

The Society of Thoracic Surgeons
 Adult Cardiac Surgery Database
 Data Collection Form Version 4.20.2



STS National Database™
 Trusted. Transformed. Real-Time.

Add/Change to Field **Risk Variable ++NQF Updates 12212020

A. Administrative	
Participant ID: _____	Record ID: (software generated)
Patient ID: (software generated)	
Patient participating in STS-related clinical trial:	
<input type="checkbox"/> None <input type="checkbox"/> Trial 1 <input type="checkbox"/> Trial 2 <input type="checkbox"/> Trial 3 <input type="checkbox"/> Trial 4 <input type="checkbox"/> Trial 5 <input type="checkbox"/> Trial 6 (If not None →)	Clinical Trial Patient ID: _____

B. Demographics		
Patient Last Name: _____	Patient First Name: _____	Patient Middle Name: _____
Date of Birth: __/__/____ (mm/dd/yyyy)	Patient Age: ** _____	Sex: ** <input type="checkbox"/> Male <input type="checkbox"/> Female
National Identification (Social Security) Number Known: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused (If Yes →)		National ID Number: _____
Medical Record Number: _____		
Permanent Street Address: _____	City: _____	
Region: _____	ZIP Code: _____	Country: _____
Race Documented: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Pt. Declined to Disclose		
Race: (If Yes, select all that apply →)	<input type="checkbox"/> White: <input type="checkbox"/> Black/African American: ** <input type="checkbox"/> Asian: **	<input type="checkbox"/> Am Indian/Alaskan: <input type="checkbox"/> Hawaiian/Pacific Islander <input type="checkbox"/> Other:
Hispanic, Latino or Spanish Ethnicity: **	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Documented	

C. Hospitalization	
Hospital Name: _____ (If Not Missing →)	Hospital ZIP Code: _____ Hospital Region: _____
Hospital National Provider Identifier: _____	Hospital CMS Certification Number: _____
Primary Payor: ** (Choose one ↓)	(If Primary Payor <>None/Self ↓) Secondary Payor: ** (Choose one)
<input type="checkbox"/> None/Self	<input type="checkbox"/> None/Self
<input type="checkbox"/> Medicare (includes commercially managed options)	<input type="checkbox"/> Medicare (includes commercially managed options)
(If Medicare →) Commercially Managed Medicare Plan	(If Medicare →) Commercially Managed Medicare Plan
<input type="checkbox"/> Yes <input type="checkbox"/> No (If No ↓)	<input type="checkbox"/> Yes <input type="checkbox"/> No (If No ↓)
HICN/MBI Known	HICN/MBI Known
<input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes ↓)	<input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes ↓)
HICN/MBI: _____	HICN/MBI: _____
Primary Payor Medicare Part B: <input type="checkbox"/> Yes <input type="checkbox"/> No	Secondary Payor Medicare Part B: <input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Medicaid (includes commercially managed options)	<input type="checkbox"/> Medicaid (includes commercially managed options)
<input type="checkbox"/> Commercial Health Insurance	<input type="checkbox"/> Commercial Health Insurance
<input type="checkbox"/> Health Maintenance Organization	<input type="checkbox"/> Health Maintenance Organization
<input type="checkbox"/> Military	<input type="checkbox"/> Military
<input type="checkbox"/> Non -U.S. Plan	<input type="checkbox"/> Non -U.S. Plan
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other
Admit Date: __/__/____ (mm/dd/yyyy)	Date of Surgery: ** __/__/____ (mm/dd/yyyy)
Admit Source: <input type="checkbox"/> Elective Admission <input type="checkbox"/> Emergency Department <input type="checkbox"/> Transfer in from another hospital/acute care facility <input type="checkbox"/> Other	
(If Transfer →) Other Hospital Performs Cardiac Surgery <input type="checkbox"/> Yes <input type="checkbox"/> No	

D. Risk Factors		
Height (cm): **	Weight (kg): **	Calculated BMI (system calculation)

Family History of Premature Coronary Artery Disease: ** <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown			
Diabetes: ** <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown (If Yes →)		Diabetes-Control: ** <input type="checkbox"/> None <input type="checkbox"/> Diet only <input type="checkbox"/> Oral <input type="checkbox"/> Insulin <input type="checkbox"/> Other SubQ <input type="checkbox"/> Other <input type="checkbox"/> Unknown	
Dialysis: ** <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		Hypertension: ** <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
Endocarditis: ** <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes →) Endocarditis Type: ** <input type="checkbox"/> Treated <input type="checkbox"/> Active			
(If Endocarditis Yes →)	Endocarditis Culture:	<input type="checkbox"/> Culture negative <input type="checkbox"/> Strep species <input type="checkbox"/> MRSA <input type="checkbox"/> MSSA <input type="checkbox"/> Coagulase negative staph <input type="checkbox"/> Enterococcus species <input type="checkbox"/> Gram negative species <input type="checkbox"/> Polymicrobial <input type="checkbox"/> Mycobacterium (chimera) <input type="checkbox"/> Fungal <input type="checkbox"/> Other <input type="checkbox"/> Unknown	
Tobacco use: **	<input type="checkbox"/> Never smoker <input type="checkbox"/> Current every day smoker <input type="checkbox"/> Current some day smoker <input type="checkbox"/> Smoker, current status (frequency) unknown <input type="checkbox"/> Former smoker <input type="checkbox"/> Smoking status unknown		
Chronic Lung Disease: ** <input type="checkbox"/> No <input type="checkbox"/> Mild <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Lung disease documented, severity unknown <input type="checkbox"/> Unknown			
(If Mild, Moderate or Severe →)	Type:	<input type="checkbox"/> Obstructive <input type="checkbox"/> Reactive <input type="checkbox"/> Interstitial Fibrosis <input type="checkbox"/> Restrictive <input type="checkbox"/> Other <input type="checkbox"/> Multiple <input type="checkbox"/> Not Documented	
Pulmonary Function Test Done: <input type="checkbox"/> Yes <input type="checkbox"/> No			
(If Yes →)	FEV1 % Predicted: _____	DLCO Test Performed: <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes →)	DLCO % Predicted: _____
Room Air ABG Performed: <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes →)		Carbon Dioxide Level: _____	Oxygen Level: _____
Home Oxygen: ** <input type="checkbox"/> Yes, PRN <input type="checkbox"/> Yes, oxygen dependent <input type="checkbox"/> No <input type="checkbox"/> Unknown		Inhaled Medication or Oral Bronchodilator Therapy: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
Sleep Apnea: ** <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		Pneumonia: ** <input type="checkbox"/> Recent <input type="checkbox"/> Remote <input type="checkbox"/> No <input type="checkbox"/> Unknown	
Illicit Drug Use within One Year: ** <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		(If Illicit Drug Use = Yes →)	Intravenous Drug Use within One Year: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
			Drug use with 30 days of procedure? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
Alcohol Use: ** <input type="checkbox"/> <=1 drink/week <input type="checkbox"/> 2-7 drinks/week <input type="checkbox"/> >=8 drinks/week <input type="checkbox"/> None <input type="checkbox"/> Unknown			
Liver Disease: ** <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		Liver Cirrhosis <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
		(If Liver Cirrhosis = Yes →)	Child -Pugh Class <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> Unknown
Immunocompromised Present: ** <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		Mediastinal Radiation: ** <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
Cancer Within 5 Years: ** <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		Peripheral Artery Disease: ** <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
Unresponsive State: ** <input type="checkbox"/> Yes <input type="checkbox"/> No		Syncope: ** <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
Cerebrovascular Disease: ** <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown			
(If Yes →)	Prior CVA: ** <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown (If Yes →)		Prior CVA-When: ** <input type="checkbox"/> <= 30 days <input type="checkbox"/> > 30 days
	CVD TIA: ** <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		
	CVD Carotid Stenosis: <input type="checkbox"/> Right <input type="checkbox"/> Left <input type="checkbox"/> Both <input type="checkbox"/> None <input type="checkbox"/> Not Documented		
	(If Right or Both →)	Severity of stenosis on the right carotid artery: ** <input type="checkbox"/> 50-79% <input type="checkbox"/> 80-99% <input type="checkbox"/> 100% <input type="checkbox"/> Not documented	
	(If Left or Both →)	Severity of stenosis on the left carotid artery: ** <input type="checkbox"/> 50-79% <input type="checkbox"/> 80-99% <input type="checkbox"/> 100% <input type="checkbox"/> Not documented	
History of previous carotid artery surgery and/or stenting: ** <input type="checkbox"/> Yes <input type="checkbox"/> No			
Enter available lab results below. Not all tests are expected or appropriate for all patients. Data Quality Report will flag missing Creatinine or if both Hemoglobin & Hematocrit are missing. if Liver disease is present, Sodium, Creatinine, Bilirubin and INR are expected			
WBC Count: **	Hemoglobin:	Hematocrit: **	Platelet Count: **
Total Albumin:	A1C Level:	BNP	
Sodium:	Last Creatinine Level **:	Total Bilirubin:	INR:
HIT Antibodies <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable		MELD Score: (System Calculation)	
Five Meter Walk Test Done: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Non-ambulatory patient			
(If Yes →) Time 1: ____ (seconds) Time 2: ____ (seconds) Time 3: ____ (seconds)			
Did the patient have a laboratory confirmed diagnosis of Covid-19? <input type="checkbox"/> No (Harvest Code 10) <input type="checkbox"/> Yes, prior to hospitalization for this surgery (Harvest Code 11) <input type="checkbox"/> Yes, in hospital prior to surgery (Harvest Code 12) <input type="checkbox"/> Yes, in hospital after surgery (Harvest Code 13) <input type="checkbox"/> Yes, after discharge within 30 days of surgery (Harvest Code 14)			
Date of Positive Covid-19 Test (closest to OR date) ____/____/____ (mm/dd/yyyy)			

E. Previous Cardiac Interventions					
Previous Cardiac Interventions: ** <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown					
(If Yes →) Previous Coronary Artery Bypass (CAB): ** <input type="checkbox"/> Yes <input type="checkbox"/> No					
Previous Valve Procedure: ** <input type="checkbox"/> Yes <input type="checkbox"/> No (If PrValve Yes, Enter at least one previous valve procedure and up to 5 ↓)					
	#1**	#2**	#3**	#4**	#5**
No additional valve procedure(s)					

Aortic valve balloon valvotomy/valvuloplasty							
Aortic valve repair, surgical							
Aortic valve replacement, surgical							
Aortic valve replacement, transcatheter							
Mitral valve balloon valvotomy/valvuloplasty							
Mitral valve commissurotomy, surgical							
Mitral valve repair, percutaneous							
Mitral valve repair, surgical							
Mitral valve replacement, surgical							
Mitral valve replacement, transcatheter							
Tricuspid valve balloon valvotomy/valvuloplasty							
Tricuspid valve repair, percutaneous							
Tricuspid valve repair, surgical							
Tricuspid valve replacement, surgical							
Tricuspid valve replacement, transcatheter							
Tricuspid valvectomy							
Pulmonary valve balloon valvotomy/valvuloplasty							
Pulmonary valve repair, surgical							
Pulmonary valve replacement, surgical							
Pulmonary valve replacement, transcatheter							
Pulmonary valvectomy							
Other valve procedure							
Previous PCI: ** <input type="checkbox"/> Yes <input type="checkbox"/> No							
(If Yes →)	PCI Performed Within This Episode Of Care: ** <input type="checkbox"/> Yes, at this facility <input type="checkbox"/> Yes, at some other acute care facility <input type="checkbox"/> No (If Yes, at this facility or Yes, at some other acute care facility ↓)						
	Indication for Surgery: <input type="checkbox"/> PCI Complication <input type="checkbox"/> PCI Failure without Clinical Deterioration <input type="checkbox"/> PCI Failure with Clinical Deterioration <input type="checkbox"/> PCI/Surgery Staged (not STEMI) <input type="checkbox"/> PCI for STEMI, multivessel disease <input type="checkbox"/> Other						
	PCI Stent: <input type="checkbox"/> Yes <input type="checkbox"/> No PCI Interval: ** <input type="checkbox"/> ≤ 6 Hours <input type="checkbox"/> > 6 Hours						
Other Previous Cardiac Interventions: ** <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes, Enter at least one previous other cardiac procedure and up to 7 ↓)							
	#1**	#2**	#3**	#4**	#5**	#6**	#7**
No additional interventions							
Ablation, catheter, atrial arrhythmia							
Ablation, catheter, other or unknown							
Ablation, catheter, ventricular arrhythmia							
Ablation, surgical, atrial arrhythmia							
Ablation, surgical, other or unknown							
Aneurysmectomy, LV							
Aortic procedure, arch							
Aortic procedure, ascending							
Aortic procedure, descending							
Aortic procedure, root							
Aortic procedure, thoracoabdominal							
Aortic Procedure, TEVAR							
Aortic root procedure, valve sparing							
Atrial appendage obliteration, left, surgical							
Atrial appendage obliteration, left, transcatheter							
Cardiac Tumor							
Cardioversion(s)							
Closure device, atrial septal defect							
Closure device, ventricular septal defect							
Congenital cardiac repair, surgical							
ECMO							
Implantable Cardioverter Defibrillator (ICD) with or without pacemaker							
Myectomy (not congenital)							
Permanent Pacemaker							
Pericardial window/Pericardiocentesis							
Pericardiectomy							
Pulmonary Thromboembolectomy							
Total Artificial Heart (TAH)							
Transmyocardial Laser Revascularization (TMR)							
Transplant heart & lung							
Transplant, heart							
Transplant, lung(s)							
Ventricular Assist Device (VAD), BiVAD							
Ventricular Assist Device (VAD), left							

Ventricular Assist Device (VAD), right							
Other Cardiac Intervention (not listed)							

F. Preoperative Cardiac Status						
Prior Myocardial Infarction: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown (If Yes ↓)						
MI When: ** <input type="checkbox"/> ≤6 Hrs. <input type="checkbox"/> >6 Hrs. but <24 Hrs. <input type="checkbox"/> 1 to 7 Days <input type="checkbox"/> 8 to 21 Days <input type="checkbox"/> >21 Days						
Primary Coronary Symptom for Surgery: **	<input type="checkbox"/> No Coronary Symptoms		<input type="checkbox"/> Angina Equivalent			
	<input type="checkbox"/> Stable Angina		<input type="checkbox"/> Unstable Angina			
	<input type="checkbox"/> ST Elevation MI (STEMI)		<input type="checkbox"/> Non-ST Elevation MI (Non-STEMI)			
	<input type="checkbox"/> Other					
Heart Failure: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown (If Yes →)			Timing: ** <input type="checkbox"/> Acute <input type="checkbox"/> Chronic <input type="checkbox"/> Both		Type: <input type="checkbox"/> Systolic <input type="checkbox"/> Diastolic <input type="checkbox"/> Both <input type="checkbox"/> Unavailable	
Classification-NYHA: ** <input type="checkbox"/> Class I <input type="checkbox"/> Class II <input type="checkbox"/> Class III <input type="checkbox"/> Class IV <input type="checkbox"/> Not Documented						
Cardiogenic Shock: ** <input type="checkbox"/> Yes, at the time of the procedure <input type="checkbox"/> Yes, not at the time of the procedure but within prior 24 hours <input type="checkbox"/> No						
Resuscitation: ** <input type="checkbox"/> Yes - Within 1 hour of the start of the procedure <input type="checkbox"/> Yes - More than 1 hour but less than 24 hours of the start of the procedure <input type="checkbox"/> No						
Cardiac Arrhythmia: <input type="checkbox"/> Yes <input type="checkbox"/> No						
(If Arrhythmia = Yes →) Permanently Paced Rhythm: <input type="checkbox"/> Yes <input type="checkbox"/> No						
(If Arrhythmia = Yes, choose one response below for each rhythm →)	VTach/VFib **	Sick Sinus Syndrome **	AFlutter **	AFibrillation **	Second Degree Heart Block **	Third Degree Heart Block **
	None					
	Remote (> 30 days preop)					
	Recent (≤ 30 days preop)					
(If AFibrillation is not None →)						
Atrial Fibrillation Type: <input type="checkbox"/> Paroxysmal <input type="checkbox"/> Persistent **						
(If AFibrillation = Recent →) Was patient in A-fib at OR Entry? <input type="checkbox"/> Yes <input type="checkbox"/> No						

