



**The Society of Thoracic Surgeons
Adult Cardiac Surgery Database
Data Collection Form**

Version 2.41

A. Administrative

Participant ID: | | | | | | | **Cost Link Field:** | | | | | | | **Optional** **STS Trial Link Number:** | | | | | | | **Optional**

B. Demographics

Patient Medical Record Number: _____ **not harvested**

Last Name: _____

First: _____ **MI:** _____ **not harvested**

Date of Birth: ___/___/_____ **optional harvest**

Age: _____ **system calculation**

Gender: (Male) (Female)

Race: (Caucasian) (Black) (Hispanic) (Asian) (Native American) (Other)

Social Security (or National ID) Number: _____ **not harvested**

ZIP or Postal Code: _____ **optional harvest** **Referring Cardiologist's Name:** _____ **not harvested** **Referring**

Physician's Name: _____ **not harvested**

C. Hospitalization

Hospital Name: _____ **controlled list** **Primary Payor:** _____ **not harvested**

Date of Admission: ___/___/_____ **Date of Surgery:** ___/___/_____ **Date of Discharge:** ___/___/_____

Same Day Elective Admission: No Yes

Initial ICU Hours: _____ **Readmn to ICU:** No Yes → **if yes, Additional ICU Hours** _____ **Total Hours in ICU:** _____ **calculated**

D. Pre-Operative Risk Factors

Weight: _____ (kg) **Height:** _____ (cm)

Smoker: No Yes → **if yes,** **Current Smoker:** No Yes

Family History of CAD: No Yes

Diabetes: No Yes → **if yes, select one:** **Diabetes Control:** (None) (Diet) (Oral) (Insulin)

Hypercholesterolemia: No Yes

Last Creatinine Preop: _____

Renal Failure: No Yes → **if yes,** **Dialysis:** No Yes

Hypertension: No Yes

Cerebrovascular Accident: No Yes → **if yes, When:** (Recent <= 2 weeks) (Remote > 2 weeks)

Infectious Endocarditis: No Yes → **if yes, Infectious Endocarditis Type:** (Treated) (Active)

Chronic Lung Disease: (No) (Mild) (Moderate) (Severe)

Immunosuppressive Trtment: No Yes

Peripheral Vascular Disease: No Yes

Cerebrovascular Disease: No Yes → **if yes, CVD Type:** (Coma) (CVA) (RIND) (TIA) (Non Invasive > 75%) (Previous Carotid Surgery)

E. Previous Interventions

Previous CV Interventions: No Yes ↓ **if yes, complete this section**

of Prior Cardiac Operations Requiring Cardiopulmonary Bypass: _____ **# of Prior Cardiac Operations Without Cardiopulmonary Bypass:** _____

Previous Surgery:

Coronary Artery Bypass: No Yes **Valve:** No Yes **Previous Other Cardiac:** No Yes

Prior PTCA including Balloon and/or Atherectomy: No Yes → **if yes, Interval:** <= 6 hours > 6 hours

Previous non-surgical Stent Placement: No Yes → **if yes, Interval:** <= 6 hours > 6 hours

Thrombolysis: No Yes → **if yes, Interval:** <= 6 hours > 6 hours

Previous non-surgical Balloon Valvuloplasty: No Yes

F. Pre Operative Cardiac Status

Myocardial Infarction: No Yes → if yes, When: (<= 6 hours) (> 6 hours but <24 hours) (1 - 7 days) (8 - 21 days) (> 21 days)
 Congestive Heart Failure: No Yes
 Angina: No Yes → if yes, Type: Stable Unstable ↓ if unstable
 Unstable Type: (Rest Angina) (New Class 3) (Recent Accel) (Variant Angina) (Non-Q MI) (Post- Infarct Angina)
 Cardiogenic Shock: No Yes → if yes Type: (Refractory Shock) (Hemodynamic Instability)
 Resuscitation: No Yes
 Arrhythmia: No Yes → if yes, Type: (Sust VT/VF) (Heart Block) (AFib/Flutter)
 Classification: CCS: 0 I II III IV NYHA: I II III IV

G. Pre Operative Medications

Digitalis: No Yes	Beta Blockers: No Yes	Nitrates – I.V.: No Yes	Anticoagulants: No Yes	Diuretics: No Yes
Inotropic Agents: No Yes	Steroids: No Yes	Aspirin: No Yes	Ace Inhibitors: No Yes	Oth Anti-Platelets: No Yes

