

The Society of Thoracic Surgeons Adult Cardiac Surgery Database

Data Collection Form Version 2.9

7/2017

A. Administrative				
Participant ID:	Record ID: (soft)	ware generated)	STS Cost Link:	
ParticID (25)	RecordID (30)		CostLink (35)	
Patient ID: (software generated) PatID (40)				
Patient participating in STS-related clinical tr	ial:			
ClinTrial (45) ☐ None ☐ Trial 1 ☐ Trial 2 ☐ Tri	al 2 □ Tuial 4 □ Tui	iol 5 Triol 6 (If not		ent ID:
L None L Inai I L Inai 2 L In	ai 5 🗀 1 i ai 4 🗀 1 i i	iai 5 🗀 Inai 6 (ii not	"None" →) ClinTrialPatID (46)	
B. Demographics				
Patient Last Name:	Patient First Name:		Patient Middle Name:	
PatLName (50)	PatFName (55)		PatMName (60)	
Date of Birth:// (mm/c	Id/yyyy) Patient Age (70)		Sex: ☐ Male ☐ Fe	emale
National Identification (Social Security)Num		$Refused (If Yes \rightarrow) \qquad N$	ational ID Number:	
SSNKnown (76)		SS	SN (80)	
Medical Record Number: MedRecN (85)				
Street Address:	Cit	ty:		
PatAddr (90)		City (95)	1 -	
Region: PatRegion (100)		P Code: ZIP (105)	Country: PatientCountry (115)
Is This Patient's Permanent Address: \(\square\) Yes		ZIF (103)	FatientCountry	113)
PermAddr (120)				
Is the Patient's Race Documented? ☐ Yes ☐	☐ No ☐ Pt. Declined to I	Disclose		
RaceDocumented (150) (If Yes \rightarrow) Race: (Select all that apply \rightarrow)	White:	□ Yes □ No	Am Indian/Alaskan:	□ Yes □ No
(if its →) Race . (Select all that apply →)	RaceCaucasian (155)	□ 1es □ No	RaceNativeAm (170)	L les L No
	Black/African American:	□ Yes □ No	Hawaiian/Pacific Islander:	□ Yes □ No
	RaceBlack (160)		RacNativePacific (175)	
	Asian: RaceAsian (165)	□ Yes □ No	Other: RaceOther (180)	□ Yes □ No
Hispanic, Latino or Spanish Ethnicity:	Yes No Not Docu	ımented	Naceother (180)	
Ethnicity (185)				
C. Hospitalization Hospital Name:	(If Not Missing \rightarrow)	Hospital ZIP Code:	Hooni	tal Region:
HospName (205)	(II Not Wissing →)	HospZIP (210)		at (215)
Hospital National Provider Identifier:			ation Number:	
HospNPI (220)		HospCMSCert (221)	e/Self \(\) Secondary Payor: (Choose	
Primary Payor: (Choose one) PayorPrim (291)		(II Primary Payor <>None	PayorSecond (293)	se one)
□ None/Self		□ None	.,(,	
☐ Medicare (includes commercially mana	aged options)	☐ Medicare		
☐ Medicaid (includes commercially mana	aged options)	☐ Medicaid		
☐ Military Health		☐ Military Healt	h	
☐ Indian Health Service		☐ Indian Health		
☐ Correctional Facility		☐ Correctional F	•	
☐ State Specific Plan		☐ State Specific		
☐ Other Government Insurance			ment Insurance	
Commercial Health Insurance			Health Insurance	
Health Maintenance Organization			enance Organization	
Non -U.S. Plan		□ Non -U.S. Plan		
☐ Charitable care/ Foundation Funding (if Medicare →) Primary Payor Medicare Fee f			e/ Foundation Funding ary Payor Medicare Fee for Serv	:

		T			
Admit Date:// (mm/dd/yyyy		Date of S	urgery://_ (mm/dd/y		
AdmitDt (305))	SurgDt (31		ууу)	
	tive Admission	gency Department Trai	•	hospital/acute care facility Other	
AdmitSrc (320)			Other Hospital Perform OthHosCS (325)	ms Cardiac Surgery □ Yes □ No	
D. Risk Factors					
"Unknown" should only be sele	cted if Patient / Family unable	to provide history			
Did the patient have a labora		of Covid-19? No (Harves			
TempCode (7230)		☐ Yes, in hos ☐ Yes, in hos	pital prior to surgery (pital after surgery (Ha		
Date of Positive Covid-19 T TempDt (7225)	est (closest to OR date)		mm/dd/yyyy)		
Height (cm):			Weight (kg):		
HeightCm (330) Family History of Premature	Coronary Artery Diagona	□ Vos □ No. □ Unknow	WeightKg (335)		
FHCAD (355)	•	Li Tes Li No Li Clikilov	VII		
Diabetes: ☐ Yes ☐ No ☐ U	$\overline{\text{Jnknown}} \text{ (If Yes} \rightarrow)$				
Diabetes (360) Diabetes-Control: □ None	☐ Diet only ☐ Oral ☐	Insulin □ Other SubO □	l Other 🛮 Unknown		
DiabCtrl (365)					
Dyslipidemia: ☐ Yes ☐ No Dyslip (370)		vialysis: □ Yes □ No □ Un ialysis (375)	known	Hypertension: ☐ Yes ☐ No ☐ Unknown Hypertn (380)	
Endocarditis: ☐ Yes ☐ No	(If Ves→) Endocarditis Tv	ne: □ Treated □ Active			_
InfEndo (385)	InfEndTy (390)	pc. 🗆 Treated 🗀 Active			
(If Endocarditis Yes→)				☐ MSSA ☐ Coagulase negative staph	
		l Enterococcus species □ (l Mycobacterium (chimera)			
Tobacco use:	☐ Never smoker	iviyeobacterium (emmera)		status (frequency) unknown	
TobaccoUse (400)	☐ Current every day smol		☐ Former smoker	1	
Lung Disease: ☐ No ☐ Mi	☐ Current some day smok		☐ Smoking status u		
ChrLungD (405)	in Dividente Deve	Le Bung disease docum	onica, severity animo	WI - CHANGWII	
(If Mild, Moderate or Severe→)	Type: Obstructive Documented		al Fibrosis □ Restric	tive 🗆 Other 🗆 Multiple 🗆 Not	
	ChrLungDType (410)				
Pulmonary Function Test Do PFT (415)	one: ∐ Yes ∐ No				
	redicted:	DLCO Test Performe DLCO (425)	d: Yes No (If	Yes →) DLCO % Predicted: DLCOPred (430)	
Room Air ABG Performed: ABG (435)	\square Yes \square No (If Yes \rightarrow)	Carbon Diox PCO2 (440)	ide Level:	Oxygen Level : PO2 (445)	
Home Oxygen: ☐ Yes, PRN	V ☐ Yes, oxygen depender	nt 🗆 No 🗆 Unknown	Inhaled Medication	or Oral Bronchodilator Therapy:	
HmO2 (450)			BDTx (455) ☐ Yes ☐ No ☐	Unknown	
Sleep Apnea: ☐ Yes ☐ No	□ Unknown			ent □ Remote □ No □ Unknown	
SlpApn (460)			Pneumonia (465)		
Illicit Drug Use: ☐ Recent IVDrugAb (470)	Remote No Unk	nown	Depression ☐ Yes ☐ Depression (475)	□ No □ Unknown	
Alcohol Use: □ <=1 drink/v Alcohol (480)	veek □ 2-7 drinks/week	$\square >= 8 \text{ drinks/week} \square \text{ N}$	None		
Liver Disease: ☐ Yes ☐ N	o □ Unknown (If Yes →)	Child –Pugh Class □	A DB DC DUnk	nown	\dashv
LiverDis (485)	()	LiverChildPugh (486)			
		Listed for liver transpla	nt: □ Yes □ No		
		LiverTransList (487) Status post liver transpl	ant: □ Yes □ No		
		LiverStatusPost (488)			

Immunocompromise Present: ☐ Yes ☐ No ☐ Unknown				Mediastinal Radiation: ☐ Yes ☐ No ☐ Unknown						
Cancer Within 5	Years: □ Yes □ No □	Unknown			MediastRad (495) Peripheral Artery Disease: □ Yes □ No □ Unknown					
Cancer (500)	10as. 🗆 10s 🗀 110 🗅	Cirkiowii		PVD		Titlery Discuse.	_ 103 110 L	i Chkhown		
Thoracic Aorta I ThAoDisease (510)	Disease: ☐ Yes ☐ No	□ Unknown			cope: ope (51	□ Yes □ No □ 5)	Unknown			
Unresponsive St	ate: □ Yes □ No			Ches	et wall	Deformity: ☐ Y	es 🗆 No 🗆 H	nknown		
UnrespStat (520)	ate. 🗆 Tes 🗀 No					ef (521)	es 🗆 No 🗀 o.	IIKIIOWII		
	Disease: ☐ Yes ☐ No ☐	□ Unknown								
$\begin{array}{c} \text{CVD (525)} \\ \text{(If Yes} \rightarrow) \end{array}$	Prior CVA: ☐ Yes ☐	No 🗆 Unk	$\mathbf{nown} \; (\text{If Yes} \rightarrow)$			VA-When: □ <=	= 30 days □ >	30 days		
	CVA (530)			C	VAWhe	en (535)				
	CVD TIA: ☐ Yes ☐ CVDTIA (540)	No □Un	known							
	CVD Carotid stenosis:	□ Right	□ Left □ Bo	th 🗆 N	lone	☐ Not Documen	ted			
	CVDCarSten (545) (If "Right" or "Both	"→) Sever	rity of stenosis o	n the righ	nt caro	tid artery: □ 50-	79% □ 80 – 9	9% □ 100%	ו ה	Not
	(II Tuguv or Boun	docui	nented enRt (550)	ir uic 11gi	n caro	ild artery. \square 30	7770 🗀 00 7	270 10070	, ш.	1101
	(If "Left" or "Both"			n tha laft	aarati	d artery: □ 50-7	700/ 🗆 90 00	00/ □ 1000/		Not
	(II Left of Both	docur	nented enLft (555)	ii tile leit	caron	d aftery. $\square 30$ -	79% <u> </u>	7% <u> </u>	, Ш1	NOL
	History of previous car CVDPCarSurg (560)	otid artery su	rgery and/or ste	nting: \square	Yes I	□ No				
	lab results below. Not									
	f both Hemoglobin & H			Liver di						xpected
WBC Count:		Hemoglobi				natocrit:		Count:		
WBC (565)	_	RFHemoglob	oin (570)		Hct (575)	Platelets	(580)		
Last Creatinine I	Level:	Total Albu	min:		Tota	l Bilirubin:	A1c Lev	vel:		
CreatLst (585)		TotAlbumin	(590)		TotB	rbn (595)	A1cLvl (6	00)		
HIT Antibodies	☐ Yes ☐ No ☐ Not A	Applicable	INR:		MEI	LD Score:	(System Calcul	lation) BNP	,	_
HITAnti (605)		• •	INR (610)			OScr (615)		BNP	(620)	
Five Meter Walk	Test Done: ☐ Yes ☐ N	lo □ Non-a	l mbulatory patier	nt						
FiveMWalkTest (64			, F							
	(If Yes →) Ti	me 1:	_ (seconds)	Т	ime 2:	(second	de)	Fime 3 ·		seconds)
		eMWalk1 (650))	Fi	Time 2: (seconds) FiveMWalk2 (655) Time 3: (seconds) FiveMWalk3 (660)					
	test done: \(\sum \text{ Yes } \sum No	(If Yes \rightarrow)	Total Dist			feet				
SixMWalkDone (66	o1)		SixMWalk	Dist (662)						
E. Previous Ca	ardiac Interventions									
	: Interventions: ☐ Yes ☐	No □ Unl	known							
$\frac{PrCVInt (665)}{(If Yes \to)} Pre$	* 1	(CAD)								
/	evious coronary artery by (AB (670)	pass (CAB):	⊔ Yes ⊔ No							
	evious valve procedure: E valve (675)	∃Yes □ No	If PrValve Yes, F	Enter at le	east one	e previous valve pro	ocedure and up to	5 ↓		
				#1		#2	#3	#4		#5
				PrValvePr (695)		PrValveProc2 (700)	PrValveProc3 (705)	PrValvePr (710)		PrValveProc5 (715)
				(-55)		()	(-20)	(, 20)		V- == /
	additional valve procedu	. ,								
	rtic valve balloon valvoto		olasty							
	rtic valve repair, surgical rtic valve replacement, su							+		
	rtic valve replacement, st									
	tral valve balloon valvoto		lastv					+		
	tral valve commissurotor									
	tral valve repair, percutar									
	tral valve repair, surgical									
	tral valve replacement, su									
	tral valve replacement tr								_	

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: ☐ Yes ☐ No								
(If Yes →) PCI Performed Within This Episode Of POCPCIWhen (780) (If "Yes, at this facility" or "Yes, at some oth Indication for Surgery: □ PCI Con	her acute care f	acility"↓)	· □:	PCI Failure	without Clin	ical Deterio		
	ure with Clini STEMI, multi			PCI/Surgery Other	Staged (not	STEMI)		
POCPCISt (790) □Unknown	PCI Stent: ☐ Yes ☐ No (If Yes →) Stent Type: ☐ Bare metal ☐ Drug-eluting ☐ Bioresorbable ☐ Multiple ☐ Unknown POCPCIStTy (795) PCI Interval: ☐ <= 6 Hours ☐ > 6 Hours POCPCIIn							
Other Previous Cardiac Interventions: Yes No	(If Yes, Enter	at least one p	revious other	cardiac proce	dure and up to	7 1)		
POC (805)		_						
	#1 POCInt1 (810)	#2 POCInt2 (815)	#3 POCInt3 (820)	#4 POCInt4 (825)	#5 POCInt5 (830)	#6 POCInt6 (835)	#7 POCInt7 (840)	
No additional interventions								
Ablation, catheter, atrial fibrillation								
Ablation, catheter, other or unknown								
Ablation, catheter, ventricular								
Ablation, surgical, atrial fibrillation								
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		1		1	1			
Closure device, ventricular septal defect								
Congenital cardiac repair, surgical								
ECMO								
Implantable Cardioverter Defibrillator (ICD) with or without pacemaker								
Pacemaker								
Pericardial window/Pericardiocentesis							1	
Pericardiectomy								
Pulmonary Thromboembolectomy		1						
Total Artificial Heart (TAH)		<u> </u>	1					
Transmyocardial Laser Revascularization (TMR)		<u> </u>	1					
Transplant heart & lung		<u> </u>	1					
Transplant heart & rung Transplant, heart								
Transplant, lung(s)								
Ventricular Assist Device (VAD), BiVAD		1						
Ventricular Assist Device (VAD), left								
Ventricular Assist Device (VAD), right		1						
	1	1	1	L	L	1	I	

Other Cardiac Intervention (not listed)				
outer cardiae intervention (not hister)	l .			

	ve Cardiac Status I Infarction: □ Yes □	No D Unknown	(If Vac. 1)						
PrevMI (885)	ii iiiiaictioii. 🗀 Tes 🗀								
		MIWhen (890)			out <24 Hrs. □ 1	to 7 Days 🛚	8 to 2	21 Days □ >21 I	Days
Cardiac Presenta	ation/Symptoms: (Choos	e one from the list be	low for each						
					ime of this admission of the description of the des			At time of CardSympTime	
No Symp	otoms			care	20 y p	501		caracymprime	0.00.8 (500)
Stable A									
Unstable	Angına Elevation MI (Non-STE	EMI)							
	tion MI (STEMI)	SIVII)							
	Equivalent								
Other	V DN DH	(YCXY) TT'			ZI : □ D 4	т По	1.		4 11
HeartFail (911)	Yes □ No □ Unknov	Hea Clas Clas	rtFailTmg (91 ssification-l sNYH (915)	<mark>12)</mark> NYHA:	Chronic □ Both □ Class I □ Clas	HeartFailType (ss II □ Class I	(913) III [☐ Class IV ☐ No	th Unavailable t Documented
CarShock (930)	ock : Yes, at the time								
No	☐ Yes - Within 1 hour o	of the start of the pr	ocedure	□ Yes -	- More than 1 hour	but less than 24	4 hou	rs of the start of th	e procedure
Resusc (935)	V □ N-								
Arrhythmia: ☐ `Arrhythmia (945)	res 🗆 No								
(If Arrhythmia = Y	Vec)	Permanently Pace ArrhythPPaced (94		□ Yes	□ No				
(If Yes, choose or	ne response below for	VTach/VFib	Sick Sinu	ıs	AFlutter	AFibrillation		Second Degree	Third Degree
each rhythm →)		ArrhythVV (950)	Syndrome ArrhythSSS	rome ArrhythAFlutter ArrhythAtrFib Heart Blo				Heart Block ArrhythSecond (965)	Heart Block ArrhythThird (970)
	None								
	note (> 30 days preop) ent (<= 30 days preop)								
(If AFibrillation no	ot 'None' →)	Atrial Fibrillation ArrhythAFib (962)	ı Type: ⊔	Paroxys	smal Persistent	☐ Longstandir	ıg Pe	rsistent 🗆 Perman	ent
a =									
	ve Medications	Ti of		T		A	2.4	-4:	
ACE or ARB	Medication	Timefor Within 48 ho		ПҮе	es 🗆 No 🗆 Contra	Admin			
MedACEI48 (1020)								
Amiodarone ((1025)	Prior to surg	ery		es, on home therapy nknown	✓ □ Yes, there	apy s	tarted this admissi	on 🗆 No
· · · · · · · · · · · · · · · · · · ·	Beta Blocker MedBeta (1030)	Within 24 ho	ours		es 🗆 No 🗆 Contra	aindicated			
	Beta Blocker	On therapy f	for ≥ 2	□Ye	es 🗆 No 🗆 Contra	aindicated U	Jnkno	own	
	MedBetaTher (1035)	weeks prior							
Antianginal	Calcium Channel Blocker	On therapy f weeks prior		□ Ye	es 🗆 No 🗆 Contra	aindicated \square U	Inkno	own	
	MedCChanTher (1040) Long-acting Nitrate	On therapy f		□ V _c	es 🗆 No 🗆 Contra	indicated □ I	Inkne	oun	
	MedLongActNit (1045)	weeks prior	to surgery			inidicated 🗀 C	TIKII	JWII	
	Nitrates, intravenous MedNitlV (1050)				es 🗆 No				
	Other Antianginal MedOthAntiang (1055)	On therapy f weeks prior		☐ Ye	es 🗆 No 🗆 Contra	aindicated U	nkno	wn	
	ADP Inhibitor (includes P2Y12)	Within 5 day			es □ No □ Contra s→)ADP Inhibitors	Discontinuation			or to surgery)
Antiplatelet	MedADP5Days (1060) Aspirin	Within 5 day	ys	□ Ye	MedADPIDis (10) es □ No □ Contra		Inkno	own	
	MedASA (1070)			(TOX)	1/2/ha//	Discontinuation Dis (1071)	n: _	(# days pric	or to surgery)
				(If Ye	Aspirin	one time dose: Once (1072)	□ Y	es 🗆 No	
	Glycoprotein IIb/IIIa MedGP (1073)	Within 24 ho	ours	□ Ye	es 🗆 No	, ,			

