# The Society of Thoracic Surgeons
# Congenital Heart Surgery Database
## Version 3.41
## Updated August 20, 2019

**STS National Database**
*Using data to drive quality*

| ADMINISTRATIVE | | |
|---|---|---|
| Participant ID: | Patient Participating in STS-Related Clinical Trial: | ☐ None  ☐ Trial 1  ☐ Trial 2  ☐ Trial 3<br>☐ Trial 4  ☐ Trial 5  ☐ 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:  ☐ Yes  ☐ No

Patient Adopted:  ☐ Yes  ☐ No

Birth Location Known: ☐ Yes  ☐ No

| *(If Yes →)* | Born at Home  ☐ Yes  ☐ No | | |
|---|---|---|---|
| | *(If No →)* | Birth Hospital Name Known: ☐ Yes  ☐ No | |
| | | *(If Yes →)* | Birth Hospital Name: |
| | | | Birth Hospital TIN: |
| | Birth City: | Birth Region: | Birth Country |

Mode of Delivery Known:  ☐ Yes  ☐ No
*(If Yes →)*  Mode of Delivery:
- ☐ Spontaneous onset labor with vaginal delivery    ☐ Spontaneous onset labor with cesarean section
- ☐ Induction of labor with vaginal delivery    ☐ Induction of labor with subsequent cesarean section
- ☐ Scheduled cesarean section    ☐ Other cesarean section

Mother's Gravidity and Parity known: ☐ Yes  ☐ No *(If Yes ↓)*
　　　Mother's Gravidity:　　　　　　Mother's Parity:

APGAR Scores Known: ☐ Yes  ☐ No *(If Yes ↓)*
　　　APGAR Score at 1 minute:　　　　APGAR Score at 5 minutes:

Mother's Name Known:  ☐ Yes  ☐ No

| *(If Yes →)*  Mother's Last : | Mother's First Name: | Mother's Middle Name: |
|---|---|---|

Mother's National ID Number (SSN) Known:  ☐ Yes  ☐ No  ☐ Refused
*(If Yes →)*  Mother's National ID Number (SSN):

| DOB: *(mm/dd/yyyy)* _ _ / _ _ / _ _ _ _ | Birth Weight Known:  ☐ Yes ☐ No | *(If Yes →)*  Birth Weight (kg): |
|---|---|---|

| Sex at Birth: ☐ M  ☐ F  ☐ Ambiguous | Premature Birth: ☐ Yes ☐ No ☐ Unknown |
|---|---|

Gestational Age at Birth Known:  ☐ Yes ☐ No

*(If Yes →)*  Gestational age at birth:  Weeks: _____wks　　Days: ☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ Unknown

| Multiple Gestation:  ☐ Yes ☐ No ☐ Unknown | Antenatal Diagnosis of Congenital Heart Disease: | ☐ Yes ☐ No<br>☐ Unknown |
|---|---|---|

Pregnancy – related complications: ☐ Yes ☐ No ☐ Unknown

| *(If Yes →)* | Pre-ecclampsia: | ☐ Yes ☐ No ☐ Unknown | Gestational DM: | ☐ Yes ☐ No ☐ Unknown |
|---|---|---|---|---|
| | Hypertension: | ☐ Yes ☐ No ☐ Unknown | HELLPP: | ☐ Yes ☐ No ☐ Unknown |
| | Polyhydramnios: | ☐ Yes ☐ No ☐ Unknown | Oligohydramnios: | ☐ Yes ☐ No ☐ Unknown |
| | Hydrops: | ☐ Yes ☐ No ☐ Unknown | Other: | ☐ Yes ☐ No ☐ Unknown |

Race Documented:
　　　☐ Yes ☐ No ☐ Patient declined to disclose

| (If Yes, →) | Caucasian: | ☐ Yes ☐ No | Black/African American: | ☐ Yes ☐ No |
|---|---|---|---|---|
| | Asian: | ☐ Yes ☐ No | Am Indian/Alaskan Native: | ☐ Yes ☐ No |
| | Native Hawaiian/Pacific Islander: | ☐ Yes ☐ No | Other: | ☐ Yes ☐ No |

| | |
|---|---|
| Hispanic or Latino Ethnicity: | ☐ Yes ☐ No ☐ Not Documented |
| Date of Last Follow-Up: | *(mm/dd/yyyy)* __ __ / __ __ / __ __ __ __ |
| Last follow-up NYHA Classification: | ☐ Not Assessed ☐ NYHA 1 ☐ NYHA 2 ☐ NYHA 3 ☐ NYHA 4 |
| Mortality Status at Last Follow-Up: | ☐ Alive ☐ Dead |
| *(If Dead →)* | Mortality Date: *(mm/dd/yyyy)* __ __ / __ __ / __ __ __ __ |

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

| | |
|---|---|
| ☐ | Major abnormality of gastrointestinal system, Anal Atresia (imperforate anus) |
| ☐ | Major abnormality of genitalia, Ambiguous genitalia |
| ☐ | Major abnormality of genitalia, Hypospadiasis |
| ☐ | Major abnormality of genitalia, Rectovaginal fistula |
| ☐ | Major abnormality of genitalia, Undescended testis |
| ☐ | Major abnormality of kidney, Horseshoe kidney |
| ☐ | Major abnormality of kidney, Hydronephronsis |
| ☐ | Major abnormality of kidney, Polycystic kidney |
| ☐ | Major abnormality of kidney, Single kidney |
| ☐ | Other |
| | *(If NCAA is Other→)* _____ <br> Major Noncardiac Abnormality- Other- Specify |

## CHROMOSOMAL ABNORMALITIES

Chromosomal Abnormality: *(select all that apply)*

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

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

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

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

| | | | |
|---|---|---|---|
| ☐ EP300 | ☐ ESC02 | ☐ EST-1 | ☐ EVC |
| ☐ EVC2 | ☐ FBN1 | ☐ FBN2 | ☐ FGF8 |
| ☐ FGFR1 | ☐ FLNA | ☐ FMR1 | ☐ FOXC1 |
| ☐ FTO | ☐ GALNT11 | ☐ GANAB | ☐ GAS8 |
| ☐ GATA4 | ☐ GATA6 | ☐ GDF1 | ☐ GJA1 |
| ☐ GPC3 | ☐ GRK5 | ☐ HNRNPK | ☐ HOXA1 |
| ☐ HRAS | ☐ HYDIN | ☐ IFT122 | ☐ IFT140 |
| ☐ IFT27 | ☐ IFT43 | ☐ IFT80 | ☐ INPP5E |
| ☐ INTU | ☐ INVS | ☐ JAG1 | ☐ KAT6B |
| ☐ KDM6A | ☐ KIAA0556 | ☐ KIAA0586 | ☐ KIAA0753 |
| ☐ KIF7 | ☐ KMT2D (MLL2) | ☐ KRAS | ☐ LRRC6 |
| ☐ LTBP4 | ☐ MAP2K1 | ☐ MAP2K2 | ☐ MAPK1 |
| ☐ MCIDAS | ☐ MED12 | ☐ MED13L | ☐ MEGF8 |
| ☐ MID1 | ☐ MKKS | ☐ MKKS (BBS6) | ☐ MKS1 |
| ☐ MYH11 | ☐ MYH6 | ☐ MYH7 | ☐ NF1 |
| ☐ NHS | ☐ NIPBL | ☐ NKX2-5 | ☐ NKX2-6 |
| ☐ NME8 (aka TXNDC3) | ☐ NODAL | ☐ NOTCH1 | ☐ NPHP3 |
| ☐ NR2F2 | ☐ NSD1 | ☐ OFD1 | ☐ PDGFRA |
| ☐ PEX1 | ☐ PIBF1 | ☐ PIH1D3 | ☐ PITX2 |
| ☐ PKD1 | ☐ PKD2 | ☐ PKHD1 | ☐ PQBP1 |
| ☐ PRKD1 | ☐ PTEN | ☐ PTPN11 | ☐ RAB23 |
| ☐ RAD21 | ☐ RAI1 | ☐ RBM10 | ☐ RBPJ |
| ☐ RDR2 | ☐ RECQL4 | ☐ ROR2 | ☐ RPGR |
| ☐ RPGRIP1L | ☐ RPL35A | ☐ RPS10 | ☐ RPS17 |
| ☐ RPS24 | ☐ RPS26 | ☐ RSK2 | ☐ RSPH1 |
| ☐ RSPH3 | ☐ RSPH4A | ☐ RSPH9 | ☐ SALL1 |
| ☐ SALL4 | ☐ SEMA3E | ☐ SH3PXD2B | ☐ SHH |
| ☐ SHOC2 | ☐ SHROOM3 | ☐ SMAD2 | ☐ SMAD3 |
| ☐ SMAD6 | ☐ SMARCA4 | ☐ SMARCB1 | ☐ SMARCE1 |
| ☐ SMC1L1 | ☐ SMC3 | ☐ SMS | ☐ SNAP29 |
| ☐ SOS2 | ☐ SPAG1 | ☐ STRA6 | ☐ TAB2 |
| ☐ TBX1 | ☐ TBX20 | ☐ TBX5 | ☐ TCOF1 |
| ☐ TCTEX1D2 | ☐ TCTN1 | ☐ TCTN2 | ☐ TCTN3 |
| ☐ TFAP2B | ☐ TGFBR1 or 2 | ☐ TLL1 | ☐ TMEM107 |
| ☐ TMEM138 | ☐ TMEM216 | ☐ TMEM231 | ☐ TMEM67 |
| ☐ TRIM32 (BBS11) | ☐ TSC1 | ☐ TSC2 | ☐ TTC25 |
| ☐ TTC8 (BBS8) | ☐ TWIST | ☐ WDR19 | ☐ ZFPM2 / FOG2 |
| ☐ ZIC3 | ☐ ZNF423 | | |
| ☐ Unlisted Gene or Chromosomal Anomaly | | | |
| | | | |
| *(If "Unlisted Gene or Chromosomal Anomaly" ↓)* | | | |
| Unlisted Gene or Chromosomal Anomaly - Specify _____ | | | |

