STS National Database™

Trusted. Transformed. Real-Time.

Society of Thoracic Surgeons

Congenital Heart Surgery Database Monthly Webinar

July 16, 2024

Agenda

- Welcome and Introduction
- STS Update
- STS Data Manager Education (Chasity Wellnitz and Leslie Wacker, CHSD Consultants)
  - Ascending Aorta Replacement Case Review
- Q&A

STS Updates

- July Training Manual posted

- Spring 24 Harvest (Surgery dates 1/1/2020 – 12/31/2023)
  - Data Analysis complete and IQVIA is working to upload data into the platform
  - UAT – Report QC in progress
  - Report release date TBD – *more information coming soon*!

- Fall 24 Harvest is underway
  - Surgery dates 7/1/2020 – 6/30/2024
  - Harvest close is September 27 @ 11:59pm Eastern

2024 Harvest Schedule

Term	Harvest Submission Window Close	Opt-Out Date	Includes Procedures Performed Through:	Report Posting
Spring 2024	3/22/2024	3/26/2024	12/31/2023	Summer 2024
Fall 2024	9/27/2024	10/1/2024	6/30/2024	Winter 2024

Data Submission Open is continuous for all harvest terms. Data Submission Close occurs at 11:59 p.m. Eastern on the date listed.

JOIN US IN MUSIC CITY!