G. Preoperative Medications						
Medication		Timeframe	Administration			
ACE or ARB **		Within 48 hours	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Contraindicated <input type="checkbox"/> Unknown			
Amiodarone		Prior to surgery	<input type="checkbox"/> Yes, on home therapy <input type="checkbox"/> Yes, therapy started this admission <input type="checkbox"/> No <input type="checkbox"/> Unknown			
Antianginal	Beta Blocker ++	Within 24 hours	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Contraindicated			
	Beta Blocker	On therapy for ≥ 2 weeks prior to surgery	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Contraindicated <input type="checkbox"/> Unknown			
	Calcium Channel Blocker	On therapy for ≥ 2 weeks prior to surgery	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Contraindicated <input type="checkbox"/> Unknown			
	Long-acting Nitrate	On therapy for ≥ 2 weeks prior to surgery	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Contraindicated <input type="checkbox"/> Unknown			
	Nitrates, intravenous	Within 24 hours	<input type="checkbox"/> Yes <input type="checkbox"/> No			
	Other Antianginal	On therapy for ≥ 2 weeks prior to surgery	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Contraindicated <input type="checkbox"/> Unknown			
Antiplatelet	ADP Inhibitor ** (includes P2Y12)	Within 5 days	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Contraindicated <input type="checkbox"/> Unknown			
	Aspirin	Within 5 days	(If Yes →) ADP Inhibitors Discontinuation: ** _____ (# days prior to surgery)			
			(If Yes →) Aspirin Discontinuation: _____ (# days prior to surgery)			
			Aspirin one time dose: <input type="checkbox"/> Yes <input type="checkbox"/> No			
Glycoprotein IIb/IIIa **	Within 24 hours	<input type="checkbox"/> Yes <input type="checkbox"/> No				
Anticoagulant	Anticoagulants (Intravenous/ SubQ)	Within 48 hours	<input type="checkbox"/> Yes <input type="checkbox"/> No			
	Warfarin (Coumadin)	Within 5 days	(If Yes →) <input type="checkbox"/> Heparin (Unfractionated) <input type="checkbox"/> Heparin (Low Molecular) <input type="checkbox"/> Both <input type="checkbox"/> Other			
			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown			
			(If Yes →) Coumadin Discontinuation: _____ (# days prior to surgery)			
Direct Oral Anticoagulant (DOAC)	Within 5 days	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown				
			(If Yes →) DOAC Discontinuation: _____ (# days prior to surgery)			

	Thrombolytics	Within 24 hours	<input type="checkbox"/> Yes <input type="checkbox"/> No
Inotropic, Intravenous **		Within 48 hours	<input type="checkbox"/> Yes <input type="checkbox"/> No
Lipid Lowering		Within 24 hours	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Contraindicated <input type="checkbox"/> Unknown
			(If Yes →) Medication Type : <input type="checkbox"/> Statin <input type="checkbox"/> Statin + Other <input type="checkbox"/> Non-statin/Other
Steroids **		Within 24 hours	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Contraindicated <input type="checkbox"/> Unknown

H. Hemodynamics/Cath/Echo

Cardiac Catheterization Performed : Yes No (If Yes →) Cardiac Catheterization Date: ___/___/_____

Coronary Anatomy/Disease known: Yes No (If Yes ↓)

Number Diseased Vessels ** (If one, two or three vessel disease ↓)	<input type="checkbox"/> None <input type="checkbox"/> One <input type="checkbox"/> Two <input type="checkbox"/> Three		
** Left Main stenosis ≥ 50% known <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
(If Yes →)	Is location of stenosis known: <input type="checkbox"/> Yes <input type="checkbox"/> No		
	(If Yes select all that apply →)	<input type="checkbox"/> Native Artery Stenosis <input type="checkbox"/> Stenotic Graft <input type="checkbox"/> Stenotic Stent	
** LAD distribution stenosis ≥ 50% known <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
(If Yes →)	<input type="checkbox"/> 50-69% <input type="checkbox"/> ≥ 70%		
	Is location of stenosis known: <input type="checkbox"/> Yes <input type="checkbox"/> No		
	(If Yes select all that apply →)	<input type="checkbox"/> Native Artery Stenosis <input type="checkbox"/> Stenotic Graft <input type="checkbox"/> Stenotic Stent	
Ramus stenosis ≥ 50% known <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
(If Yes →)	<input type="checkbox"/> 50-69% <input type="checkbox"/> ≥ 70%		
	Is location of stenosis known: <input type="checkbox"/> Yes <input type="checkbox"/> No		
	(If Yes select all that apply →)	<input type="checkbox"/> Native Artery Stenosis <input type="checkbox"/> Stenotic Graft <input type="checkbox"/> Stenotic Stent	
Circumflex distribution stenosis ≥ 50% known <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
(If Yes →)	<input type="checkbox"/> 50-69% <input type="checkbox"/> ≥ 70%		
	Is location of stenosis known: <input type="checkbox"/> Yes <input type="checkbox"/> No		
	(If Yes select all that apply →)	<input type="checkbox"/> Native Artery Stenosis <input type="checkbox"/> Stenotic Graft <input type="checkbox"/> Stenotic Stent	
RCA distribution stenosis ≥ 50% known <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
(If Yes →)	<input type="checkbox"/> 50-69% <input type="checkbox"/> ≥ 70%		
	Is location of stenosis known: <input type="checkbox"/> Yes <input type="checkbox"/> No		
	(If Yes select all that apply →)	<input type="checkbox"/> Native Artery Stenosis <input type="checkbox"/> Stenotic Graft <input type="checkbox"/> Stenotic Stent	

Ejection Fraction Done: Yes No (If Yes →) Ejection Fraction: ** _____ (%)

Dimensions Available: Yes No (If Yes →) LV End-Systolic Dimension: _____ (mm) LV End-Diastolic Dimension: _____ (mm)

PA Systolic Pressure Measured: Yes No (If Yes →) PA Systolic Pressure: _____ mmHg

Aortic Valve

Aortic Valve Regurgitation: Yes No

(If Yes →) **Aortic Valve Regurgitation:** ** Trivial/Trace Mild Moderate Severe Not Documented

Aortic Valve Stenosis: ** Yes No

(If Yes →) **Aortic Valve Stenosis:** Mild Moderate Severe Not Documented

(If Yes →)	Hemodynamic/Echo Data Available: <input type="checkbox"/> Yes <input type="checkbox"/> No
(If Yes →)	Aortic Valve Area: _____ cm ²
	Mean Gradient: _____ mmHg
	Aortic Jet Velocity (V _{max}): _____ m/s

Aortic Valve Disease: Yes No

(If Aortic Valve Disease, Yes →) **AV Disease Etiology:** ** Choose PRIMARY Etiology (one)

<input type="checkbox"/> Bicuspid valve disease	<input type="checkbox"/> Primary Aortic Disease, Atherosclerotic Aneurysm
<input type="checkbox"/> Unicuspid valve disease	<input type="checkbox"/> Primary Aortic Disease, Ehlers-Danlos Syndrome
<input type="checkbox"/> Quadricuspid valve disease	<input type="checkbox"/> Primary Aortic Disease, Hypertensive Aneurysm
<input type="checkbox"/> Congenital (other than Bicuspid, Unicuspid, or Quadricuspid)	<input type="checkbox"/> Primary Aortic Disease, Idiopathic Root Dilatation
<input type="checkbox"/> Degenerative- Calcified	<input type="checkbox"/> Primary Aortic Disease, Inflammatory
<input type="checkbox"/> Degenerative- Leaflet prolapse with or without annular dilation	<input type="checkbox"/> Primary Aortic Disease, Loeys-Dietz Syndrome
<input type="checkbox"/> Degenerative- Pure annular dilatation without leaflet prolapse	<input type="checkbox"/> Primary Aortic Disease, Marfan Syndrome
<input type="checkbox"/> Degenerative- Commissural rupture	<input type="checkbox"/> Primary Aortic Disease, Other Connective tissue disorder
<input type="checkbox"/> Degenerative- Extensive fenestration	<input checked="" type="checkbox"/> Radiation induced heart disease
<input type="checkbox"/> Degenerative- Leaflet perforation/hole	<input type="checkbox"/> Reoperation-Failure of previous AV repair or replacement
<input type="checkbox"/> Endocarditis, native valve with root abscess	<input type="checkbox"/> Rheumatic
<input type="checkbox"/> Endocarditis, native valve without root abscess	<input type="checkbox"/> Supravalvular Aortic Stenosis
<input checked="" type="checkbox"/> Endocarditis, prosthetic valve with root abscess	<input type="checkbox"/> Trauma
<input checked="" type="checkbox"/> Endocarditis, prosthetic valve without root abscess	<input type="checkbox"/> Carcinoid
<input type="checkbox"/> LV Outflow Tract Pathology, HOCM	<input type="checkbox"/> Tumor, Myxoma
<input type="checkbox"/> LV Outflow Tract Pathology, Sub-aortic membrane	<input type="checkbox"/> Tumor, Papillary Fibroelastoma
<input type="checkbox"/> LV Outflow Tract Pathology, Sub-aortic tunnel	<input type="checkbox"/> Tumor, Other
<input type="checkbox"/> LV Outflow Tract Pathology, Other	<input type="checkbox"/> Mixed Etiology
<input type="checkbox"/> Primary Aortic Disease, Aortic Dissection	<input type="checkbox"/> Not Documented

Mitral Valve

Mitral Valve Regurgitation: Yes No

(If Yes →) **Mitral Regurgitation:** ** Trivial/Trace Mild Moderate Severe Not Documented

Mitral Valve Stenosis: ** Yes No

(If Yes →) **Mitral Valve Stenosis:** Mild Moderate Severe Not Documented

Hemodynamic/ Echo data available: Yes No

(If Yes →) Valve Area: _____ cm²
Mean Gradient: _____ mmHg

Mitral Valve Disease: Yes No

Choose PRIMARY Lesion (one): (If Mitral Valve Disease, Yes ↓)

<input type="checkbox"/> Class I – Normal Leaflet Mobility (If Class I →)	<input type="checkbox"/> Pure Annular Dilatation <input type="checkbox"/> Endocarditis, Native Valve <input type="checkbox"/> Other/ Unknown/Not Available
<input type="checkbox"/> Class II – Increased Leaflet Mobility (If Class II →)	<input type="checkbox"/> Myxomatous degenerative prolapse/flail <input type="checkbox"/> Endocarditis <input type="checkbox"/> Other/Unknown/Not Available <input type="checkbox"/> (If Myxomatous →) <input type="checkbox"/> Posterior Leaflet <input type="checkbox"/> Anterior Leaflet <input type="checkbox"/> Both
<input type="checkbox"/> Class III A– Restricted Leaflet Mobility (systole and diastole) (If Class III A →)	<input type="checkbox"/> Rheumatic <input type="checkbox"/> Tumor (Carcinoid or Other) <input type="checkbox"/> Radiation Induced Heart Disease <input type="checkbox"/> MAC <input type="checkbox"/> Congenital <input type="checkbox"/> Other/Unknown/Not Available
<input type="checkbox"/> Class III B – Restricted Leaflet Mobility (systole only) (If Class III B →)	<input type="checkbox"/> Ischemic (acute/chronic) <input type="checkbox"/> Non-ischemic Cardiomyopathy <input type="checkbox"/> HCM <input type="checkbox"/> Other/Unknown/Not Available
<input type="checkbox"/> Mixed Lesion (Type II and Type IIIA) (If Mixed Lesion →)	<input type="checkbox"/> Mixed leaflet lesion (prolapse/flail and restriction) <input type="checkbox"/> Congenital <input type="checkbox"/> MAC <input type="checkbox"/> Other/Unknown/Not Available
<input type="checkbox"/> Acute Papillary muscle rupture	
<input type="checkbox"/> Reoperative-Failure of previous MV repair or replacement	
<input type="checkbox"/> Other/Unknown/Not Available	

Tricuspid Valve

Tricuspid Valve Regurgitation: Yes No

(If Yes →) **Tricuspid Regurgitation:** ** Trivial/Trace Mild Moderate Severe Not Documented

Tricuspid Valve Stenosis: Yes No

(If Yes →) **Tricuspid Valve Stenosis:** Mild Moderate Severe Not Documented

Tricuspid Valve Disease: Yes No

(If Tricuspid Disease, Yes →) **Tricuspid Annular Echo Measurement Available:** Yes No (If Yes →) **Tricuspid Diameter:** _____ cm

(If Tricuspid Disease, Yes ↓) **TV Etiology:** Choose ONE PRIMARY Etiology:

<input type="checkbox"/> Functional/ secondary	<input type="checkbox"/> Rheumatic
<input type="checkbox"/> Endocarditis, Native Valve	<input type="checkbox"/> Tumor
<input type="checkbox"/> Endocarditis, Prosthetic Valve	<input type="checkbox"/> Radiation induced heart disease
<input type="checkbox"/> Carcinoid	<input type="checkbox"/> Trauma

<input type="checkbox"/>	Congenital	<input type="checkbox"/>	Reoperation-Failure of previous TV repair or replacement
<input type="checkbox"/>	Degenerative	<input type="checkbox"/>	Mixed etiology
<input type="checkbox"/>	Pacing wire/catheter induced dysfunction	<input type="checkbox"/>	Not Documented
Pulmonic Valve			
Pulmonic Valve Regurgitation: <input type="checkbox"/> Yes <input type="checkbox"/> No			
(If Yes→)	Pulmonic Valve Regurgitation: <input type="checkbox"/> Trivial/Trace <input type="checkbox"/> Mild <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Not Documented		
Pulmonic Valve Stenosis: <input type="checkbox"/> Yes <input type="checkbox"/> No			
(If Yes→)	Pulmonic Valve Stenosis: <input type="checkbox"/> Mild <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Not Documented		
	Hemodynamic /Echo data available: <input type="checkbox"/> Yes <input type="checkbox"/> No		
	(If Yes→)	Mean Gradient : _____ mmHg	
Pulmonic Valve Disease: <input type="checkbox"/> Yes <input type="checkbox"/> No			
(If Pulmonic Valve Disease, Yes→)		Etiology: (choose one)	
<input type="checkbox"/>	Acquired	<input type="checkbox"/>	Endocarditis
<input type="checkbox"/>	Radiation induced heart disease	<input type="checkbox"/>	Endocarditis, Prosthetic valve
<input type="checkbox"/>	Congenital, s/p Tetralogy of Fallot (TOF) repair	<input type="checkbox"/>	Mixed etiology
<input type="checkbox"/>	Congenital, no prior Tetralogy of Fallot (TOF) repair	<input checked="" type="checkbox"/>	Other
<input type="checkbox"/>	Reoperation-Failure of previous PV repair or replacement	<input type="checkbox"/>	Not Documented

