No (If Yes →) Medicare Fee For Service: Yes No

(If Yes →) Medicare Health Insurance Claim Number: _____

Medicaid: Yes No Military Health Care: Yes No

State-Specific Plan: Yes No Indian Health Service: Yes No

Commercial Health Insurance: Yes No

Health Maintenance Organization: Yes No

Non-U.S. Insurance: Yes No

None / Self: Yes No

Admission date: (mm/dd/yyyy) ____ / ____ / _____ Surgery date: (mm/dd/yyyy) ____ / ____ / _____

Height (Cm): _____ Weight (Kg): _____ Age at time of surgery (in days): _____

PREOPERATIVE FACTORS (select all that apply)

- | | |
|--|---|
| <input type="checkbox"/> No preoperative factors identified | <input type="checkbox"/> Sepsis |
| <input type="checkbox"/> Cardio-pulmonary resuscitation | <input type="checkbox"/> Sepsis with positive blood culture |
| <input type="checkbox"/> Preoperative complete AV block | <input type="checkbox"/> Preoperative neurological deficit |
| <input type="checkbox"/> Preoperative/Preprocedural mechanical circulatory support (IABP, VAD, ECMO, or CPS) | <input type="checkbox"/> Seizure during lifetime |
| <input type="checkbox"/> Shock, Persistent at time of surgery | <input type="checkbox"/> Seizure within 48 hours prior to surgery |
| <input type="checkbox"/> Shock, Resolved at time of surgery | <input type="checkbox"/> Stroke, CVA, or Intracranial hemorrhage > Grade 2 during lifetime |
| <input type="checkbox"/> Diabetes mellitus, Insulin dependent | <input type="checkbox"/> Stroke, CVA, or Intracranial hemorrhage > Grade 2 within 48 hours prior to surgery |
| <input type="checkbox"/> Diabetes mellitus, Non-insulin dependent | <input type="checkbox"/> Renal dysfunction |
| <input type="checkbox"/> Hypothyroidism | <input type="checkbox"/> Renal failure requiring dialysis |
| <input type="checkbox"/> Currently taking steroids as treatment for adrenal insufficiency | <input type="checkbox"/> Mechanical ventilation to treat cardiorespiratory failure |
| <input type="checkbox"/> Currently taking steroids for any reason other than treatment of adrenal insufficiency | <input type="checkbox"/> Respiratory Syncytial Virus |
| <input type="checkbox"/> Colostomy present | <input type="checkbox"/> Single lung |
| <input type="checkbox"/> Enterostomy of small intestine present | <input type="checkbox"/> Tracheostomy present |
| <input type="checkbox"/> Esophagostomy present | <input type="checkbox"/> Asthma |
| <input type="checkbox"/> Gastrostomy present | <input type="checkbox"/> Bronchopulmonary Dysplasia (BPD) |
| <input type="checkbox"/> Hepatic dysfunction | <input type="checkbox"/> ICD (AICD) ([automatic] implantable cardioverter defibrillator) present |
| <input type="checkbox"/> Necrotizing entero-colitis, Treated medically | <input type="checkbox"/> Pacemaker present |
| <input type="checkbox"/> Necrotizing entero-colitis, Treated surgically | <input type="checkbox"/> Tobacco use |
| <input type="checkbox"/> Coagulation disorder, Hypercoagulable state | <input type="checkbox"/> Family History of Coronary Artery Disease |
| <input type="checkbox"/> Coagulation disorder, Hypocoagulable state not secondary to medication (intrinsic hypocoagulable state) | <input type="checkbox"/> Dyslipidemia |
| <input type="checkbox"/> Coagulation disorder, Hypocoagulable state secondary to medication | <input type="checkbox"/> Other preoperative factors |
| <input type="checkbox"/> Endocarditis | |

DIAGNOSIS

	Select ALL diagnosis that apply (↓)	CIRCLE the ONE PRIMARY diagnosis for this operation		Select the ONE FUNDAMENTAL diagnosis for this patient (↓)
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"/>
		<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"/>		
Cor Triatriatum		<input type="checkbox"/> Cor triatriatum		<input type="checkbox"/>
Pulmonary Venous Stenosis		<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"/>
		<input type="checkbox"/> Pulmonary atresia, IVS		<input type="checkbox"/>
		<input type="checkbox"/> Pulmonary atresia, VSD (Including TOF, PA)		<input type="checkbox"/>
		<input type="checkbox"/> Pulmonary atresia, VSD-MAPCA		<input type="checkbox"/>
		<input type="checkbox"/> MAPCA(s) (major aortopulmonary collateral[s]) (without PA-VSD)		<input type="checkbox"/>
	Tricuspid Valve Disease and Ebstein's Anomaly	<input type="checkbox"/> Ebstein's anomaly		<input type="checkbox"/>
		<input type="checkbox"/> Tricuspid regurgitation, non-Ebstein's related		<input type="checkbox"/>
		<input type="checkbox"/> Tricuspid stenosis		<input type="checkbox"/>
		<input type="checkbox"/> Tricuspid regurgitation and tricuspid stenosis		<input type="checkbox"/>
		<input type="checkbox"/> Tricuspid valve, Other		<input type="checkbox"/>

		<input type="checkbox"/> Pulmonary stenosis, Valvar	<input type="checkbox"/>
		<input type="checkbox"/> Pulmonary artery stenosis (hypoplasia), Main (trunk)	<input type="checkbox"/>
		<input type="checkbox"/> Pulmonary artery stenosis, Branch, Central (within the hilar bifurcation)	<input type="checkbox"/>
	RVOT Obstruction and/or Pulmonary Stenosis	<input type="checkbox"/> Pulmonary artery stenosis, Branch, Peripheral (at or beyond the hilar bifurcation)	<input type="checkbox"/>
		<input type="checkbox"/> Pulmonary artery, Discontinuous	<input type="checkbox"/>
		<input type="checkbox"/> Pulmonary stenosis, Subvalvar	<input type="checkbox"/>
		<input type="checkbox"/> DCRV	<input type="checkbox"/>
		<input type="checkbox"/> Pulmonary valve, Other	<input type="checkbox"/>
	Pulmonary Valve Disease	<input type="checkbox"/> Pulmonary insufficiency	<input type="checkbox"/>
		<input type="checkbox"/> Pulmonary insufficiency and pulmonary stenosis	<input type="checkbox"/>
Shunt failure	Shunt failure	<input type="checkbox"/> Shunt Failure	NA
Conduit failure	Conduit failure	<input type="checkbox"/> Conduit failure	NA
		<input type="checkbox"/> Aortic stenosis, Subvalvar	<input type="checkbox"/>
		<input type="checkbox"/> Aortic stenosis, Valvar	<input type="checkbox"/>
		<input type="checkbox"/> Aortic stenosis, Supravalvar	<input type="checkbox"/>
	Aortic Valve Disease	<input type="checkbox"/> Aortic valve atresia	<input type="checkbox"/>
		<input type="checkbox"/> Aortic insufficiency	<input type="checkbox"/>
		<input type="checkbox"/> Aortic insufficiency and aortic stenosis	<input type="checkbox"/>
		<input type="checkbox"/> Aortic valve, Other	<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"/>
Left Heart Lesions		<input type="checkbox"/> Mitral stenosis, Supravalvar mitral ring	<input type="checkbox"/>
		<input type="checkbox"/> Mitral stenosis, Valvar	<input type="checkbox"/>
		<input type="checkbox"/> Mitral stenosis, Subvalvar	<input type="checkbox"/>
	Mitral Valve Disease	<input type="checkbox"/> Mitral stenosis, Subvalvar, Parachute	<input type="checkbox"/>
		<input type="checkbox"/> Mitral stenosis	<input type="checkbox"/>
		<input type="checkbox"/> Mitral regurgitation and mitral stenosis	<input type="checkbox"/>
		<input type="checkbox"/> Mitral regurgitation	<input type="checkbox"/>
		<input type="checkbox"/> Mitral valve, Other	<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"/>
		<input type="checkbox"/> Cardiomyopathy, End-stage congenital heart disease	<input type="checkbox"/>
Pericardial Disease		<input type="checkbox"/> Pericardial effusion	<input type="checkbox"/>
		<input type="checkbox"/> Pericarditis	<input type="checkbox"/>
		<input type="checkbox"/> Pericardial disease, Other	<input type="checkbox"/>
		<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"/>
	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"/>
Thoracic Arteries and Veins	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"/>	
	<input type="checkbox"/> Primary pulmonary hypertension	<input type="checkbox"/>	
	<input type="checkbox"/> Persistent fetal circulation	<input type="checkbox"/>	
	<input type="checkbox"/> Meconium aspiration	<input type="checkbox"/>	
	<input type="checkbox"/> Kawasaki Disease	<input type="checkbox"/>	
	<input type="checkbox"/> Cardiac, Other	<input type="checkbox"/>	
	<input type="checkbox"/> Thoracic and/or mediastinal, Other	<input type="checkbox"/>	
	<input type="checkbox"/> Peripheral vascular, Other	<input type="checkbox"/>	
		<input type="checkbox"/> Complication of cardiovascular catheterization procedure	NA
		<input type="checkbox"/> Complication of cardiovascular catheterization procedure, Device embolization	NA
	<input type="checkbox"/> Complication of cardiovascular catheterization procedure, Device malfunction	NA	
	<input type="checkbox"/> Complication of cardiovascular catheterization procedure, Perforation	NA	
	<input type="checkbox"/> Complication of interventional radiology procedure	NA	

