MSTCVS Quality Collaborative Summer Meeting 2017 Traverse City, MI

Survey Monkey

These slides are intended for use by MSTCVS surgeon champions and data managers for the development and evaluation of quality improvement plans.

Each slide includes the MSTCVS confidentiality statement.

Scenario #1

A 76 yr. male with a 18 month medical history of A-Fib, rate controlled with beta blockade and Xarelto, presents to the ER at 23:00 on Sunday evening complaining of chest pain. His wife states the pain had started earlier that evening after a long day of yard work. Suspecting muscle pain, and having nothing else in the house, she made him eat four 80 mg. aspirin. The pain subsided somewhat, but then he began to complain of shortness of breath, and noticed that his heart was "fluttering like before". In the ER, sublingual NTG relieved the patient's chest pain, while a Heparin drip was started and his Xarelto was held.

Upon exam, the EKG confirmed A-Fib, and ruled out ST changes. TTE reported "inconclusive results", but suggested moderate MR with bi-leaflet thickening and an EF calculated at 45%. X-ray identified small bilateral pleural effusions with a slightly enlarged cardiac silhouette. Rales and mild pedal edema were also noted, prompting diuretic therapy. Following the diagnosis of heart failure, the patient was admitted for cardiac evaluation.

A cardiac cath performed Monday afternoon revealed triple vessel disease, mild MR and an estimated EF of 50%. After a discussion of the results and the surgical risks involved, the patient is scheduled for CAB, with possible MV Repair, and possible Maze procedure for Wednesday afternoon.
Upon entry to the OR, the TEE reveals the heart to be in NSR with mild MR, minimal anterior leaflet prolapse, and a measured EF of 48%. Based on these findings, the patient undergoes CAB x 4, an epicardial Maze and LAA exclusion via Atriclip.

Post-operatively, the patient reverts back to A-Fib, but converts to NSR with resumption of his home medications, and is discharged on POD #6 on ASA, Statin, BB, and Xarelto. Unfortunately, he is re-admitted on POD #33 with recurrent A-Fib. Following cardioversion and medication adjustment, he is discharged 4 days later.

#1: Does this patient suffer from Heart Failure (#911) in version 2.9?

Choice of Answers:

- **No.**
- **Yes. Timing is Chronic. Type is Both.**
- **Yes. Timing is Acute. Type is Unavailable.**
- **Yes. Timing is Both. Type is Both.**

Points to Consider:

- **Re-visit Heart Failure definition.**
- **Heart Failure Timing (re-design).**
- **Heart Failure Type (new).**

SEQ. #: 911
Long Name: Heart Failure
Short Name: HeartFail
Definition: Indicate whether there is physician documentation or report that the patient has been in a state of heart failure.

Intent/Clarification:
Heart failure is described as unusual dyspnea on light exertion, recurrent dyspnea occurring in the supine position, fluid retention; or the description of rales, jugular venous distension, pulmonary edema on physical exam, or pulmonary edema on chest x-ray presumed to be cardiac dysfunction. A low ejection fraction alone, without clinical evidence of heart failure does not qualify as heart failure. An elevated BNP without other supporting documentation should not be coded as CHF.

F. Preoperative Cardiac Status

Prior Myocardial Infarction: ☐ Yes ☐ No ☐ Unknown (If Yes ↓)
PrevMI (885)

MI When: ☐ <=6 Hrs. ☐ >6 Hrs. but <24 Hrs. ☐ 1 to 7 Days ☐ 8 to 21 Days ☐ >21 Days
MIWhen (890)

Cardiac Presentation/Symptoms: (Choose one from the list below for each column↓)

	At time of this admission: CardSympTimeOfAdm (895)	At time of surgery: CardSympTimeOfSurg (900)
No Symptoms		
Stable Angina		
Unstable Angina		
Non-ST Elevation MI (Non-STEMI)		
ST Elevation MI (STEMI)		
Angina Equivalent		
Other		

Heart Failure: ☐ Yes ☐ No ☐ Unknown (If Yes→)
HeartFail (911)

Timing: ☐ Acute ☐ Chronic ☐ Both
HeartFailTmg (912)

Type: ☐ Systolic ☐ Diastolic ☐ Both ☐ Unavailable
HeartFailType (913)

Classification-NYHA: ☐ Class I ☐ Class II ☐ Class III ☐ Class IV ☐ Not Documented
ClassNYH (915)

SEQ. #: 912
Long Name: Heart Failure Timing
Short Name: HeartFailTmg
Definition: Indicate whether heart failure is acute, chronic or both (acute on chronic)

Intent/Clarification:

- Acute heart failure is the rapid onset of symptoms and signs of heart failure and may occur with or without previous cardiac disease. Acute decompensated heart failure is a sudden worsening of the signs and symptoms of heart failure, which typically includes difficulty breathing (dyspnea), leg or feet swelling, and fatigue.
- Chronic heart failure develops gradually over time with symptoms of shortness of breath, lower extremity swelling and fatigue without an acute exacerbation.
- Both involves patients with chronic heart failure who presents with acute symptoms.

SEQ. #: 913
Long Name: Heart Failure Type
Short Name: HeartFailType
Definition: Indicate the type of heart failure.

Intent/Clarification:

- Systolic: The left ventricle lacks the force to push enough blood into the circulation.
- Diastolic: The left ventricle is stiff and fails to relax sufficiently to allow adequate filling.
- Both: Components of both systolic and diastolic failure exist.
- Unavailable: The type of heart failure is not documented in the medical record.

SEQ. #: 911
Long Name: Heart Failure
Short Name: HeartFail
Definition: Indicate whether there is physician documentation or report that the patient has been in a state of heart failure.

Intent/Clarification:
Heart failure is described as unusual dyspnea on light exertion, recurrent dyspnea occurring in the supine position, fluid retention; or the description of rales, jugular venous distension, pulmonary edema on physical exam, or pulmonary edema on chest x-ray presumed to be cardiac dysfunction. A low ejection fraction alone, without clinical evidence of heart failure does not qualify as heart failure. An elevated BNP without other supporting documentation should not be coded as CHF.

F. Preoperative Cardiac Status

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MI When: ☐ <=6 Hrs. ☐ >6 Hrs. but <24 Hrs. ☐ 1 to 7 Days ☐ 8 to 21 Days ☐ >21 Days
MIWhen (890)

Cardiac Presentation/Symptoms: (Choose one from the list below for each column↓)

	At time of this admission: CardSympTimeOfAdm (895)	At time of surgery: CardSympTimeOfSurg (900)
No Symptoms		
Stable Angina		
Unstable Angina		
Non-ST Elevation MI (Non-STEMI)		
ST Elevation MI (STEMI)		
Angina Equivalent		
Other		

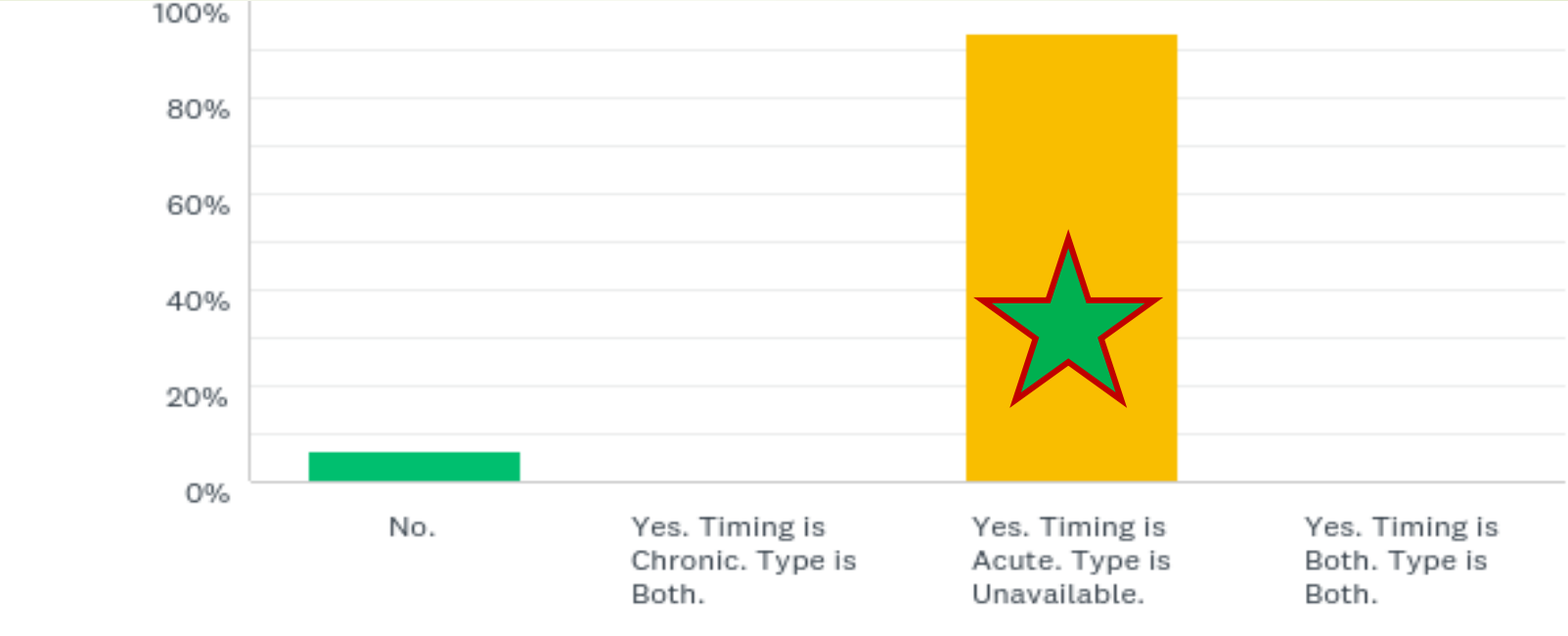
Heart Failure: ☒ Yes ☐ No ☐ Unknown (If Yes→)
HeartFail (911)

Timing: ☒ Acute ☐ Chronic ☐ Both
HeartFailTmg (912)

Type: ☐ Systolic ☐ Diastolic ☐ Both ☒ Unavailable
HeartFailType (913)

Classification-NYHA: ☐ Class I ☐ Class II ☐ Class III ☐ Class IV ☐ Not Documented
ClassNYH (915)

#1: Does this patient suffer from Heart Failure (#911) in version 2.9?



Answer Choices
No.
Yes. Timing is Chronic. Type is Both.
Yes. Timing is Acute. Type is Unavailable.
Yes. Timing is Both. Type is Both.

#2: What Type of Atrial Fibrillation (#962) does this patient suffer from?

Choice of Answers:

- **Paroxysmal**
- **Persistent**
- **Longstanding Persistent**
- **Permanent**

SEQ. #: 962
Long Name: Cardiac Arrhythmia - Atrial Fibrillation - Type
Short Name: ArrhythAFib
Definition: Indicate whether arrhythmia was atrial fibrillation and if so, which type.

Intent/Clarification:
If the diagnosis of atrial fibrillation is present code the type:

- Paroxysmal: Recurrent AF (> 2 episodes). Terminates spontaneously within 7 days.
- Persistent: Sustained episode > 7 days, or lasting < 7 days, but necessitating pharmacologic or electrical cardioversion.
- Long-Standing Persistent: Continuous episode of > 1 year duration.
- Permanent: Continuous episode of > 1 year duration.

Ver. 2.8

Paroxysmal	Recurrent AF (> 2 episodes). Terminates spontaneously within 7 days
Continuous/Persistent	Sustained episode > 7 days, or lasting < 7 days, but necessitating pharmacologic or electrical cardioversion
Long-Standing Persistent	Continuous episode of > 1 year duration
Permanent	AF at a point in which no further treatment of any kind is considered.

F. Preoperative Cardiac Status

Prior Myocardial Infarction: ☐ Yes ☐ No ☐ Unknown (If Yes ↓)
PrevMI (885)

MI When: ☐ <=6 Hrs. ☐ >6 Hrs. but <24 Hrs. ☐ 1 to 7 Days ☐ 8 to 21 Days ☐ >21 Days
MIWhen (890)

Cardiac Presentation/Symptoms: (Choose one from the list below for each column↓)

	At time of this admission: CardSympTimeOfAdm (895)	At time of surgery: CardSympTimeOfSurg (900)
No Symptoms		
Stable Angina		
Unstable Angina		
Non-ST Elevation MI (Non-STEMI)		
ST Elevation MI (STEMI)		
Angina Equivalent		
Other		

Heart Failure: ☐ Yes ☐ No ☐ Unknown (If Yes→)
HeartFail (911)

Timing: ☐ Acute ☐ Chronic ☐ Both
HeartFailTmg (912)

Type: ☐ Systolic ☐ Diastolic ☐ Both ☐ Unavailable
HeartFailType (913)

Classification-NYHA: ☐ Class I ☐ Class II ☐ Class III ☐ Class IV ☐ Not Documented
ClassNYH (915)

Cardiogenic Shock : ☐ Yes, at the time of the procedure ☐ Yes, not at the time of the procedure but within prior 24 hours ☐ No
CarShock (930)

Resuscitation: ☐ Yes - Within 1 hour of the start of the procedure ☐ Yes - More than 1 hour but less than 24 hours of the start of the procedure ☐ No
Resusc (935)

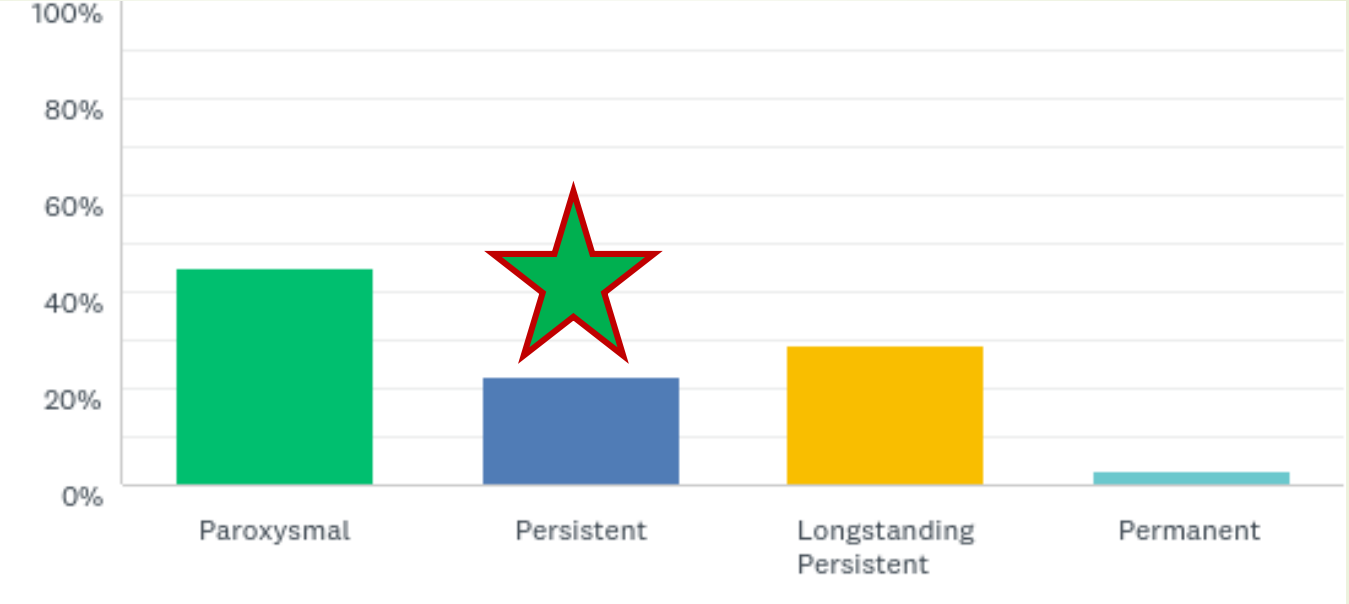
Arrhythmia: ☒ Yes ☐ No
Arrhythmia (945)

(If Arrhythmia = Yes →) Permanently Paced Rhythm: ☐ Yes ☐ No
ArrhythPPaced (947)

(If Yes , choose one response below for each rhythm →)	VTach/VFib ArrhythVV (950)	Sick Sinus Syndrome ArrhythSSS (955)	AFlutter ArrhythAFlutter (960)	AFibrillation ArrhythAtrFib (961)	Second Degree Heart Block ArrhythSecond (965)	Third Degree Heart Block ArrhythThird (970)
None						
Remote (> 30 days preop)				☒		
Recent (<= 30 days preop)						

(If AFibrillation not 'None' →) Atrial Fibrillation Type: ☐ Paroxysmal ☒ Persistent ☐ Longstanding Persistent ☐ Permanent
ArrhythAFib (962)

#2: What Type of Atrial Fibrillation (#962) does this patient suffer from?



Answer Choices
Paroxysmal
Persistent
Longstanding Persistent
Permanent

#3: How would you abstract this patient's use of ASA (#1070)?

Choice of Answers:

- **ASA is Yes; Discontinuation is 3 days; One Time Dose is No.**
- **ASA is Yes; Discontinuation is 3 days; One Time Dose is Yes.**

G. Preoperative Medications

Medication		Timeframe	Administration
ACE or ARB MedACEI48 (1020)		Within 48 hours	☐ Yes ☐ No ☐ Contraindicated ☐ Unknown
Amiodarone MedAmiodarone (1025)		Prior to surgery	☐ Yes, on home therapy ☐ Yes, therapy started this admission ☐ No ☐ Unknown
Antianginal	Beta Blocker MedBeta (1030)	Within 24 hours	☐ Yes ☐ No ☐ Contraindicated
	Beta Blocker MedBetaTher (1035)	On therapy for ≥ 2 weeks prior to surgery	☐ Yes ☐ No ☐ Contraindicated ☐ Unknown
	Calcium Channel Blocker MedCChanTher (1040)	On therapy for ≥ 2 weeks prior to surgery	☐ Yes ☐ No ☐ Contraindicated ☐ Unknown
	Long-acting Nitrate MedLongActNit (1045)	On therapy for ≥ 2 weeks prior to surgery	☐ Yes ☐ No ☐ Contraindicated ☐ Unknown
	Nitrates, intravenous MedNitIV (1050)	Within 24 hours	☐ Yes ☐ No
	Other Antianginal MedOthAntiang (1055)	On therapy for ≥ 2 weeks prior to surgery	☐ Yes ☐ No ☐ Contraindicated ☐ Unknown
Antiplatelet	ADP Inhibitor (includes P2Y12) MedADP5Days (1060)	Within 5 days	☐ Yes ☐ No ☐ Contraindicated ☐ Unknown (If Yes→) ADP Inhibitors Discontinuation: _____ (# days prior to surgery) MedADPIDis (1065)
	Aspirin MedASA (1070)	Within 5 days	☐ Yes ☐ No ☐ Contraindicated ☐ Unknown (If Yes→) Aspirin Discontinuation: _____ (# days prior to surgery) MedASADis (1071) Aspirin one time dose: ☐ Yes ☐ No MedASAOnce (1072)

SEQ. #: 1070
Long Name: Meds-Aspirin Within Five Days
Short Name: MedASA
Definition: Indicate whether or not the patient received Aspirin or Ecotrin within 5 days preceding surgery.

Intent/Clarification:
Anti-inflammatory, analgesic and antiplatelet action. Half-life of aspirin products is 5-7 days. Aspirin use may predispose patient to post op bleeding.