H. Pre Operative Hemodynamics and Cath

Number of Diseased Coronary Vessels: (None) (One) (Two) (Three)
 Left Main Disease > 50%: No Yes
 Ejection Fraction Done? No Yes → if yes, Ejection Fraction: _____ → Method: (LV gram) (Radionucleotide) (Estimate) (ECHO)
 Pulmonary Artery Mean Pressure Done? No Yes → if yes, Pulmonary Artery Mean Pressure: _____

Aortic Stenosis: No Yes → if yes, Gradient: _____	Aortic Insufficiency: 0=None 1=Trivial 2=Mild 3= Moderate 4= Severe
Mitral Stenosis: No Yes	Mitral Insufficiency: 0=None 1=Trivial 2=Mild 3= Moderate 4= Severe
Tricuspid Stenosis: No Yes	Tricuspid Insufficiency: 0=None 1=Trivial 2=Mild 3= Moderate 4= Severe
Pulmonic Stenosis: No Yes	Pulmonic Insufficiency: 0=None 1=Trivial 2=Mild 3= Moderate 4= Severe

J. Operative

Surgeon's Name: _____ controlled list Surgeon Group: _____ controlled list

Status of the procedure:
 Emergent Salvage
 Emergent → Reason: (Shock Circ Supp) (Shock No Circ Supp) (Pulm Edema) (AEMI) (Ongoing Ischemia) (Valve Dysfnctn) (Aortic Dissection)
 Urgent → Reason: (AMI) (IABP) (Worsening CP) (CHF) (Anatomy) (USA) (Rest Angina) (Valve Dysfunction) (Aortic Dissection)
 Elective

Coronary Artery Bypass: No Yes (if yes, complete Section K)

<u>Aortic:</u>	<u>Mitral:</u>	<u>Tricuspid:</u>	<u>Pulmonic:</u>
No	No	No	No
Replacement	Annuloplasty only	Annuloplasty Only	Replacement
Repair/Reconstruction	Replacement	Replacement	Reconstruction
Root Reconstruction Valve Conduit	Reconstruction w/ Annuloplasty	Reconstruction w/ Annuloplasty	
Reconstruction w/ Valve Sparing	Reconstruction w/out Annuloplasty	Reconstruction w/out Annuloplasty	
Resuspension Aortic Valve		Valvectomy	
Resection Sub-Aortic Stenosis			

Other Cardiac Procedure: No Yes ↓ (if yes, complete Section N) Other Non-Cardiac Procedure: No Yes ↓ (if yes, complete Section O)

K. Coronary Surgery

Unplanned CABG: No Yes

Number of Distal Anastomoses with Arterial Conduits: _____ Number of Distal Anastomoses with Vein Grafts: _____

IMAs Used as Grafts: (Left IMA) (Right IMA) (Both IMAs) (No IMA) Number of IMA Distal Anastomoses: _____

Radial Artery(ies) Used as Grafts: (No Radial) (Left Radial) (Right Radial) (Both Radials)

Number of Radial Artery Distal Anastomoses: _____

Number of Gastro-Epiploic Artery Distal Anastomoses: _____

L. Valve Surgery		↓ Key M = Mechanical, B = Bioprosthesis, H = Homograft, A = Autograft, R = Ring									
Aortic Prosthesis -	Implant Type:	None	M	B	H	A	R	Implant:	_____	Size:	____(mm)
	Explant Type:	None	M	B	H	A	R	Explant:	_____	Size:	____(mm)
Mitral Prosthesis -	Implant Type:	None	M	B	H	A	R	Implant:	_____	Size:	____(mm)
	Explant Type:	None	M	B	H	A	R	Explant:	_____	Size:	____(mm)
Tricuspid Prosthesis -	Implant Type:	None	M	B	H	A	R	Implant:	_____	Size:	____(mm)
	Explant Type:	None	M	B	H	A	R	Explant:	_____	Size:	____(mm)
Pulmonic Prosthesis -	Implant Type:	None	M	B	H	A	R	Implant:	_____	Size:	____(mm)
	Explant Type:	None	M	B	H	A	R	Explant:	_____	Size:	____(mm)