I. Operative																															
Surgeon: _____	Surgeon NPI: _____																														
Taxpayer Identification Number: _____																															
Indicate whether the STS Risk Calculator score was discussed with the patient/family prior to surgery. ++																															
<input type="checkbox"/> Yes, STS risk calculator score was calculated and discussed with the patient/family prior to surgery as documented in the medical record <input type="checkbox"/> No, STS risk calculator score was available for scheduled procedure but not discussed with the patient/family prior to surgery or the discussion was not documented <input type="checkbox"/> NA, Not applicable (emergent or salvage case, or no risk model available for this procedure)																															
Incidence: **	<input type="checkbox"/> First cardiovascular surgery <input type="checkbox"/> First re-op cardiovascular surgery <input type="checkbox"/> Second re-op cardiovascular surgery <input type="checkbox"/> Third re-op cardiovascular surgery <input type="checkbox"/> Fourth or more re-op cardiovascular surgery <input type="checkbox"/> NA- not a cardiovascular surgery																														
Status: **	<input type="checkbox"/> Elective <input type="checkbox"/> Urgent <input type="checkbox"/> Emergent <input type="checkbox"/> Emergent Salvage (If Urgent or Emergent or Emergent Salvage choose the most pressing reason↓) Urgent / Emergent/ Emergent Salvage reason: <table border="0" style="width: 100%;"> <tr> <td><input type="checkbox"/> AMI</td> <td><input type="checkbox"/> PCI Incomplete without clinical deterioration</td> </tr> <tr> <td><input type="checkbox"/> Anatomy</td> <td><input type="checkbox"/> PCI or attempted PCI with clinical deterioration</td> </tr> <tr> <td><input type="checkbox"/> Aortic Aneurysm</td> <td><input type="checkbox"/> Pulmonary Edema</td> </tr> <tr> <td><input type="checkbox"/> Aortic Dissection</td> <td><input type="checkbox"/> Pulmonary Embolus</td> </tr> <tr> <td><input type="checkbox"/> CHF</td> <td><input type="checkbox"/> Rest Angina</td> </tr> <tr> <td><input type="checkbox"/> Device Failure</td> <td><input type="checkbox"/> Shock, Circulatory Support</td> </tr> <tr> <td><input type="checkbox"/> Diagnostic/Interventional Procedure Complication</td> <td><input type="checkbox"/> Shock, No Circulatory Support</td> </tr> <tr> <td><input type="checkbox"/> Endocarditis</td> <td><input type="checkbox"/> Syncope</td> </tr> <tr> <td><input type="checkbox"/> Failed Transcatheter Valve Therapy , acute annular disruption</td> <td><input type="checkbox"/> Transplant</td> </tr> <tr> <td><input type="checkbox"/> Failed Transcatheter Valve Therapy , acute device malposition</td> <td><input type="checkbox"/> Trauma</td> </tr> <tr> <td><input type="checkbox"/> Failed Transcatheter Valve Therapy , subacute device dysfunction</td> <td><input type="checkbox"/> USA</td> </tr> <tr> <td><input type="checkbox"/> IABP</td> <td><input type="checkbox"/> Valve Dysfunction</td> </tr> <tr> <td><input type="checkbox"/> Infected Device</td> <td><input type="checkbox"/> Worsening CP</td> </tr> <tr> <td><input type="checkbox"/> Intracardiac mass or thrombus</td> <td><input type="checkbox"/> Other</td> </tr> <tr> <td><input type="checkbox"/> Ongoing Ischemia</td> <td></td> </tr> </table>	<input type="checkbox"/> AMI	<input type="checkbox"/> PCI Incomplete without clinical deterioration	<input type="checkbox"/> Anatomy	<input type="checkbox"/> PCI or attempted PCI with clinical deterioration	<input type="checkbox"/> Aortic Aneurysm	<input type="checkbox"/> Pulmonary Edema	<input type="checkbox"/> Aortic Dissection	<input type="checkbox"/> Pulmonary Embolus	<input type="checkbox"/> CHF	<input type="checkbox"/> Rest Angina	<input type="checkbox"/> Device Failure	<input type="checkbox"/> Shock, Circulatory Support	<input type="checkbox"/> Diagnostic/Interventional Procedure Complication	<input type="checkbox"/> Shock, No Circulatory Support	<input type="checkbox"/> Endocarditis	<input type="checkbox"/> Syncope	<input type="checkbox"/> Failed Transcatheter Valve Therapy , acute annular disruption	<input type="checkbox"/> Transplant	<input type="checkbox"/> Failed Transcatheter Valve Therapy , acute device malposition	<input type="checkbox"/> Trauma	<input type="checkbox"/> Failed Transcatheter Valve Therapy , subacute device dysfunction	<input type="checkbox"/> USA	<input type="checkbox"/> IABP	<input type="checkbox"/> Valve Dysfunction	<input type="checkbox"/> Infected Device	<input type="checkbox"/> Worsening CP	<input type="checkbox"/> Intracardiac mass or thrombus	<input type="checkbox"/> Other	<input type="checkbox"/> Ongoing Ischemia	
<input type="checkbox"/> AMI	<input type="checkbox"/> PCI Incomplete without clinical deterioration																														
<input type="checkbox"/> Anatomy	<input type="checkbox"/> PCI or attempted PCI with clinical deterioration																														
<input type="checkbox"/> Aortic Aneurysm	<input type="checkbox"/> Pulmonary Edema																														
<input type="checkbox"/> Aortic Dissection	<input type="checkbox"/> Pulmonary Embolus																														
<input type="checkbox"/> CHF	<input type="checkbox"/> Rest Angina																														
<input type="checkbox"/> Device Failure	<input type="checkbox"/> Shock, Circulatory Support																														
<input type="checkbox"/> Diagnostic/Interventional Procedure Complication	<input type="checkbox"/> Shock, No Circulatory Support																														
<input type="checkbox"/> Endocarditis	<input type="checkbox"/> Syncope																														
<input type="checkbox"/> Failed Transcatheter Valve Therapy , acute annular disruption	<input type="checkbox"/> Transplant																														
<input type="checkbox"/> Failed Transcatheter Valve Therapy , acute device malposition	<input type="checkbox"/> Trauma																														
<input type="checkbox"/> Failed Transcatheter Valve Therapy , subacute device dysfunction	<input type="checkbox"/> USA																														
<input type="checkbox"/> IABP	<input type="checkbox"/> Valve Dysfunction																														
<input type="checkbox"/> Infected Device	<input type="checkbox"/> Worsening CP																														
<input type="checkbox"/> Intracardiac mass or thrombus	<input type="checkbox"/> Other																														
<input type="checkbox"/> Ongoing Ischemia																															
Initial Operative Approach:	<input type="checkbox"/> Full conventional sternotomy <input type="checkbox"/> Partial sternotomy <input type="checkbox"/> Sub-xiphoid <input checked="" type="checkbox"/> Thoracotomy <input type="checkbox"/> Thoracoabdominal Incision <input type="checkbox"/> Percutaneous <input type="checkbox"/> Port Access <input type="checkbox"/> Other																														
Approach converted during procedure: <input type="checkbox"/> Yes <input type="checkbox"/> No																															
Robot Used: <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes →) <input type="checkbox"/> Used for entire operation <input type="checkbox"/> Used for part of the operation																															
Coronary Artery Bypass Procedure Performed:	<input type="checkbox"/> Yes, planned <input type="checkbox"/> Yes, unplanned due to surgical complication <input type="checkbox"/> Yes, unplanned due to unsuspected disease or anatomy <input type="checkbox"/> No (If Yes complete Section J)																														
Aorta Procedure Performed:	<input type="checkbox"/> Yes, planned																														

	<input type="checkbox"/> Yes, unplanned due to surgical complication <input type="checkbox"/> Yes, unplanned due to unsuspected disease or anatomy <input type="checkbox"/> No (If Yes complete Section M 2) (If Aorta Procedure performed →) Did the surgeon provide input for aortic surgery data abstraction? <input type="checkbox"/> Yes <input type="checkbox"/> No															
Valve Procedure Performed:	<input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes →) <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;"></td> <td>Was a valve explanted: <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes complete Section K)</td> </tr> <tr> <td>Aortic Valve Procedure performed:</td> <td> <input type="checkbox"/> Yes, planned <input type="checkbox"/> Yes, unplanned due to surgical complication <input type="checkbox"/> Yes, unplanned due to unsuspected disease or anatomy <input type="checkbox"/> No </td> </tr> <tr> <td></td> <td>(If Yes →) Was a procedure performed on the Aorta? <input type="checkbox"/> Yes <input type="checkbox"/> No (If 'Yes' complete M2; If 'No' complete K1)</td> </tr> <tr> <td>Mitral Valve Procedure performed:</td> <td> <input type="checkbox"/> Yes, planned <input type="checkbox"/> Yes, unplanned due to surgical complication <input type="checkbox"/> Yes, unplanned due to unsuspected disease or anatomy <input type="checkbox"/> No (If Yes complete K2) </td> </tr> <tr> <td>Tricuspid Valve Procedure performed:</td> <td> <input type="checkbox"/> Yes, planned <input type="checkbox"/> Yes, unplanned due to surgical complication <input type="checkbox"/> Yes, unplanned due to unsuspected disease or anatomy <input type="checkbox"/> No (If Yes complete K3) </td> </tr> <tr> <td>Pulmonic Valve Procedure performed:</td> <td> <input type="checkbox"/> Yes, planned <input type="checkbox"/> Yes, unplanned due to surgical complication <input type="checkbox"/> Yes, unplanned due to unsuspected disease or anatomy <input type="checkbox"/> No (If 'Yes' complete K4) </td> </tr> <tr> <td></td> <td>Did the surgeon provide input for valve surgery data abstraction? <input type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> </table>			Was a valve explanted: <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes complete Section K)	Aortic Valve Procedure performed:	<input type="checkbox"/> Yes, planned <input type="checkbox"/> Yes, unplanned due to surgical complication <input type="checkbox"/> Yes, unplanned due to unsuspected disease or anatomy <input type="checkbox"/> No		(If Yes →) Was a procedure performed on the Aorta? <input type="checkbox"/> Yes <input type="checkbox"/> No (If 'Yes' complete M2; If 'No' complete K1)	Mitral Valve Procedure performed:	<input type="checkbox"/> Yes, planned <input type="checkbox"/> Yes, unplanned due to surgical complication <input type="checkbox"/> Yes, unplanned due to unsuspected disease or anatomy <input type="checkbox"/> No (If Yes complete K2)	Tricuspid Valve Procedure performed:	<input type="checkbox"/> Yes, planned <input type="checkbox"/> Yes, unplanned due to surgical complication <input type="checkbox"/> Yes, unplanned due to unsuspected disease or anatomy <input type="checkbox"/> No (If Yes complete K3)	Pulmonic Valve Procedure performed:	<input type="checkbox"/> Yes, planned <input type="checkbox"/> Yes, unplanned due to surgical complication <input type="checkbox"/> Yes, unplanned due to unsuspected disease or anatomy <input type="checkbox"/> No (If 'Yes' complete K4)		Did the surgeon provide input for valve surgery data abstraction? <input type="checkbox"/> Yes <input type="checkbox"/> No
	Was a valve explanted: <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes complete Section K)															
Aortic Valve Procedure performed:	<input type="checkbox"/> Yes, planned <input type="checkbox"/> Yes, unplanned due to surgical complication <input type="checkbox"/> Yes, unplanned due to unsuspected disease or anatomy <input type="checkbox"/> No															
	(If Yes →) Was a procedure performed on the Aorta? <input type="checkbox"/> Yes <input type="checkbox"/> No (If 'Yes' complete M2; If 'No' complete K1)															
Mitral Valve Procedure performed:	<input type="checkbox"/> Yes, planned <input type="checkbox"/> Yes, unplanned due to surgical complication <input type="checkbox"/> Yes, unplanned due to unsuspected disease or anatomy <input type="checkbox"/> No (If Yes complete K2)															
Tricuspid Valve Procedure performed:	<input type="checkbox"/> Yes, planned <input type="checkbox"/> Yes, unplanned due to surgical complication <input type="checkbox"/> Yes, unplanned due to unsuspected disease or anatomy <input type="checkbox"/> No (If Yes complete K3)															
Pulmonic Valve Procedure performed:	<input type="checkbox"/> Yes, planned <input type="checkbox"/> Yes, unplanned due to surgical complication <input type="checkbox"/> Yes, unplanned due to unsuspected disease or anatomy <input type="checkbox"/> No (If 'Yes' complete K4)															
	Did the surgeon provide input for valve surgery data abstraction? <input type="checkbox"/> Yes <input type="checkbox"/> No															
Mechanical Assist Device/Ventricular Assist Device: <input type="checkbox"/> Yes <input type="checkbox"/> No (If 'Yes' complete section L) (Present on Admission/Implanted/Explanted)																
Other Cardiac Procedure, except Afib: <input type="checkbox"/> Yes, planned <input type="checkbox"/> Yes, unplanned due to surgical complication <input type="checkbox"/> Yes, unplanned due to unsuspected disease or anatomy <input type="checkbox"/> No (If Yes, Complete Section M)																
Afib Procedure : <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes, Complete Section M 1) (If Yes →) Did the surgeon provide input for Afib data abstraction? <input type="checkbox"/> Yes <input type="checkbox"/> No																
Other Cardiac Procedure, Congenital Procedure (Except Unicuspid , Bicuspid, Quadricuspid Valve): <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes, Complete Section M 3)																
Other Non-Cardiac Procedure: <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes, Complete Section N)																
Enter up to 10 CPT-1 Codes pertaining to the surgery for which the data collection form was initiated:																
1. _____	2. _____	3. _____	4. _____	5. _____												
6. _____	7. _____	8. _____	9. _____	10. _____												
OR Entry Date And Time: ____/____/____ : ____ (mm/dd/yyyy hh:mm - 24 hr clock)																
OR Exit Date And Time: ++ ____/____/____ : ____ (mm/dd/yyyy hh:mm - 24 hr clock)																
General Anesthesia: <input type="checkbox"/> Yes <input type="checkbox"/> No (If General Anesthesia No →)		Procedural Sedation : <input type="checkbox"/> Yes <input type="checkbox"/> No														
(If General Anesthesia Yes →)		Intubation: <input type="checkbox"/> Yes, prior to entering OR for this procedure <input type="checkbox"/> Yes, in OR for this procedure <input type="checkbox"/> No														
Skin Incision Start Date and Time: ____/____/____ : ____ (mm/dd/yyyy hh:mm - 24 hr clock)																
Skin Incision Stop Date and Time: ____/____/____ : ____ (mm/dd/yyyy hh:mm - 24 hr clock)																
Appropriate Antibiotic Selection: ++ <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Exclusion		Appropriate Antibiotic Administration Timing: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Exclusion	Appropriate Antibiotic Discontinuation: ++ <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Exclusion													
Temperature Measured: <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes →) Lowest Temperature (°C): _____ Temperature Source:																
<input type="checkbox"/> Esophageal <input type="checkbox"/> CBP venous return <input type="checkbox"/> Bladder <input type="checkbox"/> Nasopharyngeal <input type="checkbox"/> Tympanic <input type="checkbox"/> Rectal <input type="checkbox"/> Jugular-Venous <input type="checkbox"/> Oxygenator arterial outlet blood (CBP Arterial blood) <input type="checkbox"/> Pulmonary Artery <input type="checkbox"/> Other <input type="checkbox"/> Unknown																
Lowest Intra-op Hemoglobin : _____		Lowest Intra-op Hematocrit : _____		Highest Intra-op Glucose: _____												
Perfusion Strategy <input type="checkbox"/> None <input type="checkbox"/> Left Heart Bypass																

<input type="checkbox"/> Combination	(If Combination→) Combination Plan: <input type="checkbox"/> Planned <input type="checkbox"/> Unplanned (If Unplanned↓) Unplanned Reason: <input type="checkbox"/> Exposure/visualization <input type="checkbox"/> Bleeding <input type="checkbox"/> Inadequate size/ diffuse disease of distal vessel <input type="checkbox"/> Hemodynamic instability (hypotension/arrhythmias) <input type="checkbox"/> Conduit quality and/or trauma <input type="checkbox"/> Other
<input type="checkbox"/> Full	(If Left Heart Bypass , Combination or Full ↓) Arterial Cannulation Insertion Site: (Select all that apply ↓) <input type="checkbox"/> Aortic <input type="checkbox"/> Axillary <input type="checkbox"/> Femoral <input type="checkbox"/> Innominate <input type="checkbox"/> Other Venous Cannulation Insertion Site: (Select all that apply ↓) <input type="checkbox"/> Femoral <input type="checkbox"/> Pulmonary Vein <input type="checkbox"/> Jugular <input checked="" type="checkbox"/> SVC <input type="checkbox"/> Rt. Atrial <input type="checkbox"/> Lt. Atrial <input type="checkbox"/> Other Cardiopulmonary Bypass Time (minutes): _____

Circulatory Arrest: Yes No

(If Circulatory Arrest = Yes→)	Lowest Hematocrit during CPB: _____ Circulatory Arrest Without Cerebral Perfusion Time: _____ (min) Circulatory Arrest With Cerebral Perfusion: <input type="checkbox"/> Yes <input type="checkbox"/> No (If Circ Arrest w/ Cerebral Perfusion = Yes →) Cerebral Perfusion Time: _____ (min) Cerebral Perfusion Type: <input type="checkbox"/> Antegrade <input type="checkbox"/> Retrograde <input type="checkbox"/> Both antegrade and retrograde Total Circulatory Arrest Time: _____ (System Calculation) Cooling Time prior to Circ Arrest: _____ mins
--------------------------------	---

Aortic Occlusion: <input type="checkbox"/> None – beating heart <input type="checkbox"/> Aortic Cross clamp <input type="checkbox"/> None – fibrillating heart <input type="checkbox"/> Balloon Occlusion	(If Aortic cross clamp or Balloon occlusion →): Cross Clamp Time: _____ (min)
--	---

Cardioplegia Delivery: <input type="checkbox"/> None <input type="checkbox"/> Antegrade <input type="checkbox"/> Retrograde <input type="checkbox"/> Both	(If Antegrade, Retrograde or Both→) Type of Cardioplegia used: <input type="checkbox"/> Blood <input type="checkbox"/> Crystalloid <input type="checkbox"/> Both <input type="checkbox"/> Other
---	---

Cerebral Oximetry Used: Yes No

Intraop Blood Products: Yes No, **Not Given** Patient Refused

(If Yes →)	Red Blood Cell Units: _____	Platelet Dose Pack: _____
	Fresh Frozen Plasma/ Plasma Units: _____	Cryoprecipitate Units: _____

Intraop Clotting Factors : Yes, Factor VIIa Yes, Factor VIII Yes, FEIBA Yes, Composite No

Intraop Prothrombin Complex concentrate: Yes No

Was intraop Antifibrinolytic Medication given: Yes No

(If Yes →)	Intraop Antifibrinolytic Medication (select all that apply): <input type="checkbox"/> Epsilon Amino-Caproic Acid <input type="checkbox"/> Tranexamic Acid <input checked="" type="checkbox"/> Aprotinin
------------	--

Intraoperative TEE Performed post procedure: Yes No (If Yes ↓)