- **Yes** - Capture those who are prescribed to take Aspirin or Ecotrin on a regular schedule and are presumed to be at a therapeutic level, 5 days preceding surgery (entry into the OR) - The minimum dose should be at least 75 mg (i.e. Aggrenox, which is only 25mg, should not be included). **Do Not Include a one-time dose.**
- **No** – Patient did not receive Aspirin within 5 days preceding surgery.
- **Contraindicated** - Documented evidence of contraindication: If a contraindication

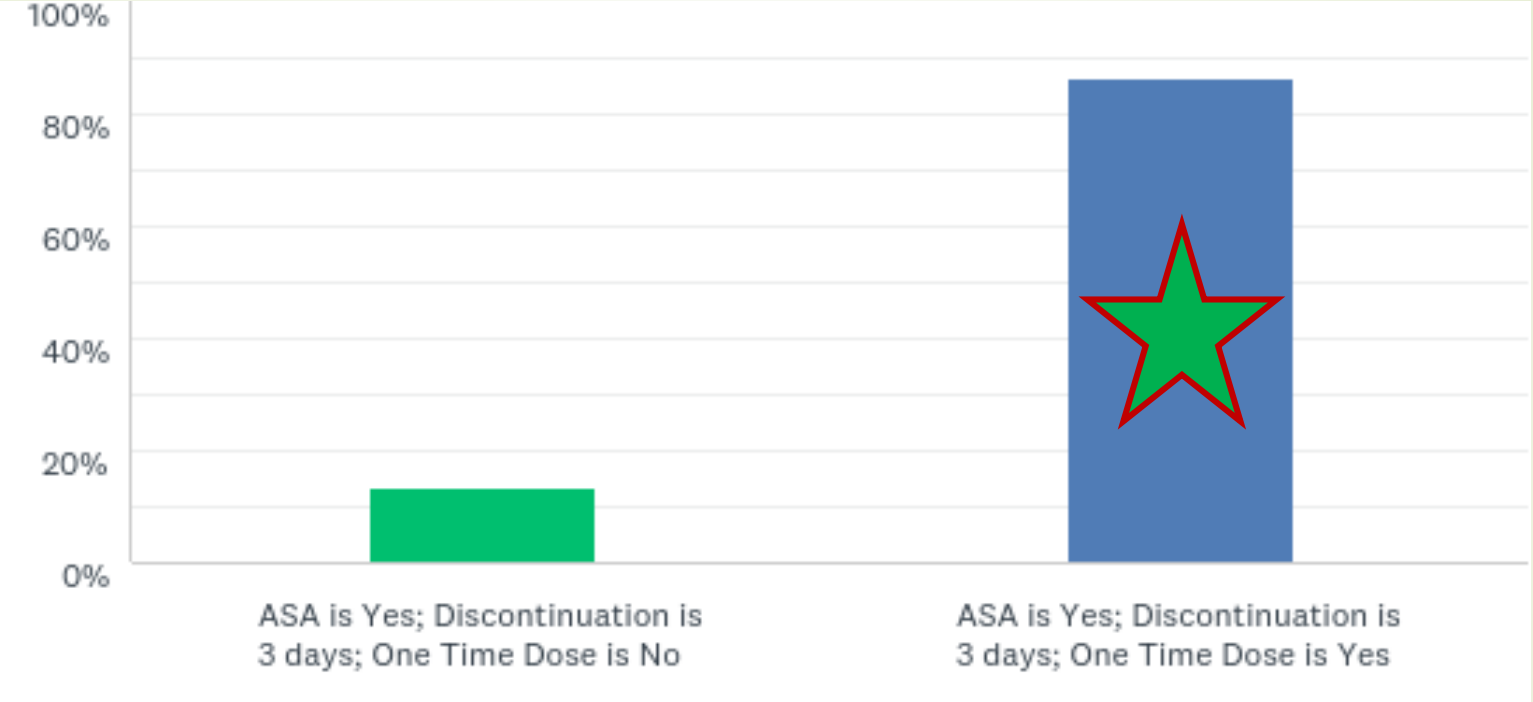
SEQ. #: 1071
Long Name: Meds-Aspirin Discontinuation
Short Name: MedASADis
Definition: Indicate the number of days prior to surgery Aspirin use was discontinued. If less than 24 hours, enter "0".

Intent/Clarification: -

SEQ. #: 1072
Long Name: Meds-Aspirin One-Time Dose
Short Name: MedASAOnce
Definition: Indicate whether the patient received a one-time dose of Aspirin and is not on daily aspirin.

G. Preoperative Medications			
Medication		**Timeframe**	**Administration**
ACE or ARB MedACEI48 (1020)		Within 48 hours	☐ Yes ☐ No ☐ Contraindicated ☐ Unknown
Amiodarone MedAmiodarone (1025)		Prior to surgery	☐ Yes, on home therapy ☐ Yes, therapy started this admission ☐ No ☐ Unknown
Antianginal	Beta Blocker MedBeta (1030)	Within 24 hours	☐ Yes ☐ No ☐ Contraindicated
	Beta Blocker MedBetaTher (1035)	On therapy for ≥ 2 weeks prior to surgery	☐ Yes ☐ No ☐ Contraindicated ☐ Unknown
	Calcium Channel Blocker MedCChanTher (1040)	On therapy for ≥ 2 weeks prior to surgery	☐ Yes ☐ No ☐ Contraindicated ☐ Unknown
	Long-acting Nitrate MedLongActNit (1045)	On therapy for ≥ 2 weeks prior to surgery	☐ Yes ☐ No ☐ Contraindicated ☐ Unknown
	Nitrates, intravenous MedNitIV (1050)	Within 24 hours	☐ Yes ☐ No
	Other Antianginal MedOthAntiang (1055)	On therapy for ≥ 2 weeks prior to surgery	☐ Yes ☐ No ☐ Contraindicated ☐ Unknown
Antiplatelet	ADP Inhibitor (includes P2Y12) MedADP5Days (1060)	Within 5 days	☐ Yes ☐ No ☐ Contraindicated ☐ Unknown (If Yes→)ADP Inhibitors Discontinuation: _____ (# days prior to surgery) MedADPIDis (1065)
	Aspirin MedASA (1070)	Within 5 days	✖ Yes ☐ No ☐ Contraindicated ☐ Unknown (If Yes→) Aspirin Discontinuation: 3 (# days prior to surgery) MedASADis (1071) Aspirin one time dose: ✖ Yes ☐ No MedASAOnce (1072)

#3: How would you abstract this patient's use of ASA (#1070)?



Answer Choices
ASA is Yes; Discontinuation is 3 days; One Time Dose is No
ASA is Yes; Discontinuation is 3 days; One Time Dose is Yes

What's a NOAC?

NOAC = **N**ovel **O**ral **A**nti**C**oagulant

- **NOAC = DOAC** (**D**irect **O**ral **A**nti**C**oagulant)
- **Developed and introduced to address several drawbacks and limitations associated with Warfarin (Coumadin) use.**
- **Indicated for prevention of stroke in patients with Non-Valvular AFib (NVAF).**
- **Do not require frequent monitoring and/or dose adjustment associated with Warfarin.**
- **All have short half-lives, BUT, with the exception of Dabigatran, reversal agents are currently not available.**
- **Currently, there are only four medications designated as NOAC's. A fifth was recently released, and more are under development.**

Thrombin Inhibitors & Factor Xa Inhibitors

Within 5 Days of OR (Brand Names in Parentheses if Applicable)

Direct Thrombin Inhibitors
Argatroban **(Acova, Argata, Novastan, Arganova, Exembol)**
Bivalirudin **(Angiomax)**
Desirudin **(Ipravask, Revasc)**
Hirudin
Lepirudin **(Refludan)**
Dabigatran **(Pradaxa)** **(NOAC)**

Factor Xa Inhibitors	
Apixaban **(Equilis)** **(NOAC)**	
Betrixaban **(BEVYXXA)**	**Newest NOAC (?)**
Edoxaban **(Lixiana, Savaysa)** **(NOAC)**	
Fondaparinux **(Arixtra)**	
Rivaroxaban **(Xarelto)** **(NOAC)**	
Others are in development	

July 2017: Not an Inclusive List/Use with Caution/ Work in Progress!

MSTCVS Quality Collaborative Data Managers

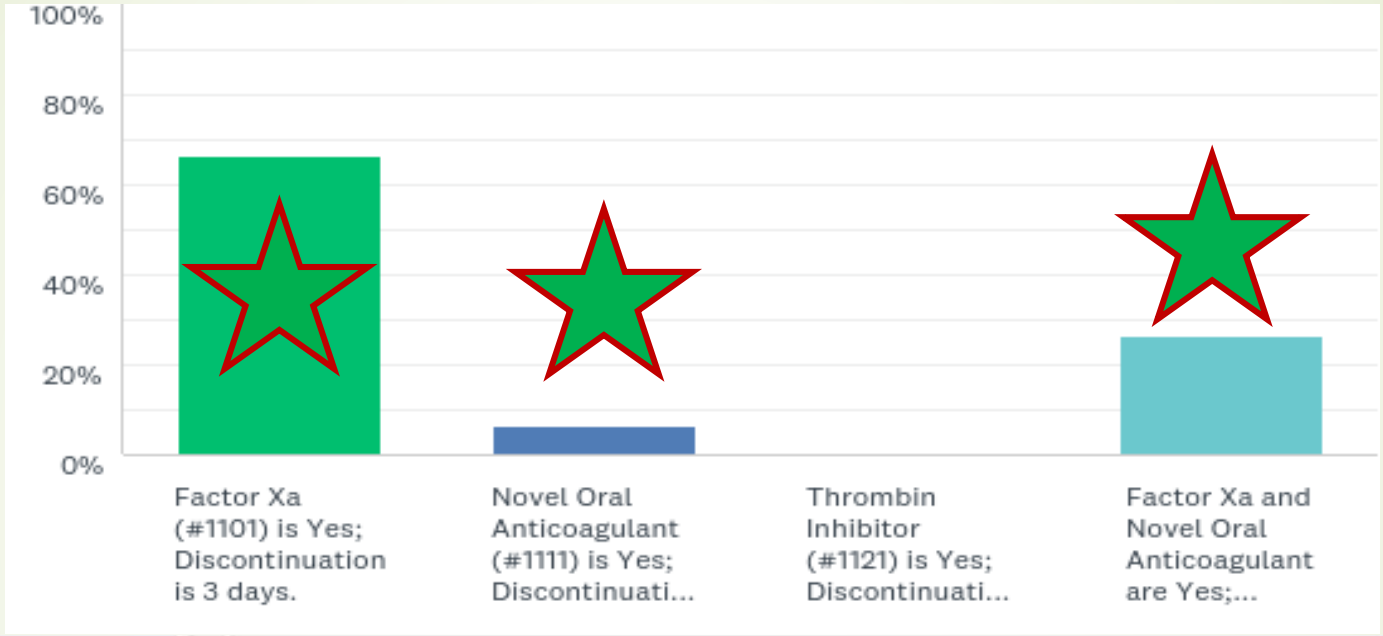
#4: How should we abstract this patient's pre-op use of Xarelto?

Choice of Answers:

- **Factor Xa (#1101) is Yes; Discontinuation is 3 days.**
- **Novel Oral Anticoagulant (#1111) is Yes; Discontinuation is 3 days.**
- **Thrombin Inhibitor (#1121) is Yes; Discontinuation is 3 days.**
- **Factor Xa and Novel Oral Anticoagulant are Yes; Discontinuation is 3 days.**

	Glycoprotein IIb/IIIa MedGP (1073)	Within 24 hours	☐ Yes ☐ No
Anticoagulant	Anticoagulants (Intravenous/ SubQ) MedACoag (1075)	Within 48 hours	☐ Yes ☐ No (If Yes→) Medication: MedACMN (1080) ☐ Heparin (Unfractionated) ☐ Heparin (Low Molecular) ☐ Both ☐ Other
	Warfarin (Coumadin) MedCoum5Days (1091)	Within 5 days	☐ Yes ☐ No ☐ Unknown (If Yes→) Coumadin Discontinuation: _____ (# days prior to surgery) MedCoum5Dis (1092)
	Factor Xa inhibitors MedXa5Days (1101)	Within 5 days	☐ Yes ☐ No ☐ Unknown (If Yes→)Factor Xa Discontinuation: _____ (# days prior to surgery) MedXa5DDis (1102)
	Novel Oral Anticoagulant MedNOAC5Days (1111)	Within 5 days	☐ Yes ☐ No ☐ Unknown (If Yes→) NOAC Discontinuation: _____ (# days prior to surgery) MedNOACDisc (1112)
	Thrombin Inhibitors MedThromIn5Days (1121)	Within 5 days	☐ Yes ☐ No ☐ Unknown (If Yes→) Thrombin Inhibitor Discontinuation: _____ (# days prior to surgery) MedThromInDisc (1122)
	Thrombolytics MedThrom (1125)	Within 48 hours	☐ Yes ☐ No

#4: How should you abstract this patient's pre-op use of Xarelto?

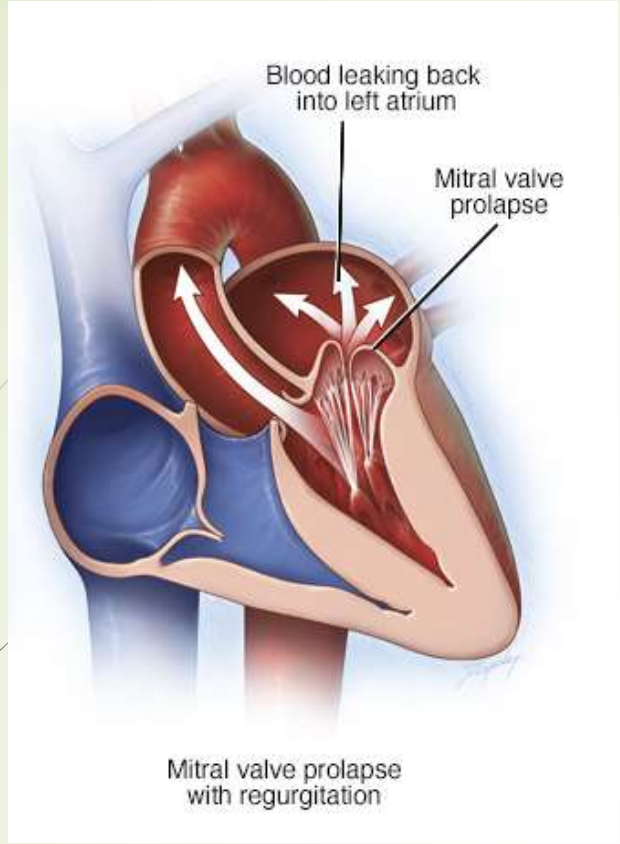


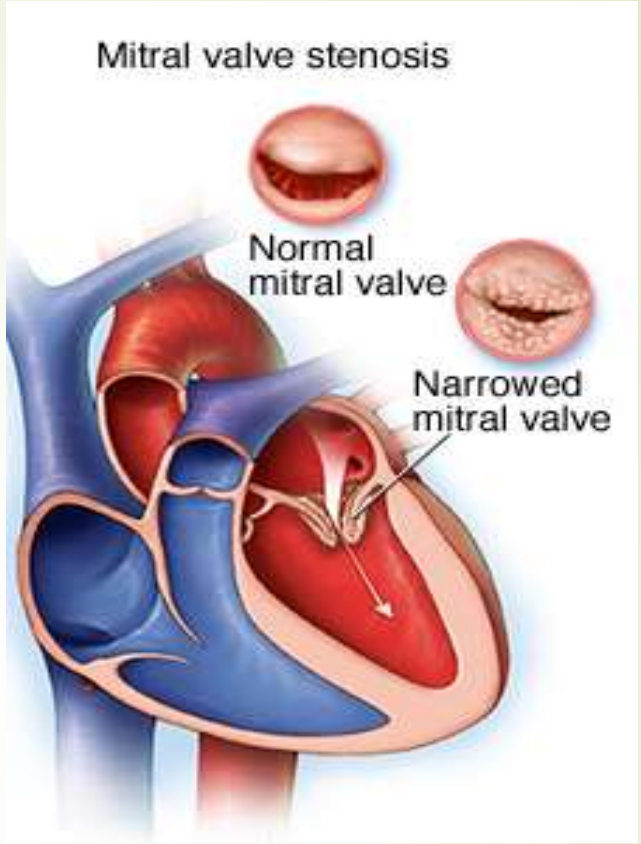
Answer Choices
Factor Xa (#1101) is Yes; Discontinuation is 3 days.
Novel Oral Anticoagulant (#1111) is Yes; Discontinuation is 3 days.
Thrombin Inhibitor (#1121) is Yes; Discontinuation is 3 days.
Factor Xa and Novel Oral Anticoagulant are Yes; Discontinuation is 3 days.

Mitral Valve Etiology

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)	☐ Trauma
☐ Non-ischemic Cardiomyopathy	☐ Congenital
☐ Endocarditis	☐ Pure annular dilatation
☐ Hypertrophic Obstructive Cardiomyopathy (HOCM)	☐ Reoperation-Failure of previous MV repair or replacement
☐ Tumor, Carcinoid	☐ Mixed Etiology
☐ Tumor, Myxoma	☐ Not Documented

- **Designed to address both types of Mitral Disease: Insufficiency and Stenosis.**
- **Etiology is the "why" that causes the disease state.**
- **New to v2.9, choice is limited to one (Primary).**
- **While there is no hierarchy, some etiologies are more common than others.**
- **"Mixed Etiology" definition is unclear.**





Myxomatous Degeneration/Prolapse
Rheumatic
Endocarditis
Ischemic
Cardiomyopathy

Rheumatic

Myxomatous Degeneration

- A pathological weakening of connective tissue.
- The fibrous collagen layer of the valve thins and mucoid (myxomatous) material accumulates.
- The chordae tendinae become longer and thinner and the valve leaflets enlarge and become rubbery.
- These changes result in floppy valve leaflets that balloon back (prolapse) into the left atrium when the left ventricle contracts, leading to regurgitation.
- Rupture of a degenerated chord can allow part of the valve leaflet to flail into the atrium, causing severe regurgitation.

Mitral Valve Lesion

MV Lesion Choose PRIMARY Lesion (one): VDMiPrimLes (1746)			
☐	Leaflet prolapse, posterior	☐	Papillary muscle elongation
☐	Leaflet prolapse, bileaflet	☐	Papillary muscle rupture
☐	Leaflet prolapse, anterior	☐	Leaflet thickening
☐	Leaflet prolapse, unspecified	☐	Leaflet retraction
☐	Elongated/ruptured chord(s)/Flail	☐	Chordal tethering
☐	Annular dilatation	☐	Chordal thickening/retraction/fusion
☐	Leaflet calcification	☐	Commissural fusion
☐	Leaflet perforation/hole	☐	Mixed lesion
☐	Mitral annular calcification	☐	Not Documented

- **Again, "Lesion" pertains to both disease states.**
- **Lesion is the "what" that is contributing to the disease process.**
- **As with Etiology, only one choice (Primary) applies.**
- **"Mixed Lesion" is unclear.**

#5: How do we abstract this patient's Mitral Etiology (1731) and Mitral Lesion (1746)?

