



# The Society of Thoracic Surgeons Adult Cardiac Surgery Database Data Collection Form Version 2.61

### A. Administrative

Participant ID: | | | | |

Cost Link: \_\_\_\_\_

STS Trial Link Number: \_\_\_\_\_

**ParticID (40)****CostLink (60)****STSTLink (70)**

### B. Demographics

Patient Last Name: \_\_\_\_\_ Patient First Name: \_\_\_\_\_ Patient M.I.: \_\_\_\_\_ [Name Fields Optional Harvest](#)**PatLName (100)****PatFName (110)****PatMInit (120)**Date of Birth (mm/dd/yyyy): \_\_\_/\_\_\_/\_\_\_\_ Patient Age: \_\_\_\_\_ [System Calculation](#) Sex: Male Female**DOB (130)****Age (140)****Gender (150)**Social Security #: \_\_\_\_\_ [Optional Harvest](#) Medical Record Number: \_\_\_\_\_ [Optional Harvest](#)**SSN (160)****MedRecN (170)**Health Insurance Claim Number: \_\_\_\_\_ [Optional Harvest](#) Patient ZIP Code: \_\_\_\_\_ [Optional Harvest](#)**HICNumber (171)****PatZIP (180)**Race: [\(Select all that apply\)](#) White Black / African American Asian**RaceCaucasian(191)****RaceBlack (192)****RaceAsian (193)**

American Indian / Alaskan Native

Native Hawaiian / Pacific Islander

Other

**RaceNativeAm (194)****RacNativePacific (195)****RaceOther (196)**

Hispanic or Latino Ethnicity: Yes No

**Ethnicity (199)**Referring Cardiologist: \_\_\_\_\_ [Not Harvested](#)**RefCard (200)**Referring Physician: \_\_\_\_\_ [Not Harvested](#)**RefPhys (210)**

### C. Hospitalization

Hospital Name: \_\_\_\_\_ Hospital ZIP Code: | | | | | Hospital State: | | |

**HospName (220)****HospZIP (230)****HospStat (240)**

Hospital National Provider Identifier: \_\_\_\_\_

**HospNPI (241)**Payor – [\(Select all that apply\)](#)Government Health Insurance: Yes No [If Yes, select all that apply:](#) → Medicare Medicaid**PayorGov (247)****PayorGovMcare (248)****PayorGovMcaid (249)**

Military Health Care State-Specific Plan Indian Health Service

**PayorGovMil (250)****PayorGovState (251)****PayorGovIHS (252)**

Commercial Health Insurance: Yes No

**PayorCom (254)**

Health Maintenance Organization: Yes No

**PayorHMO (255)**

Non-U.S. Insurance: Yes No

**PayorNonUS (256)**

None / Self: Yes No

**PayorNS (257)**

Date of Admission: \_\_\_/\_\_\_/\_\_\_\_ Date of Surgery: \_\_\_/\_\_\_/\_\_\_\_ Date of Discharge: \_\_\_/\_\_\_/\_\_\_\_

**AdmitDT (260)****SurgDT (270)****DischDT (280)**ICU Visit: Yes No [If Yes](#) → Initial ICU Hours: \_\_\_\_\_**ICUVisit (300)****ICUInHrs (310)**Readmission to ICU: Yes No [If Yes](#) → Additional ICU Hours: \_\_\_\_\_ Total Hrs ICU: \_\_\_\_\_**ICUReadm (320)****ICUAdHrs (330)****TotHrICU (340)**

### D. Risk Factors

Weight (kg): \_\_\_\_\_ Height (cm): \_\_\_\_\_

**WeightKg (350)**

**HeightCm (360)**

Current Or Recent Cigarette Smoker: Yes No

**CigSmoker (385)**

Family History of Coronary Artery Disease: Yes No

**FHCAD (390)**

Last Hematocrit: \_\_\_\_\_

**Hct (391)**

Last White Blood Cell Count: \_\_\_\_\_

**WBC (392)**

Diabetes: Yes No [If Yes →](#) Diabetes Control: [\(select one\)](#) None Diet Oral Insulin Other

**Diabetes (400)**

**DiabCtrl (410)**

Last A1c Level: \_\_\_\_\_

**A1cLvl (412)**

Dyslipidemia: Yes No

**Dyslip (421)**

Last Creatinine Level: \_\_\_\_\_

**CreatLst (430)**

Renal Failure – Dialysis: Yes No

**Dialysis (450)**

Hypertension: Yes No

**Hypertn (460)**

Infectious Endocarditis: Yes No [If Yes →](#) Infectious Endocarditis Type: Treated Active

**InfEndo (490)**

**InfEndTy (500)**

Chronic Lung Disease: No Mild Moderate Severe

**ChrLungD (510)**

Immunosuppressive Therapy: Yes No

**ImmSupp (520)**

Peripheral Arterial Disease: Yes No

**PVD (530)**

Cerebrovascular Disease: Yes No

**CVD (540)**

[If Yes →](#) Coma: Yes No

**CVDComa (551)**

CVA: Yes No [If Yes →](#) CVA-When: Recent (<=2 weeks) Remote (>2 weeks)

**CVA (552)**

**CVAWhen (553)**

CVD RIND: Yes No

**CVDRIND (554)**

CVD TIA: Yes No

**CVDTIA (555)**

CVD NonInvasive >75%: Yes No

**CVDNInvas (556)**

CVD Prior Carotid Surgery: Yes No

**CVDPCarSurg (557)**

## E. Previous CV Interventions

Previous CV Interventions: Yes No [If Yes, complete the remainder of this section ↓](#)