	Anticoagulants (Intravenous/ SubQ) MedACoag (1075)	Within 48 hours		□ No (If Yes→) Medicat MN (1080)	ion:			
Anticoagulant	Warfarin (Coumadin) MedCoum5Days (1091)	Within 5 days		□ No □ Unknown →) Coumadin Discontinua MedCoum5Dis (1092)		or to surgery)		
	Factor Xa inhibitors MedXa5Days (1101)	Within 5 days		□ No □ Unknown →)Factor Xa Discontinuat MedXa5DDis (1102)	ion: (# days pric	or to surgery)		
	Novel Oral Anticoagulant MedNOACSDays (1111)	Within 5 days		 No ☐ Unknown NOAC Discontinuation MedNOACDisc (1112) 	n:(# days prior	to surgery)		
	Thrombin Inhibitors MedThromIn5Days (1121)	Within 5 days		☐ Yes ☐ No ☐ Unknown (If Yes→) Thrombin Inhibitor Discontinuation: (# days prior to sur				
	Thrombolytics MedThrom (1125)	Within 48 hours	□ Yes	□ No				
Inotropic, intrave		Within 48 hours	☐ Yes	□ No				
Lipid lowering MedLipid (1135)		Within 24 hours		☐ No ☐ Contraindicated →) Medication Type : ☐ St MedLipType (1141)		Non-statin/Other		
Steroids MedSter (1143)		Within 24 hours	□ Yes	□ No □ Contraindicate	d 🗆 Unknown			
H. Hemodyna	mics/Cath/Echo							
CarCathPer (1145)	ization Performed : ☐ Yes			c Catheterization Date: Dt (1150)	_//			
Coronary Anator	my/Disease known: Yes (1155) Dominance:	□ No (If Yes↓)	□ Left	□ Right □ Co-dom	inant □ Not Documented	ı		
	Dominance (1160)	atify stangers						
	Source(s) used to quar StenSource (1165)	•	_	iogram 🗆 CT 🗆 IVUS [_	uner 🗀 Multiple		
Each Column	Number Diseased Ves NumDisV (1170) (If one, two or three vess vith a "yes" response belo	el disease ↓)		e	Three			
Coronary	Native Artery	Graft(s)	illation <u>o</u>	Stent(s)	Fractional Flow	Instantaneous		
-	% Stenosis Known: PctStenKnown (1175) ☐ Yes ☐ No (If ye	GraftsPrsnt (1180)	Stent(s) Present: StentPrsnt (1185) ☐ Yes ☐ No (If yes↓)	Reserve (FFR) performed: FFRPerf (1190) $\Box Yes \ \Box No \ (If yes \lor)$	wave-free ratio (iFR) performed: IFRPerf (1191) □Yes □No(If yes↓)		
Left Main	PctStenLMain (119	☐ Patent ☐ Stenosis >=5 ☐ 100% occlus: ☐ Not Documer GrftStenLMain (12)	ion nted	☐ Patent ☐ Stenosis >=50% ☐ Not Documented StntStenLMain (1205)	FFRLMain (1210)	IFRLMain (1212)		
Proximal LAD	PctStenProxLAD (12:	☐ Patent ☐ Stenosis >=5 ☐ 100% occlus: ☐ Not Documer GrftStenProxLAD	ion nted	☐ Patent ☐ Stenosis >=50% ☐ Not Documented StntStenProxLAD (1225)	FFRProxLAD (1230)	IFRProxLAD (1232)		
Mid LAD	PctStenMidLAD (123	☐ Patent ☐ Stenosis >=5 ☐ 100% occlus: ☐ Not Docume: ☐ GrftStenMidLAD (ion nted	☐ Patent ☐ Stenosis >=50% ☐ Not Documented StntStenMidLAD (1245)	FFRMidLAD (1250)	IFRMidLAD (1252)		
Distal LAD	% PctStenDistLAD (125	☐ Not Documer GrftStenDistLAD (ion nted	☐ Patent ☐ Stenosis >=50% ☐ Not Documented StntStenDistLAD (1265)	FFRDistLAD (1270)	IFRDistLAD (1272)		
Diagonal 1	PctStenDiag1 (1275	☐ Patent ☐ Stenosis >=5 ☐ 100% occlus:		☐ Patent ☐ Stenosis >=50% ☐ Not Documented StntStenDiag1 (1285)	FFRDiag1 (1290)	IFRDiag1 (1292)		

		☐ Not Documented GrftStenDiag1 (1280)			
		☐ Patent	☐ Patent		
5.	%	☐ Stenosis >=50%	☐ Stenosis >=50%		
Diagonal 2	PctStenDiag2 (1295)	☐ 100% occlusion ☐ Not Documented	☐ Not Documented StntStenDiag2 (1305)	FFRDiag2 (1310)	IFRDiag2 (1312)
		GrftStenDiag2 (1300)	Stitistelibiagz (1303)		
		☐ Patent	☐ Patent		
D'12	%	☐ Stenosis >=50%	☐ Stenosis >=50%		
Diagonal 3	PctStenDiag3 (1315)	☐ 100% occlusion ☐ Not Documented	☐ Not Documented StntStenDiag3 (1325)	FFRDiag3 (1330)	IFRDiag3 (1332)
		GrftStenDiag3 (1320)	5tilleteili2iag5 (2525)		
		□ Patent	□ Patent		
Circumflex	% PctStenCircflx (1335)	☐ Stenosis >=50% ☐ 100% occlusion	☐ Stenosis >=50% ☐ Not Documented		
Circumitex	r cistericirciix (1333)	□ Not Documented	StntStenCircflx (1345)	FFRCircflx (1350)	IFRCircflx (1352)
		GrftStenCircflx (1340)			
	%	☐ Patent☐ Stenosis >=50%	☐ Patent ☐ Stenosis >=50%		
Obtuse Marginal 1	PctStenOM1 (1355)	☐ 100% occlusion	□ Not Documented		
- · · · · · · · · · · · · · · · · · · ·	, ,	☐ Not Documented	StntStenOM1 (1365)	FFROM1 (1370)	IFROM1 (1352) IFROM1 (1372) IFROM2 (1392) IFROM3 (1412) IFRRamus (1432) IFRAM (1472) IFRAM (1472) IFRPDA (1492)
		GrftStenOM1 (1360)			
	%	☐ Patent☐ Stenosis >=50%	☐ Patent☐ Stenosis >=50%		
Obtuse Marginal 2	PctStenOM2 (1375)	□ 100% occlusion	☐ Not Documented	FFROM2 (1390)	
		☐ Not Documented	StntStenOM2 (1385)	FFROIVIZ (1390)	IFROIVIZ (1392)
		GrftStenOM2 (1380) ☐ Patent	☐ Patent		
	%	☐ Stenosis >=50%	☐ Stenosis >=50%		
Obtuse Marginal 3	PctStenOM3 (1395)	☐ 100% occlusion	☐ Not Documented		
		☐ Not Documented GrftStenOM3 (1400)	StntStenOM3 (1405)		
		☐ Patent	☐ Patent		
	%	☐ Stenosis >=50%	☐ Stenosis >=50%		
Ramus	PctStenRamus (1415)	☐ 100% occlusion	□ Not Documented	FFRRamus (1430)	IFRRamus (1432)
		☐ Not Documented GrftStenRamus (1420)	StntStenRamus (1425)		
		□ Patent	☐ Patent		
	%	☐ Stenosis >=50%	☐ Stenosis >=50% ☐ Not Documented StntStenRCA (1445)		
RCA	PctStenRCA (1435)	☐ 100% occlusion ☐ Not Documented		FFRRCA (1450)	IFRRCA (1452)
		GrftStenRCA (1440)	Stricterines (1445)		
		☐ Patent	☐ Patent		
Acute Marginal	% PctStenAM (1455)	☐ Stenosis >=50% ☐ 100% occlusion	☐ Stenosis >=50% ☐ Not Documented		
(AM)	PCISIEIIAWI (1455)	□ Not Documented	StntStenAM (1465)	FFRAM (1470)	IFRAM (1472)
		GrftStenAM (1460)			
	0/	□ Patent	□ Patent		
Posterior Descending	% PctStenPDA (1475)	☐ Stenosis >=50% ☐ 100% occlusion	☐ Stenosis >=50% ☐ Not Documented		
(PDA)	()	☐ Not Documented	StntStenPDA (1485)	FFRPDA (1490)	AM (1470) IFRAM (1472) PDA (1490) IFRPDA (1492)
		GrftStenPDA (1480)			
	%	☐ Patent☐ Stenosis >=50%	☐ Patent☐ Stenosis >=50%		
Posterolateral (PLB)	PctStenPLB (1495)	□ 100% occlusion	□ Not Documented	EEDDI D (1510)	 IEDDI D /1512\
		□ Not Documented	StntStenPLB (1505)	11KFLB (1310)	II RFLB (1312)
		GrftStenPLB (1500)			
Syntax Score Known: [Yes □ No (If Yes→) S	Syntax Score:	_		
SyntaxScrKnown (1515)		SyntaxScr (1520)			
Stress Test: ☐ Yes ☐ StressTst (1525)	No (If Yes →) Result: StrsTstRe	☐ Negative (Normal) es (1531)	☐ Positive (Abnormal)	☐ Not Documented	
Ejection Fraction Done:	\square Yes \square No (If Yes \rightarrow)	Ejection Fraction:	(%)		
HDEFD (1540)	7 V	HDEF (1545)		INE IN . P. St	
Dimensions Available: ☐ Yes ☐ No (If Yes→) LV End-Systolic Dimension: (mm) LV End-Diastolic Dimension: (mm) LVEDD (1565)					
PA Systolic Pressure Measured: \(\text{Yes} \) No (If Yes \(\text{Yes} \)) PA Systolic Pressure: mmHg					
PASYSMeas (1570) PASYS (1575)					
Aortic Valve	None ☐ Trivial/Trace	□ Mild □ Moderate	□ Severe □ Not Doour	nented	
(If not "None" ↓)	Tione in Hividi/Hace	_ wind _ widderate	_ Severe _ Not Docum	nonto	
VDInsufA (1590)					

Eccentric Jet: ☐ Yes ☐ No ☐ Not Documented	
VDAVEccJet (1591) Aortic Valve Disease: □ Yes □ No	
VDAort (1595)	
	Hemodynamic/Echo data available: ☐ Yes ☐ No (If Yes ↓)
VDStenA (1600)	AoHemoDatAvail (1605)
	nallest Aortic Valve Area: cm ²
	ighest Mean Gradient: mmHg
	OGradA (1615)
	aximum Aortic jet velocity (V _{max):} m/s
VE	DVMax (1616)
AMP. Ed. I of provinced	
AV Disease Etiology Choose PRIMARY Etiology (one): VDAoPrimEt (1646)	
□ Bicuspid valve disease	☐ Primary Aortic Disease, Hypertensive Aneurysm
☐ Congenital (other than bicuspid)	☐ Primary Aortic Disease, Hypertensive Finedrysin
Degenerative- Calcified	☐ Primary Aortic Disease, Inflammatory
☐ Degenerative- Leaflet prolapse with or without annular dilation	☐ Primary Aortic Disease, Loeys-Dietz Syndrome
☐ Degenerative- Pure annular dilatation without leaflet prolapse	☐ Primary Aortic Disease, Marfan Syndrome
☐ Degenerative- Commissural rupture	☐ Primary Aortic Disease, Other Connective tissue disorder
☐ Degenerative- Extensive fenestration	☐ Reoperation-Failure of previous AV repair or replacement
☐ Degenerative- Leaflet perforation/hole	☐ Rheumatic
☐ Endocarditis with root abscess	☐ Supravalvular Aortic Stenosis
Endocarditis without root abscess	☐ Trauma
LV Outflow Tract Pathology, HOCM	☐ Tumor, Carcinoid
LV Outflow Tract Pathology, Sub-aortic membrane	☐ Tumor, Myxoma
□ LV Outflow Tract Pathology, Sub-aortic Tunnel □ LV Outflow Tract Pathology, Other	☐ Tumor, Papillary Fibroelastoma ☐ Tumor, Other
□ Primary Aortic Disease, Aortic Dissection	☐ Tumor, Other ☐ Mixed Etiology
☐ Primary Aortic Disease, Adult Dissection ☐ Primary Aortic Disease, Atherosclerotic Aneurysm	□ Not Documented
☐ Primary Aortic Disease, Ehler-Danlos Syndrome	1 Not Documented
(If Bicuspid valve disease→) Sievers Class: □ 0 No raphe □ 1 one raphe	☐ 2 two raphe ☐ Not Documented
VDAoSievers (1647)	
Mitral Valve	
Mitral Insufficiency: ☐ None ☐ Trivial/Trace ☐ Mild ☐ Moderate	☐ Severe ☐ Not Documented
VDInsufM (1680)	
(If not "None" ↓) Eccentric Jet: ☐ Yes ☐ No ☐ Not Documented	
VDMVEccJet (1681)	
V5/WV2cccc(12001)	
Mitral Valve Disease: ☐ Yes ☐ No	
VDMit (1685)	
	dynamic/ Echo data available: ☐ Yes ☐ No (If Yes ↓)
VDStenM (1690) MiHem	oDatAvail (1695) Smallest Valve Area: cm ²
	Highest Mean Gradient:
	VDMVA (1700)
	mmHg
	VDGradM (1705)
MV Disease Etiology Choose PRIMARY Etiology (one):	
VDMiPrimEt (1731)	
Myxomatous degeneration/prolapse	☐ Tumor, Papillary fibroelastoma
Rheumatic	☐ Tumor, Other
☐ Ischemic- acute, post infarction (MI ≤ 21 days)	☐ Carcinoid
☐ Ischemic- chronic (MI > 21 days) ☐ Non-ischemic Cardiomyopathy	☐ Trauma ☐ Congenital
□ Non-ischemic Cardiomyopatny □ Endocarditis	☐ Congenital ☐ Pure annular dilatation
☐ Hypertrophic Obstructive Cardiomyopathy (HOCM)	Reoperation-Failure of previous MV repair or replacement
☐ Tumor, Carcinoid	☐ Mixed Etiology
☐ Tumor, Myxoma	□ Not Documented
, y	
MVI ' CI DDDG DVV	
MV Lesion Choose PRIMARY Lesion (one):	
VDMiPrimLes (1746) ☐ Leaflet prolapse, posterior	☐ Papillary muscle elongation
Leaflet prolapse, posterior Leaflet prolapse, bileaflet	□ Papillary muscle rupture
☐ Leaflet prolapse, anterior	☐ Leaflet thickening

☐ Lea	aflet prolapse, unspecified	☐ Leaflet retraction				
□ Elo	ngated/ruptured chord(s)/Flail	☐ Chordal tethering				
☐ Ann	nular dilatation	☐ Chordal thickening/retraction/fusion				
	aflet calcification	☐ Commissural fusion				
	aflet perforation/hole	☐ Mixed lesion				
	tral annular calcification	□ Not Documented				
Tricuspid Valve Tricuspid Insufficiency: None Trivial/Trace Mild Moderate Severe Not Documented VDINSUR (1775) Tricuspid Annular Echo Measurement Available: Yes No (If Yes) Tricuspid Diameter:						
	Congenital, s/p Tetralogy of Fallot (TOF) repair Congenital, no prior Tetralogy of Fallot (TOF) repa	☐ Mixed etiology				
I. Operative						
Surgeon: Surgeon (1955)		Surgeon NPI: SurgNPI (1960)				
Taxpayer Ident	ification Number:					
	er the STS Risk Calculator score was discussed with the	e patient/family prior to surgery.				
☐ No, was not	, STS risk calculator score was calculated and discussed	I with the patient/family prior to surgery as documented in the medical record procedure but not discussed with the patient/family prior to surgery or the discussion odel available for this procedure)				
Incidence: Incidenc (1970)	☐ First cardiovascular surgery	☐ Third re-op cardiovascular surgery				
	☐ First re-op cardiovascular surgery ☐ Second re-op cardiovascular surgery	 □ Fourth or more re-op cardiovascular surgery □ NA- not a cardiovascular surgery 				
Status: Status (1975)	□ Elective □ Urgent	☐ Emergent ☐ Emergent Salvage				
	(If Urgent or Emergent choose the most pressing reason↓) Urgent / Emergent reason: UrgemergRsn (1990) □ AMI □ Anatomy □ Aortic Aneurysm □ Aortic Dissection □ CHF	□ PCI Incomplete without clinical deterioration □ PCI or attempted PCI with Clinical Deterioration □ Pulmonary Edema □ Pulmonary Embolus □ Rest Angina				