Highest level aortic insufficiency found: <input type="checkbox"/> None <input type="checkbox"/> Trivial/Trace <input type="checkbox"/> Mild <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Not Documented
Mean Aortic Gradient: _____
Aortic Paravalvular leak: <input checked="" type="checkbox"/> No Prosthetic Valve <input type="checkbox"/> None <input type="checkbox"/> Trivial/Trace <input type="checkbox"/> Mild <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Not Documented
Highest level Mitral insufficiency found: <input type="checkbox"/> None <input type="checkbox"/> Trivial/Trace <input type="checkbox"/> Mild <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Not Documented
Mean Mitral Gradient: _____
Mitral Paravalvular leak: <input checked="" type="checkbox"/> No Prosthetic Valve <input type="checkbox"/> None <input type="checkbox"/> Trivial/Trace <input type="checkbox"/> Mild <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Not Documented
Highest level Tricuspid insufficiency found: <input type="checkbox"/> None <input type="checkbox"/> Trivial/Trace <input type="checkbox"/> Mild <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Not Documented
Mean Tricuspid Gradient: _____
Tricuspid Paravalvular leak: <input checked="" type="checkbox"/> No Prosthetic Valve <input type="checkbox"/> None <input type="checkbox"/> Trivial/Trace <input type="checkbox"/> Mild <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Not Documented
Ejection Fraction Measured post procedure: <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes →) Ejection Fraction: _____

Surgery followed by a planned PCI: Yes No

J. Coronary Bypass
(If Coronary Artery Bypass = Yes ↓)

Internal Mammary Artery (arteries) used: ++ Yes No

(If Yes→)	Left IMA: <input type="checkbox"/> Yes, pedicle <input type="checkbox"/> Yes, skeletonized <input type="checkbox"/> No/NA									
(If Yes→)	Right IMA: <input type="checkbox"/> Yes, pedicle <input type="checkbox"/> Yes, skeletonized <input type="checkbox"/> No/NA									
(If No→)	Reason for no IMA: <table border="0"> <tr> <td><input type="checkbox"/> Subclavian stenosis</td> <td><input type="checkbox"/> Previous mediastinal radiation</td> <td><input type="checkbox"/> No (bypassable) LAD disease</td> </tr> <tr> <td><input type="checkbox"/> Previous cardiac or thoracic surgery</td> <td><input type="checkbox"/> Emergent or salvage procedure</td> <td><input type="checkbox"/> Other- acceptable STS provided exclusion (See Training Manual)</td> </tr> <tr> <td></td> <td></td> <td><input type="checkbox"/> Other not acceptable STS exclusion (See Training Manual)</td> </tr> </table>	<input type="checkbox"/> Subclavian stenosis	<input type="checkbox"/> Previous mediastinal radiation	<input type="checkbox"/> No (bypassable) LAD disease	<input type="checkbox"/> Previous cardiac or thoracic surgery	<input type="checkbox"/> Emergent or salvage procedure	<input type="checkbox"/> Other- acceptable STS provided exclusion (See Training Manual)			<input type="checkbox"/> Other not acceptable STS exclusion (See Training Manual)
<input type="checkbox"/> Subclavian stenosis	<input type="checkbox"/> Previous mediastinal radiation	<input type="checkbox"/> No (bypassable) LAD disease								
<input type="checkbox"/> Previous cardiac or thoracic surgery	<input type="checkbox"/> Emergent or salvage procedure	<input type="checkbox"/> Other- acceptable STS provided exclusion (See Training Manual)								
		<input type="checkbox"/> Other not acceptable STS exclusion (See Training Manual)								

Distal Anastomoses with Arterial Conduit(s) Yes No

(If Yes→)	Total Number of Distal Anastomoses with Arterial Conduits: _____	
	Distal Anastomoses with Radial Artery Conduit(s) <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes→)	Total Number of Distal Anastomoses with radial artery conduits: _____
		Radial Artery Harvest and Prep Time: _____ (minutes)

Distal Anastomoses with Venous Conduit(s) used: <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes→)	Total Number of Distal Anastomoses with venous conduits: _____
	Saphenous Vein Harvest and Prep Time: _____ (minutes)

Proximal Technique: Single Cross Clamp Partial Occlusion Clamp Anastomotic Assist Device None

CABG Grid Key: (Refer to Data Specifications for Harvest Codes)

Proximal Site:	1=Aorta 2=T graft off artery 3=T graft off vein 4=In-situ IMA 5=Other
Distal Site:	1=Left Main Coronary Artery (LMCA) 2=LAD 3= Diagonal 4=Ramus Intermedius 5=Circumflex 6=Obtuse Marginal 7= RCA 8=PDA 9=Posterior Lateral 10=Acute Marginal 11=None
Distal Anastomosis Conduit:	1=In-situ IMA 2=Free IMA 3=Vein 4=Radial artery 5=Other

Please use the key above and enter one

Graft Number	Proximal Site	Distal Site	Conduit	Distal Position	Endarterectomy
#1	1-5 (drop downs)	1-11	1-5	<input type="checkbox"/> Side to Side <input type="checkbox"/> End to Side	<input type="checkbox"/> Yes <input type="checkbox"/> No
#2 <input type="checkbox"/> Additional Grafts <input type="checkbox"/> No Additional Grafts	1-5	1-11	1-5	<input type="checkbox"/> Side to Side <input type="checkbox"/> End to Side	<input type="checkbox"/> Yes <input type="checkbox"/> No
#3 <input type="checkbox"/> Additional Grafts <input type="checkbox"/> No Additional Grafts	1-5	1-11	1-5	<input type="checkbox"/> Side to Side <input type="checkbox"/> End to Side	<input type="checkbox"/> Yes <input type="checkbox"/> No
#4 <input type="checkbox"/> Additional Grafts <input type="checkbox"/> No Additional Grafts	1-5	1-11	1-5	<input type="checkbox"/> Side to Side <input type="checkbox"/> End to Side	<input type="checkbox"/> Yes <input type="checkbox"/> No
#5 <input type="checkbox"/> Additional Grafts <input type="checkbox"/> No Additional Grafts	1-5	1-11	1-5	<input type="checkbox"/> Side to Side <input type="checkbox"/> End to Side	<input type="checkbox"/> Yes <input type="checkbox"/> No
#6 <input type="checkbox"/> Additional Grafts <input type="checkbox"/> No Additional Grafts	1-5	1-11	1-5	<input type="checkbox"/> Side to Side <input type="checkbox"/> End to Side	<input type="checkbox"/> Yes <input type="checkbox"/> No
#7 <input type="checkbox"/> Additional Grafts <input type="checkbox"/> No Additional Grafts	1-5	1-11	1-5	<input type="checkbox"/> Side to Side <input type="checkbox"/> End to Side	<input type="checkbox"/> Yes <input type="checkbox"/> No
#8 <input type="checkbox"/> Additional Grafts <input type="checkbox"/> No Additional Grafts	1-5	1-11	1-5	<input type="checkbox"/> Side to Side <input type="checkbox"/> End to Side	<input type="checkbox"/> Yes <input type="checkbox"/> No
#9 <input type="checkbox"/> Additional Grafts	1-5	1-11	1-5	<input type="checkbox"/> Side to Side <input type="checkbox"/> End to Side	<input type="checkbox"/> Yes <input type="checkbox"/> No

<input type="checkbox"/> No Additional Grafts					
#10 <input type="checkbox"/> Additional Grafts <input type="checkbox"/> No Additional Grafts	1-5	1-11	1-5	<input type="checkbox"/> Side to Side <input type="checkbox"/> End to Side	<input type="checkbox"/> Yes <input type="checkbox"/> No

K. Valve Surgery Explant

(If Valve Explanted (ValExp) is Yes ↓)

First Valve Prosthesis Explant:

Explant Position:	<input type="checkbox"/> Aortic	<input type="checkbox"/> Mitral	<input type="checkbox"/> Tricuspid	<input type="checkbox"/> Pulmonic
Explant Type:	<input type="checkbox"/> Mechanical Valve	<input type="checkbox"/> Bioprosthetic Valve	<input type="checkbox"/> Homograft	<input type="checkbox"/> Autograft
	<input type="checkbox"/> Annuloplasty Device	<input type="checkbox"/> Leaflet Clip	<input type="checkbox"/> Transcatheter Valve	<input type="checkbox"/> Transcatheter Valve in Valve with prosthetic valve
	<input type="checkbox"/> Other	<input type="checkbox"/> Unknown		
Explant Etiology:	<input type="checkbox"/> Endocarditis	<input type="checkbox"/> Incompetence	<input type="checkbox"/> Prosthetic Deterioration	<input type="checkbox"/> Thrombus
	<input type="checkbox"/> Failed Repair	<input type="checkbox"/> Pannus	<input type="checkbox"/> Sizing/Positioning issue	<input type="checkbox"/> Other
	<input type="checkbox"/> Hemolysis	<input type="checkbox"/> Paravalvular leak	<input type="checkbox"/> Stenosis	<input type="checkbox"/> Unknown
Explant Device known:	<input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes→)		Explant model#:	Unique Device Identifier (UDI):
Year of Implant Known:	<input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes→)		Year:	

Second Valve Prosthesis Explant: Yes No (If Yes↓)

Explant Position:	<input type="checkbox"/> Aortic	<input type="checkbox"/> Mitral	<input type="checkbox"/> Tricuspid	<input type="checkbox"/> Pulmonic
Explant Type:	<input type="checkbox"/> Mechanical Valve	<input type="checkbox"/> Bioprosthetic Valve	<input type="checkbox"/> Homograft	<input type="checkbox"/> Autograft
	<input type="checkbox"/> Annuloplasty Device	<input type="checkbox"/> Leaflet Clip	<input type="checkbox"/> Transcatheter Valve	<input type="checkbox"/> Transcatheter Valve in Valve with prosthetic valve
	<input type="checkbox"/> Other	<input type="checkbox"/> Unknown		
Explant Etiology:	<input type="checkbox"/> Endocarditis	<input type="checkbox"/> Incompetence	<input type="checkbox"/> Prosthetic Deterioration	<input type="checkbox"/> Thrombus
	<input type="checkbox"/> Failed Repair	<input type="checkbox"/> Pannus	<input type="checkbox"/> Sizing/Positioning issue	<input type="checkbox"/> Other
	<input type="checkbox"/> Hemolysis	<input type="checkbox"/> Paravalvular leak	<input type="checkbox"/> Stenosis	<input type="checkbox"/> Unknown
Explant Device known:	<input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes→)		Explant model#:	Unique Device Identifier (UDI):
Year of Implant Known:	<input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes→)		Year:	

Third Valve Prosthesis Explant: Yes No (If Yes↓)

Explant Positioning	<input type="checkbox"/> Aortic	<input type="checkbox"/> Mitral	<input type="checkbox"/> Tricuspid	<input type="checkbox"/> Pulmonic
Explant Type:	<input type="checkbox"/> Mechanical Valve	<input type="checkbox"/> Bioprosthetic Valve	<input type="checkbox"/> Homograft	<input type="checkbox"/> Autograft
	<input type="checkbox"/> Annuloplasty Device	<input type="checkbox"/> Leaflet Clip	<input type="checkbox"/> Transcatheter Valve	<input type="checkbox"/> Transcatheter Valve in Valve with prosthetic valve
	<input type="checkbox"/> Other	<input type="checkbox"/> Unknown		
Explant Etiology	<input type="checkbox"/> Endocarditis	<input type="checkbox"/> Incompetence	<input type="checkbox"/> Prosthetic Deterioration	<input type="checkbox"/> Thrombus
	<input type="checkbox"/> Failed Repair	<input type="checkbox"/> Pannus	<input type="checkbox"/> Sizing/Positioning issue	<input type="checkbox"/> Other
	<input type="checkbox"/> Hemolysis	<input type="checkbox"/> Paravalvular leak	<input type="checkbox"/> Stenosis	<input type="checkbox"/> Unknown
Explant Device known:	<input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes→)		Explant model#:	Unique Device Identifier (UDI):
Year of Implant Known:	<input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes→)		Year:	

K. 1. Aortic Valve without concomitant Aorta Procedure

(If AVAortaProcPerf = No ↓)

Procedure Performed:

Replacement: (If Replacement↓)

Transcatheter Valve Replacement:	<input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes ↓)
Approach:	<input type="checkbox"/> Transapical <input type="checkbox"/> Transaxillary <input type="checkbox"/> Transfemoral <input type="checkbox"/> Transaortic <input type="checkbox"/> Subclavian <input type="checkbox"/> Transiliac <input type="checkbox"/> Transeptal <input type="checkbox"/> Transcarotid <input type="checkbox"/> Transcaval <input type="checkbox"/> Other
Surgical valve Replacement:	<input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes ↓)
Device type:	<input type="checkbox"/> Mechanical <input type="checkbox"/> Bioprosthetic <input type="checkbox"/> Surgeon fashioned pericardium (Ozaki) <input type="checkbox"/> Other

	(If Bioprosthetic→)	Valve type: <input type="checkbox"/> Stented <input type="checkbox"/> Stentless sub coronary valve only <input type="checkbox"/> Sutureless/rapid deployment
<input type="checkbox"/> Repair/Reconstruction (If Repair/Reconstruction, select all that apply ↓)		
Repair Type (Select all that apply):		
<input type="checkbox"/> Commissural suture annuloplasty <input type="checkbox"/> Nodular release <input type="checkbox"/> Leaflet resection suture <input type="checkbox"/> Leaflet plication <input type="checkbox"/> Leaflet shaving <input type="checkbox"/> Leaflet pericardial patch <input type="checkbox"/> Leaflet commissural resuspension suture <input type="checkbox"/> Leaflet debridement <input type="checkbox"/> Division of fused leaflet raphe <input type="checkbox"/> Leaflet free edge reinforcement <input type="checkbox"/> Ring annuloplastyexternal ring <input type="checkbox"/> Ring annuloplasty internal ring <input type="checkbox"/> External suture annuloplasty <input type="checkbox"/> Pannus/Thrombus Removal (Native Valve)		
<input type="checkbox"/> Surgical Prosthetic Valve Intervention (Not Explant of Valve): (Select All That Apply ↓)		
Type of Intervention: <input type="checkbox"/> Repair of periprosthetic leak <input type="checkbox"/> Removal of pannus <input type="checkbox"/> Removal of clot <input type="checkbox"/> Other		
Aortic annular enlargement: <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes ↓)		
Technique: <input type="checkbox"/> Nicks-Nunez <input type="checkbox"/> Manougian <input type="checkbox"/> Konnoz <input type="checkbox"/> Other <input type="checkbox"/> Unknown		
Replacement of non-coronary sinus (Modified Wheat/Modified Yacoub) <input type="checkbox"/> Yes <input type="checkbox"/> No		
Aortic Valve or Valve Repair Device Implant: <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes ↓)		
Implant Model Number: _____ Implant Size: _____		
Unique Device identifier (UDI): _____		
K. 2. Mitral Valve Procedure		
(If Mitral Valve Procedure Performed = Yes ↓)		
Procedure Performed:		
<input type="checkbox"/> Repair (If Repair↓)		
Repair Approach: <input type="checkbox"/> Surgical <input type="checkbox"/> Transcatheter		
If Surgical (Select all that apply ↓)		
<input type="checkbox"/> Annuloplasty <input type="checkbox"/> Leaflet resection <input type="checkbox"/> Neochords (PTFE) <input type="checkbox"/> Chordal transfer <input type="checkbox"/> Annular decalcification/ <input type="checkbox"/> Leaflet extension/replacement patch <input type="checkbox"/> Edge to edge repair <input type="checkbox"/> Leaflet plication debridement <input type="checkbox"/> Mitral commissurotomy <input type="checkbox"/> Mitral commissuroplasty <input type="checkbox"/> Mitral cleft repair: <input type="checkbox"/> Pannus/Thrombus (scallop closure): removal (native valve)		
(If Leaflet Resection →) Resection Location(s): <input type="checkbox"/> Anterior Resection <input type="checkbox"/> Posterior Resection <input type="checkbox"/> Both		
Resection Method (select all that apply):		
<input type="checkbox"/> Triangular Alone <input type="checkbox"/> Quadrangular Alone		
<input type="checkbox"/> Resection with Sliding Valvuloplasty		
<input type="checkbox"/> Resection with Folding Valvuloplasty <input type="checkbox"/> Other		
(If Neochords (PTFE) →) <input type="checkbox"/> Anterior <input type="checkbox"/> Posterior <input type="checkbox"/> Both <input type="checkbox"/> Not Documented		
(If Chordal Transfer) → <input type="checkbox"/> Anterior Chordal transfer <input type="checkbox"/> Posterior Chordal transfer <input type="checkbox"/> Not Documented		
(If Leaflet extension/replacement patch →) Patch Location: <input type="checkbox"/> Anterior <input type="checkbox"/> Posterior <input type="checkbox"/> Both <input type="checkbox"/> Not Documented		
<input type="checkbox"/> Replacement (If Replacement ↓)		
Mitral repair attempted prior to replacement: <input type="checkbox"/> Yes <input type="checkbox"/> No		
Mitral chords preserved: <input type="checkbox"/> Anterior <input type="checkbox"/> Posterior <input type="checkbox"/> Both <input type="checkbox"/> None		
Transcatheter replacement: <input type="checkbox"/> Yes <input type="checkbox"/> No		
<input type="checkbox"/> Surgical Prosthetic Valve Intervention (Not Explant of Valve): (Select All That Apply ↓)		
Type of Intervention: <input type="checkbox"/> Repair of periprosthetic leak <input type="checkbox"/> Removal of Pannus <input type="checkbox"/> Removal of Clot <input type="checkbox"/> Other		
Implant: <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes ↓)		
Implant type:	<input type="checkbox"/> Mechanical valve <input type="checkbox"/> Transcatheter device implanted open heart <input type="checkbox"/> Bioprosthetic valve <input type="checkbox"/> Transcatheter Replacement Device (Transapical) Annuloplasty Ring Surgical <input type="checkbox"/> Transcatheter Replacement Device (Trans-septal) <input type="checkbox"/> Annuloplasty without ring <input type="checkbox"/> Annuloplasty Ring Transcatheter (pericardial or suture) <input type="checkbox"/> Mitral Leaflet clip <input type="checkbox"/> Other	
	(If Mitral Leaflet Clip→) Number implanted: _____ (enter 1-3)	
Implant Model Number: _____ Implant Size: _____		
Unique Device identifier (UDI): _____		
Was the device implanted an Model #5300 – Physio Flex Annuloplasty Ring: <input type="checkbox"/> Yes <input type="checkbox"/> No		

