



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 Stnd 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	
	No	Yes	Perioperative Myocardial Infarction									
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)						