☐ Diagn☐ Endoc☐ Failec☐ Failec☐ Failec☐ IABP☐ Infect☐ Intrac☐	e Failure costic/Interventiona carditis I Transcatheter Val Transcatheter Val Transcatheter Val ed Device ardiac mass or thro ing Ischemia	□ Shock, Circulate □ Shock, No Circulate □ Syncope □ Transplant □ Trauma □ USA □ Valve Dysfuncti □ Worsening CP □ Other	ılatory Support		
PCancCase (1995)	-	(mm/dd/yyyy)	, L 140		
PCancCaseDt (2000)	se				
Timing of previous PCancCaseTmg (2005		☐ Prior to induction of	anesthesia	er induction, prior to incis	sion
Reason previous ca PCancCaseRsn (2010)	se was canceled:	☐ Anesthesiology ever ☐ Unanticipated tumor		t □ Equipment/supply in Unacceptable □ Abnorm	
Planned previous p		G CaseCAB (2015)	□ Yes □ No	Valve, Surgical PCancCaseValSur (2	☐ Yes ☐ No 030)
		anical Assist Device CaseMech (2020)	□ Yes □ No	Valve, Transcathe PCancCaseValTrans	
		Non-cardiac CaseONC (2025)	□ Yes □ No	Other Cardiac PCancCaseOC (2040	☐ Yes ☐ No
Was the current procedure canc	eled: □ Yes □ N	0			
CCancCase (2050) (If Yes→) Canceled Timing: CCancCaseTmg (205	☐ Prior to inc		☐ After induction, pr	rior to incision	er incision made
Canceled Reason: CCancCaseRsn (2060	☐ Anesthesic ☐ Unanticipa		c arrest	ent/supply issue □ Ac □ Abnormal Labs □	ccess Issue Other
Planned procedure	c: CABG CCancCaseCAB		es □ No	Valve, Surgical CCancCaseValSur (2	☐ Yes ☐ No 085)
	Mechanical A CCancCaseMed		es □ No	Valve, Transcathe CCancCaseValTrans	
	Other Non-ca		es □ No	Other Cardiac CCancCaseOC (2095	☐ Yes ☐ No
Initial Operative Approach: OPApp (2100)	☐ Full convention ☐ Partial sternoto: ☐ Transverse stern ☐ Right or left par ☐ Sub-xiphoid	my [notomy [rasternal incision [☐ Left Thoracotomy ☐ Right Thoracotomy ☐ Bilateral Thoracoto ☐ Limited (mini) Tho ☐ Limited (mini) Tho	omy oracotomy , right oracotomy , left	☐ Thoracoabdominal Incision ☐ Percutaneous ☐ Port Access ☐ Other ☐ None (canceled case)
Approach converted during pro-	☐ Sub-Costal cedure: ☐ Yes, pla		☐ Limited (mini) The ed ☐ No	oracotomy, onateral	
ApproachCon (2105) Robot Used: ☐ Yes ☐ No (If Robotic (2110)	Yes →) □ Used RobotTim	for entire operation	Used for part of the o	operation	
Coronary Artery Bypass: ☐ Yeo		, unplanned due to surgic o unsuspected disease or a		"Yes" complete Section J)	
Valve Surgery: ☐ Yes ☐ No					
(If Yes →) Did the surgeon provi OpValve (2125)	ide input for valve		□ Yes □ No SurgInput (2126)		
Aorta procedure Performed: □		es, unplanned due to surg	gical complication	Cust n	(2)
$(If Yes \rightarrow) Did the surgeon provi$	ide input for aortic			f "Yes" complete Section M	1 2)
AortProcSurgInput (2129 Other Cardiac Procedure: ☐ You	es, planned 🛮 Yes				
OpOCard (2140)	es, unplanned due t	o unsuspected disease or	anatomy \(\square\) No (If "	Yes" complete Section M)	

Other Cardiac Procedure, AFil	o:□ Yes □ No (If Yes →	(Complete Section M 1)						
AFibProc (2145) (If Yes →) Did the surgeon pro	vide input for AFib data	abstraction? ☐ Yes □	□ No						
AFibProcSurgInput (2146) Other Non-Cardiac Procedure: Yes No (If "Yes" complete Section N)									
OponCard (2155)	Li Yes Li No (If "Yes" (complete Section N)							
Enter up to 10 CPT-1 Codes pe									
1 CPT1Code1 (2195)	2 CPT1Code2 (2200)	3 CPT1Coo	de3 (2205)	4 CPT1Code4 (2210)	5 CPT1Code5 (2215)				
6 7 8 9 10 CPT1Code6 (2220) CPT1Code7 (2225) CPT1Code8 (2230) CPT1Code9 (2235) CPT1Code10 (2240)									
CPT1Code6 (2220)	CPT1Code7 (2225)	CPT1Co	de8 (2230)	CPT1Code9 (2235)	CPT1Code10 (2240)				
OK Elitiy Date Allu Tille	_/		y IIII:IIIII - 24 III CIOCK)						
OREntryDT (2245) OR Exit Date And Time: ORExitDT (2250)	//	: (mm/dd/yyyy	hh:mm - 24 hr clock)						
General Anesthesia: ☐ Yes ☐ GenAnes (2251)	No (If General Anesthesia	No→) Procedural ProcSed (225	Sedation : \square Yes \square No)					
(If General Anesthesia Yes →) In	tubation: ☐ Yes, prior to ubate (2253)			for this procedure \Box	No				
(If Intubation Yes →	Intubation Date and T	me:/	:(1	mm/dd/yyyy hh:mm - 24	hr clock)				
	Initial Extubation Date	and Time:	,	(mm/dd/yyyyy hhum	ma 24 har ala ala				
Skin Incision Start Date and Ti	ExtubateDT (2260)	e and 11me:/	_/:_	(mm/dd/yyyy nn:m	m - 24 nr clock)				
CICENTEDT 1996E1									
Skin Incision Stop Date and Tit SIStopDT (2270)	me:/	:(m	m/dd/yyyy hh:mm - 24 hr	clock)					
Anesthesia End Date and Time AnesEndDT (2275)	:/	:(mm/d	d/yyyy hh:mm - 24 hr cloc	k)					
Appropriate Antibiotic Selection	on: A ₁	ppropriate Antibiotic A	dministration Timing:	Appropriate Antib	iotic Discontinuation:				
AbxSelect (2280) ☐ Yes ☐ No ☐ Exclusion	Ab	xTiming (2285) Yes □ No □ Excl	usion	AbxDisc (2290) ☐ Yes ☐ No ☐	Evelusion				
Additional intraoperative proph			usion		Exclusion				
AddIntraopPAnti (2295) Temperature Measured: □ Yes	. □ No								
TempMeas (2296)									
(If Yes→) Lowest Temperatu LwstTemp (2300)	re (° C):	Temperature Source: LwstTempSrc (2305)	1		Bladder Nasopharyngeal				
Ewstremp (2300)		Lwstrempsic (2303)	□ Tympanic □ Re	ectal Other Unk	nown				
Lowest Intra-op Hemoglobin :		Lowest Intra-op Hen	natocrit:	Highest Intra-op	Glucose:				
LwstIntraHemo (2310)		LwstHct (2315)		HighIntraGlu (232	0)				
CPB Utilization: ☐ None CPBUtil (2325) ☐ Combin	nation (If Combinati	on→) Combinat	ion Plan: Planned	☐ Unplanned (If Unp	lanned↓)				
		CPBCmb (2 Unplanne	•	e/visualization □ B	Bleeding				
		CPBCmbR (te size/ diffuse disease					
				namic instability(hypoto quality and/or trauma					
□ Full		ion" or "Full"↓)		quanty and/or trauma	Li Ottlei				
	Arterial Can	nulation Insertion Site:	(Select all that apply ψ)						
	Aortic	☐ Yes ☐ No	Axillary		Other □ Yes □ No				
	CanArtStAort (2340)		CanArtStAx (2350		CanArtStO th (2360)				
	Femoral	☐ Yes ☐ No	Innominate	☐ Yes ☐ No					
CanArtStFem CanArtStInn (2355) (2345)									
	Venous Can	nulation Insertion Site:	(Select all that apply ψ)						
	Femoral CanVenStFem	☐ Yes ☐ No	Pulmonary Veir CanVenStPulm	n □ Yes □ No					
	<mark>(2365)</mark> Jugular	□ Yes □ No	(2385) Caval/Bicaval	□ Yes □ No					
	CanVenStJug (2370)	0	CanVenStBi (2390						
	Rt. Atrial	☐ Yes ☐ No	Other	☐ Yes ☐ No					
	CanVenStRtA (2375)		CanVenStOth (2395)						

	Lt. Atrial	☐ Yes ☐ No	
	CanVenStL	FA	
	(2380) Cardiopul	monary Bypass Time (minutes): _	
	PerfusTm (
Circulatory Arrest: ☐ You CircArr (2405)	es □ No (If Yes↓)		
	Circulatory Arrest Without DHCATm (2410)	t Cerebral Perfusion Time:	(min)
	Circulatory Arrest With C CPerfUtil (2415)	erebral Perfusion: ☐ Yes ☐ No	
	CPerfTim		
	CPerfTyp	(2425)	☐ Retrograde ☐ Both antegrade and retrograde
	Total Circulatory Arrest T TotCircArrTm (2426)	ime:(System	n Calculation)
Aortic Occlusion:	□ None – beating heart		ic Cross clamp
AortOccl (2430)	☐ None – fibrillating hear (If "Aortic cross clamp" or "l	Balloon occlusion" →): Cross C	oon Occlusion Clamp Time: (min)
Cardioplegia Delivery:		XClamp1	Tm (2435)
	None □ Antegrade □ Re	trograde	
	(If "Antegrade", "Retrograde	or "Both"→) Type of cardioplegia CplegiaType (2445)	used: □ Blood □ Crystalloid □ Both □ Other
Cerebral Oximetry Used CerOxUsed (2450)	:□Yes□No		
	ion (Porcelain Aorta): 🗆 Y	es 🗆 No	
	g Aorta/Arch for atheroma/p	aque: Yes No Not Repor	rted (If Yes ↓)
AsmtAscAA (2495) Assessment me	ethod: 🗆 TEE	☐ Epiaortic ultrasound	☐ CT scan ☐ Other diagnostic modality
AsmtAoDxMeth		□ Epiaorue utrasouna	□ C1 scan □ Other diagnostic modality
Assessment of AsmtAoDx (2500		al Aorta/No or minimal plaque ding Atheroma < 5 mm	☐ Extensive intimal thickening ☐ Protruding Atheroma >= 5 mm
	☐ Mobi	e plaques	□ Not documented
Aortic Condition Altered AsmtAPIn (2505)	l Plan: ∐ Yes ∐ No		
Intraop Blood Products I	Refused: ☐ Yes ☐ No		
	Blood Products: ☐ Yes ☐ N	0	
$ \begin{array}{c c} & \text{IBIdProd} \\ \hline \text{(If Yes} \rightarrow) & \text{Red Bloe} \end{array} $	(2515) od Cell Units:	Platelet Units:	
IBdRBCU	(2520)	IBdPlatU (2530)	
Fresh Fr	ozen Plasma Units:(2525)	Cryoprecipitate Units: IBdCryoU (2535)	
Intraop Clotting Factors		s, FEIBA Yes, Composite I	No
	mplex concentrate: ☐ Yes ☐	l No	
IntraopProComCon (2546)	- I F '1 A	· C · A·I DV DN	
Intraop Antifibrinolytic	IMedEACA (nino-Caproic Acid: ☐ Yes ☐ No 2550)	Tranexamic Acid: ☐ Yes ☐ No IMedTran (2555)
-	ormed post procedure: Yes	s □ No (If Yes ↓)	
	level aortic insufficiency fou	nd:	
PRepAR (: □ None		☐ Moderate ☐ Severe ☐ Not Docu	umented
Mean Ac	ortic Gradient:		
·	adM (2566) aravalvular leak:		
PRepAPV	L (2567)		
	level Mitral insufficiency for	☐ Moderate ☐ Severe ☐ Not Docu nd:	imented
PREDIVIR ((2310)		

	Mean Mitral Gradient:	
	PRepMGradM (2571)	
	Mitral Paravalvular leak:	
	PRepMPVL (2572)	
	□ None □ Trivial/Trace □ Mild □ Moderate □ Severe □ Not Docum	ented
	Highest level Tricuspid insufficiency found:	
	PRepTR (2575)	
	□ None □ Trivial/Trace □ Mild □ Moderate □ Severe □ Not Docum	ented
	Mean Tricuspid Gradient:	
	PRepTGradM (2576)	
	Tricuspid Paravalvular leak:	
	PRepTPVL (2577)	
	□ None □ Trivial/Trace □ Mild □ Moderate □ Severe □ Not Docum	ented
	Ejection Fraction Measured post procedure: \square Yes \square No (If Yes \rightarrow)	Ejection Fraction:
	PPEFMeas (2581)	PPEF (2582)
Surgery follow	ved by a planned PCI: ☐ Yes ☐ No	
PPPlanedPCI (20	• •	
,	·	

J. Corona	ry Bypass										
	Artery Bypass = Yes ↓)										
	mmary Artery (arteries) used: ☐ Yes ☐ No	(If yes \rightarrow)	Total Nu		Distal Ana	stomose	s with IM	A condui	ts:	_	
(If no→)	eason for no IMA: Subclavian stenosis Previous mediastinal radiation No (bypassable) LAD disease MMARSn (2627)										
(If year))	☐ Previous cardiac or thoracic surgery ☐ Emergent or salvage procedure ☐ Other										
(II yes→)	(If yes→) Left IMA: ☐ Yes, pedicle ☐ Yes, skeletonized ☐ No Left IMA (2629)										
	(If not no→) LIMA Harvest technique: □ D LIMAHarvTech (2630)	irect Vision	(open) [☐ Thorac	oscopy	□ Combi	nation [□ Robotio	e Assist		
	Right IMA: ☐ Yes, pedicle ☐ Yes, skeleto	onized 🗆 N	lo .								
	$(\overrightarrow{\text{If not no}} \rightarrow) \qquad \text{RIMA Harvest technique: } \square \text{ I} \\ \text{RIMAHarvTech (2632)}$										
Radial Arte RadialArtUse) Total Numl NumRadDA		stal Anası	tomoses v	with radia	ıl artery c	onduits:			
$(\text{If yes} \rightarrow)$	Radial Artery Harvest Technique: ☐ Endosco RadHTech (2635)	opic 🗆 Dir	ect Visio	n (open)	□ Both						
	Radial Artery Harvest and Prep Time: RadHarvPrepTm (2636)	(min	utes)								
Venous Co	$\operatorname{nduit}(s) \text{ used: } \square \text{ Yes } \square \text{ No} \qquad (\operatorname{If yes} \rightarrow) \operatorname{Tot}$	al Number o	f Distal A	nastomo	ses with	venous co	onduits:				
VenousCond		:Vein (2638)					_				
$(If yes \rightarrow)$	Vein Harvest Technique: ☐ Endoscopic ☐ I		n (open)	□ Both	☐ Cry	opreserve	ed				
	DistVeinHTech (2639)										
	Vein Harvest and Prep Time: (missaphHarPrepTm (2640)	inutes)									
Number of	Distal Anastomoses : with other arterial con NumOArtD (2641)	nduits:	_				rial- venc		osite conc	duits:	
	with venous -arterial	composite c	onduits: _				rial- arter		osite conc	luits:	
	NumVenArtComp (2651						rtComp (26				
	(Note: the total number of d										
Proximal To ProxTech (27	echnique: ☐ Single Cross Clamp ☐ Partial C (10)	Occlusion Cla	amp ⊔	Anastom	otic Assis	st Device	∐ Noi	ne (isolate	ed in situ	mammar	у)
CABG NU	MBER (one column per distal insertion)	1	2	3	4	5	6	7	8	9	10
	Yes CAB (02-10)	NA	2770	2830	2890	2950	3010	3070	3130	3190	3250
GRAFT	No										
,	Left Main CABDistSite (01-10)	2730	2790	2850	2910	2970	3030	3090	3150	3210	3270
	Proximal LAD										
5	Mid LAD			1		1					
3	Distal LAD										
	Mid LAD										
ĺ	Circumflex			1		1	1				1
-	Obtuse Marginal 1			1	1	1	1		1		1
	Obtuse Marginal 2			1	1	1	1		1		1
4			+	1	+	1	1	1	1	1	1
	Ramus		<u> </u>	1		1	1				1

	RCA											
	Acute Margi											
	Posterior Descending (PDA) Posterolateral (PLB) Other											
	In Situ Mam	nmary CABProximalSite (01-10)	2740	2800	2860	2920	2980	3040	3100	3160	3220	3280
	Ascending a											
LE LE	Descending											
SITE	Subclavian a	artery										
	Innominate	2										
MA	T-graft off S											
PROXIMAL	T-graft off F	Radial										
(O)	T-graft off L											
PF	T-graft off F	RIMA										
	Natural Y ve	ein graft										
	Other											
		CABConduit (01-10)	2750	2810	2870	2930	2990	3050	3110	3170	3230	3290
	In Situ LIM.	A										
IT	In Situ RIM	A										
DO	Free IMA											
CONDUIT	Composite a	rtery-vein										
CC	Radial artery	y										
		es, homograft										
	Synthetic gr											
DISTAL		CABDistPos (01-10)	2755	2815	2875	2935	2995	3055	3115	3175	3235	3295
POSITION	Sequential (
ENDARTERE	CTOMV	Yes CABEndArt(01-10)	2760	2820	2880	2940	3000	3060	3120	3180	3240	3300
ENDARTERI	CIOMI	No										
VEIN PATCH		Yes CABVeinPatAng (01-10)	2765	2825	2885	2945	3005	3065	3125	3185	3245	3305
ANGIOPLAS	TY	No										

K Volve Surger	y (If Valve Surgery=Y	Zon 1)			
		s □ No (If Yes ↓) ValExp	(3310)		
Explant I	•			ValExpPos (3315)	
Explant 7 ValExpTyp	J F	l Mechanical Valve l Leaflet Clip	☐ Bioprosthetic Valve ☐ Transcatheter Device	☐ Homograft ☐ Other	☐ Annuloplasty Device ☐ Unknown
Explant I ValExpEt (3325)	l Endocarditis l Failed Repair l Hemolysis	☐ Incompetence ☐ Pannus ☐ Paravalvular leak	☐ Prosthetic Deterioration ☐ Sizing/Positioning issue ☐ Stenosis	☐ Thrombosis ☐ Other ☐ Unknown
ValExpDev Second V ValExp2 (3 E	<mark>vKnown (3330)</mark> Valve Prosthesis Exp	olant: ☐ Yes ☐ No (If Y	ExpDev (3335)	Unique Device Identifier (UE ValExpUDI (3340) nic	DI):
E	xplant Type: alExpTyp2 (3360)	☐ Mechanical Valve☐ Leaflet Clip	☐ Bioprosthetic Valve☐ Transcatheter Device		Annuloplasty Device Unknown
	xplant Etiology: alExpEt2 (3365)	☐ Endocarditis☐ Failed Repair☐ Hemolysis	☐ Incompetence ☐ Pannus Formation ☐ Paravalvular leak	☐ Prosthetic Deterioration ☐ Sizing/Positioning iss ☐ Stenosis	
	xplant Device know alExpDevKnown2 (337		Explant model#: ValExpDev2 (3375)	Unique Device Ident ValExpDevUDI (3380)	ifier (UDI):
Aortic Valve VSAV (3390) Procedure Pe VSAVPr (3395)			☐ Yes, unplanned due to due to unsuspected disease	surgical complication e or anatomy \square No (If Yes \downarrow)	
□ Replac	cement (If Replaceme	ent)			
Trans VSTCV Surgi	scatheter Valve Repl (3400)	lacement: ☐ Yes ☐ No ☐ Transapical ☐ Tra 5)		al □ Transaortic □ Subclavi	an □ Other