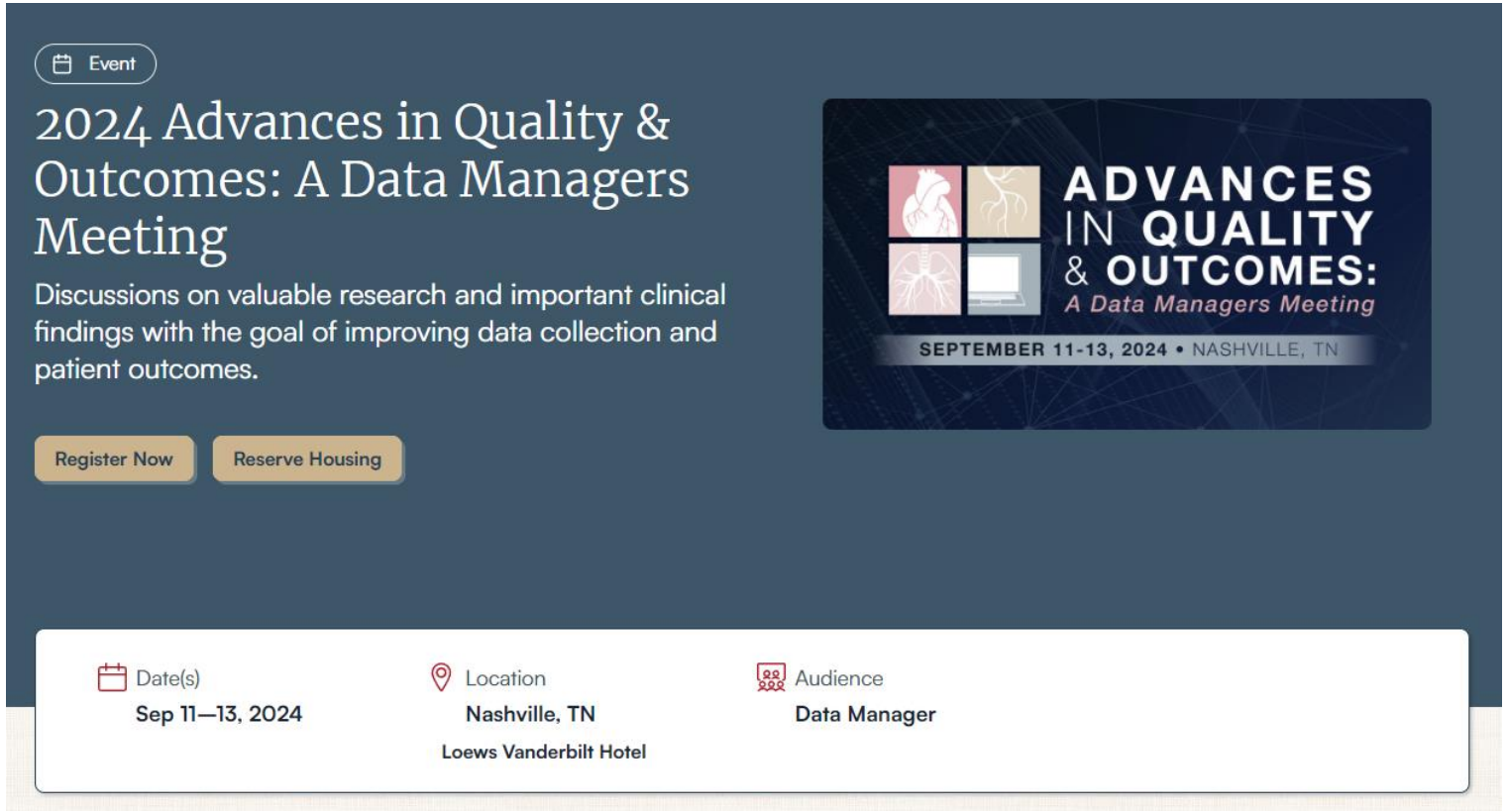
September 11-13 Nashville, TN

Register at sts.org/AQO

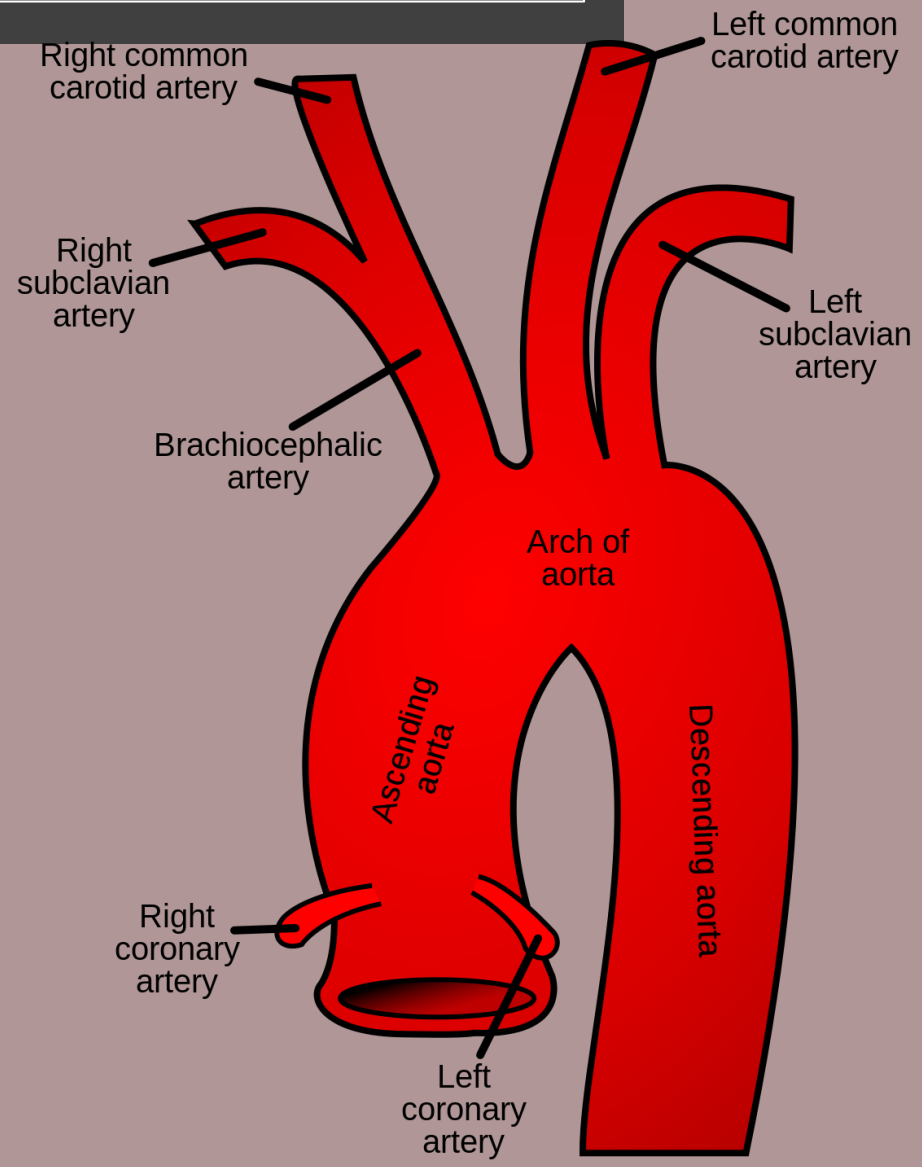
ADVANCES IN QUALITY & OUTCOMES:

