



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

Appendix I 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: _____ Readmtn 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)

<u>Valve Key</u>	
<u>Mechanical</u> 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	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
<u>Bioprosthetic</u> 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	<u>Homograft</u> H1= Homograft Aortic – Subcoronary H2= Homograft Aortic Root/Cylinder H3= Homograft Mitral H4= Homograft Pulmonic Root H5= Cryolife Homograft
	<u>Autograft</u> A1= Autograft Pulmonic Root
	<u>Ring</u> 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:	(not minimally invasive) (Surg/Pat Choice) (Contraindicated Std 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: (not minimally invasive) Exposure Bleeding Rhythm Hypotension
	(Conduit)
Cannulation Meth:	(None) (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						No		Yes		Acute Limb Ischemia									
Other		No		Yes		Heart Block				No		Yes		Gastro-Intestinal Complication									
		No		Yes		Cardiac Arrest				No		Yes		Multi-System Failure									
		No		Yes		Anticoagulant Complication				No		Yes		Atrial Fibrillation									
		No		Yes		Tamponade				No		Yes											
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)															