

ADMINISTRATIVE	
Participant ID:	Patient Participating in STS-Related Clinical Trial: <input type="checkbox"/> None <input type="checkbox"/> Trial 1 <input type="checkbox"/> Trial 2 <input type="checkbox"/> Trial 3 <input type="checkbox"/> Trial 4 <input type="checkbox"/> Trial 5 <input type="checkbox"/> Trial 6
(If not None →) STS-Related Clinical Trial ID:	

DEMOGRAPHICS		
Patient ID (software generated)	Patient Nat. ID (SSN):	MRN:
Last Name:	First Name:	Middle Name:
Region:	Postal Code:	Country:
BIRTH INFORMATION		
Born by IVF: <input type="checkbox"/> Yes <input type="checkbox"/> No		
Patient Adopted: <input type="checkbox"/> Yes <input type="checkbox"/> No		
Birth Location Known: <input type="checkbox"/> Yes <input type="checkbox"/> No		
(If Yes →)	Born at Home <input type="checkbox"/> Yes <input type="checkbox"/> No	
(If No →)	Birth Hospital Name Known: <input type="checkbox"/> Yes <input type="checkbox"/> No	
(If Yes →)	Birth Hospital Name:	
	Birth Hospital TIN:	
Birth City:	Birth Region:	Birth Country
Mode of Delivery Known: <input type="checkbox"/> Yes <input type="checkbox"/> No		
(If Yes →)	Mode of Delivery:	
<input type="checkbox"/> Spontaneous onset labor with vaginal delivery <input type="checkbox"/> Spontaneous onset labor with cesarean section <input type="checkbox"/> Induction of labor with vaginal delivery <input type="checkbox"/> Induction of labor with subsequent cesarean section <input type="checkbox"/> Scheduled cesarean section <input type="checkbox"/> Other cesarean section		
Mother's Gravidity and Parity known: <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes ↓)		
Mother's Gravidity:	Mother's Parity:	
APGAR Scores Known: <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes ↓)		
APGAR Score at 1 minute:	APGAR Score at 5 minutes:	
Mother's Name Known: <input type="checkbox"/> Yes <input type="checkbox"/> No		
(If Yes →) Mother's Last :	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):
Sex at Birth: <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: Weeks: _____ wks	Days: <input type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> Unknown
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	
Pregnancy – related complications: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		
(If Yes →)	Pre-eclampsia: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Gestational DM: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
	Hypertension: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	HELLPP: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
	Polyhydramnios: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Oligohydramnios: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
	Hydrops: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Other: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
Race Documented: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Patient declined to disclose		

(If Yes, →)	Caucasian: <input type="checkbox"/> Yes <input type="checkbox"/> No	Black/African American: <input type="checkbox"/> Yes <input type="checkbox"/> No
	Asian: <input type="checkbox"/> Yes <input type="checkbox"/> No	Am Indian/Alaskan Native: <input type="checkbox"/> Yes <input type="checkbox"/> No
	Native Hawaiian/Pacific Islander: <input type="checkbox"/> Yes <input type="checkbox"/> No	Other: <input type="checkbox"/> Yes <input type="checkbox"/> No
Hispanic or Latino Ethnicity: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Documented		
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		
(If Dead →)	Mortality Date: (mm/dd/yyyy) ___/___/_____	

**NONCARDIAC CONGENITAL ANATOMIC ABNORMALITIES (select all that apply)**

<input type="checkbox"/>	None
<input type="checkbox"/>	Major abnormality of head, Choanal atresia
<input type="checkbox"/>	Major abnormality of head, Cleft lip
<input type="checkbox"/>	Major abnormality of head, Cleft palate
<input type="checkbox"/>	Major abnormality of head, Craniosynostosis
<input type="checkbox"/>	Major abnormality of head, Macrocephaly
<input type="checkbox"/>	Major abnormality of head, Microcephaly
<input type="checkbox"/>	Major abnormality of head, Micrognathia
<input type="checkbox"/>	Major abnormality of brain, Hydrocephalus
<input type="checkbox"/>	Major abnormality of brain, Tuberos sclerosi
<input type="checkbox"/>	Major abnormality of spinal cord, Myelomeningocele
<input type="checkbox"/>	Major abnormality of spinal cord, Spina bifida
<input type="checkbox"/>	Major abnormality of spinal cord, Tethered cord
<input type="checkbox"/>	Major abnormality of spine, Scoliosis
<input type="checkbox"/>	Major abnormality of spine, Hemi-vertebrae
<input type="checkbox"/>	Major abnormality of spine, Butterfly vertebrae
<input type="checkbox"/>	Major abnormality of larynx - trachea - or bronchus, Laryngeal cleft
<input type="checkbox"/>	Major abnormality of larynx - trachea - or bronchus, Laryngomalacia
<input type="checkbox"/>	Major abnormality of larynx - trachea - or bronchus, Congenital tracheal stenosis
<input type="checkbox"/>	Major abnormality of larynx - trachea - or bronchus, Tracheomalacia
<input type="checkbox"/>	Major abnormality of larynx - trachea - or bronchus, Tracheoesophageal fistula (TEF)
<input type="checkbox"/>	Major abnormality of larynx - trachea - or bronchus, Bronchomalacia
<input type="checkbox"/>	Major abnormality of chest wall, Pectus carinatum
<input type="checkbox"/>	Major abnormality of chest wall, Pectus excavatum
<input type="checkbox"/>	Major abnormality of lung, Alveolar capillary dysplasia
<input type="checkbox"/>	Major abnormality of lung, Congenital lobar emphysema (CLE)
<input type="checkbox"/>	Major abnormality of lung, Cystic congenital adenomatous malformation of the lung (CAM)
<input type="checkbox"/>	Major abnormality of lung, Cystic fibrosis
<input type="checkbox"/>	Major abnormality of lung, Hypoplastic lung
<input type="checkbox"/>	Major abnormality of lung, Pulmonary lymphangiectasia
<input type="checkbox"/>	Major abnormality of diaphragm, Congenital diaphragmatic hernia (CDH), Bochdalek hernia
<input type="checkbox"/>	Major abnormality of abdominal wall, Gastroschisis
<input type="checkbox"/>	Major abnormality of abdominal wall, Omphalocele
<input type="checkbox"/>	Major abnormality of gastrointestinal system, Esophageal atresia
<input type="checkbox"/>	Major abnormality of gastrointestinal system, Pyloric stenosis
<input type="checkbox"/>	Major abnormality of gastrointestinal system, Biliary atresia
<input type="checkbox"/>	Major abnormality of gastrointestinal system, Duodenal atresia
<input type="checkbox"/>	Major abnormality of gastrointestinal system, Duodenal stenosis
<input type="checkbox"/>	Major abnormality of gastrointestinal system, Jejunal atresia
<input type="checkbox"/>	Major abnormality of gastrointestinal system, Jejunal stenosis
<input type="checkbox"/>	Major abnormality of gastrointestinal system, Ileal atresia
<input type="checkbox"/>	Major abnormality of gastrointestinal system, Ileal stenosis
<input type="checkbox"/>	Major abnormality of gastrointestinal system, Intestinal malrotation
<input type="checkbox"/>	Major abnormality of gastrointestinal system, Hirschsprung's disease (Congenital aganglionic megacolon)
<input type="checkbox"/>	Major abnormality of gastrointestinal system, Stenosis of large intestine
<input type="checkbox"/>	Major abnormality of gastrointestinal system, Atresia of large intestine
<input type="checkbox"/>	Major abnormality of gastrointestinal system, Atresia of rectum
<input type="checkbox"/>	Major abnormality of gastrointestinal system, Stenosis of rectum

<input type="checkbox"/>	Major abnormality of gastrointestinal system, Anal Atresia (imperforate anus)
<input type="checkbox"/>	Major abnormality of genitalia, Ambiguous genitalia
<input type="checkbox"/>	Major abnormality of genitalia, Hypospadias
<input type="checkbox"/>	Major abnormality of genitalia, Rectovaginal fistula
<input type="checkbox"/>	Major abnormality of genitalia, Undescended testis
<input type="checkbox"/>	Major abnormality of kidney, Horseshoe kidney
<input type="checkbox"/>	Major abnormality of kidney, Hydronephrosis
<input type="checkbox"/>	Major abnormality of kidney, Polycystic kidney
<input type="checkbox"/>	Major abnormality of kidney, Single kidney
<input type="checkbox"/>	Other
	(If NCAA is Other→) _____ Major Noncardiac Abnormality- Other- Specify

### CHROMOSOMAL ABNORMALITIES

Chromosomal Abnormality: *(select all that apply)*

<input type="checkbox"/>	No chromosomal or genetic abnormality identified		
<input type="checkbox"/>	Known Mosaicism	<input type="checkbox"/>	11p15.5
<input type="checkbox"/>	1p36 del	<input type="checkbox"/>	11q
<input type="checkbox"/>	1q21.1 del	<input type="checkbox"/>	12p1.21
<input type="checkbox"/>	1q21.1 dup	<input type="checkbox"/>	12p12.1
<input type="checkbox"/>	1q42.1	<input type="checkbox"/>	12q24
<input type="checkbox"/>	2p21	<input type="checkbox"/>	15q11.2 del
<input type="checkbox"/>	3p22	<input type="checkbox"/>	15q21.1
<input type="checkbox"/>	3q dup	<input type="checkbox"/>	16p11.2 del
<input type="checkbox"/>	4p16	<input type="checkbox"/>	17p11.2 del
<input type="checkbox"/>	4q del	<input type="checkbox"/>	17q21.31 del
<input type="checkbox"/>	5p15.2 del	<input type="checkbox"/>	20p12
<input type="checkbox"/>	5p15.33 del	<input type="checkbox"/>	22q11 deletion
<input type="checkbox"/>	6p12	<input type="checkbox"/>	22q11.2 dup
<input type="checkbox"/>	7q11	<input type="checkbox"/>	45X0
<input type="checkbox"/>	7q11.23 del	<input type="checkbox"/>	47,XXY
<input type="checkbox"/>	7q11.23 dup	<input type="checkbox"/>	Monosomy X
<input type="checkbox"/>	7q32	<input type="checkbox"/>	Trisomy 08
<input type="checkbox"/>	7q34	<input type="checkbox"/>	Trisomy 09
<input type="checkbox"/>	8p23.1 del	<input type="checkbox"/>	Trisomy 13
<input type="checkbox"/>	8p23.1 dup	<input type="checkbox"/>	Trisomy 18
<input type="checkbox"/>	8q12	<input type="checkbox"/>	Trisomy 21
<input type="checkbox"/>	9q34.3 del		
<input type="checkbox"/>	Other chromosomal or genetic abnormality		

*(If "Other chromosomal or genetic abnormality" ↓)*

Genes With Identified Abnormalities: *(select all that apply) ↓*

<input type="checkbox"/>	ABCC9y	<input type="checkbox"/>	ACTC1	<input type="checkbox"/>	ADAMTS10	<input type="checkbox"/>	AK7
<input type="checkbox"/>	ANKRD11	<input type="checkbox"/>	ANKS3	<input type="checkbox"/>	ANKS6	<input type="checkbox"/>	ARID1B
<input type="checkbox"/>	ARMC4	<input type="checkbox"/>	B3GALTL	<input type="checkbox"/>	B9D1	<input type="checkbox"/>	B9D2
<input type="checkbox"/>	BBIP1	<input type="checkbox"/>	BBS1	<input type="checkbox"/>	BBS10	<input type="checkbox"/>	BBS12
<input type="checkbox"/>	BBS2	<input type="checkbox"/>	BBS4	<input type="checkbox"/>	BBS7	<input type="checkbox"/>	BBS9
<input type="checkbox"/>	BCOR	<input type="checkbox"/>	BRAF	<input type="checkbox"/>	C21orf59	<input type="checkbox"/>	C2CD3
<input type="checkbox"/>	C5orf42	<input type="checkbox"/>	CACNA1C	<input type="checkbox"/>	CBP	<input type="checkbox"/>	CC2D2A
<input type="checkbox"/>	CCDC103	<input type="checkbox"/>	CCDC114	<input type="checkbox"/>	CCDC151	<input type="checkbox"/>	CCDC39
<input type="checkbox"/>	CCDC40	<input type="checkbox"/>	CCDC65	<input type="checkbox"/>	CCNO	<input type="checkbox"/>	CDK13
<input type="checkbox"/>	CDKN1C	<input type="checkbox"/>	CEP120	<input type="checkbox"/>	CEP152	<input type="checkbox"/>	CEP290
<input type="checkbox"/>	CEP41	<input type="checkbox"/>	CHD4	<input type="checkbox"/>	CHD7	<input type="checkbox"/>	CITED2
<input type="checkbox"/>	COL1A1	<input type="checkbox"/>	COL1A2	<input type="checkbox"/>	COL5A1	<input type="checkbox"/>	CRKL
<input type="checkbox"/>	CSPP1	<input type="checkbox"/>	DGCR2	<input type="checkbox"/>	DHCR7	<input type="checkbox"/>	DLL4
<input type="checkbox"/>	DNAAF1 / LRRC50	<input type="checkbox"/>	DNAAF2	<input type="checkbox"/>	DNAAF3	<input type="checkbox"/>	DNAAF5 (or HEATR2)
<input type="checkbox"/>	DNAH11	<input type="checkbox"/>	DNAH5	<input type="checkbox"/>	DNAI1	<input type="checkbox"/>	DNAI2
<input type="checkbox"/>	DNAJB13	<input type="checkbox"/>	DNAL1	<input type="checkbox"/>	DOCK6	<input type="checkbox"/>	DYNC2H1
<input type="checkbox"/>	DYX1C1 (aka DNAAF4)	<input type="checkbox"/>	EFTUD2	<input type="checkbox"/>	EHMT1	<input type="checkbox"/>	ELN

<input type="checkbox"/> EP300	<input type="checkbox"/> ESC02	<input type="checkbox"/> EST-1	<input type="checkbox"/> EVC
<input type="checkbox"/> EVC2	<input type="checkbox"/> FBN1	<input type="checkbox"/> FBN2	<input type="checkbox"/> FGF8
<input type="checkbox"/> FGFR1	<input type="checkbox"/> FLNA	<input type="checkbox"/> FMR1	<input type="checkbox"/> FOXC1
<input type="checkbox"/> FTO	<input type="checkbox"/> GALNT11	<input type="checkbox"/> GANAB	<input type="checkbox"/> GAS8
<input type="checkbox"/> GATA4	<input type="checkbox"/> GATA6	<input type="checkbox"/> GDF1	<input type="checkbox"/> GJA1
<input type="checkbox"/> GPC3	<input type="checkbox"/> GRK5	<input type="checkbox"/> HNRNPK	<input type="checkbox"/> HOXA1
<input type="checkbox"/> HRAS	<input type="checkbox"/> HYDIN	<input type="checkbox"/> IFT122	<input type="checkbox"/> IFT140
<input type="checkbox"/> IFT27	<input type="checkbox"/> IFT43	<input type="checkbox"/> IFT80	<input type="checkbox"/> INPP5E
<input type="checkbox"/> INTU	<input type="checkbox"/> INVS	<input type="checkbox"/> JAG1	<input type="checkbox"/> KAT6B
<input type="checkbox"/> KDM6A	<input type="checkbox"/> KIAA0556	<input type="checkbox"/> KIAA0586	<input type="checkbox"/> KIAA0753
<input type="checkbox"/> KIF7	<input type="checkbox"/> KMT2D (MLL2)	<input type="checkbox"/> KRAS	<input type="checkbox"/> LRRC6
<input type="checkbox"/> LTBP4	<input type="checkbox"/> MAP2K1	<input type="checkbox"/> MAP2K2	<input type="checkbox"/> MAPK1
<input type="checkbox"/> MCIDAS	<input type="checkbox"/> MED12	<input type="checkbox"/> MED13L	<input type="checkbox"/> MEGF8
<input type="checkbox"/> MID1	<input type="checkbox"/> MKKS	<input type="checkbox"/> MKKS (BBS6)	<input type="checkbox"/> MKS1
<input type="checkbox"/> MYH11	<input type="checkbox"/> MYH6	<input type="checkbox"/> MYH7	<input type="checkbox"/> NF1
<input type="checkbox"/> NHS	<input type="checkbox"/> NIPBL	<input type="checkbox"/> NKX2-5	<input type="checkbox"/> NKX2-6
<input type="checkbox"/> NME8 (aka TXNDC3)	<input type="checkbox"/> NODAL	<input type="checkbox"/> NOTCH1	<input type="checkbox"/> NPHP3
<input type="checkbox"/> NR2F2	<input type="checkbox"/> NSD1	<input type="checkbox"/> OFD1	<input type="checkbox"/> PDGFRA
<input type="checkbox"/> PEX1	<input type="checkbox"/> PIBF1	<input type="checkbox"/> PIH1D3	<input type="checkbox"/> PITX2
<input type="checkbox"/> PKD1	<input type="checkbox"/> PKD2	<input type="checkbox"/> PKHD1	<input type="checkbox"/> PQBP1
<input type="checkbox"/> PRKD1	<input type="checkbox"/> PTEN	<input type="checkbox"/> PTPN11	<input type="checkbox"/> RAB23
<input type="checkbox"/> RAD21	<input type="checkbox"/> RAI1	<input type="checkbox"/> RBM10	<input type="checkbox"/> RBPJ
<input type="checkbox"/> RDR2	<input type="checkbox"/> RECQL4	<input type="checkbox"/> ROR2	<input type="checkbox"/> RPGR
<input type="checkbox"/> RPGRI1L	<input type="checkbox"/> RPL35A	<input type="checkbox"/> RPS10	<input type="checkbox"/> RPS17
<input type="checkbox"/> RPS24	<input type="checkbox"/> RPS26	<input type="checkbox"/> RSK2	<input type="checkbox"/> RSPH1
<input type="checkbox"/> RSPH3	<input type="checkbox"/> RSPH4A	<input type="checkbox"/> RSPH9	<input type="checkbox"/> SALL1
<input type="checkbox"/> SALL4	<input type="checkbox"/> SEMA3E	<input type="checkbox"/> SH3PXD2B	<input type="checkbox"/> SHH
<input type="checkbox"/> SHOC2	<input type="checkbox"/> SHROOM3	<input type="checkbox"/> SMAD2	<input type="checkbox"/> SMAD3
<input type="checkbox"/> SMAD6	<input type="checkbox"/> SMARCA4	<input type="checkbox"/> SMARCB1	<input type="checkbox"/> SMARCE1
<input type="checkbox"/> SMC1L1	<input type="checkbox"/> SMC3	<input type="checkbox"/> SMS	<input type="checkbox"/> SNAP29
<input type="checkbox"/> SOS2	<input type="checkbox"/> SPAG1	<input type="checkbox"/> STRA6	<input type="checkbox"/> TAB2
<input type="checkbox"/> TBX1	<input type="checkbox"/> TBX20	<input type="checkbox"/> TBX5	<input type="checkbox"/> TCOF1
<input type="checkbox"/> TCTEX1D2	<input type="checkbox"/> TCTN1	<input type="checkbox"/> TCTN2	<input type="checkbox"/> TCTN3
<input type="checkbox"/> TFAP2B	<input type="checkbox"/> TGFBR1 or 2	<input type="checkbox"/> TLL1	<input type="checkbox"/> TMEM107
<input type="checkbox"/> TMEM138	<input type="checkbox"/> TMEM216	<input type="checkbox"/> TMEM231	<input type="checkbox"/> TMEM67
<input type="checkbox"/> TRIM32 (BBS11)	<input type="checkbox"/> TSC1	<input type="checkbox"/> TSC2	<input type="checkbox"/> TTC25
<input type="checkbox"/> TTC8 (BBS8)	<input type="checkbox"/> TWIST	<input type="checkbox"/> WDR19	<input type="checkbox"/> ZFPM2 / FOG2
<input type="checkbox"/> ZIC3	<input type="checkbox"/> ZNF423		
<input type="checkbox"/> Unlisted Gene or Chromosomal Anomaly			

(If "Unlisted Gene or Chromosomal Anomaly" ↓)

Unlisted Gene or Chromosomal Anomaly - Specify  
\_\_\_\_\_

### SYNDROMES

Syndromes: *(select all that apply)*

<input type="checkbox"/> No syndromic abnormality identified	<input type="checkbox"/> 1q21.1 duplication syndrome
<input type="checkbox"/> 1p36 deletion syndrome	<input type="checkbox"/> 4q deletion syndrome
<input type="checkbox"/> 3q duplication syndrome	<input type="checkbox"/> 8p23.1 deletion syndrome
<input type="checkbox"/> 7q11.23 duplication syndrome	<input type="checkbox"/> 16p11.2 deletion syndrome
<input type="checkbox"/> 15q11.2 deletion syndrome	<input type="checkbox"/> Adams-Oliver syndrome
<input type="checkbox"/> 22q11.2 duplication syndrome	<input type="checkbox"/> Alstrom syndrome
<input type="checkbox"/> Alagille syndrome (intrahepatic biliary duct agenesis)	<input type="checkbox"/> Apert syndrome
<input type="checkbox"/> Alveolar Capillary Dysplasia Syndrome	<input type="checkbox"/> Bardet-Biedl syndrome
<input type="checkbox"/> Baller-Gerold Syndrome	<input type="checkbox"/> Brugada syndrome (Sudden unexplained nocturnal death syndrome) (SUNDS)
<input type="checkbox"/> Beckwith-Wiedemann syndrome	<input type="checkbox"/> Cantu syndrome
<input type="checkbox"/> Brugada/Timothy Syndrome	<input type="checkbox"/> Cardiofaciocutaneous syndrome