A Data Managers Meeting

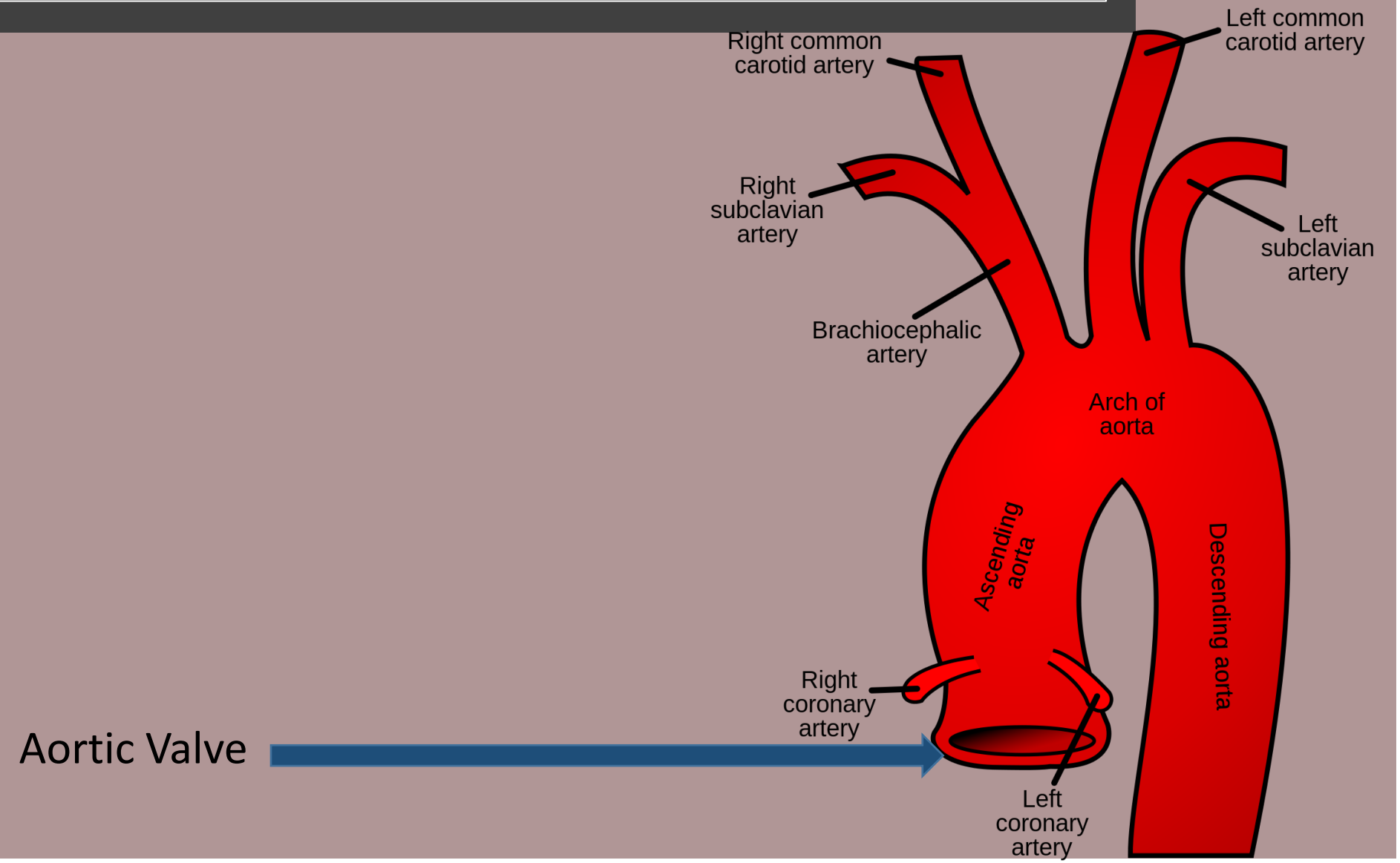
AQO Registration Now Open



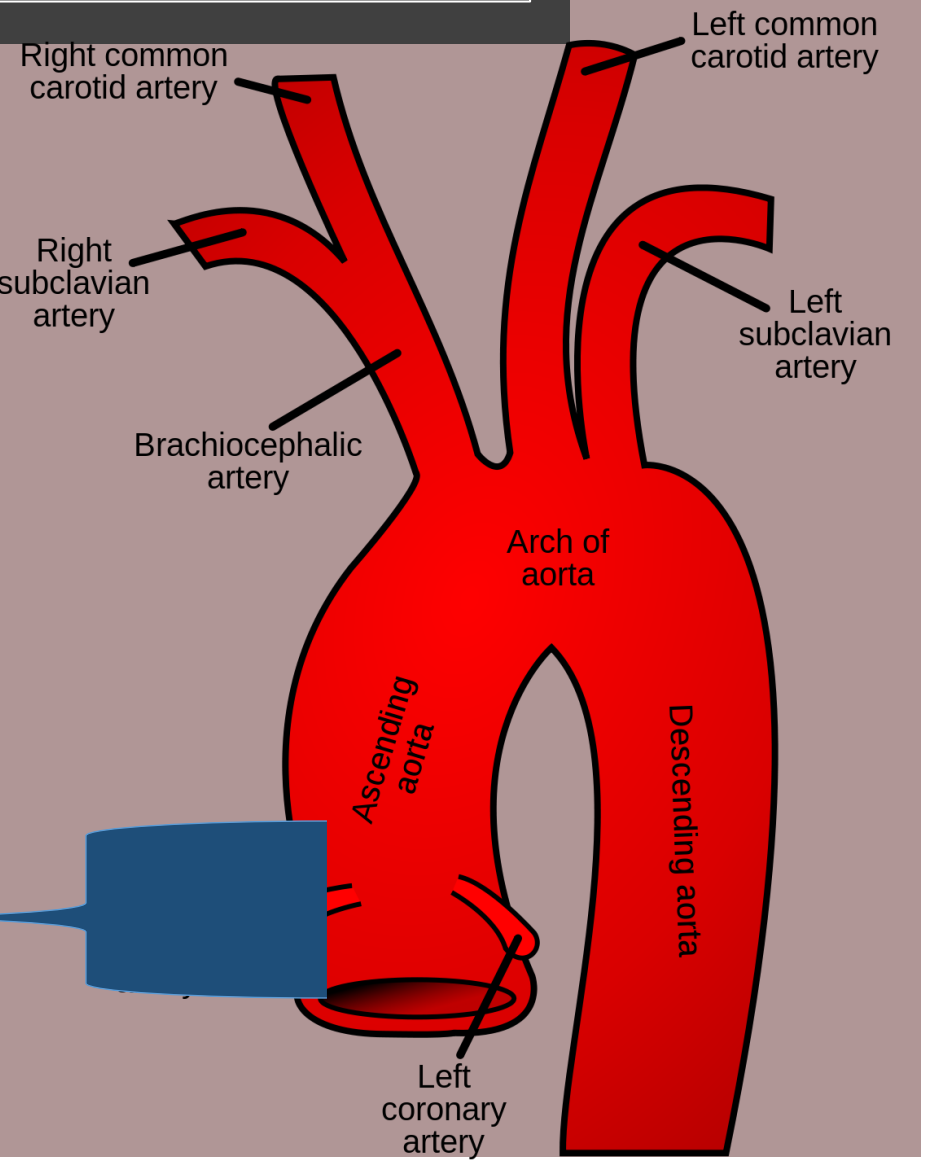