| SYNDROMES | |
|---|---|
| Syndromes: *(select all that apply)* | |
| ☐ No syndromic abnormality identified | |
| ☐ 1p36 deletion syndrome | ☐ 1q21.1 duplicaiton syndrome |
| ☐ 3q duplication syndrome | ☐ 4q deleltion syndrome |
| ☐ 7q11.23 duplication syndrome | ☐ 8p23.1 deletion syndrome |
| ☐ 15q11.2 deletion syndrome | ☐ 16p11.2 deletion syndrome |
| ☐ 22q11.2 duplication syndrome | ☐ Adams-Oliver syndrome |
| ☐ Alagille syndrome (intrahepatic biliary duct agenesis) | ☐ Alstrom syndrome |
| ☐ Alveolar Capillary Dysplasia Syndrome | ☐ Apert syndrome |
| ☐ Baller-Gerold Syndrome | ☐ Bardet-Biedl syndrome |
| ☐ Beckwith-Wiedemann syndrome | ☐ Brugada syndrome (Sudden unexplained nocturnal death syndrome) (SUNDS) |
| ☐ Brugada/Timothy Syndrome | ☐ Cantu syndrome |
| | ☐ Cardiofaciocutaneous syndrome |

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

| | |
|---|---|
| *(If Other Syndromic abnormality, Specify ↓)* | |
| _____<br>Syndrome – Other – Specify | |

## HOSPITALIZATION

Hospital Name: _____

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

| PrimaryPayor: | | Secondary (supplemental) Payor: | |
|---|---|---|---|
| ☐ None/self | | ☐ None/self | |
| *(If Primary not None or missing →)* | ☐ Medicare<br>☐ Medicaid<br>☐ Military Health<br>☐ Indian Health Service<br>☐ Correctional Facility<br>☐ State Specific Plan<br>☐ Other Government Insurance<br>☐ Commercial Health Insurance<br>☐ Health Maintenance Organization<br>☐ Non US Plan<br>☐ Charitable Care/Foundation Funding (internal)<br>☐ Charitable Care/Foundation Funding (external) | *(If Secondary not None or missing →)* | ☐ Medicare<br>☐ Medicaid<br>☐ Military Health<br>☐ Indian Health Service<br>☐ Correctional Facility<br>☐ State Specific Plan<br>☐ Other Government Insurance<br>☐ Commercial Health Insurance<br>☐ Health Maintenance Organization<br>☐ Non US Plan<br>☐ Charitable Care/Foundation Funding (internal)<br>☐ Charitable Care/Foundation Funding (external) |
| *(If Medicare→)* | Primary Payor Medicare Fee for Service: | ☐ Yes ☐ No | *(If Medicare →)* | Secondary Payor Medicare Fee for Service: | ☐ Yes ☐ No |

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)

| | | | |
|---|---|---|---|
| ☐ | No preoperative factors identified | ☐ | Sepsis |
| ☐ | Cardio-pulmonary resuscitation | ☐ | Sepsis with positive blood culture |
| ☐ | Preoperative complete AV block | ☐ | Preoperative neurological deficit |
| ☐ | Preoperative/Preprocedural mechanical circulatory support (IABP, VAD, ECMO, or CPS) | ☐ | Seizure during lifetime |
| ☐ | Shock, Persistent at time of surgery | ☐ | Seizure within 48 hours prior to surgery |
| ☐ | Shock, Resolved at time of surgery | ☐ | Stroke, CVA, or Intracranial hemorrhage > Grade 2 during lifetime |
| ☐ | Diabetes mellitus, Insulin dependent | ☐ | Stroke, CVA, or Intracranial hemorrhage > Grade 2 within 48 hours prior to surgery |
| ☐ | Diabetes mellitus, Non-insulin dependent | ☐ | Renal dysfunction |
| ☐ | Hypothyroidism | ☐ | Renal failure requiring dialysis |
| ☐ | Currently taking steroids as treatment for adrenal insufficiency | ☐ | Invasive mechanical ventilation to treat cardiorespiratory failure |
| ☐ | Currently taking steroids for any reason other than treatment of adrenal insufficiency | ☐ | Non-invasive respiratory support to treat cardiorespiratory failure |
| ☐ | Colostomy present | ☐ | Respiratory Syncytial Virus |

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

| DIAGNOSIS | | |
|---|---|---|
| Select **ALL** diagnosis that apply(↓) | CIRCLE the **ONE** PRIMARY diagnosis for this operation | Select the **ONE** FUNDAMENTAL diagnosis for this patient (↓) |

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

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

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| **Left Heart Lesions** | Aortic Valve Disease | ☐ | 550=Aortic stenosis, Subvalvar | ☐ |
| | | ☐ | 2500=Aortic stenosis, Subvalvar, Discrete | ☐ |
| | | ☐ | 2510=Aortic stenosis, Subvalvar, IHSS | ☐ |
| | | ☐ | 2520=Aortic stenosis, Subvalvar, Tunnel-like | ☐ |
| | | ☐ | 560=Aortic stenosis, Valvar | ☐ |
| | | ☐ | 570=Aortic stenosis, Supravalvar | ☐ |
| | | ☐ | 590=Aortic valve atresia | ☐ |
| | | ☐ | 600=Aortic insufficiency | ☐ |

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

| Category | Subcategory | | Diagnosis | |
|---|---|---|---|---|
| **DORV** | | ☐ | 930=DORV, VSD type | ☐ |
| | | ☐ | 940=DORV, TOF type | ☐ |
| | | ☐ | 950=DORV, TGA type | ☐ |
| | | ☐ | 960=DORV, Remote VSD (uncommitted VSD) | ☐ |
| | | ☐ | 2030=DORV + AVSD (AV Canal) | ☐ |
| | | ☐ | 975=DORV, IVS | ☐ |
| **DOLV** | | ☐ | 980=DOLV | ☐ |
| **Thoracic Arteries and Veins** | | ☐ | 990=Coarctation of aorta | ☐ |
| | | ☐ | 1000=Aortic arch hypoplasia | ☐ |