<input type="checkbox"/>	Complication of interventional radiology procedure, Device embolization	NA
<input type="checkbox"/>	Complication of interventional radiology procedure, Device malfunction	NA
<input type="checkbox"/>	Complication of interventional radiology procedure, Perforation	NA
<input type="checkbox"/>	Foreign body, Intracardiac foreign body	NA
<input type="checkbox"/>	Foreign body, Intravascular foreign body	NA
<input type="checkbox"/>	Open sternum with closed skin	NA
<input type="checkbox"/>	Open sternum with open skin (includes membrane placed to close skin)	NA
<input type="checkbox"/>	Retained sternal wire causing irritation	NA
<input type="checkbox"/>	Syncope	NA
<input type="checkbox"/>	Trauma, Blunt	<input type="checkbox"/>
<input type="checkbox"/>	Trauma, Penetrating	<input type="checkbox"/>
<input type="checkbox"/>	Normal heart	<input type="checkbox"/>
<input type="checkbox"/>	Miscellaneous, Other	<input type="checkbox"/>

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) <input type="checkbox"/> Status post - TAPVC repair

	Total Anomalous Pulmonary Venous Connection	<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
Right Heart Lesions	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
Pulmonary Atresia/VSD	<input type="checkbox"/> Status post - TOF - Absent pulmonary valve repair	
	<input type="checkbox"/> Status post - Pulmonary atresia - VSD (including TOF, PA) repair	
	<input type="checkbox"/> Status post - Pulmonary atresia - VSD - MAPCA repair, Complete single stage repair (1-stage that includes bilateral pulmonary unifocalization + VSD closure + RV to PA connection [with or without conduit])	
	<input type="checkbox"/> Status post - Pulmonary atresia - VSD - MAPCA repair, Status post prior complete unifocalization (includes VSD closure + RV to PA connection [with or without conduit])	
	<input type="checkbox"/> 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])	
	<input type="checkbox"/> Status post - Unifocalization MAPCA(s), Bilateral pulmonary unifocalization - Complete unifocalization (all usable MAPCA[s] are incorporated)	
	<input type="checkbox"/> Status post - Unifocalization MAPCA(s), Bilateral pulmonary unifocalization - Incomplete unifocalization (not all usable MAPCA[s] are incorporated)	
Tricuspid Valve Disease and Ebstein's Anomaly	<input type="checkbox"/> Status post - Unifocalization MAPCA(s), Unilateral pulmonary unifocalization	
	<input type="checkbox"/> Status post - Unifocalization MAPCA(s)	
	<input type="checkbox"/> Status post - Occlusion of MAPCA(s)	
	<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	
RVOT Obstruction, IVS Pulmonary Stenosis	<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	
	<input type="checkbox"/> Status post - RVOT procedure	
	<input type="checkbox"/> Status post - 1 1/2 ventricular repair	
Pulmonary Valve Disease	<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	
	<input type="checkbox"/> Status post - Valvuloplasty, Pulmonic	
	<input type="checkbox"/> Status post - Valvuloplasty converted to valve replacement in the same operation, Pulmonic	
Conduit operations	<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	
	<input type="checkbox"/> Status post - Conduit placement, RV to PA	

	Conduit operations	<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 neoaorta + 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, Transcatheter balloon dilatation <input type="checkbox"/> Status post – Hybrid Approach, Transcatheter transcatheter device placement	
			<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)	
		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)
				<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
		<input type="checkbox"/> Status post - Vascular ring repair
	Vascular Rings and Slings	<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
		<input type="checkbox"/> Status post - Lung biopsy
	Lung Disease	<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
		<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
	Chest Wall	<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
		<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
	Neck	<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
		<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
	Pectus Excavatum, Carinatum	<input type="checkbox"/> Status post - Pectus repair, Minimally invasive repair (Nuss), Without thoracoscopy
		<input type="checkbox"/> Status post - Pectus repair, Open repair
		<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
	Thoracic Outlet	<input type="checkbox"/> Status post - Rib excision, Excision of first rib
		<input type="checkbox"/> Status post - Rib excision, Excision of first rib, With sympathectomy
	Thorax	<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
Thoracic and Mediastinal Disease		
Electrophysiological		

**Interventional
Cardiology
Procedures**

- Status post - Cardiovascular catheterization procedure, Diagnostic
- Status post - Cardiovascular catheterization procedure, Diagnostic, Angiographic data obtained
- Status post - Cardiovascular catheterization procedure, Diagnostic, Electrophysiology alteration
- Status post - Cardiovascular catheterization procedure, Diagnostic, Hemodynamic alteration
- Status post - Cardiovascular catheterization procedure, Diagnostic, Hemodynamic data obtained
- Status post - Cardiovascular catheterization procedure, Diagnostic, Transluminal test occlusion
- Status post - Cardiovascular catheterization procedure, Therapeutic
- Status post - Cardiovascular catheterization procedure, Therapeutic, Adjunctive therapy
- Status post - Cardiovascular catheterization procedure, Therapeutic, Balloon dilation
- Status post - Cardiovascular catheterization procedure, Therapeutic, Balloon valvotomy
- Status post - Cardiovascular catheterization procedure, Therapeutic, Coil implantation
- Status post - Cardiovascular catheterization procedure, Therapeutic, Device implantation
- Status post - Cardiovascular catheterization procedure, Therapeutic, Device implantation attempted
- Status post - Cardiovascular catheterization procedure, Therapeutic, Electrophysiological ablation
- Status post - Cardiovascular catheterization procedure, Therapeutic, Intravascular foreign body removal
- Status post - Cardiovascular catheterization procedure, Therapeutic, Perforation (establishing interchamber and/or intervessel communication)
- Status post - Cardiovascular catheterization procedure, Therapeutic, Septostomy
- Status post - Cardiovascular catheterization procedure, Therapeutic, Stent insertion
- Status post - Cardiovascular catheterization procedure, Therapeutic, Stent re-dilation
- Status post - Cardiovascular catheterization procedure, Therapeutic, Transcatheter Fontan completion
- Status post - Cardiovascular catheterization procedure, Therapeutic, Transcatheter implantation of valve

**Palliative
Procedures**

- Status post - Shunt, Systemic to pulmonary, Modified Blalock-Taussig Shunt (MBTS)
- Status post - Shunt, Systemic to pulmonary, Central (shunt from aorta)
- 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)
- Status post - Shunt, Systemic to pulmonary, Other
- Status post - Shunt, Ligation and takedown
- Status post - Shunt, Reoperation
- Status post - PA banding (PAB)
- Status post - PA debanding
- Status post - Damus-Kaye-Stansel procedure (DKS) (creation of AP anastomosis without arch reconstruction)
- Status post - Bidirectional cavopulmonary anastomosis (BDCPA) (bidirectional Glenn)
- Status post - Glenn (unidirectional cavopulmonary anastomosis) (unidirectional Glenn)
- Status post - Bilateral bidirectional cavopulmonary anastomosis (BBDCPA) (bilateral bidirectional Glenn)
- Status post - HemiFontan
- Status post - Superior cavopulmonary anastomosis(es) (Glenn or HemiFontan) + Atrioventricular valvuloplasty
- Status post - Superior Cavopulmonary anastomosis(es) + PA reconstruction
- Status post - Hepatic vein to azygous vein connection, Direct
- Status post - Hepatic vein to azygous vein connection, Interposition graft
- Status post - Kawashima operation (superior cavopulmonary connection in setting of interrupted IVC with azygous continuation)
- Status post - Palliation, Other

Mechanical Support

- Status post - ECMO cannulation
- Status post - ECMO decannulation

- Status post - ECMO procedure
- Status post - Intraaortic balloon pump (IABP) insertion
- Status post - Right/left heart assist device procedure
- Status post - VAD explantation
- Status post - VAD implantation
- Status post - VAD change out

- Status post - Echocardiography procedure, Sedated transesophageal echocardiogram
- Status post - Echocardiography procedure, Sedated transthoracic echocardiogram
- Status post - Non-cardiovascular, Non-thoracic procedure on cardiac patient with cardiac anesthesia
- Status post - Radiology procedure on cardiac patient, Cardiac Computerized Axial Tomography (CT Scan)
- Status post - Radiology procedure on cardiac patient, Cardiac Magnetic Resonance Imaging (MRI)
- Status post - Radiology procedure on cardiac patient, Diagnostic radiology
- Status post - Radiology procedure on cardiac patient, Non-Cardiac Computerized Tomography (CT) on cardiac patient
- Status post - Radiology procedure on cardiac patient, Non-cardiac Magnetic Resonance Imaging (MRI) on cardiac patient
- Status post - Radiology procedure on cardiac patient, Therapeutic radiology

- Status post - Aneurysm, Ventricular, Right, Repair
- Status post - Aneurysm, Ventricular, Left, Repair
- Status post - Aneurysm, Pulmonary artery, Repair
- Status post - Cardiac tumor resection
- Status post - Pulmonary AV fistula repair/occlusion
- Status post - Ligation, Pulmonary artery
- Status post - Pulmonary embolectomy, Acute pulmonary embolus
- Status post - Pulmonary embolectomy, Chronic pulmonary embolus
- Status post - Pleural drainage procedure
- Status post - Pleural procedure, Other
- Status post - Ligation, Thoracic duct
- Status post - Decortication
- Status post - Esophageal procedure
- Status post - Mediastinal procedure
- Status post - Bronchoscopy
- Status post - Diaphragm plication
- Status post - Diaphragm procedure, Other
- Status post - VATS (video-assisted thoracoscopic surgery)
- Status post - Minimally invasive procedure
- Status post - Bypass for noncardiac lesion
- 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

Anesthetic procedures

Miscellaneous Procedures

PROCEDURES

Select **ALL** procedures that apply. (↓)

Circle the **ONE PRIMARY** procedure for this operation.