<input type="checkbox"/> Carpenter syndrome	<input type="checkbox"/> Cat-eye syndrome
<input type="checkbox"/> Caudal Regression Syndrome	<input type="checkbox"/> Char syndrome
<input type="checkbox"/> CHARGE Association	<input type="checkbox"/> Chiari I Malformation
<input type="checkbox"/> Chromosome 17q12 deletion syndrome	<input type="checkbox"/> Coffin Lowry syndrome
<input type="checkbox"/> Coffin Siris Syndrome	<input type="checkbox"/> Cornelia de Lange syndrome
<input type="checkbox"/> Costello syndrome	<input type="checkbox"/> Cranioectodermal dysplasia (Sensenbrenner syndrome)
<input type="checkbox"/> Cri-du-chat syndrome	<input type="checkbox"/> Dandy Walker Malformation
<input type="checkbox"/> Deletion 10p syndrome	<input type="checkbox"/> Deletion 8p syndrome
<input type="checkbox"/> DiGeorge syndrome (velocardiofacial syndrome) (conotruncal anomaly face syndrome) (22q11 deletion)	<input type="checkbox"/> Distinct disorder
<input type="checkbox"/> Down syndrome (Trisomy 21)	<input type="checkbox"/> Duane Radial Ray (Okhiro) syndrome
<input type="checkbox"/> Duchenne Muscular Dystrophy	<input type="checkbox"/> Edwards syndrome (Trisomy 18)
<input type="checkbox"/> Ehlers-Danlos Syndrome	<input type="checkbox"/> Ellis-van Creveld syndrome
<input type="checkbox"/> Familial atrial septal defects	<input type="checkbox"/> Familial CHD
<input type="checkbox"/> Familial non-syndromic CHD	<input type="checkbox"/> Fetal alcohol syndrome (FAS)
<input type="checkbox"/> Fetal drug exposure	<input type="checkbox"/> Fetal rubella syndrome (Congenital rubella syndrome)
<input type="checkbox"/> Fragile X	<input type="checkbox"/> Goldenhar syndrome
<input type="checkbox"/> Heterotaxy syndrome, Asplenia syndrome	<input type="checkbox"/> Heterotaxy syndrome, Polysplenia syndrome
<input type="checkbox"/> Heterotaxy syndrome, Unknown if asplenia or polysplenia	<input type="checkbox"/> Holt-Oram syndrome
<input type="checkbox"/> Jacobsen syndrome	<input type="checkbox"/> Joubert syndrome
<input type="checkbox"/> Kabuki syndrome	<input type="checkbox"/> Kartagener syndrome (Siewert syndrome) (Primary ciliary dyskinesia)
<input type="checkbox"/> Kleefstra Syndrome	<input type="checkbox"/> Klinefelter syndrome (XXY Syndrome)
<input type="checkbox"/> Koolen-De Vries Syndrome	<input type="checkbox"/> LEOPARD syndrome
<input type="checkbox"/> Loey-Dietz syndrome	<input type="checkbox"/> Marfan syndrome
<input type="checkbox"/> Marfan-like syndrome	<input type="checkbox"/> McKusick-Kaufman syndrome
<input type="checkbox"/> Meckel-Gruber syndrome	<input type="checkbox"/> Microphthalmia syndromic 9
<input type="checkbox"/> Mowat Wilson Syndrome	<input type="checkbox"/> Mucopolysaccharidosis type IH (Hurler syndrome)
<input type="checkbox"/> Mucopolysaccharidosis type IH/S (Hurler-Scheie syndrome)	<input type="checkbox"/> Mucopolysaccharidosis type II (Hunter syndrome)
<input type="checkbox"/> Mucopolysaccharidosis type IS (Scheie syndrome)	<input type="checkbox"/> Nance Horan syndrome
<input type="checkbox"/> Nephronophthisis	<input type="checkbox"/> Neurofibromatosis
<input type="checkbox"/> Non-syndromic CHD	<input type="checkbox"/> Noonan syndrome
<input type="checkbox"/> Oculofaciocardiodental	<input type="checkbox"/> Oral-facial-digital syndromes (types I-XVI and unclassified)
<input type="checkbox"/> Patau syndrome (Trisomy 13)	<input type="checkbox"/> Peter's Plus syndrome
<input type="checkbox"/> Pierre Robin syndrome	<input type="checkbox"/> Polycystic Kidney Disease
<input type="checkbox"/> Primary ciliary dyskinesia (PCD)	<input type="checkbox"/> Prune Belly Syndrome
<input type="checkbox"/> Rethore syndrome (Trisomy 9)	<input type="checkbox"/> Roberts syndrome
<input type="checkbox"/> Robinow syndrome	<input type="checkbox"/> Rubinstein-Taybi syndrome
<input type="checkbox"/> Saethre Chotzen syndrome	<input type="checkbox"/> Short Rib Polydactyly Type I
<input type="checkbox"/> Short rib thoracic dysplasias including Jeune chondrodysplasia, Saldino Mainzer	<input type="checkbox"/> Sickle cell disease
<input type="checkbox"/> Sickle cell trait	<input type="checkbox"/> Sifrim-Hitz-Weiss syndrome (SIHIWES)
<input type="checkbox"/> Simpson-Golabi-Behmel syndrome	<input type="checkbox"/> Situs inversus
<input type="checkbox"/> Smith Magenis syndrome	<input type="checkbox"/> Smith-Lemli-Opitz syndrome
<input type="checkbox"/> Sotos syndrome	<input type="checkbox"/> Spinal Muscular Atrophy, Type II
<input type="checkbox"/> Sporadic and familial CHD	<input type="checkbox"/> Syndromic CHD
<input type="checkbox"/> TAR syndrome	<input type="checkbox"/> Thalassemia - Major
<input type="checkbox"/> Thalassemia - Minor	<input type="checkbox"/> Townes-Brocks syndrome
<input type="checkbox"/> Trisomy 13	<input type="checkbox"/> Trisomy 18
<input type="checkbox"/> Trisomy 21	<input type="checkbox"/> Turner syndrome (45XO)
<input type="checkbox"/> VACTERL syndrome (VACTER/VATER/VATERR syndrome)	<input type="checkbox"/> VACTERL-H syndrome (VATER association with hydrocephalus) (Briard-Evans syndrome)
<input type="checkbox"/> von Willebrand disease (vWD)	<input type="checkbox"/> Warkany syndrome (Trisomy 8)
<input type="checkbox"/> Williams syndrome (Williams-Beuren syndrome)	<input type="checkbox"/> Wolf-Hirschhorn syndrome
<input type="checkbox"/> X-linked heterotaxy	
<input type="checkbox"/> Other syndromic abnormality	

(If Other Syndromic abnormality, Specify ↓)

Syndrome – Other – Specify

### HOSPITALIZATION

Hospital Name: \_\_\_\_\_

Hospital Zip Code: \_\_\_\_\_ Hospital State: \_\_\_\_\_ Hospital National Provider Identifier: \_\_\_\_\_

Primary Payor: \_\_\_\_\_ Secondary (supplemental) Payor: \_\_\_\_\_

None/self  None/self

<i>(If Primary not None or missing →)</i>	<input type="checkbox"/> Medicare <input type="checkbox"/> Medicaid <input type="checkbox"/> Military Health <input type="checkbox"/> Indian Health Service <input type="checkbox"/> Correctional Facility <input type="checkbox"/> State Specific Plan <input type="checkbox"/> Other Government Insurance <input type="checkbox"/> Commercial Health Insurance <input type="checkbox"/> Health Maintenance Organization <input type="checkbox"/> Non US Plan <input type="checkbox"/> Charitable Care/Foundation Funding (internal) <input type="checkbox"/> Charitable Care/Foundation Funding (external)	<i>(If Secondary not None or missing →)</i>	<input type="checkbox"/> Medicare <input type="checkbox"/> Medicaid <input type="checkbox"/> Military Health <input type="checkbox"/> Indian Health Service <input type="checkbox"/> Correctional Facility <input type="checkbox"/> State Specific Plan <input type="checkbox"/> Other Government Insurance <input type="checkbox"/> Commercial Health Insurance <input type="checkbox"/> Health Maintenance Organization <input type="checkbox"/> Non US Plan <input type="checkbox"/> Charitable Care/Foundation Funding (internal) <input type="checkbox"/> Charitable Care/Foundation Funding (external)
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<i>(If Medicare →)</i>	Primary Payor Medicare Fee for Service:	<input type="checkbox"/> Yes <input type="checkbox"/> No	<i>(If Medicare →)</i>	Secondary Payor Medicare Fee for Service:	<input type="checkbox"/> Yes <input type="checkbox"/> No
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Admission date: (mm/dd/yyyy) \_\_\_ / \_\_\_ / \_\_\_\_\_

Location From which Patient was Admitted:  Home  Other acute care center  
 Other chronic care center  Born at operative center

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"/> Invasive mechanical ventilation to treat cardiorespiratory failure
<input type="checkbox"/> Currently taking steroids for any reason other than treatment of adrenal insufficiency	<input type="checkbox"/> Non-invasive respiratory support to treat cardiorespiratory failure
<input type="checkbox"/> Colostomy present	<input type="checkbox"/> Respiratory Syncytial Virus

<input type="checkbox"/>	Enterostomy of small intestine present	<input type="checkbox"/>	Single lung
<input type="checkbox"/>	Esophagostomy present	<input type="checkbox"/>	Tracheostomy present
<input type="checkbox"/>	Gastrostomy present	<input type="checkbox"/>	Asthma
<input type="checkbox"/>	Hepatic dysfunction	<input type="checkbox"/>	Bronchopulmonary Dysplasia (BPD)
<input type="checkbox"/>	Necrotizing entero-colitis, Treated medically	<input type="checkbox"/>	ICD (AICD) ([automatic] implantable cardioverter defibrillator) present
<input type="checkbox"/>	Necrotizing entero-colitis, Treated surgically	<input type="checkbox"/>	Pacemaker present
<input type="checkbox"/>	Coagulation disorder, Hypercoagulable state	<input type="checkbox"/>	Tobacco use
<input type="checkbox"/>	Coagulation disorder, Hypocoagulable state not secondary to medication (intrinsic hypocoagulable state)	<input type="checkbox"/>	Transferred from another hospital after undergoing cardiac surgical operation at that hospital during this episode of care.
<input type="checkbox"/>	Coagulation disorder, Hypocoagulable state secondary to medication	<input type="checkbox"/>	Admitted from home after having undergone a cardiac surgical operation within the past 30 days
<input type="checkbox"/>	Dyslipidemia	<input type="checkbox"/>	Other preoperative factors (If Other Preoperative Factors, Specify ↓) _____
<input type="checkbox"/>	Endocarditis		
<input type="checkbox"/>	Family History of Coronary Artery Disease		

### DIAGNOSIS

Select <b>ALL</b> diagnosis that apply(↓)	CIRCLE the <b>ONE</b> PRIMARY diagnosis for this operation	Select the <b>ONE</b> FUNDAMENTAL diagnosis for this patient (↓)
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Septal Defects	ASD	<input type="checkbox"/> 10=PFO	<input type="checkbox"/>
		<input type="checkbox"/> 20= ASD, Secundum	<input type="checkbox"/>
		<input type="checkbox"/> 30= ASD, Sinus venosus	<input type="checkbox"/>
		<input type="checkbox"/> 40= ASD, Coronary sinus	<input type="checkbox"/>
		<input type="checkbox"/> 50= ASD, Common atrium (single atrium)	<input type="checkbox"/>
		<input type="checkbox"/> 2150= ASD, Postoperative interatrial communication	NA
	VSD	<input type="checkbox"/> 71= VSD, Type 1 (Subarterial) (Supracristal) (Conal septal defect) (Infundibular)	<input type="checkbox"/>
		<input type="checkbox"/> 73= VSD, Type 2 (Perimembranous) (Paramembranous) (Conoventricular)	<input type="checkbox"/>
		<input type="checkbox"/> 75= VSD, Type 3 (Inlet) (AV canal type)	<input type="checkbox"/>
		<input type="checkbox"/> 77= VSD, Type 4 (Muscular)	<input type="checkbox"/>
		<input type="checkbox"/> 79= VSD, Type: Gerbode type (LV-RA communication)	<input type="checkbox"/>
		<input type="checkbox"/> 80= VSD, Multiple	<input type="checkbox"/>
AV Canal	<input type="checkbox"/> 100= AVC (AVSD), Complete (CAVSD)	<input type="checkbox"/>	
	<input type="checkbox"/> 110= AVC (AVSD), Intermediate (transitional)	<input type="checkbox"/>	
	<input type="checkbox"/> 120= AVC (AVSD), Partial (incomplete) (PAVSD) (ASD, primum)	<input type="checkbox"/>	
AP Window	<input type="checkbox"/> 140= AP window (aortopulmonary window)	<input type="checkbox"/>	
	<input type="checkbox"/> 150= Pulmonary artery origin from ascending aorta (hemitruncus)	<input type="checkbox"/>	
Truncus Arteriosus	<input type="checkbox"/> 160= Truncus arteriosus	<input type="checkbox"/>	
	<input type="checkbox"/> 170= Truncal valve insufficiency	<input type="checkbox"/>	
	<input type="checkbox"/> 2470= Truncal valve stenosis	NA	
	<input type="checkbox"/> 2010= Truncus arteriosus + Interrupted aortic arch	<input type="checkbox"/>	
Pulmonary Venous Anomalies	Partial Anomalous Pulmonary Venous Connection	<input type="checkbox"/> 180= Partial anomalous pulmonary venous connection (PAPVC)	<input type="checkbox"/>
		<input type="checkbox"/> 190= Partial anomalous pulmonary venous connection (PAPVC), scimitar	<input type="checkbox"/>
	Total Anomalous Pulmonary	<input type="checkbox"/> 200=Total anomalous pulmonary venous connection (TAPVC), Type1 (supracardiac)	<input type="checkbox"/>

	Venous Connection	<input type="checkbox"/>	210=Total anomalous pulmonary venous connection (TAPVC), Type 2 (cardiac)	<input type="checkbox"/>
		<input type="checkbox"/>	220=Total anomalous pulmonary venous connection (TAPVC), Type 3 (infracardiac)	<input type="checkbox"/>
		<input type="checkbox"/>	230=Total anomalous pulmonary venous connection (TAPVC), Type 4 (mixed)	<input type="checkbox"/>
<b>Cor Triatriatum</b>		<input type="checkbox"/>	250=Cor triatriatum	<input type="checkbox"/>
<b>Pulmonary Venous Stenosis</b>		<input type="checkbox"/>	260=Pulmonary venous stenosis	<input type="checkbox"/>
		<input type="checkbox"/>	2480=Pulmonary venous stenosis, Acquired	<input type="checkbox"/>
		<input type="checkbox"/>	2490=Pulmonary venous stenosis, Spontaneous	<input type="checkbox"/>
<b>Systemic Venous Anomalies</b>	Anomalous Systemic Venous Connection	<input type="checkbox"/>	270=Systemic venous anomaly	<input type="checkbox"/>
	Systemic venous obstruction	<input type="checkbox"/>	280=Systemic venous obstruction	<input type="checkbox"/>
<b>Right Heart Lesions</b>	Tetralogy of Fallot	<input type="checkbox"/>	290=TOF	<input type="checkbox"/>
		<input type="checkbox"/>	2140=TOF, Pulmonary stenosis	<input type="checkbox"/>
		<input type="checkbox"/>	300=TOF, AVC (AVSD)	<input type="checkbox"/>
		<input type="checkbox"/>	310=TOF, Absent pulmonary valve	<input type="checkbox"/>
	Pulmonary Atresia	<input type="checkbox"/>	320=Pulmonary atresia	<input type="checkbox"/>
		<input type="checkbox"/>	330=Pulmonary atresia, IVS	<input type="checkbox"/>
		<input type="checkbox"/>	340=Pulmonary atresia, VSD (Including TOF, PA)	<input type="checkbox"/>
		<input type="checkbox"/>	350=Pulmonary atresia, VSD-MAPCA	<input type="checkbox"/>
		<input type="checkbox"/>	360=MAPCA(s) (major aortopulmonary collateral[s]) (without PA-VSD)	<input type="checkbox"/>
	Tricuspid Valve Disease and Ebstein's Anomaly	<input type="checkbox"/>	370=Ebstein's anomaly	<input type="checkbox"/>
		<input type="checkbox"/>	380=Tricuspid regurgitation, non-Ebstein's related	<input type="checkbox"/>
		<input type="checkbox"/>	390=Tricuspid stenosis	<input type="checkbox"/>
		<input type="checkbox"/>	400=Tricuspid regurgitation and tricuspid stenosis	<input type="checkbox"/>
		<input type="checkbox"/>	410=Tricuspid valve, Other	<input type="checkbox"/>
	RVOT Obstruction and/or Pulmonary Stenosis	<input type="checkbox"/>	420=Pulmonary stenosis, Valvar	<input type="checkbox"/>
		<input type="checkbox"/>	430=Pulmonary artery stenosis (hypoplasia), Main (trunk)	<input type="checkbox"/>
		<input type="checkbox"/>	440=Pulmonary artery stenosis, Branch, Central (within the hilar bifurcation)	<input type="checkbox"/>
		<input type="checkbox"/>	450=Pulmonary artery stenosis, Branch, Peripheral (at or beyond the hilar bifurcation)	<input type="checkbox"/>
		<input type="checkbox"/>	470=Pulmonary artery, Discontinuous	<input type="checkbox"/>
		<input type="checkbox"/>	490=Pulmonary stenosis, Subvalvar	<input type="checkbox"/>
<input type="checkbox"/>		500=DCRV	<input type="checkbox"/>	
Pulmonary Valve Disease	<input type="checkbox"/>	510=Pulmonary valve, Other	<input type="checkbox"/>	
	<input type="checkbox"/>	530=Pulmonary insufficiency	<input type="checkbox"/>	
	<input type="checkbox"/>	540=Pulmonary insufficiency and pulmonary stenosis	<input type="checkbox"/>	
<b>Shunt failure</b>	Shunt failure	<input type="checkbox"/>	2130=Shunt Failure	NA
<b>Conduit failure</b>	Conduit failure	<input type="checkbox"/>	520=Conduit failure	NA

<b>Left Heart Lesions</b>	Aortic Valve Disease	<input type="checkbox"/>	550=Aortic stenosis, Subvalvar	<input type="checkbox"/>
		<input type="checkbox"/>	2500=Aortic stenosis, Subvalvar, Discrete	<input type="checkbox"/>
		<input type="checkbox"/>	2510=Aortic stenosis, Subvalvar, IHSS	<input type="checkbox"/>
		<input type="checkbox"/>	2520=Aortic stenosis, Subvalvar, Tunnel-like	<input type="checkbox"/>
		<input type="checkbox"/>	560=Aortic stenosis, Valvar	<input type="checkbox"/>
		<input type="checkbox"/>	570=Aortic stenosis, Supravalvar	<input type="checkbox"/>
		<input type="checkbox"/>	590=Aortic valve atresia	<input type="checkbox"/>
		<input type="checkbox"/>	600=Aortic insufficiency	<input type="checkbox"/>