K.3. Tricuspid Valve Procedure

(If Tricuspid Valve Procedure Performed Yes ↓)

Tricuspid Procedure Performed

Repair : (If Repair, select all that apply.) **

Annuloplasty Transcatheter Clip/Device Leaflet Resection: Pannus/Thrombus Removal (Native Valve)

(If Annuloplasty→) Type of Annuloplasty: Pericardium Suture Prosthetic Ring Prosthetic Band Other

Replacement: (If Yes↓)

Transcatheter Replacement: Yes No

Surgical Prosthetic Valve Intervention (Not Explant of Valve): (Select All That Apply ↓)

Type of Intervention: Repair of periprosthetic leak Removal of Pannus Removal of Clot Other

Implant: Yes No (If Yes ↓)

Implant Type: Mechanical Valve Annuloplasty device Bioprosthetic Valve Homograft
 Transcatheter device Transcatheter Valve Other
 Transcatheter device implanted open heart

Implant Model Number: _____ Size: _____

Unique Device Identifier (UDI): _____

Valvectomy: Yes No

K. 4. Pulmonic Valve Procedure

(If Pulmonic Valve Procedure Performed = Yes ↓)

Procedure Performed:

Repair/Leaflet Reconstruction

Pannus or Thrombus removal

Replacement (If Replacement→) Transcatheter Replacement: Yes No

Valvectomy

Implant: Yes No (If Yes ↓)

Implant Type: Surgeon Fashioned Commercially Supplied

(If Surgeon Fashioned →) Material: PTFE (Gore-Tex) Pericardium Other

(If Commercially Supplied →) Device Type: Mechanical Valve Annuloplasty Device

Bioprosthetic Valve Homograft

Transcatheter Valve Other

Transcatheter device implanted open heart

Implant Model Number: _____ Size: _____

Unique Device Identifier (UDI): _____

L. Mechanical Cardiac Assist Devices

Planned and consented insertion of a device that can deliver a minimum of 5.0 L of flow using an open surgical approach (transaxillary or transaortic) during the index cardiac procedure. Yes No

Intra-Aortic Balloon Pump (IABP): Yes No (If Yes ↓)

IABP Insertion: ** Preop Intraop Postop

ECMO: Yes No (If Yes ↓)

ECMO Mode: Veno-venous Veno-arterial Veno-Arterial Venous (VAV) Veno-venous arterial (VVA)

ECMO Initiated: ** Preop Intraop Postop Non-operative

Temporary Assist Device Used: Yes No (If Yes ↓)

Position: Open Catheter Based

Type: RV LV BiV

When Inserted: ** Preop Intraop Postop

Was patient admitted with VAD Yes No (If Yes ↓)

Insertion date: __/__/__

Device Model Number: _____

UDI: _____

	Previous VAD Explanted During This Admission:	<input type="checkbox"/> Yes, not during this procedure <input type="checkbox"/> Yes, during this procedure <input type="checkbox"/> No
--	---	---

Ventricular Assist Device Implanted during this hospitalization Yes No

(Use Key to complete table below -will be dropdown lists in software)

Timing:	1. Pre-Operative (during same hospitalization and prior to OR trip for CV surgical procedure) 2. Stand-alone VAD procedure (Not in conjunction with a CV Procedure) 3. In conjunction with CV surgical procedure (same trip to the OR)- planned 4. In conjunction with CV surgical procedure (same trip to the OR)- unplanned 5. Post-Operative (after surgical procedure during reoperation)		
VAD Implant Indication:	1. Bridge to Transplantation 2. Bridge to Recovery 3. Destination 4. Post cardiomy Ventricular Failure 5. Device Malfunction 6. End of (device) Life 7. Salvage	Type:	1. Right VAD (RVAD) 2. Left VAD (LVAD) 3. Biventricular VAD (BiVAD) 4. Total Artificial Heart (TAH)
Device:	See VAD list	VAD Explant Reason:	1. Cardiac Transplant 2. Recovery 3. Device Transfer 4. Device-Related Infection 5. Device Malfunction 6. End of (device) Life

(If Yes, provide data on up to 3 separate devices implanted ↓)

VAD IMPLANT(s)	Initial implant	2nd device implanted? <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes ↓)	3rd Device implanted? <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes ↓)
Timing			
Indication			
Type			
Device			
Implant Date	__/__/____	__/__/____	__/__/____
UDI	_____	_____	_____
	Initial explant	2nd device explanted?	3rd Device explanted
VAD Explant(s)	<input type="checkbox"/> Yes, not during this procedure <input type="checkbox"/> Yes, during this procedure <input type="checkbox"/> No	<input type="checkbox"/> Yes, not during this procedure <input type="checkbox"/> Yes, during this procedure <input type="checkbox"/> No	<input type="checkbox"/> Yes, not during this procedure <input type="checkbox"/> Yes, during this procedure <input type="checkbox"/> No
(If Yes, not during this procedure or Yes, during this procedure →) Reason			
(If Yes, not during this procedure →) Date	__/__/____	__/__/____	__/__/____

M. Other Cardiac Procedures

(If Other Cardiac Procedure, **Except Afib** = Yes ↓) See Proc ID Table to determine whether these procedures impact isolate procedure categories

Subaortic Stenosis Resection: Muscle Membrane Other Not Documented No

Pulmonary Thromboembolctomy Acute Chronic No

Myocardial Stem Cell Therapy: Yes No | LV Aneurysm Repair: Yes No

Arrhythmia Device: Pacemaker Pacemaker with CRT ICD ICD with CRT Implantable Recorder None

Lead Insertion: Yes No

Lead Extraction: Yes, planned Yes, unplanned due to surgical complication Yes, unplanned due to unsuspected disease or anatomy No

Transmyocardial revascularization (TMR): Yes No

Tumor: Myxoma Fibroelastoma Other No

Transplant, Cardiac : Yes No

Trauma, Cardiac : Yes No

Acquired VSD Repair: Yes No

Other Cardiac Procedure <input type="checkbox"/> Yes <input type="checkbox"/> No	
ASD Repair <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes →)	ASD Repair Type: <input type="checkbox"/> Congenital (secundum) <input type="checkbox"/> Acquired
PFO Repair : <input type="checkbox"/> Yes <input type="checkbox"/> No	

M.1. Atrial Fibrillation Procedures

(If Afib Procedure = Yes ↓)

Left Atrial Appendage Obliteration Epicardially applied occlusion device Epicardial Staple Epicardial Suture Endocardial Suture
 Prior Transcatheter Device In Existence Other No

(If Epicardial applied occlusion device →) UDI: _____

Left Atrial Appendage Amputation: Yes No

Lesion location: Epicardial Intracardiac Both None

(if not None, select all that apply) → Radiofrequency Cut-and-sew Cryo

(If Radiofrequency →) Bipolar: Yes No Not Documented

Lesions Documented: Yes No (If Yes ↓)

Left Atrial	<input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes, select all that apply →)	<input type="checkbox"/> Pulmonary Vein Isolation <input type="checkbox"/> Posterior Box Lesion <input type="checkbox"/> Mitral Line <input type="checkbox"/> Left atrial appendage line <input type="checkbox"/> Epicardial Coronary Sinus Lesion <input type="checkbox"/> Epicardial Posterior Wall Other (i.e. Convergent procedure) <input type="checkbox"/> Other
Right Atrial	<input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes, select all that apply →)	<input type="checkbox"/> SVC Line <input type="checkbox"/> IVC Line <input type="checkbox"/> Tricuspid Completion Line <input type="checkbox"/> Verticle Right Atrial Line <input type="checkbox"/> Right Atrial Appendage Line <input type="checkbox"/> Other

M.2. Aorta And Aortic Root Procedures

(If AortProc = Yes ↓)

Family history of disease of aorta: Aneurysm Dissection Both Aneurysm and Dissection Sudden Death Unknown None

Patient's genetic history: Marfan Ehlers-Danlos Loeyes-Dietz Non-Specific familial thoracic aortic syndrome
 Aortic Valve Morphology Turner syndrome Other- Unknown None

Prior aortic intervention: Yes No Unknown (If Yes ↓)

Location	Previous repair location(s)	Repair Type	Repair failure (If Yes ↓)	Disease progression (If Yes ↓)
	Select all that apply	Select all that apply	Select all that apply	Select all that apply
Root (Zone 0 –A)	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Open <input type="checkbox"/> Endovascular <input type="checkbox"/> Hybrid	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Ascending (Zone 0 – B&C)	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Open <input type="checkbox"/> Endovascular <input type="checkbox"/> Hybrid	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Arch (Zones 1,2,3)	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Open <input type="checkbox"/> Endovascular <input type="checkbox"/> Hybrid	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Descending (Zones 4,5)	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Open <input type="checkbox"/> Endovascular <input type="checkbox"/> Hybrid	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Suprarenal abdominal (Zones 6,7)	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Open <input type="checkbox"/> Endovascular <input type="checkbox"/> Hybrid	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Infrarenal abdominal (Zone 8,9,10,11)	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Open <input type="checkbox"/> Endovascular <input type="checkbox"/> Hybrid	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No

Current Procedure with Endoleak involvement: Yes No

(If Yes →)	Type I: leak at graft attachment site: <input type="checkbox"/> Yes <input type="checkbox"/> No
	(If Yes →) Type I location: <input type="checkbox"/> Ia-proximal <input type="checkbox"/> Ib -distal <input type="checkbox"/> Ic- iliac occluder
	Type II: aneurysm sac filling via branch vessel: <input type="checkbox"/> Yes <input type="checkbox"/> No
	(If Yes →) Number of vessels: <input type="checkbox"/> IIa: single vessel <input type="checkbox"/> IIb: two vessels or more
	Type III: leak through defect in graft: <input type="checkbox"/> Yes <input type="checkbox"/> No
(If Yes →)	Graft defect type: <input type="checkbox"/> IIIa: junctional separation of modular components <input type="checkbox"/> IIIb: endograft fractures or holes
	Type IV: leak through graft fabric – porosity: <input type="checkbox"/> Yes <input type="checkbox"/> No
	Type V: endotension - expansion aneurysm sac without leak: <input type="checkbox"/> Yes <input type="checkbox"/> No

Current Procedure with Aorta Infection: Yes No

(If Yes →)	Aorta Infection Type: <input type="checkbox"/> Graft infection <input type="checkbox"/> Valvular endocarditis <input type="checkbox"/> Nonvalvular endocarditis <input type="checkbox"/> Native aorta <input type="checkbox"/> Multiple infection types
------------	---

Current Procedure with Trauma: Yes No

(If Yes, select all that apply →)	<input type="checkbox"/> Root <input type="checkbox"/> Ascending <input type="checkbox"/> Arch <input type="checkbox"/> Descending <input type="checkbox"/> Thoracoabdominal <input type="checkbox"/> Abdominal
-----------------------------------	---

Presenting Symptom:	<input type="checkbox"/> Pain <input type="checkbox"/> CHF <input type="checkbox"/> Cardiac Arrest <input type="checkbox"/> Syncope <input type="checkbox"/> Infection <input type="checkbox"/> Asymptomatic <input checked="" type="checkbox"/> Injury related to Surgical Complication <input type="checkbox"/> Neuro Deficit <input type="checkbox"/> Other <input type="checkbox"/> Unknown		
	<input checked="" type="checkbox"/> (If Neuro Deficit →)	<input type="checkbox"/> Stroke <input type="checkbox"/> Limb numbness <input type="checkbox"/> Paralysis <input type="checkbox"/> Hoarseness (<input checked="" type="checkbox"/> acute vocal cord dysfunction)	
Primary Indication:	<input type="checkbox"/> Aneurysm <input type="checkbox"/> Dissection <input type="checkbox"/> Other		
(if Aneurysm →)	Etiology:	<input type="checkbox"/> Atherosclerosis <input type="checkbox"/> Infection <input type="checkbox"/> Inflammatory <input type="checkbox"/> Connective Tissue/ <input checked="" type="checkbox"/> Syndromic Disorder <input checked="" type="checkbox"/> Ulcerative Plaque/Penetrating Ulcer <input type="checkbox"/> Pseudoaneurysm <input type="checkbox"/> Mycotic <input type="checkbox"/> Traumatic transection <input type="checkbox"/> Intercostal visceral patch <input type="checkbox"/> Anastomotic site <input checked="" type="checkbox"/> Aortic Valve Morphology <input checked="" type="checkbox"/> Chronic Dissection <input type="checkbox"/> Unknown	
	Type:	<input type="checkbox"/> Fusiform <input type="checkbox"/> Saccular <input type="checkbox"/> Unknown	
	Rupture:	<input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes →) Contained rupture: <input type="checkbox"/> Yes <input type="checkbox"/> No	
Location of Maximum Diameter:	<input type="checkbox"/> Below STJ <input type="checkbox"/> STJ-midascending <input type="checkbox"/> Midascending to distal ascending <input type="checkbox"/> Zone 1 <input type="checkbox"/> Zone 2 <input type="checkbox"/> Zone 3 <input type="checkbox"/> Zone 4 <input type="checkbox"/> Zone 5 <input type="checkbox"/> Zone 6 <input type="checkbox"/> Zone 7 <input type="checkbox"/> Zone 8 <input type="checkbox"/> Zone 9 <input type="checkbox"/> Zone 10 <input type="checkbox"/> Zone 11		
	Timing:	<input type="checkbox"/> Hyperacute (<24 hrs) <input type="checkbox"/> Acute (<input checked="" type="checkbox"/> 24hrs-<2weeks) <input type="checkbox"/> Subacute (2weeks -<90 days) <input type="checkbox"/> Chronic (90 days or more) <input type="checkbox"/> Acute on Chronic <input type="checkbox"/> Unknown	
(if Dissection →)	Dissection onset date known <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes →) Date of onset: __/__/____		
	Primary tear location:	<input type="checkbox"/> Below STJ <input type="checkbox"/> STJ-midascending <input type="checkbox"/> Midascending to distal ascending <input type="checkbox"/> Zone 1 <input type="checkbox"/> Zone 2 <input type="checkbox"/> Zone 3 <input type="checkbox"/> Zone 4 <input type="checkbox"/> Zone 5 <input type="checkbox"/> Zone 6 <input type="checkbox"/> Zone 7 <input type="checkbox"/> Zone 8 <input type="checkbox"/> Zone 9 <input type="checkbox"/> Zone 10 <input type="checkbox"/> Zone 11	
	Proximal Dissection Extent Known: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		
	(If Yes →)	Most Proximal Dissection Location:	<input type="checkbox"/> Below STJ <input type="checkbox"/> STJ-midascending <input type="checkbox"/> Midascending to distal ascending <input type="checkbox"/> Zone 1 <input type="checkbox"/> Zone 2 <input type="checkbox"/> Zone 3 <input type="checkbox"/> Zone 4
	Distal Dissection Extent Known: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		
	(If Yes →)	Distal Dissection Extension Location:	<input type="checkbox"/> Below STJ <input type="checkbox"/> STJ-midascending <input type="checkbox"/> Midascending to distal ascending <input type="checkbox"/> Zone 1 <input type="checkbox"/> Zone 2 <input type="checkbox"/> Zone 3 <input type="checkbox"/> Zone 4 <input type="checkbox"/> Zone 5 <input type="checkbox"/> Zone 6 <input type="checkbox"/> Zone 7 <input type="checkbox"/> Zone 8 <input type="checkbox"/> Zone 9 <input type="checkbox"/> Zone 10 <input type="checkbox"/> Zone 11
	Stanford Classification: <input type="checkbox"/> Type A <input type="checkbox"/> Type B <input type="checkbox"/> Unknown <input type="checkbox"/> Other		
	Retrograde dissection caused by Aortic Stent Graft (Post TEVAR): <input type="checkbox"/> Yes <input type="checkbox"/> No		
	Patient within 30 days post TAVR <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		
	Patient within 30 days Post Other Cath Procedure <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		
Malperfusion: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown			
(If Yes →)	Malperfusion Type: (select all that apply):		
	<input type="checkbox"/> Coronary <input type="checkbox"/> Superior Mesenteric <input type="checkbox"/> Right Subclavia <input type="checkbox"/> Renal, left <input type="checkbox"/> Right Common Carotid <input type="checkbox"/> Renal, right <input type="checkbox"/> Left Common Carotid <input type="checkbox"/> Iliofemoral <input type="checkbox"/> Left Subclavian <input type="checkbox"/> Spinal <input type="checkbox"/> Celiac		
Lower Extremity Motor Function: <input type="checkbox"/> No deficit <input type="checkbox"/> Weakness <input type="checkbox"/> Paralysis <input type="checkbox"/> Unknown			
Lower Extremity Sensory Deficit: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown			
Rupture: <input type="checkbox"/> Yes <input type="checkbox"/> No			
(If Yes →)	Contained rupture:	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	Rupture Location:	<input type="checkbox"/> Below STJ <input type="checkbox"/> STJ-midascending <input type="checkbox"/> Midascending to distal ascending <input type="checkbox"/> Zone 1 <input type="checkbox"/> Zone 2 <input type="checkbox"/> Zone 3 <input type="checkbox"/> Zone 4 <input type="checkbox"/> Zone 5 <input type="checkbox"/> Zone 6 <input type="checkbox"/> Zone 7 <input type="checkbox"/> Zone 8 <input type="checkbox"/> Zone 9 <input type="checkbox"/> Zone 10 <input type="checkbox"/> Zone 11	
(If Other →)	<input type="checkbox"/> Valvular Dysfunction <input type="checkbox"/> Stenosis/Obstruction <input type="checkbox"/> Intramural Hematoma <input type="checkbox"/> Coarctation <input checked="" type="checkbox"/> Endoleak <input checked="" type="checkbox"/> Infection <input checked="" type="checkbox"/> Injury related to Surgical Complication/Perforation <input type="checkbox"/> Trauma		
Additional Anatomical Information			
Root	Aorto-annular ectasia: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		
	Asymmetric Root Dilation: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown (If Yes →) Dilation Location: <input type="checkbox"/> Right <input type="checkbox"/> Left <input type="checkbox"/> Non-coronary		
	Sinus of Valsalva aneurysm:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown (If Yes →)	SV Aneurysm Location (select all that apply): <input type="checkbox"/> Right <input type="checkbox"/> Left <input type="checkbox"/> Non-coronary
Arch Anomalies <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes ↓)			
Arch Anomalies Type(s): select all that apply			
	<input type="checkbox"/> Arch Type Right <input type="checkbox"/> Aberrant Right Subclavian <input type="checkbox"/> Kommerell/Ductus Bulge <input type="checkbox"/> Variant vertebral origin <input type="checkbox"/> Aberrant Left Subclavian: <input type="checkbox"/> Bovine:		
Patent internal mammary artery bypass graft: <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A			