Ascending Aorta procedures



Ascending Aorta procedures

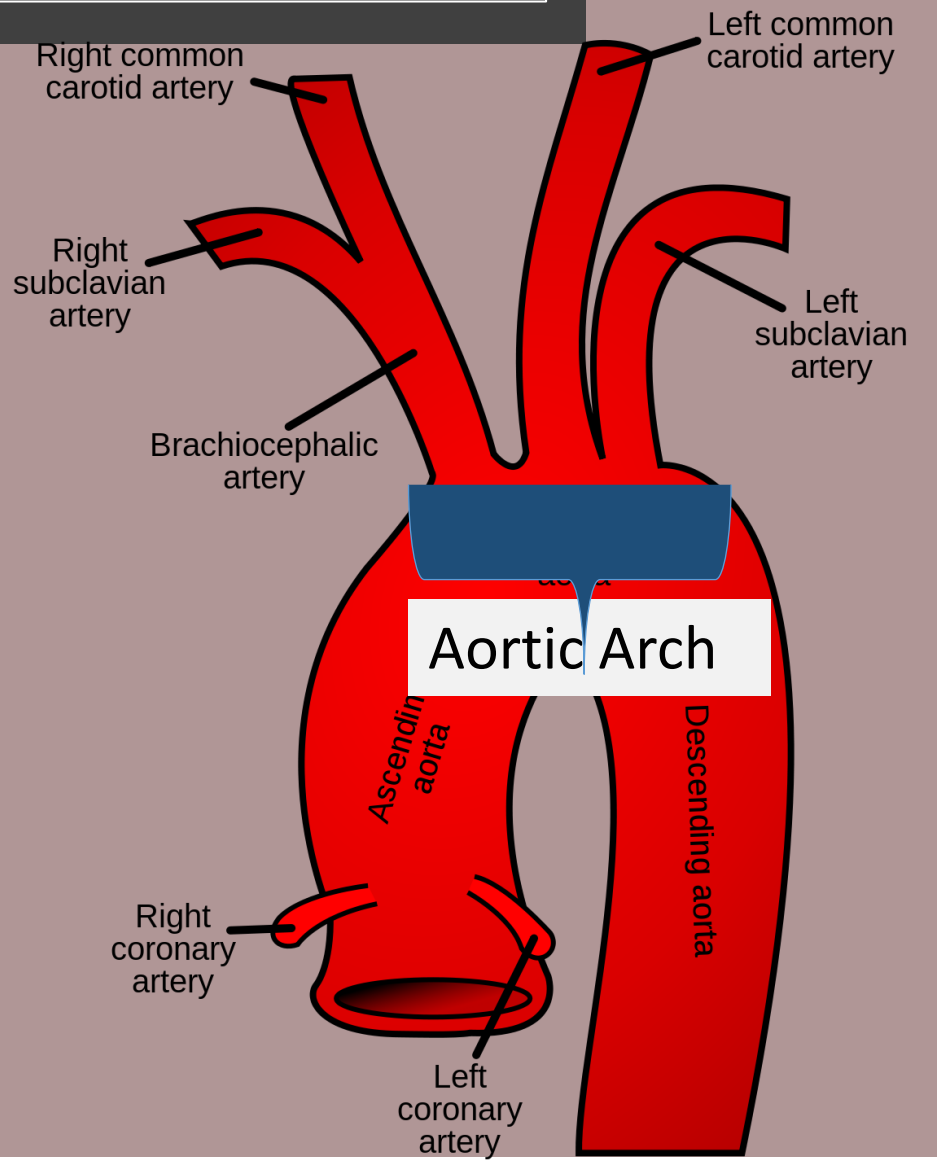


Ascending Aorta procedures



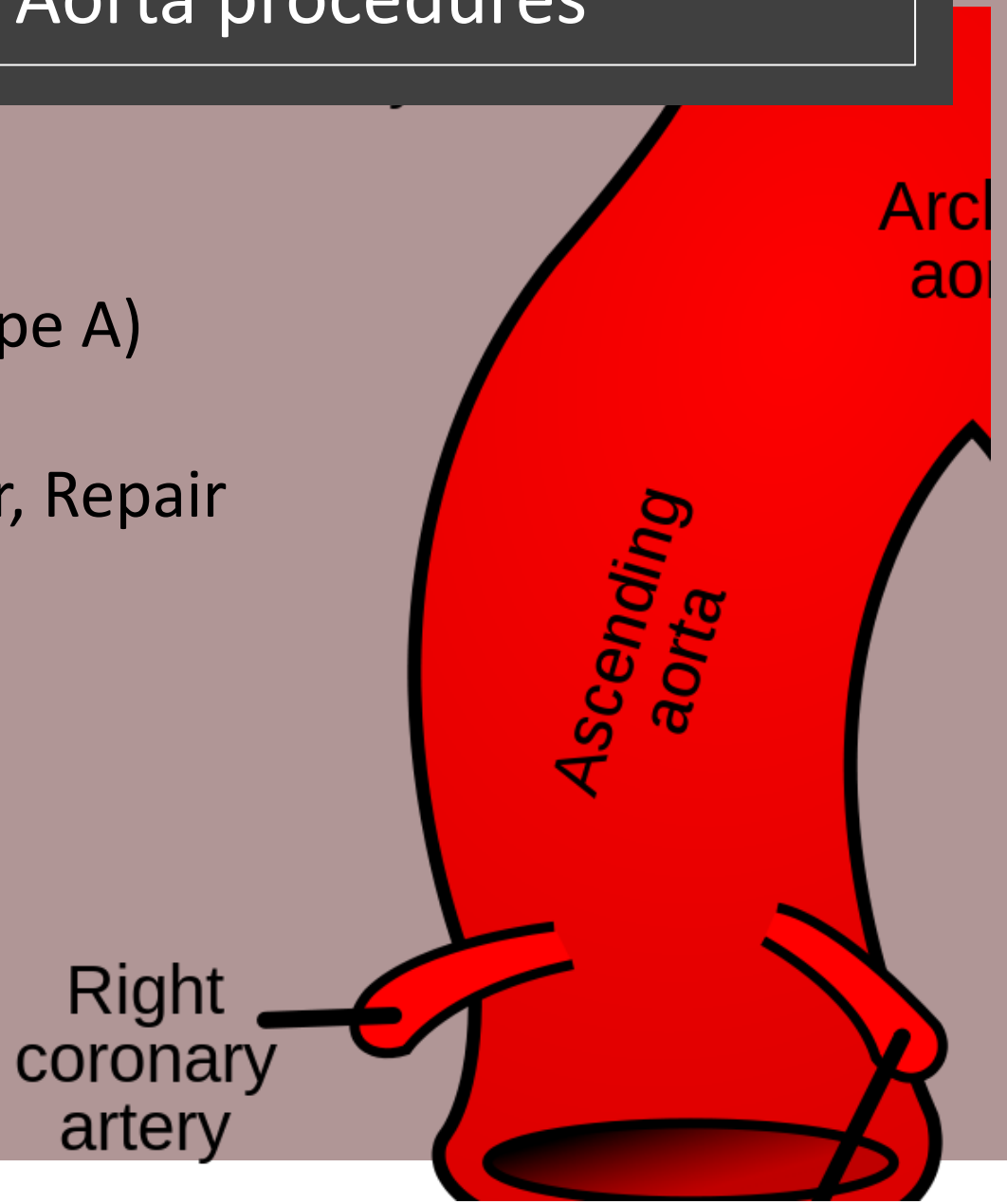