		<input type="checkbox"/> 610=Aortic insufficiency and aortic stenosis	<input type="checkbox"/>
		<input type="checkbox"/> 620=Aortic valve, Other	<input type="checkbox"/>
	Sinus of Valsalva Fistula/Aneurysm	<input type="checkbox"/> 630=Sinus of Valsalva aneurysm	<input type="checkbox"/>
	LV to Aorta Tunnel	<input type="checkbox"/> 640=LV to aorta tunnel	<input type="checkbox"/>
	Mitral Valve Disease	<input type="checkbox"/> 650=Mitral stenosis, Supravalvar mitral ring	<input type="checkbox"/>
		<input type="checkbox"/> 660=Mitral stenosis, Valvar	<input type="checkbox"/>
		<input type="checkbox"/> 670=Mitral stenosis, Subvalvar	<input type="checkbox"/>
		<input type="checkbox"/> 680=Mitral stenosis, Subvalvar, Parachute	<input type="checkbox"/>
		<input type="checkbox"/> 695=Mitral stenosis	<input type="checkbox"/>
		<input type="checkbox"/> 700=Mitral regurgitation and mitral stenosis	<input type="checkbox"/>
		<input type="checkbox"/> 710=Mitral regurgitation	<input type="checkbox"/>
		<input type="checkbox"/> 720=Mitral valve, Other	<input type="checkbox"/>
	Hypoplastic Left Heart Syndrome	<input type="checkbox"/> 730=Hypoplastic left heart syndrome (HLHS)	<input type="checkbox"/>
	Shone's syndrome	<input type="checkbox"/> 2080=Shone's syndrome { <i>CANNOT BE PRIMARY DIAGNOSIS</i> }	<input type="checkbox"/>
<b>Cardiomyopathy</b>		<input type="checkbox"/> 740=Cardiomyopathy (including dilated, restrictive, and hypertrophic)	<input type="checkbox"/>
		<input type="checkbox"/> 750=Cardiomyopathy, End-stage congenital heart disease	<input type="checkbox"/>
<b>Pericardial Disease</b>		<input type="checkbox"/> 760=Pericardial effusion	<input type="checkbox"/>
		<input type="checkbox"/> 770=Pericarditis	<input type="checkbox"/>
		<input type="checkbox"/> 780=Pericardial disease, Other	<input type="checkbox"/>
<b>Single Ventricle</b>		<input type="checkbox"/> 790=Single ventricle, DILV	<input type="checkbox"/>
		<input type="checkbox"/> 800=Single ventricle, DIRV	<input type="checkbox"/>
		<input type="checkbox"/> 810=Single ventricle, Mitral atresia	<input type="checkbox"/>
		<input type="checkbox"/> 820=Single ventricle, Tricuspid atresia	<input type="checkbox"/>
		<input type="checkbox"/> 830=Single ventricle, Unbalanced AV canal	<input type="checkbox"/>
		<input type="checkbox"/> 840=Single ventricle, Heterotaxia syndrome	<input type="checkbox"/>
		<input type="checkbox"/> 850=Single ventricle, Other	<input type="checkbox"/>
		<input type="checkbox"/> 851=Single ventricle + Total anomalous pulmonary venous connection (TAPVC)	<input type="checkbox"/>
<b>Transposition of the Great Arteries</b>	Congenitally Corrected TGA	<input type="checkbox"/> 870=Congenitally corrected TGA	<input type="checkbox"/>
		<input type="checkbox"/> 872=Congenitally corrected TGA, IVS	<input type="checkbox"/>
		<input type="checkbox"/> 874=Congenitally corrected TGA, IVS-LVOTO	<input type="checkbox"/>
		<input type="checkbox"/> 876=Congenitally corrected TGA, VSD	<input type="checkbox"/>
		<input type="checkbox"/> 878=Congenitally corrected TGA, VSD-LVOTO	<input type="checkbox"/>
	Transposition of the Great Arteries	<input type="checkbox"/> 880=TGA, IVS	<input type="checkbox"/>
		<input type="checkbox"/> 890=TGA, IVS-LVOTO	<input type="checkbox"/>
		<input type="checkbox"/> 900=TGA, VSD	<input type="checkbox"/>
		<input type="checkbox"/> 910=TGA, VSD-LVOTO	<input type="checkbox"/>
<b>DORV</b>		<input type="checkbox"/> 930=DORV, VSD type	<input type="checkbox"/>
		<input type="checkbox"/> 940=DORV, TOF type	<input type="checkbox"/>
		<input type="checkbox"/> 950=DORV, TGA type	<input type="checkbox"/>
		<input type="checkbox"/> 960=DORV, Remote VSD (uncommitted VSD)	<input type="checkbox"/>
		<input type="checkbox"/> 2030=DORV + AVSD (AV Canal)	<input type="checkbox"/>
		<input type="checkbox"/> 975=DORV, IVS	<input type="checkbox"/>
<b>DOLV</b>		<input type="checkbox"/> 980=DOLV	<input type="checkbox"/>
<b>Thoracic Arteries and Veins</b>		<input type="checkbox"/> 990=Coarctation of aorta	<input type="checkbox"/>
		<input type="checkbox"/> 1000=Aortic arch hypoplasia	<input type="checkbox"/>

	Coarctation of Aorta and Aortic arch hypoplasia	<input type="checkbox"/>	92=VSD + Aortic arch hypoplasia	<input type="checkbox"/>
		<input type="checkbox"/>	94=VSD + Coarctation of aorta	<input type="checkbox"/>
	Coronary Artery Anomalies	<input type="checkbox"/>	1010=Coronary artery anomaly, Anomalous aortic origin of coronary artery (AAOCA)	<input type="checkbox"/>
		<input type="checkbox"/>	1020=Coronary artery anomaly, Anomalous pulmonary origin (includes ALCAPA)	<input type="checkbox"/>
		<input type="checkbox"/>	1030=Coronary artery anomaly, Fistula	<input type="checkbox"/>
		<input type="checkbox"/>	1040=Coronary artery anomaly, Aneurysm	<input type="checkbox"/>
		<input type="checkbox"/>	2420=Coronary artery anomaly, Ostial atresia	<input type="checkbox"/>
	Interrupted Arch	<input type="checkbox"/>	1050=Coronary artery anomaly, Other	<input type="checkbox"/>
<input type="checkbox"/>		1070=Interrupted aortic arch	<input type="checkbox"/>	
	<input type="checkbox"/>	2020=Interrupted aortic arch + VSD	<input type="checkbox"/>	
	<input type="checkbox"/>	2000=Interrupted aortic arch + AP window (aortopulmonary window)	<input type="checkbox"/>	
Patent Ductus Arteriosus	<input type="checkbox"/>	1080=Patent ductus arteriosus	<input type="checkbox"/>	
Vascular rings and Slings	<input type="checkbox"/>	1090=Vascular ring	<input type="checkbox"/>	
	<input type="checkbox"/>	1100=Pulmonary artery sling	<input type="checkbox"/>	
Aortic Aneurysm	<input type="checkbox"/>	1110=Aortic aneurysm (including pseudoaneurysm)	<input type="checkbox"/>	
Aortic Dissection	<input type="checkbox"/>	1120=Aortic dissection	<input type="checkbox"/>	
<b>Thoracic and Mediastinal Disease</b>	Lung Disease	<input type="checkbox"/>	1130=Lung disease, Benign	<input type="checkbox"/>
		<input type="checkbox"/>	1140=Lung disease, Malignant	<input type="checkbox"/>
	Tracheal	<input type="checkbox"/>	1160=Tracheal stenosis	<input type="checkbox"/>
		<input type="checkbox"/>	2430=Tracheomalacia	<input type="checkbox"/>
		<input type="checkbox"/>	1170=Airway disease, Other	<input type="checkbox"/>
	Pleural Disease	<input type="checkbox"/>	1430=Pleural disease, Benign	<input type="checkbox"/>
		<input type="checkbox"/>	1440=Pleural disease, Malignant	<input type="checkbox"/>
		<input type="checkbox"/>	1450=Pneumothorax	<input type="checkbox"/>
		<input type="checkbox"/>	1460=Pleural effusion	<input type="checkbox"/>
		<input type="checkbox"/>	1470=Chylothorax	<input type="checkbox"/>
		<input type="checkbox"/>	1480=Empyema	<input type="checkbox"/>
	Esophageal Disease	<input type="checkbox"/>	1490=Esophageal disease, Benign	<input type="checkbox"/>
		<input type="checkbox"/>	1500=Esophageal disease, Malignant	<input type="checkbox"/>
	Mediastinal Disease	<input type="checkbox"/>	1505=Mediastinal disease	<input type="checkbox"/>
		<input type="checkbox"/>	1510=Mediastinal disease, Benign	<input type="checkbox"/>
<input type="checkbox"/>		1520=Mediastinal disease, Malignant	<input type="checkbox"/>	
Diaphragmatic Disease	<input type="checkbox"/>	1540=Diaphragm paralysis	<input type="checkbox"/>	
	<input type="checkbox"/>	1550=Diaphragm disease, Other	<input type="checkbox"/>	
<b>Thoracic and Mediastinal Disease</b>	Chest Wall	<input type="checkbox"/>	2160=Rib tumor, Benign	<input type="checkbox"/>
		<input type="checkbox"/>	2170=Rib tumor, Malignant	<input type="checkbox"/>
		<input type="checkbox"/>	2180=Rib tumor, Metastatic	<input type="checkbox"/>
		<input type="checkbox"/>	2190=Sternal tumor, Benign	<input type="checkbox"/>
		<input type="checkbox"/>	2200=Sternal tumor, Malignant	<input type="checkbox"/>
		<input type="checkbox"/>	2210=Sternal tumor, Metastatic	<input type="checkbox"/>
Pectus Excavatum, Carinatum	<input type="checkbox"/>	2220=Pectus carinatum	<input type="checkbox"/>	
	<input type="checkbox"/>	2230=Pectus excavatum	<input type="checkbox"/>	
Thoracic Outlet	<input type="checkbox"/>	2240=Thoracic outlet syndrome	<input type="checkbox"/>	
<b>Electrophysiological</b>	<input type="checkbox"/>	1180=Arrhythmia	<input type="checkbox"/>	
	<input type="checkbox"/>	2440=Arrhythmia, Atrial, Atrial fibrillation	<input type="checkbox"/>	

	<input type="checkbox"/> 2450=Arrhythmia, Atrial, Atrial flutter	<input type="checkbox"/>
	<input type="checkbox"/> 2460=Arrhythmia, Atrial, Other	<input type="checkbox"/>
	<input type="checkbox"/> 2050=Arrhythmia, Junctional	<input type="checkbox"/>
	<input type="checkbox"/> 2060=Arrhythmia, Ventricular	<input type="checkbox"/>
	<input type="checkbox"/> 1185=Arrhythmia, Heart block	<input type="checkbox"/>
	<input type="checkbox"/> 1190=Arrhythmia, Heart block, Acquired	<input type="checkbox"/>
	<input type="checkbox"/> 1200=Arrhythmia, Heart block, Congenital	<input type="checkbox"/>
	<input type="checkbox"/> 1220=Arrhythmia, Pacemaker, Indication for replacement	NA
	<input type="checkbox"/> 2530= Short QT syndrome	<input type="checkbox"/>
	<input type="checkbox"/> 2540= Long QT syndrome (Ward Romano syndrome)	<input type="checkbox"/>
	<input type="checkbox"/> 2550= Wolff-Parkinson-White syndrome (WPW syndrome)	<input type="checkbox"/>
<b>Miscellaneous, Other</b>	<input type="checkbox"/> 1230=Atrial Isomerism, Left {CANNOT BE PRIMARY DIAGNOSIS}	NA
	<input type="checkbox"/> 1240=Atrial Isomerism, Right {CANNOT BE PRIMARY DIAGNOSIS}	NA
	<input type="checkbox"/> 2090=Dextrocardia {CANNOT BE PRIMARY DIAGNOSIS}	NA
	<input type="checkbox"/> 2100=Levocardia {CANNOT BE PRIMARY DIAGNOSIS}	NA
	<input type="checkbox"/> 2110=Mesocardia {CANNOT BE PRIMARY DIAGNOSIS}	NA
	<input type="checkbox"/> 2120=Situs inversus {CANNOT BE PRIMARY DIAGNOSIS}	NA
	<input type="checkbox"/> 1250=Aneurysm, Ventricular, Right (including pseudoaneurysm)	<input type="checkbox"/>
	<input type="checkbox"/> 1260=Aneurysm, Ventricular, Left (including pseudoaneurysm)	<input type="checkbox"/>
	<input type="checkbox"/> 1270=Aneurysm, Pulmonary artery	<input type="checkbox"/>
	<input type="checkbox"/> 1280=Aneurysm, Other	<input type="checkbox"/>
	<input type="checkbox"/> 1290=Hypoplastic RV	<input type="checkbox"/>
	<input type="checkbox"/> 1300=Hypoplastic LV	<input type="checkbox"/>
	<input type="checkbox"/> 2070=Postoperative bleeding	NA
	<input type="checkbox"/> 1310=Mediastinitis	<input type="checkbox"/>
	<input type="checkbox"/> 1320=Endocarditis	<input type="checkbox"/>
	<input type="checkbox"/> 1325=Rheumatic heart disease {CANNOT BE PRIMARY DIAGNOSIS}	<input type="checkbox"/>
	<input type="checkbox"/> 1330=Prosthetic valve failure	NA
	<input type="checkbox"/> 1340=Myocardial infarction	<input type="checkbox"/>
	<input type="checkbox"/> 1350=Cardiac tumor	<input type="checkbox"/>
	<input type="checkbox"/> 1360=Pulmonary AV fistula	<input type="checkbox"/>
	<input type="checkbox"/> 1370=Pulmonary embolism	<input type="checkbox"/>
	<input type="checkbox"/> 1385=Pulmonary vascular obstructive disease	<input type="checkbox"/>
	<input type="checkbox"/> 1390=Pulmonary vascular obstructive disease (Eisenmenger's)	<input type="checkbox"/>
	<input type="checkbox"/> 1400=Primary pulmonary hypertension	<input type="checkbox"/>
	<input type="checkbox"/> 1410=Persistent fetal circulation	<input type="checkbox"/>
	<input type="checkbox"/> 1420=Meconium aspiration	<input type="checkbox"/>
	<input type="checkbox"/> 2250=Kawasaki Disease	<input type="checkbox"/>
	<input type="checkbox"/> 1560=Cardiac, Other	<input type="checkbox"/>
	<input type="checkbox"/> 1570=Thoracic and/or mediastinal, Other	<input type="checkbox"/>
	<input type="checkbox"/> 1580=Peripheral vascular, Other	<input type="checkbox"/>
	<input type="checkbox"/> 2260=Complication of cardiovascular catheterization procedure	NA
	<input type="checkbox"/> 2270=Complication of cardiovascular catheterization procedure, Device embolization	NA
	<input type="checkbox"/> 2280=Complication of cardiovascular catheterization procedure, Device malfunction	NA
<input type="checkbox"/> 2290=Complication of cardiovascular catheterization procedure, Perforation	NA	
<input type="checkbox"/> 2300=Complication of interventional radiology procedure	NA	

<input type="checkbox"/>	2310=Complication of interventional radiology procedure, Device embolization	NA
<input type="checkbox"/>	2320=Complication of interventional radiology procedure, Device malfunction	NA
<input type="checkbox"/>	2330=Complication of interventional radiology procedure, Perforation	NA
<input type="checkbox"/>	2340=Foreign body, Intracardiac foreign body	NA
<input type="checkbox"/>	2350=Foreign body, Intravascular foreign body	NA
<input type="checkbox"/>	2360=Open sternum with closed skin	NA
<input type="checkbox"/>	2370=Open sternum with open skin (includes membrane placed to close skin)	NA
<input type="checkbox"/>	2380=Retained sternal wire causing irritation	NA
<input type="checkbox"/>	2390=Syncope	NA
<input type="checkbox"/>	2400=Trauma, Blunt	<input type="checkbox"/>
<input type="checkbox"/>	2410=Trauma, Penetrating	<input type="checkbox"/>
<input type="checkbox"/>	2560=Cardio-respiratory failure not secondary to known structural heart disease	<input type="checkbox"/>
<input type="checkbox"/>	2570=Myocarditis	<input type="checkbox"/>
<input type="checkbox"/>	2580=Common AV valve insufficiency	<input type="checkbox"/>
<input type="checkbox"/>	2590=Protein-losing enteropathy	<input type="checkbox"/>
<input type="checkbox"/>	2600=Plastic bronchitis	<input type="checkbox"/>
<input type="checkbox"/>	7000=Normal heart	<input type="checkbox"/>
<input type="checkbox"/>	7777=Miscellaneous, Other	<input type="checkbox"/>

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

<b>Septal Defects</b>	ASD	<input type="checkbox"/>	4010=Status post - PFO, Primary closure
		<input type="checkbox"/>	4020=Status post - ASD repair, Primary closure
		<input type="checkbox"/>	4030=Status post - ASD repair, Patch
		<input type="checkbox"/>	4040=Status post - ASD repair, Device
		<input type="checkbox"/>	6110=Status post - ASD repair, Patch + PAPVC repair
		<input type="checkbox"/>	4050=Status post - ASD, Common atrium (single atrium), Septation
		<input type="checkbox"/>	4060=Status post - ASD creation/enlargement
		<input type="checkbox"/>	4070=Status post - ASD partial closure
		<input type="checkbox"/>	4080=Status post - Atrial septal fenestration
		<input type="checkbox"/>	4085=Status post - Atrial fenestration closure
	VSD	<input type="checkbox"/>	4100=Status post - VSD repair, Primary closure
		<input type="checkbox"/>	4110=Status post - VSD repair, Patch
		<input type="checkbox"/>	4120=Status post - VSD repair, Device
		<input type="checkbox"/>	4130=Status post - VSD, Multiple, Repair
		<input type="checkbox"/>	4140=Status post - VSD creation/enlargement
	AV Canal	<input type="checkbox"/>	4150=Status post - Ventricular septal fenestration
		<input type="checkbox"/>	4170=Status post - AVC (AVSD) repair, Complete (CAVSD)
		<input type="checkbox"/>	4180=Status post - AVC (AVSD) repair, Intermediate (Transitional)
		<input type="checkbox"/>	4190=Status post - AVC (AVSD) repair, Partial (Incomplete) (PAVSD)
		<input type="checkbox"/>	6300=Status post - Valvuloplasty, Common atrioventricular valve
AP Window	<input type="checkbox"/>	6250=Status post - Valvuloplasty converted to valve replacement in the same operation, Common atrioventricular valve	
	<input type="checkbox"/>	6230=Status post - Valve replacement, Common atrioventricular valve	
Truncus Arteriosus	<input type="checkbox"/>	4210=Status post - AP window repair	
	<input type="checkbox"/>	4220=Status post - Pulmonary artery origin from ascending aorta (hemitruncus) repair	
		<input type="checkbox"/>	4230=Status post - Truncus arteriosus repair
		<input type="checkbox"/>	4240=Status post - Valvuloplasty, Truncal valve

		<input type="checkbox"/>	6290=Status post - Valvuloplasty converted to valve replacement in the same operation, Truncal valve	
		<input type="checkbox"/>	4250=Status post - Valve replacement, Truncal valve	
		<input type="checkbox"/>	6220=Status post - Truncus + Interrupted aortic arch repair (IAA) repair	
<b>Pulmonary Venous Anomalies</b>	Partial Anomalous Pulmonary Venous Connection	<input type="checkbox"/>	4260=Status post - PAPVC repair	
		<input type="checkbox"/>	4270=Status post - PAPVC, Scimitar, Repair	
		<input type="checkbox"/>	6120=Status post - PAPVC repair, Baffle redirection to left atrium with systemic vein translocation (Warden) (SVC sewn to right atrial appendage)	
	Total Anomalous Pulmonary Venous Connection	<input type="checkbox"/>	4280=Status post - TAPVC repair	
		<input type="checkbox"/>	6200=Status post - TAPVC repair + Shunt - systemic-to-pulmonary	
<b>Cor Triatriatum</b>		<input type="checkbox"/>	4290=Status post - Cor triatriatum repair	
<b>Pulmonary Venous Stenosis</b>		<input type="checkbox"/>	4300=Status post - Pulmonary venous stenosis repair	
<b>Systemic Venous Anomalies</b>	Anomalous Systemic Venous Connection	<input type="checkbox"/>	4310=Status post - Atrial baffle procedure (non-Mustard, non-Senning)	
		<input type="checkbox"/>	4330=Status post - Anomalous systemic venous connection repair	
		Systemic venous obstruction	<input type="checkbox"/>	4340=Status post - Systemic venous stenosis repair
<b>Right Heart Lesions</b>	Tetralogy of Fallot	<input type="checkbox"/>	4350=Status post - TOF repair, No ventriculotomy	
		<input type="checkbox"/>	4360=Status post - TOF repair, Ventriculotomy, Nontransannular patch	
		<input type="checkbox"/>	4370=Status post - TOF repair, Ventriculotomy, Transannular patch	
		<input type="checkbox"/>	7330=Status post - TOF repair, Ventriculotomy, Transannular patch, plus native valve reconstruction	
		<input type="checkbox"/>	7340=Status post - TOF repair, Ventriculotomy, Transannular patch, with monocusp or other surgically fashioned RVOT valve	
		<input type="checkbox"/>	4380=Status post - TOF repair, RV-PA conduit	
		<input type="checkbox"/>	4390=Status post - TOF - AVC (AVSD) repair	
		<input type="checkbox"/>	4400=Status post - TOF - Absent pulmonary valve repair	
		Pulmonary Atresia/VSD	<input type="checkbox"/>	4420=Status post - Pulmonary atresia - VSD (including TOF, PA) repair
			<input type="checkbox"/>	6700=Status post - Pulmonary atresia - VSD - MAPCA repair, Complete single stage repair (1-stage that includes bilateral pulmonary unifocalization + VSD closure + RV to PA connection [with or without conduit])
			<input type="checkbox"/>	6710=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"/>	6720=Status post - Pulmonary atresia - VSD - MAPCA repair, Status post prior incomplete unifocalization (includes completion of pulmonary unifocalization + VSD closure + RV to PA connection [with or without conduit])
			<input type="checkbox"/>	6730=Status post - Unifocalization MAPCA(s), Bilateral pulmonary unifocalization - Complete unifocalization (all usable MAPCA[s] are incorporated)
			<input type="checkbox"/>	6740=Status post - Unifocalization MAPCA(s), Bilateral pulmonary unifocalization - Incomplete unifocalization (not all usable MAPCA[s] are incorporated)
			<input type="checkbox"/>	6750=Status post - Unifocalization MAPCA(s), Unilateral pulmonary unifocalization
			<input type="checkbox"/>	4440=Status post - Unifocalization MAPCA(s)
			<input type="checkbox"/>	4450=Status post - Occlusion of MAPCA(s)
			<input type="checkbox"/>	4460=Status post - Valvuloplasty, Tricuspid