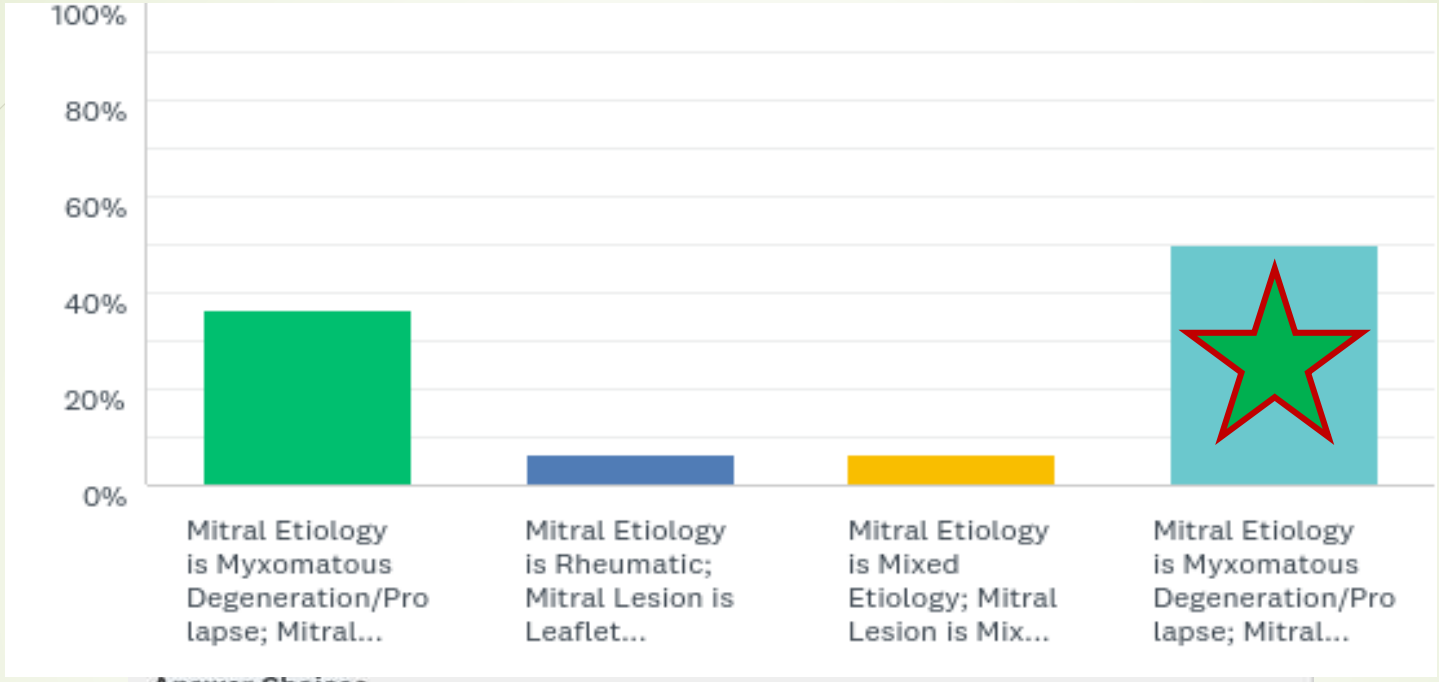
Answer Choices:

- **Mitral Etiology is Myxomatous Degeneration/Prolapse; Mitral Lesion is Leaflet Prolapse, Bi-Leaflet and Leaflet Thickening.**
- **Mitral Etiology is Rheumatic; Mitral Lesion is Leaflet Prolapse, Unspecified.**
- **Mitral Etiology is Mixed Etiology; Mitral Lesion is Mixed Lesion.**
- **Mitral Etiology is Myxomatous Degeneration/Prolapse; Mitral Lesion is Leaflet Prolapse, Anterior**

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)	☐	Trauma
☐	Non-ischemic Cardiomyopathy	☐	Congenital
☐	Endocarditis	☐	Pure annular dilatation
☐	Hypertrophic Obstructive Cardiomyopathy (HOCM)	☐	Reoperation-Failure of previous MV repair or replacement
☐	Tumor, Carcinoid	☐	Mixed Etiology
☐	Tumor, Myxoma	☐	Not Documented

MV Lesion Choose PRIMARY Lesion (one): VDMiPrimLes (1746)			
☐	Leaflet prolapse, posterior	☐	Papillary muscle elongation
☐	Leaflet prolapse, bileaflet	☐	Papillary muscle rupture
☒	Leaflet prolapse, anterior	☐	Leaflet thickening
☐	Leaflet prolapse, unspecified	☐	Leaflet retraction
☐	Elongated/ruptured chord(s)/Flail	☐	Chordal tethering
☐	Annular dilatation	☐	Chordal thickening/retraction/fusion
☐	Leaflet calcification	☐	Commissural fusion
☐	Leaflet perforation/hole	☐	Mixed lesion
☐	Mitral annular calcification	☐	Not Documented

#5: How would you abstract this patient's Mitral Etiology (1731) and Mitral Lesion (1746)?



Answer Choices
Mitral Etiology is Myxomatous Degeneration/Prolapse; Mitral Lesion is Leaflet Prolapse, Bi-Leaflet and Leaflet Thickening.
Mitral Etiology is Rheumatic; Mitral Lesion is Leaflet Prolapse, Unspecified.
Mitral Etiology is Mixed Etiology; Mitral Lesion is Mixed Lesion.
Mitral Etiology is Myxomatous Degeneration/Prolapse; Mitral Lesion is Leaflet Prolapse, Anterior .

#6: Which Ejection Fraction (1545) should be abstracted?

Intent/Clarification:

- **Use the most recent determination *prior* to the induction of anesthesia documented on a diagnostic report, regardless of the diagnostic procedure to obtain it.**
- **If no diagnostic report specifying an ejection fraction (EF) is in the medical record, a value documented in the progress record is acceptable.**
- **If there is no documentation of a pre-op EF, *then* it is acceptable to code the EF from the intra-op TEE prior to incision.**
- **Use the surgeon's documentation if more than one value is reported as this was likely used to plan operative care.**
- **Time Frame: Collect the last value closest to incision, not greater than 6 months.**

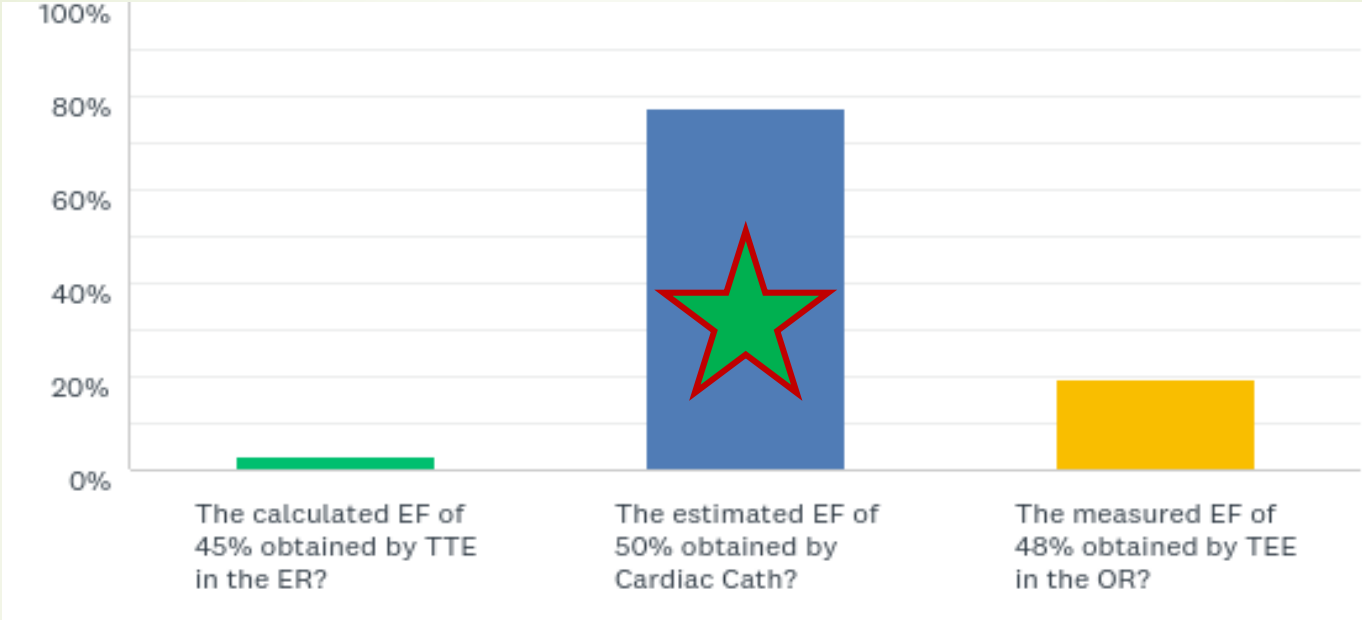
#6: Which Ejection Fraction (1545) should be abstracted?

Answer Choices:

- The *calculated* EF of 45% obtained by TTE in the ER?
- The *estimated* EF of 50% obtained by Cardiac Cath?
- The *measured* EF of 48% obtained by TEE in the OR?

Stress Test: ☐ Yes ☐ No (If Yes →) Result: ☐ Negative (Normal) ☐ Positive (Abnormal) ☐ Not Documented StressTst (1525) StrsTstRes (1531)		
Ejection Fraction Done: ☒ Yes ☐ No (If Yes→) Ejection Fraction: 50 (%) HDEFD (1540) HDEF (1545)		
Dimensions Available: ☐ Yes ☐ No (If Yes→) DimAvail (1555)	LV End-Systolic Dimension: _____ (mm) LVSD (1560)	LV End-Diastolic Dimension: _____ (mm) LVEDD (1565)

#6: Which Ejection Fraction (1545) should be abstracted?



Answer Choices
The calculated EF of 45% obtained by TTE in the ER?
The estimated EF of 50% obtained by Cardiac Cath?
The measured EF of 48% obtained by TEE in the OR?

#7: Given the patient's pre-op history of AFib, does this patient suffer from post-op AFib (6930)?

SEQ. #: 6930 Long Name: Post-Op-Other-A Fib Short Name: COtAFib Definition: Indicate whether the patient experienced atrial fibrillation/flutter (AF) requiring treatment. Exclude patients who were in AFib at the start of surgery.

Intent/Clarification: Include any episode of A-Fib lasting longer than one hour and/or requiring treatment. Capture event(s) in all patients who were not in A-Fib at the start of surgery.

Ver. 2.8 Example: A patient is on a protocol preoperatively; the patient then goes in to atrial fibrillation (AF) postoperatively and the protocol is not adjusted: If the patient was in sinus rhythm and then develops AF postoperatively, this should be coded "Yes" as a post op event.

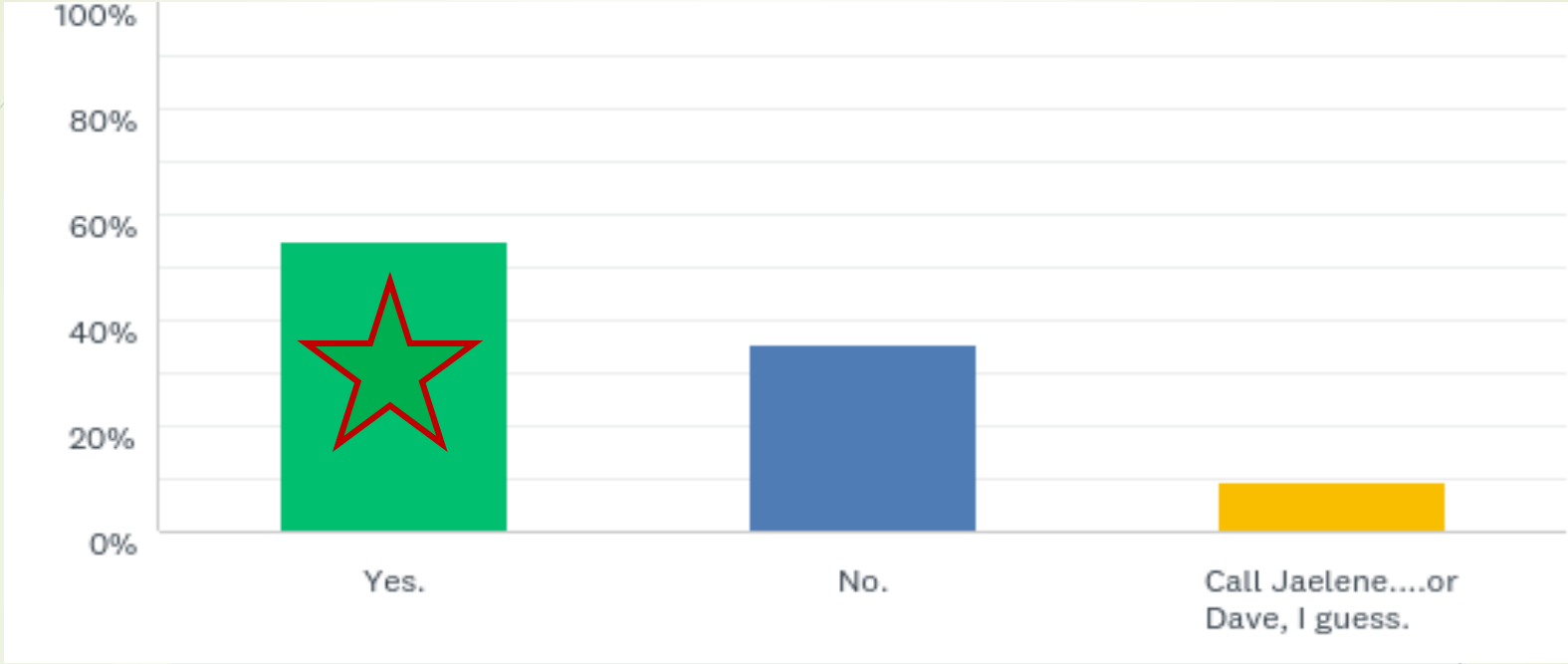
#7: Given the patient's pre-op history of AFib, does this patient suffer from post-op AFib (6930)?

Answer Choices:

- Yes.
- No.
- Call Jaelene....or Dave, I guess.

Other
Rhythm Disturbance Requiring Permanent Device: ☐ Pacemaker ☐ ICD ☐ Pacemaker/ICD ☐ Other ☐None CRhythmDis (6900)
Cardiac Arrest: ☐ Yes ☐ No COtArrst (6905)
Post Op Aortic Endoleak: ☐ Yes ☐ No (if yes→) Type: ☐ Ia ☐ Ib ☐ II ☐ III ☐ IV ☐ V COtAortEndo (6906) COtAortEndoTy (6907)
Aortic Rupture: ☐ Yes ☐ No COtAortRupt (6908)
Aortic Dissection: ☐ Yes ☐ No (if yes→) Type: ☐Antegrade ☐ Retrograde ☐ Both CVaAoDis (6909) CVaAoDisTy (6910)
Aortic Side Branch malperfusion: ☐ Yes ☐ No 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)

#7: Given the patient's pre-op history of A-Fib, does this patient suffer from post-op A-Fib (6930)?



Answer Choices
Yes.
No.
Call Jaelene....or Dave, I guess.

#8: How would you code this patient's Readmission (7140)?

SEQ. #: 7140
Long Name: Readmission
Short Name: Readmit
Definition: Indicate whether the patient was readmitted to the hospital within 30 days of discharge from hospitalization for this surgery. Code yes for inpatient admission to an acute care facility. Do not capture ED or outpatient visits or admission to a skilled facility or nursing home.

Intent/Clarification:

This is not part of the composite score.

The intent is to capture inpatient readmissions to acute care and primary care facilities only where the patient **status is listed as "In-Patient".**

- Obtain information as close to 30 days from date of discharge as possible.
- It is understood that some readmissions are planned; these are still counted as readmissions.

- To code "Yes", readmissions do not need to be at same institution where the initial surgical procedure was done.
- Discharge and readmission to a psychiatric care facilities, where the patient is considered an in-patient are to be considered as readmissions.
- Do not include Emergency Department visits or observation status visits unless the ED visits leads to status of in-patient.
- If a patient is readmitted to an in-patient rehabilitation hospital, code "No".
- If a patient is readmitted to an LTAC, code "No".
- Do not code transfers to higher level of care, this is considered an extension of the same acute care admission. If the patient was discharged to the "Acute Rehab" floor of the same hospital and then readmitted back as an in-patient back into a nursing floor, code "Yes" to admission as an inpatient is considered "Yes."
- To align with CMS, 30 day readmission should not be coded for patients who remain in observation units, no matter the duration.

#8: How would you code this patient's Readmission (7140)?

Answer Choices:

- Readmission is No.
- Readmission is Yes; Reason is Arrhythmia/Heart Block; Procedure is Other Procedure.
- Readmission is Yes; Reason is Arrhythmia/Heart Block; Procedure is No Procedure Performed.