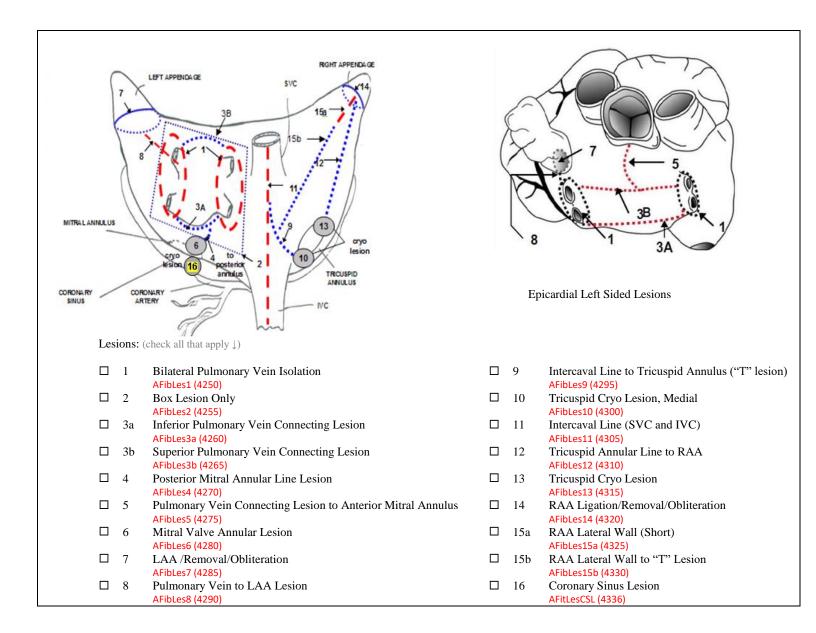
$(\text{If Yes} \rightarrow)$	Device type: ☐ Mechanica VSAVSurgType (3408)	al 🗆 Bioprosthetic 🗆 S	Surgeon fashioned pericardium (Ozaki)	Other
	(If Bioprosthetic→) Valve ty	rpe: ☐ Stented ☐ Sten gBioT (3409)	tless subcoronary valve only Sutureles	ss/rapid deployment
☐ Repair/Reconstruction	(If Repair/Reconstruction ↓)			
Repair Type (Select al	l that apply)			
	ssural suture annuloplasty omA (3410)	□ Yes □ No	Ring annuloplasty VSAVRRingA (3435)	□ Yes □ No
	l Suture Annuloplasty (SutAn (3411)	□ Yes □ No	(If Yes →) Type: VSAVRRingATy □ External Ring (3436)	☐ Internal Ring
VSAVRLI	plication Plic (3415)	□ Yes □ No	Leaflet resection suture VSAVRLResect (3440)	□ Yes □ No
	r Release odRel (3416)	☐ Yes ☐ No	Leaflet Shaving VSAVRLeafShav (3441)	□ Yes □ No
	free edge reinforcement SAVRPTFE (3420)	☐ Yes ☐ No	Leaflet pericardial patch VSAVRLPPatch (3445)	□ Yes □ No
Leaflet	commissural resuspension /SAVRComRS (3425)	□ Yes □ No	Leaflet debridement VSAVRDeb (3450)	□ Yes □ No
Divisio	n of fused leaflet raphe	□ Yes □ No	Repair of periprosthetic leak VSAVRPeriLeak (3455)	□ Yes □ No
	ent with patch \(\sigma\) Yes \(\sigma\) No		VSAVNI CITECUN (S433)	
AnlrEnl [®] Root Procedure □ Yes □ VSAVRoot (3462)	Tech (3461)		Other □ Unknown oot → also complete section M-2)	
$ \begin{array}{c} \textbf{VSAVRootOReimp (} \\ \textbf{Typ} \\ (\text{If Yes} \rightarrow) \end{array} $	3463) :: VSAVRootOReimpTy (3464)	prosthetic ulmonary valve (Ross pr ve composite graft □ St	rocedure)	nent
VSAVSparRtOp (346				
	esuspension AV without repl	_		
	esuspension AV with replace	•		
	alve sparing root reimplantat alve sparing root remodeling			
Major root recons VSAVRootRecon (34		r without pericardial pate		
Patch used: ☐ Yes ☐ No (VSAVPat (3469)	If Yes \rightarrow) Patch type: \square Syn VSAVPatTy (3470)	thetic Bioprosthetic	□ Autologous	
Aortic Valve Implant: ☐ Yes				
Aortic valves/valve repair de	vices only, use section M 2 fe	or root devices		
Implant Model Number: VSAolm (3480)			lant Size: plmSz (3485)	_
Unique Device identifier VSAolmUDI (3490)	(UDI):			
Mitral Valve Procedure Performs VSMV (3495) Procedure Performed: VSMVPr (3500) □ Repair (If Repair↓) Repair Approach: □ VSMVRepApp (3501) If Surgical (Select all the Annuloplasty: □ Yesto VSMitRAnnulo (3505) Leaflet resection: □ VSMitRLeafRes (3510)	☐ Yes, unplanned of Transcatheter ☐ Surgical nat apply↓) ☐ No	☐ Yes, unplanned due to due to unsuspected disea	o surgical complication ase or anatomy No (If Yes \(\))	

Resection Typ VSLeafResTyp (3		ılar 🗆 Quadrangular 🗅 Other			
vstearkesryp (s		esection: Yes No No es (3517)			
	$(\text{If Yes}{\rightarrow})$	Location documented: ☐ Yes ☐ No VSLeafAntResLocD (3518)	(If Yes↓)		
		Anterior leaflet resection location:	A1 ☐ Yes ☐ No VSLeafAntResA1 (3519)	A2 ☐ Yes ☐ No	A3 ☐ Yes ☐ No VSLeafAntResA3 (3521)
Resection	Posterior F VSLeafPostF	Resection: ☐ Yes ☐ No Res (3522)	VSECULATIONS (SSES)	Valedianticas (3320)	VSECULATIONS (SSEE)
Location(s):	$(\text{If Yes}{\rightarrow})$				
		VSLeafPostResLocD (3523) Posterior leaflet resection location:	P1 □ Yes □ No LeafPostResP1 (3524) VS	P2 □ Yes □ No SLeafPostResP2 (3525) VSI	P3□ Yes □ No
		re Resection: \square Yes \square No(If Yes \downarrow)	real ostilesi 1 (5524)	v51	ceun ostriesi s (5520)
	VSLeafComI	Commissural resection location:	l Medial (C2)	(C1) Both Not	Documented
Neochords (PTFE): □ VSMitRPTFE (3532)] Yes □ No	VSLeafComResLoc (3528) (If Yes↓)			
	Anterior N VSNeoAnt (3				
	$(\text{If Yes}{\rightarrow})$	Location documented: ☐ Yes ☐ No VSNeoAntLocD (3535)	(If Yes↓)		
		Anterior neochord location:	A1 □ Yes □ No VSNeoAntA1 (3536)	A2 ☐ Yes ☐ No VSNeoAntA2 (3537)	A3□ Yes □ No VSNeoAntA3 (3538)
Neochord	Posterior N VSNeoPost	Neochords: ☐ Yes ☐ No (3539)			
Location(s):	$(\text{If Yes}{\rightarrow})$	Location documented: ☐ Yes ☐ No VSNeoPostLocD (3540)	(If Yes↓)		
		Posterior Neochord location:	P1 □ Yes □ No VSNeoPostP1 (3541)	P2 ☐ Yes ☐ No VSNeoPostP2 (3542)	P3□ Yes □ No VSNeoPostP3 (3543)
	☐ Commis	ssure Neochords: \square Yes \square No(If Yes (3544)	1)		
		Commissure Neochord location: VSNeoComLoc (3545)	l Medial (C2) ☐ Lateral	(C1) \square Both \square No	t Documented
Chordal/ Leaflet trans VSMitRChord (3550)		□ No (If Yes↓)			
	☐ Anterio: VSChorLfAn	r Chordal/Leaflet transfer: ☐ Yes ☐ : t (3551)	No		
	$(\text{If Yes}{\rightarrow})$	Location documented: ☐ Yes ☐ No VSChorLfAntLocD (3552)	(If Yes↓)		
Chordal/		Anterior chordal/leaflet transfer loca		o A2 □ Yes □ No 53) VSChorLfAntA2 (3554	A3□ Yes □ No VSChorLfAntA3 (3555)
Leaflet Transfer	☐ Posterio	or Chordal/Leaflet transfer: ☐ Yes ☐	No		
Location(s):	(If Yes→)	Location documented: ☐ Yes ☐ No VSChorLfPostLocD (3557)	(If Yes↓)		
		Posterior chordal/leaflet transfer loc		P2 □ Yes □ No 58) VSChorLfPostP2 (3559	P3□ Yes □ No
	☐ Commis	ssure Chordal/Leaflet transfer: Yes	· · · · · · · · · · · · · · · · · · ·	oo, vochoren ostre (5555) V3CH01EH 03H 3 (3300)
		Commissural chordal/leaflet transfe VSChorLfComLoc (3562)	r location: ☐ Medial (C2)	☐ Lateral(C1) ☐ Bot	h □ Not Documented
Folding Plasty: ☐ Yest VSMitRFold (3565)	s 🗆 No				
Sliding Plasty: ☐ Ye. VSMitRSlidP (3566)	s 🗆 No				
Annular decalcification VSMitRADecalc (3567)	on/ debridem	ent: □ Yes □ No			
Leaflet extension/repl VSMitRLeafERP (3568)	acement pato	ch: □ Yes □ No			
(If Yes \rightarrow) Pa	atch Location	a: ☐ Anterior ☐ Posterior ☐ Both ☐ No	ot Documented		
Edge to edge repair: C					
Mitral commissurotor VSMitRMitComm (3580)		□ No			
Mitral commissuropla	ısty: 🗆 Yes	□ No			
VSMitRMitCplasty (3585 Mitral cleft repair: (sc		e): 🗆 Yes 🗆 No			
VSMitRMitCleft (3590) Mitral paraprosthetic		☐ Yes ☐ No			
VSMitParaprosLeak (359	91)				

☐ Replacement (If Replacement ↓)	
Mitral repair attempted prior to replacement: ☐ Yes ☐ No	
MitralIntent (3600)	N.
Mitral chords preserved: ☐ Anterior ☐ Posterior ☐ Both ☐ VSChorPres (3605)	None
Transcatheter replacement: \square Yes \square No	
VSTCVMit (3610)	
Implant: ☐ Yes ☐ No (If Yes	
MitralImplant (3615)	
	ve ☐ Annuloplasty device ☐ Mitral Leaflet clip ☐ Transcatheter device
MitralImplantTy (3620) ☐ Surgically implanted transcatheter dev	ce 🗆 Other
Lucal and Mardal November	I
Implant Model Number:	Implant Size:
Volviiiii (3023)	V3(VIIII1)32 (3030)
Unique Device identifier (UDI):	
VSMilmUDI (3635)	
Tricuspid Valve Procedure Performed: Yes, planned Yes, u	
1	suspected disease or anatomy \square No (If Yes \downarrow)
Repair: ☐ Yes ☐ No (If Yes↓) VSTrRepair (3646)	
Annuloplasty ☐ Yes ☐ No (If Yes↓)	
VSTrRepAnnulo (3647)	
	tture □ Prosthetic Ring □ Prosthetic Band □ Other
OpTricusAnTy (3648)	
Leaflet Resection: ☐ Yes ☐ No	
VSTrLeafRes (3649) Populacement Ves No (If Ves) Transcetheter	Replacement: ☐ Yes ☐ No
Replacement: ☐ Yes ☐ No (If Yes→) Transcatheter VSTrReplace (3650) VSTCVTri (3652	
Valvectomy: ☐ Yes ☐ No	
VSTrValvec (3653)	
Implant: \square Yes \square No (If Yes \downarrow)	
TricuspidImplant (3660)	
Implant Type:	☐ Bioprosthetic Valve ☐ Homograft
TricusImplantTy (3665) ☐ Annuloplasty Device	☐ Transcatheter Device ☐ Other
Implant Model Number:	Size:
VSTrIm (3670)	VSTrImSz (3675)
Unique Device Identifier (UDI):	
VSTrImUDI (3680)	
Pulmonic Valve Procedure Performed: ☐ Yes, planned ☐ Yes, un	pulanned due to equatical complication
	uspected disease or anatomy \square No (If Yes \downarrow)
Procedure Performed:	uspected disease of anatomy \square No $(n \text{ res } \downarrow)$
OpPulm (3690)	
☐ Repair/Leaflet Reconstruction	
☐ Replacement (If Replacement→) Transcatheter Replacement	ement: Yes No
☐ Valvectomy VSTCVPu (3695)	
Implant: ☐ Yes ☐ No (If Yes ↓)	
PulmonicImplant (3700) Implant Type: □Surgeon Fashioned □	Commercially Supplied
VSPuTypeImp (3701)	Confinerciany Supplied
	PTFE (Gore-Tex) Pericardium Other
VSPulmpMa	
(If Commercially Supplied →) Device Typ	
PulmonicImp	lantTy ☐ Bioprosthetic Valve ☐ Homograft
(3705)	☐ Transcatheter Device ☐ Other
Implant Model Number:	Size:
VSPulm (3710)	VSPulmSz (3715)
Unique Device Identifier (UDI):	
VSPulmUDI (3720)	
L. Mechanical Cardiac Assist Devices	
Intra-Aortic Balloon Pump (IABP): ☐ Yes ☐ No (If Yes ↓)	
IABP (3725) IABP Insertion: □ Preop □ Intraop □ Postop	
IABP Insertion: \Box Preop \Box Intraop \Box Postop IABPWhen (3730)	
	Procedural Support Unstable Angina
IABPInd (3735)	

Catheter Based A		\square Yes \square No (If Yes \downarrow)								
·										
	Type: □ RV □ LV □ BiV CathBasAssistTy (3755)									
	erted: ☐ Preop ☐ ☐ sistWhen (3760)	Intraop □ Postop								
	Reason for Insertions sistInd (3765)	:	CPB weaning	failure PCI failure	Procedural support □Other					
ECMO: ☐ Veno ECMO (3775)	o-venous	arterial	ed to Veno-art	erial □ No (If Yes ↓)						
ECMO In		□ Intraop □ Postop □ Non-op	perative							
Clinical In ECMOInd (D: ☐ Cardiac Failure ☐ Respira	tory Failure	☐ Hypothermia ☐ Rescu	ue/salvage					
L.2 Ventricula	ar Assist Devices									
		e dropdown lists in software)								
Timing:		(during same hospitalization but i	not same OR ta	rip as CV surgical procedu	ure)					
	2. Stand-alone V	AD procedure n with CV surgical procedure (sam	e trin to the O	R)- nlanned						
	4. In conjunction	n with CV surgical procedure (sam	e trip to the O							
Indication:	 Post-Operativ Bridge to Trai 	e (after surgical procedure during ansplantation Type: 1. I	reoperation) Right VAD (R	VAD) Reason:	1. Cardiac Transplant					
mulcation.	2. Bridge to Rec	overy 2. I	Left VAD (LV	AD)	2. Recovery					
	3. Destination4. Post cardiotor		Biventricular V VAD)	/AD	Device Transfer Device-Related Infection					
	Failure		VAD) Гotal Artificial	Heart	5. Device Malfunction					
	5. Device Malfu	`	AH)		6. End of (device) Life					
	 End of (device Salvage 	e) Life								
Device:	See VAD list									
PrevVAD (3790)	itted with VAD	Yes ⊔ No								
$(If Yes \rightarrow)$		planted at another facility Yes	□ No							
	PrevVADF (3795) Insertion date:/	/ /								
	PrevVADD (3800)									
	Indication: PrevVADIn (3805)									
	Type:									
	PrevVADTy (3810)			1						
		mber:		UDI:						
	PrevVADDevice (383			PrevVADUDI (3820)						
	Previous VAD Ex PrevVADExp (3825)	planted During This Admission:		☐ Yes, not during this ☐ Yes, during this prod						
				□ No						
	(If "Y es, not durir	ng this procedure" or "Yes, during this	procedure" →)	Reason: PrevVADExpRsn (3830)						
		/TC//37	1 22	Date://						
Ventricular Assi VADImp (3840)	st Device Implanted	(If "Yes, not during this during this hospitalization ☐ Yes	*	PrevVADExpDt (3835)						
	ta on up to 3 separate of	devices implanted ↓)								
VAD IMPLANT	$\Gamma(\mathbf{s})$	Initial implant	2nd	device implanted?	3rd Device implanted?					
				VImp2 (3895) les ☐ No (If Yes ↓)	VImp3 (3950) ☐ Yes ☐ No (If Yes ↓)					
Timing		VADImpTmg (3845)	VADImpTm		VADImpTmg3 (3955)					
Indication		VADInd (3850)	VADInd2 (3	905)	VADInd3 (3960)					
Type		VImpTy (3855) VProdTy (3860)	VImpTy2 (3 VProdTy2 (VImpTy3 (3965)					
Device		vriouty (3000)	veroary2 (ובדבר	VProdTy3 (3970)					