	Tricuspid Valve Disease and Ebstein's Anomaly	<input type="checkbox"/> 6280=Status post - Valvuloplasty converted to valve replacement in the same operation, Tricuspid <input type="checkbox"/> 4465=Status post - Ebstein's repair <input type="checkbox"/> 4470=Status post - Valve replacement, Tricuspid (TVR) <input type="checkbox"/> 4480=Status post - Valve closure, Tricuspid (exclusion, univentricular approach) <input type="checkbox"/> 4490=Status post - Valve excision, Tricuspid (without replacement) <input type="checkbox"/> 4500=Status post - Valve surgery, Other, Tricuspid
	RVOT Obstruction, IVS Pulmonary Stenosis	<input type="checkbox"/> 4510=Status post - RVOT procedure <input type="checkbox"/> 4520=Status post - 1 1/2 ventricular repair <input type="checkbox"/> 4530=Status post - PA, reconstruction (plasty), Main (trunk) <input type="checkbox"/> 4540=Status post - PA, reconstruction (plasty), Branch, Central (within the hilar bifurcation) <input type="checkbox"/> 4550=Status post - PA, reconstruction (plasty), Branch, Peripheral (at or beyond the first lobar branch) <input type="checkbox"/> 7350=Status post - PA, reconstruction (plasty), Branch, Peripheral (at or beyond the first lobar branch, proximal to first segmental branch) <input type="checkbox"/> 7360=Status post - PA, reconstruction (plasty), Branch, Peripheral (at or beyond the first lobar branch, beyond the first segmental branch) <input type="checkbox"/> 4570=Status post - DCRV repair <input type="checkbox"/> 7370=Status post - RV Rehabilitation, Endocardial Resection
	Pulmonary Valve Disease	<input type="checkbox"/> 4590=Status post - Valvuloplasty, Pulmonic <input type="checkbox"/> 6270=Status post - Valvuloplasty converted to valve replacement in the same operation, Pulmonic <input type="checkbox"/> 4600=Status post - Valve replacement, Pulmonic (PVR) <input type="checkbox"/> 4630=Status post - Valve excision, Pulmonary (without replacement) <input type="checkbox"/> 4640=Status post - Valve closure, Semilunar <input type="checkbox"/> 4650=Status post - Valve surgery, Other, Pulmonic
<b>Conduit operations</b>	Conduit operations	<input type="checkbox"/> 4610=Status post - Conduit placement, RV to PA <input type="checkbox"/> 4620=Status post - Conduit placement, LV to PA <input type="checkbox"/> 5774=Status post - Conduit placement, Ventricle to aorta <input type="checkbox"/> 5772=Status post - Conduit placement, Other
	Conduit Stenosis / Insufficiency	<input type="checkbox"/> 4580=Status post - Conduit reoperation
<b>Left Heart Lesions</b>	Aortic Valve Disease	<input type="checkbox"/> 4660=Status post - Valvuloplasty, Aortic <input type="checkbox"/> 6240=Status post - Valvuloplasty converted to valve replacement in the same operation, Aortic <input type="checkbox"/> 6310=Status post - Valvuloplasty converted to valve replacement in the same operation, Aortic – with Ross procedure <input type="checkbox"/> 6320=Status post - Valvuloplasty converted to valve replacement in the same operation, Aortic – with Ross-Konno procedure <input type="checkbox"/> 4670=Status post - Valve replacement, Aortic (AVR) <input type="checkbox"/> 4680=Status post - Valve replacement, Aortic (AVR), Mechanical <input type="checkbox"/> 4690=Status post - Valve replacement, Aortic (AVR), Bioprosthetic <input type="checkbox"/> 4700=Status post - Valve replacement, Aortic (AVR), Homograft <input type="checkbox"/> 4715=Status post - Aortic root replacement, Bioprosthetic <input type="checkbox"/> 4720=Status post - Aortic root replacement, Mechanical <input type="checkbox"/> 4730=Status post - Aortic root replacement, Homograft <input type="checkbox"/> 4735=Status post - Aortic root replacement, Valve sparing <input type="checkbox"/> 4740=Status post - Ross procedure <input type="checkbox"/> 4750=Status post - Konno procedure <input type="checkbox"/> 4760=Status post - Ross-Konno procedure <input type="checkbox"/> 4770=Status post - Other annular enlargement procedure

	<input type="checkbox"/> 4780=Status post - Aortic stenosis, Subvalvar, Repair <input type="checkbox"/> 6100=Status post - Aortic stenosis, Subvalvar, Repair, With myectomy for IHSS <input type="checkbox"/> 4790=Status post - Aortic stenosis, Supravalvar, Repair <input type="checkbox"/> 4800=Status post - Valve surgery, Other, Aortic <input type="checkbox"/> 7380=Status post - Extended Ventricular Septoplasty (modified Konno, VSD creation and patch enlargement of LVOT, sparing aortic valve) for tunnel type sub aortic stenosis
Sinus of Valsalva Aneurysm	<input type="checkbox"/> 4810=Status post - Sinus of Valsalva, Aneurysm repair
LV to Aorta Tunnel	<input type="checkbox"/> 4820=Status post - LV to aorta tunnel repair
Mitral Valve Disease	<input type="checkbox"/> 4830=Status post - Valvuloplasty, Mitral <input type="checkbox"/> 6260=Status post - Valvuloplasty converted to valve replacement in the same operation, Mitral <input type="checkbox"/> 4840=Status post - Mitral stenosis, Supravalvar mitral ring repair <input type="checkbox"/> 4850=Status post - Valve replacement, Mitral (MVR) <input type="checkbox"/> 4860=Status post - Valve surgery, Other, Mitral
Hypoplastic Left Heart and Related malformations	<input type="checkbox"/> 4870=Status post - Norwood procedure <input type="checkbox"/> 4880=Status post - HLHS biventricular repair <input type="checkbox"/> 7390=Status post - LV Endocardial Fibroelastosis resection <input type="checkbox"/> 6755=Status post - Conduit insertion right ventricle to pulmonary artery + Intraventricular tunnel left ventricle to neoaorta + arch reconstruction (Rastelli and Norwood type arch reconstruction) (Yasui)
<b>Hybrid</b>	<input type="checkbox"/> 6160=Status post - Hybrid Approach "Stage 1", Application of RPA & LPA bands <input type="checkbox"/> 6170=Status post - Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA) <input type="checkbox"/> 6180=Status post - Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA) + application of RPA & LPA bands <input type="checkbox"/> 6140=Status post - Hybrid approach "Stage 2", Aortopulmonary amalgamation + Superior Cavopulmonary anastomosis(es) + PA Debanding + Aortic arch repair (Norwood [Stage 1] + Superior Cavopulmonary anastomosis(es) + PA Debanding) <input type="checkbox"/> 6150=Status post - Hybrid approach "Stage 2", Aortopulmonary amalgamation + Superior Cavopulmonary anastomosis(es) + PA Debanding + Without aortic arch repair <input type="checkbox"/> 6760=Status post – Hybrid Approach, Transcardiac balloon dilatation <input type="checkbox"/> 6770=Status post – Hybrid Approach, Transcardiac transcatheter device placement
<b>Cardiomyopathy</b>	<input type="checkbox"/> 1590=Status post - Transplant, Heart <input type="checkbox"/> 1610=Status post - Transplant, Heart and lung <input type="checkbox"/> 4910=Status post - Partial left ventriculectomy (LV volume reduction surgery) (Batista)
<b>Pericardial Disease</b>	<input type="checkbox"/> 4920=Status post - Pericardial drainage procedure <input type="checkbox"/> 4930=Status post - Pericardiectomy <input type="checkbox"/> 4940=Status post - Pericardial procedure, Other
<b>Single Ventricle</b>	<input type="checkbox"/> 4950=Status post - Fontan, Atrio-pulmonary connection <input type="checkbox"/> 4960=Status post - Fontan, Atrio-ventricular connection <input type="checkbox"/> 4970=Status post - Fontan, TCPC, Lateral tunnel, Fenestrated <input type="checkbox"/> 4980=Status post - Fontan, TCPC, Lateral tunnel, Nonfenestrated <input type="checkbox"/> 5000=Status post - Fontan, TCPC, External conduit, Fenestrated <input type="checkbox"/> 5010=Status post - Fontan, TCPC, External conduit, Nonfenestrated <input type="checkbox"/> 6780=Status post - Fontan, TCPC, Intra/extracardiac conduit, Fenestrated

		<input type="checkbox"/> 6790=Status post - Fontan, TCPC, Intra/extracardiac conduit, Nonfenestrated <input type="checkbox"/> 7310=Status post - Fontan, TCPC, External conduit, hepatic veins to pulmonary artery, Fenestrated <input type="checkbox"/> 7320=Status post - Fontan, TCPC, External conduit, hepatic veins to pulmonary artery, Nonfenestrated <input type="checkbox"/> 5025=Status post - Fontan revision or conversion (Re-do Fontan) <input type="checkbox"/> 5030=Status post - Fontan, Other <input type="checkbox"/> 6340=Status post - Fontan + Atrioventricular valvuloplasty <input type="checkbox"/> 5035=Status post - Ventricular septation
<b>Transposition of the Great Arteries</b>	Congenitally Corrected TGA	<input type="checkbox"/> 5050=Status post - Congenitally corrected TGA repair, Atrial switch and ASO (double switch) <input type="checkbox"/> 5060=Status post - Congenitally corrected TGA repair, Atrial switch and Rastelli <input type="checkbox"/> 5070=Status post - Congenitally corrected TGA repair, VSD closure <input type="checkbox"/> 5080=Status post - Congenitally corrected TGA repair, VSD closure and LV to PA conduit <input type="checkbox"/> 5090=Status post - Congenitally corrected TGA repair, Other
	Transposition of the Great Arteries	<input type="checkbox"/> 5110=Status post - Arterial switch operation (ASO) <input type="checkbox"/> 5120=Status post - Arterial switch operation (ASO) and VSD repair <input type="checkbox"/> 5123=Status post - Arterial switch procedure + Aortic arch repair <input type="checkbox"/> 5125=Status post - Arterial switch procedure and VSD repair + Aortic arch repair <input type="checkbox"/> 5130=Status post - Senning <input type="checkbox"/> 5140=Status post - Mustard <input type="checkbox"/> 5145=Status post - Atrial baffle procedure, Mustard or Senning revision <input type="checkbox"/> 5150=Status post - Rastelli <input type="checkbox"/> 5160=Status post - REV <input type="checkbox"/> 6190=Status post - Aortic root translocation over left ventricle (Including Nikaidoh procedure) <input type="checkbox"/> 6210=Status post - TGA, Other procedures (Kawashima, LV-PA conduit, other) <input type="checkbox"/> 7400=Status post - Double root translocation
<b>DORV</b>		<input type="checkbox"/> 5180=Status post - DORV, Intraventricular tunnel repair <input type="checkbox"/> 7410=Status post - DORV repair, No Ventriculotomy <input type="checkbox"/> 7420=Status post - DORV repair, Ventriculotomy, Nontransannular patch <input type="checkbox"/> 7430=Status post - DORV repair, Ventriculotomy, Transannular patch <input type="checkbox"/> 7440=Status post - DORV repair, RV-PA conduit <input type="checkbox"/> 7450=Status post - DORV - AVC (AVSD) repair
<b>DOLV</b>		<input type="checkbox"/> 5200=Status post - DOLV repair
<b>Thoracic Arteries and Veins</b>	Coarctation of Aorta and Aortic arch hypoplasia	<input type="checkbox"/> 5210=Status post - Coarctation repair, End to end <input type="checkbox"/> 5220=Status post - Coarctation repair, End to end, Extended <input type="checkbox"/> 7460=Status post - Coarctation repair, Descending aorta anastomosed to Ascending aorta <input type="checkbox"/> 5230=Status post - Coarctation repair, Subclavian flap <input type="checkbox"/> 5240=Status post - Coarctation repair, Patch aortoplasty <input type="checkbox"/> 5250=Status post - Coarctation repair, Interposition graft <input type="checkbox"/> 7470=Status post - Coarctation repair, Extra-anatomic Bypass graft <input type="checkbox"/> 5260=Status post - Coarctation repair, Other <input type="checkbox"/> 5275=Status post - Coarctation repair + VSD repair <input type="checkbox"/> 5280=Status post - Aortic arch repair <input type="checkbox"/> 5285=Status post - Aortic arch repair + VSD repair
		<input type="checkbox"/> 5290=Status post - Coronary artery fistula ligation



	Coronary Artery Anomalies	<input type="checkbox"/>	5291=Status post - Anomalous origin of coronary artery from pulmonary artery repair
		<input type="checkbox"/>	5300=Status post - Coronary artery bypass
		<input type="checkbox"/>	5305=Status post - Anomalous aortic origin of coronary artery (AAOCA) repair
		<input type="checkbox"/>	5310=Status post - Coronary artery procedure, Other
	Interrupted Arch	<input type="checkbox"/>	5320=Status post - Interrupted aortic arch repair
	Patent Ductus Arteriosus	<input type="checkbox"/>	5330=Status post - PDA closure, Surgical
		<input type="checkbox"/>	5340=Status post - PDA closure, Device
Vascular Rings and Slings		<input type="checkbox"/>	5360=Status post - Vascular ring repair
		<input type="checkbox"/>	5365=Status post - Aortopexy
		<input type="checkbox"/>	5370=Status post - Pulmonary artery sling repair
Aortic Aneurysm	<input type="checkbox"/>	5380=Status post - Aortic aneurysm repair	
Aortic Dissection	<input type="checkbox"/>	5390=Status post - Aortic dissection repair	
<b>Thoracic and Mediastinal Disease</b>	Lung Disease	<input type="checkbox"/>	5400=Status post - Lung biopsy
		<input type="checkbox"/>	1600=Status post - Transplant, lung(s)
		<input type="checkbox"/>	5420=Status post - Lung procedure, Other
	Tracheal Stenosis	<input type="checkbox"/>	5440=Status post - Tracheal procedure
	Chest Wall	<input type="checkbox"/>	6800=Status post - Muscle flap, Trunk (i.e. intercostal, pectus, or serratus muscle)
		<input type="checkbox"/>	6810=Status post - Muscle flap, Trunk (i.e. latissimus dorsi)
		<input type="checkbox"/>	6820=Status post - Removal, Sternal wire
		<input type="checkbox"/>	6830=Status post - Rib excision, Complete
		<input type="checkbox"/>	6840=Status post - Rib excision, Partial
		<input type="checkbox"/>	6850=Status post - Sternal fracture, Open treatment
		<input type="checkbox"/>	6860=Status post - Sternal resection, Radical resection of the sternum
		<input type="checkbox"/>	6870=Status post - Sternal resection, Radical resection of the sternum with mediastinal lymphadenectomy
		<input type="checkbox"/>	6880=Status post - Tumor of chest wall, Excision including ribs
		<input type="checkbox"/>	6890=Status post - Tumor of chest wall, Excision including ribs, With reconstruction
		<input type="checkbox"/>	6900=Status post - Tumor of soft tissue of thorax, Excision of deep subfascial or intramuscular tumor
	<input type="checkbox"/>	6910=Status post - Tumor of soft tissue of thorax, Excision of subcutaneous tumor	
	<input type="checkbox"/>	6920=Status post - Tumor of soft tissue of thorax, Radical resection	
	Neck	<input type="checkbox"/>	6930=Status post - Hyoid myotomy and suspension
		<input type="checkbox"/>	6940=Status post - Muscle flap, Neck
		<input type="checkbox"/>	6950=Status post - Procedure on neck
<input type="checkbox"/>		6960=Status post - Tumor of soft tissue of neck, Excision of deep subfascial or intramuscular tumor	
<input type="checkbox"/>		6970=Status post - Tumor of soft tissue of neck, Excision of subcutaneous tumor	
<input type="checkbox"/>		6980=Status post - Tumor of soft tissue of neck, Radical resection	
Pectus Excavatum, Carinatum	<input type="checkbox"/>	6990=Status post - Pectus bar removal	
	<input type="checkbox"/>	7005=Status post - Pectus bar repositioning	
	<input type="checkbox"/>	7010=Status post - Pectus repair, Minimally invasive repair (Nuss), With thoracoscopy	
	<input type="checkbox"/>	7020=Status post - Pectus repair, Minimally invasive repair (Nuss), Without thoracoscopy	
	<input type="checkbox"/>	7030=Status post - Pectus repair, Open repair	
Thoracic Outlet	<input type="checkbox"/>	7040=Status post - Division of scalenus anticus, With resection of a cervical rib	
	<input type="checkbox"/>	7050=Status post - Division of scalenus anticus, Without resection of a cervical rib	

		<input type="checkbox"/> 7060=Status post - Rib excision, Excision of a cervical rib <input type="checkbox"/> 7070=Status post - Rib excision, Excision of a cervical rib, With sympathectomy <input type="checkbox"/> 7080=Status post - Rib excision, Excision of first rib <input type="checkbox"/> 7090=Status post - Rib excision, Excision of first rib, With sympathectomy
	Thorax	<input type="checkbox"/> 7100=Status post - Procedure on thorax
<b>Electrophysiological</b>		<input type="checkbox"/> 5450=Status post - Pacemaker implantation, Permanent <input type="checkbox"/> 5460=Status post - Pacemaker procedure <input type="checkbox"/> 6350=Status post - Explantation of pacing system <input type="checkbox"/> 5470=Status post - ICD (AICD) implantation <input type="checkbox"/> 5480=Status post - ICD (AICD) ([automatic] implantable cardioverter defibrillator) procedure <input type="checkbox"/> 5490=Status post - Arrhythmia surgery - atrial, Surgical Ablation <input type="checkbox"/> 5500=Status post - Arrhythmia surgery - ventricular, Surgical Ablation
<b>Interventional Cardiology Procedures</b>		<input type="checkbox"/> 6500=Status post - Cardiovascular catheterization procedure, Diagnostic <input type="checkbox"/> 6520=Status post - Cardiovascular catheterization procedure, Diagnostic, Angiographic data obtained <input type="checkbox"/> 6550=Status post - Cardiovascular catheterization procedure, Diagnostic, Electrophysiology alteration <input type="checkbox"/> 6540=Status post - Cardiovascular catheterization procedure, Diagnostic, Hemodynamic alteration <input type="checkbox"/> 6510=Status post - Cardiovascular catheterization procedure, Diagnostic, Hemodynamic data obtained <input type="checkbox"/> 6530=Status post - Cardiovascular catheterization procedure, Diagnostic, Transluminal test occlusion <input type="checkbox"/> 6410=Status post - Cardiovascular catheterization procedure, Therapeutic <input type="checkbox"/> 6670=Status post - Cardiovascular catheterization procedure, Therapeutic, Adjunctive therapy <input type="checkbox"/> 6570=Status post - Cardiovascular catheterization procedure, Therapeutic, Balloon dilation <input type="checkbox"/> 6590=Status post - Cardiovascular catheterization procedure, Therapeutic, Balloon valvotomy <input type="checkbox"/> 6600=Status post - Cardiovascular catheterization procedure, Therapeutic, Coil implantation <input type="checkbox"/> 6610=Status post - Cardiovascular catheterization procedure, Therapeutic, Device implantation <input type="checkbox"/> 7110=Status post - Cardiovascular catheterization procedure, Therapeutic, Device implantation attempted <input type="checkbox"/> 6690=Status post - Cardiovascular catheterization procedure, Therapeutic, Electrophysiological ablation <input type="checkbox"/> 7120=Status post - Cardiovascular catheterization procedure, Therapeutic, Intravascular foreign body removal <input type="checkbox"/> 6640=Status post - Cardiovascular catheterization procedure, Therapeutic, Perforation (establishing interchamber and/or intervessel communication) <input type="checkbox"/> 6580=Status post - Cardiovascular catheterization procedure, Therapeutic, Septostomy <input type="checkbox"/> 6620=Status post - Cardiovascular catheterization procedure, Therapeutic, Stent insertion <input type="checkbox"/> 6630=Status post - Cardiovascular catheterization procedure, Therapeutic, Stent re-dilation <input type="checkbox"/> 6650=Status post - Cardiovascular catheterization procedure, Therapeutic, Transcatheter Fontan completion <input type="checkbox"/> 6660=Status post - Cardiovascular catheterization procedure, Therapeutic, Transcatheter implantation of valve
<b>Palliative Procedures</b>		<input type="checkbox"/> 5590=Status post - Shunt, Systemic to pulmonary, Modified Blalock-Taussig Shunt (MBTS)