R. Readmission

(If Discharge/Mortality Status = "Discharged alive, last know status=alive" or "Discharged alive, died after discharge" ↓)

Readmit : ☒ Yes ☐ No ☐ Unknown (If Yes ↓)

Readmit (7140)

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

Expanded Readmission Reasons

Readmit Primary Reason:
ReadmRsn (7160)

- ☐ Angina
- ☐ Anticoagulation Complication - Pharmacological
- ☐ Anticoagulation Complication – Valvular
- ☐ Aortic Complication
- ☒ Arrhythmia or Heart Block
- ☐ Blood Pressure (hyper or hypotension)
- ☐ Chest pain, noncardiac
- ☐ Congestive Heart Failure
- ☐ Coronary Artery/Graft Dysfunction
- ☐ Depression/psychiatric issue
- ☐ DVT
- ☐ Electrolyte imbalance
- ☐ Endocarditis
- ☐ Failure to thrive
- ☐ GI issue
- ☐ Infection, Conduit Harvest Site
- ☐ Infection, Deep Sternum / Mediastinitis
- ☐ Mental status changes
- ☐ Myocardial Infarction
- ☐ PE
- ☐ Pericardial Effusion and/or Tamponade
- ☐ Pericarditis/Post Cardiotomy Syndrome
- ☐ Pleural effusion requiring intervention
- ☐ Pneumonia
- ☐ Renal Failure
- ☐ Renal Insufficiency
- ☐ Respiratory complication, Other
- ☐ Sepsis
- ☐ Stroke
- ☐ TIA
- ☐ Transfusion
- ☐ Transplant Rejection
- ☐ VAD Complication
- ☐ Valve Dysfunction
- ☐ Vascular Complication, acute
- ☐ Wound , other (drainage, cellulitis)
- ☐ Other – Related Readmission
- ☐ Other – Nonrelated Readmission
- ☐ Other – Planned Readmission
- ☐ Unknown

Expanded Readmission Procedures

Readmit Primary Procedure:

ReadmPro (7165)

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

(if OR for Aorta intervention→)

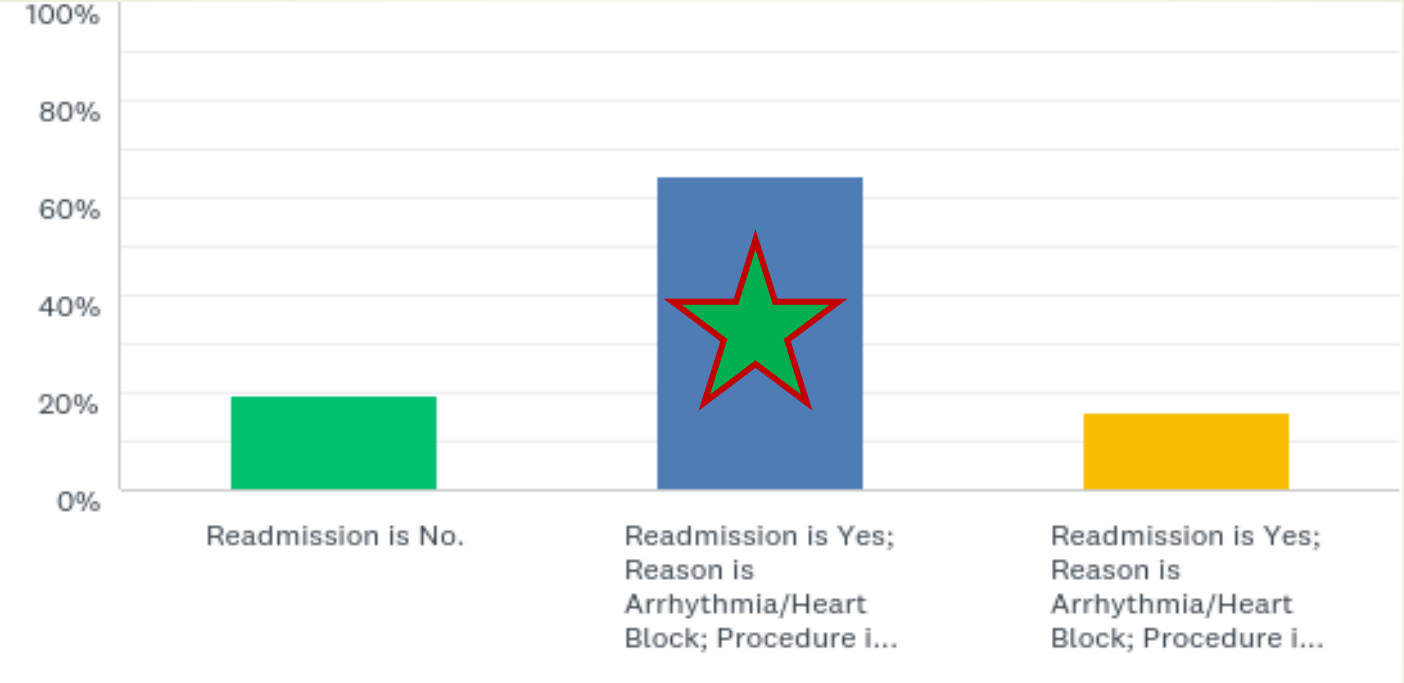
Type: ☐ Open ☐ Endovascular

ReadmAortIntTy (7166)

Indication: ☐ Rupture ☐ Endoleak ☐ Infection ☐ Dissection ☐ Expansion ☐ Loss of side branch patency ☐ Other

ReadmAortIntInd (7167)

#8: How would you code this patient's Readmission (7140)?



Answer Choices
Readmission is No.
Readmission is Yes; Reason is Arrhythmia/Heart Block; Procedure is Other Procedure.
Readmission is Yes; Reason is Arrhythmia/Heart Block; Procedure is No Procedure Performed.

Scenario #2

An elderly patient is brought to the ER as a result of a syncopal episode at home. The patient had regained consciousness shortly after arrival, but began to complain of severe back pain, and was taken for CT scans of the head, neck, chest, and abdomen, with the following results:

"Dissection of the ascending thoracic aorta which originates in the ascending thoracic aorta just above the sinotubular junction, and extends throughout the aorta and into the iliac vasculature. A secondary tear is evident in the descending thoracic aorta 2 cm. above the diaphragm. The dissection compromises the innominate, left common and right common carotid arteries, with up to 75% diminished flow of the true lumen of the vessels."

The patient is taken for emergent surgery, where the surgeon replaces the ascending aorta and hemi-arch with a 30 mm. dacron graft while undergoing circulatory arrest. After an extended and complicated recovery, the patient is discharged to an acute rehab facility on POD #24. On POD #27, the facility phones to report the patient had suffered a cardiac arrest, and could not be revived.

#9: Which of the following Risk Factors (section D.) would you abstract for this patient?

Answer Choices:

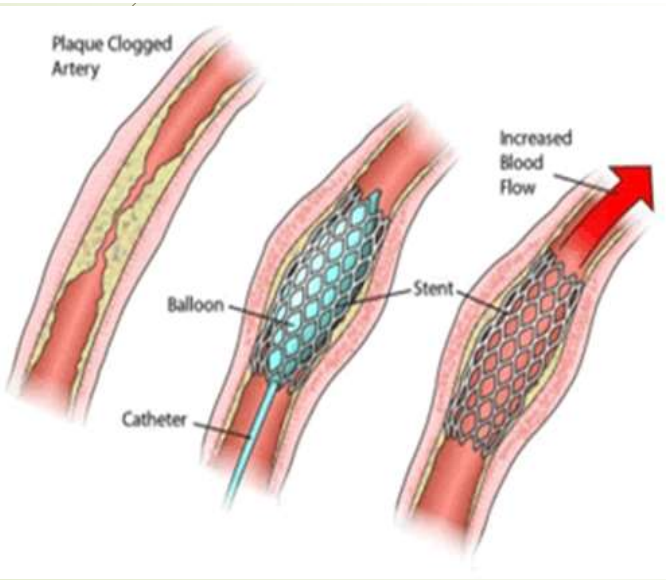
- **Thoracic Artery Disease (510).**
- **Thoracic Artery Disease (510), Cerebrovascular Disease, Carotid Stenosis, Both (545).**
- **Thoracic Artery Disease (510), Peripheral Artery Disease (505) and Cerebrovascular Disease, TIA (540).**
- **All of the above. #'s 505, 510, 540, 545.**

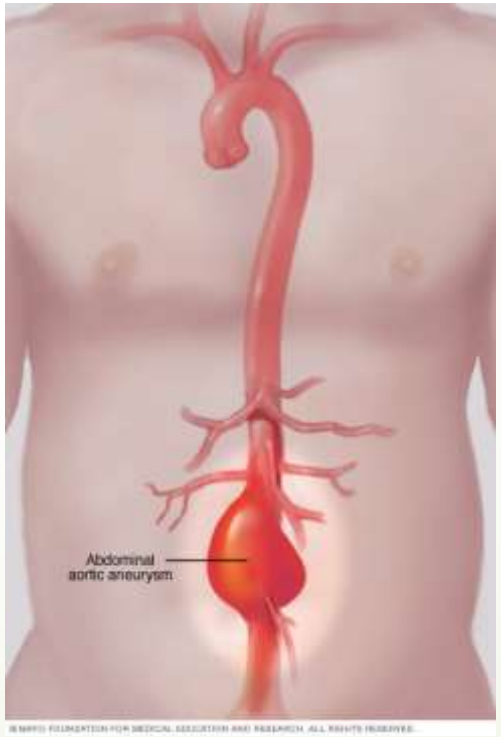
SEQ. #: 510
Long Name: RF-Thoracic Aorta Disease
Short Name: ThAoDisease
Definition: Indicate whether the patient has a history of disease of the thoracic or thoracoabdominal aorta.
Abdominal aortic disease without thoracic involvement is captured in peripheral artery disease.

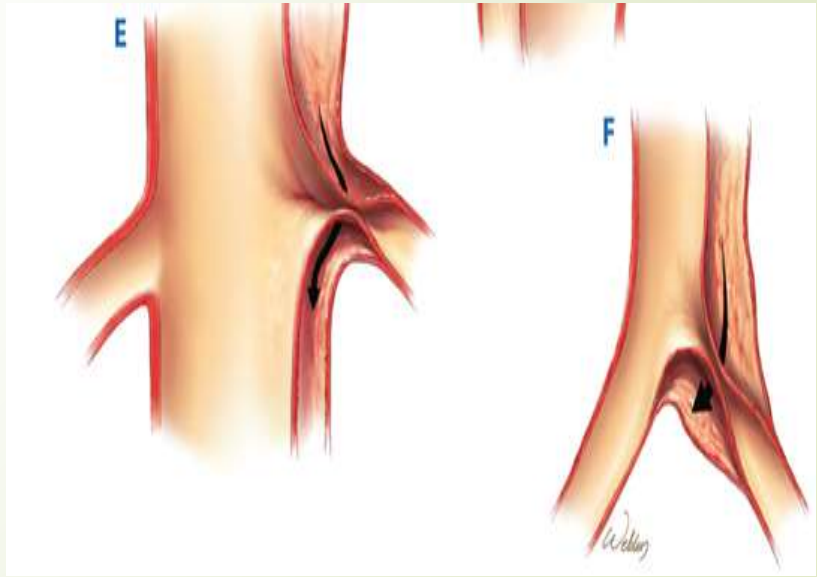
Intent/Clarification:
Code "Yes" to aortic aneurysms, aortic dissection/rupture. Fusiform ascending thoracic aneurysm is more likely to dissect when the aortic cross clamp is applied and should be coded as thoracic aorta disease.

SEQ. #: 505
Long Name: RF-Peripheral Arterial Disease
Short Name: PVD
Definition: Indicate whether the patient has a history of peripheral arterial disease (includes upper and lower extremity, renal, mesenteric, and abdominal aortic systems).

Peripheral arterial disease excludes disease in the carotid, cerebrovascular arteries or thoracic aorta.
PVD does not include DVT.







SEQ. #: 525
Long Name: RF-Cerebrovascular Dis
Short Name: CVD

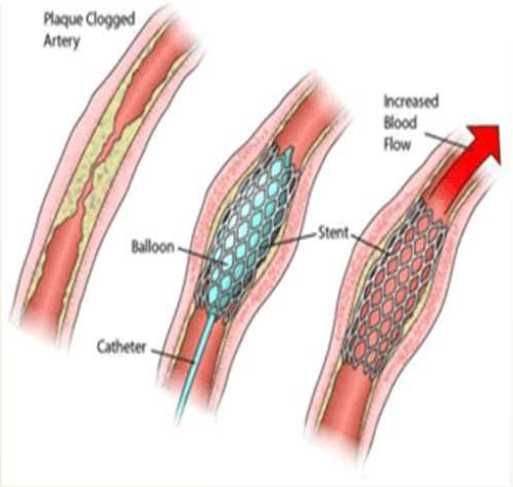
Definition: Indicate whether the patient has a current or previous history of any of the following:

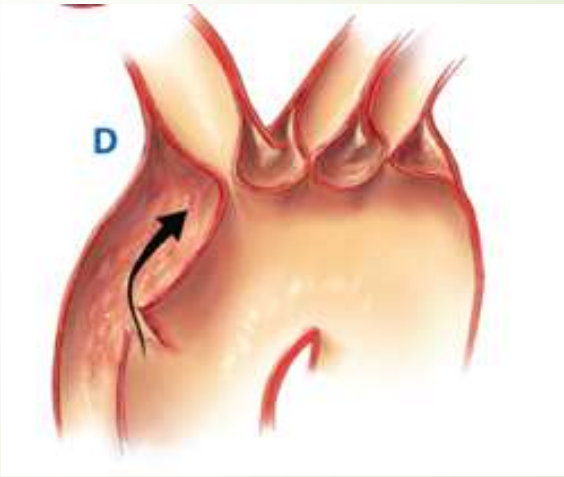
A. Stroke: Stroke is an acute episode of focal or global neurological dysfunction caused by brain, spinal cord, or retinal vascular injury as a result of hemorrhage or infarction, where the neurological dysfunction lasts for greater than 24 hours.

B. TIA: is defined as a transient episode of focal neurological dysfunction caused by brain, spinal cord, or retinal ischemia, without acute infarction, where the neurological dysfunction resolves within 24 hours.

C. Noninvasive or invasive arterial imaging test demonstrating >=50% stenosis of any of the major extracranial or intracranial vessels of the brain

D. Previous cervical or cerebral artery revascularization surgery or percutaneous intervention





Answer Choices:

- **Thoracic Artery Disease (510).**
- **Thoracic Artery Disease (510), Cerebrovascular Disease, Carotid Stenosis, Both (545).**
- **Thoracic Artery Disease (510), Peripheral Artery Disease (505) and Cerebrovascular Disease, TIA (540).**
- **All of the above. #'s 505, 510, 540, 545.**

Immunocompromise Present: ☐ Yes ☐ No ☐ Unknown ImmSupp (490)	Mediastinal Radiation: ☐ Yes ☐ No ☐ Unknown MediastRad (495)
Cancer Within 5 Years: ☐ Yes ☐ No ☐ Unknown Cancer (500)	Peripheral Artery Disease: ☐ Yes ☐ No ☐ Unknown PVD (505)
Thoracic Aorta Disease: ☐ Yes ☐ No ☐ Unknown ThAoDisease (510)	Syncope: ☐ Yes ☐ No ☐ Unknown Syncope (515)

Cerebrovascular Disease: ☐ Yes ☐ No ☐ Unknown
CVD (525)

(If Yes→) Prior CVA: ☐ Yes ☐ No ☐ Unknown (If Yes →) Prior CVA-When: ☐ <= 30 days ☐ > 30 days
CVA (530) CVAWhen (535)

CVD TIA: ☐ Yes ☐ No ☐ Unknown
CVDTIA (540)

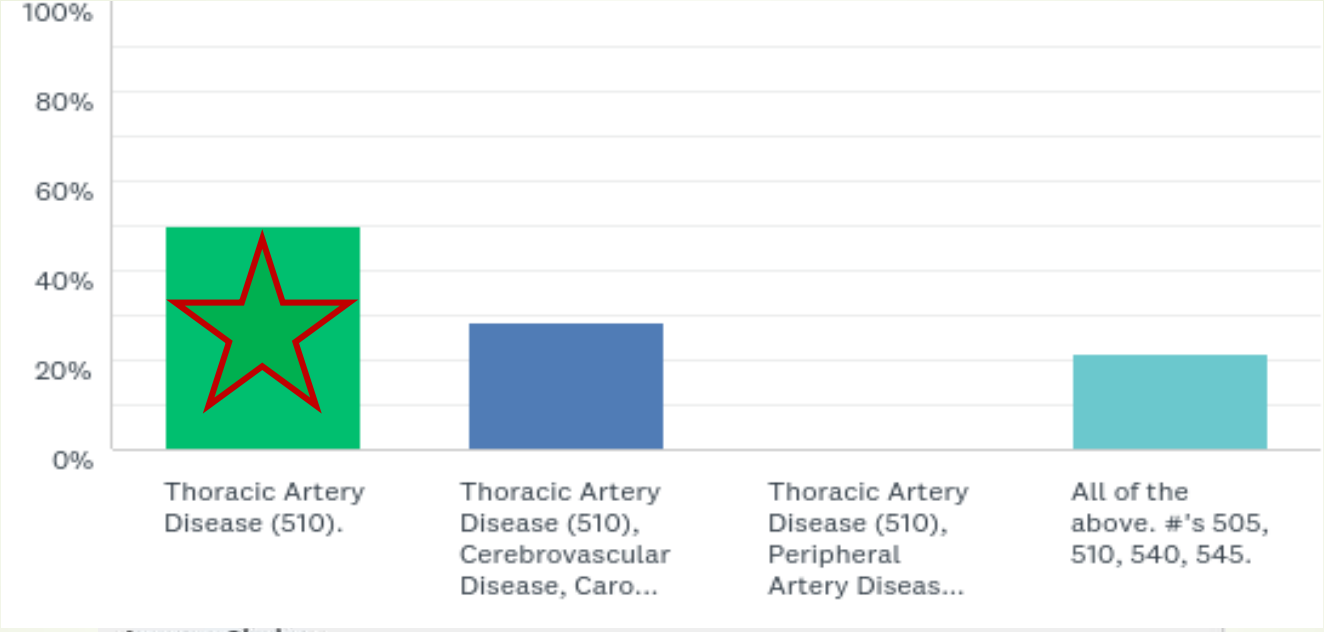
CVD Carotid stenosis: ☐ Right ☐ Left ☐ Both ☐ None ☐ Not Documented
CVDCarSten (545)

(If "Right" or "Both" →) Severity of stenosis on the right carotid artery: ☐ 50-79% ☐ 80 – 99% ☐ 100% ☐ Not documented
CVDStenRt (550)

(If "Left" or "Both" →) Severity of stenosis on the left carotid artery: ☐ 50-79% ☐ 80 – 99% ☐ 100% ☐ Not documented
CVDStenLft (555)

History of previous carotid artery surgery and/or stenting: ☐ Yes ☐ No
CVDPCarSurg (560)

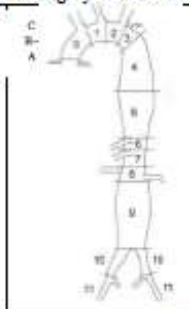
#9: Which of the following Risk Factors (section D.) would you abstract for this patient?



Answer Choices
Thoracic Artery Disease (510).
Thoracic Artery Disease (510), Cerebrovascular Disease, Carotid Stenosis, Both (545).
Thoracic Artery Disease (510), Peripheral Artery Disease (505) and Cerebrovascular Disease, TIA (540).
All of the above. #'s 505, 510, 540, 545.