Implant Date	//	/_		//				
	VImpDt (3865)	VImpl	Ot2 (3920)	VImpDt3 (3975)				
UDI								
W.D.	VImpUDI (3870)		JDI2 (3925)	VImpUDI3 (3980)				
VAD was explanted	☐ Yes, not during this procedure		es, not during this procedure	☐ Yes, not during this procedure				
	☐ Yes, during this procedure ☐ No		es, during this procedure	☐ Yes, during this procedure☐ No				
	VExp (3875)		(3930)	VExp3 (3985)				
Reason	VExpRsn (3880)		Isn2 (3935)	VExpRsn3 (3990)				
(If "Yes, not during this procedure" or "Yes, during this procedure" →)	12.4.000							
Date	//	/_	/	//				
(If "Yes, not during this procedure" \rightarrow)	VExpDt (3885)	VExp	ot2 (3940)	VExpDt3 (3995)				
M. Other Cardiac Procedures								
(If Other Cardiac Procedure = Yes ↓) See		se proced						
ASD repair- PFO type	☐ Yes ☐ No		Myocardial Stem Cell Ther	apy: ⊔ Yes ⊔ No				
OCarASDPFO (4030) ASD Repair- secundum or sinus vene	osus □ Yes □ No		OCarStemCell (4080) Pulmonary	☐ Yes, Acute ☐ Yes, Chronic ☐ No				
OCarASDSec (4035)	0303		Thromboembolectomy:	in res, neute in res, enfolite in to				
			OCPulThromDis (4085)					
AFib Intracardiac lesions (If yes, com	plete M-1)		Subaortic Stenosis Resection	n: \square Yes \square No (If Yes \downarrow)				
OCarAFibIntraLes (4040)			OCarSubaStenRes (4090)	OCarSubaStenRes (4090)				
AFib Epicardial lesions (If yes, comp OCarAFibEpLes (4045)			OCarSubaStenRes1					
Atrial Appendage procedure: □ RA	A □ LAA □ Both □ No (If not	No ↓)	Surgical Ventricular Restora	ation: Yes No				
OCarAAProc (4050)			OCarSVR (4105)					
Indicate method for atrial appendage	ligation/evelusion:	loverse	wing Frieardial Suture Lie	gation Amputation with oversewing				
OCarAAMeth (4051)	☐ Stapler (c	utting) [Stapler (noncutting) ☐ Epic	cardially applied occlusion device				
If epicardial applied occlusion device →	Model: ☐ AtriClip ☐ Lariat	\Box Other	·	cardiany applied occidence device				
	OCarAAModel (4052)							
	UDI:							
_	OCarAAUDI (4053)		1					
Arrhythmia Device: Pacemaker		7 N.T		ization (TMR): ☐ Yes ☐ No				
OCarACD (4055) ☐ ICD ☐ ICD with	h CRT 🗀 Implantable Recorder L	J None	OCarLasr (4110)	oroelastoma □ Hypernephroma □ Sarcoma				
				er \square No				
Lead Insertion: ☐ Yes ☐ No				Yes □ No				
OCarLeadInsert (4060)			OCarCrTx (4120)	165 2110				
Lead Extraction :				Yes □ No				
OCarACDLE (4065) Yes, planned	☐ Yes, unplanned due to surgical		OCarTrma (4125)					
complication ☐ Yes, unplanned due		□ No						
Congenital Defect Repair: (If yes, con	mplete M-3) ☐ Yes ☐ No		VSD Repair: ☐ Yes-conger OCarVSD (4130)	nital □ Yes-acquired □ No				
OCarCong (4070) LV Aneurysm Repair:	□ Yes □ No		Other Cardiac Procedure:	☐ Yes ☐ No				
OCarLVA (4075)			OCarOthr (4135)					
, ,			, ,					
M.1. Atrial Fibrillation Procedu	urec							
(If Other Cardiac Procedure, AFib = Yes								
Lesion location: Primarily epicard		AFibLesL	oc (4191)					
Method of Lesion Creation: (Select								
Radiofrequency OCarA		s □ No	(If Yes →) Bipolar □ Yes	☐ No OCarAFibMethRadBi (4205)				
Cut-and-sew OCarAFib		s □ No	· · · · · · · · · · · · · · · · · · ·					
Cryo OCarAFibMethCry		s □ No						
Lesions Documented: ☐ Yes ☐ No								
OCarLesDoc (4240)								



	nd Aortic Root Pr					
Family history of FamHistAorta (45)	of disease of aorta:	☐ Aneurys:	m □ Dissection □ Both Ane	urysm and Dissection	l Sudden Death	□ None □ Unknown
Patient's genetic			ers-Danlos □ Loeys-Dietz □ : □ Turner syndrome □ Other □		acic aortic syndro	ome
Prior aortic inter PriorAorta (4510)			Jnknown (If Yes↓)			
Location	Previous	repair	Repair Type	Repair failu	re	Disease progression
	locatio		0.1 (11.1 ((If Yes ↓)	1	(If Yes ↓)
Root	Select all th		Select all that apply ☐ Open ☐ Endovascular ☐ Hyb	Select all that a		Select all that apply es D No
Root	PriorRepRoc	ot (4520)	PriorRepTyRoot (4521)	PriorFailRoot (4522)		ProgRoot (4523)
Ascending	☐ Yes ☐ PriorRepAsc		☐ Open ☐ Endovascular ☐ Hyt PriorRepTyAsc (4526)	rid ☐ Yes ☐ No PriorFailAsc (4527)		es □ No ProgAsc (4528)
Arch	□ Yes □	No	☐ Open ☐ Endovascular ☐ Hyb	rid □ Yes □ No	□ Ye	es 🗆 No
Descending	PriorRepArc ☐ Yes ☐		PriorRepTyArch (4531) ☐ Open ☐ Endovascular ☐ Hyb	PriorFailArch (4532) orid □ Yes □ No		ProgArch (4533) es □ No
	PriorRepDes		PriorRepTyDesc (4536)	PriorFailDesc (4537)	PriorF	ProgDesc (4538)
Suprarenal abdo	ominal Yes PriorRepSup (4540)		☐ Open ☐ Endovascular ☐ Hyb PriorRepTySupraAb (4541)	orid Yes No PriorFailSupraAb (454		es □ No ProgSupraAb (4543)
Infrarenal abdor	minal Yes PriorRepInfr (4545)		☐ Open ☐ Endovascular ☐ Hyb PriorRepTyInfraAb (4546)	orid		es □ No ProginfraAb (4548)
Endoleak: ☐ Y	es \square No \square Unknow	n (If Yes, se	elect all \(\)		<u> </u>	
	ype I: leak at graft att leakTypel (4625)	achment sit	ee: 🗆 Yes 🗆 No			
	(If Ye	En	ype I location: ☐ Ia-proximal ☐ I idoleakTylLoc (4630)	b -distal □ Ic- iliac occlud	ler	
		filling via b	oranch vessel: ☐ Yes ☐ No			
Endo	leakTypell (4635) (If Ye		umber of vessels: ☐ IIa: single vendoleakVessNum (4640)	essel □ IIb: two vessels or	more	
□ T ₂	ype III: leak through					
Endo	leakTypeIII (4645) (If Ye		raft defect type: IIIa: junctiona	l separation of modular co	mponents 🗆 IIIb	: endograft fractures or holes
□Т	ype IV: leak through	graft fabric	doleakType (4650) – porosity: ☐ Yes ☐ No			
	eakTypeIV (4655)		aneurysm sac without leak: \(\simeg\) Ye	- - N-		
	leakTypeV (4660)	expansion	aneuryshi sac without leak. 🗀 Te	S LI NO		
	es 🗆 No 🗆 Unknow	n (If Yes —		Graft infection □ Valvu Native aorta □Multiple		☐ Nonvalvular endocarditis
Trauma: 🗆 Ye	es 🗆 No 🗆 Unknow	n (If Yes —	Location: Select all that apply		71	
Trauma (4675)	Root TraumacRoot (4680)	□ Yes □ No	Descending Trauma	aDesc (4695)	□ Yes □ No
	Ascending Trauma	Asc (4685)	☐ Yes ☐ No	Thoracoabdominal	TraumaThorac (47)	00) □ Yes □ No
D	Arch TraumaArch (46		☐ Yes ☐ No	Abdominal Trauma		☐ Yes ☐ No
Presentation: Presentation (471			rdiac Arrest ☐ Syncope ☐ Streeness (vocal cord dysfunction)		⊥ raraiysis ⊔ F	Fatigue Infection
Primary Indicati		☐ Dissect	ion □ Valvular Dysfunction □ is □ Coarctation		l Hematoma	
	Etiology:	☐ Atherose	clerosis □ Infection □ Inflam neurysm □ Mycotic □ Traumat			
(if	Type:		n □ Saccular □ Unknown			
Aneurysm→)	Rupture: AnRupt (4730)	□ Yes □	No (If Yes \rightarrow) Contained ruptur AnRuptCon (4735)	e: 🗆 Yes 🗆 No		
	Location:		TJ □ STJ-midascending □ Mid □ Zone 2 □ Zone 3 □ Zone 4 □			Zone 9 □ Zone 10 □ Zone 11
	Timing:	☐ Hyperac	eute (<48 hrs) ☐ Acute (48hrs-2vn Chronic ☐ Unknown			
(if		e known 🗆	$ Yes \ \square \ No \ (If \ Yes \rightarrow) \qquad Date $	of onset:// setDt (4747)		
Dissection→)	Primary tear					
	location		STJ □ STJ-midascending □ Mic□ Zone 2 □ Zone 3 □ Zone 4 □			Zone 9 □ Zone 10 □ Zone 11

					ling to distal ascends □ Zone 6 □ Zon		9 □ Zone 10 □ Zone 11
	Retrograde extension: ☐ Yes DisRetExt (4760)	□ No □ Unkno	wn (If Yes↓)				
	Retrograde DisRetLoc (4				dascending	dascending to distal as	cending
	Post TEVA	ιR: Γ	l Yes □ No				
	Distal extension: ☐ Yes ☐ No DistalExt (4775)		If Yes↓)				
	Distal Extension Locati	Ion:	☐ Zone 2 ☐ 2 0 ☐ Zone 11	Zone 3 \square		ng to distal ascending ☐ Zone 6 ☐ Zone 7 ☐	l Zone 8 □ Zone 9
	Malperfusion: ☐ Yes ☐ No ☐ DisMal (4785)	□ Unknown (If \)	Yes↓ select all t	hat apply)			
	Coronary DisMalCor (4790)		Yes □ No		Superior Mesent DisMalSup (4815)		O
	Right Subclavia DisMalRtSubclav	(4791)	Yes □ No		Renal, left DisMalRenL (4820	☐ Yes ☐ N	O
	Right Common DisMalRtComCar	(4792)	Yes □ No		Renal. right DisMalRenR (4825	5) □ Yes □ N	O
	Left Common C DisMalComL (480	0)	Yes □ No		Iliofemoral DisMalllio (4830)	□ Yes □ N	O
	Left Subclavian DisMalSubL (4805	1 1	Yes □ No		Spinal DisMalSpin (4835)	□ Yes □ N	O
	Celiac DisMalCel (4810)		Yes □ No				
	Lower Extremity Motor Function DisLowMotFun (4836)	ion: □ No deficit	□ Weakness	□ Paraly	sis □ Unknown		
	Lower Extremity Sensory Definition DisLowSenDef (4837) Rupture: □ Yes □ No (If Yes)		o 🗆 Unknown	l			
	DisRupt (4840) Contain	ned rupture:	□ Yes □ N	0			
	Ruptur	Con (4845) e Location: Loc (4850)	☐ Below ST☐ Zone 1 ☐	J □ STI Zone 2	□ Zone 3 □ Žone	Midascending to distate 4 □ Zone 5 □ Zone 6	
	Aorto-annular ectasia: ☐ Yes	□ No □ Unknov		Zone 9	☐ Zone 10 ☐ Zon	ne 11	
Root	RootAAnnEctasia (4855) Asymmetric Root Dilation: RootDilaAsym (4870) Sinus of Valsalva aneurysm:				RoottDilaAsym (4875		•
	RootSinus (4880)	☐ Left ☐ Right	`		RootSinusLoc (4881) Left Subclavian:		Yes □ No
	ArchType (4882)	_ Len _ ragin	•		Sub (4885)	_	2 163 2 110
Arch	Aberrant Right Subclavian : ArchAbRtSub (4884)	□ Yes □ No		Bovine: ArchBovin	ne (4887)	С] Yes □ No
	Kommerell : ArchKom (4886)	□ Yes □ No		Patent in	ternal mammary ar 1A (4889)	rtery bypass graft:] Yes □ No
	Variant vertebral origin: ArchVarVertOr (4888)	□ Yes □ No					
Ascending	Asymmetric Dilatation: AscAsymDil (4891) Proximal coronary bypass graf	☐ Yes ☐ No					
2.5	AscProxGr (4892)						
3-D reconstructi Diameter3DMeas	on aortic diameter measurement (4895)	s available: \square Y	es 🗀 No (lf)	es ↓ indica	ate maximal diameter	for each zone in mm)	
Annulus	nnulus (4900)	mm Zone	e 2 n3DZone2 (4930	n 	mm	Zone 8 Diam3DZone8 (4944)	mm
Sinus seg	gment	Zone	e 3		mm	Zone 9	mm
	inus (4905) ılar junction	— Diam Zone	13DZone3 (4935 e <i>4</i>)		Diam3DZone9 (4945) Zone 10	11111
Diam3DSi	inotubular (4910)	mm Diam	n3DZone4 (4940)	mm	Diam3DZone10 (4946)	mm
Mid-asco	ending MidAsc (4915)	mm Zone	e 5 13DZone5 (4941)	mm	Zone 11 Diam3DZone11 (4947)	mm

Distal Ascending	****	Zone 6	*****		
Diam3DDistalAsc (4920)	mm	Diam3DZone6 (4942)	mm		
Zone 1 Diam3DZone1 (4925)	mm	Zone 7 Diam3DZone7 (4943)	mm		
Largest (pre-operative) diameter of	treated segment(s)	51011155251167 (15.16)			
Annulus		Zone 2		Zone 8	
DiamLgstAnnulus (4948)	mm	DiamLgstZone2 (4954)	mm	DiamLgstZone8 (4960)	mm
Sinus segment DiamLgstSinus (4949)	mm	Zone 3 DiamLgstZone3 (4955)	mm	Zone 9 DiamLgstZone9 (4961)	mm
Sinotubular junction		Zone 4		Zone 10	
DiamLgstSinotubular (4950)	mm	DiamLgstZone4 (4956)	mm	DiamLgstZone10 (4962)	mm
Mid-ascending DiamLgstMidAsc (4951)	mm	Zone 5 DiamLgstZone5 (4957)	mm	Zone 11 DiamLgstZone11 (4963)	mm
Distal Ascending	mm	Zone 6	mm	Diamegstzoneri (4503)	
DiamLgstDistalAsc (4952)	mm	DiamLgstZone6 (4958)	mm		
Zone 1 DiamLgstZone1 (4953)	mm	Zone 7 DiamLgstZone7 (4959)	mm		
Intervention		Diamegatzoner (1993)			
Planned Staged Hybrid: ☐ Yes ☐ I	No				
PlanStagHybrid (4970)	o (If V 1)				
Open Arch Procedure: ☐ Yes ☐ N ArchProc (4975)	O (If Yes↓)				
Distal Technique: □	Open Clamped				
ArchDisTech (4980)	ding Aorta 🗆 Hamiara	h □ Zone 1 □ Zone 2 □ Zo	one 3 🗆 Zone 4		
ArchDiscSite (4985)	ding Aorta 🗆 Heilitaich		one 3 🗆 Zone 4		
	Elephant trunk 🏻 Froz	en Elephant trunk 🛮 No			
Arch Prench Poimp	lantation: □ Yes □ No	(If Vac 1)			
Arch Brankeimp (4995)		(II Tes 1)			
	☐ Yes ☐ No	Right Subclavian: Y		t Common Carotid: ☐ Yes	□ No
ArchBranling	om (5000) on Carotid: 🏻 Yes 🗖 N	ArchBranRSub (5001) To Left Subclavian: □ Ye		ranRComm (5002) Vertebral: □ Yes □ No	Other: ☐ Yes ☐ No
ArchBranLCo		ArchBranLSub (5010)		BranLVert (5011)	ArchBranOth (5012)
Open Descending Thoracic Aorta o	r Thoracoabdominal Pr	ocedure: Yes No (If Y	es \lorentheta)		
DescAortaProc (5015) Proximal Location: Rev	verse Hemiarch 🗆 Zono	e 0 □ Zone 1 □ Zone 2 □ 2	Zone 3 □ Zone 4 □	7one 5 □ 7one 6 □ 7one	7 □ Zone 8 □ Zone 9
DescAortaLoc (5020)				Zone 3 L Zone 6 L Zone	, , L Zone o L Zone ,
Intercostal Reimplantation	: ☐ Yes ☐ No AortaInterReimp (5	:020)			
Distal Location:		one 5 □ Zone 6 □ Zone 7	□ 7ama 9 □ 7am	a 0 □ 7 and 10 □ 7 and 1	1
AortaDisZone (5035)			□ Zone 8 □ Zor	ie 9 🗆 Zone 10 🗀 Zone 1	1
Visceral vessel interventio AortaVisceral (5045)	n: ☐ Yes ☐ No (If Yes ,	↓)			
Aortaviscelai (3043)	Celiac: ☐ Reimplant AortaViscCel (5050)	ation Branch Graft D	Ione		
	the state of the s	☐ Reimplantation ☐ Bran	ch Graft □ None		
	AortaViscSup (5055)	1: DD 1 C 6			
	AortaViscRenR (5060)	nplantation Branch Graft	∴ □ None		
	Left Renal: ☐ Reimp	olantation Branch Graft	□ None		
	AortaViscRenL (5065)				
Endovascular Procedure(s) : ☐ Yes EndovasProc (5066)	, □ No (If Yes ↓)				
Access: ☐ Femoral ☐ Ilia	ac 🗆 Abdominal Aorta	☐ Lt. Subclavian ☐ Rt. S	bubclavian Asce	ending Aorta LV Apex	
EndovasAccess (5067) Percutaneous Access: □ Y	Zos □ No				
EndovasPercAcc (5068)	es 🗆 No				
Proximal landing zone:		-midascending			
EndoProxZone (5070)	\square Zone 1 \square Zone 2 \square Zone 10 \square Zone 1	\square Zone 3 \square Zone 4 \square Zone	$5 \square \text{ Zone } 6 \square \text{ Zo}$	ne 7 \square Zone 8 \square Zone 9	
Distal landing zone:		-midascending ☐ Midascer	nding to distal asce	nding	
EndoDistalZone (5080)	□ Zone 1 □ Zone 2 □	☐ Zone 3 ☐ Zone 4 ☐ Zone			
TAVD (for atime-ti	☐ Zone 10 ☐ Zone 1				
TAVR (for combination p EndovasTAVR (5090)	rocedures). L. Tes L. N	10			
Ascending TEVAR : □ D	edicated IDE	abel Stent No			
EndovasTEVAR (5095) Arch Vessel managemen					
		vular Branch Craft DE-1-	vacculer Derellal C	Croft Evtra anatamic D-	mass D Ennestrated
Innominate: \square Na Innominate (5100)	mve flow L Endovaso	cular Branch Graft	ovascular Parallel C	лан 🗀 Ехига-анатоппс Ву	pass in renestrated