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

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|---|---|---|---|---|
| **Thoracic and Mediastinal Disease** | Chest Wall | ☐ | 2160=Rib tumor, Benign | ☐ |
| | | ☐ | 2170=Rib tumor, Malignant | ☐ |
| | | ☐ | 2180=Rib tumor, Metastatic | ☐ |
| | | ☐ | 2190=Sternal tumor, Benign | ☐ |
| | | ☐ | 2200=Sternal tumor, Malignant | ☐ |
| | | ☐ | 2210=Sternal tumor, Metastatic | ☐ |
| | Pectus Excavatum, Carinatum | ☐ | 2220=Pectus carinatum | ☐ |
| | | ☐ | 2230=Pectus excavatum | ☐ |
| | Thoracic Outlet | ☐ | 2240=Thoracic outlet syndrome | ☐ |
| **Electrophysiological** | | ☐ | 1180=Arrhythmia | ☐ |
| | | ☐ | 2440=Arrhythmia, Atrial, Atrial fibrillation | ☐ |

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

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

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

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

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

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

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

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

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

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

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| | ☐ | 5600=Status post - Shunt, Systemic to pulmonary, Central (shunt from aorta) |
| | ☐ | 7130=Status post - Shunt, Systemic to pulmonary, Central (shunt from aorta) Central shunt with an end-to-side connection between the transected main pulmonary artery and the side of the ascending aorta (i.e. Mee shunt) |
| | ☐ | 7230=Status post – Shunt, Systemic to pulmonary, Potts – Smith type (descending aorta to pulmonary artery) |
| | ☐ | 5610=Status post - Shunt, Systemic to pulmonary, Other |
| | ☐ | 5630=Status post - Shunt, Ligation and takedown |
| | ☐ | 6095=Status post - Shunt, Reoperation |
| | ☐ | 5640=Status post - PA banding (PAB) |
| | ☐ | 5650=Status post - PA debanding |
| | ☐ | 7200=Status post - PA band adjustment |
| | ☐ | 5660=Status post - Damus-Kaye-Stansel procedure (DKS) (creation of AP anastomosis without arch reconstruction) |
| | ☐ | 5670=Status post - Bidirectional cavopulmonary anastomosis (BDCPA) (bidirectional Glenn) |
| | ☐ | 5680=Status post - Glenn (unidirectional cavopulmonary anastomosis) (unidirectional Glenn) |
| | ☐ | 5690=Status post - Bilateral bidirectional cavopulmonary anastomosis (BBDCPA) (bilateral bidirectional Glenn) |
| | ☐ | 5700=Status post - HemiFontan |
| | ☐ | 6330=Status post - Superior cavopulmonary anastomosis(es) (Glenn or HemiFontan) + Atrioventricular valvuloplasty |
| | ☐ | 6130=Status post - Superior Cavopulmonary anastomosis(es) + PA reconstruction |
| | ☐ | 7300=Status post - Takedown of superior cavopulmonary anastomosis |
| | ☐ | 7140=Status post - Hepatic vein to azygous vein connection, Direct |
| | ☐ | 7150=Status post - Hepatic vein to azygous vein connection, Interposition graft |
| | ☐ | 7160=Status post - Kawashima operation (superior cavopulmonary connection in setting of interrupted IVC with azygous continuation) |
| | ☐ | 5710=Status post - Palliation, Other |
| **Mechanical Support** | ☐ | 6360=Status post - ECMO cannulation |
| | ☐ | 6370=Status post - ECMO decannulation |
| | ☐ | 5910=Status post - ECMO procedure |
| | ☐ | 5900=Status post - Intraaortic balloon pump (IABP) insertion |
| | ☐ | 5920=Status post - Right/left heart assist device procedure |
| | ☐ | 6390=Status post - VAD explantation |
| | ☐ | 6380=Status post - VAD implantation |
| | ☐ | 7170=Status post - VAD change out |
| **Anesthetic procedures** | ☐ | 6420=Status post - Echocardiography procedure, Sedated transesophageal echocardiogram |
| | ☐ | 6430=Status post - Echocardiography procedure, Sedated transthoracic echocardiogram |
| | ☐ | 6435=Status post - Non-cardiovascular, Non-thoracic procedure on cardiac patient with cardiac anesthesia |
| | ☐ | 6440=Status post - Radiology procedure on cardiac patient, Cardiac Computerized Axial Tomography (CT Scan) |
| | ☐ | 6450=Status post - Radiology procedure on cardiac patient, Cardiac Magnetic Resonance Imaging (MRI) |
| | ☐ | 6460=Status post - Radiology procedure on cardiac patient, Diagnostic radiology |
| | ☐ | 6470=Status post - Radiology procedure on cardiac patient, Non-Cardiac Computerized Tomography (CT) on cardiac patient |

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| | ☐ | 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 |

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| **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 | | |
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| 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 |

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

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| **Right Heart Lesions** | | unifocalization + VSD closure + RV to PA connection [with or without conduit]) |
| | | ☐ 2710= Pulmonary atresia - VSD – MAPCA repair, Status post prior complete unifocalization (includes VSD closure + RV to PA connection [with or without conduit]) |
| | | ☐ 2720= Pulmonary atresia - VSD – MAPCA repair, Status post prior incomplete unifocalization (includes completion of pulmonary unifocalization + VSD closure + RV to PA connection [with or without conduit]) |
| | | ☐ 2730= Unifocalization MAPCA(s), Bilateral pulmonary unifocalization - Complete unifocalization (all usable MAPCA[s] are incorporated) |
| | | ☐ 2740= Unifocalization MAPCA(s), Bilateral pulmonary unifocalization - Incomplete unifocalization (not all usable MAPCA[s] are incorporated) |
| | | ☐ 2750= Unifocalization MAPCA(s), Unilateral pulmonary unifocalization |
| | | ☐ 440= Unifocalization MAPCA(s) |
| | | ☐ 450= Occlusion of MAPCA(s) |
| | Tricuspid Valve Disease and Ebstein's Anomaly | ☐ 460= Valvuloplasty, Tricuspid (do not use this code if tricuspid valve malfunction is secondary to Ebstein's anomaly. Use 465= Ebstein's repair) |
| | | ☐ 2280= Valvuloplasty converted to valve replacement in the same operation, Tricuspid |
| | | ☐ 465= Ebstein's repair |
| | | ☐ 470= Valve replacement, Tricuspid (TVR) |
| | | ☐ 480= Valve closure, Tricuspid (exclusion, univentricular approach) |
| | | ☐ 490= Valve excision, Tricuspid (without replacement) |
| | | ☐ 500= Valve surgery, Other, Tricuspid |
| | RVOT Obstruction, IVS Pulmonary Stenosis | ☐ 510= RVOT procedure |
| | | ☐ 520= 1 1/2 ventricular repair |
| | | ☐ 530= PA, reconstruction (plasty), Main (trunk) |
| | | ☐ 540= PA, reconstruction (plasty), Branch, Central (within the hilar bifurcation) |
| | | ☐ 550= PA, reconstruction (plasty), Branch, Peripheral (at or beyond the first lobar branch) |
| | | ☐ 3350= PA, reconstruction (plasty), Branch, Peripheral (at or beyond the first lobar branch, proximal to first segmental branch) |
| | | ☐ 3360= PA, reconstruction (plasty), Branch, Peripheral (at or beyond the first lobar branch, beyond the first segmental branch) |
| | | ☐ 570= DCRV repair |
| | | ☐ 3370= RV Rehabilitation, Endocardial Resection |
| | Pulmonary Valve Disease | ☐ 590= Valvuloplasty, Pulmonic |
| | | ☐ 2270= Valvuloplasty converted to valve replacement in the same operation, Pulmonic |
| | | ☐ 600= Valve replacement, Pulmonic (PVR) |
| | | ☐ 630= Valve excision, Pulmonary (without replacement) |
| | | ☐ 640= Valve closure, Semilunar |
| | | ☐ 650= Valve surgery, Other, Pulmonic |
| **Conduit operations** | Conduit operations | ☐ 610= Conduit placement, RV to PA |
| | | ☐ 620= Conduit placement, LV to PA |
| | | ☐ 1774= Conduit placement, Ventricle to aorta |
| | | ☐ 1772= Conduit placement, Other |
| | Conduit Stenosis / Insufficiency | ☐ 580= Conduit reoperation |
| **Left Heart Lesions** | Aortic Valve Disease | ☐ 660= Valvuloplasty, Aortic |