STS Aorta Surgery Worksheet V2.9

Identify procedural location using graph letters A-N →



A. Below sinotubular junction
B. Sinotubular junction to mid ascending
C. Mid ascending to distal ascending
D. Zone 1 (between innominate and left carotid)
E. Zone 2 (between left carotid and left subclavian)
F. Zone 3 (first 2 cm. distal to left subclavian)
G. Zone 4 (end of zone 3 to mid descending aorta – T6)
H. Zone 5 (mid descending aorta to celiac)
I. Zone 6 (celiac to superior mesenteric)
J. Zone 7 (superior mesenteric to renals)
K. Zone 8 (renal to infra-renal abdominal aorta)
L. Zone 9 (infrarenal abdominal aorta)
M. Zone 10 (common iliac)
N. Zone 11 (external iliac)

For Aneurysm:

Aneurysm/Primary Tear Location : _____

For Dissection:
(Select all that apply and fill in location)

☐ **Secondary Tear Location:** _____

☐ **Retrograde Extension Location:** _____

☐ **Distal Extension Location:** _____

☐ **Rupture Location:** _____

Rupture Contained: ☐Yes ☐No

For Open Descending Thoracic Aorta or Thoracoabdominal Procedures:

Proximal Location: _____ ☐ **Reverse Heni**

Distal Location: _____

For Endovascular Procedures:

Proximal Location: _____

Distal Location: _____

Intra OP:

Unintentional Rupture of dissection septum

Location: _____

↓ PLEASE COMPLETE THE FOLLOWING SECTIONS ↓

Presentation

Endoleak:
☐ Type I (leak at graft attachment site) → Location: ☐ Ia-proximal ☐ Ib – distal ☐ Ic – iliac occluded
☐ Type II (aneurysm sac filling via branch vessel) → Number of vessel: ☐ IIa – single vessel ☐ IIb – two vessels or more
☐ Type III (leak defect in graft) → Graft defect type: ☐ IIIa – junctional separation of modular components ☐ IIIb – endograft fractures/holes
☐ Type IV (leak through graft fabric)
☐ Type V (endotension – expansion aneurysm sac without leak)

Aneurysm:
Etiology: ☐ Atherosclerosis ☐ Infection ☐ Inflammatory ☐ Connective Tissue Disorder ☐ Penetrating Ulcer ☐ Pseudoaneurysm ☐ Mycotic ☐ Traumatic transection ☐ Intercostal visceral patch ☐ Anastomotic site
Type: ☐Fusiform ☐Saccular **Rupture:** ☐Yes ☐No

Dissection:
Timing: ☐ Hyper-acute (<48hrs) ☐Acute (48hrs-2wks) ☐Sub-acute (>2wks-90days) ☐Chronic (>90days) ☐Acute on Chronic
Malperfusion: ☐Yes (If Yes ↓) ☐No
If Yes → **Subclavian→** ☐ Right ☐ Left **Common Carotid→** ☐Right ☐Left **Renal→** ☐Right ☐Left
☐ Coronary ☐ Celiac ☐ Superior Mesenteric ☐ Iliofemoral ☐Spinal

Infection (if yes→) ☐ Graft infection ☐ Valvular endocarditis ☐ Nonvalvular endocarditis ☐ Native aorta ☐ Multiple infection types

Trauma (if yes→) ☐Root ☐Ascending ☐Arch ☐Descending ☐Thoracoabdominal ☐Abdominal

Root: ☐Aorto-annular ectasia
☐Asymmetric Root Dilation (if yes→) ☐Right ☐Left ☐Non-coronary
☐Sinus of Valsalva aneurysm (if yes→) ☐Right ☐Left ☐Non-coronary

Arch Type: ☐ Right ☐ Left
☐Aberrant subclavian → ☐ Right ☐ Left / ☐ Kommerell / ☐ Bovine / ☐ Variant vertebral origin / ☐ Patent IMA bypass graft

Ascending: ☐ Asymmetric Dilatation
☐ Proximal coronary artery bypass grafts

STS Aorta Surgery Worksheet V2.9

Intervention:
☐ Planned stage hybrid
☐ Open Arch Procedure (If Yes↓)
Distal Technique: ☐ Open ☐Clamp‡
Site → ☐Ascending Aorta ☐ Hemiarch ☐ Zone 1 ☐ Zone 2 ☐ Zone 3 ☐ Zone 4 *(Refer to graph on 1st page)*
Extension → ☐Elephant Trunk ☐ Frozen Elephant Trunk ☐ No
☐ Arch Branch Reimplantation (If Yes→) **Subclavian** → ☐ Right ☐ Left **Common Carotid** → ☐ Right ☐ Left
☐Innominate ☐ Left Vertebral ☐Other

Open Descending Thoracic Aorta or Thoracoabdominal Procedure:
☐ Intercostal reimplantation
☐ Visceral vessel intervention (If Yes→) ☐ Celiac → ☐ Reimplantation ☐ Branch Graft
☐Superior mesenteric → ☐ Reimplantation ☐ Branch Graft
☐Right renal → ☐ Reimplantation ☐ Branch Graft
☐Left renal → ☐ Reimplantation ☐ Branch Graft

Endovascular Procedure:
Access (If Yes→) ☐ Femoral ☐ Iliac ☐ Abdominal Aorta ☐ Lt. Subclavian ☐ Rt. Subclavian ☐ Ascending Aorta ☐ LV Apex
☐ Percutaneous Access ☐ TAVR (for combination procedures) ☐ Ascending TEAVR (If Yes→) ☐ Dedicated IDE ☐ Off-label stent ☐ No

Arch Vessel Management:
Innominate → ☐ Native Flow ☐ Endovascular Branch Graft ☐ Endovascular Parallel Graft ☐ Fenestrated
☐Extra-anatomic Bypass (If Yes→) ☐Aorta-Innominate ☐Aorta-Rt Carotid ☐Aorta Rt Subclavian ☐ Rt Carotid-Rt Subclavian ☐Other
Left Carotid → ☐ Native Flow ☐ Endovascular Branch Graft ☐ Endovascular Parallel Graft ☐ Fenestrated
☐Extra-anatomic Bypass (If Yes→) ☐ Aorta-Lt Carotid ☐Innominate-Lt Carotid ☐ Rt Carotid-Lt Carotid ☐Other
Left Subclavian → ☐ Native Flow ☐ Endovascular Branch Graft ☐ Endovascular Parallel Graft ☐ Fenestrated
☐Extra-anatomic Bypass (If Yes→) ☐Aorta-Lt Subclavian ☐ Lt Carotid-Lt Subclavian ☐Other
Other Arch Vessel(s) Extra-anatomic bypass (If Yes→) ☐ Innominate-Carotid ☐ Innominate-Subclavian ☐ Subclavian-Subclavian ☐ Other

Visceral Vessel Management:

Celiac → ☐ Native Flow ☐ Endovascular Branch Graft ☐ Endovascular Parallel Graft ☐ Fenestrated
☐ Extra-anatomic Bypass → ☐ Aorta-celiac ☐ Iliac-celiac ☐ Other

Superior mesenteric → ☐ Native Flow ☐ Endovascular Branch Graft ☐ Endovascular Parallel Graft ☐ Fenestrated
☐ Extra-anatomic Bypass → ☐ Aorta-superior mesenteric ☐ Iliac-superior mesenteric ☐ Other

Right renal → ☐ Native Flow ☐ Endovascular Branch Graft ☐ Endovascular Parallel Graft ☐ Fenestrated
☐ Extra-anatomic Bypass → ☐ Aorta-right renal ☐ Iliac-right renal ☐ Other

Left renal → ☐ Native Flow ☐ Endovascular Branch Graft ☐ Endovascular Parallel Graft ☐ Fenestrated
☐ Extra-anatomic Bypass → ☐Aorta-left renal ☐ Iliac-left renal ☐ Other

Right Iliac → ☐ Native Flow ☐ Bifurcated Graft ☐ Extra-anatomic Bypass → ☐ Fem-Fem ☐ Other

Left Iliac → ☐ Native Flow ☐ Bifurcated Graft ☐ Extra-anatomic Bypass → ☐ Fem-Fem ☐ Other

Internal Iliac Preserved → ☐ Rt Iliac only ☐ Lt Iliac only ☐ Both ☐ No

Other Visceral Vessel(s) → ☐ Extra-anatomic Bypass → ☐ Aorta-Other ☐ Iliac-Other ☐ Other

Intra-Op (Check all that apply):
☐ Dissection proximal entry tear covered
☐ Endoleak at end of procedure → Type ☐ Ia ☐ Ib ☐ II ☐ III ☐ IV ☐ V
☐ Conversion to open → ☐ Deployment failure ☐ Endoleak ☐ Rupture ☐ Occlusion/loss of branch
☐ Intra-Op Dissection Extension → ☐ None ☐ Antegrade ☐ Retrograde ☐ Both
☐ Spinal drain placement → ☐ Pre-Aortic procedure ☐ Post-Aortic procedure
☐ IntraOp Motor Evoked Potential → Documented MEP abnormality → ☐ Yes ☐ No
☐ IntraOp Somatosensory Evoked Potential → Documented SEP abnormality → ☐ Yes ☐ No
☐ IntraOp EEG → Documented EEG abnormality → ☐ Yes ☐ No ☐ Unknown
☐ IVUS Performed Intra-Op
☐ IntraOp Transcutaneous Doppler Performed Intra-Op
☐ IntraOp Angiogram → Volume of Contrast _____ ml Fluoro time _____ min

#10: Based on the CT scan results, how would you abstract the following fields in Section M2?

Answer Choices:

- **Primary Tear Location (4750) is Below STJ (Zone A); Secondary Tear (4755) is Zone 6.**
- **Primary Tear Location (4750) is STJ to mid-ascending (Zone B); Secondary Tear (4755) is Zone 5.**
- **Primary Tear Location (4750) is mid-ascending to distal ascending (Zone C); Secondary Tear (4755) is Zone 5.**

Points to Consider:

- **Primary Tear**
- **Secondary Tear**
- **Location, Location, Location**

"Dissection of the ascending thoracic aorta which originates in the ascending thoracic aorta just above the sinotubular junction, and extends throughout the aorta and into the iliac vasculature. A secondary tear is evident in the descending thoracic aorta 2 cm. above the diaphragm. The dissection compromises the innominate, left common and right common carotid arteries, with up to 75% diminished flow of the true lumen of the vessels."

SEQ. #: 4750
Long Name: Dissection - Primry Tear Location **Short Name:** DisTearLoc
Definition: Indicate location of the primary tear

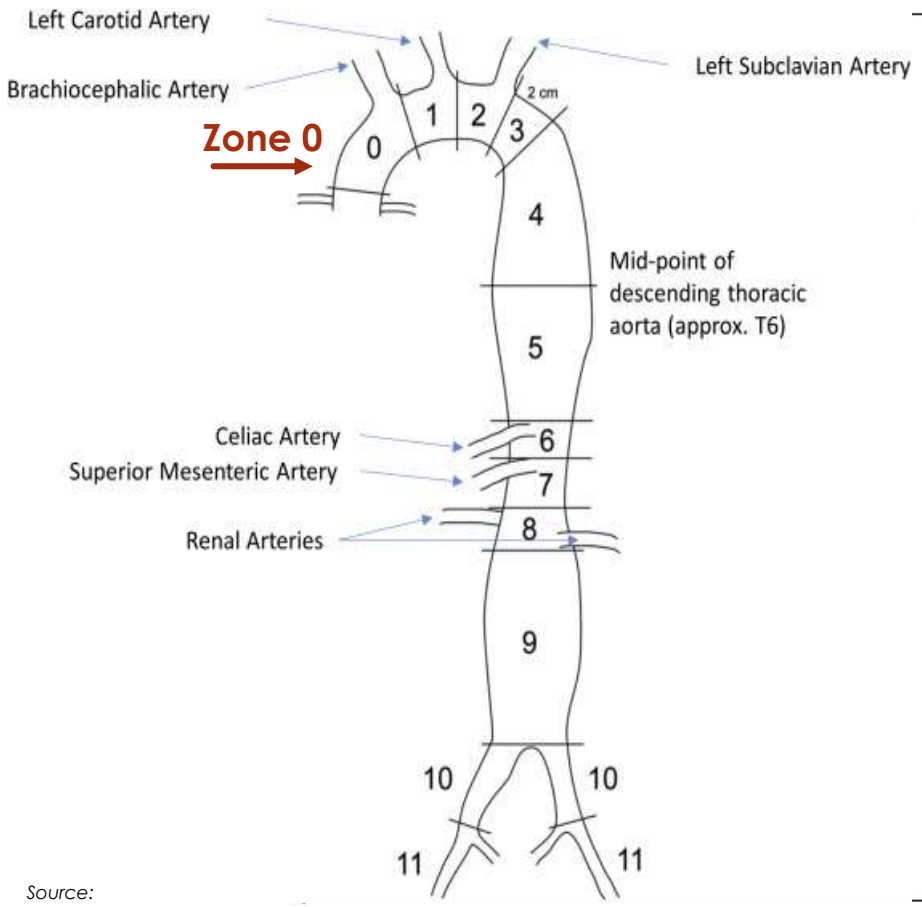
Intent/Clarification:
The intent is to identify the primary entry tear for the dissection. As most dissections include multiple re-entry tears it may be difficult to confirm the primary site and the surgeon MUST be the final arbiter of this definition. This is the site identified by the surgeon at an open operation or judged by the surgeon from imaging as the primary site to be covered by endovascular stent. If the radiology report names a primary entry point and the surgeon concurs, report this location.

SEQ. #: 4755
Long Name: Dissection - Secondary Tear Location **Short Name:** DisSecLoc
Definition: Indicate location of secondary tear

Intent/Clarification:
The intent is to identify any secondary tear for the dissection. This would be a re-entry site resulting from flow within the false lumen returning to the true lumen. The surgeon MUST be the final arbiter of this definition. This is the site identified by the surgeon at open operation or judged by the surgeon from imaging as a secondary site to be covered by endovascular stent.

Intent/Clarification:

Zone 0 is the Ascending Aorta and includes letter A-C. Verify exact location with CV Surgeon. Aortic Root (letter A) is below sinotublar junction.



Source:
Canadian Cardiovascular Society

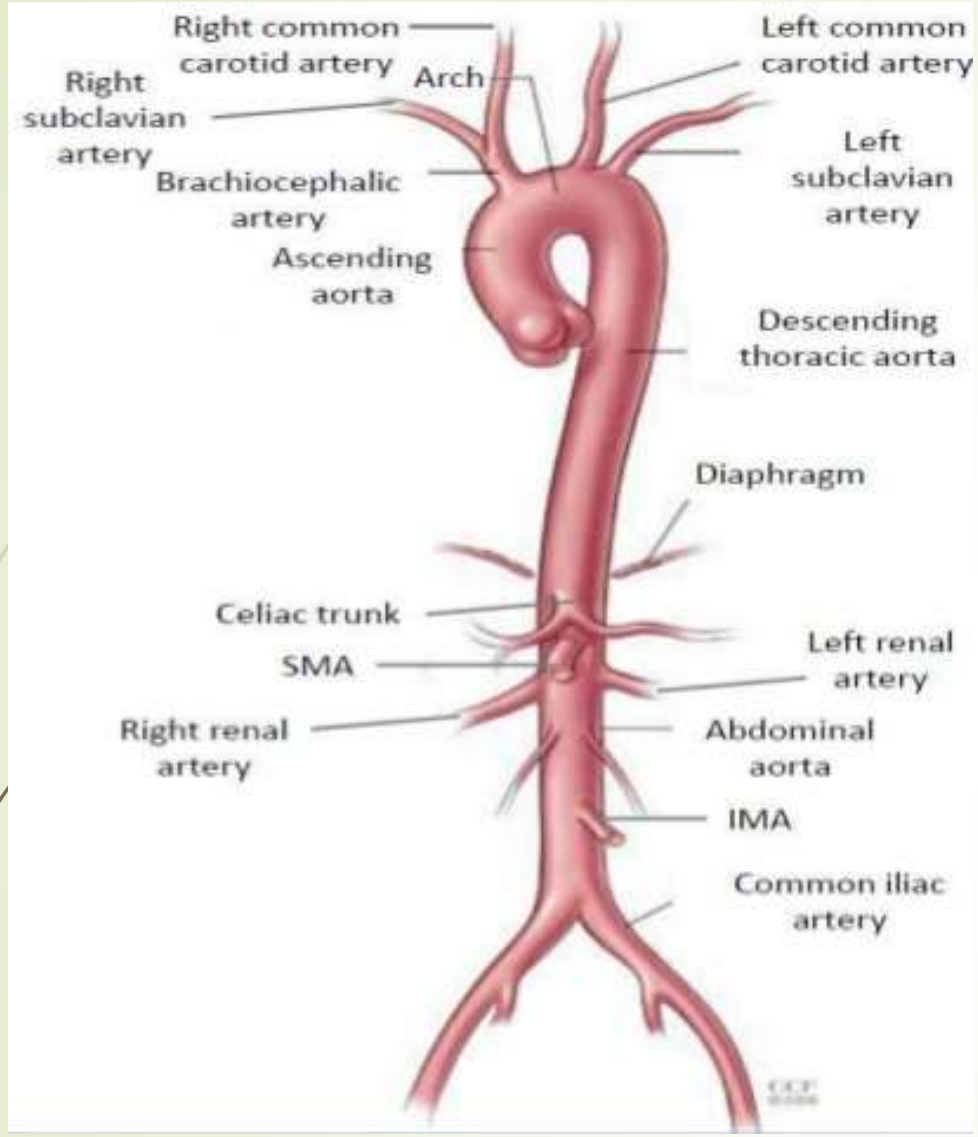
A. Below sinotubular junction
B. Sinotubular junction to mid ascending
C. Mid ascending to distal ascending

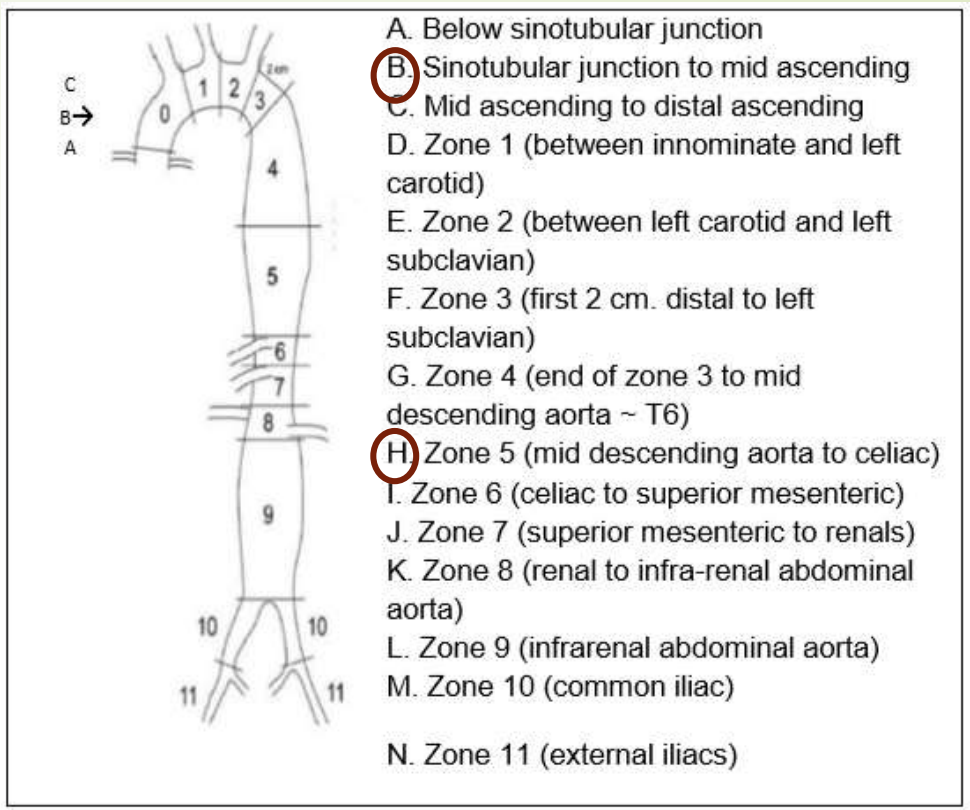
Zone 0

D. Zone 1 (between innominate and left carotid)
E. Zone 2 (between left carotid and left subclavian)
F. Zone 3 (first 2 cm. distal to left subclavian)
G. Zone 4 (end of zone 3 to mid descending aorta ~ T6)
H. Zone 5 (mid descending aorta to celiac)
I. Zone 6 (celiac to superior mesenteric)
J. Zone 7 (superior mesenteric to renals)
K. Zone 8 (renal to infra-renal abdominal aorta)
L. Zone 9 (infrarenal abdominal aorta)
M. Zone 10 (common iliac)

N. Zone 11 (external iliacs)

Source:
Society of Thoracic Surgeons Training Manual





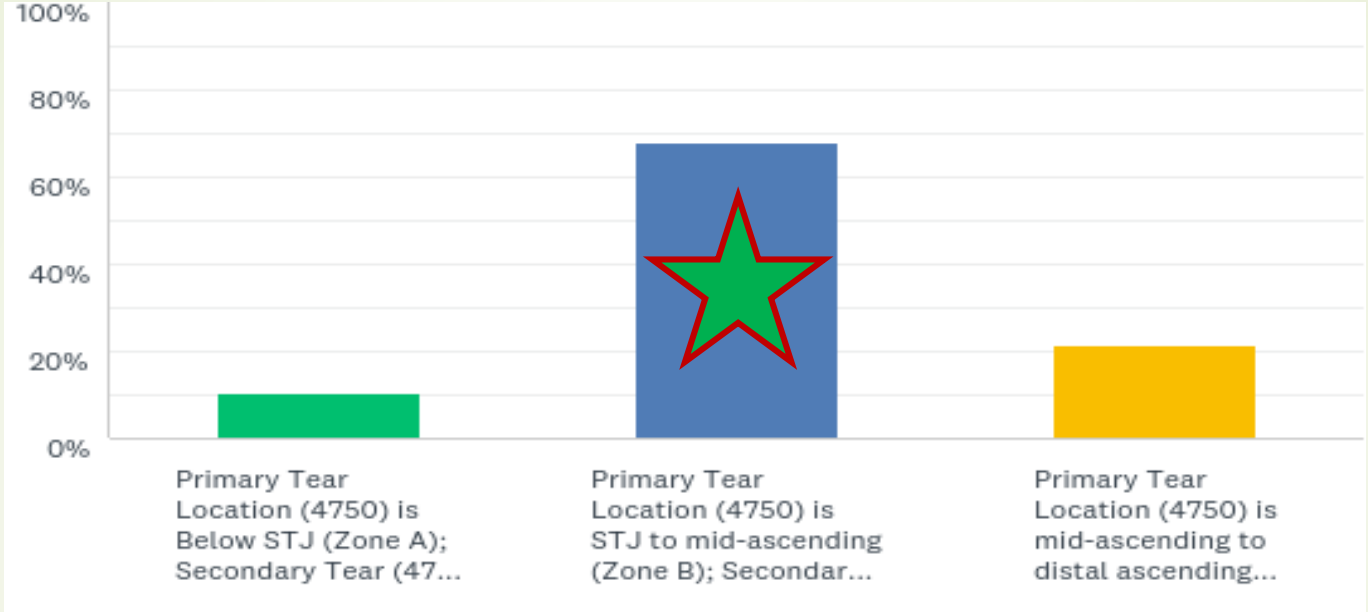
#10: Based on the CT scan results, how would you abstract the following fields in Section M2?