**PrCVInt (570)**

Previous Coronary Artery Bypass: Yes No

**PrCAB (600)**

Previous Valve: Yes No

**PvValve (610)**

Previous Other Cardiac Yes No

**PrOthCar (620)**

Congenital Yes No

**PrOthCongen (621)**

AICD (Automatic Implanted Cardioverter / Defibrillator): Yes No

**PrOCAICD (630)**

Pacemaker: Yes No

**PrOCPace (640)**

PCI (Percutaneous Cardiac Intervention): Yes No [If Yes ↓](#)

**POCPCI (660)**

PCI Stent: Yes No [If Yes →](#) Stent Type: Bare Metal Drug-eluting Unknown

**POCPCISt (661)**

**POCPCIStTy (663)**

PCI Interval: ≤ 6 Hours > 6 Hours

**POCPCIIn (670)**

Other: Yes No

**POCO (671)**

## F. Preoperative Cardiac Status

Previous Myocardial Infarction: Yes No [If Yes →](#) When: ≤ 6 hours > 6 hours but <24 hours 1 - 7 days 8 - 21 days > 21 days

**PrevMI (751)**

**MIWhen (760)**

Heart Failure: Yes No

**CHF (770)**

Classification - NYHA: Class I Class II Class III Class IV

**ClassNYH (775)**

Cardiac Presentation on Admission: No Symptoms or Angina

**CardPres (791)**

Symptoms Unlikely to be Ischemia

Stable Angina

Unstable Angina

Non-ST Elevation MI (Non-STEMI)

ST-Elevation MI (STEMI)

STS Cardiogenic Shock: Yes No

**CarShock (810)**

Resuscitation: Yes No

**Resusc (830)**

Arrhythmia: Yes No [If Yes →](#) Arrhythmia Type: Vtach / Vfib Yes No

**Arrhyth (840)**

**ArrhyVtach (851)**

3<sup>rd</sup> degree HB Yes No

**ArrhyTHB (852)**

Afib / Aflutter Yes No

**ArrhyAfib (853)**

**G. Preoperative Medications**

Beta Blockers: Yes No Contraindicated / Not Indicated

**MedBeta (890)**

ACE or ARB Inhibitors: Yes No Contraindicated / Not Indicated

**MedACEI (900)**

Nitrates I.V.: Yes No Contraindicated / Not Indicated

**MedNitIV (910)**

Anticoagulants: Yes No Contraindicated / Not Indicated

**MedACoag (930)**

If Yes → Medication Name: Heparin (Unfractionated) Heparin (Low Molecular) Thrombin Inhibitors Other  
**MedACMN (940)**

Coumadin: Yes No Contraindicated / Not Indicated

**MedCoum (950)**

Inotropes: Yes No Contraindicated / Not Indicated

**MedInotr (970)**

Steroids: Yes No Contraindicated / Not Indicated

**MedSter (980)**

Aspirin: Yes No Contraindicated / Not Indicated

**MedASA (990)**

Lipid-Lowering: Yes No Contraindicated / Not Indicated If Yes → Medication Name: Statin Non-statin Both

**MedLipid (1000)** **MedLipMN (1010)**

ADP Inhibitors Within Five Days: Yes No Contraindicated / Not Indicated If Yes → Discontinuation: \_\_\_\_\_ (# Days)

**MedADP5Days (1021)** **MedADPIDis (1022)**

Antiplatelets Within 5 Days: Yes No Contraindicated / Not Indicated

**MedApt5Days (1023)**

Glycoprotein IIb/IIIa Inhibitor: Yes No Contraindicated / Not Indicated

**MedGP (1030)** If Yes → Medication Name: Abciximab (ReoPro) Eptifibatid (Integrilin) Tirofiban (Aggrastat)  
**MedGPMN (1040)**

**H. Hemodynamics and Cath**

Number of Diseased Coronary Vessels: None One Two Three

**NumDisV (1050)**

Left Main Disease >= 50%: Yes No

**LMainDis (1060)**

Ejection Fraction Done: Yes No If Yes → Ejection Fraction: \_\_\_\_\_ (%)

**HDEFD (1070)** **HDEF (1080)**

Ejection Fraction Method: LV gram Radionucleotide Estimate ECHO MRI/CT Other

**HDEFMeth (1090)**

Pulmonary Artery Mean Pressure Done: Yes No If Yes → Mean Pressure: \_\_\_\_\_ (mm Hg)

**HDPAD (1100)** **HDPAMean (1110)**

Aortic Stenosis: Yes No N/A If Yes → Gradient: \_\_\_\_\_

**VDStenA (1120)** **VDGradA (1130)**

Mitral Stenosis: Yes No N/A

**VDStenM (1140)**

Tricuspid Stenosis: Yes No N/A

**VDStenT (1150)**

Pulmonic Stenosis: Yes No N/A

**VDStenP (1160)**

Aortic Insufficiency: 0=None 1=Trivial 2=Mild 3=Moderate 4= Severe 5= N/A

**VDInsufA (1170)**

Mitral Insufficiency: 0=None 1=Trivial 2=Mild 3=Moderate 4= Severe 5= N/A

**VDInsufM (1180)**

Tricuspid Insufficiency: 0=None 1=Trivial 2=Mild 3= Moderate 4= Severe 5= N/A

**VDInsufT (1190)**

Pulmonic Insufficiency: 0=None 1=Trivial 2=Mild 3= Moderate 4= Severe 5= N/A

**VDInsufP (1200)**

**I. Operative**

Surgeon: \_\_\_\_\_ Surgeon's National Provider Identifier: \_\_\_\_\_

**Surgeon (1210)**

**SurgNPI (1221)**

Taxpayer Identification Number: \_\_\_\_\_

**TIN (1222)**

Incidence: First cardiovascular surgery

**Incidence (1230)**

- First re-op cardiovascular surgery
- Second re-op cardiovascular surgery
- Third re-op cardiovascular surgery
- Fourth or more re-op cardiovascular surgery