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 <input type="checkbox"/> TOF - Absent pulmonary valve repair

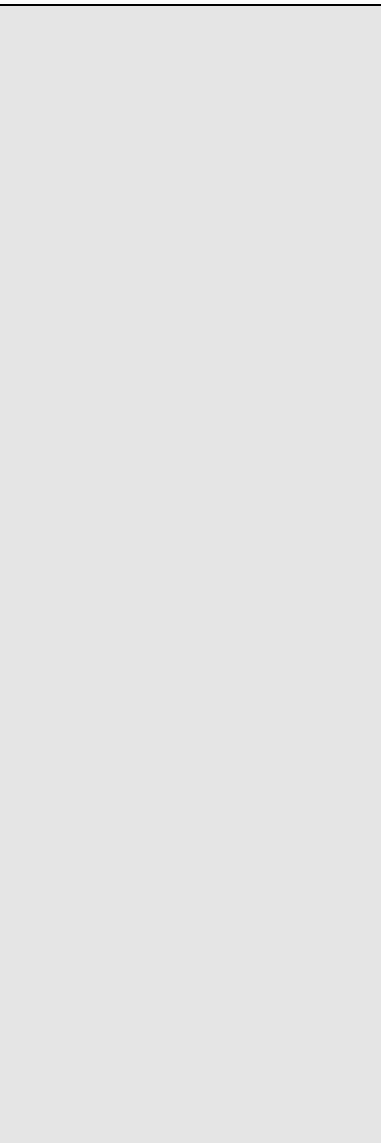
Right Heart Lesions	Pulmonary Atresia/VSD	<input type="checkbox"/> Pulmonary atresia - VSD (including TOF, PA) repair <input type="checkbox"/> Pulmonary atresia - VSD – MAPCA repair, Complete single stage repair (1 stage that includes bilateral pulmonary unifocalization + VSD closure + RV to PA connection [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 Arteries	Congenitally Corrected TGA	<input type="checkbox"/> Congenitally corrected TGA repair, Atrial switch and ASO (double switch) <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 <input type="checkbox"/> Sternal resection, Radical resection of the sternum

Thoracic and Mediastinal Disease	<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
Electrophysiological	<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
Interventional Cardiology Procedures	<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 <input type="checkbox"/> Cardiovascular catheterization procedure, Therapeutic, Intravascular foreign body removal

	<ul style="list-style-type: none"> <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
<p>Palliative Procedures</p>	<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
<p>Mechanical Support</p>	<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
<p>Anesthetic procedures</p>	<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
<p>Miscellaneous Procedures</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Aneurysm, Ventricular, Right, Repair <input type="checkbox"/> Aneurysm, Ventricular, Left, Repair <input type="checkbox"/> 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	<input type="checkbox"/> Operation canceled before skin incision
	Aborted operation	<input type="checkbox"/> Operation aborted after skin incision

PROCEDURE SPECIFIC FACTORS

Indicate if any of the following is the Primary procedure

None of the listed procedures below (if none, skip to Operative section)

If one of the following is the Primary procedure, specify whether the procedure specific factors apply

VSD repair, Primary closure

VSD repair, Patch

VSD repair, Device

Apical VSD

Yes No

Straddling AV valve

Yes No

If the following is the Primary procedure, specify whether the procedure specific factors apply

TOF - AVC (AVSD) repair

Major coronary crossing RVOT - Coronary anomaly restricting RVOT enlargement

Yes No

VSD, Multiple, Repair

Yes No

Restrictive VSD

Yes No

Hypoplastic branch pulmonary arteries (diminished pulmonary vascular bed)

Yes No

AV Valve regurgitation grade 3 and 4 (Severe AV Valve regurgitation)

Yes No

Double orifice left atrioventricular valve

Yes No

Single papillary muscle in the left ventricle and/or parachute left atrioventricular valve

Yes No

Hypoplastic posterior mural leaflet

Yes No

Atrioventricular septal defect with ventricular imbalance: dominant left ventricle, hypoplastic right ventricle

Yes No

Atrioventricular septal defect with ventricular imbalance: dominant right ventricle, hypoplastic left ventricle

Yes No

Common atrioventricular valve with unbalanced commitment of valve to left ventricle

Yes No

Common atrioventricular valve with unbalanced commitment of valve to right ventricle

Yes No

If one of the following is the Primary procedure, specify whether the procedure specific factors apply

TOF repair, No ventriculotomy

TOF repair, Ventriculotomy, Nontransanular patch

TOF repair, Ventriculotomy, Transanular patch

TOF repair, RV-PA conduit

TOF - Absent pulmonary valve repair

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])

Pulmonary atresia - VSD - MAPCA repair, Status post prior complete unifocalization (includes VSD closure + RV to PA connection [with or without conduit])

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])

Pulmonary atresia - VSD (including TOF, PA) repair

Major coronary crossing RVOT - Coronary anomaly restricting RVOT enlargement

Yes No

VSD, Multiple, Repair

Yes No

Restrictive VSD

Yes No

Hypoplastic branch pulmonary arteries (diminished pulmonary vascular bed)

Yes No

If one of the following is the Primary procedure, specify whether the procedure specific factors apply

AVC (AVSD) repair, Complete (CAVSD)

AV Valve regurgitation grade 3 and 4 (Severe AV Valve regurgitation)

Yes No

Double orifice left atrioventricular valve

Yes No

Single papillary muscle in the left ventricle and/or parachute left atrioventricular valve

Yes No

Hypoplastic posterior mural leaflet

Yes No

Atrioventricular septal defect with ventricular imbalance: dominant left ventricle and hypoplastic right ventricle

Yes No

Atrioventricular septal defect with ventricular imbalance: dominant right ventricle and hypoplastic left ventricle

Yes No

Common atrioventricular valve with unbalanced commitment of valve to left ventricle

Yes No

Common atrioventricular valve with unbalanced commitment of valve to right ventricle

Yes No

If one of the following is the Primary procedure, specify whether the procedure specific factors apply

- Bidirectional cavopulmonary anastomosis (BDCPA) (bidirectional Glenn)
- Glenn (unidirectional cavopulmonary anastomosis) (unidirectional Glenn)
- Bilateral bidirectional cavopulmonary anastomosis (BBDCPA) (bilateral bidirectional Glenn)
- HemiFontan
- Superior Cavopulmonary anastomosis(es) (Glenn or HemiFontan) + Atrioventricular valvuloplasty
- Superior Cavopulmonary anastomosis(es) + PA reconstruction

- AV Valve regurgitation grade 3 and 4 (Severe AV Valve regurgitation) Yes No
- Moderate to severe systemic ventricular dysfunction Yes No
- Hypoplastic branch pulmonary arteries (diminished pulmonary vascular bed) Yes No
- Systemic ventricular outflow tract obstruction (subaortic obstruction) Yes No
- Ventricular dominance
 - Left Ventricular dominance
 - Right Ventricular dominance
 - Balanced
 - Indeterminate Ventricular dominance

If one of the following is the Primary procedure, specify whether the procedure specific factors apply

- Fontan, Atrio-pulmonary connection
- Fontan, Atrio-ventricular connection
- Fontan, TCPC, Lateral tunnel, Fenestrated
- Fontan, TCPC, Lateral tunnel, Nonfenestrated
- Fontan, TCPC, External conduit, Fenestrated
- Fontan, TCPC, External conduit, Nonfenestrated
- Fontan, TCPC, Intra/extracardiac conduit, Fenestrated
- Fontan, TCPC, Intra/extracardiac conduit, Nonfenestrated
- Fontan, Other
- Fontan + Atrioventricular valvuloplasty
- Fontan revision or conversion (Re-do Fontan)

- AV Valve regurgitation grade 3 and 4 (Severe AV Valve regurgitation) Yes No
- Moderate to severe systemic ventricular dysfunction Yes No
- Hypoplastic branch pulmonary arteries (diminished pulmonary vascular bed) Yes No
- Systemic ventricular outflow tract obstruction (subaortic obstruction) Yes No
- Ventricular dominance
 - Left Ventricular dominance
 - Right Ventricular dominance
 - Balanced
 - Indeterminate Ventricular dominance