	<ul style="list-style-type: none"> <li><input type="checkbox"/> 5600=Status post - Shunt, Systemic to pulmonary, Central (shunt from aorta)</li> <li><input type="checkbox"/> 7130=Status post - Shunt, Systemic to pulmonary, Central (shunt from aorta) Central shunt with an end-to-side connection between the transected main pulmonary artery and the side of the ascending aorta (i.e. Mee shunt)</li> <li><input type="checkbox"/> 7230=Status post – Shunt, Systemic to pulmonary, Potts – Smith type (descending aorta to pulmonary artery)</li> <li><input type="checkbox"/> 5610=Status post - Shunt, Systemic to pulmonary, Other</li> <li><input type="checkbox"/> 5630=Status post - Shunt, Ligation and takedown</li> <li><input type="checkbox"/> 6095=Status post - Shunt, Reoperation</li> <li><input type="checkbox"/> 5640=Status post - PA banding (PAB)</li> <li><input type="checkbox"/> 5650=Status post - PA debanding</li> <li><input type="checkbox"/> 7200=Status post - PA band adjustment</li> <li><input type="checkbox"/> 5660=Status post - Damus-Kaye-Stansel procedure (DKS) (creation of AP anastomosis without arch reconstruction)</li> <li><input type="checkbox"/> 5670=Status post - Bidirectional cavopulmonary anastomosis (BDCPA) (bidirectional Glenn)</li> <li><input type="checkbox"/> 5680=Status post - Glenn (unidirectional cavopulmonary anastomosis) (unidirectional Glenn)</li> <li><input type="checkbox"/> 5690=Status post - Bilateral bidirectional cavopulmonary anastomosis (BBDCPA) (bilateral bidirectional Glenn)</li> <li><input type="checkbox"/> 5700=Status post - HemiFontan</li> <li><input type="checkbox"/> 6330=Status post - Superior cavopulmonary anastomosis(es) (Glenn or HemiFontan) + Atrioventricular valvuloplasty</li> <li><input type="checkbox"/> 6130=Status post - Superior Cavopulmonary anastomosis(es) + PA reconstruction</li> <li><input type="checkbox"/> 7300=Status post - Takedown of superior cavopulmonary anastomosis</li> <li><input type="checkbox"/> 7140=Status post - Hepatic vein to azygous vein connection, Direct</li> <li><input type="checkbox"/> 7150=Status post - Hepatic vein to azygous vein connection, Interposition graft</li> <li><input type="checkbox"/> 7160=Status post - Kawashima operation (superior cavopulmonary connection in setting of interrupted IVC with azygous continuation)</li> <li><input type="checkbox"/> 5710=Status post - Palliation, Other</li> </ul>
<p><b>Mechanical Support</b></p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> 6360=Status post - ECMO cannulation</li> <li><input type="checkbox"/> 6370=Status post - ECMO decannulation</li> <li><input type="checkbox"/> 5910=Status post - ECMO procedure</li> <li><input type="checkbox"/> 5900=Status post - Intraaortic balloon pump (IABP) insertion</li> <li><input type="checkbox"/> 5920=Status post - Right/left heart assist device procedure</li> <li><input type="checkbox"/> 6390=Status post - VAD explantation</li> <li><input type="checkbox"/> 6380=Status post - VAD implantation</li> <li><input type="checkbox"/> 7170=Status post - VAD change out</li> </ul>
<p><b>Anesthetic procedures</b></p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> 6420=Status post - Echocardiography procedure, Sedated transesophageal echocardiogram</li> <li><input type="checkbox"/> 6430=Status post - Echocardiography procedure, Sedated transthoracic echocardiogram</li> <li><input type="checkbox"/> 6435=Status post - Non-cardiovascular, Non-thoracic procedure on cardiac patient with cardiac anesthesia</li> <li><input type="checkbox"/> 6440=Status post - Radiology procedure on cardiac patient, Cardiac Computerized Axial Tomography (CT Scan)</li> <li><input type="checkbox"/> 6450=Status post - Radiology procedure on cardiac patient, Cardiac Magnetic Resonance Imaging (MRI)</li> <li><input type="checkbox"/> 6460=Status post - Radiology procedure on cardiac patient, Diagnostic radiology</li> <li><input type="checkbox"/> 6470=Status post - Radiology procedure on cardiac patient, Non-Cardiac Computerized Tomography (CT) on cardiac patient</li> </ul>

- 6480=Status post - Radiology procedure on cardiac patient, Non-cardiac Magnetic Resonance Imaging (MRI) on cardiac patient
- 6490=Status post - Radiology procedure on cardiac patient, Therapeutic radiology

**Miscellaneous Procedures**

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

**PROCEDURES**

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

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

**Septal Defects**

ASD

- 10= PFO, Primary closure
- 20= ASD repair, Primary closure
- 30= ASD repair, Patch
- 40= ASD repair, Device
- 2110= ASD repair, Patch + PAPVC repair
- 50= ASD, Common atrium (single atrium), Septation
- 60= ASD creation/enlargement
- 70= ASD partial closure

		<input type="checkbox"/> 80= Atrial septal fenestration <input type="checkbox"/> 85= Atrial fenestration closure
	VSD	<input type="checkbox"/> 100= VSD repair, Primary closure <input type="checkbox"/> 110= VSD repair, Patch <input type="checkbox"/> 120= VSD repair, Device <input type="checkbox"/> 130= VSD, Multiple, Repair <input type="checkbox"/> 140= VSD creation/enlargement <input type="checkbox"/> 150= Ventricular septal fenestration
	AV Canal	<input type="checkbox"/> 170= AVC (AVSD) repair, Complete (CAVSD) <input type="checkbox"/> 180= AVC (AVSD) repair, Intermediate (Transitional) <input type="checkbox"/> 190= AVC (AVSD) repair, Partial (Incomplete) (PAVSD) <input type="checkbox"/> 2300= Valvuloplasty, Common atrioventricular valve <input type="checkbox"/> 2250= Valvuloplasty converted to valve replacement in the same operation, Common atrioventricular valve <input type="checkbox"/> 2230= Valve replacement, Common atrioventricular valve
	AP Window	<input type="checkbox"/> 210= AP window repair <input type="checkbox"/> 220= Pulmonary artery origin from ascending aorta (hemitruncus) repair
	Truncus Arteriosus	<input type="checkbox"/> 230= Truncus arteriosus repair <input type="checkbox"/> 240= Valvuloplasty, Truncal valve <input type="checkbox"/> 2290= Valvuloplasty converted to valve replacement in the same operation, Truncal valve <input type="checkbox"/> 250= Valve replacement, Truncal valve <input type="checkbox"/> 2220= Truncus + Interrupted aortic arch repair (IAA) repair
<b>Pulmonary Venous Anomalies</b>	Partial Anomalous Pulmonary Venous Connection	<input type="checkbox"/> 260= PAPVC repair <input type="checkbox"/> 270= PAPVC, Scimitar, Repair <input type="checkbox"/> 2120= 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"/> 280= TAPVC repair <input type="checkbox"/> 2200= TAPVC repair + Shunt - systemic-to-pulmonary
<b>Cor Triatriatum</b>		<input type="checkbox"/> 290= Cor triatriatum repair
<b>Pulmonary Venous Stenosis</b>		<input type="checkbox"/> 300= Pulmonary venous stenosis repair
<b>Systemic Venous Anomalies</b>	Anomalous Systemic Venous Connection	<input type="checkbox"/> 310= Atrial baffle procedure (non-Mustard, non-Senning) <input type="checkbox"/> 330= Anomalous systemic venous connection repair
	Systemic venous obstruction	<input type="checkbox"/> 340= Systemic venous stenosis repair
	Tetralogy of Fallot	<input type="checkbox"/> 350= TOF repair, No Ventriculotomy <input type="checkbox"/> 360= TOF repair, Ventriculotomy, Nontransannular patch <input type="checkbox"/> 370= TOF repair, Ventriculotomy, Transannular patch <input type="checkbox"/> 3330= TOF repair, Ventriculotomy, Transannular patch, plus native valve reconstruction <input type="checkbox"/> 3340= TOF repair, Ventriculotomy, Transannular patch, with monocusp or other surgically fashioned RVOT valve <input type="checkbox"/> 380= TOF repair, RV-PA conduit <input type="checkbox"/> 390= TOF - AVC (AVSD) repair <input type="checkbox"/> 400= TOF - Absent pulmonary valve repair
	Pulmonary Atresia/VSD	<input type="checkbox"/> 420= Pulmonary atresia - VSD (including TOF, PA) repair <input type="checkbox"/> 2700= Pulmonary atresia - VSD – MAPCA repair, Complete single stage repair (1 stage that includes bilateral pulmonary

<b>Right Heart Lesions</b>		<p>unifocalization + VSD closure + RV to PA connection [with or without conduit])</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> 2710= Pulmonary atresia - VSD – MAPCA repair, Status post prior complete unifocalization (includes VSD closure + RV to PA connection [with or without conduit])</li> <li><input type="checkbox"/> 2720= Pulmonary atresia - VSD – MAPCA repair, Status post prior incomplete unifocalization (includes completion of pulmonary unifocalization + VSD closure + RV to PA connection [with or without conduit])</li> <li><input type="checkbox"/> 2730= Unifocalization MAPCA(s), Bilateral pulmonary unifocalization - Complete unifocalization (all usable MAPCA[s] are incorporated)</li> <li><input type="checkbox"/> 2740= Unifocalization MAPCA(s), Bilateral pulmonary unifocalization - Incomplete unifocalization (not all usable MAPCA[s] are incorporated)</li> <li><input type="checkbox"/> 2750= Unifocalization MAPCA(s), Unilateral pulmonary unifocalization</li> <li><input type="checkbox"/> 440= Unifocalization MAPCA(s)</li> <li><input type="checkbox"/> 450= Occlusion of MAPCA(s)</li> </ul>
	Tricuspid Valve Disease and Ebstein's Anomaly	<ul style="list-style-type: none"> <li><input type="checkbox"/> 460= Valvuloplasty, Tricuspid (do not use this code if tricuspid valve malfunction is secondary to Ebstein's anomaly. Use 465= Ebstein's repair)</li> <li><input type="checkbox"/> 2280= Valvuloplasty converted to valve replacement in the same operation, Tricuspid</li> <li><input type="checkbox"/> 465= Ebstein's repair</li> <li><input type="checkbox"/> 470= Valve replacement, Tricuspid (TVR)</li> <li><input type="checkbox"/> 480= Valve closure, Tricuspid (exclusion, univentricular approach)</li> <li><input type="checkbox"/> 490= Valve excision, Tricuspid (without replacement)</li> <li><input type="checkbox"/> 500= Valve surgery, Other, Tricuspid</li> </ul>
	RVOT Obstruction, IVS Pulmonary Stenosis	<ul style="list-style-type: none"> <li><input type="checkbox"/> 510= RVOT procedure</li> <li><input type="checkbox"/> 520= 1 1/2 ventricular repair</li> <li><input type="checkbox"/> 530= PA, reconstruction (plasty), Main (trunk)</li> <li><input type="checkbox"/> 540= PA, reconstruction (plasty), Branch, Central (within the hilar bifurcation)</li> <li><input type="checkbox"/> 550= PA, reconstruction (plasty), Branch, Peripheral (at or beyond the first lobar branch)</li> <li><input type="checkbox"/> 3350= PA, reconstruction (plasty), Branch, Peripheral (at or beyond the first lobar branch, proximal to first segmental branch)</li> <li><input type="checkbox"/> 3360= PA, reconstruction (plasty), Branch, Peripheral (at or beyond the first lobar branch, beyond the first segmental branch)</li> <li><input type="checkbox"/> 570= DCRV repair</li> <li><input type="checkbox"/> 3370= RV Rehabilitation, Endocardial Resection</li> </ul>
	Pulmonary Valve Disease	<ul style="list-style-type: none"> <li><input type="checkbox"/> 590= Valvuloplasty, Pulmonic</li> <li><input type="checkbox"/> 2270= Valvuloplasty converted to valve replacement in the same operation, Pulmonic</li> <li><input type="checkbox"/> 600= Valve replacement, Pulmonic (PVR)</li> <li><input type="checkbox"/> 630= Valve excision, Pulmonary (without replacement)</li> <li><input type="checkbox"/> 640= Valve closure, Semilunar</li> <li><input type="checkbox"/> 650= Valve surgery, Other, Pulmonic</li> </ul>
<b>Conduit operations</b>	Conduit operations	<ul style="list-style-type: none"> <li><input type="checkbox"/> 610= Conduit placement, RV to PA</li> <li><input type="checkbox"/> 620= Conduit placement, LV to PA</li> <li><input type="checkbox"/> 1774= Conduit placement, Ventricle to aorta</li> <li><input type="checkbox"/> 1772= Conduit placement, Other</li> </ul>
	Conduit Stenosis / Insufficiency	<ul style="list-style-type: none"> <li><input type="checkbox"/> 580= Conduit reoperation</li> </ul>
<b>Left Heart Lesions</b>	Aortic Valve Disease	<ul style="list-style-type: none"> <li><input type="checkbox"/> 660= Valvuloplasty, Aortic</li> </ul>

	<input type="checkbox"/> 2240= Valvuloplasty converted to valve replacement in the same operation, Aortic <input type="checkbox"/> 2310= Valvuloplasty converted to valve replacement in the same operation, Aortic – with Ross procedure <input type="checkbox"/> 2320= Valvuloplasty converted to valve replacement in the same operation, Aortic – with Ross-Konno procedure <input type="checkbox"/> 670= Valve replacement, Aortic (AVR) <input type="checkbox"/> 680= Valve replacement, Aortic (AVR), Mechanical <input type="checkbox"/> 690= Valve replacement, Aortic (AVR), Bioprosthetic <input type="checkbox"/> 700= Valve replacement, Aortic (AVR), Homograft <input type="checkbox"/> 715= Aortic root replacement, Bioprosthetic <input type="checkbox"/> 720= Aortic root replacement, Mechanical <input type="checkbox"/> 730= Aortic root replacement, Homograft <input type="checkbox"/> 735= Aortic root replacement, Valve sparing <input type="checkbox"/> 740= Ross procedure <input type="checkbox"/> 750= Konno procedure <input type="checkbox"/> 760= Ross-Konno procedure <input type="checkbox"/> 770= Other annular enlargement procedure <input type="checkbox"/> 780= Aortic stenosis, Subvalvar, Repair <input type="checkbox"/> 2100= Aortic stenosis, Subvalvar, Repair, With myectomy for IHSS <input type="checkbox"/> 790= Aortic stenosis, Supravalvar, Repair <input type="checkbox"/> 800= Valve surgery, Other, Aortic <input type="checkbox"/> 3380= Extended Ventricular Septoplasty (modified Konno, VSD creation and patch enlargement of LVOT, sparing aortic valve) for tunnel type sub aortic stenosis
Sinus of Valsalva Aneurysm	<input type="checkbox"/> 810= Sinus of Valsalva, Aneurysm repair
LV to Aorta Tunnel	<input type="checkbox"/> 820= LV to aorta tunnel repair
Mitral Valve Disease	<input type="checkbox"/> 830= Valvuloplasty, Mitral <input type="checkbox"/> 2260= Valvuloplasty converted to valve replacement in the same operation, Mitral <input type="checkbox"/> 840= Mitral stenosis, Supravalvar mitral ring repair <input type="checkbox"/> 850= Valve replacement, Mitral (MVR) <input type="checkbox"/> 860= Valve surgery, Other, Mitral
Hypoplastic Left Heart and Related malformations	<input type="checkbox"/> 870= Norwood procedure <input type="checkbox"/> 880= HLHS biventricular repair <input type="checkbox"/> 3390= LV Endocardial Fibroelastosis resection <input type="checkbox"/> 2755= 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"/> 2160= Hybrid Approach "Stage 1", Application of RPA & LPA bands <input type="checkbox"/> 2170= Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA) <input type="checkbox"/> 2180= Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA) + application of RPA & LPA bands <input type="checkbox"/> 2140= Hybrid approach "Stage 2", Aortopulmonary amalgamation + Superior Cavopulmonary anastomosis(es) + PA Debanding + Aortic arch repair (Norwood [Stage 1] + Superior Cavopulmonary anastomosis(es) + PA Debanding) <input type="checkbox"/> 2150= Hybrid approach "Stage 2", Aortopulmonary amalgamation + Superior Cavopulmonary anastomosis(es) + PA Debanding + Without aortic arch repair

		<input type="checkbox"/> 2760= Hybrid Approach, Transcatheter balloon dilatation <input type="checkbox"/> 2770= Hybrid Approach, Transcatheter device placement
<b>Cardiomyopathy</b>		<input type="checkbox"/> 890= Transplant, Heart <input type="checkbox"/> 900= Transplant, Heart and lung <input type="checkbox"/> 910= Partial left ventriculectomy (LV volume reduction surgery) (Batista)
<b>Pericardial Disease</b>		<input type="checkbox"/> 920= Pericardial drainage procedure <input type="checkbox"/> 930= Pericardiectomy <input type="checkbox"/> 940= Pericardial procedure, Other
<b>Single Ventricle</b>		<input type="checkbox"/> 950= Fontan, Atrio-pulmonary connection <input type="checkbox"/> 960= Fontan, Atrio-ventricular connection <input type="checkbox"/> 970= Fontan, TCPC, Lateral tunnel, Fenestrated <input type="checkbox"/> 980= Fontan, TCPC, Lateral tunnel, Nonfenestrated <input type="checkbox"/> 1000= Fontan, TCPC, External conduit, Fenestrated <input type="checkbox"/> 1010= Fontan, TCPC, External conduit, Nonfenestrated <input type="checkbox"/> 2780= Fontan, TCPC, Intra/extracardiac conduit, Fenestrated <input type="checkbox"/> 2790= Fontan, TCPC, Intra/extracardiac conduit, Nonfenestrated <input type="checkbox"/> 3310 = Fontan, TCPC, External conduit, hepatic veins to pulmonary artery, Fenestrated <input type="checkbox"/> 3320 = Fontan, TCPC, External conduit, hepatic veins to pulmonary artery, Nonfenestrated <input type="checkbox"/> 1025= Fontan revision or conversion (Re-do Fontan) <input type="checkbox"/> 1030= Fontan, Other <input type="checkbox"/> 2340= Fontan + Atrioventricular valvuloplasty <input type="checkbox"/> 1035= Ventricular septation
<b>Transposition of the Great Arteries</b>	<b>Congenitally Corrected TGA</b>	<input type="checkbox"/> 1050=Congenitally corrected TGA repair, Atrial switch and ASO (double switch) <input type="checkbox"/> 1060= Congenitally corrected TGA repair, Atrial switch and Rastelli <input type="checkbox"/> 1070= Congenitally corrected TGA repair, VSD closure <input type="checkbox"/> 1080= Congenitally corrected TGA repair, VSD closure and LV to PA conduit <input type="checkbox"/> 1090= Congenitally corrected TGA repair, Other
	<b>Transposition of the Great Arteries</b>	<input type="checkbox"/> 1110= Arterial switch operation (ASO) <input type="checkbox"/> 1120= Arterial switch operation (ASO) and VSD repair <input type="checkbox"/> 1123= Arterial switch procedure + Aortic arch repair <input type="checkbox"/> 1125= Arterial switch procedure and VSD repair + Aortic arch repair <input type="checkbox"/> 1130= Senning <input type="checkbox"/> 1140= Mustard <input type="checkbox"/> 1145= Atrial baffle procedure, Mustard or Senning revision <input type="checkbox"/> 1150= Rastelli <input type="checkbox"/> 1160= REV <input type="checkbox"/> 2190= Aortic root translocation over left ventricle (Including Nikaidoh procedure) <input type="checkbox"/> 2210= TGA, Other procedures (Kawashima, LV-PA conduit, other) <input type="checkbox"/> 3400= Double root translocation
<b>DORV</b>		<input type="checkbox"/> 1180= DORV, Intraventricular tunnel repair <input type="checkbox"/> 3410= DORV repair, No Ventriculotomy <input type="checkbox"/> 3420= DORV repair, Ventriculotomy, Nontransannular patch <input type="checkbox"/> 3430= DORV repair, Ventriculotomy, Transannular patch <input type="checkbox"/> 3440= DORV repair, RV-PA conduit