Answer Choices:

- **Primary Tear Location (4750) is Below STJ (Zone A); Secondary Tear (4755) is Zone 6.**
- **Primary Tear Location (4750) is STJ to mid-ascending (Zone B); Secondary Tear (4755) is Zone 5.**
- **Primary Tear Location (4750) is mid-ascending to distal ascending (Zone C); Secondary Tear (4755) is Zone 5.**

Primary tear location: DisTearLoc (4750)	☐ Below STJ ☒ STJ-midascending ☐ Midascending to distal ascending ☐ Zone 1 ☐ Zone 2 ☐ Zone 3 ☐ Zone 4 ☐ Zone 5 ☐ Zone 6 ☐ Zone 7 ☐ Zone 8 ☐ Zone 9 ☐ Zone 10 ☐ Zone 11
Secondary tear location: DisSecLoc (4755)	☐ Below STJ ☐ STJ-midascending ☐ Midascending to distal ascending ☐ Zone 1 ☐ Zone 2 ☐ Zone 3 ☐ Zone 4 ☒ Zone 5 ☐ Zone 6 ☐ Zone 7 ☐ Zone 8 ☐ Zone 9 ☐ Zone 10 ☐ Zone 11

#10: Based on the CT scan results, how would you abstract the following fields in Section M2?



Answer Choices
Primary Tear Location (4750) is Below STJ (Zone A); Secondary Tear (4755) is Zone 6.
Primary Tear Location (4750) is STJ to mid-ascending (Zone B); Secondary Tear (4755) is Zone 5.
Primary Tear Location (4750) is mid-ascending to distal ascending (Zone C); Secondary Tear (4755) is Zone 5.

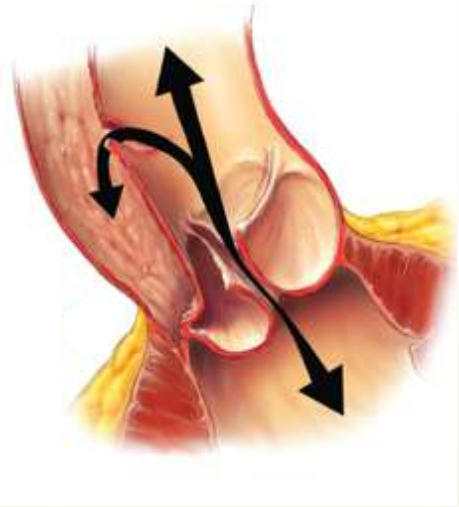
#11: Based on the CT scan results, how would you abstract these subsequent fields?

Answer Choices:

- **Retrograde extension (4760) is Yes; Retrograde Location (4765) is Below STJ; Distal extension (4775) is Yes; Distal Location (4780) is Zone 10.**
- **Retrograde extension (4760) is No; Distal extension (4775) is Yes; Distal Location (4780) is Zone 5.**
- **Retrograde extension (4760) is No; Distal extension (4775) is Yes; Distal Location (4780) is Zone 10.**

Points to Consider:

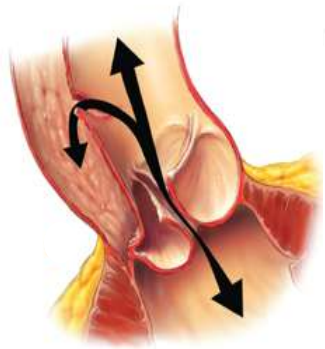
- **Retrograde Extension**
- **Retrograde Location**
- **Distal Extension**
- **Distal Location**



SEQ. #: 4760
Long Name: Dissection - Retrograde Extension **Short Name:** DisRetExt
Definition: Indicate whether there was retrograde extension

Intent/Clarification:
The intent is to determine whether the dissection propagates proximal (toward the aortic valve) from the primary tear location. Report yes if imaging indicates an extension of the false lumen proximal (toward the aortic valve) to the primary tear location.

SEQ. #: 4765
Long Name: Dissection - Retrograde Location
Short Name: DisRetLoc
Definition: Indicate location of retrograde extension

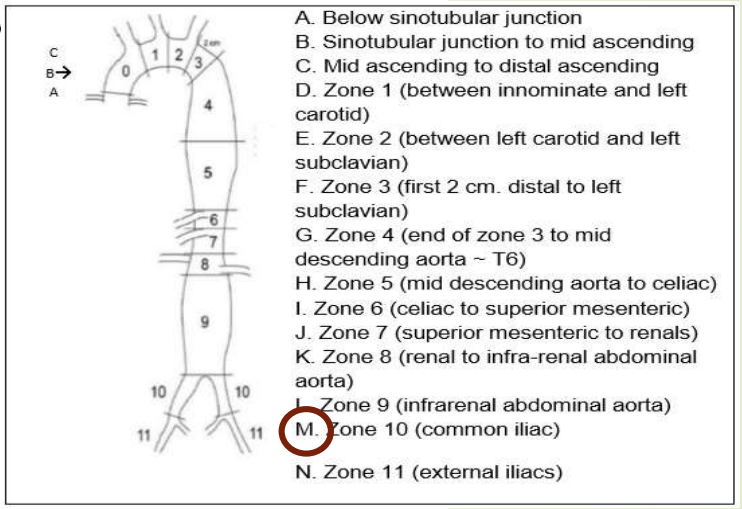


Intent/Clarification:
The intent is to define how far the retrograde dissection extends toward the aortic valve. This would be the point at which the false lumen comes closest to the aortic valve. The surgeon or radiologist can be the final arbiter of this definition. Refer to the image showing the zones and note that zone "0" is subdivided into 3 sections:

SEQ. #: 4775
Long Name: Dissection - Distal Extension
Short Name: DistalExt
Definition: Indicate whether there is distal extension

Intent/Clarification:
The intent is to identify where distal (antegrade) dissection occurred or extended.

SEQ. #: 4780
Long Name: Dissection - Distal Extension Location
Short Name: DistalExtLoc
Definition: Indicate location of distal extension



Intent/Clarification:
The intent is to define the how far along the aorta (away from the valve) any new or extended dissection goes. Refer to the image showing the zones and report the most distal (highest # zone) extent of the false lumen.

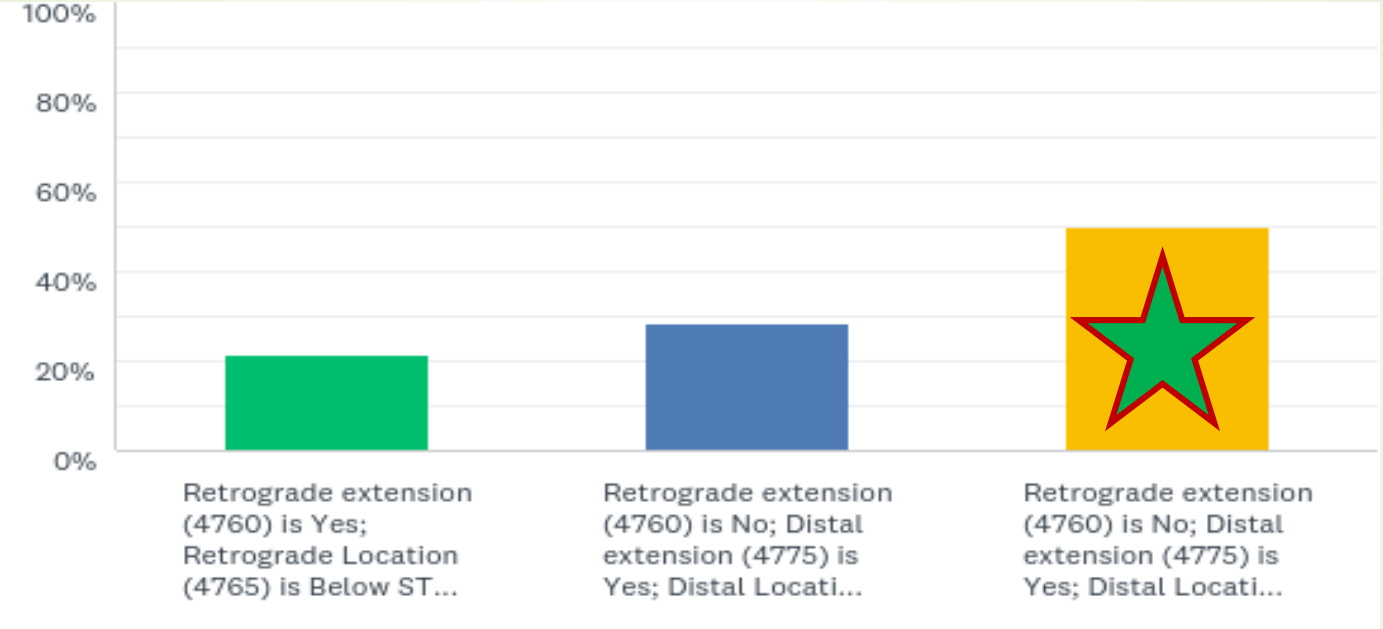
#11: Based on the CT scan results, how would you abstract these subsequent fields?

Answer Choices:

- **Retrograde extension (4760) is Yes; Retrograde Location (4765) is Below STJ; Distal extension (4775) is Yes; Distal Location (4780) is Zone 10.**
- **Retrograde extension (4760) is No; Distal extension (4775) is Yes; Distal Location (4780) is Zone 5.**
- **Retrograde extension (4760) is No; Distal extension (4775) is Yes; Distal Location (4780) is Zone 10.**

Primary tear location: DisTearLoc (4750)	☐ Below STJ ☐ STJ-midascending ☐ Midascending to distal ascending ☐ Zone 1 ☐ Zone 2 ☐ Zone 3 ☐ Zone 4 ☐ Zone 5 ☐ Zone 6 ☐ Zone 7 ☐ Zone 8 ☐ Zone 9 ☐ Zone 10 ☐ Zone 11
Secondary tear location: DisSecLoc (4755)	☐ Below STJ ☐ STJ-midascending ☐ Midascending to distal ascending ☐ Zone 1 ☐ Zone 2 ☐ Zone 3 ☐ Zone 4 ☐ Zone 5 ☐ Zone 6 ☐ Zone 7 ☐ Zone 8 ☐ Zone 9 ☐ Zone 10 ☐ Zone 11
Retrograde extension: ☐ Yes ☒ No ☐ Unknown (If Yes ↓) DisRetExt (4760)	
Retrograde Location: DisRetLoc (4765)	☐ Below STJ ☐ STJ-midascending ☐ Midascending to distal ascending ☐ Zone 1 ☐ Zone 2 ☐ Zone 3 ☐ Zone 4
Post TEVAR: DisPosTEVAR (4770)	☐ Yes ☐ No
Distal extension: ☒ Yes ☐ No ☐ Unknown (If Yes ↓) DistalExt (4775)	
Distal Extension Location: DistalExtLoc (4780)	☐ Below STJ ☐ STJ-midascending ☐ Midascending to distal ascending ☐ Zone 1 ☐ Zone 2 ☐ Zone 3 ☐ Zone 4 ☐ Zone 5 ☐ Zone 6 ☐ Zone 7 ☐ Zone 8 ☐ Zone 9 ☒ Zone 10 ☐ Zone 11

#11: Based on the CT scan results, how would you abstract these subsequent fields?



Answer Choices
Retrograde extension (4760) is Yes; Retrograde Location (4765) is Below STJ; Distal extension (4775) is Yes; Distal Location (4780) is Zone 10.
Retrograde extension (4760) is No; Distal extension (4775) is Yes; Distal Location (4780) is Zone 5.
Retrograde extension (4760) is No; Distal extension (4775) is Yes; Distal Location (4780) is Zone 10.

#12: What sort of Open Arch Procedure (4975) did this patient undergo?

Answer Choices:

- **Distal Technique (4980) is Open; Distal Site (4985) is Hemi-Arch; Distal Extension (4990) is Elephant Trunk; Arch Branch Re-implantation (4995) is Yes.**
- **Distal Technique (4980) is Clamped; Distal Site (4985) is Zone 3; Distal Extension (4990) is Frozen Elephant Trunk; Arch Branch Re-implantation (4995) is No.**
- **Distal Technique (4980) is Open; Distal Site (4985) is Hemi-Arch; Distal Extension is No; Arch Branch Re-implantation (4995) is No.**

Points to Consider:

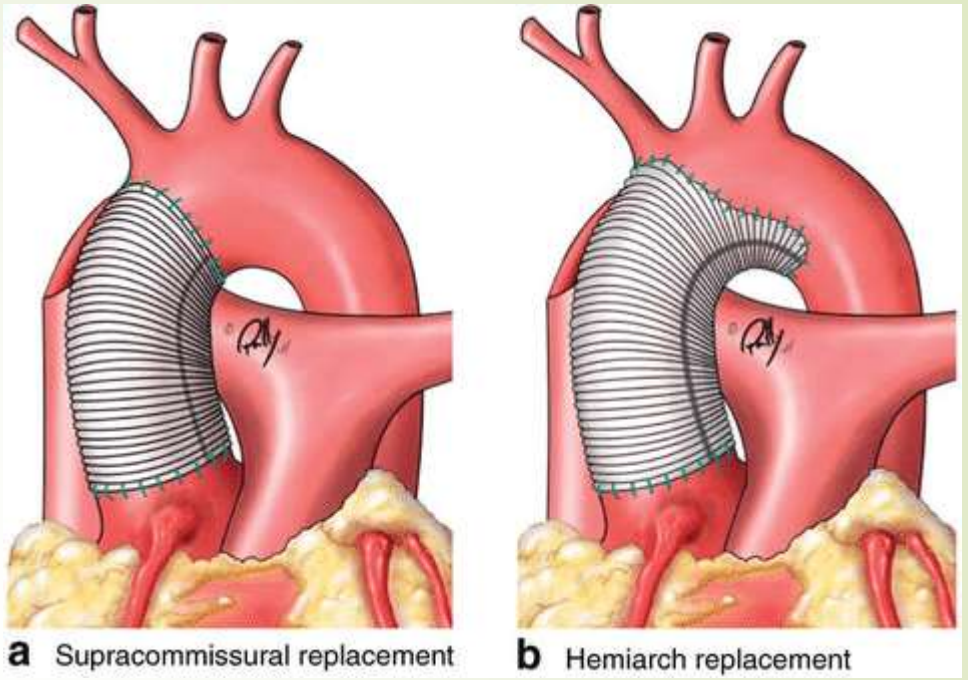
- **Distal Technique**
- **Distal Site**
- **Distal Extension**
- **Arch Branch Re-Implantation**

Remember:

- **Proximal = *Toward* the Heart**
- **Distal = *Away* from the Heart**

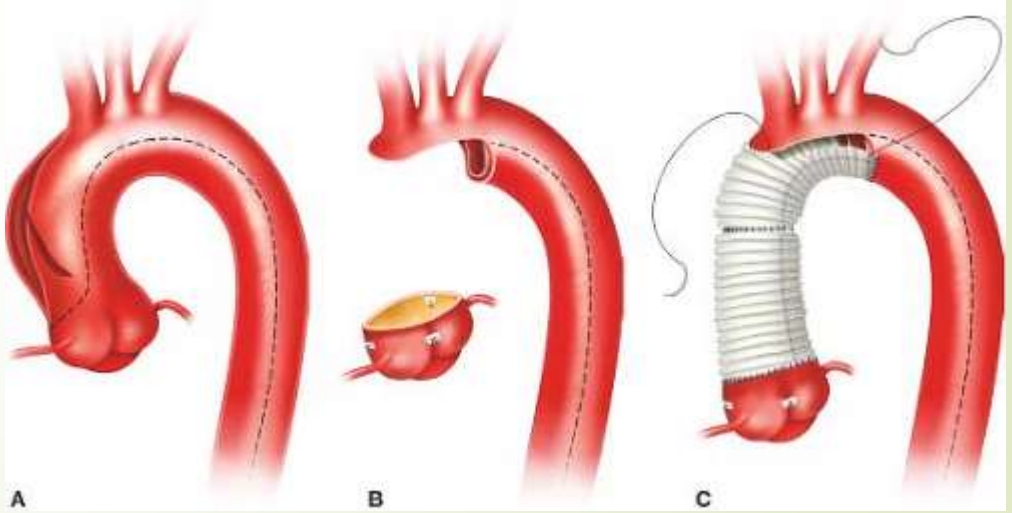
SEQ. #: 4975
Long Name: Open Arch Procedure
Short Name: ArchProc
Definition: Indicate whether there was an open arch procedure

Intent/Clarification:
The intent is to identify procedures with replacement of or connection to the arch of the aorta. Anything from the base of the innominate through the subclavian takeoff would be included.