If one of the following is the Primary procedure, specify whether the procedure specific factors apply

- Arterial switch operation (ASO)
- Arterial switch procedure + Aortic arch repair
 - Posterior coronary loop: circumflex coming off the RCA Yes No
 - Posterior coronary loop: left trunk coming off the RCA Yes No
 - Double coronary loops: inverted origin of right & left coronary arteries Yes No
 - Single coronary ostium Yes No
 - Intramural coronary Yes No
 - Large infundibular coronary artery from LAD Yes No
 - Malaligned commissures Yes No
 - Take down of a commissure Yes No
 - Aorto-pulmonary diameter mismatch Yes No
 - Side by side vessels Yes No
 - Posterior native aorta Yes No
 - Subaortic obstruction/ conal septum malalignment Yes No
 - Bicuspid native aortic valve (Bicuspid neopulmonary valve) Yes No
 - Bicuspid native pulmonary valve (Bicuspid neo-aortic valve) Yes No

If one of the following is the Primary procedure, specify whether the procedure specific factors apply

- Arterial switch operation (ASO) and VSD repair
- Arterial switch procedure and VSD repair + Aortic arch repair
 - Posterior coronary loop: circumflex coming off the RCA Yes No
 - Posterior coronary loop: left trunk coming off the RCA Yes No
 - Double coronary loops: inverted origin of right & left coronary arteries Yes No
 - Single coronary ostium Yes No
 - Intramural coronary Yes No
 - Large infundibular coronary artery from LAD Yes No
 - Malaligned commissures Yes No
 - Take down of a commissure Yes No
 - Aorto-pulmonary diameter mismatch Yes No
 - Side by side vessels Yes No
 - Posterior native aorta Yes No
 - Subaortic obstruction/ conal septum malalignment Yes No
 - Bicuspid native aortic valve (Bicuspid neopulmonary valve) Yes No
 - Bicuspid native pulmonary valve (Bicuspid neo-aortic valve) Yes No
 - Apical VSD Yes No
 - Straddling AV valve Yes No

If one of the following is the Primary procedure, specify whether the procedure specific factors apply

- Truncus arteriosus repair
- Truncus + Interrupted aortic arch repair (IAA) repair
 - Truncus type 3 (PA Branches from PDA or descending aorta) Yes No
 - Abnormal coronary Yes No
 - Truncal valve regurgitation (moderate to severe) Yes No

If the following is the Primary procedure, specify whether the procedure specific factors apply

Norwood procedure

- Source of pulmonary blood flow: Shunt - systemic artery-to-pulmonary artery Yes No
- Source of pulmonary blood flow: Shunt - ventricle-to-pulmonary artery Yes No
- Source of pulmonary blood flow: Superior caval vein-to-pulmonary artery Yes No
- Ascending aorta < 2 mm Yes No
- Aortic atresia Yes No
- Aortic stenosis Yes No
- Mitral atresia Yes No
- Mitral stenosis Yes No
- Sinusoids Yes No
- Intact atrial septum Yes No
- Obstructed pulmonary venous return with severely restrictive ASD Yes No
- AV Valve regurgitation grade 3 and 4 (Severe AV Valve regurgitation) Yes No
- Aberrant right subclavian artery Yes No
- Ventricular dominance
 - Left Ventricular dominance
 - Right Ventricular dominance
 - Balanced
 - Indeterminate Ventricular dominance

OPERATIVE

Procedure Location:	<input type="checkbox"/> Cardiac OR	<input type="checkbox"/> ICU	<input type="checkbox"/> SICU
	<input type="checkbox"/> General OR	<input type="checkbox"/> CVICU	<input type="checkbox"/> Radiology Suite
	<input type="checkbox"/> Hybrid Suite	<input type="checkbox"/> NICU	<input type="checkbox"/> Procedure Room
	<input type="checkbox"/> Cath lab	<input type="checkbox"/> PICU	<input type="checkbox"/> Other

Status:	<input type="checkbox"/> Elective	<input type="checkbox"/> Urgent	<input type="checkbox"/> Emergent	<input type="checkbox"/> Salvage
----------------	-----------------------------------	---------------------------------	-----------------------------------	----------------------------------

Operation Type:	<input type="checkbox"/> CPB	<input type="checkbox"/> No CPB Cardiovascular	<input type="checkbox"/> ECMO
	<input type="checkbox"/> Thoracic	<input type="checkbox"/> Interventional Cardiology	<input type="checkbox"/> VAD w/ CPB
	<input type="checkbox"/> VAD w/out CPB	<input type="checkbox"/> NonCardiac/NonThoracic Procedure w/ Anesthesia	<input type="checkbox"/> Other

Near InfraredSpectroscopy (NIRS) Cerebral Metrics Used: <small>If NIRSCerUsed is Yes→</small>	<input type="checkbox"/> Yes <input type="checkbox"/> No
NIRS Cerebral Metrics Used Preoperatively	<input type="checkbox"/> Yes <input type="checkbox"/> No
NIRS Cerebral Metrics Used Intraoperatively	<input type="checkbox"/> Yes <input type="checkbox"/> No
NIRS Cerebral Metrics Used Postoperatively	<input type="checkbox"/> Yes <input type="checkbox"/> No

Near InfraredSpectroscopy (NIRS) Somatic Metrics Used: <small>If NIRSSomUsed is Yes→</small>	<input type="checkbox"/> Yes <input type="checkbox"/> No
NIRS Somatic Metrics Used Preoperatively	<input type="checkbox"/> Yes <input type="checkbox"/> No
NIRS Somatic Metrics Used Intraoperatively	<input type="checkbox"/> Yes <input type="checkbox"/> No
NIRS Somatic Metrics Used Postoperatively	<input type="checkbox"/> Yes <input type="checkbox"/> No

OR Entry Time: (00:00 – 23:59) ___:___	Skin Incision Start Time: (00:00 – 23:59) ___:___
Endotracheal Intubation Performed: <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes ↓)	Initial Extubation Date/Time:
Intubation Date/Time: (mm/dd/yyyy 00:00 – 23:59) ___/___/____-__:__	(mm/dd/yyyy 00:00 – 23:59) ___/___/____-__:__
Extubated in OR: <input type="checkbox"/> Yes <input type="checkbox"/> No	Re-Intubated After Initial Postoperative Extubation: <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes ↓)
Final Extubation Date/Time: (mm/dd/yyyy 00:00 – 23:59) ___/___/____-__:__	

Time of Skin Closure: (00:00 – 23:59) ___:___ OR Exit Time: (00:00 – 23:59) ___:___ Extended Through Midnight: Yes No

If Op type is: "NonCardiac/NonThoracic Procedure w/Anesthesia" or "Interventional Cardiology" → Skip to Complications section. However, if the procedure was performed by a surgeon participant in the STS CHSD, enter the surgeon's name and NPI.

Surgeon:	Surgeon NPI:	Taxpayer Identification Number:
----------	--------------	---------------------------------

Reoperation Within This Admission: Yes – Planned reoperation Yes – Unplanned reoperation No

Number of Prior Cardiothoracic Operations:	Number of Prior CPB Cardiothoracic Operations:
--	--

(If operation type is No CPB Cardiovascular→) Cross Clamp Time – No CPB: (minutes):

(If operation type is CPB or VAD w/ CPB ↓)

CPB Blood Prime: Yes No CPB Time (min): _____ Cross Clamp Time - CPB:(min): _____ Circulatory Arrest Time (min): _____

Patient Temperature Monitoring Site :

(If Yes, Lowest Core Temperature recorded at site):

Bladder: Yes No (If Yes →) _____ °C
Esophageal: Yes No (If Yes →) _____ °C
Nasopharyngeal: Yes No (If Yes →) _____ °C
Rectal: Yes No (If Yes →) _____ °C
Tympanic: Yes No (If Yes →) _____ °C
Other: Yes No (If Yes →) _____ °C

Cooling Time: (minutes) _____

Rewarming Time: (minutes) _____

Cerebral Perfusion Utilized: Yes No (If Yes ↓)

Cerebral Perfusion Time: _____ (minutes)

Cerebral Perfusion Cannulation Site: Innominate Artery Yes No Right Subclavian Yes No
Right Axillary Artery Yes No Right Carotid Artery Yes No
Left Carotid Artery Yes No Superior Vena Cava Yes No

Cerebral Perfusion Periods: _____

Cerebral Perfusion Flow Rate: _____ (mL/kg) per minute

Cerebral Perfusion Temperature: _____ °C

Arterial Blood Gas Management During Cooling:

Alpha STAT pH STAT
 pHSTAT cooling/Alpha STAT rewarming Other Combination

Hematocrit Prior to Circulatory Arrest or Cerebral Perfusion: _____

Cardioplegia Delivery: None Antegrade Retrograde Both

If CPlegiaDeliv is Antegrade, Retrograde or Both ↓

Cardioplegia Type: Blood Crystalloid Both Other

Cardioplegia Solution: del Nido Celsior
 Custodiol / Bretschneider (HTK) Roe's Solution
 Buckberg Microplegia with Potassium
 Plegisol / St. Thomas Microplegia with Adenocaine
 University of Wisconsin Other