	<input type="checkbox"/> 3450= DORV - AVC (AVSD) repair		
<b>DOLV</b>	<input type="checkbox"/> 1200= DOLV repair		
<b>Thoracic Arteries and Veins</b>	Coarctation of Aorta and Aortic arch hypoplasia	<input type="checkbox"/> 1210= Coarctation repair, End to end <input type="checkbox"/> 1220= Coarctation repair, End to end, Extended <input type="checkbox"/> 3460= Coarctation repair, Descending aorta anastomosed to Ascending aorta <input type="checkbox"/> 1230= Coarctation repair, Subclavian flap <input type="checkbox"/> 1240= Coarctation repair, Patch aortoplasty <input type="checkbox"/> 1250= Coarctation repair, Interposition graft <input type="checkbox"/> 3470= Coarctation repair, Extra-anatomic Bypass graft <input type="checkbox"/> 1260= Coarctation repair, Other <input type="checkbox"/> 1275= Coarctation repair + VSD repair <input type="checkbox"/> 1280= Aortic arch repair <input type="checkbox"/> 1285= Aortic arch repair + VSD repair	
	Coronary Artery Anomalies	<input type="checkbox"/> 1290= Coronary artery fistula ligation <input type="checkbox"/> 1291= Anomalous origin of coronary artery from pulmonary artery repair <input type="checkbox"/> 1300= Coronary artery bypass <input type="checkbox"/> 1305= Anomalous aortic origin of coronary artery (AAOCA) repair <input type="checkbox"/> 1310= Coronary artery procedure, Other	
	Interrupted Arch	<input type="checkbox"/> 1320= Interrupted aortic arch repair	
	Patent Ductus Arteriosus	<input type="checkbox"/> 1330= PDA closure, Surgical <input type="checkbox"/> 1340= PDA closure, Device	
	Vascular Rings and Slings	<input type="checkbox"/> 1360= Vascular ring repair <input type="checkbox"/> 1365= Aortopexy <input type="checkbox"/> 1370= Pulmonary artery sling repair	
	Aortic Aneurysm	<input type="checkbox"/> 1380= Aortic aneurysm repair	
	Aortic Dissection	<input type="checkbox"/> 1390= Aortic dissection repair	
	<b>Thoracic and Mediastinal Disease</b>	Lung Disease	<input type="checkbox"/> 1400= Lung biopsy <input type="checkbox"/> 1410= Transplant, lung(s) <input type="checkbox"/> 1420= Lung procedure, Other
		Tracheal Stenosis	<input type="checkbox"/> 1440= Tracheal procedure
		Chest Wall	<input type="checkbox"/> 2800= Muscle flap, Trunk (i.e. intercostal, pectus, or serratus muscle) <input type="checkbox"/> 2810= Muscle flap, Trunk (i.e. latissimus dorsi) <input type="checkbox"/> 2820= Removal, Sternal wire <input type="checkbox"/> 2830= Rib excision, Complete <input type="checkbox"/> 2840= Rib excision, Partial <input type="checkbox"/> 2850= Sternal fracture, Open treatment <input type="checkbox"/> 2860= Sternal resection, Radical resection of the sternum <input type="checkbox"/> 2870= Sternal resection, Radical resection of the sternum with mediastinal lymphadenectomy <input type="checkbox"/> 2880= Tumor of chest wall, Excision including ribs <input type="checkbox"/> 2890= Tumor of chest wall, Excision including ribs, With reconstruction <input type="checkbox"/> 2900= Tumor of soft tissue of thorax, Excision of deep subfascial or intramuscular tumor <input type="checkbox"/> 2910= Tumor of soft tissue of thorax, Excision of subcutaneous tumor <input type="checkbox"/> 2920= Tumor of soft tissue of thorax, Radical resection
			<input type="checkbox"/> 2930= Hyoid myotomy and suspension

	Neck	<input type="checkbox"/> 2940= Muscle flap, Neck <input type="checkbox"/> 2950= Procedure on neck <input type="checkbox"/> 2960= Tumor of soft tissue of neck, Excision of deep subfascial or intramuscular tumor <input type="checkbox"/> 2970= Tumor of soft tissue of neck, Excision of subcutaneous tumor <input type="checkbox"/> 2980= Tumor of soft tissue of neck, Radical resection
	Pectus Excavatum, Carinatum	<input type="checkbox"/> 2990= Pectus bar removal <input type="checkbox"/> 3000= Pectus bar repositioning <input type="checkbox"/> 3010= Pectus repair, Minimally invasive repair (Nuss), With thoracoscopy <input type="checkbox"/> 3020= Pectus repair, Minimally invasive repair (Nuss), Without thoracoscopy <input type="checkbox"/> 3030= Pectus repair, Open repair
	Thoracic Outlet	<input type="checkbox"/> 3040= Division of scalenus anticus, With resection of a cervical rib <input type="checkbox"/> 3050= Division of scalenus anticus, Without resection of a cervical rib <input type="checkbox"/> 3060= Rib excision, Excision of a cervical rib <input type="checkbox"/> 3070= Rib excision, Excision of a cervical rib, With sympathectomy <input type="checkbox"/> 3080= Rib excision, Excision of first rib <input type="checkbox"/> 3090= Rib excision, Excision of first rib, With sympathectomy
	Thorax	<input type="checkbox"/> 3100= Procedure on thorax
<b>Electrophysiological</b>		<input type="checkbox"/> 1450= Pacemaker implantation, Permanent <input type="checkbox"/> 1460= Pacemaker procedure <input type="checkbox"/> 2350= Explantation of pacing system <input type="checkbox"/> 1470= ICD (AICD) implantation <input type="checkbox"/> 1480= ICD (AICD) ([automatic] implantable cardioverter defibrillator) procedure <input type="checkbox"/> 1490= Arrhythmia surgery - atrial, Surgical Ablation <input type="checkbox"/> 1500= Arrhythmia surgery - ventricular, Surgical Ablation
<b>Interventional Cardiology Procedures</b>		<input type="checkbox"/> 2500= Cardiovascular catheterization procedure, Diagnostic <input type="checkbox"/> 2520= Cardiovascular catheterization procedure, Diagnostic, Angiographic data obtained <input type="checkbox"/> 2550= Cardiovascular catheterization procedure, Diagnostic, Electrophysiology alteration <input type="checkbox"/> 2540= Cardiovascular catheterization procedure, Diagnostic, Hemodynamic alteration <input type="checkbox"/> 2510= Cardiovascular catheterization procedure, Diagnostic, Hemodynamic data obtained <input type="checkbox"/> 2530= Cardiovascular catheterization procedure, Diagnostic, Transluminal test occlusion <input type="checkbox"/> 2410= Cardiovascular catheterization procedure, Therapeutic <input type="checkbox"/> 2670= Cardiovascular catheterization procedure, Therapeutic, Adjunctive therapy <input type="checkbox"/> 1540= Cardiovascular catheterization procedure, Therapeutic, Balloon dilation <input type="checkbox"/> 2590= Cardiovascular catheterization procedure, Therapeutic, Balloon valvotomy <input type="checkbox"/> 1580= Cardiovascular catheterization procedure, Therapeutic, Coil implantation <input type="checkbox"/> 1560= Cardiovascular catheterization procedure, Therapeutic, Device implantation <input type="checkbox"/> 3110= Cardiovascular catheterization procedure, Therapeutic, Device implantation attempted

- 2690= Cardiovascular catheterization procedure, Therapeutic, Electrophysiological ablation
- 3120= Cardiovascular catheterization procedure, Therapeutic, Intravascular foreign body removal
- 2640= Cardiovascular catheterization procedure, Therapeutic, Perforation (establishing interchamber and/or intervessel communication)
- 2580= Cardiovascular catheterization procedure, Therapeutic, Septostomy
- 1550= Cardiovascular catheterization procedure, Therapeutic, Stent insertion
- 2630= Cardiovascular catheterization procedure, Therapeutic, Stent re-dilation
- 2650= Cardiovascular catheterization procedure, Therapeutic, Transcatheter Fontan completion
- 2660= Cardiovascular catheterization procedure, Therapeutic, Transcatheter implantation of valve

**Palliative Procedures**

- 1590= Shunt, Systemic to pulmonary, Modified Blalock-Taussig Shunt (MBTS)
- 1600= Shunt, Systemic to pulmonary, Central (shunt from aorta)
- 3130= Shunt, Systemic to pulmonary, Central (shunt from aorta) Central shunt with an end-to-side connection between the transected main pulmonary artery and the side of the ascending aorta (i.e. Mee shunt)
- 3230= Shunt, Systemic to pulmonary, Potts – Smith type (descending aorta to pulmonary artery)
- 1610= Shunt, Systemic to pulmonary, Other
- 1630= Shunt, Ligation and takedown
- 2095= Shunt, Reoperation
- 1640= PA banding (PAB)
- 1650= PA debanding
- 3200= PA band adjustment
- 1660= Damus-Kaye-Stansel procedure (DKS) (creation of AP anastomosis without arch reconstruction)
- 1670= Bidirectional cavopulmonary anastomosis (BDCPA) (bidirectional Glenn)
- 1680= Glenn (unidirectional cavopulmonary anastomosis) (unidirectional Glenn)
- 1690= Bilateral bidirectional cavopulmonary anastomosis (BBDCPA) (bilateral bidirectional Glenn)
- 1700= HemiFontan
- 2330= Superior cavopulmonary anastomosis(es) (Glenn or HemiFontan) + Atrioventricular valvuloplasty
- 2130= Superior Cavopulmonary anastomosis(es) + PA reconstruction
- 3300 = Takedown of superior cavopulmonary anastomosis
- 3140= Hepatic vein to azygous vein connection, Direct
- 3150= Hepatic vein to azygous vein connection, Interposition graft
- 3160= Kawashima operation (superior cavopulmonary connection in setting of interrupted IVC with azygous continuation)
- 1710= Palliation, Other

**Mechanical Support**

- 2360= ECMO cannulation
- 2370= ECMO decannulation
- 1910= ECMO procedure
- 1900= Intraaortic balloon pump (IABP) insertion
- 1920= Right/left heart assist device procedure

- 2390= VAD explantation
- 2380= VAD implantation
- 3170= VAD change out

**Anesthetic procedures**

- 2420= Echocardiography procedure, Sedated transesophageal echocardiogram
- 2430= Echocardiography procedure, Sedated transthoracic echocardiogram
- 2435= Non-cardiovascular, Non-thoracic procedure on cardiac patient with cardiac anesthesia
- 2440= Radiology procedure on cardiac patient, Cardiac Computerized Axial Tomography (CT Scan)
- 2450= Radiology procedure on cardiac patient, Cardiac Magnetic Resonance Imaging (MRI)
- 2460= Radiology procedure on cardiac patient, Diagnostic radiology
- 2470= Radiology procedure on cardiac patient, Non-Cardiac Computerized Tomography (CT) on cardiac patient
- 2480= Radiology procedure on cardiac patient, Non-cardiac Magnetic Resonance Imaging (MRI) on cardiac patient
- 2490= Radiology procedure on cardiac patient, Therapeutic radiology

**Miscellaneous Procedures**

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

		<input type="checkbox"/> 2030= Peripheral vascular procedure, Other
		<input type="checkbox"/> 2040= Miscellaneous procedure, Other
		<input type="checkbox"/> 2050= Organ procurement
		<input type="checkbox"/> 7777= Other procedure
<b>Operation Canceled or Aborted</b>	Canceled operation	<input type="checkbox"/> 7800= Operation canceled before skin incision
	Aborted operation	<input type="checkbox"/> 7810= 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
- VSD, Multiple, Repair
  - 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, Nontransannular patch
- TOF repair, Ventriculotomy, Transannular 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	<input type="checkbox"/> Yes <input type="checkbox"/> No
Hypoplastic posterior mural leaflet	<input type="checkbox"/> Yes <input type="checkbox"/> No
Atrioventricular septal defect with ventricular imbalance: dominant left ventricle and hypoplastic right ventricle	<input type="checkbox"/> Yes <input type="checkbox"/> No
Atrioventricular septal defect with ventricular imbalance: dominant right ventricle and hypoplastic left ventricle	<input type="checkbox"/> Yes <input type="checkbox"/> No
Common atrioventricular valve with unbalanced commitment of valve to left ventricle	<input type="checkbox"/> Yes <input type="checkbox"/> No
Common atrioventricular valve with unbalanced commitment of valve to right ventricle	<input type="checkbox"/> Yes <input type="checkbox"/> 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
  - Kawashima operation (superior cavopulmonary connection in setting of interrupted IVC with azygous continuation)
- |   |  |
|---|--|
| AV Valve regurgitation grade 3 and 4 (Severe AV Valve regurgitation)      | <input type="checkbox"/> Yes <input type="checkbox"/> No   |
| Moderate to severe systemic ventricular dysfunction                       | <input type="checkbox"/> Yes <input type="checkbox"/> No   |
| Hypoplastic branch pulmonary arteries (diminished pulmonary vascular bed) | <input type="checkbox"/> Yes <input type="checkbox"/> No   |
| Systemic ventricular outflow tract obstruction (subaortic obstruction)    | <input type="checkbox"/> Yes <input type="checkbox"/> No   |
| Ventricular dominance   | <input type="checkbox"/> Left Ventricular dominance<br><input type="checkbox"/> Right Ventricular dominance<br><input type="checkbox"/> Balanced<br><input type="checkbox"/> 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, TCPC, External conduit, hepatic veins to pulmonary artery, Fenestrated
  - Fontan, TCPC, External conduit, hepatic veins to pulmonary artery, Nonfenestrated
  - Fontan, Other
  - Fontan + Atrioventricular valvuloplasty
  - Fontan revision or conversion (Re-do Fontan)
- |   |  |
|---|--|
| AV Valve regurgitation grade 3 and 4 (Severe AV Valve regurgitation)      | <input type="checkbox"/> Yes <input type="checkbox"/> No   |
| Moderate to severe systemic ventricular dysfunction                       | <input type="checkbox"/> Yes <input type="checkbox"/> No   |
| Hypoplastic branch pulmonary arteries (diminished pulmonary vascular bed) | <input type="checkbox"/> Yes <input type="checkbox"/> No   |
| Systemic ventricular outflow tract obstruction (subaortic obstruction)    | <input type="checkbox"/> Yes <input type="checkbox"/> No   |
| Ventricular dominance   | <input type="checkbox"/> Left Ventricular dominance<br><input type="checkbox"/> Right Ventricular dominance<br><input type="checkbox"/> Balanced<br><input type="checkbox"/> 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                   | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Posterior coronary loop: left trunk coming off the RCA                   | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Double coronary loops: inverted origin of right & left coronary arteries | <input type="checkbox"/> Yes <input type="checkbox"/> No |

Single coronary ostium	<input type="checkbox"/> Yes <input type="checkbox"/> No
Intramural coronary	<input type="checkbox"/> Yes <input type="checkbox"/> No
Large infundibular coronary artery from LAD	<input type="checkbox"/> Yes <input type="checkbox"/> No
Maligned commissures	<input type="checkbox"/> Yes <input type="checkbox"/> No
Take down of a commissure	<input type="checkbox"/> Yes <input type="checkbox"/> No
Aorto-pulmonary diameter mismatch	<input type="checkbox"/> Yes <input type="checkbox"/> No
Side by side vessels	<input type="checkbox"/> Yes <input type="checkbox"/> No
Posterior native aorta	<input type="checkbox"/> Yes <input type="checkbox"/> No
Subaortic obstruction/ conal septum malalignment	<input type="checkbox"/> Yes <input type="checkbox"/> No
Bicuspid native aortic valve (Bicuspid neopulmonary valve)	<input type="checkbox"/> Yes <input type="checkbox"/> No
Bicuspid native pulmonary valve (Bicuspid neo-aortic valve)	<input type="checkbox"/> Yes <input type="checkbox"/> No

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

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

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

<input type="checkbox"/> Truncus arteriosus repair	
<input type="checkbox"/> Truncus + Interrupted aortic arch repair (IAA) repair	
Truncus type 3 ( PA Branches from PDA or descending aorta)	<input type="checkbox"/> Yes <input type="checkbox"/> No
Abnormal coronary	<input type="checkbox"/> Yes <input type="checkbox"/> No
Truncal valve regurgitation (moderate to severe)	<input type="checkbox"/> Yes <input type="checkbox"/> No
Truncal valve stenosis (moderate to severe)	<input type="checkbox"/> Yes <input type="checkbox"/> No

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

<input type="checkbox"/> Norwood procedure	
<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	
Source of pulmonary blood flow: Shunt - systemic artery-to-pulmonary artery	<input type="checkbox"/> Yes <input type="checkbox"/> No
Source of pulmonary blood flow: Shunt - ventricle-to-pulmonary artery	<input type="checkbox"/> Yes <input type="checkbox"/> No
Source of pulmonary blood flow: Superior caval vein-to-pulmonary artery	<input type="checkbox"/> Yes <input type="checkbox"/> No
Source of Pulmonary Blood Flow: Banded central PAs	<input type="checkbox"/> Yes <input type="checkbox"/> No
Ascending aorta < 2 mm	<input type="checkbox"/> Yes <input type="checkbox"/> No
Aortic atresia	<input type="checkbox"/> Yes <input type="checkbox"/> No
Aortic stenosis	<input type="checkbox"/> Yes <input type="checkbox"/> No
Mitral atresia	<input type="checkbox"/> Yes <input type="checkbox"/> No
Mitral stenosis	<input type="checkbox"/> Yes <input type="checkbox"/> No
Sinusoids	<input type="checkbox"/> Yes <input type="checkbox"/> No

Intact atrial septum	<input type="checkbox"/> Yes <input type="checkbox"/> No
Obstructed pulmonary venous return with severely restrictive ASD	<input type="checkbox"/> Yes <input type="checkbox"/> No
AV Valve regurgitation grade 3 and 4 (Severe AV Valve regurgitation)	<input type="checkbox"/> Yes <input type="checkbox"/> No
Aberrant right subclavian artery	<input type="checkbox"/> Yes <input type="checkbox"/> No
Ventricular dominance	<input type="checkbox"/> Left Ventricular dominance <input type="checkbox"/> Right Ventricular dominance <input type="checkbox"/> Balanced <input type="checkbox"/> Indeterminate Ventricular dominance

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

<input type="checkbox"/> Ebstein's repair	
Tricuspid Valve Repair	<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>If Yes</i> → Monocusp	<input type="checkbox"/> Yes <input type="checkbox"/> No
Bileaflet repair	<input type="checkbox"/> Yes <input type="checkbox"/> No
Cone repair (360° leaflet approximation)	<input type="checkbox"/> Yes <input type="checkbox"/> No
Sebening stitch (anterior RV papillary muscle to ventricular septum)	<input type="checkbox"/> Yes <input type="checkbox"/> No
Annular reduction	<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>If Yes</i> → Plication	<input type="checkbox"/> Yes <input type="checkbox"/> No
Partial ring (c-shaped anterior & inferior annulus)	<input type="checkbox"/> Yes <input type="checkbox"/> No
Eccentric ring (inferior annulus)	<input type="checkbox"/> Yes <input type="checkbox"/> No
Atrialized RV plication	<input type="checkbox"/> Yes <input type="checkbox"/> No
Atrialized RV resection	<input type="checkbox"/> Yes <input type="checkbox"/> No
ASD/PFO closure	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Subtotal
Reduction atrioplasty	<input type="checkbox"/> Yes <input type="checkbox"/> No
Arrhythmia surgery	<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>If Yes</i> → Cavotricuspid isthmus ablation	<input type="checkbox"/> Yes <input type="checkbox"/> No
Modified right atrial maze	<input type="checkbox"/> Yes <input type="checkbox"/> No
Left atrial Cox maze	<input type="checkbox"/> Yes <input type="checkbox"/> No
Pulmonary vein isolation	<input type="checkbox"/> Yes <input type="checkbox"/> No
Bidirectional cavopulmonary anastomosis	<input type="checkbox"/> Yes <input type="checkbox"/> No

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 Cardiovascular	<input type="checkbox"/> No CPB Cardiovascular	<input type="checkbox"/> CPB Non-Cardiovascular
	<input type="checkbox"/> ECMO	<input type="checkbox"/> Thoracic	<input type="checkbox"/> Interventional Cardiology
	<input type="checkbox"/> VAD with CPB	<input type="checkbox"/> VAD without CPB	<input type="checkbox"/> NonCardiac/NonThoracic Procedure w/ Anesthesia
	<input type="checkbox"/> Other		
Near Infrared Spectroscopy (NIRS) Cerebral Metrics Used:			<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>If NIRSCerUsed is Yes</i> →	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 Infrared Spectroscopy (NIRS) Somatic Metrics Used:			<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>If NIRSSomUsed is Yes</i> →	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 ↓)			



Intubation Date/Time: (mm/dd/yyyy 00:00 – 23:59) \_\_/\_\_/\_\_\_\_ \_\_:\_\_:\_\_ Initial Extubation Date/Time: (mm/dd/yyyy 00:00 – 23:59) \_\_/\_\_/\_\_\_\_ \_\_:\_\_:\_\_