Valve Key

Mechanical

- M1= ATS Mechanical Prosthesis
- M2= Björk-Shiley Convex-Concave Mechanical Prosthesis
- M3= Björk-Shiley Monostrut Mechanical Prosthesis
- M4= CarboMedics Mechanical Prosthesis
- M5= Edwards Tekna Mechanical Prosthesis
- M6= Lillehei-Kaster Mechanical Prosthesis
- M7= Medtronic-Hall Mechanical Prosthesis
- M8= OmniCarbon Mechanical Prosthesis
- M9= OmniScience Mechanical Prosthesis
- M10= On-X Mechanical Prosthesis
- M11= Sorin Bicarbon (Baxter Mira) Mechanical Prosthesis
- M12= Sorin Monoleaflet Allcarbon Mechanical Prosthesis
- M13= St. Jude Medical Mechanical Prosthesis
- M14= Starr-Edwards Caged-Ball Prosthesis
- M15= Ultracor Mechanical Prosthesis

Bioprosthetic

- B1= Baxter Prima Plus Stentless Porcine Bioprosthesis
- B2= Baxter Prima Stentless Porcine Bioprosthesis
- B3= Biocor Porcine Bioprosthesis
- B4= Biocor Stentless Porcine Bioprosthesis
- B5= CarboMedics PhotoFix Pericardial Bioprosthesis
- B6= Carpentier-Edwards Pericardial Bioprosthesis
- B7= Carpentier-Edwards Standard Porcine Bioprosthesis
- B8= Carpentier-Edwards Supra-Annular Porcine Bioprosthesis
- B9= Cryolife O'Brien Stentless Porcine Bioprosthesis
- B10= Hancock Standard Porcine Bioprosthesis
- B11= Hancock II Porcine Bioprosthesis

- B12= Hancock Modified Orifice Porcine Bioprosthesis
- B13= Ionescu-Shiley Pericardial Bioprosthesis
- B14= Labcor Stented Porcine Bioprosthesis
- B15= Labcor Stentless Porcine Bioprosthesis
- B16= Medtronic Freestyle Stentless Porcine Bioprosthesis
- B17= Medtronic Intact Porcine Bioprosthesis
- B18= Medtronic Mosaic Porcine Bioprosthesis
- B19= Mitroflow Pericardial Bioprosthesis
- B20= Sorin Pericarbon Stentless Pericardial Bioprosthesis
- B21= St. Jude Medical - Toronto SPV Stentless Porcine Bioprosthesis
- B22= St. Jude Medical-Bioimplant Porcine Bioprosthesis

Homograft

- H1= Homograft Aortic – Subcoronary
- H2= Homograft Aortic Root/Cylinder
- H3= Homograft Mitral
- H4= Homograft Pulmonic Root
- H5= Cryolife Homograft

Autograft

- A1= Autograft Pulmonic Root

Ring

- R1= Carpentier-Edwards Classic Ring
- R2= Carpentier-Edwards Physio Ring
- R3= Cosgrove-Edwards Ring
- R4= Medtronic Sculptor Ring
- R5= Medtronic-Duran Ring
- R6= Sorin-Puig-Messana Ring
- R7= St. Jude Medical Sequin Ring

777= Other

M. Operative Techniques

Cardiopulmonary Bypass Used: No Yes → if yes, Conversion to CPB: No Yes

Primary Indication for minimally Invasive approach: (Surg/Pat Choice) (ContraindicatedStd Approach) (Comb Cath Intervention)

Primary Incision:

Full Sternotomy Partial Sternotomy Transverse Sternotomy Right Vertical Parasternal Left Vertical Parasternal
 Right Anterior Thoracotomy Left Anterior Thoracotomy Posterolateral Thoracotomy Xiphoid Epigastric Subcostal

Total # of Incisions: _____ Conversion to Std Incision: No Yes → if yes, Indication: (Exposure) (Bleeding) (Rhythm) (Hypotension) (Conduit)

Cannulation Meth: (Aorta and Fem/Jug Vein) (Fem Art and Fem/Jug Vein) (Aorta and Atrial/Caval) (Fem Art and Atrial/Caval) (Other)

Aortic Occlusion Method: (None) (Cross-clamp) (Balloon Occlusion)

Intracoronary Shunt used during distal anastomoses: No Yes

Suture Technique: (Running) (Interrupted) (Stapler) (Combination)

Vessel Stabilization Technique: (None) (Suture Snare) (Suction Device) (Compression) (Other)

IMA Harvest Technique: (None) (Direct Vision) (Thoracoscopy) (Combination)

Acute Flow Patency Assess of Grafts (Periop): (None) (IntaOp Doppler) (IntraOp Angio) (Postop Angio) (Postop Doppler)