Cardioplegia Number of Doses: _____

Hematocrit - First after initiating CPB: _____

Hematocrit - Last Measured During CPB: _____

Hematocrit - Post CPB, Post Protamine: _____

Ultrafiltration performed After CPB:

No
 Yes, Modified Ultrafiltration (MUF)
 Yes, Conventional Ultrafiltration (CUF)
 Yes, MUF and CUF

Pulmonary Vascular Resistance Measured: Yes No

(If Yes and WeightKg ≥40 →) PVR: _____ (Wood units)

(If Yes and WeightKg <40 →) PVR Index: _____ (Wood units x m2)

Intraop Blood Products Used: Yes No

(If No →) Intraop Blood Products Refused: Yes No

(If Yes ↓)

Red Blood Cells Yes No Fresh Frozen Plasma Yes No

Cryoprecipitate Yes No Platelets Yes No

Whole Blood Yes No Factor VIIa Yes No

If Whole Blood is Yes ↓

Fresh Whole Blood Yes No

Intraop Medications:

Aprotinin: Yes No

Desmopressin: Yes No

Epsilon Amino-Caproic Acid: Yes No

Tranexamic Acid: Yes No

CABG PROCEDURES

Coronary Artery Bypass (CAB): Yes No (If Yes ↓)

Number of Distal Arterial Anast: _____

Number of Distal Vein Anast: _____

Internal Mammary Artery (IMA) Used:

Left IMA Right IMA
 Both IMAs No IMA

VALVE PROCEDURES

Valve Operation: Yes No *(If Yes ↓)*

Valve Device Explanted and/or Implanted: No Yes, Explanted Yes, Implanted Yes, Explanted and Implanted

If Yes, Explanted or Yes, explanted and Implanted, complete one column per explant ↓

EXPLANT(S)

Valve Explant #1

Valve Explant Type #1

- Mechanical
- Bioprosthetic
- Homograft/Allograft
- Autograft
- Annuloplasty Band/Ring
- Mitral Clip
- Surgeon Fashioned
- Other

2nd Explant: Yes No

If Yes ↓ (if no skip to implant)

Valve Explant Type #2

- Mechanical
- Bioprosthetic
- Homograft/Allograft
- Autograft
- Annuloplasty Band/Ring
- Mitral Clip
- Surgeon Fashioned
- Other

3rd Explant: Yes No

If Yes ↓ (if no skip to implant)

Valve Explant Type #3

- Mechanical
- Bioprosthetic
- Homograft/Allograft
- Autograft
- Annuloplasty Band/Ring
- Mitral Clip
- Surgeon Fashioned
- Other

4th Explant: Yes No

If Yes ↓ (if no skip to implant)

Valve Explant Type #4

- Mechanical
- Bioprosthetic
- Homograft/Allograft
- Autograft
- Annuloplasty Band/Ring
- Mitral Clip
- Surgeon Fashioned
- Other

If Yes, Implanted or Yes, Explanted and Implanted, complete one column per implant ↓

IMPLANT(S)

Valve Implant Location #1

- Aortic
- Mitral
- Tricuspid
- Pulmonic
- Common AV
- Truncal

Valve Implant Type #1

- Surgeon Fashioned
- Autograft
- Commercially supplied

If Surgeon fashioned ↓

Material #1:

- PTFE (Gore-Tex)
- Pericardium
- Other

If Commercially Supplied ↓

Model #1: _____

Device Size #1: _____

2nd Implant: Yes No

If Yes ↓ (if no skip to VAD proc)

Valve Implant Location #2

- Aortic
- Mitral
- Tricuspid
- Pulmonic
- Common AV
- Truncal

Valve Implant Type #2

- Surgeon Fashioned
- Autograft
- Commercially supplied

If Surgeon fashioned ↓

Material #2:

- PTFE (Gore-Tex)
- Pericardium
- Other

If Commercially Supplied ↓

Model #2: _____

Device Size #2: _____

3rd Implant: Yes No

If Yes ↓ (if no skip to VAD proc)

Valve Implant Location #3

- Aortic
- Mitral
- Tricuspid
- Pulmonic
- Common AV
- Truncal

Valve Implant Type #3

- Surgeon Fashioned
- Autograft
- Commercially supplied

If Surgeon fashioned ↓

Material #3:

- PTFE (Gore-Tex)
- Pericardium
- Other

If Commercially Supplied ↓

Model #3: _____

Device Size #3: _____

4th Implant: Yes No

If Yes ↓ (if no skip to VAD proc)

Valve Implant Location #4

- Aortic
- Mitral
- Tricuspid
- Pulmonic
- Common AV
- Truncal

Valve Implant Type #4

- Surgeon Fashioned
- Autograft
- Commercially supplied

If Surgeon fashioned ↓

Material #4:

- PTFE (Gore-Tex)
- Pericardium
- Other

If Commercially Supplied ↓

Model #4: _____

Device Size #4: _____

VAD PROCEDURES

VAD Explanted and/or Implanted: No Yes, Explanted Yes, Implanted Yes, Explanted and Implanted

If Implanted or Explanted and Implanted ↓

Indication:

- Bridge to Transplantation
- Bridge to Recovery
- Destination
- Postcardiotomy Ventricular failure
- Device malfunction
- End of Life

Implant Type:

- RVAD
- LVAD
- BiVAD
- TAH (total artificial heart)

Product:

(choose from VAD List) _____

If Explanted or Explanted and Implanted ↓

Explant Reason:

- Cardiac Transplant Recovery Device Transfer
 Device Related Infection Device Malfunction End of Life

If Explanted, Implanted or Explanted and Implanted indicate whether VAD related complications occurred ↓

- Intracranial Bleed: Yes No Embolic Stroke: Yes No Driveline/Cannula Infection: Yes No
Pump Pocket Infection: Yes No Endocarditis: Yes No Device Malfunction: Yes No
Bowel Obstruction: Yes No Hemolysis: Yes No

POSTOPERATIVE

Blood Products Used Postoperatively: Yes No

(If Yes ↓)

- Red Blood Cells Yes No Fresh Frozen Plasma Yes No Cryoprecipitate Yes No
Platelets Yes No Whole Blood Yes No *If Whole Blood Yes→* Fresh Whole Blood: Yes No
Factor VIIa Yes No

COMPLICATIONS

Assign complication(s) to the operation that is most closely associated with the complication

- No complications *OR select ALL that apply: (↓)*
- No complications during the intraop or postop time periods (No complications prior to discharge & no complications within ≤ 30 days of surgery)
 - Intraoperative death or intraprocedural death
 - Unplanned readmission to the hospital within 30 days of surgery or intervention
 - Multi-System Organ Failure (MSOF) = Multi-Organ Dysfunction Syndrome (MODS)
 - Unexpected Cardiac arrest during or following procedure (Periop/Periprocedural = Intraop/Intraprocedural and/or Postop/Postprocedural)
 - Cardiac dysfunction resulting in low cardiac output
 - Cardiac failure (severe cardiac dysfunction)
 - Endocarditis-postprocedural infective endocarditis
 - Pericardial effusion, Requiring drainage
 - Pulmonary hypertension
 - Pulmonary hypertensive crisis (PA pressure > systemic pressure)
 - Pulmonary vein obstruction
 - Systemic vein obstruction
 - Bleeding, Requiring reoperation
 - Sternum left open, Planned
 - Sternum left open, Unplanned
 - Unplanned cardiac reoperation during the postoperative or postprocedural time period, exclusive of reoperation for bleeding
 - Unplanned interventional therapeutic cardiovascular catheterization procedure during the postoperative or postprocedural time period
 - Unplanned non-cardiac reoperation during the postoperative or postprocedural time period
 - Postoperative/Postprocedural mechanical circulatory support (IABP, VAD, ECMO, or CPS)
 - Arrhythmia requiring drug therapy
 - Arrhythmia requiring electrical cardioversion or defibrillation
 - Arrhythmia necessitating pacemaker, Permanent pacemaker
 - Arrhythmia necessitating pacemaker, Temporary pacemaker
 - Chylothorax
 - Pleural effusion, Requiring drainage
 - Pneumonia
 - Pneumothorax, Requiring drainage or evacuation
 - Postoperative/Postprocedural respiratory insufficiency requiring mechanical ventilatory support > 7 days
 - Postoperative/Postprocedural respiratory insufficiency requiring reintubation
 - Respiratory failure, Requiring tracheostomy
 - Renal failure - acute renal failure, Acute renal failure requiring dialysis at the time of hospital discharge
 - Renal failure - acute renal failure, Acute renal failure requiring temporary dialysis with the need for dialysis not present at hospital discharge
 - Renal failure - acute renal failure, Acute renal failure requiring temporary hemofiltration with the need for dialysis not present at hospital discharge