Status: ↓

**Status (1240)**

Elective

Urgent → Reason: AMI IABP Worsening CP CHF Anatomy USA Rest Angina  
Valve Dysfunction Aortic Dissection Angiographic Accident Cardiac Trauma

**UrgntRsn (1250)**

Emergent → Reason: Shock Circ Support Shock No Circ Support Pulmonary Edema AEMI  
Ongoing Ischemia Valve Dysfunction Aortic Dissection Angiographic Accident Cardiac Trauma

**EmergRsn (1260)**

Emergent Salvage

Robotic Technology Assisted: Yes No

**Robotic (1270)**

Coronary Artery Bypass: Yes No → If Yes, also complete Section J

**OpCAB (1280)**

Valve Surgery : Yes No → If Yes, also complete Section K

**OpValve (1290)**

Ventricular Assist Device: Yes No → If Yes, also complete Section L

**VAD (1300)**

Other Cardiac Procedure: Yes No → If Yes, also complete Section M

**OpOCard (1310)**

Other Non-Cardiac Procedure: Yes No → If yes, also complete Section N

**OPONCard (1320)**

Enter up to 10 CPT-I Codes pertaining to the surgery for which the data collection form was initiated:

#1. \_\_\_\_\_, #2. \_\_\_\_\_, #3. \_\_\_\_\_, #4. \_\_\_\_\_, #5. \_\_\_\_\_, #6. \_\_\_\_\_, #7. \_\_\_\_\_, #8. \_\_\_\_\_, #9. \_\_\_\_\_, #10. \_\_\_\_\_

CPTICode1 (1321) CPTICode2 (1322) CPTICode3 (1323) CPTICode4 (1324) CPTICode5 (1325) CPTICode6 (1326) CPTICode7 (1327) CPTICode8 (1328) CPTICode9 (1329) CPTICode10 (1330)

OR Entry Date And Time: \_\_\_ / \_\_\_ / \_\_\_\_\_ : \_\_\_\_\_ (mm/dd/yyyy, 24 hr clk)

**OREntryDT (1335)**

OR Exit Date And Time: \_\_\_ / \_\_\_ / \_\_\_\_\_ : \_\_\_\_\_ (mm/dd/yyyy, 24 hr clk)

**ORExitDt (1336)**

Initial Intubation Date And Time: \_\_\_ / \_\_\_ / \_\_\_\_\_ : \_\_\_\_\_ (mm/dd/yyyy, 24 hr clk)

**IntubateDT (1337)**

Initial Extubation Date And Time: \_\_\_ / \_\_\_ / \_\_\_\_\_ : \_\_\_\_\_ (mm/dd/yyyy, 24 hr clk)

**ExtubateDT (1338)**

Skin Incision Start Date And Time: \_\_\_ / \_\_\_ / \_\_\_\_\_ : \_\_\_\_\_ (mm/dd/yyyy, 24 hr clk)

**SISStartT (1341)**

Skin Incision Stop Date And Time: \_\_\_ / \_\_\_ / \_\_\_\_\_ : \_\_\_\_\_ (mm/dd/yyyy, 24 hr clk)

**SISStopT (1342)**

Antibiotic Selection: Yes No

**AbxSelect (1345)**

Antibiotic Timing: Yes No

**AbxTiming (1346)**

Antibiotics Discontinued: Yes No

**AbxDisc (1347)**

CPB Utilization: None Combination Full

**CPBUtil (1350)**

If **Combination** → CPB Utilization - Combination Plan: Planned Unplanned

**CPBCmb (1360)**

If **Unplanned** → Unplanned Combination Reason: Exposure/visualization

**CPBCmbR (1370)**

Bleeding

Inadequate size and/or diffuse disease of distal vessel

Hemodynamic instability

Conduit quality and/or trauma

Other

If **Combination or Full** → Perfusion Time (minutes): \_\_\_\_\_

**PerfusTm (1380)**

Cannulation Method: Aorta and Femoral/Jugular Vein: Yes No

**CanAortFem (1391)**

Femoral Artery and Femoral/Jugular Vein: Yes No

**CanFemFem (1392)**

Aorta and Atrial/Caval: Yes No

**CanAortAtr (1393)**

Femoral Artery and Atrial/Caval: Yes No

**CanFemAtr (1394)**

Other: Yes No

**CanOther (1395)**

Circulatory Arrest: Yes No If **Yes** → Circulatory Arrest Time: \_\_\_\_\_ (minutes)

**CircArr (1381)**

**DHCATm (1382)**

Aortic Occlusion: None **AortOccl (1400)**

Aortic Crossclamp → If **Aortic Crossclamp or Balloon Occlusion** → Cross Clamp Time (minutes): \_\_\_\_\_

Balloon Occlusion → **XClampTm (1410)**

Partial Crossclamp

Cardioplegia: Yes No

**Cplegia (1420)**

Cerebral Oximetry: **Optional Harvest**

Pre-Induction Baseline Regional Oxygen Saturation: Left: \_\_\_\_\_ (%) Right: \_\_\_\_\_ (%)