N. Other Cardiac Procedures

No	Yes	Left Ventricular Aneurysm Repair	No	Yes	Vent Septal Defect Repair	No	Yes	Atrial Septal Defect Repair
No	Yes	Batista	No	Yes	SVR	No	Yes	Congenital Defect Repair
No	Yes	Transmyocard Laser Revasc	No	Yes	Cardiac Trauma	No	Yes	Cardiac Transplant
No	Yes	Permanent Pacemaker	No	Yes	AICD	No	Yes	Other

O. Other Non Cardiac Procedures													
No	Yes	Aortic Aneurysm	No	Yes	Carotid Endarterectomy	No	Yes	Other Vascular	No	Yes	Other Thoracic		
P. CPB and Support													
Skin Incision Start Time: _____		24 hour clock		Skin Incision Stop Time: _____		24 hour clock							
Cross Clamp Time (min): _____			Perfusion Time (min): _____			Cardioplegia: No Yes							
IABP	No	Yes	→ if yes, When Inserted: (Preop) (Intraop) (Postop)										
	If yes, → Indication: (Hemodynamic Instab)		(PTCA Support)		(Unst. Angina)		(CPB Wean)		(Prophylatic)				
Ventricular Assist Device:		No	Yes										
Q. Post Operative													
Blood Products Used:		No	Yes										
Initial # of Hrs Ventilated Postop: _____		Re-intubated During Hosp Stay: No		Yes		→ if yes, Addl Hours Ventilated Postop: _____							
Total Hours Ventilated Postop: _____													
R. Complications In hospital Complications: No Yes ↓ if yes, at least one complication below must be selected													
Operative	No	Yes	ReOp for Bleeding/Tamponade			Infection		No	Yes	Sternum – Deep			
	No	Yes	ReOp for Valvular Dysfunction					No	Yes	Thoracotomy			
	No	Yes	ReOp for Graft Occlusion					No	Yes	Leg			
	No	Yes	ReOp for Other Cardiac Problem					No	Yes	Septicemia			
	No	Yes	ReOp for Other Non Cardiac Problem					No	Yes	Urinary Tract Infection			
Neurologic	No	Yes	Stroke			Pulmonary		No	Yes	Prolonged Ventilation			
	No	Yes	Transient					No	Yes	Pulmonary Embolism			
	No	Yes	Continuous Coma >=24Hrs					No	Yes	Pneumonia			
Renal	No	Yes	Renal Failure			Vascular		No	Yes	Vascular - Aortic Dissection			
	No	Yes	Dialysis					No	Yes	Iliac/Femoral Dissection			
								No	Yes	Acute Limb Ischemia			
Other	No	Yes	Heart Block										
	No	Yes	Cardiac Arrest					No	Yes	Gastro-Intestinal Complication			
	No	Yes	Anticoagulant Complication					No	Yes	Multi-System Failure			
	No	Yes	Tamponade					No	Yes	Atrial Fibrillation			
S. Discharge (Note: this section is blank if patient dies during initial hospital stay)													
Aspirin: No Yes		Ace-Inhibitors: No Yes		Beta Blockers: No Yes		Lipid Lowering: No Yes		Other Anti-Platelets: No Yes					
Discharge Location: (Home)		(Extended Care/TCU)		(Other Hospital)		(Nursing Home)		(Other)					
T. Mortality													
Mortality - Mortality: No Yes		Discharge Status: Alive Dead		Status at 30 days after surgery: Alive Dead									
Mortality - Operative Death: No Yes		Mortality - Date ___/___/___ (mm/dd/yyyy)											
Location of Death: (OR)		(Hospital)		(Home)		(Other Facility)							
Primary Cause of Death (select only one):		(Cardiac)		(Neurological)		(Renal)		(Vascular)		(Infection)	(Pulmonary)	(Valvular)	(Other)
U. Readmission (Note: this section is blank if patient dies during initial hospital stay)													
Readmit <=30 Days from Date of Procedure: No Yes		↓ if yes, select the most predominate reason											
Readmission Reason:													
(Anticoagulant Complications)			(Arrhythmias/Heart Block/Pacemaker Insertion/AICD)			(CHF)							
(MI/Recurrent Angina)			(Pericardial Effusion/Tamponade)			(Pneumonia/ Respiratory Complication)							
(Valve Dysfunction)			(Infection Deep Sternum)			(Infection Leg)							
Cardiac Cath)			(PTCA Stent)			(Renal Failure)							
TIA)			(Reop for Graft Occlusion)			(Reop for Bleeding)							
(Permanent CVA)			(Acute Vascular Complication)			(Other)							