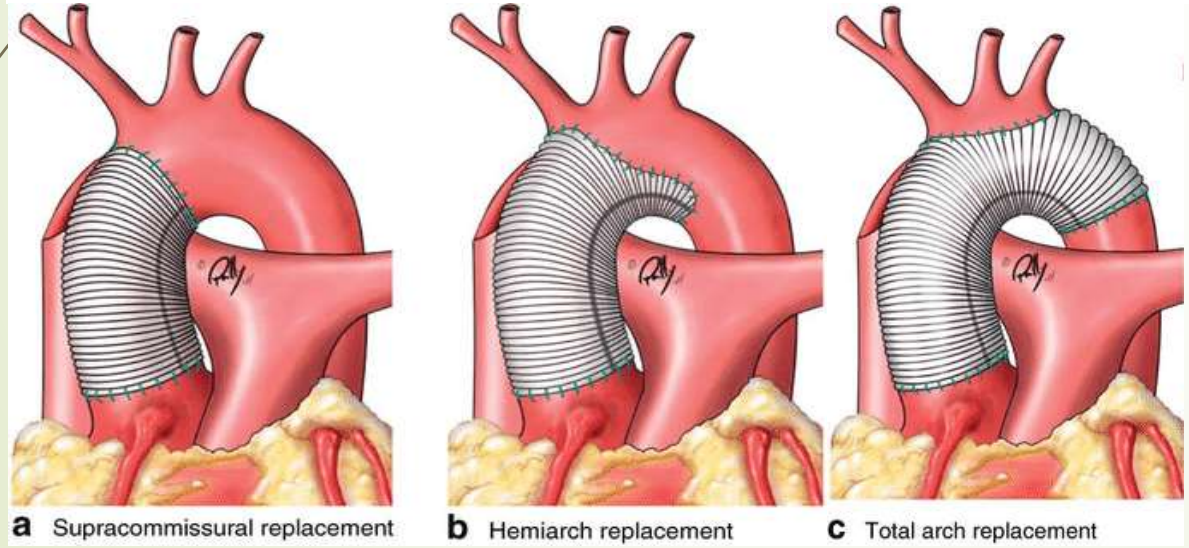
SEQ. #: 4980
Long Name: Open Arch Procedure - Distal Technique
Short Name: ArchDisTech
Definition: Indicate the distal technique for the arch procedure

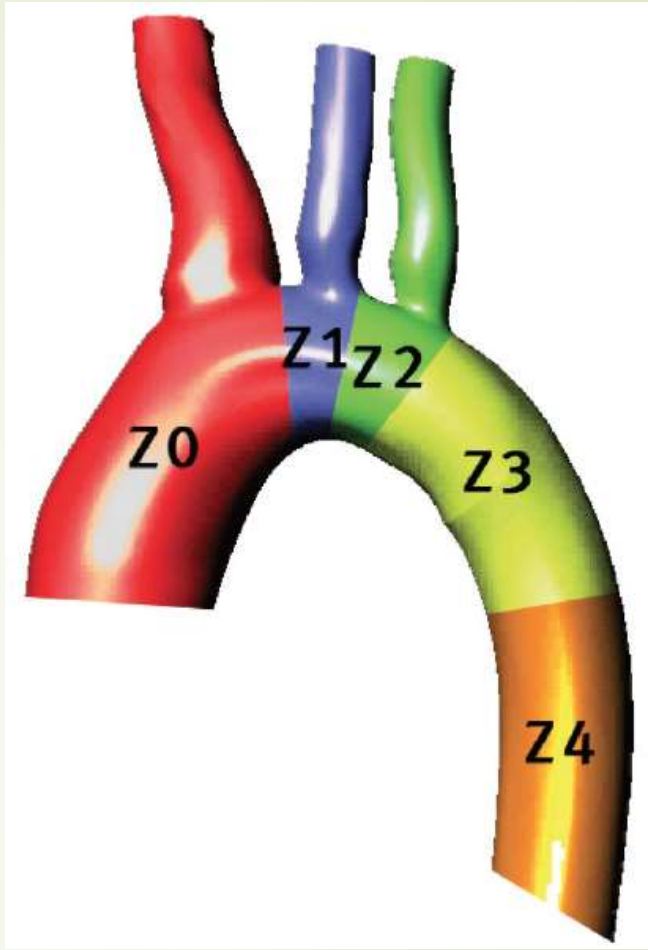
Intent/Clarification:
The intent is to define that the distal anastomosis was done with or without a clamp. Many arch procedures are done with the clamp removed, sewing to the aorta looking down the barrel of the vessel. This of course requires circulatory arrest. The clamp means that the aorta is clamped with an instrument and the anastomosis is completed proximal (close to the heart) to that part of the aorta.



SEQ. #: 4985
Long Name: Open Arch Procedure - Distal Site
Short Name: ArchDiscSite
Definition: Indicate the distal site

Intent/Clarification:
The intent of this is to define the level of the distal (far from the heart) anastomosis. Ascending aorta implies the ascending was resected with a clamp on the distal ascending aorta. Hemiarch means a single anastomosis was done somewhere in the ascending or proximal arch without separate grafts to the head vessels. Zone 1 means the innominate was reconnected with a graft between the innominate and left common carotid takeoffs. Zone 2 means the innominate and carotid were reconnected with a graft sewn to between the left common carotid and the left subclavian takeoffs. Zone three means the innominate, carotid and the left subclavian were reconnected with the graft being sewn beyond the left subclavian takeoff. Zone 4 means the graft was sewn to the mid descending thoracic aorta.





Intervention

Planned Staged Hybrid: ☐ Yes ☐ No

PlanStagHybrid (4970)

Open Arch Procedure: ☒ Yes ☐ No (If Yes ↓)

ArchProc (4975)

Distal Technique: ☒ Open ☐ Clamped

ArchDisTech (4980)

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

ArchDiscSite (4985)

Distal Extention: ☐ Elephant trunk ☐ Frozen Elephant trunk ☐ No

ArchDisExt (4990)

Arch Branch Reimplantation: ☐ Yes ☐ No (If Yes ↓)

ArchBranReimp (4995)

Innominate: ☐ Yes ☐ No

ArchBranInnom (5000)

Right Subclavian: ☐ Yes ☐ No

ArchBranRSub (5001)

Right Common Carotid: ☐ Yes ☐ No

ArchBranRComm (5002)

Left Common Carotid: ☐ Yes ☐ No

ArchBranLComm (5005)

Left Subclavian: ☐ Yes ☐ No

ArchBranLSub (5010)

Left Vertebral: ☐ Yes ☐ No

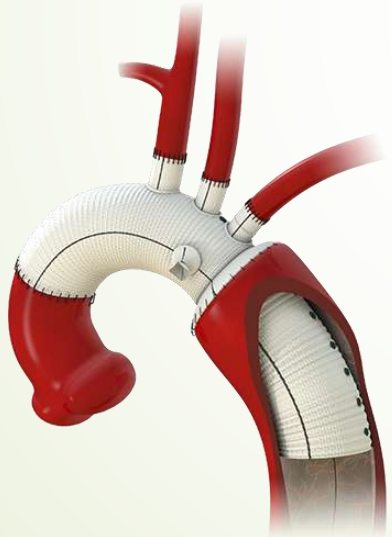
ArchBranLVert (5011)

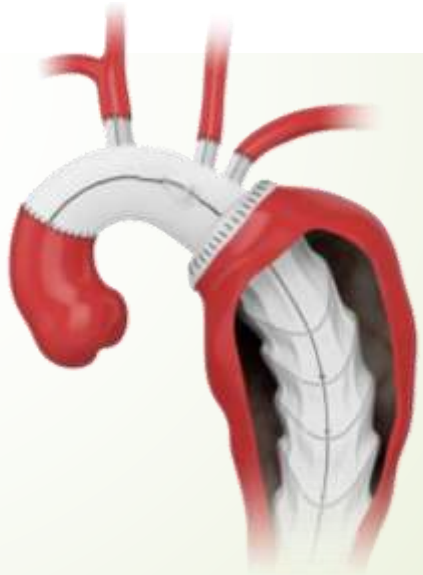
Other: ☐ Yes ☐ No

ArchBranOth (5012)

SEQ. #: 4990
Long Name: Open Arch Procedure - Distal Extention
Short Name: ArchDisExt
Definition: Indicate distal extension type

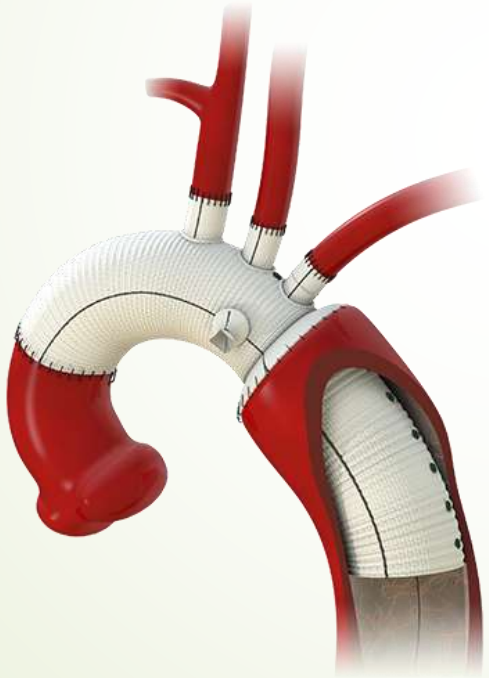
Intent/Clarification:
The intent of the question is to define whether graft was left that extended (distally) beyond the arch anastomosis. An elephant trunk is a soft graft, while a frozen elephant trunk means a stent was placed distally.

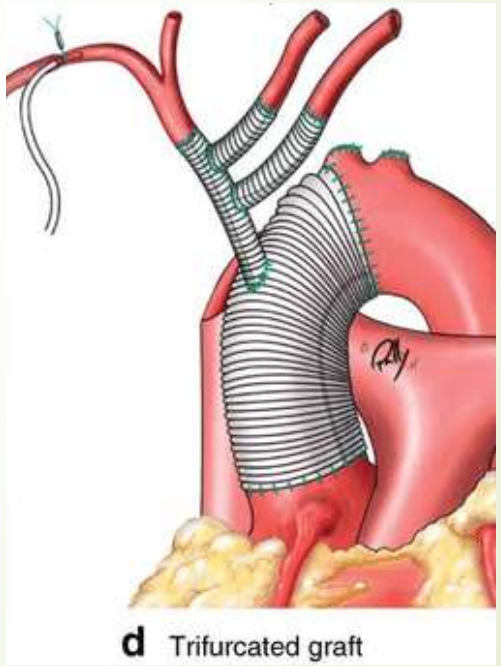




SEQ. #: 4995
Long Name: Open Arch Procedure - Arch Branch Reimplantation
Short Name: ArchBranReimp
Definition: Indicate whether arch branch reimplantation was performed

Intent/Clarification:
The intent of this is to define the end branches that were sewn to the graft.





d Trifurcated graft

Intervention

Planned Staged Hybrid: ☐ Yes ☐ No
PlanStagHybrid (4970)

Open Arch Procedure: ☒ Yes ☐ No (If Yes ↓)
ArchProc (4975)

Distal Technique: ☒ Open ☐ Clamped
ArchDisTech (4980)

Distal Site: ☐ Ascending Aorta ☒ Hemiarch ☐ Zone 1 ☐ Zone 2 ☐ Zone 3 ☐ Zone 4
ArchDiscSite (4985)

Distal Extention: ☐ Elephant trunk ☐ Frozen Elephant trunk ☒ No
ArchDisExt (4990)

Arch Branch Reimplantation: ☐ Yes ☒ No (If Yes ↓)
ArchBranReimp (4995)

Innominate: ☐ Yes ☐ No
ArchBranInnom (5000)

Right Subclavian: ☐ Yes ☐ No
ArchBranRSub (5001)

Right Common Carotid: ☐ Yes ☐ No
ArchBranRComm (5002)

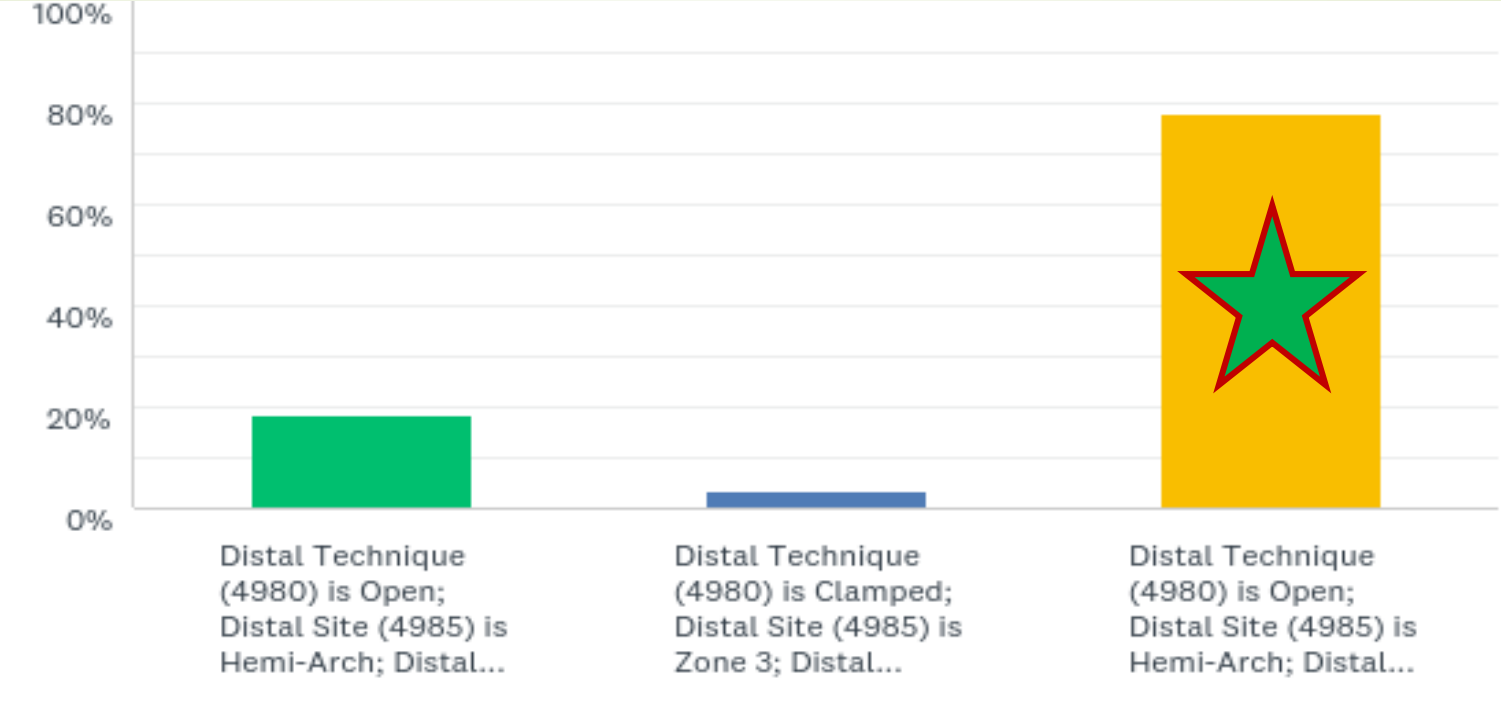
Left Common Carotid: ☐ Yes ☐ No
ArchBranLComm (5005)

Left Subclavian: ☐ Yes ☐ No
ArchBranLSub (5010)

Left Vertebral: ☐ Yes ☐ No
ArchBranLVert (5011)

Other: ☐ Yes ☐ No
ArchBranOth (5012)

#12: What sort of Open Arch Procedure (4975) did this patient undergo?



Answer Choices
Distal Technique (4980) is Open; Distal Site (4985) is Hemi-Arch; Distal Extension (4990) is Elephant Trunk; Arch Branch Re-implantation (4995) is Yes.
Distal Technique (4980) is Clamped; Distal Site (4985) is Zone 3; Distal Extension (4990) is Frozen Elephant Trunk; Arch Branch Re-implantation (4995) is No.
Distal Technique (4980) is Open; Distal Site (4985) is Hemi-Arch; Distal Extension is No; Arch Branch Re-implantation (4995) is No.

#13: How would you abstract the woven graft implanted during the procedure?

Answer Choices:

- Device Inserted (5440) is Yes; Location (5450) is Zone 1; Delivery Method (5455) is Open.
- Device Inserted (5440) is Yes; Location (5450) is Zone A; Delivery Method (5455) is Open.
- Device Inserted (5440) is Yes; Location (5450) is Zone B; Delivery Method (5455) is Open.
- Sorry, but I'm "Zoned Out"!!!!!!

Points to Consider:

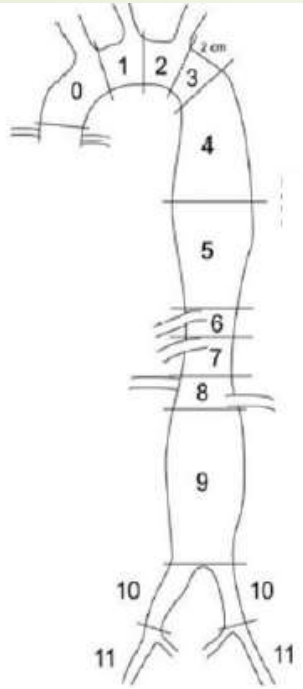
- Was a Device Inserted?
- Location of Device
- Delivery Method

SEQ. #: 5440
Long Name: Aorta Device Inserted
Short Name: ADevIns
Definition: Indicate whether one or more devices were inserted into the aorta.

Intent/Clarification:
This will include all synthetic prosthetics inserted. This may include Dacron, PTFE, homografts, autografts, stents, and stentgrafts. Some aortic interventions may not require prosthetic materials or device implants such as primary repair of a pseudoaneurysm. This will be indicated as "No."

SEQ. #: 5450
Long Name: Aorta Device - Location #01
Short Name: ADevLoc01
Definition: Indicate the location within the aorta where device #01 was inserted.

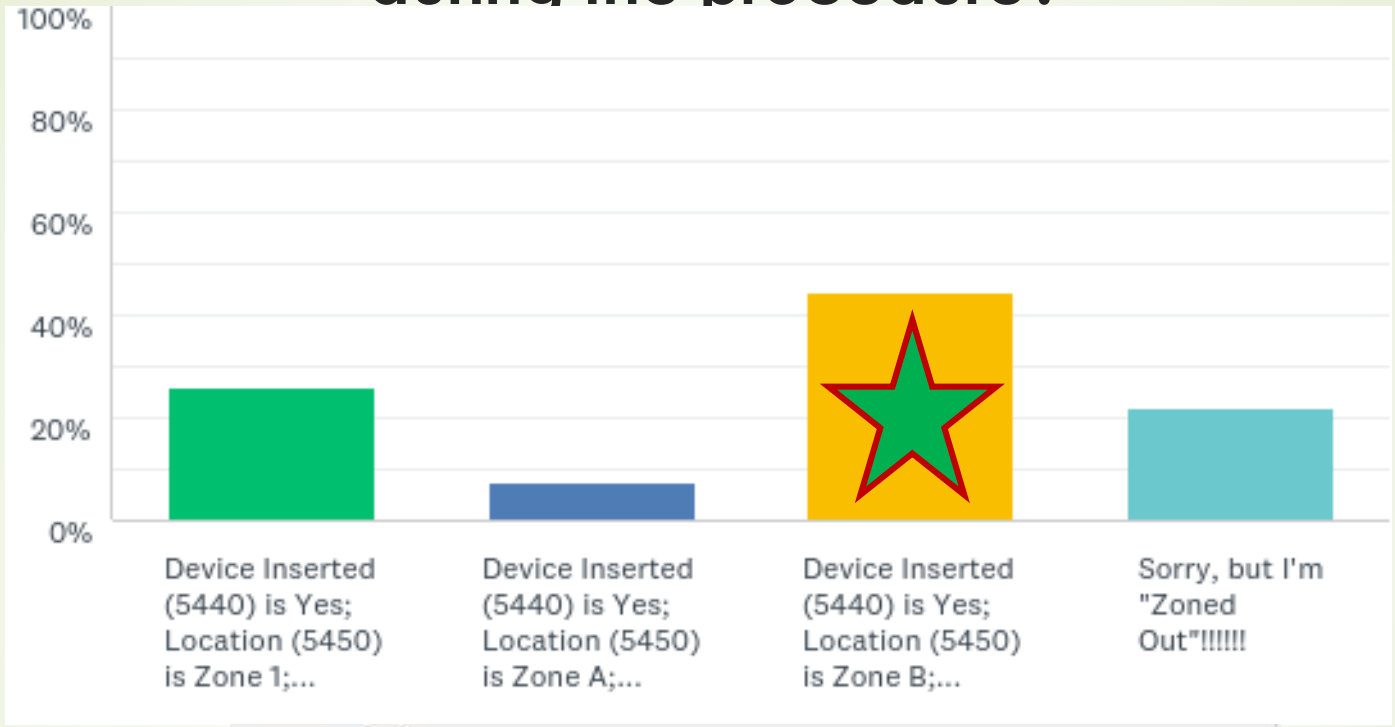
Intent/Clarification:
Zone 0 is the Ascending Aorta and includes letter A-C. Verify exact location with CV Surgeon. Aortic Root (letter A) is below sinotublar junction.