**PreRSO2Lft (1422) PreRSO2Rt (1423)**

Cumulative Saturation Below Threshold: Left: \_\_\_\_\_ (minute-%) Right: \_\_\_\_\_ (minute-%)

**CumulSatLft (1424) CumulSatRt (1425)**

Cerebral Oximeter Provided The First Indication: Yes No

**COFirstInd (1426)**

Skin Closure Regional Oxygen Saturation: Left: \_\_\_\_\_ (%) Right: \_\_\_\_\_ (%)

**SCRSO2Lft (1427) SCRSO2Rt (1428)**

IABP: Yes No If **Yes** → When Inserted: Preoperatively Intraoperatively Postoperatively

**IABP (1430)****IABPWhen(1440)**

Indication: Hemodynamic Instab PTCA Support Unstable Angina CPB Wean Prophylactic

**IABPInd(1450)**

Intraop Blood Products: Yes No

**IBldProd(1460)**

If No → Intraop Blood Products Refused: Yes No

**IBldProdRef (1461)**If Yes → Red Blood Cell Units: \_\_\_\_\_ **IBdRBCU (1470)**Fresh Frozen Plasma Units: \_\_\_\_\_ **IBdFFPU (1480)**Cryoprecipitate Units: \_\_\_\_\_ **IBdCryoU (1490)**Platelet Units: \_\_\_\_\_ **IBdPlatU (1500)**

Intraop Medications: Aprotinin: Yes No If Yes → Aprotinin – Dose: Full Dose Half Dose

**IMedAprot (1509)****IMedAprotD (1510)**

Epsilon Amino-Caproic Acid: Yes No

**IMedEACA(1511)**

Desmopressin: Yes No

**IMedDesmo (1512)**

Tranexamic Acid: Yes No

**IMedTran (1513)****J. Coronary Bypass**

Number of Distal Anastomoses with Arterial Conduits: \_\_\_\_\_

**DistArt (1520)**

Number of Distal Anastomoses with Venous Conduits: \_\_\_\_\_

**DistVein (1530)**

Distal Anastomoses - Vein Harvest Technique: Endovascular Direct Vision Both

**DistVeinHTech (1531)**

Saphenous Vein Harvest Time: \_\_\_\_\_ (minutes)

**SaphHrvstT (1532)**

Anastomotic Device Used: Yes No If Yes → Anastomotic Device: Glue Magnets Clips Staples Other

**AnasDevU (1540)****AnasDev (1550)**

Internal Mammary Arteries Used as Grafts: Left IMA Right IMA Both IMAs No IMA If Left, Right, or Both ↓

**IMAArtUs(1560)**

IMA Harvest Technique: Direct Vision Thoracoscopy Combination Robotic Assisted

**IMATechn (1570)**

Number of IMA Distal Anastomoses: \_\_\_\_\_

**NumIMADA (1580)**

Radial Artery Used: No Radial Left Radial Right Radial Both Radials If Left, Right, or Both ↓

**RadArtUs(1590)**

Number of Radial Artery Distal Anastomoses: \_\_\_\_\_

**NumRadDA (1600)**

Radial Distal Anastomoses Harvest Technique: Endovascular Direct Vision Both

**RadHTech (1601)**

Radial Artery Harvest Time: \_\_\_\_\_ (minutes)

**RadHrvstT (1602)**

Number of Gastro-Epiploic Artery Distal Anastomoses: \_\_\_\_\_

**NumGEPDA (1610)**

Number of Other Arterial Distal Anastomoses: \_\_\_\_\_

**NumOArtD (1620)****K. Valve Surgery**Aortic Procedure:**OpAortic (1630)**

No

Mitral Procedure:**OpMitral (1640)**

No

Tricuspid Procedure:**OpTricus (1650)**

No

Pulmonic Procedure**OpPulm (1660)**

No

Replacement Repair/Reconstruction Root Reconstruction w/ Valve Conduit Replacement + Aortic Graft Conduit Root Reconstruction w/ Valve Sparing Resuspension Aortic Valve w/ Replacement Ascending Aorta Resuspension Aortic Valve w/o Replacement Ascending Aorta Resection Sub-Aortic Stenosis	Annuloplasty Only Replacement Reconstruction w/ Annuloplasty Reconstruction w/o Annuloplasty  ↓ (If Replacement) <u>Mitral Repair Attempt:</u> Yes No <b>MitralIntent (1641)</b>	Annuloplasty Only Replacement Reconstruction w/ Annuloplasty Reconstruction w/o Annuloplasty Valvectomy	Replacement Reconstruction
Aortic Annular Enlargement: Yes No <b>AnlRenl (1670)</b>			
↓ <b>Key</b> M = Mechanical B = Bioprosthesis H = Homograft A = Autograft (Ross) R = Ring/Annuloplasty BA = Band/Annuloplasty			
Aortic Prosthesis -	Implant Type: None M B H A R BA <b>VSAoImTy (1680)</b>	Implant: _____ Size: _____ <b>VSAoIm (1690)</b>	<b>VSAoImSz (1700)</b>
Mitral Prosthesis -	Implant Type: None M B H A R BA <b>VSMiImTy (1740)</b>	Implant: _____ Size: _____ <b>VSMiIm (1750)</b>	<b>VSMiImSz (1760)</b>
Tricuspid Prosthesis -	Implant Type: None M B H A R BA <b>VSTriImTy (1800)</b>	Implant: _____ Size: _____ <b>VSTriIm (1810)</b>	<b>VSTriImSz (1820)</b>
Pulmonic Prosthesis -	Implant Type: None M B H A R BA <b>VSPulmTy (1860)</b>	Implant: _____ Size: _____ <b>VSPulm (1870)</b>	<b>VSPulmSz (1880)</b>