Ascending	Asymmetric Dilatation: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
	Proximal coronary bypass grafts: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
Measurements (Largest Diameter)		
Treated Zone with the Largest Diameter:	<input type="checkbox"/> Below STJ <input type="checkbox"/> STJ-midascending <input type="checkbox"/> Midascending-distal ascending <input type="checkbox"/> Zone 1 <input type="checkbox"/> Zone 2 <input type="checkbox"/> Zone 3 <input type="checkbox"/> Zone 4 <input type="checkbox"/> Zone 5 <input type="checkbox"/> Zone 6 <input type="checkbox"/> Zone 7 <input type="checkbox"/> Zone 8 <input type="checkbox"/> Zone 9 <input type="checkbox"/> Zone 10 <input type="checkbox"/> Zone 11	
Measurement:	_____ mm	
Method Obtained:	<input type="checkbox"/> 3D or 4D Reconstruction <input type="checkbox"/> PreOp CT <input type="checkbox"/> PreOp MRI <input type="checkbox"/> PreOp Echo <input type="checkbox"/> Intra Operatively	
Proximal to Treated Zone(s) (Largest Diameter) Available: <input type="checkbox"/> Yes <input type="checkbox"/> No	Location: <input type="checkbox"/> Below STJ <input type="checkbox"/> STJ-midascending <input type="checkbox"/> Midascending-distal ascending <input type="checkbox"/> Zone 1 <input type="checkbox"/> Zone 2 <input type="checkbox"/> Zone 3 <input type="checkbox"/> Zone 4 <input type="checkbox"/> Zone 5 <input type="checkbox"/> Zone 6 <input type="checkbox"/> Zone 7 <input type="checkbox"/> Zone 8 <input type="checkbox"/> Zone 9 <input type="checkbox"/> Zone 10 <input type="checkbox"/> Zone 11	
(If Yes →)	Measurement:	_____ mm
	Method Obtained:	<input type="checkbox"/> 3D or 4D Reconstruction <input type="checkbox"/> PreOp CT <input type="checkbox"/> PreOp MRI <input type="checkbox"/> PreOp Echo <input type="checkbox"/> Intra Operatively
Distal to Treated Zone(s) (Largest Diameter) Available: <input type="checkbox"/> Yes <input type="checkbox"/> No	Location: <input type="checkbox"/> Below STJ <input type="checkbox"/> STJ-midascending <input type="checkbox"/> Midascending-distal ascending <input type="checkbox"/> Zone 1 <input type="checkbox"/> Zone 2 <input type="checkbox"/> Zone 3 <input type="checkbox"/> Zone 4 <input type="checkbox"/> Zone 5 <input type="checkbox"/> Zone 6 <input type="checkbox"/> Zone 7 <input type="checkbox"/> Zone 8 <input type="checkbox"/> Zone 9 <input type="checkbox"/> Zone 10 <input type="checkbox"/> Zone 11	
(If Yes →)	Measurement:	_____ mm
	Method Obtained:	<input type="checkbox"/> 3D or 4D Reconstruction <input type="checkbox"/> PreOp CT <input type="checkbox"/> PreOp MRI <input type="checkbox"/> PreOp Echo <input type="checkbox"/> Intra Operatively
Intervention		
(If Aorta Procedure Performed = Yes ↓)		
Aortic Valve or Root Procedure Performed:	<input type="checkbox"/> Yes, planned <input type="checkbox"/> Yes, unplanned due to surgical complication <input type="checkbox"/> Yes, unplanned due to unsuspected disease or anatomy <input type="checkbox"/> No (If Yes ↓)	
Procedure Performed:		
<input type="checkbox"/> Replacement (If Replacement ↓)		
	Transcatheter Valve Replacement: <input type="checkbox"/> Yes <input type="checkbox"/> No	
(If Yes →)	Approach: <input type="checkbox"/> Transapical <input type="checkbox"/> Transaxillary <input type="checkbox"/> Transfemoral <input type="checkbox"/> Transaortic <input type="checkbox"/> Subclavian <input type="checkbox"/> Other <input type="checkbox"/> Transiliac <input type="checkbox"/> Transeptal <input type="checkbox"/> Transcarotid. <input type="checkbox"/> Transcaval	
	Surgical valve Replacement: <input type="checkbox"/> Yes <input type="checkbox"/> No	
(If Yes →)	Device type: <input type="checkbox"/> Mechanical <input type="checkbox"/> Bioprosthetic <input type="checkbox"/> Surgeon fashioned pericardium (Ozaki) <input type="checkbox"/> Other	
(If Bioprosthetic →)	Valve type: <input type="checkbox"/> Stented <input type="checkbox"/> Stentless sub coronary valve only <input type="checkbox"/> Sutureless/rapid deployment	
<input type="checkbox"/> Repair/Reconstruction (If Repair/Reconstruction ↓)		
	Repair Type (Select all that apply)	
	<input type="checkbox"/> Commissural suture annuloplasty	<input type="checkbox"/> Nodular Release
	<input type="checkbox"/> Leaflet plication	<input type="checkbox"/> Leaflet Shaving
	<input type="checkbox"/> Leaflet commissural resuspension suture	<input type="checkbox"/> Leaflet debridement
	<input type="checkbox"/> Leaflet free edge reinforcement (PTFE)	<input type="checkbox"/> Ring annuloplasty external ring
	<input type="checkbox"/> External Suture Annuloplasty	<input type="checkbox"/> Pannus/Thrombus removal (native valve)
	<input type="checkbox"/> Leaflet resection suture	<input type="checkbox"/> Leaflet pericardial patch
	<input type="checkbox"/> Division of fused leaflet raphe	<input type="checkbox"/> Ring annuloplasty internal ring
<input type="checkbox"/> Surgical Prosthetic Valve Intervention: (Not Explant of Valve) : (If Surgical Prosthetic Valve Intervention...Select All That Apply ↓)		
	Type of Intervention: <input type="checkbox"/> Repair of periprosthetic leak <input type="checkbox"/> Removal of pannus <input type="checkbox"/> Removal of clot <input type="checkbox"/> Other	
Aortic annular enlargement <input type="checkbox"/> Yes <input type="checkbox"/> No		
(If Yes →)	Technique: <input type="checkbox"/> Nicks-Nunez <input type="checkbox"/> Manougian <input type="checkbox"/> Konno <input type="checkbox"/> Other <input type="checkbox"/> Unknown	
Replacement of non-coronary sinus (Modified Wheat/Modified Yacoub) <input type="checkbox"/> Yes <input type="checkbox"/> No		
Root Procedure: <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes ↓)		
	Root Replacement with coronary Ostial Reimplantation <input type="checkbox"/> Yes <input type="checkbox"/> No	
(If Yes →)	<input type="checkbox"/> Composite Valve Conduit <input type="checkbox"/> Valve Sparing Root	

	(If Composite Valve Conduit →)	<input type="checkbox"/> Mechanical <input type="checkbox"/> Bioprosthetic <input type="checkbox"/> Homograft Root Replacement
		<input type="checkbox"/> Autograft with Native Pulmonary Valve (Ross)
	(If Bioprosthetic →)	<input type="checkbox"/> Stented Valve Conduit <input type="checkbox"/> Stentless Valve Conduit <input type="checkbox"/> Stentless Biologic Full Root
	(If Valve Sparing Root →)	<input type="checkbox"/> Valve sparing root reimplantation (David) <input type="checkbox"/> Valve sparing root remodeling (Yacoub) <input type="checkbox"/> Valve sparing root reconstruction (Florida Sleeve)
Coronary Reimplantation:	<input type="checkbox"/> No <input type="checkbox"/> Direct to Root Prosthesis (Button) <input type="checkbox"/> With Vein Graft Extension (SVG Cabrol) <input type="checkbox"/> With Dacron Graft Extension (Classic Cabrol)	
Major root reconstruction/ debridement without coronary ostial reimplantation		<input type="checkbox"/> Yes <input type="checkbox"/> No

(If AortProc = Yes ↓)

Surgical Ascending/Arch Procedure Yes No (If Yes ↓)

Proximal Location: STJ-midascending Midascending to distal ascending Zone 1 Zone 2 Zone 3

Distal Technique: Open/**Unclamped** Clamped

Distal Site: Ascending Aorta Hemiarch Zone 1 Zone 2 Zone 3 Zone 4

Distal Extention: Elephant trunk Frozen Elephant trunk No

Arch Branch Reimplantation: Yes No (If Yes ↓ - **select all that apply**)

Arch Branch Location: Innominate Right Subclavian Right Common Carotid Left Common Carotid
 Left Subclavian Left Vertebral Other

Open **Surgical** Descending Thoracic Aorta or Thoracoabdominal Procedure (If Yes ↓): Yes No

Proximal Location: Reverse Hemiarch Zone 0 Zone 1 Zone 2 Zone 3 Zone 4 Zone 5
 Zone 6 Zone 7 Zone 8 Zone 9

Intercostal Reimplantation: Yes No

Distal Location: Zone 3 Zone 4 Zone 5 Zone 6 Zone 7 Zone 8 Zone 9 Zone 10 Zone 11

Visceral vessel intervention: Yes No (If Yes ↓)

Celiac: Reimplantation Branch Graft None

Superior mesenteric: Reimplantation Branch Graft None

Right Renal: Reimplantation Branch Graft None

Left Renal: Reimplantation Branch Graft None

Endovascular Procedure(s) : Yes No (If Yes ↓)

Access: Femoral Iliac Abdominal Aorta Lt. Subclavian/**Axila** Rt. Subclavian/**Axila** Ascending Aorta
 Carotid LV Apex

Percutaneous Access: Yes No

Proximal landing zone: Below STJ STJ-midascending Midascending to distal ascending
 Zone 1 Zone 2 Zone 3 Zone 4 Zone 5 Zone 6 Zone 7
 Zone 8 Zone 9 Zone 10 Zone 11

Distal landing zone: Below STJ STJ-midascending Midascending to distal ascending
 Zone 1 Zone 2 Zone 3 Zone 4 Zone 5 Zone 6 Zone 7
 Zone 8 Zone 9 Zone 10 Zone 11

Ascending TEVAR : Dedicated IDE Off Label Stent No

Arch Vessel management

Innominate: Native Flow Endovascular Branch Graft Endovascular Parallel Graft
 Extra-anatomic Bypass Fenestrated **No Flow Restored**

(If Extra-anatomic bypass (select all that apply)→)

Location:

Aorta-Innominate Aorta-right carotid Aorta- right subclavian
 Right Carotid- Right subclavian Other

Left Carotid: Native Flow Endovascular Branch Graft Endovascular Parallel Graft
 Extra-anatomic Bypass Fenestrated No Flow Restored

(If Extra-anatomic bypass (select all that apply)→)

Location:

Aorta- left carotid Innominate- left carotid

		<input type="checkbox"/> Right carotid- Left carotid	<input type="checkbox"/> Other
Left Subclavian:	<input type="checkbox"/> Native Flow <input type="checkbox"/> Endovascular Branch Graft <input type="checkbox"/> Endovascular Parallel Graft <input type="checkbox"/> Extra-anatomic Bypass <input type="checkbox"/> Fenestrated <input type="checkbox"/> No Flow Restored		
	(If Extra-anatomic bypass (select all that apply)→)	Location:	<input type="checkbox"/> Aorta- left subclavian <input type="checkbox"/> Left carotid- left subclavian <input type="checkbox"/> Other
Visceral Vessel management			
Celiac:	<input type="checkbox"/> Native Flow <input type="checkbox"/> Endovascular Branch Graft <input type="checkbox"/> Endovascular Parallel Graft <input type="checkbox"/> Extra-anatomic Bypass <input type="checkbox"/> Fenestrated <input type="checkbox"/> No Flow Restored		
	(If Extra-anatomic bypass (select all that apply)→)	Location:	<input type="checkbox"/> Aorta- celiac <input type="checkbox"/> Iliac-celiac <input type="checkbox"/> Other
Superior mesenteric:	<input type="checkbox"/> Native Flow <input type="checkbox"/> Endovascular Branch Graft <input type="checkbox"/> Endovascular Parallel Graft <input type="checkbox"/> Extra-anatomic Bypass <input type="checkbox"/> Fenestrated <input type="checkbox"/> No Flow Restored		
	(If Extra-anatomic bypass (select all that apply)→)	Location:	<input type="checkbox"/> Aorta- superior mesenteric <input type="checkbox"/> Iliac- superior mesenteric <input type="checkbox"/> Other
Right renal:	<input type="checkbox"/> Native Flow <input type="checkbox"/> Endovascular Branch Graft <input type="checkbox"/> Endovascular Parallel Graft <input type="checkbox"/> Extra-anatomic Bypass <input type="checkbox"/> Fenestrated <input type="checkbox"/> No Flow Restored		
	(If Extra-anatomic bypass (select all that apply)→)	Location:	<input type="checkbox"/> Aorta- right renal <input type="checkbox"/> Iliac- right renal <input type="checkbox"/> Other
Left renal:	<input type="checkbox"/> Native Flow <input type="checkbox"/> Endovascular Branch Graft <input type="checkbox"/> Endovascular Parallel Graft <input type="checkbox"/> Extra-anatomic Bypass <input type="checkbox"/> Fenestrated <input type="checkbox"/> No Flow Restored		
	(If Extra-anatomic bypass (select all that apply) →)	Location:	<input type="checkbox"/> Aorta- left renal <input type="checkbox"/> Iliac – left renal <input type="checkbox"/> Other
Right Iliac:	<input type="checkbox"/> Native Flow <input type="checkbox"/> Bifurcated Graft <input type="checkbox"/> Extra-anatomic Bypass <input type="checkbox"/> No Flow Restored		
	(If Extra-anatomic bypass (select all that apply)→)	Location:	<input type="checkbox"/> Femoral- Femoral <input type="checkbox"/> Other
Left Iliac:	<input type="checkbox"/> Native Flow <input type="checkbox"/> Bifurcated Graft <input type="checkbox"/> Extra-anatomic Bypass <input type="checkbox"/> No Flow Restored		
	(If Extra-anatomic bypass (select all that apply) →)	Location:	<input type="checkbox"/> Femoral- Femoral <input type="checkbox"/> Other
Internal Iliac Preserved:	<input type="checkbox"/> Right Iliac only <input type="checkbox"/> Left Iliac only <input type="checkbox"/> Both <input type="checkbox"/> No		
Other Visceral Vessel(s) Extra-anatomic Bypass:	<input type="checkbox"/> Yes <input type="checkbox"/> No		
	(If Yes (select all that apply) →)	Location:	<input type="checkbox"/> Aorta-other <input type="checkbox"/> Iliac-other <input type="checkbox"/> Other
Planned Staged Hybrid:	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Other Endovascular Procedural Information			
Dissection proximal entry tear covered:	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Endoleak at end of procedure:	<input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes →)	Type:	<input type="checkbox"/> Ia <input type="checkbox"/> Ib <input type="checkbox"/> II <input type="checkbox"/> III <input type="checkbox"/> IV <input type="checkbox"/> V
Conversion to open:	<input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes →)	Conversion reason:	<input type="checkbox"/> Deployment failure <input type="checkbox"/> Endoleak <input type="checkbox"/> Rupture <input type="checkbox"/> Occlusion/loss of branch
Intraop Dissection Extension:	<input type="checkbox"/> None <input type="checkbox"/> Antegrade <input type="checkbox"/> Retrograde <input type="checkbox"/> Both		
Unintentional rupture of dissection septum:	<input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes →)	Location:	<input type="checkbox"/> Below STJ <input type="checkbox"/> STJ-midascending <input type="checkbox"/> Midascending-distal ascending <input type="checkbox"/> Zone 1 <input type="checkbox"/> Zone 2 <input type="checkbox"/> Zone 3 <input type="checkbox"/> Zone 4 <input type="checkbox"/> Zone 5 <input type="checkbox"/> Zone 6 <input type="checkbox"/> Zone 7 <input type="checkbox"/> Zone 8 <input type="checkbox"/> Zone 9 <input type="checkbox"/> Zone 10 <input type="checkbox"/> Zone 11
Additional Procedural Information			
Spinal Drain Placement:	<input type="checkbox"/> Pre- aortic procedure <input type="checkbox"/> Post- aortic procedure <input type="checkbox"/> None		
IntraOp Motor Evoked Potential:	<input type="checkbox"/> Yes <input type="checkbox"/> No	(If Yes →) Documented MEP abnormality	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
IntraOp Somatosensory Evoked Potential:	<input type="checkbox"/> Yes <input type="checkbox"/> No	(If Yes →) Documented SEP abnormality	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
IntraOp EEG:	<input type="checkbox"/> Yes <input type="checkbox"/> No	(If Yes →) Documented EEG abnormality	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
IntraOp Intravascular Ultrasound(IVUS):	<input type="checkbox"/> Yes <input type="checkbox"/> No		
IntraOp Transcutaneous Doppler:	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Intraoperative Angiogram:	<input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes →)	Volume of contrast: _____ml	Fluoroscopy time:_____ min