Aortic Root

Ascending Aorta procedures



Ascending Aorta procedures

1. Aortic dissection repair (Type A)
2. Aortic aneurysm repair
3. Aortic stenosis, Supravalvar, Repair
4. Aorta, Other



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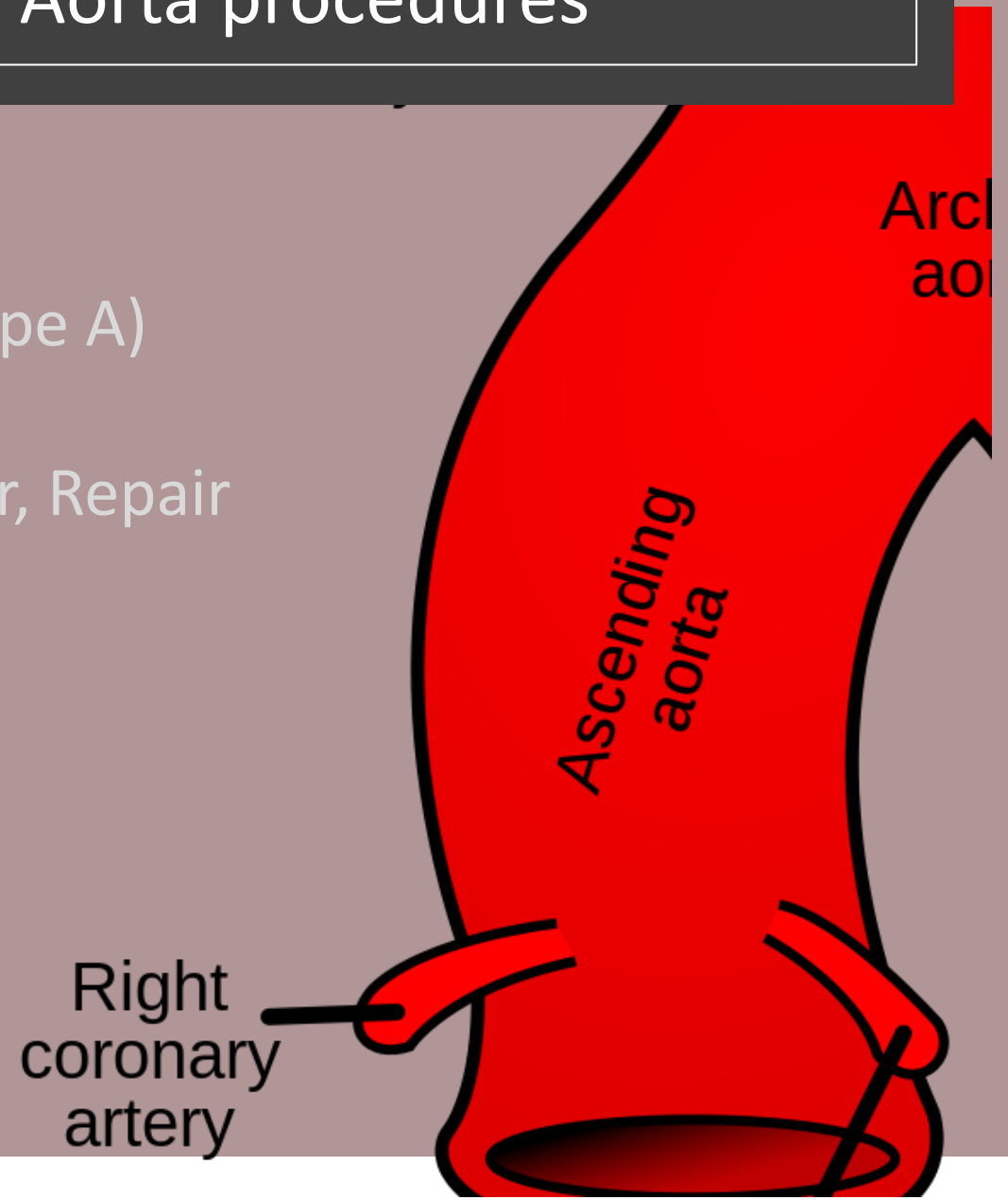