<p><b>Valve Key</b> (check STS web site for periodic updates to this list).</p> <p><b>Mechanical</b>  ATS Mechanical Prosthesis = 2  Björk-Shiley Convex-Concave Mechanical Prosthesis = 3  Björk-Shiley Monostrut Mechanical Prosthesis = 4  CarboMedics Mechanical Prosthesis = 6  CarboMedics Carbo-Seal Ascending Aortic Valved Conduit Prosthesis = 7  CarboMedics Carbo-Seal Valsalva Ascending Aortic Valved Conduit Prosthesis = 58  CarboMedics Reduced Cuff Aortic Valve = 59  CarboMedics Standard Aortic Valve = 60  CarboMedics Top-Hat Supra-annular Aortic Valve = 61  CarboMedics OptiForm Mitral Valve = 62  CarboMedics Standard Mitral Valve = 63  CarboMedics Orbis Universal Valve = 64  CarboMedics Small Adult Aortic and Mitral Valves = 65  Edwards Tekna Mechanical Prosthesis = 7  Lillehei-Kaster Mechanical Prosthesis = 53  MCRI On-X Mechanical Prosthesis = 10  Medtronic-Hall/Hall Easy-Fit Mechanical Prosthesis = 8  Medtronic ADVANTAGE Mechanical Prosthesis = 66  OmniCarbon Mechanical Prosthesis = 9  OmniScience Mechanical Prosthesis = 54  Sorin Bicarbon (Baxter Mira) Mechanical Prosthesis = 11  Sorin Monoleaflet Allcarbon Mechanical Prosthesis = 12  St. Jude Medical Mechanical Prosthesis or St. Jude Medical® Mechanical Heart Valve = 13  SJM® Masters Series Mechanical Heart Valve = 67  SJM® Masters Series Aortic Valve Graft Prosthesis = 68  St. Jude Medical® Mechanical Heart Valve Hemodynamic Plus (HP) Series = 69  SJM® Masters Series Hemodynamic Plus Valve with FlexCuff™ Sewing Ring = 70  SJM Regent™ Valve = 71  Starr-Edwards Caged-Ball Prosthesis = 14  Ultracor Mechanical Prosthesis = 15</p> <p><b>Bioprosthesis</b>  ATS 3f Aortic Bioprosthesis = 108  Baxter Prima Stentless Porcine Bioprosthesis – Subcoronary = 72  Baxter Prima Stentless Porcine Bioprosthesis – Root = 73  Biocor Porcine Bioprosthesis = 19  Biocor Stentless Porcine Bioprosthesis – Subcoronary = 74  Biocor Stentless Porcine Bioprosthesis – Root = 75  CarboMedics PhotoFix Pericardial Bioprosthesis = 21  Carpentier-Edwards Duraflex Porcine Bioprosthesis = 76  Carpentier-Edwards Prima Plus Stentless Porcine Bioprosthesis – Subcoronary = 77  Carpentier-Edwards Prima Plus Stentless Porcine Bioprosthesis – Root = 78  Carpentier-Edwards PERIMOUNT Pericardial Bioprosthesis = 22  Carpentier-Edwards PERIMOUNT Pericardial Magna Bioprosthesis = 103  Carpentier-Edwards Standard Porcine Bioprosthesis = 23  Carpentier-Edwards Supra-Annular Aortic Porcine Bioprosthesis = 25  Cryolife O'Brien Stentless Porcine Bioprosthesis – Subcoronary = 79  Cryolife O'Brien Stentless Porcine Bioprosthesis – Root = 80  Hancock Standard Porcine Bioprosthesis = 55  Hancock II Porcine Bioprosthesis = 28  Hancock Modified Orifice Porcine Bioprosthesis = 29  Ionescu-Shiley Pericardial Bioprosthesis = 30  Labcor Stented Porcine Bioprosthesis = 31  Labcor Stentless Porcine Bioprosthesis – Subcoronary = 81</p>	<p>Medtronic Freestyle Stentless Porcine Bioprosthesis – Subcoronary = 83  Medtronic Freestyle Stentless Porcine Bioprosthesis – Root = 84  Medtronic Intact Porcine Bioprosthesis = 35  Medtronic Mosaic Porcine Bioprosthesis = 36  Medtronic Contegra Bovine Jugular Bioprosthesis = 85  Mitroflow Pericardial Bioprosthesis = 37  St. Jude Medical - Toronto SPV Stentless Porcine Bioprosthesis or SJM Toronto SPV® Valve = 39  St. Jude Medical-Bioimplant Porcine Bioprosthesis = 40  SJM Biocor™ Valve = 86  SJM Epic™ Valve = 87  SJM Toronto Root™ Bioprosthesis = 88  Sorin Pericarbon Stentless Pericardial Bioprosthesis = 38</p> <p><b>Homograft</b>  CryoLife Aortic Homograft = 89  CryoLife Pulmonary Homograft = 90  CryoLife CryoValve SG(Decellularized) Aortic Homograft = 91  CryoLife CryoValve SG Pulmonary Homograft = 92  Homograft Aortic – Subcoronary = 41  Homograft Aortic Root = 42  Homograft Mitral = 43  Homograft Pulmonic Root = 44  LifeNet CV Allografts = 93</p> <p><b>Autograft</b>  Pulmonary Autograft to aortic root (Ross Procedure) = 45</p> <p><b>Ring / Annuloplasty</b>  ATS Simulus Flex-O Ring = 109  ATS Simulus Flex-C Band = 110  CarboMedics AnnuloFlo Ring = 94  CarboMedics AnnuloFlex Ring = 95  CarboMedics CardioFix Bovine Pericardium with PhotoFix Technology = 96  Carpentier-Edwards Classic Annuloplasty Ring = 46  Carpentier-Edwards Geoform Ring = 104  Carpentier-Edwards IMR Etlogix Ring = 105  Carpentier-Edwards Physio Annuloplasty System Ring = 47  Cosgrove-Edwards Annuloplasty System Ring = 48  Edwards MC³ Tricuspid Annuloplasty System G Future Band = 97  Genesee Sculptor Annuloplasty Ring = 98  Medtronic Sculptor Ring = 49  Medtronic-Duran AnCore Ring = 50  Sorin-Puig-Messana Ring = 51  St. Jude Medical Sequin Ring or SJM® Séguin Annuloplasty Ring = 52  St. Jude RSR (Rigid Saddle Ring) = 106  SJM Tailor™ Annuloplasty Ring = 99</p> <p><b>Band / Annuloplasty</b>  Medtronic Colvin Galloway Future Band = 100  Medtronic Duran Band = 101  Medtronic Duran – Ancore Band = 102  St. Jude Tailor Band = 107</p> <p><b>Other</b>  Other = 777</p>
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**L. VAD**