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

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

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

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

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| | | ☐ 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 |

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| | ☐ 2390= VAD explantation |
| | ☐ 2380= VAD implantation |
| | ☐ 3170= VAD change out |
| **Anesthetic procedures** | ☐ 2420= Echocardiography procedure, Sedated transesophageal echocardiogram |
| | ☐ 2430= Echocardiography procedure, Sedated transthoracic echocardiogram |
| | ☐ 2435= Non-cardiovascular, Non-thoracic procedure on cardiac patient with cardiac anesthesia |
| | ☐ 2440= Radiology procedure on cardiac patient, Cardiac Computerized Axial Tomography (CT Scan) |
| | ☐ 2450= Radiology procedure on cardiac patient, Cardiac Magnetic Resonance Imaging (MRI) |
| | ☐ 2460= Radiology procedure on cardiac patient, Diagnostic radiology |
| | ☐ 2470= Radiology procedure on cardiac patient, Non-Cardiac Computerized Tomography (CT) on cardiac patient |
| | ☐ 2480= Radiology procedure on cardiac patient, Non-cardiac Magnetic Resonance Imaging (MRI) on cardiac patient |
| | ☐ 2490= Radiology procedure on cardiac patient, Therapeutic radiology |
| **Miscellaneous Procedures** | ☐ 1720= Aneurysm, Ventricular, Right, Repair |
| | ☐ 1730= Aneurysm, Ventricular, Left, Repair |
| | ☐ 1740= Aneurysm, Pulmonary artery, Repair |
| | ☐ 1760= Cardiac tumor resection |
| | ☐ 1780= Pulmonary AV fistula repair/occlusion |
| | ☐ 1790= Ligation, Pulmonary artery |
| | ☐ 1802= Pulmonary embolectomy, Acute pulmonary embolus |
| | ☐ 1804= Pulmonary embolectomy, Chronic pulmonary embolus |
| | ☐ 1810= Pleural drainage procedure |
| | ☐ 1820= Pleural procedure, Other |
| | ☐ 1830= Ligation, Thoracic duct |
| | ☐ 1840= Decortication |
| | ☐ 1850= Esophageal procedure |
| | ☐ 1860= Mediastinal procedure |
| | ☐ 1870= Bronchoscopy |
| | ☐ 1880= Diaphragm plication |
| | ☐ 1890= Diaphragm procedure, Other |
| | ☐ 1930= VATS (video-assisted thoracoscopic surgery) |
| | ☐ 1940= Minimally invasive procedure |
| | ☐ 1950= Bypass for noncardiac lesion |
| | ☐ 1960= Delayed sternal closure |
| | ☐ 1970= Mediastinal exploration |
| | ☐ 1980= Sternotomy wound drainage |
| | ☐ 3180= Intravascular stent removal |
| | ☐ 3220= Removal of transcatheter delivered device from heart |
| | ☐ 3210= Removal of transcatheter delivered device from blood vessel |
| | ☐ 1990= Thoracotomy, Other |
| | ☐ 2000= Cardiotomy, Other |
| | ☐ 2010= Cardiac procedure, Other |
| | ☐ 2020= Thoracic and/or mediastinal procedure, Other |

| | | ☐ 2030= Peripheral vascular procedure, Other |
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| | | ☐ 2040= Miscellaneous procedure, Other |
| | | ☐ 2050= Organ procurement |
| | | ☐ 7777= Other procedure |
| **Operation Canceled or Aborted** | Canceled operation | ☐ 7800= Operation canceled before skin incision |
| | Aborted operation | ☐ 7810= Operation aborted after skin incision |

| PROCEDURE SPECIFIC FACTORS |
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**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

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| 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

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| Major coronary crossing RVOT - Coronary anomaly restricting RVOT enlargement | ☐ Yes ☐ No |
| VSD, Multiple, Repair | ☐ Yes ☐ No |
| Restrictive VSD | ☐ Yes ☐ No |
| Hypoplastic branch pulmonary arteries (diminished pulmonary vascular bed) | ☐ Yes ☐ No |
| AV Valve regurgitation grade 3 and 4 (Severe AV Valve regurgitation) | ☐ Yes ☐ No |
| Double orifice left atrioventricular valve | ☐ Yes ☐ No |
| Single papillary muscle in the left ventricle and/or parachute left atrioventricular valve | ☐ Yes ☐ No |
| Hypoplastic posterior mural leaflet | ☐ Yes ☐ No |
| Atrioventricular septal defect with ventricular imbalance: dominant left ventricle, hypoplastic right ventricle | ☐ Yes ☐ No |
| Atrioventricular septal defect with ventricular imbalance: dominant right ventricle, hypoplastic left ventricle | ☐ Yes ☐ No |
| Common atrioventricular valve with unbalanced commitment of valve to left ventricle | ☐ Yes ☐ No |
| Common atrioventricular valve with unbalanced commitment of valve to right ventricle | ☐ Yes ☐ No |

*If one of the following is the Primary procedure, specify whether the procedure specific factors apply*
☐ TOF repair, No ventriculotomy
☐ TOF repair, Ventriculotomy, Nontransanular patch
☐ TOF repair, Ventriculotomy, Transanular patch
☐ TOF repair, RV-PA conduit
☐ TOF - Absent pulmonary valve repair
☐ Pulmonary atresia - VSD - MAPCA repair, Complete single stage repair (1-stage that includes bilateral pulmonary unifocalization + VSD closure + RV to PA connection [with or without conduit])
☐ Pulmonary atresia - VSD - MAPCA repair, Status post prior complete unifocalization (includes VSD closure + RV to PA connection [with or without conduit])
☐ Pulmonary atresia - VSD - MAPCA repair, Status post prior incomplete unifocalizarion (includes completion of pulmonary unifocalization + VSD closure + RV to PA connection [with or without conduit])
☐ Pulmonary atresia - VSD (including TOF, PA) repair

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| 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)

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| AV Valve regurgitation grade 3 and 4 (Severe AV Valve regurgitation) | ☐ Yes ☐ No |
| Double orifice left atrioventricular valve | ☐ Yes ☐ No |

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| Single papillary muscle in the left ventricle and/or parachute left atrioventricular valve | ☐ Yes ☐ No |
| Hypoplastic posterior mural leaflet | ☐ Yes ☐ No |
| Atrioventricular septal defect with ventricular imbalance: dominant left ventricle and hypoplastic right ventricle | ☐ Yes ☐ No |
| Atrioventricular septal defect with ventricular imbalance: dominant right ventricle and hypoplastic left ventricle | ☐ Yes ☐ No |
| Common atrioventricular valve with unbalanced commitment of valve to left ventricle | ☐ Yes ☐ No |
| Common atrioventricular valve with unbalanced commitment of valve to right ventricle | ☐ Yes ☐ No |

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

☐ Bidirectional cavopulmonary anastomosis (BDCPA) (bidirectional Glenn)
☐ Glenn (unidirectional cavopulmonary anastomosis) (unidirectional Glenn)
☐ Bilateral bidirectional cavopulmonary anastomosis (BBDCPA) (bilateral bidirectional Glenn)
☐ HemiFontan
☐ Superior Cavopulmonary anastomosis(es) (Glenn or HemiFontan) + Atrioventricular valvuloplasty
☐ Superior Cavopulmonary anastomosis(es) + PA reconstruction
☐ Kawashima operation (superior cavopulmonary connection in setting of interrupted IVC with azygous continuation)