Location :		X. No additional devices inserted (only for locations 2 – 15) A. Below sinotubular junction B. Sinotubular junction to mid ascending C. Mid ascending to distal ascending D. Zone 1 (between innominate and left carotid) E. Zone 2 (between left carotid and left subclavian) F. Zone 3 (first 2 cm. distal to left subclavian) G. Zone 4 (end of zone 3 to mid descending aorta ~ T6) H. Zone 5 (mid descending aorta to celiac) I. Zone 6 (celiac to superior mesenteric) J. Zone 7 (superior mesenteric to renals) K. Zone 8 (renal to infra-renal abdominal aorta) L. Zone 9 (infrarenal abdominal aorta) M. Zone 10 (common iliac) N. Zone 11 (external iliacs)
Delivery Method:	1=Open 2= Endovascular	
Outcome:	1= Maldeployed 2= Deployed and removed 3= Successfully deployed	
Model Number:	Enter device model number	
UDI:	Enter unique device identifier (not serial number)	

Location (Letter)	Delivery Method	Outcome	Model #	UDI
B	**1**	**Leave Blank**		
ADevLoc02 (5475)	ADevDelMeth02 (5480)	ADevOut02 (5485)	ADevModel02 (5490)	ADevUDI02 (5495)

Currently unclear about where an associated valve device will be recorded.

#13: How would you abstract the woven graft implanted during the procedure?



Answer Choices
Device Inserted (5440) is Yes; Location (5450) is Zone 1; Delivery Method (5455) is Open.
Device Inserted (5440) is Yes; Location (5450) is Zone A; Delivery Method (5455) is Open.
Device Inserted (5440) is Yes; Location (5450) is Zone B; Delivery Method (5455) is Open.
Sorry, but I'm "Zoned Out"!!!!!!

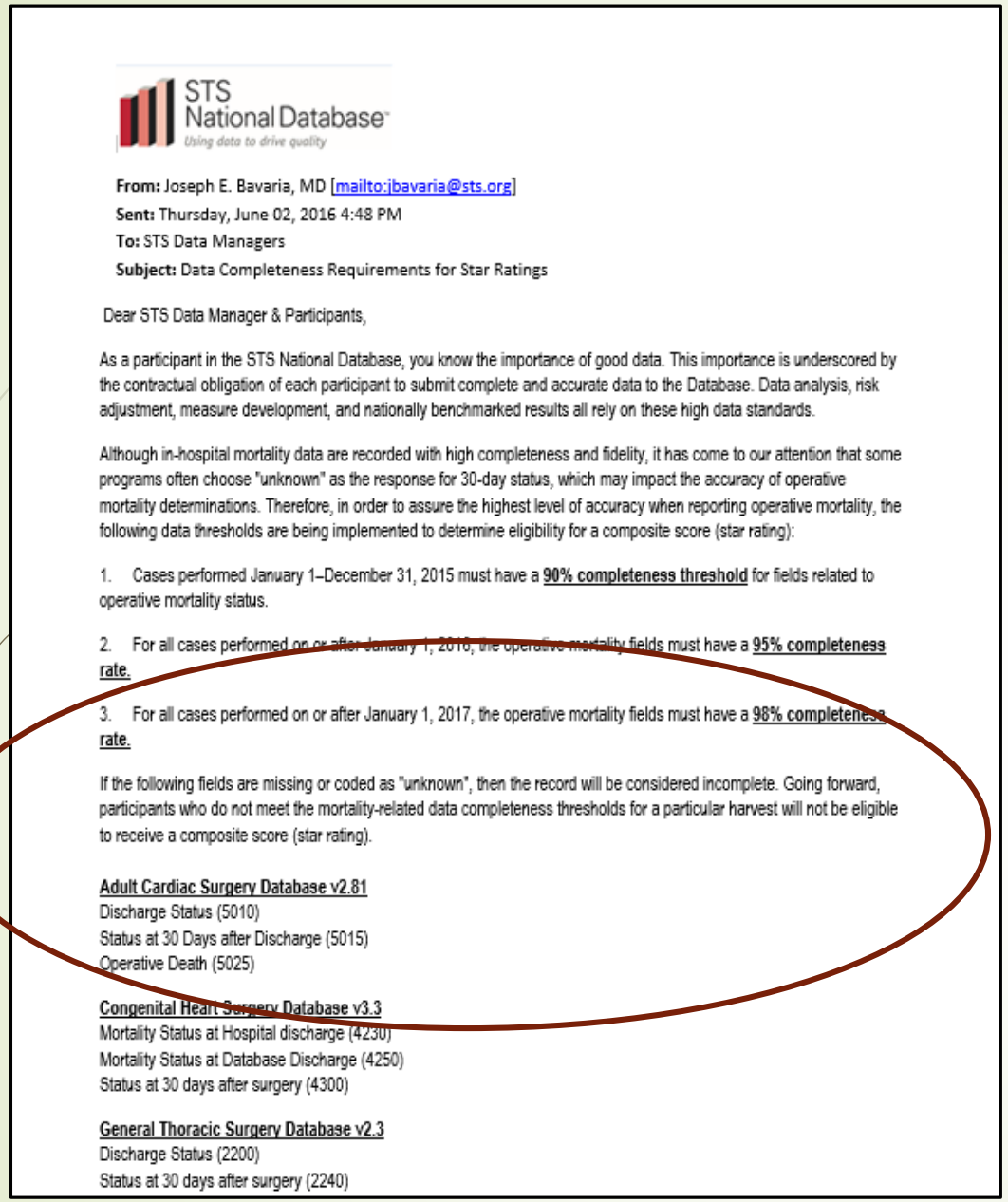
#14: How would you abstract the following Discharge (Section Q) fields?

Answer Choices:

- Date of Last Follow-up (7000) is Discharge Date; Verification of 30-day Status (7002) is Phone call to/from patient or family; Discharge/Mortality Status (7005) is Discharged alive, last known status is alive.
- Date of Last Follow-up (7000) is Mortality Date; Verification of 30-day Status (7002) is Phone call/letter to/from medical provider; Discharge/Mortality Status (7005) is Discharged alive, died after discharge.
- Date of Last Follow-up (7000) is Discharge Date; Verification of 30-day Status (7002) is Phone call/letter to/from medical provider; Discharge/Mortality Status (7005) is Discharged alive, died after discharge.

Points to Consider:

- Date of Last Follow-up
- Verification of 30-day Status
- Discharge/Mortality Status



STS National Database
Using data to drive quality

From: Joseph E. Bavaria, MD [mailto:jbavaria@sts.org]
Sent: Thursday, June 02, 2016 4:48 PM
To: STS Data Managers
Subject: Data Completeness Requirements for Star Ratings

Dear STS Data Manager & Participants,

As a participant in the STS National Database, you know the importance of good data. This importance is underscored by the contractual obligation of each participant to submit complete and accurate data to the Database. Data analysis, risk adjustment, measure development, and nationally benchmarked results all rely on these high data standards.

Although in-hospital mortality data are recorded with high completeness and fidelity, it has come to our attention that some programs often choose "unknown" as the response for 30-day status, which may impact the accuracy of operative mortality determinations. Therefore, in order to assure the highest level of accuracy when reporting operative mortality, the following data thresholds are being implemented to determine eligibility for a composite score (star rating):

1. Cases performed January 1–December 31, 2015 must have a **90% completeness threshold** for fields related to operative mortality status.

2. For all cases performed on or after January 1, 2016, the operative mortality fields must have a **95% completeness rate.**

3. For all cases performed on or after January 1, 2017, the operative mortality fields must have a **98% completeness rate.**

If the following fields are missing or coded as "unknown", then the record will be considered incomplete. Going forward, participants who do not meet the mortality-related data completeness thresholds for a particular harvest will not be eligible to receive a composite score (star rating).

Adult Cardiac Surgery Database v2.81
Discharge Status (5010)
Status at 30 Days after Discharge (5015)
Operative Death (5025)

Congenital Heart Surgery Database v3.3
Mortality Status at Hospital discharge (4230)
Mortality Status at Database Discharge (4250)
Status at 30 days after surgery (4300)

General Thoracic Surgery Database v2.3
Discharge Status (2200)
Status at 30 days after surgery (2240)

January, 2017:

Operative Mortality fields > 98% completeness rate:

- Discharge Status
- Status at 30 days
- Operative Death

< 98% = ineligible to receive Composite Score (star rating)

SEQ. #: 7000
Long Name: Date of Last Follow-Up
Short Name: LFUDate
Definition: Indicate the date on which the last follow-up was made. If patient dies in the hospital, this value will be the same as the date of death. If no follow-up is made after patient is discharged, this value will be the same as the discharge date.

Intent/Clarification:
This is the date that is last documented in the chart or obtained by contacting the physician's office. Required date format: mm/dd/yyyy

SEQ. #: 7001
Long Name: Mort-30d Status
Short Name: Mt30Stat
Definition: Indicate whether the patient was alive or dead at 30 days post-surgery (whether in hospital or not).

Intent/Clarification:

- Alive
- Dead
- Unknown

SEQ. #: 7002
Long Name: Mort-Op Death-Method Of Verification
Short Name: Mt30StatMeth
Definition: Indicate the primary method used to verify the patient's 30-day mortality status.

Intent/Clarification:

- Phone call to patient or family
- Letter from medical provider
- Evidence of life or death in medical record
- Office visit on or after 30 days after the date of surgery.
- Social Security Death Master File/NDI
- Other

SEQ. #: 7005
Long Name: Discharge / Mortality Status
Short Name: DischMortStat
Definition: Indicate the discharge and current vital status of the patient

Intent/Clarification:

- In hospital, alive
- Died in hospital
- Discharged alive, last known status is alive
- Discharged alive, died after discharge

"In hospital, alive" refers to patient's that are in the hospital at the 30 day mark that were never discharged. It is provided so sites do not get marked as missing on the required mortality fields for their composite scores/STAR ratings.

Q. Discharge / Mortality

Date of Last Follow-up: __/__/____ (mm/dd/yyyy)
LFUDate (7000)

Mortality Date

Status at 30 days After Surgery: ☐ Alive ☒ Dead ☐ Unknown
Mt30Stat (7001)

Primary method used to verify 30-day status:
Mt30StatMeth (7002)

- ☐ Phone call to patient or family
- ☒ Letter from medical provider
- ☐ Medical record (evidence of life or death)
- ☐ Office visit >= 30 days after procedure
- ☐ Social Security Death Master File /NDI
- ☐ Other

Discharge/Mortality status:
DischMortStat (7005)

- ☐ In hospital, alive
- ☐ Discharged alive, last known status = alive
- ☐ Died in hospital
- ☒ Discharged alive, died after discharge

#14: How would you abstract the following Discharge (Section Q) fields?

Answer Choices
Date of Last Follow-up (7000) is Discharge Date; Verification of 30-day Status (7002) is Phone call to/from patient or family; Discharge/Mortality Status (7005) is Discharged alive, last known status is alive.
Date of Last Follow-up (7000) is Mortality Date; Verification of 30-day Status (7002) is Phone call/letter to/from medical provider; Discharge/Mortality Status (7005) is Discharged alive, died after discharge.
Date of Last Follow-up (7000) is Discharge Date; Verification of 30-day Status (7002) is Phone call/letter to/from medical provider; Discharge/Mortality Status (7005) is Discharged alive, died after discharge.

#15: Finally, how would you abstract these Mortality (Section Q) fields?

Answer Choices:

- Primary cause of Death (7122) is Cardiac; Operative Death (7124) is No; Discharge Death Location (7125) is Acute Rehabilitation.
- Primary cause of Death (7122) is Cardiac; Operative Death (7124) is Yes; Discharge Death Location (7125) is Acute Rehabilitation.
- Primary cause of Death (7122) is Cardiac; Operative Death (7124) is Yes; Discharge Death Location (7125) is Extended Care Facility.

Points to Consider:

- Primary Cause of Death
- Was this an Operative Death?
- Discharge Death Location

SEQ. #: 7122
Long Name: Mort-Prim Cause
Short Name: MtCause
Definition: Indicate the PRIMARY cause of death, i.e., the first significant abnormal event which ultimately led to death.

Intent/Clarification: If the patient died due to multiple organ system failure, select the system that either was the initiator of the Multisystem Organ Failure (MSOF) or the primary cause of the patient's demise.

- Cardiac
- Neurologic
- Renal
- Vascular
- Infection
- Pulmonary
- Unknown
- Other

SEQ. #: 7124
Long Name: Mort-Op Death
Short Name: MtOpD
Definition: Operative Mortality includes: (1) all deaths, regardless of cause, occurring during the hospitalization in which the operation was performed, even if after 30 days (including patients transferred to other acute care facilities); and (2) all deaths, regardless of cause, occurring after discharge from the hospital, but before the end of the thirtieth postoperative day.

SEQ. #: 7125
Long Name: Post Discharge Death Location
Short Name: PostDisDthLoc
Definition: Indicate the location where the patient died after being discharged from the original hospitalization.

Intent/Clarification:

- **Home** (or, temporarily, at the home of a relative)
- **Extended Care Facility/Transitional Care Unit (TCU)** (Code LTAC as Extended Care/Transitional Care Unit/Rehab. Do not count as part of acute care stay.
- **Hospice**
- **Acute Rehabilitation** (Ultimate plan for patient to return home after a short-stay)
- **Hospital, During Readmission**
- **Other**
- **Unknown**

If Discharge/Mortality Status = "Died in hospital" or "Discharged alive, died after discharge" ↓)

Mortality - Date __ __/__ __/__ __ __ __ (mm/dd/yyyy)

MtDate (7121)

Primary Cause of Death (select only one)

MtCause (7122)

☒ Cardiac ☐ Neurologic ☐ Renal ☐ Vascular ☐ Infection ☐ Pulmonary ☐ Unknown ☐ Other

(If Discharge/Mortality Status = "Died in hospital↓)

In-Hospital death location: ☐ OR During Initial Surgery ☐ OR during reoperation ☐ In Hospital (Other than OR)

InHospDthLoc (7123)

(If Discharge/Mortality Status = "Discharged alive, died after discharge")

Operative Death: ☒ Yes ☐ No

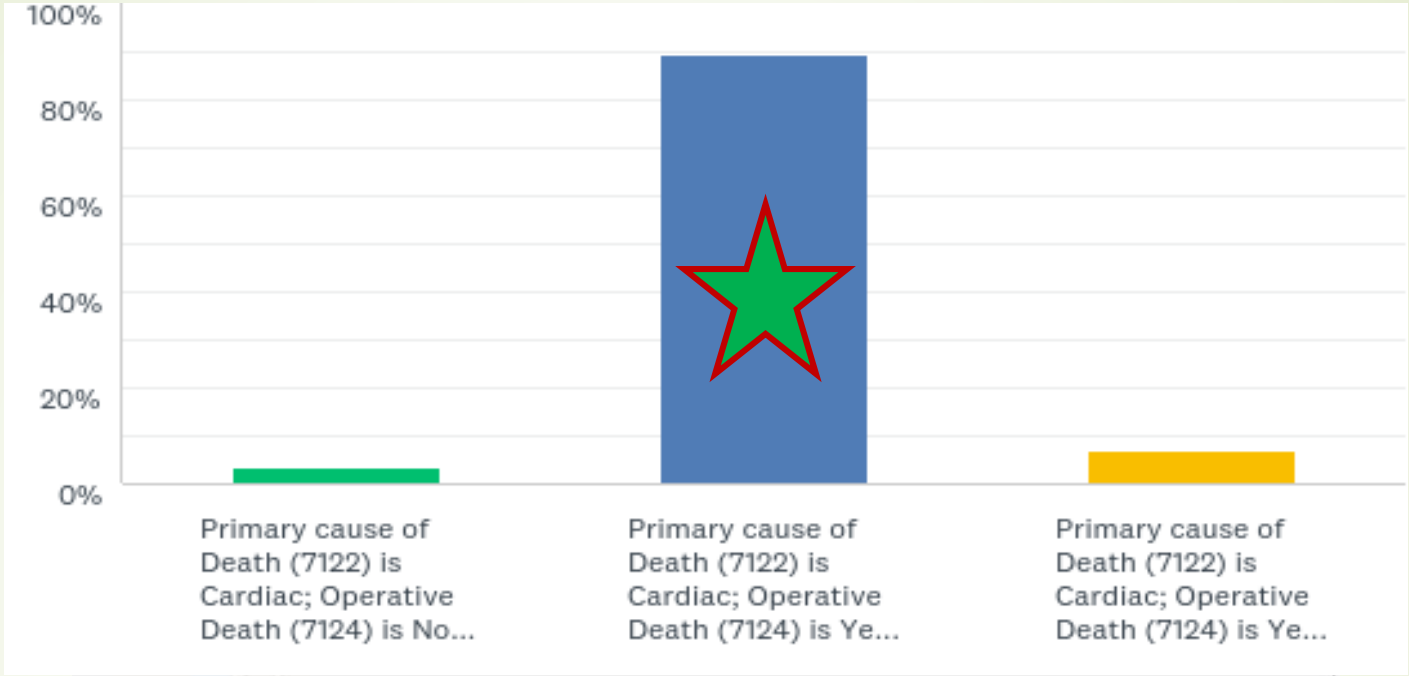
MtOpD (7124)

Post Discharge death location:

PostDisDthLoc (7125)

☐ Home ☐ Extended Care Facility ☐ Hospice ☒ Acute Rehabilitation ☐ Hospital during readmission ☐ Other ☐ Unknown

#15: Finally, how would you abstract these Mortality (Section Q) fields?



Answer Choices
Primary cause of Death (7122) is Cardiac; Operative Death (7124) is No; Discharge Death Location (7125) is Acute Rehabilitation.
Primary cause of Death (7122) is Cardiac; Operative Death (7124) is Yes; Discharge Death Location (7125) is Acute Rehabilitation.
Primary cause of Death (7122) is Cardiac; Operative Death (7124) is Yes; Discharge Death Location (7125) is Extended Care Facility.