- Sepsis
- Neurological deficit, Neurological deficit persisting at discharge
- Neurological deficit, Transient neurological deficit not present at discharge
- Paralyzed diaphragm (possible phrenic nerve injury)
- Peripheral nerve injury, Neurological deficit persisting at discharge
- Seizure
- Spinal cord injury, Neurological deficit persisting at discharge
- Stroke
- Subdural Bleed
- Intraventricular hemorrhage (IVH) > grade 2
- Vocal cord dysfunction (possible recurrent laryngeal nerve injury)
- Wound dehiscence (sterile)
- Wound dehiscence (sterile), Median sternotomy
- Wound infection
- Wound infection-Deep wound infection
- Wound infection-Mediastinitis
- Wound infection-Superficial wound infection
- Anesthesia – related complication
- Complication of cardiovascular catheterization procedure
- Other complication
- Other operative/procedural complication

DISCHARGE/READMISSION

Date of Hospital Discharge: (mm/dd/yyyy) ___/___/_____

Mortality Status at Hospital Discharge: Alive Dead

(If Alive →) Discharge Location: Home Other Acute Care Center Other Chronic Care Center

VAD Discharge Status: No VAD this admission Discharged w/ VAD VAD removed prior to discharge Expired in Hospital

Date of Database Discharge: (mm/dd/yyyy) ___/___/_____

Mortality Status at Database Discharge: Alive Dead Unknown (If Alive ↓)

Readmission within 30 days: Yes No (If Yes →) Readmission Date: (mm/dd/yyyy) ___/___/_____

(If Yes →) Primary Readmission Reason (select one ↓):

- | | |
|--|--|
| <ul style="list-style-type: none"> <input type="checkbox"/> Thrombotic Complication <input type="checkbox"/> Hemorrhagic Complication <input type="checkbox"/> Stenotic Complication <input type="checkbox"/> Arrhythmia <input type="checkbox"/> Congestive Heart Failure <input type="checkbox"/> Embolic Complication <input type="checkbox"/> Cardiac Transplant Rejection <input type="checkbox"/> Myocardial Ischemia <input type="checkbox"/> Renal Failure <input type="checkbox"/> Pericardial Effusion and/or Tamponade <input type="checkbox"/> Pleural Effusion | <ul style="list-style-type: none"> <input type="checkbox"/> Neurologic Complication <input type="checkbox"/> Respiratory Complication/Airway Complication <input type="checkbox"/> Septic/Infectious Complication <input type="checkbox"/> Cardiovascular Device Complications <input type="checkbox"/> Residual/Recurrent Cardiovascular Defects <input type="checkbox"/> Failure to Thrive <input type="checkbox"/> VAD Complications <input type="checkbox"/> Gastrointestinal Complication <input type="checkbox"/> Other Cardiovascular Complication <input type="checkbox"/> Other - Readmission related to this index operation <input type="checkbox"/> Other - Readmission not related to this index operation |
|--|--|

Status at 30 days after surgery: Alive Dead Unknown

30 Day Status Method of Verification: Evidence of life or death in Medical Record Contact w/ patient or family
 Contact w/ medical provider Office visit to provider ≥ 30 days post op SSDMF Other

Mortality Assigned to this Operation: Yes No Operative Mortality: Yes No

CHSS Eligibility: Eligible & Enrolled Eligible, but declined enrollment Eligible, but not invited to participate
 Eligible, but institution not CHSS participant Eligible, but not enrolled, other reason Not Eligible

PATIENT PROCESS MEASURES

(if Op Type CPB or No CPB Cardiovascular ↓)

Patient care discussed at preop multidisciplinary planning conference: Yes No

If No → Reason care was not discussed: Urgent/Emergent/Salvage Case Neonate admitted between conferences

Program does not routinely discuss all cases Program does not have regular conferences

Other

Transesophageal Echo (TEE) available for case: Yes No

If Yes → Intraop TEE performed: Yes No

Pre-op Antibiotic Prophylaxis given: Yes No

If Yes → Cephalosporin Yes No Penicillin or related med Yes No Aminoglycoside Yes No

Vancomycin Yes No Other Yes No

Antibiotic Start time: (00:00 – 23:59) __: __

Conventional Pre-procedure Time Out: Yes No

Surgeon shares essential elements of operative plan: Yes No

Postprocedure debriefing: Yes No

Hand-off protocol at the time of transfer to ICU: Yes- all required team members present

Yes- not all required team members present

No

If yes-not all required team members present → Anesthesiologist: Attended hand-off Did not attend hand-off

Surgeon: Attended hand-off Did not attend hand-off

ICU MD: Attended hand-off Did not attend hand-off

Nurse: Attended hand-off Did not attend hand-off

Patient died or had major postoperative complication(s): Yes No

If Yes → Management and outcomes reviewed: Reviewed at conference

Scheduled for review at conference

Not reviewed or scheduled for review

Program does not have scheduled conferences

If Reviewed → Review Date: (mm/dd/yyyy) __ __ / __ __ / __ __ __ __

ANESTHESIA (for sites participating in anesthesiology component)

ANESTHESIA Administrative

Primary Anesthesiologist Attending: _____

Primary Anesthesiologist National Provider Identifier: _____

Secondary Anesthesiologist Attending: Yes No

Fellow or Resident Present Yes No

Mid-Level provider CRNA/AA Present Yes No

ANESTHESIA Preoperative

Preoperative Medication Category:

- | | |
|---|---|
| <input type="checkbox"/> None (If not None, select all pre-operative medications that apply: ↓) | <input type="checkbox"/> Milrinone |
| <input type="checkbox"/> ACE Inhibitors | <input type="checkbox"/> Narcotics |
| <input type="checkbox"/> Amiodarone | <input type="checkbox"/> Nitric Oxide |
| <input type="checkbox"/> Anti-reflux Medications (H2 antagonists, PPI, propulsives) | <input type="checkbox"/> Nitroglycerin |
| <input type="checkbox"/> Anti-seizure medications | <input type="checkbox"/> Nitroprusside |
| <input type="checkbox"/> Aspirin | <input type="checkbox"/> Norepinephrine (Levophed) |
| <input type="checkbox"/> Benzodiazepines | <input type="checkbox"/> PDE-5 Inhibitors (e.g., Sildenafil) |
| <input type="checkbox"/> Beta Blockers | <input type="checkbox"/> Platelet inhibitors other than Aspirin (e.g., Plavix) |
| <input type="checkbox"/> Birth Control (Oral, IM) | <input type="checkbox"/> Prostacyclin (e.g., Flolan, Remodulin) |
| <input type="checkbox"/> Bronchodilators, Inhaled | <input type="checkbox"/> Prostaglandin |
| <input type="checkbox"/> Calcium Channel Blockers | <input type="checkbox"/> Psychiatric Medications (including ADHD and antidepressants) |
| <input type="checkbox"/> Calcium Chloride infusion | <input type="checkbox"/> Statins |
| <input type="checkbox"/> Coumadin | <input type="checkbox"/> Steroids (oral / IV) |
| <input type="checkbox"/> Digoxin | <input type="checkbox"/> Thyroid Hormone |
| <input type="checkbox"/> Direct Thrombin Inhibitors (e.g., argatroban) | <input type="checkbox"/> Transplant Rejection Inhibition Meds (other than steroids) |
| <input type="checkbox"/> Diuretics | <input type="checkbox"/> Vasopressin |
| <input type="checkbox"/> Dobutamine | <input type="checkbox"/> Antiarrhythmics not otherwise listed |
| <input type="checkbox"/> Dopamine | <input type="checkbox"/> Inotropes not otherwise listed |
| <input type="checkbox"/> Endothelin Antagonist (e.g., Bosentan) | <input type="checkbox"/> Vasodilators not otherwise listed |
| <input type="checkbox"/> Epinephrine | <input type="checkbox"/> Vasoconstrictors not otherwise listed |
| <input type="checkbox"/> Heparin | <input type="checkbox"/> Other |
| <input type="checkbox"/> Heparin, Low molecular weight | |
| <input type="checkbox"/> Insulin | |

Preoperative Sedation Yes No

(If Yes→) Preoperative Sedation Route IM IV Nasal PO (Oral) Rectal

(If Yes, select all pre-operative sedation drugs that apply: ↓)

- | | | | |
|-----------------|--|---------------|--|
| Atropine | <input type="checkbox"/> Yes <input type="checkbox"/> No | Ketamine | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Demerol | <input type="checkbox"/> Yes <input type="checkbox"/> No | Lorazepam | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Dexmedetomidine | <input type="checkbox"/> Yes <input type="checkbox"/> No | Midazolam | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Diazepam | <input type="checkbox"/> Yes <input type="checkbox"/> No | Morphine | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Glycopyrrolate | <input type="checkbox"/> Yes <input type="checkbox"/> No | Pentobarbital | <input type="checkbox"/> Yes <input type="checkbox"/> No |

Preoperative Oxygen Saturation: _____ %

Preoperative Oxygen Supplementation Yes No

Date and Time of Transport to Procedure Location Or Anesthesia Start Time: mm/dd/yyyy hh:mm__/__/____:____

ANESTHESIA Monitoring

Arterial Line Yes No (If Yes →) Type: (Select all that apply)