Devices

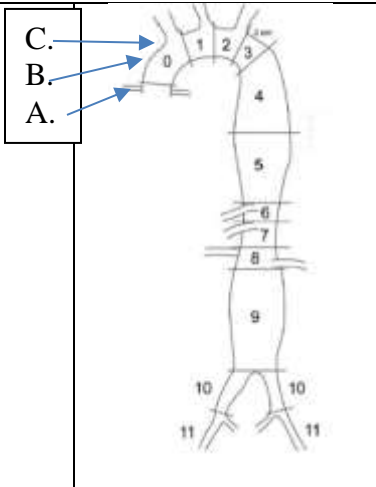
Device(s) Inserted: Yes No (If Yes, list aorta proximal to distal using device key ↓)

Aortic Valve or Aortic Valve Composite Graft Implanted Yes No (If Yes↓)

Implant Model Number: _____
 Implant Size: _____
 Unique Device identifier (UDI): _____

Aorta Devices

Location :



- X. No additional devices inserted (only for locations 2 – 15)
- A. Below sinotubular junction
- B. Sinotubular junction to mid ascending
- C. Mid ascending to distal ascending
- D. Zone 1 (between innominate and left carotid)
- E. Zone 2 (between left carotid and left subclavian)
- F. Zone 3 (first 2 cm. distal to left subclavian)
- G. Zone 4 (end of zone 3 to mid descending aorta ~ T6)
- H. Zone 5 (mid descending aorta to celiac)
- I. Zone 6 (celiac to superior mesenteric)
- J. Zone 7 (superior mesenteric to renals)
- K. Zone 8 (renal to infra-renal abdominal aorta)
- L. Zone 9 (infrarenal abdominal aorta)
- M. Zone 10 (common iliac)
- N. Zone 11 (external iliacs)

(Refer to Data Specifications for Harvest Codes)

For devices other than aortic valves and aortic valve composite grafts:

Implant Method: 1=Open **Surgical** 2= Endovascular

Outcome: 1= **Unsuccessfully implanted/maldeployed** 2= **Implanted/deployed and removed** 3= Successfully **implanted/deployed**

Model Number: Enter device model number

UDI: Enter unique device identifier (not serial number)

Location (Letter)	Implant Method	Outcome	Model Number	UDI

M.3. Congenital Defect Repair (other than-ASD – Secundum, PFO, or Unicuspid, Bicuspid or Quadricuspid valve)
Congenital Diagnoses: Select up to three most significant diagnoses: (refer to “Congenital Diagnoses/Procedures List” document) Diagnosis 1: _____ Diagnosis 2: _____ (If not No Other Congenital→) Diagnosis 3: _____
Congenital Procedures: Select up to three most significant: (refer to “Congenital Diagnoses/Procedures List” document) Procedure 1: _____ Procedure 2: _____ (If not No Other Congenital→) Procedure 3: _____

N. Other Non-Cardiac Procedures (If Other Non-Cardiac Procedure = Yes ↓)
Carotid Endarterectomy: <input type="checkbox"/> Yes, planned <input type="checkbox"/> Yes, unplanned due to surgical complication <input type="checkbox"/> Yes, unplanned due to unsuspected disease or anatomy <input type="checkbox"/> No
Other Vascular: <input type="checkbox"/> Yes, planned <input type="checkbox"/> Yes, unplanned due to surgical complication <input type="checkbox"/> Yes, unplanned due to unsuspected disease or anatomy <input type="checkbox"/> No
Other Thoracic: <input type="checkbox"/> Yes, planned <input type="checkbox"/> Yes, unplanned due to surgical complication <input type="checkbox"/> Yes, unplanned due to unsuspected disease or anatomy <input type="checkbox"/> No
Other: <input type="checkbox"/> Yes, planned <input type="checkbox"/> Yes, unplanned due to surgical complication <input type="checkbox"/> Yes, unplanned due to unsuspected disease or anatomy <input type="checkbox"/> No

O. Post-Operative			
Patient expired in OR. <input type="checkbox"/> Yes <input type="checkbox"/> No (If No ↓)			
Peak Postoperative Creatinine Level within 48 hours of OR Exit: _____	Peak Postoperative Creatinine Level prior to discharge: _____	Discharge Hemoglobin: _____	Discharge Hematocrit: _____
Blood Products Used Postoperatively: <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes ↓)			
Red Blood Cell Units: _____ Fresh Frozen Plasma/Plasma Units: _____ Cryoprecipitate Units: _____ Platelet Dose Pack: _____			
Extubated in OR: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A (not intubated)			
(If “No” or “N/A”→)	Initial Extubation Date and Time: ____/____/____ : ____ (mm/dd/yyyy hh:mm - 24 hr clock) (for N/A leave this field blank)++		
	Total post-op initial vent hour _____ (system calculation)		
Re-intubated /or intubated Post Op During Hospital Stay: <input type="checkbox"/> Yes <input type="checkbox"/> No (If yes →) Additional Hours Ventilated: ++ _____			
Total post-operative ventilation hours: ++ _____ (System Calculation)			
ICU Visit: <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes →) Initial ICU Hours: _____			
Readmission to ICU: <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes →) Additional ICU Hours: _____			
Post Op Echo Performed to evaluate valve(s): <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes ↓)			
	Level aortic insufficiency found: <input type="checkbox"/> None <input type="checkbox"/> Trivial/Trace <input type="checkbox"/> Mild <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Not Documented		
	Aortic Paravalvular leak: <input type="checkbox"/> None <input type="checkbox"/> Trivial/Trace <input type="checkbox"/> Mild <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Not Documented <input checked="" type="checkbox"/> N/A		
	Level mitral insufficiency found: <input type="checkbox"/> None <input type="checkbox"/> Trivial/Trace <input type="checkbox"/> Mild <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Not Documented		
	Mitral Paravalvular leak: <input type="checkbox"/> None <input type="checkbox"/> Trivial/Trace <input type="checkbox"/> Mild <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Not Documented <input checked="" type="checkbox"/> N/A		
	Level tricuspid insufficiency found: <input type="checkbox"/> None <input type="checkbox"/> Trivial/Trace <input type="checkbox"/> Mild <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Not Documented		
	Level pulmonic insufficiency found: <input type="checkbox"/> None <input type="checkbox"/> Trivial/Trace <input type="checkbox"/> Mild <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Not Documented		
Post Op Ejection Fraction: <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes →) Post Op Ejection Fraction: _____ (%)			

P. Postoperative Events		
(If Expired in OR = No↓)		
Surgical Site Complications during postoperative period up to 30 days or during initial hospitalization <input type="checkbox"/> Yes, Infectious <input type="checkbox"/> Yes, Non-Infectious <input type="checkbox"/> Yes, Both <input type="checkbox"/> No		
(If Yes, Infectious or Yes, Both →)	Superficial Sternal Wound:	<input type="checkbox"/> Yes, within 30 days of procedure <input type="checkbox"/> Yes, >30 days after procedure but during hospitalization for surgery <input type="checkbox"/> No
	Deep Sternal: ++	<input type="checkbox"/> Yes, within 30 days of procedure <input type="checkbox"/> Yes, greater than 30 days but during initial hospitalization <input type="checkbox"/> No
		(If either Yes value →) Diagnosis Date: ____/____/____ (mm/dd/yyyy)

	Thoracotomy (within 30 days or initial hospitalization): <input type="checkbox"/> Yes <input type="checkbox"/> No	
	Conduit Harvest (within 30 days or initial hospitalization): <input type="checkbox"/> Yes <input type="checkbox"/> No	
	Cannulation Site (within 30 days or initial hospitalization): <input type="checkbox"/> Yes <input type="checkbox"/> No	
(If Yes, Non-Infectious or Yes, Both→)	Non-Infective Surgical Wound Dehiscence (includes non-infective sterile wound): <input type="checkbox"/> Sternal Superficial <input type="checkbox"/> Deep Sternal	
Is there evidence that the patient had a deep sternal wound infection within 90 days of the procedure: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		
Other In Hospital Postoperative Event Occurred: <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes ↓)		
Operative		
ReOp for Bleeding /Tamponade: ++ <input type="checkbox"/> Yes <input type="checkbox"/> No	(If Yes →) Bleed Timing: <input type="checkbox"/> Acute <input type="checkbox"/> Late	
ReOp for Valvular Dysfunction: ++ <input type="checkbox"/> Yes, surgical <input type="checkbox"/> Yes, transcatheter <input type="checkbox"/> No		
Unplanned Coronary Artery Intervention: ++ <input type="checkbox"/> Yes <input type="checkbox"/> No		
(If Yes →) Vessel: <input type="checkbox"/> Native coronary <input type="checkbox"/> Graft <input type="checkbox"/> Both	Intervention Type: <input type="checkbox"/> Surgery <input type="checkbox"/> PCI <input type="checkbox"/> Both	
Aortic Reintervention: ++ <input type="checkbox"/> Yes <input type="checkbox"/> No	(If yes→) Type: <input type="checkbox"/> Open <input type="checkbox"/> Endovascular	
ReOp for Other Cardiac Reasons: ++ <input type="checkbox"/> Yes <input type="checkbox"/> No		
Returned to the OR for Other Non-Cardiac Reasons: <input type="checkbox"/> Yes <input type="checkbox"/> No		
Open chest with planned delayed sternal closure: <input type="checkbox"/> Yes <input type="checkbox"/> No		
Infection		
Sepsis: <input type="checkbox"/> Yes <input type="checkbox"/> No		
Neurologic, Central		
Postoperative Stroke: ++ <input type="checkbox"/> Yes <input type="checkbox"/> No		
Encephalopathy: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Neurologic, Peripheral		
Lower Extremity Paralysis >24 Hours: Yes <input type="checkbox"/> No		
Paresis >24 hours: <input type="checkbox"/> Yes <input type="checkbox"/> No		
Recurrent Laryngeal Nerve Injury: <input type="checkbox"/> Yes <input type="checkbox"/> No		
Pulmonary		
Prolonged Ventilation: <input type="checkbox"/> Yes <input type="checkbox"/> No (OR exit time until initial extubation, plus any additional reintubation hours)		
(If Yes →)	Tracheostomy Required after OR Exit <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Pneumonia: <input type="checkbox"/> Yes <input type="checkbox"/> No		
Pulmonary Thromboembolism: <input type="checkbox"/> Yes <input type="checkbox"/> No		
Pleural Effusion Requiring Drainage: <input type="checkbox"/> Yes <input type="checkbox"/> No		
Pneumothorax Requiring Intervention: <input type="checkbox"/> Yes <input type="checkbox"/> No		
Renal		
Renal Failure: ++ <input type="checkbox"/> Yes <input type="checkbox"/> No		
(If Yes →)	Dialysis (Newly Required): <input type="checkbox"/> Yes <input type="checkbox"/> No	(If Yes →) Required after Hospital Discharge: <input type="checkbox"/> Yes <input type="checkbox"/> No
Vascular		
Iliac/Femoral Dissection: <input type="checkbox"/> Yes <input type="checkbox"/> No		
Acute Limb Ischemia: <input type="checkbox"/> Yes <input type="checkbox"/> No		
Deep Venous Thrombosis: <input type="checkbox"/> Yes <input type="checkbox"/> No		
Mechanical assist device related complication : <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes ↓)		
	Type of Complication: (select all that apply)	
	<input type="checkbox"/> Cannula/Insertion site issue <input type="checkbox"/> Hemorrhagic	
	<input type="checkbox"/> Thrombotic/Embolic	
	<input type="checkbox"/> Hemolytic	
	<input type="checkbox"/> Infection	
	<input type="checkbox"/> Other mechanical assist device related complication	
Other		
Rhythm Disturbance Requiring Permanent Pacemaker: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Cardiac Arrest: <input type="checkbox"/> Yes <input type="checkbox"/> No		
Aortic Complication <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes ↓)		
	Aortic Dissection: <input type="checkbox"/> Yes <input type="checkbox"/> No	
	Post Op Aortic Endoleak: <input type="checkbox"/> Yes <input type="checkbox"/> No	(If Yes→) Type: <input type="checkbox"/> Ia <input type="checkbox"/> Ib <input type="checkbox"/> II <input type="checkbox"/> III <input type="checkbox"/> IV <input type="checkbox"/> V
	Aortic Side Branch malperfusion: <input type="checkbox"/> Yes <input type="checkbox"/> No	
	Aortic stent graft induced entry tear: <input type="checkbox"/> Yes <input type="checkbox"/> No	
Anticoagulant Bleeding Event: <input type="checkbox"/> Yes <input type="checkbox"/> No		
(If Yes→)	<input checked="" type="checkbox"/> Intracerebral <input type="checkbox"/> Subdural <input type="checkbox"/> Gastrointestinal	
Heparin Induced Thrombocytopenia (HIT) <input type="checkbox"/> Yes <input type="checkbox"/> No		(If Yes→) Heparin Induced Thrombocytopenia Thrombosis (HITT) <input type="checkbox"/> Yes <input type="checkbox"/> No
Pericardiocentesis: <input type="checkbox"/> Yes <input type="checkbox"/> No		

Gastro-Intestinal Event: <input type="checkbox"/> Yes <input type="checkbox"/> No <small>(If Yes, select all that apply→)</small>	<input type="checkbox"/> Ischemic Bowel <input type="checkbox"/> Gastrointestinal Bleed <input type="checkbox"/> Pancreatitis <input type="checkbox"/> Cholecystitis <input type="checkbox"/> Liver Dysfunction/Liver Failure <input type="checkbox"/> Ileus <input type="checkbox"/> Other
Atrial Fibrillation: <input type="checkbox"/> Yes <input type="checkbox"/> No	

Q. Discharge / Mortality

Status at 30 days After Surgery (either discharged or in-hospital): ++ Alive Dead Unknown

Did the patient transfer to another acute care hospital after this procedure during same stay: Yes No (If Yes →) Date Transferred: ___/___/___

Is the patient still in the Acute Care Hospital Setting: Yes No (If No ↓)