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

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

☐ Fontan, Atrio-pulmonary connection
☐ Fontan, Atrio-ventricular connection
☐ Fontan, TCPC, Lateral tunnel, Fenestrated
☐ Fontan, TCPC, Lateral tunnel, Nonfenestrated
☐ Fontan, TCPC, External conduit, Fenestrated
☐ Fontan, TCPC, External conduit, Nonfenestrated
☐ Fontan, TCPC, Intra/extracardiac conduit, Fenestrated
☐ Fontan, TCPC, Intra/extracardiac conduit, Nonfenestrated
☐ Fontan, 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) | ☐ Yes ☐ No |
| Moderate to severe systemic ventricular dysfunction | ☐ Yes ☐ No |
| Hypoplastic branch pulmonary arteries (diminished pulmonary vascular bed) | ☐ Yes ☐ No |
| Systemic ventricular outflow tract obstruction (subaortic obstruction) | ☐ Yes ☐ No |
| Ventricular dominance | ☐ Left Ventricular dominance |
| | ☐ Right Ventricular dominance |
| | ☐ Balanced |
| | ☐ Indeterminate Ventricular dominance |

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

☐ Arterial switch operation (ASO)
☐ Arterial switch procedure + Aortic arch repair

| | |
|---|---|
| Posterior coronary loop: circumflex coming off the RCA | ☐ Yes ☐ No |
| Posterior coronary loop: left trunk coming off the RCA | ☐ Yes ☐ No |
| Double coronary loops: inverted origin of right & left coronary arteries | ☐ Yes ☐ No |

| | |
|---|---|
| Single coronary ostium | ☐ Yes ☐ No |
| Intramural coronary | ☐ Yes ☐ No |
| Large infundibular coronary artery from LAD | ☐ Yes ☐ No |
| Malaligned commissures | ☐ Yes ☐ No |
| Take down of a commissure | ☐ Yes ☐ No |
| Aorto-pulmonary diameter mismatch | ☐ Yes ☐ No |
| Side by side vessels | ☐ Yes ☐ No |
| Posterior native aorta | ☐ Yes ☐ No |
| Subaortic obstruction/ conal septum malalignment | ☐ Yes ☐ No |
| Bicuspid native aortic valve (Bicuspid neopulmonary valve) | ☐ Yes ☐ No |
| Bicuspid native pulmonary valve (Bicuspid neoaortic valve) | ☐ Yes ☐ No |

*If one of the following is the Primary procedure, specify whether the procedure specific factors apply*
☐ Arterial switch operation (ASO) and VSD repair
☐ Arterial switch procedure and VSD repair + Aortic arch repair

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

*If one of the following is the Primary procedure, specify whether the procedure specific factors apply*
☐ Truncus arteriosus repair
☐ Truncus + Interrupted aortic arch repair (IAA) repair

| | |
|---|---|
| Truncus type 3 ( PA Branches from PDA or descending aorta) | ☐ Yes ☐ No |
| Abnormal coronary | ☐ Yes ☐ No |
| Truncal valve regurgitation (moderate to severe) | ☐ Yes ☐ No |
| Truncal valve stenosis (moderate to severe) | ☐ Yes ☐ No |

*If the following is the Primary procedure, specify whether the procedure specific factors apply*
☐ Norwood procedure
☐ Hybrid Approach "Stage 1", Application of RPA & LPA bands
☐ Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA)
☐ 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 | ☐ Yes ☐ No |
| Source of pulmonary blood flow: Shunt - ventricle-to-pulmonary artery | ☐ Yes ☐ No |
| Source of pulmonary blood flow: Superior caval vein-to-pulmonary artery | ☐ Yes ☐ No |
| Source of Pulmonary Blood Flow: Banded central PAs | ☐ Yes ☐ No |
| Ascending aorta < 2 mm | ☐ Yes ☐ No |
| Aortic atresia | ☐ Yes ☐ No |
| Aortic stenosis | ☐ Yes ☐ No |
| Mitral atresia | ☐ Yes ☐ No |
| Mitral stenosis | ☐ Yes ☐ No |
| Sinusoids | ☐ Yes ☐ No |

| | | |
|---|---|---|
| Intact atrial septum | | ☐ Yes ☐ No |
| Obstructed pulmonary venous return with severely restrictive ASD | | ☐ Yes ☐ No |
| AV Valve regurgitation grade 3 and 4 (Severe AV Valve regurgitation) | | ☐ Yes ☐ No |
| Aberrant right subclavian artery | | ☐ Yes ☐ No |
| Ventricular dominance | ☐ Left Ventricular dominance | |
| | ☐ Right Ventricular dominance | |
| | ☐ Balanced | |
| | ☐ Indeterminate Ventricular dominance | |

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

☐ Ebstein's repair

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

| OPERATIVE | | | |
|---|---|---|---|
| Procedure Location: ☐ Cardiac OR | ☐ ICU | ☐ SICU | |
| ☐ General OR | ☐ CVICU | ☐ Radiology Suite | |
| ☐ Hybrid Suite | ☐ NICU | ☐ Procedure Room | |
| ☐ Cath lab | ☐ PICU | ☐ Other | |

| Status: | ☐ Elective | ☐ Urgent | ☐ Emergent | ☐ Salvage |
|---|---|---|---|---|

| Operation Type: | ☐ CPB Cardiovascular | ☐ No CPB Cardiovascular | ☐ CPB Non-Cardiovascular |
|---|---|---|---|
| | ☐ ECMO | ☐ Thoracic | ☐ Interventional Cardiology |
| | ☐ VAD with CPB | ☐ VAD without CPB | ☐ NonCardiac/NonThoracic Procedure w/ Anesthesia |
| | ☐ Other | | |

| | |
|---|---|
| Near InfraredSpectroscopy (NIRS) Cerebral Metrics Used: | ☐ Yes ☐ No |
| *If NIRSCerUsed is Yes→* NIRS Cerebral Metrics Used Preoperatively | ☐ Yes ☐ No |
| NIRS Cerebral Metrics Used Intraoperatively | ☐ Yes ☐ No |
| NIRS Cerebral Metrics Used Postoperatively | ☐ Yes ☐ No |
| Near InfraredSpectroscopy (NIRS) Somatic Metrics Used: | ☐ Yes ☐ No |
| *If NIRSSomUsed is Yes→* NIRS Somatic Metrics Used Preoperatively | ☐ Yes ☐ No |
| NIRS Somatic Metrics Used Intraoperatively | ☐ Yes ☐ No |
| NIRS Somatic Metrics Used Postoperatively | ☐ Yes ☐ No |

OR Entry Time: *(00:00 – 23:59)* __ __: __ __          Skin Incision Start Time: *(00:00 – 23:59)* __ __: __ __
Endotracheal Intubation Performed: ☐ Yes ☐ No  *(If Yes ↓)*

| | Intubation Date/Time: | | Initial Extubation Date/Time: | |
|---|---|---|---|---|

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 Artery | ☐ Yes ☐ No | Right Carotid Artery | ☐ Yes ☐ No |
| | Left Carotid Artery | ☐ Yes ☐ No | Superior Vena Cava | ☐ Yes ☐ No |

Cerebral Perfusion Periods: _____
Cerebral Perfusion Flow Rate: _____ *(mL/kg) per minute*
Cerebral Perfusion Temperature: _____ *°C*

Arterial Blood Gas Management During Cooling:  ☐ Alpha STAT          ☐ pH STAT
☐ pHSTAT cooling/Alpha STAT rewarming     ☐ Other Combination

Hematocrit Prior to Circulatory Arrest or Cerebral Perfusion: _____

| Cardioplegia Delivery: | ☐ None | ☐ Antegrade | ☐ Retrograde | ☐ Both |
|---|---|---|---|---|

*If CPlegiaDeliv is Antegrade, Retrograde or Both ↓*

Cardioplegia Type: ☐ Blood ☐ Crystalloid ☐ Both ☐ Other

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

Cardioplegia Number of Doses: _____

Hematocrit - First after initiating CPB: _____
Hematocrit - Last Measured During CPB: _____
Hematocrit – Post CPB, Post Protamine: _____