Left Currids: Native How Endowacediar Branch Graft Endowacediar Parallel Graft Extra-anatomic Bypass Fenestrated Innominate - set acrosted Yes No (IT Extra-anatomic bypase-) Endowacediar Branch Graft Endowacediar Parallel Graft Yes No (IT Extra-anatomic bypase-) Endowacediar Branch Graft Endowacediar Parallel Graft Extra-anatomic Bypass Fenestrated Extra-anatomic Bypass Fenestrated Extra-anatomic Bypass Extra-anatomic Bypass Fenestrated Extra-anatomic Bypass Extra-anatomic Bypa	(If Extra-anatomic bypass→)	Aorta-Innominate InAortaInnom (5105 Right Carotid- Rig InCaroSubclav (5125) ght subclavian □ Y	Aorta-right carotid ☐ Y nAortaCarotid (5110) es ☐ No		AortaSubclav (511	avian □ Yes □ No 5)
Acrial-elic carotid Yes No Innominane-left carotid Yes No It Candes order (5150) Right carotid-Left carotid Yes No It Candes order (5150) Caroller (5175)	I I Notivo	Flow Endovascu	ılar Branch Graft 🏻 🖺	☐ Endovascular Paralle	el Graft 🛮 Extra	a-anatomic Bypa	ass Fenestrated
Inf. Subclavian Native Flow Endovascular Branch Graft Hodovascular Parallel Graft Estara-anatomic Bypass Fenestrated (\$150)	,	LTCaroAortaCaro (5 Right carotid- Let	150) ft carotid □ Yes □	No Other 🗆	omCaro (5160) Yes □ No] Yes □ No	
Cife Extra-matorine bypass == No Arta - left subclavian Yes No Other Yes No	LeftSubclavian ☐ Nativ	,	,	☐ Endovascular Paral	lel Graft □ Ext	ra-anatomic By _l	pass Fenestrated
OthArchves (\$214)] Yes □ No	
Innominate Carotid Yes No Othinonomacous Satistation Yes No Othinonomacous Satistation Yes No Othinonomacous Satistation Yes No Other Yes No Oth		natomic bypass:	☐ Yes ☐ No (If Y	res↓)			
Celiac (\$220)	Othactives (5214)		OthInnomCaro (5215 Subclavian-subcla	5)	OthInnomSub (52 Other ☐ Yes ☐	<mark>216)</mark>] No	□ No
Celiac (1922)	Visceral Vessel managemen	t					
Aorta-celiac Yes No CelacAntacellis (\$2725) CelacOther (\$285) CelacOther (\$285)	LINative	Flow Endovase	ular Branch Graft	☐ Endovascular Parall	lel Graft 🛮 Extr	ra-anatomic Byp	oass
Superior mesenteric: Native Flow Endovascular Branch Graft Endovascular Parallel Graft Extra-anatomic Bypass Penestrated (\$270) (If Extra-anatomic bypass-) Aorta- superior mesenteric Yes No Iliac- superior mesenteric Yes No SupMesenterio SupMesenterio SupMesenterio Yes No SupMesenterio Extra-anatomic Bypass Penestrated Testra-anatomic bypass-) Aorta- right renal Yes No Iliac- right renal Yes No Ritendovascular Branch Graft Endovascular Parallel Graft Extra-anatomic Bypass Penestrated Yes No Iliac- left renal Yes No Ritendovascular Branch Graft Endovascular Parallel Graft Extra-anatomic Bypass Penestrated Yes No Iliac- left renal Yes No Other Yes No Other Yes No Itendovascular Parallel Graft Extra-anatomic Bypass Penestrated Yes No Iliac- left renal Yes No Other Yes No Itendovascular Parallel Graft Extra-anatomic Bypass Penestrated Yes No Iliac- left renal Yes No Other Yes No Itendovascular Parallel Graft Extra-anatomic Bypass Right Iliac Native Flow Bifurcated Graft Extra-anatomic Bypass Right Iliac Native Flow Bifurcated Graft Extra-anatomic Bypass Leftiliac (3393) (If Extra-anatomic bypass-) Femoral - Femoral Yes No Other Yes No Iteliac Other (5395) Internal Iliac Preserved: Right Iliac only Deformation Penoral Preserved: Right Iliac only Both No Riteacother Yes No Other Yes No Othe	•						—
Right renal: Native Flow Endovascular Branch Graft Endovascular Parallel Graft Extra-anatomic Bypass Fenestrated Penestrated P	mesenteric:	ve Flow □ Endovas	scular Branch Graft	☐ Endovascular Para	allel Graft □ Ex	ctra-anatomic By	ypass □ Fenestrated
RightRenal (5320) Native Flow Endovascular Branch Graft Endovascular Parallel Graft Extra-anatomic Bypass Penestrated							
Left renal: LeftRenal (\$370)		Flow	ular Branch Graft	☐ Endovascular Parall	el Graft 🛮 Extr	a-anatomic Byp	ass
LeftRenal (5370)							
Conversion to open: Yes No	I I Nativ	e Flow Endovaso	cular Branch Graft	☐ Endovascular Paral	lel Graft □ Ext	ra-anatomic By _l	pass Fenestrated
Rightlliac (5390)	(If Extra-anatomic bypass→)	LtRenAortaLtRe	(5375)	LtRenIliacLtRen (
Conversion to open:		e Flow	ed Graft	anatomic Bypass			
Leftllac (5393) (If Extra-anatomic bypass →) Femoral - Femoral Yes No	· · ·						
Femoral Yes No		Flow Bifurcated	Graft □ Extra-an	atomic Bypass			
Other Visceral Vessel(s) Extra-anatomic Bypass:							
OthVisVes (5397) Aorta-other □ Yes □ No OthVisIacOther □ Yes □ No OthVisIdeCoth (5398) OthVisIliacOth (5399) OthVisOther (5400) Dissection proximal entry tear covered: □ Yes □ No DisProxTearCov (5401) Endoleak at end of procedure: □ Yes □ No (If Yes ↓) EndoEndProc (5402) Type: □ Ia □ Ib □ II □ III □ IV □ V EndoEndProcTy (5403) Conversion to open: □ Yes □ No (If Yes →) Conversion reason: □ Deployment failure □ Endoleak □ Rupture □ Occlusion/loss of branch ConvToOpen (5404) ConvToOpenRes (5405) Intraop Dissection Extension: □ None □ Antegrade □ Retrograde □ Both IntDisExten (5406) Unintentional rupture of dissection septum: □ Yes □ No (If Yes →) □ Below STJ □ STJ-midascending □ Midascending-distal ascending UnintRup (5407) UnintRupLoc (5408) □ Zone 1 □ Zone 2 □ Zone 3 □ Zone 4 □ Zone 5 □ Zone 6 □ Zone 7 □ Zone 8 □ Zone 9 □ Zone 10 □ Zone 11 Spinal Drain Placement: □ Pre- aortic procedure □ Post- aortic procedure □ None		Right Iliac only 🗆 L	eft Iliac only 🗆 Bo	th □ No			
Aorta-other		ra-anatomic Bypass:	☐ Yes ☐ No (If Y	es ↓)			
DisProxTearCov (5401) EndoEndProc (5402)	Othvisves (3337)						
Type: ☐ Ia ☐ Ib ☐ II ☐ IV ☐ V EndoEndProcTy (5403) Conversion to open: ☐ Yes ☐ No (If Yes →) Conversion reason: ☐ Deployment failure ☐ Endoleak ☐ Rupture ☐ Occlusion/loss of branch ConvToOpen (5404) Intraop Dissection Extension: ☐ None ☐ Antegrade ☐ Retrograde ☐ Both IntDisExten (5406) Unintentional rupture of dissection septum: ☐ Yes ☐ No (If Yes →) UnintRup (5407) UnintRupLoc (5408) □ Zone 1 ☐ Zone 2 ☐ Zone 3 ☐ Zone 4 ☐ Zone 5 ☐ Zone 6 □ Zone 7 ☐ Zone 8 ☐ Zone 9 ☐ Zone 10 ☐ Zone 11 Spinal Drain Placement: ☐ Pre- aortic procedure ☐ Post- aortic procedure ☐ None		r covered: ☐ Yes ☐			:□ Yes□ No (If Yes↓)	
Conversion to open: ☐ Yes ☐ No (If Yes →) Conversion reason: ☐ Deployment failure ☐ Endoleak ☐ Rupture ☐ Occlusion/loss of branch ConvToOpen (5404)	DISFIGNTERICOV (3401)		Endoch	urioc (5402)			IV □ V
Unintentional rupture of dissection septum: □Yes □No (If Yes →) UnintRup (5407) □ Below STJ □ STJ-midascending □ Midascending-distal ascending □ Zone 1 □ Zone 2 □ Zone 3 □ Zone 4 □ Zone 5 □ Zone 6 □ Zone 7 □ Zone 8 □ Zone 9 □ Zone 10 □ Zone 11 Spinal Drain Placement: □ Pre- aortic procedure □ Post- aortic procedure □ None				Deployment failure 🗆			on/loss of branch
UnintRup (5407) UnintRupLoc (5408) Zone 1 Zone 2 Zone 3 Zone 4 Zone 5 Zone 6 Zone 7 Zone 8 Zone 9 Zone 10 Zone 11 Spinal Drain Placement: Pre- aortic procedure Post- aortic procedure None		: □ None □ Antegra	ade □ Retrograde □] Both			
Spinal Drain Placement: ☐ Pre- aortic procedure ☐ Post- aortic procedure ☐ None	UnintRup (5407)	-	UnintRupLoc (5408)	☐ Zone 1 ☐ Zone 2 ☐ Zone 7 ☐ Zone 3	2 □ Zone 3 □ Zo	one 4 \square Zone 5	☐ Zone 6
		procedure Post	- aortic procedure [-	

IntraOp Motor Evoked Potential: ☐ Yes ☐ No MotorEvoke (5425)		(If Yes →) Documented MEP abnormality □ Yes □ No □ Unknown							
IntraOp Somatosensory Evoked	d Potential: ☐ Yes ☐ No		MotorEvokeAb (5426) (If Yes →) Documented SEP abnormality □ Yes □ No □ Unknown						
SomatEvoke (5430)		SomatEvokeAb (5431)							
IntraOp EEG: ☐ Yes ☐ No IntraOpEEG (5432)		(If Yes →) Documented E IntraOpEEGAb (5433)	(If Yes →) Documented EEG abnormality ☐ Yes ☐ No ☐ Unknown						
IntraOp Intravascular Ultrasour	nd(IVUS): □ Yes □ No	IntraOp Transcutaneous I	Doppler: ☐ Yes ☐ No						
IntraOpIVUS (5434) Intraoperative Angiogram: ☐ Y	$V_{es} \square N_{o} (If V_{es} \rightarrow)$	TransDoppler (5435) Volume of contrast:	ml Fluoroscopy ti	me: min					
IntraOpAng (5436)		IntraOpAngVol (5437)	IntraOpAngFlTm						
Devices									
Device(s) Inserted: ADevIns (5440)	☐ Yes ☐ No (If Yes, list proxi	imal to distal using device key ↓))						
Location :	1 2 3 4 4 5 6 7 8 9	A. Below sinotubul B. Sinotubular junc C. Mid ascending t D. Zone 1 (between E. Zone 2 (between F. Zone 3 (first 2 c G. Zone 4 (end of z H. Zone 5 (mid des I. Zone 6 (celiac to J. Zone 7 (superior K. Zone 8 (renal to	action to mid ascending to distal ascending en innominate and left carotid) en left carotid and left subclavian) cm. distal to left subclavian) zone 3 to mid descending aorta ~ T6) escending aorta to celiac) to superior mesenteric) or mesenteric to renals) to infra-renal abdominal aorta) nal abdominal aorta)						
Delivery Method:	1=Open 2= Endovascular	N. Zone 11 (externi	ai macs)						
Outcome:	1= Maldeployed 2= Deploy	red and removed 3= Success	sfully deployed						
Outcome: Model Number:	1= Maldeployed 2= Deploy Enter device model number	ed and removed 3= Success	fully deployed						
Outcome: Model Number: UDI:	Enter device model number		fully deployed						
Model Number:			fully deployed Model #	UDI					
Model Number: UDI:	Enter device model number Enter unique device identifier	(not serial number)		UDI ADevUDI01 (5470)					
Model Number: UDI: Location (Letter)	Enter device model number Enter unique device identifier Delivery Method	(not serial number) Outcome	Model #						
Model Number: UDI: Location (Letter) ADevLoc01 (5450)	Enter device model number Enter unique device identifier Delivery Method ADevDelMeth01 (5455)	Outcome ADevOut01 (5460)	Model # ADevModel01 (5465)	ADevUDI01 (5470)					
Model Number: UDI: Location (Letter) ADevLoc01 (5450) ADevLoc02 (5475)	Enter device model number Enter unique device identifier Delivery Method ADevDelMeth01 (5455) ADevDelMeth02 (5480)	Outcome ADevOut01 (5460) ADevOut02 (5485)	Model # ADevModel01 (5465) ADevModel02 (5490)	ADevUDI01 (5470) ADevUDI02 (5495)					
Model Number: UDI: Location (Letter) ADevLoc01 (5450) ADevLoc02 (5475) ADevLoc03 (5500)	Enter device model number Enter unique device identifier Delivery Method ADevDelMeth01 (5455) ADevDelMeth02 (5480) ADevDelMeth03 (5505)	Outcome ADevOut01 (5460) ADevOut02 (5485) ADevOut03 (5510)	Model # ADevModel01 (5465) ADevModel02 (5490) ADevModel03 (5515)	ADevUDI01 (5470) ADevUDI02 (5495) ADevUDI03 (5520)					
Model Number: UDI: Location (Letter) ADevLoc01 (5450) ADevLoc02 (5475) ADevLoc03 (5500) ADevLoc04 (5525)	Enter device model number Enter unique device identifier Delivery Method ADevDelMeth01 (5455) ADevDelMeth02 (5480) ADevDelMeth03 (5505) ADevDelMeth04 (5530)	Outcome ADevOut01 (5460) ADevOut02 (5485) ADevOut03 (5510) ADevOut04 (5535)	Model # ADevModel01 (5465) ADevModel02 (5490) ADevModel03 (5515) ADevModel04 (5540)	ADevUDI01 (5470) ADevUDI02 (5495) ADevUDI03 (5520) ADevUDI04 (5545)					
Model Number: UDI: Location (Letter) ADevLoc01 (5450) ADevLoc02 (5475) ADevLoc03 (5500) ADevLoc04 (5525) ADevLoc05 (5550)	Enter device model number Enter unique device identifier Delivery Method ADevDelMeth01 (5455) ADevDelMeth02 (5480) ADevDelMeth03 (5505) ADevDelMeth04 (5530) ADevDelMeth05 (5555)	Outcome ADevOut01 (5460) ADevOut02 (5485) ADevOut03 (5510) ADevOut04 (5535) ADevOut05 (5560)	Model # ADevModel01 (5465) ADevModel02 (5490) ADevModel03 (5515) ADevModel04 (5540) ADevModel05 (5565)	ADevUDI01 (5470) ADevUDI02 (5495) ADevUDI03 (5520) ADevUDI04 (5545) ADevUDI05 (5570)					
Model Number: UDI: Location (Letter) ADevLoc01 (5450) ADevLoc02 (5475) ADevLoc03 (5500) ADevLoc04 (5525) ADevLoc05 (5550) ADevLoc06 (5575)	Enter device model number Enter unique device identifier Delivery Method ADevDelMeth01 (5455) ADevDelMeth02 (5480) ADevDelMeth03 (5505) ADevDelMeth04 (5530) ADevDelMeth05 (5555) ADevDelMeth06 (5580)	Outcome ADevOut01 (5460) ADevOut02 (5485) ADevOut03 (5510) ADevOut04 (5535) ADevOut05 (5560) ADevOut06 (5585)	Model # ADevModel01 (5465) ADevModel02 (5490) ADevModel03 (5515) ADevModel04 (5540) ADevModel05 (5565) ADevModel06 (5590)	ADevUDI01 (5470) ADevUDI02 (5495) ADevUDI03 (5520) ADevUDI04 (5545) ADevUDI05 (5570) ADevUDI06 (5595)					
Model Number: UDI: Location (Letter) ADevLoc01 (5450) ADevLoc02 (5475) ADevLoc03 (5500) ADevLoc04 (5525) ADevLoc05 (5550) ADevLoc06 (5575) ADevLoc07 (5600)	Enter device model number Enter unique device identifier Delivery Method ADevDelMeth01 (5455) ADevDelMeth02 (5480) ADevDelMeth03 (5505) ADevDelMeth04 (5530) ADevDelMeth05 (5555) ADevDelMeth06 (5580) ADevDelMeth07 (5605)	Outcome ADevOut01 (5460) ADevOut02 (5485) ADevOut03 (5510) ADevOut04 (5535) ADevOut05 (5560) ADevOut06 (5585) ADevOut07 (5610)	Model # ADevModel01 (5465) ADevModel02 (5490) ADevModel03 (5515) ADevModel04 (5540) ADevModel05 (5565) ADevModel06 (5590) ADevModel07 (5615)	ADevUDI01 (5470) ADevUDI02 (5495) ADevUDI03 (5520) ADevUDI04 (5545) ADevUDI05 (5570) ADevUDI06 (5595) ADevUDI07 (5620)					
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Model Number: UDI: Location (Letter) ADevLoc01 (5450) ADevLoc02 (5475) ADevLoc03 (5500) ADevLoc04 (5525) ADevLoc05 (5550) ADevLoc06 (5575) ADevLoc07 (5600) ADevLoc08 (5625) ADevLoc09 (5650)	Enter device model number Enter unique device identifier Delivery Method ADevDelMeth01 (5455) ADevDelMeth02 (5480) ADevDelMeth03 (5505) ADevDelMeth04 (5530) ADevDelMeth05 (5555) ADevDelMeth06 (5580) ADevDelMeth07 (5605) ADevDelMeth08 (5630) ADevDelMeth09 (5655)	Outcome ADevOut01 (5460) ADevOut02 (5485) ADevOut03 (5510) ADevOut04 (5535) ADevOut05 (5560) ADevOut06 (5585) ADevOut07 (5610) ADevOut08 (5635) ADevOut09 (5660)	Model # ADevModel01 (5465) ADevModel02 (5490) ADevModel03 (5515) ADevModel04 (5540) ADevModel05 (5565) ADevModel06 (5590) ADevModel07 (5615) ADevModel08 (5640) ADevModel09 (5665)	ADevUDI01 (5470) ADevUDI02 (5495) ADevUDI03 (5520) ADevUDI04 (5545) ADevUDI05 (5570) ADevUDI06 (5595) ADevUDI07 (5620) ADevUDI08 (5645) ADevUDI09 (5670)					
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Model Number: UDI: Location (Letter) ADevLoc01 (5450) ADevLoc02 (5475) ADevLoc03 (5500) ADevLoc04 (5525) ADevLoc05 (5550) ADevLoc06 (5575) ADevLoc07 (5600) ADevLoc09 (5650) ADevLoc10 (5675) ADevLoc11 (5700) ADevLoc12 (5725) ADevLoc13 (5750)	Enter device model number Enter unique device identifier Delivery Method ADevDelMeth01 (5455) ADevDelMeth02 (5480) ADevDelMeth03 (5505) ADevDelMeth04 (5530) ADevDelMeth05 (5555) ADevDelMeth06 (5580) ADevDelMeth07 (5605) ADevDelMeth09 (5655) ADevDelMeth09 (5655) ADevDelMeth10 (5680) ADevDelMeth11 (5705) ADevDelMeth12 (5730) ADevDelMeth13 (5755)	Outcome ADevOut01 (5460) ADevOut02 (5485) ADevOut03 (5510) ADevOut04 (5535) ADevOut05 (5560) ADevOut06 (5585) ADevOut07 (5610) ADevOut08 (5635) ADevOut09 (5660) ADevOut11 (5710) ADevOut12 (5735) ADevOut13 (5760)	Model # ADevModel01 (5465) ADevModel02 (5490) ADevModel03 (5515) ADevModel04 (5540) ADevModel05 (5565) ADevModel06 (5590) ADevModel07 (5615) ADevModel08 (5640) ADevModel09 (5665) ADevModel10 (5690) ADevModel11 (5715) ADevModel12 (5740) ADevModel13 (5765)	ADevUDI01 (5470) ADevUDI02 (5495) ADevUDI03 (5520) ADevUDI04 (5545) ADevUDI05 (5570) ADevUDI06 (5595) ADevUDI07 (5620) ADevUDI08 (5645) ADevUDI09 (5670) ADevUDI10 (5695) ADevUDI11 (5720) ADevUDI12 (5745) ADevUDI13 (5770)					