Extubated in OR:  Yes  No

Re-Intubated After Initial Postoperative Extubation:  Yes  No (If Yes ↓)

Final Extubation Date/Time: (mm/dd/yyyy 00:00 – 23:59) \_\_/\_\_/\_\_\_\_ \_\_:\_\_:\_\_

Incision Type: Sternotomy  Yes  No  
Partial Sternotomy  Yes  No (if yes →) Location:  upper  lower  
Clamshell Thoracotomy  Yes  No  
Thoracotomy  Yes  No (if yes →) Location:  left  right  
Video-Assisted Thoracoscopy (VATS)  Yes  No (if yes →) Location:  left  right

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.**

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 Cardiovascular or VAD w/ CPB or CPB NonCardiovascular ↓)

CPB Blood Prime:  Yes  No (If Yes →) PRBC \_\_\_\_\_ ml (0 – 5000)

FFP \_\_\_\_\_ ml (0 – 5000)

Whole Blood \_\_\_\_\_ ml (0 – 5000)

CPB Time (min): \_\_\_\_\_ Cross Clamp Time - CPB:(min): \_\_\_\_\_ Circulatory Arrest Time (min): \_\_\_\_\_

Induced Fibrillation:  Yes  No (If Yes →) Time: \_\_\_\_\_ (minutes) \_\_\_\_\_ (seconds)

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 (prior to initiation of hypothermic circulatory arrest or selective cerebral perfusion) \_\_\_\_\_ (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  Yes  No Right Carotid  Yes  No  
Artery  
Left Carotid Artery  Yes  No Superior Vena  Yes  No  
Cava

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?  Yes  No

(If Yes →)  During CPB, CUF/ZBUF/DUF  After CPB, MUF  During and after CPB  
 When

Pulmonary Vascular Resistance Measured (within 6 months):  Yes  No  
 (If Yes and WeightKg ≥40 →) PVR: \_\_\_\_\_ (Wood units)  
 (If Yes and WeightKg <40 →) PVR Index: \_\_\_\_\_ (Wood units/m2)

Anticoagulant Used?  Yes  No  Unknown  
 (If Yes →) Unfractionated Heparin  Yes  No Argatroban  Yes  No  
 Bivaluridin  Yes  No Other  Yes  No

**Blood and Blood Related Products (Including CPB Blood Prime Units)**

Blood Type:  A  B  O  AB  Unknown Rh:  Positive  Negative  Unknown  
 Autologous Transfusion:  Yes  No Cell Saver/Cell Salvage \_\_\_\_\_ mL

Transfusion of Non-Autologous Blood Products During or After Procedure:  Yes  No  Patient/family refused

(If Yes →)	Transfusion of Non-Autologous Blood Products Initiated Before Leaving OR: <input type="checkbox"/> Yes <input type="checkbox"/> No				
	(If Yes →)	Packed Red Blood Cells	_____ mL (0-10000)	Fresh Frozen Plasma	_____ mL (0-10000)
		Fresh Plasma	_____ mL (0-10000)		
		Platelets	_____ mL (0-10000)	Cryoprecipitate	_____ mL (0-10000)
		Fresh Whole Blood	_____ mL (0-10000)	Whole Blood	_____ mL (0-10000)

Transfusion of Blood Products within 24 hours post procedure:  Yes  No

(If Yes →)	Packed Red Blood Cells	_____ mL (0-10000)	Fresh Frozen Plasma	_____ mL (0-10000)
	Fresh Plasma	_____ mL (0-10000)		
	Platelets	_____ mL (0-10000)	Cryoprecipitate	_____ mL (0-10000)
	Fresh Whole Blood	_____ mL (0-10000)	Whole Blood	_____ mL (0-10000)

Transfusion of Blood Products after 24 hours post procedure:  Yes  No

(If Yes →)	Packed Red Blood Cells	_____ mL (0-10000)	Fresh Frozen Plasma	_____ mL (0-10000)
	Fresh Plasma	_____ mL (0-10000)		
	Platelets	_____ mL (0-10000)	Cryoprecipitate	_____ mL (0-10000)
	Fresh Whole Blood	_____ mL	Whole Blood	_____ mL

(0-10000)

(0-10000)

Directed Donor Units:  Yes  No

Antifibrinolytics Used Intraoperatively:  Yes  No

(If Yes →)

Epsilon Amino-Caproic Acid (Amicar, EACA) Used:  Yes  No

(If Yes →)

Epsilon Amino-Caproic Acid (Amicar, EACA) Load

(0 - 30,000 mg)

Epsilon Amino-Caproic Acid (Amicar, EACA) Pump Prime

(0 - 30,000 mg)

(If AntifinEpPrime >0) Was Epsilon Amino-Caproic Acid (Amicar, EACA) dosed as mg/ml of Pump Prime:  Yes  No  Unknown

Epsilon Amino-Caproic Acid (Amicar, EACA) Infusion rate mg/kg/hr::

(0-200)

Tranexamic Acid Used:  Yes  No

(If Yes →)

Tranexamic Acid Load

(0 - 15,000 mg)

Tranexamic Acid Pump Prime

(0 - 15,000 mg)

(If AntifibTranexPrime >0) Was Tranexamic Acid dosed as mg/ml of Pump Prime:  Yes  No  Unknown

Tranexamic Acid Infusion rate mg/kg/hr:

(0.0 - 25.0)

Trasylol (Aprotinin) Used:  Yes  No

(If Yes →)

Trasylol (Aprotinin) Load

(0 - 400 cc)

Trasylol (Aprotinin) Pump Prime

(0 - 400 cc)

Trasylol (Aprotinin) Infusion rate cc/kg/hr:

(0.0 - 10.0)

Procoagulant Used Intraoperatively:  Yes  No

(If Yes →)

Factor VIIa (Novoseven) Usage:  Yes  No

(If Yes →)

Factor VIIa (Novoseven) Dose 1:

(1 - 20,000 mcg)

Factor VIIa (Novoseven) Dose 2:

(0 - 20,000 mcg)

(If Dose 2 > 0 →) Factor VIIa (Novoseven) Dose 3:

(0 - 20,000 mcg)

Prothrombin Complex Concentrate-4 (PCC-4, KCentra) Usage:  Yes  No

(If Yes →)

Prothrombin Complex Concentrate-4 (PCC-4, KCentra) Dose 1:

(1 - 10,000 units)

Prothrombin Complex Concentrate-4 (PCC-4, KCentra) Dose 2:

(0 - 10,000 units)

(If Dose 2 > 0 →) Prothrombin Complex Concentrate-4 (PCC-4, KCentra) Dose 3:

(0 - 10,000 units)

Prothrombin Complex Concentrate-4 with Factor VIIa (FEIBA) Usage:  Yes  No

(If Yes →)

Prothrombin Complex Concentrate-4 with Factor VIIa (FEIBA) Dose 1:

(1 - 20,000 units)

Prothrombin Complex Concentrate-4 with Factor VIIa (FEIBA) Dose 2:

(0 - 20,000 units)

(If Dose 2 > 0 →) Prothrombin Complex Concentrate-4 with Factor VIIa (FEIBA) Dose 3:

(0 - 20,000 units)

Prothrombin Complex Concentrate-3 (PCC-3, ProfilNine-SD) Usage:  Yes  No

(If Yes →)

Prothrombin Complex Concentrate-3 (PCC-3, ProfilNine-SD) Dose 1:

	Prothrombin Complex Concentrate-3 (PCC-3, ProfilNine-SD) Dose 2:	(1 - 2000 units)
	(If Dose 2 > 0 →) Prothrombin Complex Concentrate-3 (PCC-3, ProfilNine-SD) Dose 3:	(0 - 2000 units)
		(0 - 2000 units)

Octaplex Prothrombin Concentrate Usage:  Yes  No

(If Yes →)

Octaplex Prothrombin Concentrate – units Dose 1:	(1 – 6000 units)
Octaplex Prothrombin Concentrate – units Dose 2:	(0 – 6000 units)
(If Dose 2 > 0 →) Octaplex Prothrombin Concentrate – units Dose 3:	(0 – 6000 units)

Fibrinogen Concentrate Usage:  Yes  No

(If Yes →)

Fibrinogen Concentrate mg – Dose 1	(1 - 10,000 mg)
Fibrinogen Concentrate mg – Dose 2	(0 - 10,000 mg)
(If Dose 2 > 0 →) Fibrinogen Concentrate mg – Dose 3	(0 - 10,000 mg)

Antithrombin 3 Concentrate (AT3) Usage:  Yes  No

(If Yes →)

Antithrombin 3 Concentrate (AT3) units Dose 1:	(1 – 5000 units)
Antithrombin 3 Concentrate (AT3) units Dose 2:	(0 – 5000 units)
(If Dose 2 > 0 →) Antithrombin 3 Concentrate (AT3) units Dose 3	(0 – 5000 units)

Desmopressin (DDAVP) Usage:  Yes  No

(If Yes →)

Desmopressin (DDAVP) - Dose 1:	(1 - 1,000 mcg)
Desmopressin (DDAVP) - Dose 2:	(0 - 1,000 mcg)
(If Dose 2 > 0 →) Desmopressin (DDAVP) - Dose 3:	(0 - 1,000 mcg)

Humate P usage:  Yes  No ProcoagHumateP (2907)

(If Yes →)

Humate P Dose 1:	(1 – 10,000 units)
Humate P Dose 2:	(0 – 10,000 units)
(If Dose 2 > 0 →) Humate P Dose3:	(0 – 10,000 units)

Point of Care Coagulation Testing Used Intraoperatively:  Yes  No

(If Yes →)

Thromboelastography (TEG):	<input type="checkbox"/> Yes <input type="checkbox"/> No
ROTEM:	<input type="checkbox"/> Yes <input type="checkbox"/> No
Sonoclot:	<input type="checkbox"/> Yes <input type="checkbox"/> No
Heparin Concentration (Hepcon, HMS):	<input type="checkbox"/> Yes <input type="checkbox"/> No
INR/PT/aPPP (iStat or equivalent):	<input type="checkbox"/> Yes <input type="checkbox"/> No
ACT	<input type="checkbox"/> Yes <input type="checkbox"/> No

**CABG PROCEDURES**

If Op Type is CBP or No CBP Cardiovascular ↓

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

**VALVE PROCEDURES***If Op Type is CBP or No CBP Cardiovascular ↓*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  
 Transcatheter device  
 Other

*If Commercially Supplied ↓*

Valve Explant #1 UDI:

Model #1: \_\_\_\_\_

*If not transcatheter device ↓*

Device Size #1: \_\_\_\_\_

**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  
 Transcatheter device  
 Other

*If Commercially Supplied ↓*

Valve Explant #2 UDI:

Model #2: \_\_\_\_\_

*If not transcatheter device ↓*

Device Size #2: \_\_\_\_\_

**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  
 Transcatheter device  
 Other

*If Commercially Supplied ↓*

Valve Explant #3 UDI:

Model #3: \_\_\_\_\_

*If not transcatheter device ↓*

Device Size #3: \_\_\_\_\_

**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  
 Transcatheter device  
 Other

*If Commercially Supplied ↓*

Valve Explant #4 UDI:

Model #4: \_\_\_\_\_

*If not transcatheter device ↓*

Device Size #4: \_\_\_\_\_

*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  
 Transcatheter device

*If Surgeon fashioned ↓*

Material #1:

- PTFE (Gore-Tex)  
 Pericardium  
 Other

**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  
 Transcatheter device

*If Surgeon fashioned ↓*

Material #2:

- PTFE (Gore-Tex)  
 Pericardium  
 Other

**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  
 Transcatheter device

*If Surgeon fashioned ↓*

Material #3:

- PTFE (Gore-Tex)  
 Pericardium  
 Other

**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  
 Transcatheter device

*If Surgeon fashioned ↓*

Material #4:

- PTFE (Gore-Tex)  
 Pericardium  
 Other

<i>If Commercially Supplied or Transcatheter ↓</i> Model #1: _____ UDI#1 _____	<i>If Commercially Supplied or Transcatheter ↓</i> Model #2: _____ UDI#2 _____	<i>If Commercially Supplied or Transcatheter ↓</i> Model #3: _____ UDI#3 _____	<i>If Commercially Supplied or Transcatheter ↓</i> Model #4: _____ UDI#4 _____
<i>If Commercially Supplied ↓</i> Device Size #1: _____	<i>If Commercially Supplied ↓</i> Device Size #2: _____	<i>If Commercially Supplied ↓</i> Device Size #3: _____	<i>If Commercially Supplied ↓</i> 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

First Implant Type:     RVAD     LVAD     TAH (total artificial heart)

First Implant UDI: \_\_\_\_\_

First Product (choose from VAD List): \_\_\_\_\_

*If Implant Type = RVAD or LVAD complete ↓*

Did the first occurrence involve the implantation of two VAD devices?     Yes     No

(If Yes →) Second Implant UDI: \_\_\_\_\_

Second 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

Explant UDI: \_\_\_\_\_

*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

### COMPLICATIONS

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

- 15= No complications    *OR select ALL that apply: (↓)*
- 16= No complications during the intraop or postop time periods (No complications prior to discharge & no complications within ≤ 30 days of surgery)
- 350= Intraoperative death or intraoperative death
- 360= Unplanned readmission to the hospital within 30 days of surgery or intervention
- 370= Multi-System Organ Failure (MSOF) = Multi-Organ Dysfunction Syndrome (MODS)
- 30= Unexpected Cardiac arrest during or following procedure (Periop/Periprocedural = Intraop/Intraoperative and/or Postop/Postprocedural)
- 80= Cardiac dysfunction resulting in low cardiac output
- 384= Cardiac failure (severe cardiac dysfunction)
- 280= Endocarditis-postprocedural infective endocarditis
- 110= Pericardial effusion, Requiring drainage
- 390= Pulmonary hypertension
- 140= Pulmonary hypertensive crisis (PA pressure > systemic pressure)
- 130= Pulmonary vein obstruction
- 120= Systemic vein obstruction
- 240= Bleeding, Requiring reoperation

- 102= Sternum left open, Planned
- 104= Sternum left open, Unplanned
- 22= Unplanned cardiac reoperation during the postoperative or postprocedural time period, exclusive of reoperation for bleeding
- 24= Unplanned interventional cardiovascular catheterization procedure during the postoperative or postprocedural time period
- 26= Unplanned non-cardiac reoperation during the postoperative or postprocedural time period
- 40= Postoperative/Postprocedural mechanical circulatory support (IABP, VAD, ECMO, or CPS)
- 72= Arrhythmia requiring drug therapy
- 73= Arrhythmia requiring electrical cardioversion or defibrillation
- 74= Arrhythmia necessitating pacemaker, Permanent pacemaker
- 75= Arrhythmia necessitating pacemaker, Temporary pacemaker
- 210= Chylothorax
- 200= Pleural effusion, Requiring drainage
- 180= Pneumonia
- 190= Pneumothorax, Requiring drainage or evacuation
- 150= Postoperative/Postprocedural respiratory insufficiency requiring mechanical ventilatory support > 7 days
- 160= Postoperative/Postprocedural respiratory insufficiency requiring reintubation
- 170= Respiratory failure, Requiring tracheostomy
- 230= Renal failure - acute renal failure, Acute renal failure requiring dialysis at the time of hospital discharge
- 223= Renal failure - acute renal failure, Acute renal failure requiring temporary dialysis with the need for dialysis not present at hospital discharge
- 224= Renal failure - acute renal failure, Acute renal failure requiring temporary hemofiltration with the need for dialysis not present at hospital discharge
- 290= Sepsis
- 320= Neurological deficit, Neurological deficit persisting at discharge
- 325= Neurological deficit, Transient neurological deficit not present at discharge
- 300= Paralyzed diaphragm (possible phrenic nerve injury)
- 400= Peripheral nerve injury, Neurological deficit persisting at discharge
- 331= Seizure
- 410= Spinal cord injury, Neurological deficit persisting at discharge
- 420= Stroke
- 440= Subdural Bleed
- 450= Intraventricular hemorrhage (IVH) > grade 2
- 470= Thrombus, Intracardiac
- 480= Thrombus, Central vein
- 510= Thrombosis/thromboembolism, Pulmonary artery
- 490= Thrombus, Peripheral deep vein
- 500= Thrombosis, Systemic to pulmonary shunt
- 530= Thrombosis, Systemic artery, in situ (central)
- 540= Thrombosis, Systemic artery, in situ (peripheral)
- 550= Thrombosis, Systemic artery, embolic
- 310= Vocal cord dysfunction (possible recurrent laryngeal nerve injury)
- 250= Wound dehiscence (sterile)
- 255= Wound dehiscence (sterile), Median sternotomy
- 520= Sternal instability (sterile)
- 261= Wound infection
- 262= Wound infection-Deep wound infection
- 270= Wound infection-Mediastinitis
- 263= Wound infection-Superficial wound infection
- 430= Anesthesia – related complication
- 460= Complication of cardiovascular catheterization procedure
- 902= Compartment syndrome
- 900= Other complication; Specify \_\_\_\_\_

901= Other operative/procedural complication; Specify \_\_\_\_\_

### DISCHARGE/READMISSION

Patient remains hospitalized during this episode of care  Yes  No

(If No →) 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

Discharged with Nasoenteric Tube?  Yes  No

Discharged with Transabdominal Gastrostomy or Jejunostomy Tube?  Yes  No

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) \_\_\_/\_\_\_/\_\_\_\_

Primary Readmission Reason (select one↓):

- |  |  |
|--|--|
| <input type="checkbox"/> Thrombotic Complication               | <input type="checkbox"/> Neurologic Complication                                 |
| <input type="checkbox"/> Hemorrhagic Complication              | <input type="checkbox"/> Respiratory Complication/Airway Complication            |
| <input type="checkbox"/> Stenotic Complication                 | <input type="checkbox"/> Septic/Infectious Complication                          |
| <input type="checkbox"/> Arrhythmia                            | <input type="checkbox"/> Cardiovascular Device Complications                     |
| <input type="checkbox"/> Congestive Heart Failure              | <input type="checkbox"/> Residual/Recurrent Cardiovascular Defects               |
| <input type="checkbox"/> Embolic Complication                  | <input type="checkbox"/> Failure to Thrive                                       |
| <input type="checkbox"/> Cardiac Transplant Rejection          | <input type="checkbox"/> VAD Complications                                       |
| <input type="checkbox"/> Myocardial Ischemia                   | <input type="checkbox"/> Gastrointestinal Complication                           |
| <input type="checkbox"/> Renal Failure                         | <input type="checkbox"/> Other Cardiovascular Complication                       |
| <input type="checkbox"/> Pericardial Effusion and/or Tamponade | <input type="checkbox"/> Other - Readmission related to this index operation     |
| <input type="checkbox"/> Pleural Effusion                      | <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

If Mt30Stat=Alive →

Status at 365 days after surgery:  Alive  Dead  Unknown

365 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 ≥ 365 days post op  SSDMF  Other

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, No CPB Cardiovascular, or CPB Noncardiovascular ↓)

Patient care discussed at preop multidisciplinary planning conference:  Yes  No

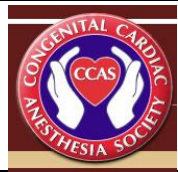
If No → Reason care was not discussed:  Urgent/Emergent/Salvage Case  Patient admitted between conferences



	<input type="checkbox"/> Program does not routinely discuss all cases	<input type="checkbox"/> Program does not have regular conferences
	<input type="checkbox"/> Other	
Transesophageal Echo (TEE) available for case:	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<i>If Yes</i> → Intraop TEE performed:	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Pre-op Antibiotic Prophylaxis given:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Patient on ongoing antibiotic therapy, prophylaxis not indicated	
<i>If Yes</i> → Cephalosporin	<input type="checkbox"/> Yes <input type="checkbox"/> No	Penicillin or related med <input type="checkbox"/> Yes <input type="checkbox"/> No
Aminoglycoside	<input type="checkbox"/> Yes <input type="checkbox"/> No	Vancomycin <input type="checkbox"/> Yes <input type="checkbox"/> No
Other	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Antibiotic Start time: (00:00 – 23:59) __: __		
Conventional Pre-procedure Time Out:	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Surgeon shares essential elements of operative plan:	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Postprocedure debriefing:	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Hand-off protocol at the time of transfer to ICU:	<input type="checkbox"/> Yes- all required team members present	
	<input type="checkbox"/> Yes- not all required team members present	
	<input type="checkbox"/> No	
<i>If yes-not all required team members present</i> → Anesthesiologist:	<input type="checkbox"/> Attended hand-off	<input type="checkbox"/> Did not attend hand-off
Surgeon:	<input type="checkbox"/> Attended hand-off	<input type="checkbox"/> Did not attend hand-off
ICU MD:	<input type="checkbox"/> Attended hand-off	<input type="checkbox"/> Did not attend hand-off
Nurse:	<input type="checkbox"/> Attended hand-off	<input type="checkbox"/> Did not attend hand-off
Patient died or had major postoperative complication(s):	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<i>If Yes</i> → Management and outcomes reviewed:	<input type="checkbox"/> Reviewed at conference	
	<input type="checkbox"/> Scheduled for review at conference	
	<input type="checkbox"/> Not reviewed or scheduled for review	
	<input type="checkbox"/> Program does not have scheduled conferences	
<i>If Reviewed</i> →	Review Date: (mm/dd/yyyy) __ / __ / _____	