Ultrafiltration Performed? ☐ 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: ☐ 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 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)* |
| Procoagulent 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)* |
|---|---|---|---|
| | | | *(0 - 2000 units)* |
| | | *(If Dose 2 > 0 →)* Prothrombin Complex Concentrate-3 (PCC-3, ProfilNine-SD)  Dose 3: | |
| | | | *(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): | ☐ Yes ☐ No |
|---|---|---|
| | ROTEM: | ☐ Yes ☐ No |
| | Sonoclot: | ☐ Yes ☐ No |
| | Heparin Concentration (Hepcon, HMS): | ☐ Yes ☐ No |
| | INR/PT/aPPP (iStat or equivalent): | ☐ Yes ☐ No |
| | ACT | ☐ Yes ☐ 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

| ☐ Both IMAs | ☐ No IMA |
|---|---|

<div align="center">

**VALVE PROCEDURES**

</div>

*If Op Type is CBP or No CBP Cardiovascular ↓*

Valve Operation: ☐ Yes ☐ No  *(If Yes ↓)*

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

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

<div align="center">

**EXPLANT(S)**

</div>

| **Valve Explant #1** | **2nd Explant: ☐ Yes ☐ No** | **3rd Explant: ☐ Yes ☐ No** | **4th Explant: ☐ Yes ☐ No** |
|---|---|---|---|
| | *If Yes ↓ (if no skip to implant)* | *If Yes ↓ (if no skip to implant)* | *If Yes ↓ (if no skip to implant)* |
| Valve Explant Type #1 | Valve Explant Type #2 | Valve Explant Type #3 | Valve Explant Type #4 |
| ☐ Mechanical | ☐ Mechanical | ☐ Mechanical | ☐ Mechanical |
| ☐ Bioprosthetic | ☐ Bioprosthetic | ☐ Bioprosthetic | ☐ Bioprosthetic |
| ☐ Homograft/Allograft | ☐ Homograft/Allograft | ☐ Homograft/Allograft | ☐ Homograft/Allograft |
| ☐ Autograft | ☐ Autograft | ☐ Autograft | ☐ Autograft |
| ☐ Annuloplasty Band/Ring | ☐ Annuloplasty Band/Ring | ☐ Annuloplasty Band/Ring | ☐ Annuloplasty Band/Ring |
| ☐ Mitral Clip | ☐ Mitral Clip | ☐ Mitral Clip | ☐ Mitral Clip |
| ☐ Surgeon Fashioned | ☐ Surgeon Fashioned | ☐ Surgeon Fashioned | ☐ Surgeon Fashioned |
| ☐ Transcatheter device | ☐ Transcatheter device | ☐ Transcatheter device | ☐ Transcatheter device |
| ☐ Other | ☐ Other | ☐ Other | ☐ Other |
| *If Commercially Supplied↓* | *If Commercially Supplied↓* | *If Commercially Supplied↓* | *If Commercially Supplied↓* |
| Valve Explant #1 UDI: _____ | Valve Explant #2 UDI: _____ | Valve Explant #3 UDI: _____ | Valve Explant #4 UDI: _____ |
| Model #1:_____ | Model #2:_____ | Model #3:_____ | Model #4:_____ |
| *If not transcatheter device↓* | *If not transcatheter device↓* | *If not transcatheter device↓* | *If not transcatheter device↓* |
| Device Size #1: ____ | Device Size #2: ____ | Device Size #3: ____ | Device Size #4: ____ |

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

<div align="center">

**IMPLANT(S)**

</div>

| | **2nd Implant: ☐ Yes ☐ No** | **3rd Implant: ☐ Yes ☐ No** | **4th Implant: ☐ Yes ☐ No** |
|---|---|---|---|
| | *If Yes ↓ (if no skip to VAD proc)* | *If Yes ↓ (if no skip to VAD proc)* | *If Yes ↓ (if no skip to VAD proc)* |
| Valve Implant Location #1 | Valve Implant Location #2 | Valve Implant Location #3 | Valve Implant Location #4 |
| ☐ Aortic | ☐ Aortic | ☐ Aortic | ☐ Aortic |
| ☐ Mitral | ☐ Mitral | ☐ Mitral | ☐ Mitral |
| ☐ Tricuspid | ☐ Tricuspid | ☐ Tricuspid | ☐ Tricuspid |
| ☐ Pulmonic | ☐ Pulmonic | ☐ Pulmonic | ☐ Pulmonic |
| ☐ Common AV | ☐ Common AV | ☐ Common AV | ☐ Common AV |
| ☐ Truncal | ☐ Truncal | ☐ Truncal | ☐ Truncal |
| Valve Implant Type #1 | Valve Implant Type #2 | Valve Implant Type #3 | Valve Implant Type #4 |
| ☐ Surgeon Fashioned | ☐ Surgeon Fashioned | ☐ Surgeon Fashioned | ☐ Surgeon Fashioned |
| ☐ Autograft | ☐ Autograft | ☐ Autograft | ☐ Autograft |
| ☐ Commercially supplied | ☐ Commercially supplied | ☐ Commercially supplied | ☐ Commercially supplied |
| ☐ Transcatheter device | ☐ Transcatheter device | ☐ Transcatheter device | ☐ Transcatheter device |
| *If Surgeon fashioned ↓* | *If Surgeon fashioned ↓* | *If Surgeon fashioned ↓* | *If Surgeon fashioned ↓* |
| Material #1: | Material #2: | Material #3: | Material #4: |
| ☐ PTFE (Gore-Tex) | ☐ PTFE (Gore-Tex) | ☐ PTFE (Gore-Tex) | ☐ PTFE (Gore-Tex) |
| ☐ Pericardium | ☐ Pericardium | ☐ Pericardium | ☐ Pericardium |
| ☐ Other | ☐ Other | ☐ Other | ☐ Other |

| If Commercially Supplied or Transcatheter ↓<br>Model #1: _____<br><br>UDI#1_____ | If Commercially Supplied or Transcatheter ↓<br>Model #2:_____<br><br>UDI#2_____ | If Commercially Supplied or Transcatheter ↓<br>Model #3: _____<br><br>UDI#3_____ | If Commercially Supplied or Transcatheter ↓<br>Model #4: _____<br><br>UDI#4_____ |
|---|---|---|---|
| If Commercially Supplied↓<br>Device Size #1: ____ | If Commercially Supplied↓<br>Device Size #2: ____ | If Commercially Supplied↓<br>Device Size #3: ____ | If Commercially Supplied↓<br>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 intraprocedural 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/Intraprocedural 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↓):*

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

| | | |
|---|---|---|
| | ☐ Program does not routinely discuss all cases | ☐ Program does not have regular conferences |
| | ☐ Other | |

| | |
|---|---|
| Transesophageal Echo (TEE) available for case: | ☐ Yes ☐ No |
| *If Yes →*   Intraop TEE performed: | ☐ Yes ☐ No |

| | | | |
|---|---|---|---|
| Pre-op Antibiotic Prophylaxis given: | ☐ Yes ☐ No ☐ Patient on ongoing antibiotic therapy, prophylaxis not indicated | | |
| *If Yes →*   Cephalosporin | ☐ Yes ☐ No | Penicillin or related med | ☐ Yes ☐ No |
| Aminoglycoside | ☐ Yes ☐ No | Vancomycin | ☐ Yes ☐ No |
| Other | ☐ Yes ☐ No | | |

Antibiotic Start time: *(00:00 – 23:59)* _ _**:**_ _

| | |
|---|---|
| Conventional Pre-procedure Time Out: | ☐ Yes ☐ No |
| Surgeon shares essential elements of operative plan: | ☐ Yes ☐ No |
| Postprocedure debriefing: | ☐ Yes ☐ No |
| Hand-off protocol at the time of transfer to ICU: | ☐ Yes- all required team members present |
| | ☐ Yes- not all required team members present |
| | ☐ No |

| | | | |
|---|---|---|---|
| *If yes-not all required team members present →* | Anesthesiologist: | ☐ Attended hand-off | ☐ Did not attend hand-off |
| | Surgeon: | ☐ Attended hand-off | ☐ Did not attend hand-off |
| | ICU MD: | ☐ Attended hand-off | ☐ Did not attend hand-off |
| | Nurse: | ☐ Attended hand-off | ☐ Did not attend hand-off |

| | |
|---|---|
| Patient died or had major postoperative complication(s): | ☐ Yes ☐ No |
| *If Yes →*   Management and outcomes reviewed: | ☐ Reviewed at conference |
| | ☐ Scheduled for review at conference |
| | ☐ Not reviewed or scheduled for review |
| | ☐ Program does not have scheduled conferences |
| *If Reviewed →*   Review Date: *(mm/dd/yyyy)* __ __ / __ __ / __ __ __ __ | |