M.3. Congenital Defect Repair (other than ASD, VSD or Bicuspid valve)						
Congenital Diagnoses: Select up to three most significant diagnoses: (refer to "Congenital Diagnoses/Procedures List" document)						
Diagnosis 1:OCarCongDiag1 (6500) (If not "No additional congenital diagnoses"→) Diagnosis 2:OCarCongDiag2 (6505) (If not						
"No additional congenital diagnoses"→)Diagnosis 3:OCarCongDiag3 (6510)						
Congenital Procedures: Select up to three most significant: (refer to "Congenital Diagnoses/Procedures List" document)						
Procedure 1: OCarCongProc1 (6515) (If not "No additional congenital procedures"→) Procedure 2: OCarCongProc1 (6515) (If not						
"No additional congenital procedures"→) Procedure 3: OCarCongProc3 (6525)						

N. Other Non-Cardiac Procedures (If Other Non-Cardiac Procedure = Yes 1)
Carotid Endarterectomy: Yes, planned Yes, unplanned due to surgical complication
ONCCarEn (6530) ☐ Yes, unplanned due to unsuspected disease or anatomy ☐ No Other Vascular: ☐ Yes, planned ☐ Yes, unplanned due to surgical complication
ONCOVasc (6535) Yes, unplanned due to unsuspected disease or anatomy No
Other Thoracic: ☐ Yes, planned ☐ Yes, unplanned due to surgical complication
ONCOThor (6540)
Other: ☐ Yes, planned ☐ Yes, unplanned due to surgical complication ONCOther (6545) ☐ Yes, unplanned due to unsuspected disease or anatomy ☐ No
ONCOther (6545) Tes, unpranned due to unsuspected disease or anatomy No
O. Post-Operative
Peak Glucose within18-24 hours of anesthesia end time: PostOpPeakGlu (6550)
Postoperative Creatinine Level: Discharge Hemoglobin: Discharge Hematocrit:
PostCreat (6555) PostopHemoglobin (6556) PostopHct (6557)
Blood Products Used Postoperatively: ☐ Yes ☐ No (If Yes ↓)
BldProd (6560) Red Blood Cell Units: Fresh Frozen Plasma Units: Cryoprecipitate Units: Platelet Units:
BdRBCU (6565) BdFFPU (6570) BdCryoU (6575) BdPlatU (6580)
Extubated in OR: Yes No NA
ExtubOR (6585) Re-intubated /or intubated Post Op During Hospital Stay: □ Yes □ No (If yes →) Additional Hours Ventilated:
Postopintub (6591) VentHrsA (6595)
Total post-operative ventilation hours(System Calculation)
VentHrsTot (6600)
ICU Visit: ☐ Yes ☐ No (If Yes →) Initial ICU Hours: ICUVisit (6605) ICUInHrs (6610)
ICUVisit (6605) ICUInHrs (6610) Readmission to ICU: □ Yes □ No (If Yes →) Additional ICU Hours:
ICUReadm (6615) ICUAdHrs (6620)
Post Op Echo Performed to evaluate valve(s): ☐ Yes ☐ No (If Yes ↓)
POPTTECh (6625) Level aortic insufficiency found:
POPTTAR (6630)
□ None □ Trivial/Trace □ Mild □ Moderate □ Severe □ Not Documented
Aortic Paravalvular leak:
POpAortParaLk (6631) □ None □ Trivial/Trace □ Mild □ Moderate □ Severe □ Not Documented
Level mitral insufficiency found:
POpTTMR (6635)
□ None □ Trivial/Trace □ Mild □ Moderate □ Severe □ Not Documented
Mitral Paravalvular leak: POpMitParaLk (6636)
□ None □ Trivial/Trace □ Mild □ Moderate □ Severe □ Not Documented
Level tricuspid insufficiency found:
POPTTTR (6640)
□ None □ Trivial/Trace □ Mild □ Moderate □ Severe □ Not Documented Level pulmonic insufficiency found:
POPTTPu (6645)
□ None □ Trivial/Trace □ Mild □ Moderate □ Severe □ Not Documented
Post Op Ejection Fraction: ☐ Yes ☐ No If Yes →) Post Op Ejection Fraction:(%)
POPEFD (6655) Cardiac Enzymes (biomarkers) Drawn: ☐ Yes ☐ No (If Yes →) Peak CKMB: Peak Troponin I Peak Troponin T
POpenzDrawn (6660) POpPkCKMB (6665) POpPkTrl (6670) POpPkTrl (6675)
12-Lead EKG Findings:
POpEKG (6680) ☐ Not performed ☐ No ischemic changes ☐ New ST changes ☐ New Pathological Q-wave or LBBB
□ New RBBB □ New AV Conduction Block □ New STEMI □ Other □ NA (no pre-op EKG for comparison, transplant
P. Postoperative Events
Surgical Site Infection within 30 days of operation: ☐ Yes ☐ No (If Yes ↓)
SurSInf (6690)
Sternal Superficial Wound Infection: \square Yes, within 30 days of procedure \square Yes, >30 days after procedure but during hosp. for surgery \square No
CSternalSupInf (6695) Deep Starnal Infaction / Mediastinitis: DeepStarnlaf (6700)
Deep Sternal Infection/ Mediastinitis: DeepSternInf (6700) ☐ Yes, within 30 days of procedure ☐ Yes, >30 days after procedure but during hosp. for surgery ☐ No
(If either Yes value →) Diagnosis Date:/ (mm/dd/yyyy)
DeepSternInfDt (6705)
Thoracotomy: \square Yes, within 30 days of procedure \square Yes, >30 days after procedure but during hosp. for surgery \square No CIThor (6710)

Conduit Harvest : ☐ Yes, within 30 days of procedure ☐ Yes, ConduitHarv (6715)	
Cannulation Site: ☐ Yes, within 30 days of procedure ☐ Yes, CanSite (6720)	, >30 days after procedure but during hosp. for surgery ☐ No
Wound Intervention/Procedure: \square Yes \square No (If Yes \downarrow) WoundInter (6725)	
Wound Intervention – Open with Packing/Irrigation: WoundIntOpen (6730)	☐ Yes, primary incision ☐ Yes, secondary incision ☐ Both ☐ No
Wound Intervention – Wound Vac: WoundIntVac (6735)	\square Yes, primary incision \square Yes, secondary incision \square Both \square No
Secondary Procedure Muscle Flap: WoundIntMuscle (6740)	\square Yes, primary incision \square Yes, secondary incision \square Both \square No
Secondary Procedure Omental Flap: WoundIntOmental (6745)	☐ Yes ☐ No
Other In Hospital Postoperative Event Occurred: Yes No (If Yes)	es ↓)
Complics (6750) Operative	
	ReBldTim (6760)
ReOp for Valvular Dysfunction: ☐ Yes, surgical ☐ Yes, transc COpReVIv (6765)	eatheter No
Reintervention for Myocardial Ischemia: ☐ Yes ☐ No CReintMI (6771)	
(If Yes \rightarrow) Vessel: \square Native coronary \square Graft \square Bo CReintMIVes (6772)	CReintMIIntTy (6773)
Aortic Reintervention: \square Yes \square No (if yes \rightarrow) Type: \square Open \square CAortReint (6774) CAortReintTy (6775	
ReOp for Other Cardiac Reasons: ☐ Yes ☐ No COpReOth (6778)	•
Returned to the OR for Other Non-Cardiac Reasons: Yes Copresson (6780)	No
Open chest with planned delayed sternal closure: ☐ Yes ☐ No COpPlndDelay (6785)	
Sternotomy Issue: \square Yes \square No (If Yes \rightarrow) Sternal instability/d	
CSternal (6790) CSternalDehis (6795) Infection	
Sepsis: ☐ Yes ☐ No (If Yes →) Positive Blood Cultures: ☐ Yes ☐ Sepsis (6800) CSepsis (6805)	Yes □ No
Sepsis: ☐ Yes ☐ No (If Yes →) Positive Blood Cultures: ☐ Y	
Sepsis: ☐ Yes ☐ No (If Yes →) Positive Blood Cultures: ☐ Yespesis (6800) CSepsis (6800) Neurologic, Central Postoperative Stroke: ☐ Yes, hemorrhagic ☐ Yes, ischemic	
Sepsis: ☐ Yes ☐ No (If Yes →) Positive Blood Cultures: ☐ Yespis (6800) CSepsisPBC (6805) Neurologic, Central Postoperative Stroke: ☐ Yes, hemorrhagic ☐ Yes, ischemic CNStrokP (6810) Transient Ischemic Attack (TIA): ☐ Yes ☐ No CNStrokTIA (6815) Encephalopathy: ☐ None ☐ Anoxic ☐ Drug ☐ Metabolic	☐ Yes, undetermined type ☐ No
Sepsis: □ Yes □ No (If Yes →) Positive Blood Cultures: □ Yespis (6800) CSepsis PBC (6805) Neurologic, Central Postoperative Stroke: □ Yes, hemorrhagic □ Yes, ischemic CNStrokP (6810) Transient Ischemic Attack (TIA): □ Yes □ No CNStrokTIA (6815) Encephalopathy: □ None □ Anoxic □ Drug □ Metabolic CNEnceph (6821) Coma/unresponsive state (not stroke): □ Yes □ No	☐ Yes, undetermined type ☐ No
Sepsis: ☐ Yes ☐ No (If Yes →) Positive Blood Cultures: ☐ Yespis (6800)	☐ Yes, undetermined type ☐ No c ☐ Mixed ☐ Unknown
Sepsis: □ Yes □ No (If Yes →) Positive Blood Cultures: □ Yespis (6800) Neurologic, Central Postoperative Stroke: □ Yes, hemorrhagic □ Yes, ischemic CNStrokP (6810) Transient Ischemic Attack (TIA): □ Yes □ No CNStrokTIA (6815) Encephalopathy: □ None □ Anoxic □ Drug □ Metabolic CNEnceph (6821) Coma/unresponsive state (not stroke): □ Yes □ No CNComa (6822) Neurologic, Peripheral Lower Extremity Paralysis: □ Yes □ No (If Yes →) Paralysis CNParal (6825)	☐ Yes, undetermined type ☐ No c ☐ Mixed ☐ Unknown Type: ☐ Transient ☐ Permanent (6826)
Sepsis: □ Yes □ No (If Yes →) Positive Blood Cultures: □ Yespis (6800)	☐ Yes, undetermined type ☐ No c ☐ Mixed ☐ Unknown Type: ☐ Transient ☐ Permanent (6826)
Sepsis: □ Yes □ No (If Yes →) Positive Blood Cultures: □ Yespis (6800) Neurologic, Central Postoperative Stroke: □ Yes, hemorrhagic □ Yes, ischemic CNStrokP (6810) Transient Ischemic Attack (TIA): □ Yes □ No CNStrokTTIA (6815) Encephalopathy: □ None □ Anoxic □ Drug □ Metabolic CNEnceph (6821) Coma/unresponsive state (not stroke): □ Yes □ No CNComa (6822) Neurologic, Peripheral Lower Extremity Paralysis: □ Yes □ No (If Yes →) Paralysis CNParal (6825) Paresis: □ Yes □ No (If Yes →) Paresis Type: □ Transient □ CNParesis (6829) Phrenic Nerve Injury: □ Yes □ No PhrenNrvInj (6832)	☐ Yes, undetermined type ☐ No c ☐ Mixed ☐ Unknown Type: ☐ Transient ☐ Permanent (6826)
Sepsis: □ Yes □ No (If Yes →) Positive Blood Cultures: □ Yespis (6800)	☐ Yes, undetermined type ☐ No c ☐ Mixed ☐ Unknown Type: ☐ Transient ☐ Permanent (6826)
Sepsis: □ Yes □ No (If Yes →) Positive Blood Cultures: □ Yespis (6800) Neurologic, Central Postoperative Stroke: □ Yes, hemorrhagic □ Yes, ischemic CNStrokP (6810) Transient Ischemic Attack (TIA): □ Yes □ No CNStrokTTIA (6815) Encephalopathy: □ None □ Anoxic □ Drug □ Metabolic CNEnceph (6821) Coma/unresponsive state (not stroke): □ Yes □ No CNComa (6822) Neurologic, Peripheral Lower Extremity Paralysis: □ Yes □ No (If Yes →) Paralysis CNParal (6825) Paresis: □ Yes □ No (If Yes →) Paresis Type: □ Transient □ CNParesis (6829) Phrenic Nerve Injury: □ Yes □ No PhrenNrvInj (6832) Recurrent Laryngeal Nerve Injury: □ Yes □ No RecLarynNrvInj (6833) Pulmonary	☐ Yes, undetermined type ☐ No c ☐ Mixed ☐ Unknown Type: ☐ Transient ☐ Permanent (6826) ☐ Permanent
Sepsis: □ Yes □ No (If Yes →) Positive Blood Cultures: □ Yespis (6800)	☐ Yes, undetermined type ☐ No c ☐ Mixed ☐ Unknown Type: ☐ Transient ☐ Permanent (6826) ☐ Permanent
Sepsis: □ Yes □ No (If Yes →) Positive Blood Cultures: □ Yespis (6800)	☐ Yes, undetermined type ☐ No c ☐ Mixed ☐ Unknown Type: ☐ Transient ☐ Permanent (6826) ☐ Permanent
Sepsis: □ Yes □ No (If Yes →) Positive Blood Cultures: □ Yespis (6800) Neurologic, Central Postoperative Stroke: □ Yes, hemorrhagic □ Yes, ischemic CNStrokP (6810) Transient Ischemic Attack (TIA): □ Yes □ No CNStrokTTIA (6815) Encephalopathy: □ None □ Anoxic □ Drug □ Metabolic CNEnceph (6821) Coma/unresponsive state (not stroke): □ Yes □ No CNComa (6822) Neurologic, Peripheral Lower Extremity Paralysis: □ Yes □ No (If Yes →) Paralysis CNParal (6825) CNParalTy Paresis: □ Yes □ No (If Yes →) Paresis Type: □ Transient □ CNParesis (6829) CNParesis (6830) Phrenic Nerve Injury: □ Yes □ No PhrenNrvInj (6832) Recurrent Laryngeal Nerve Injury: □ Yes □ No RecLarynNrvInj (6833) Pulmonary Prolonged Ventilation: □ Yes □ No (OR exit time until initial ext CPVntLng (6835) Pneumonia: □ Yes □ No (PPneum (6840) Venous Thromboembolism – VTE: □ Yes □ No (If Yes ↓) CVTE (6845)	☐ Yes, undetermined type ☐ No c ☐ Mixed ☐ Unknown Type: ☐ Transient ☐ Permanent (6826) ☐ Permanent
Sepsis:	☐ Yes, undetermined type ☐ No c ☐ Mixed ☐ Unknown Type: ☐ Transient ☐ Permanent (6826) ☐ Permanent
Sepsis:	☐ Yes, undetermined type ☐ No c ☐ Mixed ☐ Unknown Type: ☐ Transient ☐ Permanent (6826) ☐ Permanent
Sepsis:	☐ Yes, undetermined type ☐ No c ☐ Mixed ☐ Unknown Type: ☐ Transient ☐ Permanent (6826) ☐ Permanent