- | | | | |
|------------------|--|----------------|--|
| Radial | <input type="checkbox"/> Yes <input type="checkbox"/> No | Brachial | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Axillary | <input type="checkbox"/> Yes <input type="checkbox"/> No | Femoral | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Ulnar | <input type="checkbox"/> Yes <input type="checkbox"/> No | Dorsalis Pedis | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Posterior Tibial | <input type="checkbox"/> Yes <input type="checkbox"/> No | Umbilical | <input type="checkbox"/> Yes <input type="checkbox"/> No |

Cutdown Yes No (If Yes →) Type: (Select all that apply)
 Radial Yes No Femoral Yes No
 Ulnar Yes No Other Yes No

Percutaneous Central Pressure Yes No (If Yes →) Location: (Select all that apply)
 Right Internal Jugular Yes No Left Internal Jugular Yes No
 Right Subclavian Yes No Left Subclavian Yes No
 Right Femoral Vein Yes No Left Femoral Vein Yes No
 Other Yes No

CVP Placed by Anesthesia Yes No
 Swan-Ganz Catheter Yes No
 Oximetric Central Line (ScVO2) Yes No

Ultrasound Guidance Used for Line Placement: None Central venous line
 Arterial line Both arterial & venous lines

Neurologic Monitoring Yes No

(If Yes →) Bispectral Index Yes No
 Transcranial Doppler Yes No
 NIRS (Cerebral) Yes No
 Other Yes No

Lowest Recorded Intraoperative Temperature: _____ °C

Lowest Intraoperative Temperature Site: Nasal Esophageal Bladder Rectal
 Axillary Skin Tympanic Other

Transesophageal Echocardiography Yes No

ANESTHESIA Anesthetic Technique

Date and Time of Induction: mm/ dd/ yyyy hh : mm __ / __ / ____ : __

Induction Type:

Inhalation	<input type="checkbox"/> Yes <input type="checkbox"/> No	(If Yes →)	Sevoflurane	<input type="checkbox"/> Yes <input type="checkbox"/> No
			Isoflurane	<input type="checkbox"/> Yes <input type="checkbox"/> No
Intravenous	<input type="checkbox"/> Yes <input type="checkbox"/> No	(If Yes →)	Sodium Thiopental	<input type="checkbox"/> Yes <input type="checkbox"/> No
			Ketamine	<input type="checkbox"/> Yes <input type="checkbox"/> No
			Etomidate	<input type="checkbox"/> Yes <input type="checkbox"/> No
			Propofol	<input type="checkbox"/> Yes <input type="checkbox"/> No
			Fentanyl	<input type="checkbox"/> Yes <input type="checkbox"/> No
			Midazolam	<input type="checkbox"/> Yes <input type="checkbox"/> No
			Dexmedetomidine	<input type="checkbox"/> Yes <input type="checkbox"/> No
			Sufentanil	<input type="checkbox"/> Yes <input type="checkbox"/> No
			Remifentanil	<input type="checkbox"/> Yes <input type="checkbox"/> No
Intramuscular (IM)	<input type="checkbox"/> Yes <input type="checkbox"/> No	(If Yes →)	Ketamine	<input type="checkbox"/> Yes <input type="checkbox"/> No
			Midazolam	<input type="checkbox"/> Yes <input type="checkbox"/> No

Regional Anesthetic Yes No

(If Yes →) Regional Anesthetic Site: Thoracic Epidural Catheter Lumbar Epidural Catheter Caudal Epidural Catheter
 Lumbar Epidural -Single shot Caudal Epidural – Single shot
 Lumbar Intrathecal -Single Shot Other

(If Yes →) **Regional Anesthetic Drug:** (Select all that apply)

Bupivacaine	<input type="checkbox"/> Yes <input type="checkbox"/> No	Bupivacaine/Fentanyl	<input type="checkbox"/> Yes <input type="checkbox"/> No
Clonidine	<input type="checkbox"/> Yes <input type="checkbox"/> No	Fentanyl	<input type="checkbox"/> Yes <input type="checkbox"/> No
Hydromorphone	<input type="checkbox"/> Yes <input type="checkbox"/> No	Lidocaine	<input type="checkbox"/> Yes <input type="checkbox"/> No
Morphine	<input type="checkbox"/> Yes <input type="checkbox"/> No	Ropivacaine	<input type="checkbox"/> Yes <input type="checkbox"/> No
Ropivacaine/Fentanyl	<input type="checkbox"/> Yes <input type="checkbox"/> No	Tetracaine	<input type="checkbox"/> Yes <input type="checkbox"/> No
		Other	<input type="checkbox"/> Yes <input type="checkbox"/> No

Intercostal Nerve Infiltration by Surgeon or Anesthesia: Yes No
 Regional Field Block by Surgeon or Anesthesia: Yes No

ANESTHESIA Airway

Airway In-situ (ETT or Tracheostomy): Yes No

Airway Type: No airway support Simple face mask Bag-mask Nasal cannulae Laryngeal Mask Airway (LMA)
 Endotracheal intubation Tracheostomy

(If LMA →) Airway Size (mm): 1.0 1.5 2.0 2.5 3.0 4.0 5.0

(If Endotracheal intubation →) Airway Size (mm): 2.5 3.0 3.5 4.0 4.5 5.0
 5.5 6.0 6.5 7.0 7.5 8.0
 Other Size not listed (DLETT, Tracheotomy)

(If Endotracheal intubation or Tracheostomy →) Cuffed Airway Site: Yes No
 Oral Nasal Tracheostomy

Endobronchial Isolation (DLETT, Bronchial Blocker) Yes No
 ICU Type Ventilator Used Intraop Yes No

ANESTHESIA Transfusion

Transfusion Yes No (If Yes enter # of units or 0 if none ↓)

Packed Red Blood Cells (PRBC) Units _____

Platelet Pheresis Units _____

Random Donor Platelet Units _____

Fresh Frozen Plasma (FFP) – Units _____

Cryoprecipitate – Units _____

Whole Blood – Units _____

Autologous Transfusion Yes No

Cell Saver/Salvage Yes No

Directed Donor Units Yes No

ANESTHESIA Procoagulents

Factor VIIa (Novoseven) mcg/kg- Dose 1 _____

(If Factor VIIa dose 1 > 0 →) Factor VIIa (Novoseven) mcg/kg- Dose 2 _____

(If Factor VIIa dose 2 > 0 →) Factor VIIa (Novoseven) mcg/kg- Dose 3 _____

Prothrombin Concentrate units/kg- Dose 1 _____

(If Prothrombin dose 1 > 0 →) Prothrombin Concentrate units/kg- Dose 2 _____

(If Prothrombin dose 2 > 0 →) Prothrombin Concentrate units/kg- Dose 3 _____

Fibrinogen Concentrate mg/kg- Dose 1 _____

(If Fibrinogen dose 1 > 0 →) Fibrinogen Concentrate mg/kg- Dose 2 _____

(If Fibrinogen dose 2 > 0 →) Fibrinogen Concentrate mg/kg- Dose 3 _____

Antithrombin 3 Concentrate units- Dose 1 _____

(If Antithrombin dose 1 > 0 →) Antithrombin 3 Concentrate units- Dose 2 _____

(If Antithrombin dose 2 > 0 →) Antithrombin 3 Concentrate units- Dose 3 _____

Desmopressin (DDAVP) mcg/kg- Dose 1 _____

(If DDAVP dose 1 > 0 →) Desmopressin (DDAVP) mcg/kg- Dose 2 _____

(If DDAVP dose 2 > 0 →) Desmopressin (DDAVP) mcg/kg- Dose 3 _____

ANESTHESIA Antifibrinolytics

Epsilon Aminocaproic Acid (Amicar) Used Yes No

(If Yes →) Epsilon Aminocaproic Acid (Amicar) Load mg/kg _____ mg/kg
Epsilon Aminocaproic Acid (Amicar) Pump Prime mg/kg _____ mg/kg
Epsilon Aminocaproic Acid (Amicar) Infusion Rate mg/kg/hr _____ mg/kg/hr

Tranexamic Acid Used Yes No

(If Yes →) Tranexamic Acid Load mg/kg _____ mg/kg
Tranexamic Acid Pump Prime mg/kg _____ mg/kg
Tranexamic Acid Infusion Rate mg/kg/hr _____ mg/kg/hr

Trasylol (Aprotinin) Used Yes No

(If Yes →) Trasylol (Aprotinin) Load cc/kg _____ cc/kg
Trasylol (Aprotinin) Pump Prime cc/kg _____ cc/kg
Trasylol (Aprotinin) Infusion Rate cc/kg/hr _____ cc/kg/hr

ANESTHESIA Intraoperative Pharmacology (including CPB)

Intraoperative Medications: None (If not None, select all intra-operative medications that apply: ↓)