Hospital Discharge Date ___/___/___ (mm/dd/yyyy)	
Status at Hospital Discharge++	<input type="checkbox"/> Discharged Alive, last known status alive (other than Hospice) <input type="checkbox"/> Discharged Alive, died after discharge <input type="checkbox"/> Discharged to Hospice <input type="checkbox"/> Died in hospital
(If Discharge Alive, last known status alive OR Discharged Alive, died after discharge →)	Discharge Location: <input type="checkbox"/> Home <input type="checkbox"/> Extended Care/Transitional Care Unit/Rehab <input type="checkbox"/> Nursing Home <input type="checkbox"/> Left AMA <input type="checkbox"/> Other
(If Discharge Location = Extended Care/Transitional Care Unit/Rehab →)	<input type="checkbox"/> Acute/Short-term Rehab <input type="checkbox"/> Long-term Rehab <input type="checkbox"/> Unknown
(If Discharge Location is NOT Left AMA →)	Cardiac Rehabilitation Referral: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable
	Substance Use Screening and Counseling Performed (NQF 2597): <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable
Medications Prescribed at Discharge	
Antiplatelet++	Aspirin <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Contraindicated
	ADP Inhibitor <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Contraindicated
	Other Antiplatelet <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Contraindicated
Anticoagulant	Direct Oral Anticoagulant <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Contraindicated
	Warfarin (Coumadin) <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Contraindicated
	Other Anticoagulant <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Contraindicated
ACE or ARB	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Contraindicated <input type="checkbox"/> Not Indicated (see Training Manual)
Amiodarone	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Contraindicated
Beta Blocker ++	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Contraindicated
Lipid Lowering - Statin ++	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Contraindicated
Lipid Lowering - Other	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Contraindicated
(If Status at Hospital Discharge is 'Discharged Alive, Died after discharge' OR 'Discharged to Hospice' →)	Mortality - Date++ ___/___/___ (mm/dd/yyyy)
(If Status at Hospital Discharge is 'discharged alive, died after discharge' OR 'Discharged to Hospice' →)	Operative Mortality: ++ <input type="checkbox"/> Yes <input type="checkbox"/> No
(If Status at Hospital Discharge is 'Discharged to Hospice' OR 'Discharged Alive, died after discharge' →)	Post Discharge death location: <input type="checkbox"/> Home <input type="checkbox"/> Extended Care Facility <input type="checkbox"/> Hospice <input type="checkbox"/> Acute Rehabilitation <input type="checkbox"/> Hospital during readmission <input type="checkbox"/> Other <input type="checkbox"/> Unknown
(If Died in Hospital →)	Primary Cause of Death (select only one) <input type="checkbox"/> Cardiac <input type="checkbox"/> Neurologic <input type="checkbox"/> Renal <input type="checkbox"/> Vascular <input type="checkbox"/> Infection <input type="checkbox"/> Pulmonary <input type="checkbox"/> Unknown <input type="checkbox"/> Other

R. Readmission

(If Status at Hospital Discharge = Discharged alive, last know status = alive or Discharged alive, died after discharge ↓)

Readmit : ++ Yes No Unknown (If Yes ↓)

Readmit Date: ___/___/___ (mm/dd/yyyy)

Readmit Primary Reason:

- | | |
|--|--|
| <input type="checkbox"/> Angina
<input type="checkbox"/> Anticoagulation Complication - Pharmacological
<input type="checkbox"/> Anticoagulation Complication – Valvular
<input type="checkbox"/> Aortic Complication
<input type="checkbox"/> Arrhythmia or Heart Block
<input type="checkbox"/> Blood Pressure (hyper or hypotension)
<input type="checkbox"/> Chest pain, noncardiac
<input type="checkbox"/> Congestive Heart Failure
<input type="checkbox"/> Coronary Artery/Graft Dysfunction
<input type="checkbox"/> Depression/psychiatric issue
<input type="checkbox"/> DVT
<input type="checkbox"/> Electrolyte imbalance
<input type="checkbox"/> Endocarditis
<input type="checkbox"/> Failure to thrive
<input type="checkbox"/> GI issue
<input type="checkbox"/> Infection, Conduit Harvest Site
<input type="checkbox"/> Infection, Deep Sternum / Mediastinitis
<input type="checkbox"/> Mental status changes
<input type="checkbox"/> Myocardial Infarction
<input type="checkbox"/> PE | <input type="checkbox"/> Pericardial Effusion and/or Tamponade
<input type="checkbox"/> Pericarditis/Post Cardiotomy Syndrome
<input type="checkbox"/> Pleural effusion requiring intervention
<input type="checkbox"/> Pneumonia
<input type="checkbox"/> Renal Failure
<input type="checkbox"/> Renal Insufficiency
<input type="checkbox"/> Respiratory complication, Other
<input type="checkbox"/> Sepsis
<input type="checkbox"/> Stroke
<input type="checkbox"/> TIA
<input type="checkbox"/> Transfusion
<input type="checkbox"/> Transplant Rejection
<input type="checkbox"/> VAD Complication
<input type="checkbox"/> Valve Dysfunction
<input type="checkbox"/> Vascular Complication, acute
<input type="checkbox"/> Wound , other (drainage, cellulitis,)
<input checked="" type="checkbox"/> Wound, Sternal dehiscence not related to infection
<input type="checkbox"/> Other – Related Readmission
<input type="checkbox"/> Other – Nonrelated Readmission
<input type="checkbox"/> Other – Planned Readmission
<input type="checkbox"/> Unknown |
|--|--|

Readmit Primary Procedure:

- | | |
|--|--|
| <input type="checkbox"/> No Procedure Performed
<input type="checkbox"/> Cath lab for Valve Intervention
<input type="checkbox"/> Cath lab for Coronary Intervention (PCI)
<input type="checkbox"/> Dialysis
<input type="checkbox"/> OR for Bleeding
<input type="checkbox"/> OR for Coronary Artery Intervention
<input type="checkbox"/> OR for Sternal Debridement / Muscle Flap
<input type="checkbox"/> OR for Valve Intervention | <input type="checkbox"/> OR for Vascular Procedure
<input type="checkbox"/> OR for Aorta Intervention
<input type="checkbox"/> Pacemaker Insertion / AICD
<input type="checkbox"/> Pericardiotomy / Pericardiocentesis
<input type="checkbox"/> Planned noncardiac procedure
<input type="checkbox"/> Thoracentesis/ Chest tube insertion
<input type="checkbox"/> Wound vac
<input type="checkbox"/> Other Procedure
<input type="checkbox"/> Unknown |
|--|--|

If OR for Aorta intervention→)

- Type: Open Endovascular
- Indication: Rupture Endoleak Infection Dissection Expansion Loss of side branch patency
 Other

Adult Cardiac Anesthesiology

(for sites participating in the optional anesthesiology component)

Organization participates in the Adult Anesthesia Section: Yes No

Primary Anesthesiologist Name: _____ Primary Anesthesiologist National Provider Number: _____

Anesthesiology Care Team Model:

- Anesthesiologist working alone
- Attending anesthesiologist teaching/medically directing fellow
- Attending anesthesiologist teaching/medically directing house staff
- Attending anesthesiologist medically directing CRNA

Attending anesthesiologist medically directing AA

- Surgeon medically directing CRNA
- CRNA practicing independently

If Attending anesthesiologist medically directing CRNA ↓
Ratio: 1:1 1:2 1:3 1:4 1:5 N/A

If Attending anesthesiologist medically directing AA ↓
Ratio: 1:1 1:2 1:3 1:4 1:5 N/A

Pain Score Baseline: 0 1 2 3 4 5 6 7 8 9 10 Not Recorded

Pre Induction Systolic BP: _____

Pre Induction Diastolic BP: _____

Pre Induction Heart Rate: _____

Pulmonary Artery Catheter Used: Yes No

Algorithm used to Guide Transfusion: Yes No

Anticoagulation Prior to CPB

Heparin prior to CPB Yes No

(If Yes →)

Heparin Dose: _____ units

Heparin Management:

- Heparin titration based on activated clotting time (ACT)
- Heparin titration based on heparin concentration (Hepcon)
- Other method

Fresh Frozen Plasma prior to CPB Yes No (If yes →)

Total Dose: _____ units

Antithrombin III prior to CPB Yes No (If yes →)

Total Dose: _____ International Unit/mL

Bivalirudin Yes No

Argatroban Yes No

Viscoelastic Testing Used Intraop: Yes No

Volatile Agent Used: Yes No

(If Yes →)

Volatile Agent(s) used:

- Isoflurane Desflurane Sevoflurane Other

(select all that apply →)

Volatile Agent(s) timing

- Pre CPB During CPB Post CPB Maintenance (if no CPB)

(select all that apply →)

Intraop Midazolam: Yes No

If Yes → Dose _____ mcgs

Intraop Fentanyl Yes No

If Yes → Dose _____ mcgs

Intraop Sufentanil Yes No

If Yes → Dose _____ mcgs

Intraop Remifentanyl Yes No

If Yes → Dose _____ mcgs

Multimodal Analgesics (OR Entry to 24h post OR Exit) Yes No

(If Yes, select all that apply →)

- Ketamine (IV) Local/Regional Anesthesia Lidocaine Infusion (not bolus)
- Acetaminophen (IV or PO) Cox-2 inhibitor/non-steroidal anti-inflammatory (PO)
- Dexmedetomidine (IV)

Core Temperature Source in OR:

- Esophageal Tympanic Oxygenator arterial outlet
- Bladder Rectal blood (CPB Arterial Blood)
- Nasopharyngeal CPB venous return Other
- PA Catheter Jugular-Venous Unknown
- Thermistor

Core Temp Max during rewarming: _____ °C

Crystalloid given by Anesthesia Yes No

(If Yes →)

Anesth. Total Crystalloid: _____ mL

Type: 0.9 Sodium Chloride Normosol Ringer's Lactate Plasmalyte

Was 5% Albumin given by Anesthesia Yes No (If Yes →)

Anesthesiology Total 5% Albumin _____ mL

Was 25% Albumin give by Anesthesia <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes→)		Anesthesiology Total 25% Albumin _____ mL
Autologous Normovolemic Hemodilution (ANH) <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes→)	ANH Volume: _____ mL	
Intraop Inhaled Vasodilator: <input type="checkbox"/> Yes <input type="checkbox"/> No	Intraop IV Vasodilators Used: <input type="checkbox"/> Yes <input type="checkbox"/> No	
Intraop Glucose Trough: <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes→)	_____ mg/dL	
Intraop Insulin Given: <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes→)	Intraop Insulin Total Dose _____ units	
Intraoperative Processed EEG (BIS): <input type="checkbox"/> Yes <input type="checkbox"/> No		
Intraop Post-Induction/Pre-Incision Transesophageal Echo (TEE): <input type="checkbox"/> Yes <input type="checkbox"/> No		
(If Post-Induction/Pre-Incision TEE is Yes→)	LVEF Measured or Estimated: <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes→)	LVEF: _____ %
	Left Atrial Size <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes→)	Left Atrial Superior-Inferior _____ cm
		Left Atrial Medial-Lateral _____ cm
	RV Function:	<input type="checkbox"/> Normal <input type="checkbox"/> Moderate Dysfunction <input type="checkbox"/> Not Assessed <input type="checkbox"/> Mild Dysfunction <input type="checkbox"/> Severe Dysfunction
	Mitral Regurgitation:	<input type="checkbox"/> None <input type="checkbox"/> Trace/trivial <input type="checkbox"/> Mild <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Not assessed
	Patent Foramen Ovale:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not assessed
	Ascending Aorta Assessed <input type="checkbox"/> Yes <input type="checkbox"/> No	
	(If Yes→)	Maximal Ascending Aorta Diameter: _____ cm Maximal Ascending Aorta Atheroma Thickness: _____ mm Ascending Aorta Atheroma Mobility: <input type="checkbox"/> Yes <input type="checkbox"/> No
	Aortic Arch Visualized: <input type="checkbox"/> Yes <input type="checkbox"/> No	
	(If Yes→)	Maximal Aortic Arch Atheroma Thickness: _____ mm Aortic Arch Atheroma Mobility: <input type="checkbox"/> Yes <input type="checkbox"/> No
Cardiopulmonary Bypass Used: <input type="checkbox"/> Yes <input type="checkbox"/> No		
(If CPB Use is Yes→)	ABG Management during cooling <input type="checkbox"/> Alpha-Stat <input type="checkbox"/> pH-Stat <input type="checkbox"/> Unknown	
	ABG Management during rewarming <input type="checkbox"/> Alpha-Stat <input type="checkbox"/> pH-Stat <input type="checkbox"/> Unknown	
	Arterial Outflow Temperature Measured <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes→)	Highest Arterial Outflow Temperature: _____ °C
	Retrograde Autologous Priming of CPB Circuit: <input type="checkbox"/> Yes <input type="checkbox"/> No	
	Total Crystalloid Administered by Perfusion Team: _____ mL	
	(If mL >0 select all that apply) <input type="checkbox"/> 0.9 Sodium Chloride <input type="checkbox"/> Normosol <input type="checkbox"/> Ringer's Lactate <input type="checkbox"/> Plasmalyte	
	Total 5% Albumin Administered by Perfusion Team: _____ mL	
	Total 25% Albumin Administered by Perfusion Team: _____ mL	
Hemofiltration Volume Removed by Perfusion Team: _____ mL		

	Inotropes used to wean from CPB: <input type="checkbox"/> Yes <input type="checkbox"/> No	
	Vasopressors used to wean from CPB: <input type="checkbox"/> Yes <input type="checkbox"/> No	
Cell Saver Volume: _____ mL	Protamine Total Dose : _____ mgs	
Post-Procedure Use Of Intraoperative TEE: <input type="checkbox"/> Yes <input type="checkbox"/> No		
(If Post Proc TEE is Yes→)	Systolic Anterior Motion of Mitral Valve: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not assessed	
	Return to CPB for Echo Related Diagnosis: <input type="checkbox"/> Yes <input type="checkbox"/> No	
	(If Yes →)	Reason for return to CPB: <input type="checkbox"/> New Wall Motion Abnormality <input type="checkbox"/> Residual Valvular Leak <input type="checkbox"/> Systolic Anterior Motion (SAM) <input type="checkbox"/> Paravalvular Leak <input type="checkbox"/> Ventricular Failure <input type="checkbox"/> Other <input type="checkbox"/> Unknown
		(If Ventricular Failure →) <input type="checkbox"/> Left Ventricular Failure <input type="checkbox"/> Right Ventricular Failure <input type="checkbox"/> Bi-Ventricular Failure <input type="checkbox"/> Unknown
	Post-Procedure LVEF Measured: <input type="checkbox"/> Yes <input type="checkbox"/> No	(If Yes→) Post-Procedure LVEF: _____ %
Post-Procedure RV Function: <input type="checkbox"/> Normal <input type="checkbox"/> Moderate Dysfunction <input type="checkbox"/> Not Assessed <input type="checkbox"/> Mild Dysfunction <input type="checkbox"/> Severe Dysfunction		
Patient Died in the OR: <input type="checkbox"/> Yes <input type="checkbox"/> No		
(If Died in OR is No→)	Core Temp Measured upon Entry to ICU/PACU: <input type="checkbox"/> Yes <input type="checkbox"/> No	
	(If Yes→)	Post Op Core Temp: _____ °C
	Post-Op INR Measured upon admission to post op care location (PACU, ICU): <input type="checkbox"/> Yes <input type="checkbox"/> No	
	(If Yes→)	INR: _____
	WBC Measured upon admission to post op care location (PACU, ICU): <input type="checkbox"/> Yes <input type="checkbox"/> No	
	(If Yes→)	WBC : _____ / μ L
	Platelets Measured upon admission to post op care location (PACU, ICU): <input type="checkbox"/> Yes <input type="checkbox"/> No	
	(If Yes→)	Platelet Count: _____ / μ L
	Hemoglobin Measured upon admission to post op care location (PACU, ICU): <input type="checkbox"/> Yes <input type="checkbox"/> No	
	(If Yes→)	Hemoglobin: _____ /gm/dL
	Hematocrit Measured upon admission to post op care location (PACU, ICU): <input type="checkbox"/> Yes <input type="checkbox"/> No	
	(If Yes→)	Hematocrit: _____ %
	Fibrinogen Measured upon admission to post op care location (PACU, ICU): <input type="checkbox"/> Yes <input type="checkbox"/> No	
	(If Yes→)	Fibrinogen _____ mg/dL
	Lactate Measured upon admission to post op care location (PACU, ICU): <input type="checkbox"/> Yes <input type="checkbox"/> No	
	(If Yes→)	Lactate: _____ mg/dL
	Peak Glucose between within 18-24 hours after OR Exit Time: _____	
	Post Op Propofol: <input type="checkbox"/> Yes <input type="checkbox"/> No	
Post Op Other Sedation: <input type="checkbox"/> Yes <input type="checkbox"/> No		
Post Op Delirium: <input type="checkbox"/> Yes <input type="checkbox"/> No		
Pain Score POD #3: <input type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> Not recorded <input type="checkbox"/> NA		
Pain Score Discharge: <input type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> Not recorded <input type="checkbox"/> NA		