Renal

Renal Failure: ☐ Yes ☐ No		
CRenFail (6870) Dialysis (Newly Required): ☐ Yes ☐ No (If Yes -	→) Required after Hospital Discharge: □ Yes □] No
CRenDial (6875)	DialDur (6880) Duration: ☐ Temporary ☐ Permanent ☐ Ur	known
Ultra-Filtration Required: ☐ Yes ☐ No	DialStat (6881)	
CUltraFil (6885)		
Vascular Iliac/Femoral Dissection: □ Yes □ No		
CVallFem (6890)		
Acute Limb Ischemia: ☐ Yes ☐ No		
CVaLblsc (6891)	W TN- (ICV 1)	
Mechanical assist device related complication : ☐ `CMAD (6892)	Yes 🗆 No (II Yes Į)	
Cannula/Insertion site issue ☐ Yes ☐ CMADCanIns (6893)	No	
Hemorrhagic: ☐ Yes ☐ No		
CMADHem (6894) Thrombotic/Embolic: □ Yes □ No		
CMADThromEm (6895)		
Hemolytic: ☐ Yes ☐ No		
CMADHemolytic (6896) Infection: ☐ Yes ☐ No		
CMADInf (6897)		
Other mechanical assist device related CMADOther (6898)	complication: □ Yes □ No	
Other		
Rhythm Disturbance Requiring Permanent Device: CCRhythmDis (6900)	Pacemaker □ ICD □ Pacemaker/ICD □	Other None
Cardiac Arrest: ☐ Yes ☐ No COtArrst (6905)		
Post Op Aortic Endoleak: ☐ Yes ☐ No (if yes→)	Type: □ Ia □ Ib □ II □ III □ IV □ V COtAortEndoTy (6907)	
Aortic Rupture: ☐ Yes ☐ No COtAortRupt (6908)	cornorcal data (0307)	
Aortic Dissection: ☐ Yes ☐ No (if yes→) Type: ☐ A CVaAoDis (6909) CVaAoDis		
Aortic Side Branch malperfusion: ☐ Yes ☐ No	17 (0310)	
COtAortSide (6911) Aortic stent graft induced entry tear: ☐ Yes ☐ No		
COtAortTear (6912) Anticoagulant Event: □ Yes □ No		
COtCoag (6914)		
Pericardiocentesis:: ☐ Yes ☐ No COtTamp (6915)		
Gastro-Intestinal Event: ☐ Yes ☐ No COtGI (6920)		
Liver Dysfunction/ Failure: ☐ Yes ☐ No COtLiver (6921)		
Multi-System Failure: ☐ Yes ☐ No COtMSF (6925)		
Atrial Fibrillation: ☐ Yes ☐ No COtAFib (6930)		
Other: Yes No		
COtOther (6950)		
O Dischause / Mantalite		
Q. Discharge / Mortality Date of Last Follow-up:// (mm/dd/y	vvv)	
LFUDate (7000)		
Status at 30 days After Surgery: ☐ Alive ☐ Dead ☐ UMt30Stat (7001)	Jnknown	
Primary method used to verify 30-day status:	☐ Phone call to patient or family	☐ Office visit >= 30 days after procedure
Mt30StatMeth (7002)	☐ Letter from medical provider ☐ Medical record (evidence of life or death)	☐ Social Security Death Master File /NDI
Discharge/Mortality status: ☐ In hospital, alive ☐ Discha		
DischMortStat (7005) ☐ Died in hospital ☐ Discha	arged alive, died after discharge	
If Discharge/Mortality Status = "Discharged alive, last know statu Discharge Date//		
Discharge Date/(mm/dd	1.	

Discharge Location: ☐ Ho		ional Care Unit/Rehab □ Other Acute Care Hospital □ Left AMA □ Other
Cardiac Rehabilitation Referral: CardRef (7010)	☐ Yes ☐ No ☐ Not Ap	plicable
Smoking Cessation Counseling: SmokCoun (7011)	☐ Yes ☐ No ☐ Not Ap	plicable
Medications Prescribed at Disch	arge	
Antiplatelet	Aspirin DCASA (7060)	☐ Yes ☐ No ☐ Contraindicated
7 mapateret	ADP Inhibitor DCADP (7070)	☐ Yes ☐ No ☐ Contraindicated
	Other Antiplatelet DCOthAntiplat (7075)	☐ Yes ☐ No ☐ Contraindicated
	Thrombin Inhibitors DCDirThromIn (7080)	☐ Yes ☐ No ☐ Contraindicated
Anticoagulant	Warfarin (Coumadin) DCCoum (7085)	☐ Yes ☐ No ☐ Contraindicated
	Factor Xa inhibitors DCFactorXa (7090)	☐ Yes ☐ No ☐ Contraindicated
	Novel Oral Anticoagulant DCNovOrAnti (7091)	☐ Yes ☐ No ☐ Contraindicated
	Other Anticoagulant DCOthAnticoag (7095)	☐ Yes ☐ No ☐ Contraindicated
ACE or ARB	Destinational (1933)	☐ Yes ☐ No ☐ Contraindicated ☐ Not Indicated (no CHF or EF >
DCACE (7100)		40%)
Amiodarone DCAmiodarone (7103)		☐ Yes ☐ No ☐ Contraindicated
Beta Blocker DCBeta (7105)		☐ Yes ☐ No ☐ Contraindicated
Lipid Lowering - Statin DCLipLowStat (7115)		☐ Yes ☐ No ☐ Contraindicated
Lipid Lowering - Other DCLipLowNonStat (7120)		☐ Yes ☐ No ☐ Contraindicated
If Discharge/Mortality Status = "Died in hospital" of Mortality - Date// MtDate (7121) Primary Cause of Death (select only MtCause (7122) □ Cardiac □ Neurologic □ Ro	(mm/dd/yyyy)	
(If Discharge/Mortality Status = "Died in hospital))	ing reoperation □ In Hospital (Other than OR)
(If Discharge/Mortality Status = "Discharged alive, Operative Death: ☐ Yes ☐ No MtOpD (7124) Post Discharge death location: PostDisDthLoc (7125) ☐ Home ☐ Extended Care Fac		habilitation □ Hospital during readmission □ Other □ Unknown
R. Readmission		
(If Discharge/Mortality Status = "Discharged alive, Readmit: ☐ Yes ☐ No ☐ Unknown (If Ye Readmit (7140) Readmit Date://	es \lambda)	ed anve, died after discharge (1)
ReadmitDt (7145) Readmit <u>Primary</u> Reason:		
ReadmRsn (7160)		
☐ Angina ☐ Anticoagulation Comp ☐ Anticoagulation Comp ☐ Aortic Complication ☐ Arrhythmia or Heart B ☐ Blood Pressure (hyper	slock	☐ Pericardial Effusion and/or Tamponade ☐ Pericarditis/Post Cardiotomy Syndrome ☐ Pleural effusion requiring intervention ☐ Pneumonia ☐ Renal Failure ☐ Renal Insufficiency
☐ Chest pain, noncardiac☐ Congestive Heart Failu	e ure	☐ Respiratory complication, Other ☐ Sepsis ☐ Stroke
☐ Coronary Artery/Graft ☐ Depression/psychiatric ☐ DVT		☐ TIA ☐ Transfusion
☐ Electrolyte imbalance☐ Endocarditis		☐ Transplant Rejection ☐ VAD Complication
☐ Failure to thrive		□ Valve Dysfunction

☐ GI issue	☐ Vascular Complication, acute
☐ Infection, Conduit Harvest Site	☐ Wound , other (drainage, cellulitis)
☐ Infection, Deep Sternum / Mediastinitis	☐ Other – Related Readmission
☐ Mental status changes	☐ Other – Nonrelated Readmission
☐ Myocardial Infarction	☐ Other – Planned Readmission
□ PĚ	□ Unknown
Readmit Primary Procedure:	
ReadmPro (7165)	
☐ No Procedure Performed	☐ OR for Vascular Procedure
☐ Cath lab for Valve Intervention	☐ OR for Aorta Intervention
☐ Cath lab for Coronary Intervention (PCI)	☐ Pacemaker Insertion / AICD
□ Dialysis	☐ Pericardiotomy / Pericardiocentesis
☐ OR for Bleeding	☐ Planned noncardiac procedure
☐ OR for Coronary Artery Intervention	☐ Thoracentesis/ Chest tube insertion
☐ OR for Sternal Debridement / Muscle Flap	☐ Wound vac
☐ OR for Valve Intervention	☐ Other Procedure
	□ Unknown
(if OR for Aorta intervention→)	
Type: □ Open □ Endovascular	
ReadmAortIntTy (7166)	
Indication: ☐ Rupture ☐ Endoleak ☐ Infection	on □ Dissection □ Expansion □ Loss of side branch patency □ Other
ReadmAortIntInd (7167)	

Adult Cardiac Anesthesiology (for sites participating in the optional anesthesiology component)											
Primary Anesthesiologist Name:		Primary Anesthesiologist National Provider Number: PrimAnesNPI (7315)									
PrimAnesName (7310) Anesthesiology Care Team Model: AnesCareTeamMod (7320) Anesthesiologist working alone Attending anesthesiologist teach Attending anesthesiologist teach Attending anesthesiologist med Attending anesthesiologist med Surgeon medically directing CF CRNA practicing independently	hing/med hing/med ically dir ically dir RNA	lically directing recting CRNA (house sta 1:4 ratio o	aff or less)	·)					
Pain Score Baseline: PainScorePre (7325) □ 0 □ 1 □ 2		3 🗆	4	□ 5	□ 6		17	□8	□9	□ 10	□ Not Recorded
Algorithm to Guide Transfusion: TransfAlg (7330)	□,	Yes, SCA/STS Yes, other algor No Algorithm u	rithm used					aver Volu (ol (7335)	me:		
Heparin Total Dose: TotHep (7340)		(If TotHep > 0 → HepMgmt (734	15)	☐ Hepa	rin titratio				ing time (A ntration (e.ş		system)
Protamine Total Dose: TotProt (7350)		Antithrombia AntithromDose		al Dose	:				astic Testi coTest (7360	_	ntraop: □ Yes □ No
Volatile Agent Used: ☐ Yes ☐ No VolAgentUsed (7365) (If Yes →) Volatile Agent(s) used:		Isoflurane VolAgentiso (7 Sevoflurane VolAgentSevo		□ Yes		VolAg (7368 Othe		□ Yes			
Volatile Agent(s) timin	g:	Pre CPB VolAgentTimPr Post CPB VolAgentTimPc		□ Y€			9)	During C VolAgentT Maintena CPB) VolAgentT (7385)	imDur (7375) nce (if no)	□ No
Intraop Infusion ☐ Yes Dexmedetomidine: ☐ No DexIntra (7390)	Propos	p Infusion fol: ra (7395)	□ Yes □ No	Mida	op Mgs azolam: zintra (740	-0)			Intraop Insulin T Dose: Totlnsulnti (7405)		-
Pre Induction Systolic BP: PreAnesthBPSys (7410)				luction I	Diastolic 7415)	BP:			Pre Indu BP:	ction Mea	
Pre Induction Heart Rate: PreAnesthHR (7425)					nonary A etra (7430)		Catheter	Used:	☐ Yes ☐ No		
Core Temperature Source: CoreTempSrc (7435)	□ Eso _j □ Blac		Nasophar PA Cathe		mistor		ympanic ectal		emp Max: pMax (7440)	-	_
Intra Op Nitric Oxide: ☐ Yes NitricOxIntraop (7445) ☐ No		esth. Total Cr CrystAnesth (745		:				Colloid	Synthetic	- - :)	-
Anesthesiology Total Albumin: TotAlbumAnesth (7460)	l							cose Troug		, 	
Intraop Vasodilators Used: Vasodillntraop (7475)		Yes □ No				1					
Intraoperative Processed EEG (BIS):		Yes □ No									

T	1 151 (775)		3.T					
Intraop Trai	nsesophageal Echo (TEE):	Yes □	No					
IntraOpPreTEE	(7480)							
(If Pre Proc	Pre-procedure LVEF Meas	sured:	☐ Yes ☐ No(If	LVEF:				
TEE is Yes→)	PreLVEFMeas (7485)		Yes→)		PreLVEF	(7490)		
			_	_				
	Pre-procedure RV Function	n:	☐ Normal		erate Dysi		☐ Not Assessed	
	PreRVFx (7495)		☐ Mild Dysfunction		re Dysfun	ction		
	Mitral Regurgitation:		□ None	☐ Mild			☐ Severe	
	PreMR (7500)		☐ Trace/trivial	☐ Mod			☐ Not assessed	
	Mitral Stenosis:		□ None	□ Mod			☐ Not Assessed	
	PreMS (7505)		☐ Mild	☐ Seve				
	Aortic Regurgitation:		□ None	☐ Mild			Severe	
	PreAR (7510)		☐ Trace/trivial	□ Mod			☐ Not assessed	
	Aortic Stenosis:		□ None	□ Mod			☐ Not Assessed	
	PreAS (7515)		☐ Mild	☐ Seve				
	Aortic Valve Area Assesse	d:	\square Yes \square No (If Yes \rightarrow)		Valve Are	a:		
	PreAVAAssessed (7520)			PreAVA				
	Tricuspid Regurgitation:		□ None	☐ Mild			□ Severe	
	PreTR (7530)		☐ Trace/trivial	□ Mod	erate		☐ Not assessed	
	Patent Foramen Ovale:		□ Yes □ No □ N	ot assessed				
	PrePFO (7535)							
	Ascending Aorta Assessed		☐ Yes ☐ No					
	AscAoAssessed (7540)	Maximal Asa	andina Aarta Diamatari					
		MxAscAo (7545	ending Aorta Diameter:					
				بن مادس مرور				
	(If Yes→)	MxAscAoThick	ending Aorta Atheroma Th	nckness:				
			orta Atheroma Mobility:		□ Yes	ПМо		
		Ascending Ac			□ res	□ NO		
		ASACTIVIO (7555	'1					
	Aortic Arch Visualized:	Г	□ Yes □ No					
	AoArcVis (7560)		1103 1110					
	7.67.11.67.15 (7.500)							
		Maximal Aor	tic Arch Atheroma Thickne	ess:				
		MxArcAth (756						
	(If Yes→)	()	- /					
		Aortic Arch	Atheroma Mobility:		☐ Yes	□ No		
		ArcAthMo (757	0)					
Cardiopulm	onary Bypass Used: ☐ Ye	s 🗆 No						
CPBUsed (757)	5)							
(If CPB								
Use is Yes→)		ming of CPB C	rcuit:		☐ Yes	□ No		
	RetrAutolPrim (7580)							
			_					
	Total Crystalloid Administr	ered by Perfusion	on Team:				_	
	TotCrystPerf (7585)							
	Total Synthetic Colloid Ad	lministanad by D	arfusion Tooms					
	Total Synthetic Colloid Ad TotColloidPerf (7590)	ministered by P	errusion ream:					
	Totcollolarett (7390)							
	Total Albumin Administere	ed by Perfusion	Team·					
	Total Produitin Padministero	ed by I citusion	Team.				_	
	Hemofiltration Volume Re	moved by Perfu	sion Team:					
	HemofilPerf (7600)	J					_	
	Inotropes used to wean from	m CPB: 🗆 Yes	□ No					
	InotropWeanCPB (7605)							
	Vasopressors used to wean	trom CPB:	Yes ⊔ No					
	VasopWeanCPB (7610)							
Post Proces	lure Use Of Intraoperative	TEE: D Vac	□ No					
IntraOnPostTE		1LL. L 168	□ 1 1 0					

(If Post Proc TEE is Yes→)	Systolic Anterior Motion PostSAM (7620)	n of Mitral Val	lve:		☐ Yes	□ No	□ Not a	assessed			
	Return to CPB for Echo RetCPBEch (7625)	Related Diagn	nosis:		□Yes	□ No					
	Post-Procedure LVEF M PostLVEFMeas (7630) (If Yes→)	leasured:			□ Yes	□ No					
	(II fes→)	Post-Pr	ocedure LV	VEF:			_				
	Post-Procedure RV Func PostRVFx (7640)		. (7000)		□ Norm □ Mild	al Dysfunctio		Moderate Severe Dy		on 🗆 Not 2	Assessed
Intraoperativ	ve cardiac arrest related	to anesthesia	a care: \square	Yes \square	No						
	l in the OR: ☐ Yes ☐] No									
(If OR Death is No→)	Core Temp Measured up PostTempMeas (7650)	on Entry to IC	CU/PACU:	□ Yes □	No						
	(If Yes→)	Post Op Co PostCoreTer	mp (7655)								
	Post-Op INR Measured (PostINRMeas (7660) (If Yes→)	INR:			tion (PACU	J, ICU):	[□ Yes □ N	lo		
	WBC Measured upon ad	PostINR (7665		ocation (Pa	ACU, ICU)		[☐ Yes ☐ N	Го		
	PostWBCMeas (7670) (If Yes→)	WBC :									
	Platelets Measured upon	PostWBC (767	75) post op car	re location	(PACU, IC	U):	[□ Yes □ N	Го		
	PostPltMeas (7680) (If Yes→)	Platelet Co	unt:								
	Hematocrit Measured up	PostPlt (7685) on admission	to post op	care location	on (PACU,	ICU):	[□ Yes □ N	Го		
	PostHCTMeas (7690) (If Yes→)	Hematocrit			_						
	Fibrinogen Measured up PostFibrinMeas (7696)		to post op o	care location	on (PACU,	ICU):]	□ Yes □ N	Го		
	(If Yes→)	Fibrinogen PostFibrin (76	697)		-						
	Lactate Measured upon a PostLactMeas (7700) (If Yes→)	□ Yes □ No									
		PostLact (77	03)								
	Post Op Dexmedetomidi DexPost (7710)	ne:		С	□ Yes □ N	Ю					
	Post Op Propofol: PropPost (7715)										
	Post Op Delirium: ☐ Yes ☐ No PostopDel (7720)										
	Post Op Heparin Induced PostHITAnti (7725)	d Thrombocyto	openia:	Г	∃Yes □ N	[о					
	Pain Score POD #3: PainScorePOD3 (7730) □ 0 □ 1 □ 2	□3	□ 4	□ 5	□ 6	□7	□ 8	□9	□ 10	☐ Not recorded	□NA
	Pain Score Discharge: PainScoreDisch (7735)	□ 3	\Box 4	□ 5	П 6	\Box 7	ПΩ	По	□ 10	□ Not recorded	ПМА