Previous VAD: Yes No [If Yes →](#) Implanted at another facility: Yes No

**PrevVAD(1920)** **PrevVADF(1921)**

**References to “Initial VAD” refer to the initial VAD for this hospitalization, not a VAD placed during a previous hospitalization.**

**Current Circulatory Support: For Initial VAD Only**

Indication for VAD: Bridge to Transplantation Bridge to Recovery Destination  
 Postcardiotomy Ventricular Failure (Separation from CPB) Device Malfunction End of Life

**VADInd(1930)**

Intubated Pre VAD: Yes No

**IntPVAD (1940)**

Hemodynamics Pre VAD:

PCWP: \_\_\_\_mm/Hg CVP: \_\_\_\_mm/Hg CI: \_\_\_\_L/ (min x m2)

**HPVPCWP (1950)** **HPVCVP (1960)** **HPVCI (1980)**

RV Function: Normal Mildly Impaired Moderately Impaired Severely Impaired

**HPVRVEF (1990)**

**VAD Device Data:**

Implant Type: [Fill in below:](#) Right VAD (RVAD) Left VAD (LVAD) BiVentricular BIVAD (BIVAD) Total Artificial Heart (TAH)  
 Product Type: [Fill in below:](#) 1. HeartQuest VAD 2. Lion Heart 3. Novacor LVAS 4. Heartsaver VAD 5. Jarvik 2000 6. DeBakey VAD  
 7. TandemHeart pVAD 8. AB-180 iVAD 9. CardioWest TAH 10. Thoratec iVAD 11. HeartMate VE 12. HeartMate IP LVAS  
 13. HeartMate SNAP-VE 14. HeartMate XVE 15. HeartMate II 16. HeartMate III 17. BVS5000i 18. AbioCor 19. Incor  
 20. Excor 21. Other

Explant Reason: [Fill in below:](#) 1. Cardiac Transplant 2. Recovery 3. Device Transfer 4. Device Related Infection 5. Device Malfunction 6. End of Life

**Initial Implant Data**

Implant Type	Product Type	Implant Date	Explant	Explant Date	Explant Reason	Transplant Date
_____	_____	___/___/____	Yes No	___/___/____	_____	___/___/____
		mm dd yyyy		mm dd yyyy		mm dd yyyy
<b>VImpTy (2030)</b>	<b>VProdTy (2040)</b>	<b>VImpDt (2050)</b>	<b>VExp (2060)</b>	<b>VExpDt (2070)</b>	<b>VExpRsn (2080)</b>	<b>VTxDt (2100)</b>

Initial VAD Cannulation/Attach Site:

LVAD Inflow: Left Atrium Left Ventricle

**LVADInf (2032)**

RVAD Inflow: Right Atrium Right Ventricle

**RVADInf (2033)**

**Additional Implant(s) Data**

Second Device Implanted: Yes No [If Yes ↓](#)

**VImp2 (2129)**

Implant Type #2	Product Type #2	Implant Date #2	Explant #2	Explant Date #2	Explant Reason #2	Transplant Date #2
_____	_____	___/___/____	Yes No	___/___/____	_____	___/___/____
		mm dd yyyy		mm dd yyyy		mm dd yyyy
<b>VImpTy2 (2130)</b>	<b>VProdTy2 (2140)</b>	<b>VImpDt2 (2150)</b>	<b>VExp2 (2160)</b>	<b>VExpDt2 (2170)</b>	<b>VExpRsn2 (2180)</b>	<b>VTxDt2 (2200)</b>

Implant #2 VAD Cannulation/Attach Site:

LVAD Inflow: Left Atrium Left Ventricle

**LVADInf2 (2131)**

RVAD Inflow: Right Atrium Right Ventricle

**RVADInf2 (2132)**

Third Device Implanted: Yes No [If Yes ↓](#)