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| STS National Database *Using data to drive quality* | **ANESTHESIA** (for sites participating in CHSD anesthesiology component) | CCAS |
|---|---|---|

| **ANESTHESIA Administrative** |
|---|
| Anesthesiology data being collected: ☐ Yes ☐ No *(If No, skip all Anesthesia sections)* |

| | |
|---|---|
| Anesthesiologist Present: ☐ Yes ☐ No | |
| *(If Yes→)* | Primary Anesthesiologist Attending: _____ |
| | Primary Anesthesiologist National Provider Identifier: _____ |
| | Secondary Anesthesiologist Attending: ☐ Yes ☐ No |
| Fellow or Resident Present:  ☐ Yes ☐ No | |
| Mid-Level provider CRNA/AA Present: ☐ Yes ☐ No | |

## ANESTHESIA Preoperative

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

☐ 5= None *(If not None, select all pre-operative medications that apply: ↓)*

| | |
|---|---|
| ☐ 10= Amiodarone | ☐ 190= Heparin |
| ☐ 20= Angiotension Converting Enzyme (ACE) Inhibitors | ☐ 220= Heparin, Low molecular weight |
| ☐ 760= Angiotension Receptor Blockers (ARB) | ☐ 710= Inotropes Not Otherwise Listed |
| ☐ 700= Anti-arrhythmics Not Otherwise Listed | ☐ 210= Insulin |
| ☐ 770= Anticoagulents Not Otherwise Listed | ☐ 230= Milrinone |
| ☐ 30= Anti-reflux Meds (H2 antagonists,PPI, propulsives) | |
| ☐ 40= Anti-seizure medications | ☐ 240= Narcotics |
| ☐ 50= Aspirin (within 5 days) | ☐ 250= Nitric Oxide |
| ☐ 60= Benzodiazepines | ☐ 260= Nitroglycerin |
| ☐ 70= Beta Blockers | ☐ 270= Nitroprusside |
| ☐ 80= Birth Control (Oral, IM) | ☐ 280= Norepinephrine (Levophed) |
| | ☐ 290= PDE-5 Inhibitors (e.g., Sildenafil) |
| ☐ 200= Bronchodilators, Inhaled | ☐ 300= Platelet inhibitors other than Aspirin (e.g.,Plavix) (within 5 days) |
| ☐ 90= Calcium Channel Blockers | ☐ 310= Prostacyclin (e.g., Flolan, Remodulin) |
| ☐ 100= Calcium Chloride Infusion | ☐ 320= Prostaglandin |
| ☐ 750= Clonidine | ☐ 330= Psychiatric Medications (including ADHD and antidepressants) |
| ☐ 110= Coumadin | ☐ 340= Statins |
| ☐ 740= Dexmedetomidine | ☐ 350= Steroids (oral / IV) |
| ☐ 120= Digoxin | ☐ 360= Thyroid Hormone |
| ☐ 130= Direct Thrombin Inhibitors (e.g., argatroban) | ☐ 370= Transplant Rejection Inhibition Meds (other than steroids) |
| ☐ 140= Diuretics | ☐ 720= Vasoconstrictors Not Otherwise Listed |
| ☐ 150= Dobutamine | ☐ 730= Vasodilators Not Otherwise Listed |
| ☐ 160= Dopamine | ☐ 380= Vasopressin |
| ☐ 170= Endothelin Antagonist (e.g., Bosentan) | ☐ 900= Other |
| ☐ 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 | ☐ Yes ☐ No | Ketamine | ☐ Yes ☐ No |
| Demerol | ☐ Yes ☐ No | Lorazepam | ☐ Yes ☐ No |
| Dexmedetomidine | ☐ Yes ☐ No | Midazolam | ☐ Yes ☐ No |
| Diazepam | ☐ Yes ☐ No | Morphine | ☐ Yes ☐ No |
| Fentanyl | ☐ Yes ☐ No | Pentobarbital | ☐ Yes ☐ No |
| Glycopyrrolate | ☐ Yes ☐ 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 | ☐ Yes ☐ No | Brachial | ☐ Yes ☐ No |
| Axillary | ☐ Yes ☐ No | Femoral | ☐ Yes ☐ No |
| Ulnar | ☐ Yes ☐ No | Dorsalis Pedis | ☐ Yes ☐ No |
| Posterior Tibial | ☐ Yes ☐ No | Umbilical | ☐ Yes ☐ No |
| Arterial line in-situ pre procedure: | ☐ Yes ☐ No | | |

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

| | | | |
|---|---|---|---|
| Radial | ☐ Yes ☐ No | Femoral | ☐ Yes ☐ No |
| Ulnar | ☐ Yes ☐ No | Other | ☐ Yes ☐ No |

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

| | | | |
|---|---|---|---|
| Right Internal Jugular | ☐ Yes ☐ No | Left Internal Jugular | ☐ Yes ☐ No |
| Right Subclavian | ☐ Yes ☐ No | Left Subclavian | ☐ Yes ☐ No |
| Right Femoral Vein | ☐ Yes ☐ No | Left Femoral Vein | ☐ Yes ☐ No |
| PICC | ☐ Yes ☐ No | Other | ☐ Yes ☐ 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 Catheter         ☐ Yes     ☐ No

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 | ☐ Yes     ☐ No | |
| | Transcranial Doppler | ☐ Yes     ☐ No | |
| | NIRS (Cerebral) | ☐ Yes     ☐ No | |
| | Other | ☐ Yes     ☐ No | |

Lowest Recorded Intraoperative Temperature:         _____ °C

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

Transesophageal Echocardiography     ☐ Yes ☐ No

## ANESTHESIA Anesthetic Technique

Date and Time of Induction: *mm/ dd/ yyyy  hh : mm* _ _ / _ _ / _ _ _ _  _ _:_ _

Induction Type:

| | | | | | |
|---|---|---|---|---|---|
| Inhalation | ☐ Yes ☐ No | *(If Yes →)* | Sevoflurane | ☐ Yes | ☐ No |
| | | | Isoflurane | ☐ Yes | ☐ No |
| Intravenous | ☐ Yes ☐ No | *(If Yes →)* | Sodium Thiopental | ☐ Yes | ☐ No |
| | | | Ketamine | ☐ Yes | ☐ No |
| | | | Etomidate | ☐ Yes | ☐ No |
| | | | Propofol | ☐ Yes | ☐ No |
| | | | Fentanyl | ☐ Yes | ☐ No |
| | | | Midazolam | ☐ Yes | ☐ No |
| | | | Dexmedetomidine | ☐ Yes | ☐ No |
| | | | Sufentanil | ☐ Yes | ☐ No |
| | | | Remifentanil | ☐ Yes | ☐ No |