**ANESTHESIA**  
(for sites participating in  
CHSD anesthesiology component)



<b>ANESTHESIA Administrative</b>	
Anesthesiology data being collected: <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(If No, skip all Anesthesia sections)</i>	
Anesthesiologist Present: <input type="checkbox"/> Yes <input type="checkbox"/> No	
<i>(If Yes→)</i>	Primary Anesthesiologist Attending: _____
	Primary Anesthesiologist National Provider Identifier: _____
	Secondary Anesthesiologist Attending: <input type="checkbox"/> Yes <input type="checkbox"/> No
Fellow or Resident Present: <input type="checkbox"/> Yes <input type="checkbox"/> No	
Mid-Level provider CRNA/AA Present: <input type="checkbox"/> Yes <input type="checkbox"/> No	

**ANESTHESIA Preoperative**

Preoperative Medication Category: (within 24 hours unless listed otherwise)

- 5= None (If not None, select all pre-operative medications that apply: ↓)
- |   |  |
|---|--|
| <input type="checkbox"/> 10= Amiodarone   | <input type="checkbox"/> 190= Heparin  |
| <input type="checkbox"/> 20= Angiotension Converting Enzyme (ACE) Inhibitors    | <input type="checkbox"/> 220= Heparin, Low molecular weight  |
| <input type="checkbox"/> 760= Angiotension Receptor Blockers (ARB)              | <input type="checkbox"/> 710= Inotropes Not Otherwise Listed                                       |
| <input type="checkbox"/> 700= Anti-arrhythmics Not Otherwise Listed             | <input type="checkbox"/> 210= Insulin  |
| <input type="checkbox"/> 770= Anticoagulents Not Otherwise Listed               | <input type="checkbox"/> 230= Milrinone  |
| <input type="checkbox"/> 30= Anti-reflux Meds (H2 antagonists,PPI, propulsives) | <input type="checkbox"/> 240= Narcotics  |
| <input type="checkbox"/> 40= Anti-seizure medications                           | <input type="checkbox"/> 250= Nitric Oxide   |
| <input type="checkbox"/> 50= Aspirin (within 5 days)                            | <input type="checkbox"/> 260= Nitroglycerin  |
| <input type="checkbox"/> 60= Benzodiazepines                                    | <input type="checkbox"/> 270= Nitroprusside  |
| <input type="checkbox"/> 70= Beta Blockers                                      | <input type="checkbox"/> 280= Norepinephrine (Levophed)  |
| <input type="checkbox"/> 80= Birth Control (Oral, IM)                           | <input type="checkbox"/> 290= PDE-5 Inhibitors (e.g., Sildenafil)                                  |
| <input type="checkbox"/> 200= Bronchodilators, Inhaled                          | <input type="checkbox"/> 300= Platelet inhibitors other than Aspirin (e.g.,Plavix) (within 5 days) |
| <input type="checkbox"/> 90= Calcium Channel Blockers                           | <input type="checkbox"/> 310= Prostacyclin (e.g., Flolan, Remodulin)                               |
| <input type="checkbox"/> 100= Calcium Chloride Infusion                         | <input type="checkbox"/> 320= Prostaglandin  |
| <input type="checkbox"/> 750= Clonidine   | <input type="checkbox"/> 330= Psychiatric Medications (including ADHD and antidepressants)         |
| <input type="checkbox"/> 110= Coumadin  | <input type="checkbox"/> 340= Statins  |
| <input type="checkbox"/> 740= Dexmedetomidine                                   | <input type="checkbox"/> 350= Steroids (oral / IV)   |
| <input type="checkbox"/> 120= Digoxin   | <input type="checkbox"/> 360= Thyroid Hormone  |
| <input type="checkbox"/> 130= Direct Thrombin Inhibitors (e.g., argatroban)     | <input type="checkbox"/> 370= Transplant Rejection Inhibition Meds (other than steroids)           |
| <input type="checkbox"/> 140= Diuretics   | <input type="checkbox"/> 720= Vasoconstrictors Not Otherwise Listed                                |
| <input type="checkbox"/> 150= Dobutamine  | <input type="checkbox"/> 730= Vasodilators Not Otherwise Listed                                    |
| <input type="checkbox"/> 160= Dopamine  | <input type="checkbox"/> 380= Vasopressin  |
| <input type="checkbox"/> 170= Endothelin Antagonist (e.g., Bosentan)            | <input type="checkbox"/> 900= Other  |
| <input type="checkbox"/> 180= Epinephrine                                       |  |

Preoperative Sedation  Yes  No

(If Yes→)

Preoperative Sedation Route:  IM  IV  Nasal  PO/GT  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 |
| Fentanyl        | <input type="checkbox"/> Yes <input type="checkbox"/> No | Pentobarbital | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Glycopyrrolate  | <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
Arterial line in-situ pre procedure:	<input type="checkbox"/> Yes <input type="checkbox"/> No		

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

Radial	<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	Other	<input type="checkbox"/> Yes <input type="checkbox"/> No

Percutaneous Central Pressure:  Yes  No (If Yes →) Location: (Select all that apply)

Right Internal Jugular	<input type="checkbox"/> Yes <input type="checkbox"/> No	Left Internal Jugular	<input type="checkbox"/> Yes <input type="checkbox"/> No
Right Subclavian	<input type="checkbox"/> Yes <input type="checkbox"/> No	Left Subclavian	<input type="checkbox"/> Yes <input type="checkbox"/> No
Right Femoral Vein	<input type="checkbox"/> Yes <input type="checkbox"/> No	Left Femoral Vein	<input type="checkbox"/> Yes <input type="checkbox"/> No
PICC	<input type="checkbox"/> Yes <input type="checkbox"/> No	Other	<input type="checkbox"/> Yes <input type="checkbox"/> No

CVP or PICC in situ pre procedure  Yes  No

CVP Placed by Anesthesia  Yes  No

Surgeon Placed lines INSTEAD of Anesthesia Placed Central Lines:  Yes  No

Swan-Ganz  Yes  No

Catheter

Oximetric Central Line (ScVO2)  Yes  No

Ultrasound Guidance Used for Line Placement:  None  Central venous line only

Arterial line only  Both arterial & venous lines

Neurologic Monitoring:  Yes  No

(If Yes →)

Bispectral Index	<input type="checkbox"/> Yes <input type="checkbox"/> No
Transcranial Doppler	<input type="checkbox"/> Yes <input type="checkbox"/> No
NIRS (Cerebral)	<input type="checkbox"/> Yes <input type="checkbox"/> No
Other	<input type="checkbox"/> Yes <input type="checkbox"/> 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:

<input type="checkbox"/> Thoracic Epidural Catheter	<input type="checkbox"/> Lumbar Epidural Catheter	<input type="checkbox"/> Caudal Epidural Catheter
<input type="checkbox"/> Lumbar Epidural -Single shot	<input type="checkbox"/> Caudal Epidural – Single shot	<input type="checkbox"/> Lumbar Intrathecal -Single Shot
<input type="checkbox"/> Paravertebral Block-Single shot	<input type="checkbox"/> Paravertebral Block – Catheter	<input type="checkbox"/> 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

(If Yes →) ETT or Tracheostomy Replaced for Procedure:  Yes  No

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

Endotracheal intubation  Tracheostomy

<i>(If LMA →)</i>	Airway Size (mm):	<input type="checkbox"/> 1.0 <input type="checkbox"/> 1.5 <input type="checkbox"/> 2.0 <input type="checkbox"/> 2.5 <input type="checkbox"/> 3.0 <input type="checkbox"/> 4.0 <input type="checkbox"/> 5.0
<i>(If Endotracheal intubation →)</i>	Airway Size (mm):	<input type="checkbox"/> 2.5 <input type="checkbox"/> 3.0 <input type="checkbox"/> 3.5 <input type="checkbox"/> 4.0 <input type="checkbox"/> 4.5 <input type="checkbox"/> 5.0 <input type="checkbox"/> 5.5 <input type="checkbox"/> 6.0 <input type="checkbox"/> 6.5 <input type="checkbox"/> 7.0 <input type="checkbox"/> 7.5 <input type="checkbox"/> 8.0 <input type="checkbox"/> Other <input type="checkbox"/> Size not listed (DLETT, Tracheotomy)
	Cuffed:	<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>(If Endotracheal intubation or Trach→)</i>	Airway Site:	<input type="checkbox"/> Oral <input type="checkbox"/> Nasal <input type="checkbox"/> Tracheostomy

Endobronchial Isolation (DLETT, Bronchial Blocker)  Yes  No

(If Yes →) Endobronchial Isolation Method:

<input type="checkbox"/> Double lumen ETT	<input type="checkbox"/> Arndt Bronchial Blocker	<input type="checkbox"/> Fogarty Catheter
<input type="checkbox"/> Intentional Mainstem ETT	<input type="checkbox"/> Univent ETT	<input type="checkbox"/> Other

ICU Type Ventilator Used Intraop:  Yes  No

Anesthesia Ready / End of Induction: mm/dd/yyyy hh : mm \_\_ / \_\_ / \_\_\_\_ :\_\_

**ANESTHESIA Intraoperative Pharmacology (including CPB)**

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

- |  |  |
|--|--|
| <input type="checkbox"/> 450= 5-HT3 Agents (e.g., Ondansetron) | <input type="checkbox"/> 190= Magnesium Sulfate  |
| <input type="checkbox"/> 520= Acetaminophen                    | <input type="checkbox"/> 210= Milrinone  |
| <input type="checkbox"/> 20= Adenosine bolus                   | <input type="checkbox"/> 430= Narcotic   |
| <input type="checkbox"/> 50= Amiodarone                        | <input type="checkbox"/> 230= Nesiritide Infusion  |
| <input type="checkbox"/> 440= Benzodiazepine                   | <input type="checkbox"/> 240= Nicardipine Infusion   |
| <input type="checkbox"/> 420= Bronchodilator - Inhaled         | <input type="checkbox"/> 250= Nitric Oxide inhalation  |
| <input type="checkbox"/> 70= Calcium Chloride infusion         | <input type="checkbox"/> 260= Nitroglycerin (Tridil) infusion                                      |
| <input type="checkbox"/> 75= Calcium Gluconate infusion        | <input type="checkbox"/> 270= Nitroprusside (Nipride)  |
| <input type="checkbox"/> 480= Desflurane                       | <input type="checkbox"/> 180= Norepinephrine (Levophed) infusion                                   |
| <input type="checkbox"/> 80= Dexmetomidine (Precedex)          | <input type="checkbox"/> 280= Phenoxybenzamine bolus   |
| <input type="checkbox"/> 90= Dobutamine infusion               | <input type="checkbox"/> 290= Phentolamine (Regitine)  |
| <input type="checkbox"/> 100= Dopamine infusion                | <input type="checkbox"/> 300= Phenylephrine infusion   |
| <input type="checkbox"/> 110= Epinephrine (Adrenalin) infusion | <input type="checkbox"/> 500= Procainamide   |
| <input type="checkbox"/> 120= Esmolol                          | <input type="checkbox"/> 310= Propofol (Diprivan) infusion   |
| <input type="checkbox"/> 510= Fenoldopam infusion              | <input type="checkbox"/> 320= Prostaglandin infusion   |
| <input type="checkbox"/> 140= Furosemide                       | <input type="checkbox"/> 470= Sevoflurane  |
| <input type="checkbox"/> 370= Inotrope, Other                  | <input type="checkbox"/> 400= Sodium Bicarbonate bolus   |
| <input type="checkbox"/> 150= Insulin                          | <input type="checkbox"/> 160= Steroids IV/CPB<br>(Hydrocortisone/Methylprednisolone/Dexamethasone) |
| <input type="checkbox"/> 460= Isoflurane                       | <input type="checkbox"/> 340= Thyroid Hormone  |
| <input type="checkbox"/> 170= Isoproterenol infusion           | <input type="checkbox"/> 410= Tromethamine (THAM) bolus  |
| <input type="checkbox"/> 490= Ketamine                         | <input type="checkbox"/> 390= Vasoconstrictor, Other   |
| <input type="checkbox"/> 530= Ketorolac                        | <input type="checkbox"/> 380= Vasodilator, Other   |
| <input type="checkbox"/> 540= Levosimendan                     | <input type="checkbox"/> 360= Vasopressin infusion   |

Was AT III measured preoperatively?  Yes  No

Were any of the following labs checked during CPB?

- |                 |  |  |
|-----------------|--|--|
| Fibrinogen      | <input type="checkbox"/> Yes <input type="checkbox"/> No | If yes → value: _____ mg/dL                |
| Platelet Count  | <input type="checkbox"/> Yes <input type="checkbox"/> No | If yes → value: _____ 10 <sup>3</sup> / μL |
| TEG on CPB      | <input type="checkbox"/> Yes <input type="checkbox"/> No |  |
| TEG – FF on CPB | <input type="checkbox"/> Yes <input type="checkbox"/> No |  |
| ROTEM on CPB    | <input type="checkbox"/> Yes <input type="checkbox"/> No |  |
| FIBTEM on CPB   | <input type="checkbox"/> Yes <input type="checkbox"/> No |  |
| SONOCLOT on CPB | <input type="checkbox"/> Yes <input type="checkbox"/> No |  |

Were any of the following labs checked in the Operating Room after CPB completed?

- |                    |  |  |
|--------------------|--|--|
| Fibrinogen         | <input type="checkbox"/> Yes <input type="checkbox"/> No | If yes → FINAL value: _____ mg/dL                |
| Platelet Count     | <input type="checkbox"/> Yes <input type="checkbox"/> No | If yes → FINAL value: _____ 10 <sup>3</sup> / μL |
| TEG after CPB      | <input type="checkbox"/> Yes <input type="checkbox"/> No |  |
| TEG – FF after CPB | <input type="checkbox"/> Yes <input type="checkbox"/> No |  |
| ROTEM after CPB    | <input type="checkbox"/> Yes <input type="checkbox"/> No |  |
| FIBTEM after CPB   | <input type="checkbox"/> Yes <input type="checkbox"/> No |  |
| SONOCLOT after CPB | <input type="checkbox"/> Yes <input type="checkbox"/> No |  |

### 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"/> 20= Aminocaproic Acid (Amicar) infusion | <input type="checkbox"/> 170= Muscle Relaxant infusion |
| <input type="checkbox"/> 30= Amiodarone infusion                 | <input type="checkbox"/> 360= Narcotic infusion        |

<input type="checkbox"/>	40= Aprotinin (Trasylol ) infusion	<input type="checkbox"/>	180= Nesiritide Infusion
<input type="checkbox"/>	370= Benzodiazepine infusion	<input type="checkbox"/>	190= Nicardipine infusion
<input type="checkbox"/>	50= Calcium Chloride infusion	<input type="checkbox"/>	200= Nitric Oxide inhalation
<input type="checkbox"/>	60= Calcium Gluconate infusion	<input type="checkbox"/>	210= Nitroglycerin (Tridil) infusion
<input type="checkbox"/>	70= Dexmetetomidine (Precedex) infusion	<input type="checkbox"/>	220= Nitroprusside (Nipride) infusion
<input type="checkbox"/>	80= Dobutamine infusion	<input type="checkbox"/>	230= Norepinephrine (Levophed) infusion
<input type="checkbox"/>	90= Dopamine infusion	<input type="checkbox"/>	240= Phentolamine (Regitine) infusion
<input type="checkbox"/>	100= Epinephrine (Adrenalin) infusion	<input type="checkbox"/>	250= Phenylephrine infusion
<input type="checkbox"/>	340= Esmolol infusion	<input type="checkbox"/>	380= Procainamide bolus/infusion
<input type="checkbox"/>	390= Fenoldopam infusion	<input type="checkbox"/>	260= Propofol (Diprivan) infusion
<input type="checkbox"/>	310= Inotrope, Other	<input type="checkbox"/>	270= Prostaglandin infusion
<input type="checkbox"/>	120=Insulin infusion	<input type="checkbox"/>	280= Thyroid Hormone infusion
<input type="checkbox"/>	130= Isoproterenol infusion	<input type="checkbox"/>	290= Tranexamic Acid infusion
<input type="checkbox"/>	410= Ketamine Infusion	<input type="checkbox"/>	330= Vasoconstrictor, Other
<input type="checkbox"/>	400= Levosimendan	<input type="checkbox"/>	320= Vasodilator, Other
<input type="checkbox"/>	350= Local Anesthetic infusion via catheter (On-Q, Pleural catheter)	<input type="checkbox"/>	300= Vasopressin infusion
<input type="checkbox"/>	150= Milrinone 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

Additional Intervention Required:

*Circle EACH event that required additional intervention.*

Anesthesia adverse events:  None

(If not None, select all adverse events that apply: ↓)

20= Oral/Nasal Injury-Bleeding

210= Anaphylaxis/Anaphylactoid Reaction

30= Respiratory Arrest

220= Non-allergic Drug Reaction

40= Difficult Intubation/Reintubation

230= Medication Administration

- |   |   |
|---|---|
| <input type="checkbox"/> 50= Stridor / Sub-glottic Stenosis   | <input type="checkbox"/> 240= Medication Dosage   |
| <input type="checkbox"/> 60= Extubation   | <input type="checkbox"/> 250= Intraoperative Recall                                       |
| <input type="checkbox"/> 70= Endotracheal Tube Migration  | <input type="checkbox"/> 260= Malignant Hyperthermia                                      |
| <input type="checkbox"/> 80= Airway Injury  | <input type="checkbox"/> 270= Protamine Reaction  |
| <input type="checkbox"/> 410= Hemoptysis  | <input type="checkbox"/> 280= Cardiac Arrest - related to anesthesia care                 |
| <input type="checkbox"/> 450= Laryngospasm requiring medication   | <input type="checkbox"/> 490= Cardiac Arrest - unrelated to anesthesia care               |
| <input type="checkbox"/> 400= Bronchospasm  | <input type="checkbox"/> 510= Hypercyanotic Episode (Tet Spell) unrelated to manipulation |
| <input type="checkbox"/> 470= Unplanned need to remain intubated post-procedure due to anesthesia factors | <input type="checkbox"/> 500= Pulmonary Hypertensive Crisis unrelated to manipulation     |
| <input type="checkbox"/> 90= Arrhythmia - Central Venous Line Placement                                   | <input type="checkbox"/> 290= TEE related esophageal bleeding / rupture                   |
| <input type="checkbox"/> 100= Myocardial Injury - Central Venous Line Placement                           | <input type="checkbox"/> 300= TEE related esophageal chemical burn                        |
| <input type="checkbox"/> 110= Vascular Compromise - Central Venous Line Placement                         | <input type="checkbox"/> 310= TEE related airway compromise                               |
| <input type="checkbox"/> 120= Pneumothorax - Central Venous Line Placement                                | <input type="checkbox"/> 315= TEE related hemodynamic compromise                          |
| <input type="checkbox"/> 130= Vascular Access   | <input type="checkbox"/> 320= TEE related extubation                                      |
| <input type="checkbox"/> 140= Hematoma requiring relocation of catheter placement                         | <input type="checkbox"/> 330= Complications during patient transfer                       |
| <input type="checkbox"/> 150= Arterial Puncture   | <input type="checkbox"/> 340= Peripheral Nerve Injury due to positioning                  |
| <input type="checkbox"/> 160= Intravenous/Intra-arterial Air Embolism                                     | <input type="checkbox"/> 370= Anesthesia Equipment Malfunction/ Failure                   |
| <input type="checkbox"/> 350= Arterial Line Placement- Extremity ischemia                                 | <input type="checkbox"/> 390= Integument Injury (skin breakdown or dehiscence)            |
| <input type="checkbox"/> 380= Intravenous Infiltration  | <input type="checkbox"/> 480= Ocular Injury (corneal abrasion or injury)                  |
| <input type="checkbox"/> 170= Bleeding - Regional Anesthetic Site   | <input type="checkbox"/> 420= Postop Nausea/Vomiting requiring admission                  |
| <input type="checkbox"/> 180= Intrathecal Puncture - Regional   | <input type="checkbox"/> 430= Vomiting or Aspiration on Induction/Emergence               |
| <input type="checkbox"/> 190= Local Anesthetic Toxicity - Regional  | <input type="checkbox"/> 440= Emergence Delirium requiring Medication                     |
| <input type="checkbox"/> 200= Neurologic Injury - Regional  | <input type="checkbox"/> 900= Other   |