**VImp3 (2209)**

Implant Type #3	Product Type #3	Implant Date #3	Explant #3	Explant Date #3	Explant Reason #3	Transplant Date #3
_____	_____	___/___/___ mm dd yyyy	Yes No	___/___/___ mm dd yyyy	_____	___/___/___ mm dd yyyy
<b>VImpTy3 (2210)</b>	<b>VProdTy3 (2220)</b>	<b>VImpDt3 (2230)</b>	<b>VExp3 (2240)</b>	<b>VExpDt3 (2250)</b>	<b>VExpRsn3 (2260)</b>	<b>VTxDt3 (2280)</b>

Implant #3 VAD Cannulation/Attach Site:

LVAD Inflow: Left Atrium Left Ventricle

**LVADInf3 (2211)**

RVAD Inflow: Right Atrium Right Ventricle

**RVADInf3 (2212)****Primary VAD Complications Data:**

Intracranial Bleed:	Yes	No
<b>PVCmpBld (2290)</b>		
Embolic Stroke:	Yes	No
<b>PVCmpESt (2300)</b>		
Driveline and/or Cannula Infection:	Yes	No
<b>PVCmpDCI (2310)</b>		
Pump Pocket Infection:	Yes	No
<b>PVCmpPPI (2320)</b>		
VAD Endocarditis:	Yes	No
<b>PVCmpEnd (2330)</b>		
Device Malfunction:	Yes	No
<b>PVCmpMal (2340)</b>		
Bowel Obstruction:	Yes	No
<b>PVCmpBO (2341)</b>		

**Additional Complications (not specific to initial VAD as above) to be collected in section "P", Complications.**

VAD Discharge Status: With VAD  
Without VAD  
Expired in hospital (where initial VAD was implanted)

**VADDiscS (2350)****M. Other Cardiac Procedures**

Left Ventricular Aneurysm Repair	Yes No	Ventricular Septal Defect Repair	Yes No	Atrial Septal Defect Repair	Yes No
<b>OCarLVA (2360)</b>		<b>OCarVSD (2370)</b>		<b>OCarASD (2380)</b>	
Batista	Yes No	Surgical Ventricular Restoration	Yes No	Congenital Defect Repair	Yes No
<b>OCarBati (2390)</b>		<b>OCarSVR (2400)</b>		<b>OCarCong (2410)</b>	
Transmyocardial Laser Revascularization	Yes No	Cardiac Trauma	Yes No	Cardiac Transplant	Yes No
<b>OCarLasr (2420)</b>		<b>OCarTrma (2430)</b>		<b>OCarCrTx (2440)</b>	
Arrhythmia Correction Surgery:	None				
<b>OCarACD (2450)</b>					
	Permanent Pacemaker				
	Permanent Pacemaker with Cardiac Resynchronization Therapy (CRT)				
	Automatic Implanted Cardioverter Defibrillator (AICD)				
	AICD with CRT				
	If "Permanent Pacemaker with CRT" or "AICD with CRT" ↓				
	Lead Placement:	Epicardial	Endocardial		
		<b>OCarACDL (2460)</b>			

Atrial Fibrillation Correction Surgery: None

**OCarAFib (2470)**

Standard Surgical Maze Procedure  
 Other Surgical Ablative Procedure  
 Combination of Standard and Other

Aortic Aneurysm Yes No **If Yes → Ascending Aorta** Yes No **ONCAAsc (2520)**  
**ONCAoAn (2510)**

Aortic Arch Yes No **ONCArch (2530)**  
 Descending Aorta Yes No **ONCDesc (2540)**  
 Thoracoabdominal Aneurysm Yes No **ONCThAbd (2550)**

Other Yes No  
**OCarOthr (2560)**

**N. Other Non Cardiac Procedures**

Carotid Endarterectomy Yes No Other Vascular Yes No Other Thoracic Yes No Other Yes No  
**ONCCarEn (2570)** **ONCOVasc (2580)** **ONCOThor (2590)** **ONCOther (2600)**

**O. Post Operative**

Postoperative Creatinine Level \_\_\_\_\_

**PostCreat (2605)**

Blood Products Used Postoperatively: Yes No **If Yes → Red Blood Cell Units \_\_\_\_\_ BdRBCU (2620)**

**BldProd (2610)**

Fresh Frozen Plasma Units \_\_\_\_\_ **BdFFPU (2630)**

Cryoprecipitate Units \_\_\_\_\_ **BdCryoU (2640)**

Platelet Units \_\_\_\_\_ **BdPlatU (2650)**

Extubated in OR: Yes No

**ExtubOR (2660)**

Re-intubated During Hospital Stay: Yes No **If Yes → Additional Hours Ventilated: \_\_\_\_\_**