- | | |
|---|--|
| <input type="checkbox"/> 5-HT3 Agents (e.g., Ondansetron) | <input type="checkbox"/> Narcotic |
| <input type="checkbox"/> Adenosine bolus | <input type="checkbox"/> Nesiritide Infusion |
| <input type="checkbox"/> Amiodarone | <input type="checkbox"/> Nicardipine Infusion |
| <input type="checkbox"/> Bronchodilator - Inhaled | <input type="checkbox"/> Nitric Oxide inhalation |
| <input type="checkbox"/> Benzodiazepine | <input type="checkbox"/> Nitroglycerin (Tridil) infusion |
| <input type="checkbox"/> Calcium Chloride infusion | <input type="checkbox"/> Nitroprusside (Nipride) |
| <input type="checkbox"/> Calcium Gluconate infusion | <input type="checkbox"/> Phenoxybenzamine bolus |
| <input type="checkbox"/> Desflurane | <input type="checkbox"/> Phentolamine (Regitine) |
| <input type="checkbox"/> Dexmetomidine (Precedex) | <input type="checkbox"/> Phenylephrine infusion |
| <input type="checkbox"/> Dobutamine infusion | <input type="checkbox"/> Procainamide |
| <input type="checkbox"/> Dopamine infusion | <input type="checkbox"/> Propofol (Diprivan) infusion |
| <input type="checkbox"/> Epinephrine (Adrenalin) infusion | <input type="checkbox"/> Prostaglandin infusion |
| <input type="checkbox"/> Esmolol | <input type="checkbox"/> Sevoflurane |
| <input type="checkbox"/> Fenoldopam infusion | <input type="checkbox"/> Sodium Bicarbonate bolus |
| <input type="checkbox"/> Furosemide | <input type="checkbox"/> Steroids IV/CPB (Hydrocortisone/Methylprednisolone/Dexamethasone) |
| <input type="checkbox"/> Insulin | <input type="checkbox"/> Thyroid Hormone |
| <input type="checkbox"/> Isoflurane | <input type="checkbox"/> Tromethamine (THAM) bolus |
| <input type="checkbox"/> Isoproterenol infusion | <input type="checkbox"/> Vasopressin infusion |
| <input type="checkbox"/> Ketamine | <input type="checkbox"/> Other Inotrope |
| <input type="checkbox"/> Norepinephrine (Levophed) infusion | <input type="checkbox"/> Other Vasodilator |
| <input type="checkbox"/> Magnesium Sulfate | <input type="checkbox"/> Other Vasoconstrictor |
| <input type="checkbox"/> Milrinone | |

ANESTHESIA Pharmacology On Arrival To ICU/PACU

- Medications Given At Time Of Transfer: None (If not None, select all medications that apply: ↓)
- | | |
|--|---|
| <input type="checkbox"/> Aminocaproic Acid (Amicar) infusion | <input type="checkbox"/> Nesiritide Infusion |
| <input type="checkbox"/> Amiodarone infusion | <input type="checkbox"/> Nicardipine infusion |
| <input type="checkbox"/> Aprotinin (Trasylol) infusion | <input type="checkbox"/> Nitric Oxide inhalation |
| <input type="checkbox"/> Benzodiazepine infusion | <input type="checkbox"/> Nitroglycerin (Tridil) infusion |
| <input type="checkbox"/> Calcium Chloride infusion | <input type="checkbox"/> Nitroprusside (Nipride) infusion |
| <input type="checkbox"/> Calcium Gluconate infusion | <input type="checkbox"/> Norepinephrine (Levophed) infusion |
| <input type="checkbox"/> Dexmetetomidine (Precedex) infusion | <input type="checkbox"/> Phentolamine (Regitine) infusion |
| <input type="checkbox"/> Dobutamine infusion | <input type="checkbox"/> Phenylephrine infusion |
| <input type="checkbox"/> Dopamine infusion | <input type="checkbox"/> Procainamide bolus/infusion |
| <input type="checkbox"/> Epinephrine (Adrenalin) infusion | <input type="checkbox"/> Propofol (Diprivan) infusion |
| <input type="checkbox"/> Esmolol infusion | <input type="checkbox"/> Prostaglandin infusion |
| <input type="checkbox"/> Fenoldopam infusion | <input type="checkbox"/> Thyroid Hormone infusion |
| <input type="checkbox"/> Insulin infusion | <input type="checkbox"/> Tranexamic Acid infusion |
| <input type="checkbox"/> Isoproterenol infusion | <input type="checkbox"/> Vasopressin infusion |
| <input type="checkbox"/> Local Anesthetic infusion via catheter (On-Q, Pleural catheter) | <input type="checkbox"/> Other Inotrope |
| <input type="checkbox"/> Milrinone infusion | <input type="checkbox"/> Other Vasodilator |
| <input type="checkbox"/> Muscle Relaxant infusion | <input type="checkbox"/> Other Vasoconstrictor |
| <input type="checkbox"/> Narcotic infusion | |

ANESTHESIA ICU/PACU Care

Date and Time of ICU/PACU Arrival: (mm/dd/yyyy 00:00 – 23:59) __/__/____ :__

Initial FiO2 _____ Mechanical circulatory support(ECMO/VAD) Yes No
 ICU/PACU Arrival labs Yes No (If Yes →) pH: _____ pCO2: _____ pO2: _____
 Base Excess: _____ Lactate: _____ Hematocrit: _____

Initial pulse oximeter _____ % Temperature on ICU/PACU Arrival: _____ ° c
 Temperature Measurement Site: Forehead scan Tympanic membrane Skin Rectal Bladder
 Oral Axillary Other

Need for Temporary Pacemaker on Arrival In ICU/PACU Yes No
 (If Yes →) Site of Temporary Pace Maker: Epicardial Transvenous
 (If Yes →) Type of Temporary Pacing: Atrial Atrio-ventricular Ventricular Other

Disposition Under Anesthesia: Discharged as planned after PACU/Recovery Admit to hospital floor as planned
 Admit to ICU as planned Unplanned admit to hospital or ICU
 Other location not listed above Patient expired under anesthetic management

Peri-Anesthetic Demise: (within 24 hr of last anesthetic end time) Yes No**ANESTHESIA Adverse Events**

- Anesthesia adverse events: None (If not None, select all adverse events that apply: ↓)
- | | |
|--|---|
| <input type="checkbox"/> Oral/Nasal Injury-Bleeding | <input type="checkbox"/> Protamine Reaction |
| <input type="checkbox"/> Respiratory Arrest | <input type="checkbox"/> Cardiac Arrest - related to anesthesia care |
| <input type="checkbox"/> Difficult Intubation/Reintubation | <input type="checkbox"/> Cardiac Arrest - unrelated to anesthesia care |
| <input type="checkbox"/> Stridor / Sub-glottic Stenosis | <input type="checkbox"/> TEE related esophageal bleeding / rupture |
| <input type="checkbox"/> Extubation | <input type="checkbox"/> Esophageal Chemical Burn |
| <input type="checkbox"/> Endotracheal Tube Migration | <input type="checkbox"/> TEE related airway compromise |
| <input type="checkbox"/> Airway Injury | <input type="checkbox"/> TEE related extubation |
| <input type="checkbox"/> Arrhythmia - Central Venous Line Placement | <input type="checkbox"/> Complications during patient transfer |
| <input type="checkbox"/> Myocardial Injury - Central Venous Line Placement | <input type="checkbox"/> Peripheral Nerve Injury due to positioning |
| <input type="checkbox"/> Vascular Compromise - Central Venous Line Placement | <input type="checkbox"/> Arterial Line Placement- Extremity ischemia |
| <input type="checkbox"/> Pneumothorax - Central Venous Line Placement | <input type="checkbox"/> Anesthesia Equipment Malfunction/ Failure |
| <input type="checkbox"/> Vascular Access | <input type="checkbox"/> Intravenous Infiltration |
| <input type="checkbox"/> Hematoma requiring relocation of catheter placement | <input type="checkbox"/> Integument Injury (skin breakdown or dehiscence, pressure ulcer or alopecia) |

- | | |
|--|---|
| <input type="checkbox"/> Arterial Puncture | <input type="checkbox"/> Bronchospasm |
| <input type="checkbox"/> Intravenous/Intra-arterial Air Embolism | <input type="checkbox"/> Hemoptysis |
| <input type="checkbox"/> Bleeding - Regional Anesthetic Site | <input type="checkbox"/> Postop Nausea/Vomiting requiring admission |
| <input type="checkbox"/> Intrathecal Puncture - Regional | <input type="checkbox"/> Vomiting or Aspiration on Induction/Emergence |
| <input type="checkbox"/> Local Anesthetic Toxicity - Regional | <input type="checkbox"/> Emergence Delirium requiring Medication |
| <input type="checkbox"/> Neurologic Injury - Regional | <input type="checkbox"/> Laryngospasm requiring medication |
| <input type="checkbox"/> Anaphylaxis/Anaphylactoid Reaction | <input type="checkbox"/> Unplanned need to remain intubated postprocedure due to anesthesia factors |
| <input type="checkbox"/> Non-allergic Drug Reaction | <input type="checkbox"/> Ocular Injury (corneal abrasion or injury) |
| <input type="checkbox"/> Medication Administration | <input type="checkbox"/> Pulmonary Hypertensive Crisis |
| <input type="checkbox"/> Medication Dosage | <input type="checkbox"/> Hypercyanotic Episode (Tet Spell) |
| <input type="checkbox"/> Intraoperative Recall | <input type="checkbox"/> Other |
| <input type="checkbox"/> Malignant Hyperthermia | |