Ascending Aorta – Case #1

13 year old patient with Marfan syndrome presents with aortic root aneurysm and dilated ascending aorta. She is the first member of her family with this condition; gene testing was complete with variants noted in FBN2, FBN1, and FLNA genes of unknown significance. Further review pending.

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What is the patient's diagnosis?

a) Marfan syndrome
b) Aortic stenosis, Supravalvar
c) Aortic aneurysm
d) Aortic root dilation

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What is the patient's diagnosis?

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b) Aortic stenosis, Supravalvar
c) Aortic aneurysm
d) Aortic root dilation

Ascending Aorta – Case #1

What is the patient's diagnosis?

a) Marfan syndrome

b) Aortic stenosis, Supravalvar

c) Aor

d) Aor

1110	Aortic aneurysm (including pseudoaneurysm)	An aneurysm of the aorta is defined as a localized dilation or enlargement of the aorta at any site along its length (from aortic annulus to aortoiliac bifurcation). A true aortic aneurysm involves all layers of the aortic wall. A false aortic aneurysm (pseudoaneurysm) is defined as a dilated segment of the aorta not containing all layers of the aortic wall and may include postoperative or post-procedure false aneurysms at anastomotic sites, traumatic aortic injuries or transections, and infectious processes leading to a contained rupture.

Ascending Aorta – Case #1

What is the patient's diagnosis?

a) Marfan syndrome

b) Aortic stenosis, Supravalvar

c) Aor

d) Aor

1110	Aortic aneurysm (including pseudoaneurysm)	An aneurysm of the aorta is defined as a localized dilation or enlargement of the aorta at any site along its length (from aortic annulus to aortoiliac bifurcation). A true aortic aneurysm involves all layers of the aortic wall. A false aortic aneurysm (pseudoaneurysm) is defined as a dilated segment of the aorta not containing all layers of the aortic wall and may include postoperative or post-procedure false aneurysms at anastomotic sites, traumatic aortic injuries or transections, and infectious processes leading to a contained rupture.

Ascending Aorta – Case #1

What is the patient's diagnosis?

a) Marfan syndrome
b) Aortic stenosis, Supravalvar
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Ascending Aorta – Case #1

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a) Marfan syndrome
b) Aortic stenosis, Supravalvar
c) Aortic aneurysm
d) Aortic root dilation

Ascending Aorta – Case #2

37 year old patient with bicuspid aortic valve, aortic stenosis, aortic insufficiency, and ascending aorta and aortic root aneurysm.

Ascending Aorta – Case #2

37 year old patient with bicuspid aortic valve, aortic stenosis, aortic insufficiency, and ascending aorta and aortic root aneurysm.

Which is **NOT** part of the patient's diagnosis list?

a) Aortic valve, Bicuspid
b) Aortic, neo-aortic or truncal valve insufficiency and stenosis
c) Aortic aneurysm
d) Aortic, neo-aortic or truncal valve, Other

Ascending Aorta – Case #2

37 year old patient with bicuspid aortic valve, aortic stenosis, aortic insufficiency, and ascending aorta and aortic root aneurysm.