**ReIntub (2680)**

**VentHrsA (2690)**

**P. Complications**

In Hospital Postoperative Complications: Yes No **If Yes ↓**

**Complics (2710)**

**Operative:**

ReOp for Bleeding/Tamponade Yes No

**COpReBld (2720)**

ReOp for Valvular Dysfunction Yes No

**COpReVlv (2730)**

ReOp for Graft Occlusion Yes No

**COpReGft (2740)**

ReOp for Other Cardiac Reason Yes No

**COpReOth (2750)**

ReOp for Other Non-Cardiac Reason Yes No

**COpReNon (2760)**

Perioperative MI Yes No

**COpPerMI (2770)**

**Infection**

Sternum – Deep Yes No

**CIStDeep (2780)**

Thorotomy Yes No

**CIThor (2790)**

Leg Yes No

**CILeg (2800)**

Arm Yes No

**CIArm (2801)**

Septicemia Yes No

**CISeptic (2810)**

**Neurologic**

Postoperative Stroke (Perm > 24 hours) Yes No

**CNStrokP (2830)**

Transient Ischemic Attack (TIA) Yes No

**Pulmonary**

Prolonged Ventilation Yes No

**CPVntLng (2860)**

Pulmonary Embolism Yes No

<b>CNStrokTTIA (2841)</b>			<b>CPPulEmb (2870)</b>		
RIND	Yes	No	Pneumonia	Yes	No
<b>CNStrokTRIND (2842)</b>			<b>CPPneum (2880)</b>		
Continuous Coma >=24Hrs	Yes	No			
<b>CNComa (2850)</b>					
Paralysis	Yes	No	If Yes ↓		
<b>CNParal (2851)</b>					
	Paralysis Type: Transient    Permanent				
			<b>CNParalTy (2852)</b>		

<b>Renal</b>			<b>Vascular</b>		
Renal Failure	Yes	No	If Yes ↓	Illiac/Femoral Dissection	Yes    No
<b>CRenFail (2890)</b>				<b>CVallFem (2910)</b>	
	Dialysis (Newly Required): Yes    No			Acute Limb Ischemia	Yes    No
			<b>CRenDial (2900)</b>	<b>CVaLbIs (2920)</b>	

<b>Other:</b>					
Heart Block	Yes	No		Multi-System Failure	Yes    No
<b>COtHtBIK (2930)</b>				<b>COtMSF (2980)</b>	
Cardiac Arrest	Yes	No		Atrial Fibrillation	Yes    No
<b>COtArrst (2940)</b>				<b>COtAFib (2990)</b>	
Anticoagulant Event	Yes	No		Aortic Dissection	Yes    No
<b>COtCoag (2950)</b>				<b>CVaAoDis (3000)</b>	
Tamponade	Yes	No		Other	Yes    No
<b>COtTamp (2960)</b>				<b>COtOther (3010)</b>	
Gastro-Intestinal Event	Yes	No			
<b>COtGI (2970)</b>					

**Q. Mortality**

Mortality: Yes    No                      Discharge Status: Alive    Dead                      Status at 30 days After Surgery: Alive    Dead    Unknown

**Mortality (3020)**                      **MtDCStat (3030)**                      **Mt30Stat (3040)**

If Mortality = Yes ↓

Operative Death: Yes    No

**MtOpD (3050)**

Mortality - Date    \_\_\_/\_\_\_/\_\_\_ (mm/dd/yyyy)

**MtDate (3060)**

Location of Death: OR during Initial Surgery    Hospital    Home    Other Care Facility    OR during Reoperation    Unknown

**MtLocatn (3070)**

Primary Cause of Death (select only one) ↓

**MtCause (3080)**

Cardiac    Neurologic    Renal    Vascular    Infection    Pulmonary    Valvular    Unknown    Other

R. **Discharge** (Note: This section is only answered if Discharge Status is Alive)

ADP Inhibitors: Yes No Contraindicated / Not Indicated

**DCADP (3090)**

Antiarrhythmics: Yes No Contraindicated / Not Indicated If Yes → Medication Name: Amiodarone Other

**DCAArhy (3100)**

**DCAArMN (3110)**

Aspirin: Yes No Contraindicated / Not indicated

**DCASA (3120)**

Ace or ARB Inhibitors: Yes No Contraindicated / Not Indicated

**DCACE (3130)**

Beta Blockers: Yes No Contraindicated / Not Indicated

**DCBeta (3140)**

Lipid Lowering: Yes No Contraindicated / Not Indicated If Yes → Medication Type: Statin Non-statin Both

**DCLipid (3150)**

**DCLipMT (3160)**

Coumadin: Yes No Contraindicated / Not Indicated

**DCCoum (3180)**

Discharge Location: Home Extended Care / Transitional Care Unit/Rehab Other Hospital Nursing Home Hospice Other

**DisLoctn (3190)**

Cardiac Rehabilitation Referral: Yes No Not Applicable

**CardRef (3200)**

Smoking Cessation Counseling: Yes No Not Applicable

**SmokCoun (3210)**

S. **Readmission** (Note: This section is only answered if Discharge Status is Alive)

Readmit <=30 Days from Date of Procedure: Yes No If Yes ↓

**Readm30 (3220)**

Readmit Primary Reason:

**ReadmRsn (3230)**

Anticoagulation Complication – Valvular  
Anticoagulation Complication - Pharmacological  
Arrhythmia/Heart Block  
Congestive Heart Failure  
Myocardial Infarction and/or Recurrent Angina  
Pericardial Effusion and/or Tamponade  
Pneumonia or other Respiratory Complication  
Coronary Artery Dysfunction  
Valve Dysfunction  
Infection - Deep Sternum  
Infection – Conduit Harvest Site  
Renal Failure  
TIA  
Permanent CVA  
Acute Vascular Complication  
Subacute Endocarditis  
VAD Complication  
Transplant Rejection  
Other – Related Readmission  
Other – Nonrelated Readmission

Readmit Primary Procedure

**ReadmPro (3240)**

OR for Bleeding  
Pacemaker Insertion/AICD  
PCI  
Pericardiotomy / Pericardiocentesis  
OR for Coronary Arteries  
OR for Valve  
OR for Sternal Debridement / Muscle Flap  
Dialysis  
OR for Vascular  
No Procedure Performed  
Other Procedure  
Unknown