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| | | | | |
|---|---|---|---|---|
| Intramuscular (IM) | ☐ Yes ☐ No | *(If Yes →)* | Ketamine | ☐ Yes ☐ No |
| | | | Midazolam | ☐ Yes ☐ No |

| | | | |
|---|---|---|---|
| Regional Anesthetic | ☐ Yes ☐ No | | |
| *(If Yes →)* | **Regional Anesthetic Site:** | | |
| | ☐ Thoracic Epidural Catheter | ☐ Lumbar Epidural Catheter | ☐ Caudal Epidural Catheter |
| | ☐ Lumbar Epidural -Single shot | ☐ Caudal Epidural – Single shot | ☐ Lumbar Intrathecal -Single Shot |
| | ☐ Paravertebral Block-Single shot | ☐ Paravertebral Block – Catheter | ☐ Other |

| *(If Yes →)* | Regional Anesthetic Drug: *(Select all that apply)* | Bupivicaine | ☐ Yes ☐ No | Bupivicaine/Fentanyl | ☐ Yes ☐ No |
|---|---|---|---|---|---|
| | | Clonidine | ☐ Yes ☐ No | Fentanyl | ☐ Yes ☐ No |
| | | Hydromorphone | ☐ Yes ☐ No | Lidocaine | ☐ Yes ☐ No |
| | | Morphine | ☐ Yes ☐ No | Ropivicaine | ☐ Yes ☐ No |
| | | Ropivicaine/Fentanyl | ☐ Yes ☐ No | Tetracaine | ☐ Yes ☐ No |
| | | | | Other | ☐ Yes ☐ 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 |

| | | | |
|---|---|---|---|
| *(If LMA →)* | Airway Size *(mm):* | ☐ 1.0 ☐ 1.5 ☐ 2.0 ☐ 2.5 ☐ 3.0 ☐ 4.0 ☐ 5.0 | |
| *(If Endotracheal intubation →)* | Airway Size *(mm):* | ☐ 2.5 ☐ 3.0 ☐ 3.5 ☐ 4.0 ☐ 4.5 ☐ 5.0 ☐ 5.5 ☐ 6.0 ☐ 6.5 ☐ 7.0 ☐ 7.5 ☐ 8.0 ☐ Other ☐ Size not listed (DLETT, Tracheotomy) | |
| | Cuffed: | ☐ Yes ☐ No | |
| *(If Endotracheal intubation or Trach→)* | Airway Site: | ☐ Oral ☐ Nasal ☐ Tracheostomy | |

Endobronchial Isolation (DLETT, Bronchial Blocker) ☐ Yes ☐ No

| *(If Yes →)* | Endobronchial Isolation Method: | ☐ Double lumen ETT | ☐ Arndt Bronchial Blocker | ☐ Fogarty Catheter |
|---|---|---|---|---|
| | | ☐ Intentional Mainstem ETT | ☐ Uninvent ETT | ☐ 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: ↓)*

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

Was AT III measured preoperatively?        ☐ Yes ☐ No

Were any of the following labs checked during CPB?

| | | |
|---|---|---|
| Fibrinogen | ☐ Yes ☐ No | If yes → value: _____mg/dL |
| Platelet Count | ☐ Yes ☐ No | If yes → value: _____$10^3$/ µL |
| TEG on CPB | ☐ Yes ☐ No | |
| TEG – FF on CPB | ☐ Yes ☐ No | |
| ROTEM on CPB | ☐ Yes ☐ No | |
| FIBTEM on CPB | ☐ Yes ☐ No | |
| SONOCLOT on CPB | ☐ Yes ☐ No | |

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

| | | |
|---|---|---|
| Fibrinogen | ☐ Yes ☐ No | If yes → FINAL value: _____mg/dL |
| Platelet Count | ☐ Yes ☐ No | If yes → FINAL value: _____$10^3$/ µL |
| TEG after CPB | ☐ Yes ☐ No | |
| TEG – FF after CPB | ☐ Yes ☐ No | |
| ROTEM after CPB | ☐ Yes ☐ No | |
| FIBTEM after CPB | ☐ Yes ☐ No | |
| SONOCLOT after CPB | ☐ Yes ☐ No | |

**ANESTHESIA Pharmacology On Arrival To ICU/PACU**

Medications Given At Time Of Transfer:    ☐ None    *(If not None, select all medications that apply: ↓)*

| | | | |
|---|---|---|---|
| ☐ 20= Aminocaproic Acid (Amicar) infusion | | ☐ 170= Muscle Relaxant infusion | |
| ☐ 30= Amiodarone infusion | | ☐ 360= Narcotic infusion | |

| | | | | |
|---|---|---|---|---|
| ☐ | 40= Aprotinin (Trasylol ) infusion | ☐ | 180= Nesiritide Infusion | |
| ☐ | 370= Benzodiazepine infusion | ☐ | 190= Nicardipine infusion | |
| ☐ | 50= Calcium Chloride infusion | ☐ | 200= Nitric Oxide inhalation | |
| ☐ | 60= Calcium Gluconate infusion | ☐ | 210= Nitroglycerin (Tridil) infusion | |
| ☐ | 70= Dexmetetomidine (Precedex) infusion | ☐ | 220= Nitroprusside (Nipride) infusion | |
| ☐ | 80= Dobutamine infusion | ☐ | 230= Norepinephrine (Levophed) infusion | |
| ☐ | 90= Dopamine infusion | ☐ | 240= Phentolamine (Regitine) infusion | |
| ☐ | 100= Epinephrine (Adrenalin) infusion | ☐ | 250= Phenylephrine infusion | |
| ☐ | 340= Esmolol infusion | ☐ | 380= Procainamide bolus/infusion | |
| ☐ | 390= Fenoldopam infusion | ☐ | 260= Propofol (Diprivan) infusion | |
| ☐ | 310= Inotrope, Other | ☐ | 270= Prostaglandin infusion | |
| ☐ | 120=Insulin infusion | ☐ | 280= Thyroid Hormone infusion | |
| ☐ | 130= Isoproterenol infusion | ☐ | 290= Tranexamic Acid infusion | |
| ☐ | 410= Ketamine Infusion | ☐ | 330= Vasoconstrictor, Other | |
| ☐ | 400= Levosimendan | ☐ | 320= Vasodilator, Other | |
| ☐ | 350= Local Anesthetic infusion via catheter (On-Q, Pleural catheter) | ☐ | 300= Vasopressin infusion | |
| ☐ | 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        ☐ Admit to hospital floor as planned
                                 PACU/Recovery                        ☐ Unplanned admit to hospital or ICU
                                 ☐ Admit to ICU as planned            ☐ Patient expired under anesthetic
                                 ☐ Other location not listed above        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 |

- ☐ 50= Stridor / Sub-glottic Stenosis
- ☐ 60= Extubation
- ☐ 70= Endotracheal Tube Migration
- ☐ 80= Airway Injury
- ☐ 410= Hemoptysis
- ☐ 450= Laryngospasm requiring medication
- ☐ 400= Bronchospasm

- ☐ 470= Unplanned need to remain intubated post-procedure due to anesthesia factors
- ☐ 90= Arrhythmia - Central Venous Line Placement
- ☐ 100= Myocardial Injury - Central Venous Line Placement
- ☐ 110= Vascular Compromise - Central Venous Line Placement
- ☐ 120= Pneumothorax - Central Venous Line Placement
- ☐ 130= Vascular Access
- ☐ 140= Hematoma requiring relocation of catheter placement
- ☐ 150= Arterial Puncture
- ☐ 160= Intravenous/Intra-arterial Air Embolism
- ☐ 350= Arterial Line Placement- Extremity ischemia
- ☐ 380= Intravenous Infiltration
- ☐ 170= Bleeding - Regional Anesthetic Site
- ☐ 180= Intrathecal Puncture - Regional
- ☐ 190= Local Anesthetic Toxicity - Regional
- ☐ 200= Neurologic Injury - Regional

- ☐ 240= Medication Dosage
- ☐ 250= Intraoperative Recall
- ☐ 260= Malignant Hyperthermia
- ☐ 270= Protamine Reaction
- ☐ 280= Cardiac Arrest - related to anesthesia care
- ☐ 490= Cardiac Arrest - unrelated to anesthesia care
- ☐ 510= Hypercyanotic Episode (Tet Spell) unrelated to manipulation
- ☐ 500= Pulmonary Hypertensive Crisis unrelated to manipulation
- ☐ 290= TEE related esophageal bleeding / rupture
- ☐ 300= TEE related esophageal chemical burn
- ☐ 310= TEE related airway compromise
- ☐ 315= TEE related hemodynamic compromise
- ☐ 320= TEE related extubation
- ☐ 330= Complications during patient transfer
- ☐ 340= Peripheral Nerve Injury due to positioning
- ☐ 370= Anesthesia Equipment Malfunction/ Failure
- ☐ 390= Integument Injury (skin breakdown or dehiscence)
- ☐ 480= Ocular Injury (corneal abrasion or injury)
- ☐ 420= Postop Nausea/Vomiting requiring admission
- ☐ 430= Vomiting or Aspiration on Induction/Emergence
- ☐ 440= Emergence Delirium requiring Medication
- ☐ 900= Other