Which is **NOT** part of the patient's diagnosis list?

a) **Aortic valve, Bicuspid**
b) Aortic, neo-aortic or truncal valve insufficiency and stenosis
c) Aortic aneurysm
d) Aortic, neo-aortic or truncal valve, Other

Ascending Aorta – Case #2

37 year old patient with bicuspid aortic valve, aortic stenosis, aortic insufficiency, and ascending aorta and aortic root aneurysm.

W

a) Aorti

b) Aortic

c) Aortic

d) Aortic

sis

620	Aortic, neo-aortic or truncal valve, Other	Aortic/neo-aortic/truncal valve pathology not otherwise specified in diagnosis definitions (590) Aortic valve atresia, (600) Aortic, neo-aortic or truncal valve insufficiency, or (610) Aortic, neo-aortic or truncal valve insufficiency and stenosis. Coding Notes: See General Information Valve Related Diagnosis for more information.

Ascending Aorta – Case #2

37 year old patient with bicuspid aortic valve, aortic stenosis, aortic insufficiency, and ascending aorta and aortic root aneurysm.

Patient undergoes a Ross procedure with reinforced autograft and an ascending aorta replacement.

Ascending Aorta – Case #2

37 year old patient with bicuspid aortic valve, aortic stenosis, aortic insufficiency, and ascending aorta and aortic root aneurysm.

Patient undergoes a Ross procedure with reinforced autograft and an ascending aorta replacement.

Which procedures should be listed in the procedure list?

a) Ross
b) Aortic stenosis repair, Supravalvar
c) Aortic aneurysm repair
d) A) and C)

Ascending Aorta – Case #2

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Patient undergoes a Ross procedure with reinforced autograft and an ascending aorta replacement.

Which procedures should be listed in the procedure list?

a) Ross
b) Aortic stenosis repair, Supravalvar
c) Aortic aneurysm repair
d) A) and C)

Ascending Aorta – Case #2

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a) Ross
b) Aortic st
c) Aortic ar
d) A) and C

740	Ross procedure	Replacement of the aortic valve with a pulmonary autograft and replacement of the pulmonary valve with a homograft conduit. Coding Notes: Do not list the pulmonary homograft conduit placement as a separate procedure. The conduit related details can be included in the valve section of the database. In the event a Ross procedure is completed in a patient ≥6575 days (≥18 years), do not list the associated root replacement as a separate procedure. The root replacement information can be included in the Aorta Procedure section; code field Aorta Procedure Performed (SeqNo 1765) as Yes and within the aorta procedure section, code field VS-Aortic Root Procedure (SeqNo 3900) as Yes (update Nov-23).

Ascending Aorta – Case #2

37 year ol
insuffi

Patient unc

Whic

a) Ross
b) Aortic st
c) Aortic ar
d) A) and C

740	Ross procedure	Replacement of the aortic valve with a pulmonary autograft and replacement of the pulmonary valve with a homograft conduit. Coding Notes: Do not list the pulmonary homograft conduit placement as a separate procedure. The conduit
1380	Aortic aneurysm repair	Repair of an aortic aneurysm by any technique.

In the event a Ross procedure is completed in a patient ≥6575 days (≥18 years), do not list the associated root replacement as a separate procedure. The root replacement information can be included in the Aorta Procedure section; code field Aorta Procedure Performed (SeqNo 1765) as Yes and within the aorta procedure section, code field VS-Aortic Root Procedure (SeqNo 3900) as Yes (update Nov-23).

Ascending Aorta – Case #2

37 year old patient with bicuspid aortic valve, aortic stenosis, aortic insufficiency, and ascending aorta and aortic root aneurysm.

Patient undergoes a Ross procedure with reinforced autograft and an ascending aorta replacement.

Ascending Aorta – Case #2

DIAGNOSIS

Ascending Aorta – Case #2 – adult valve diagnosis

		(CANNOT BE FUNDAMENTAL)	
Aortic/Neo-aortic/Truncal Valve			
(if DiagnosisMulti contains (600, 610, OR 620) AND =>18 →)	Aortic/Neo-aortic/Truncal Valve Insufficiency: ++☐None/Trivial/Trace ☐ Mild ☐ Moderate ☐ Severe ☐ Not Documented VDInsufA (1080)		
(if DiagnosisMulti contains (550, 2500, 2510, 2520, 560, 570, 610 OR 620) AND =>18 →)	Aortic/Neo-aortic/Truncal Valve Stenosis: ☐ None ☐ Mild ☐ Moderate ☐ Severe ☐ Not Documented AVStenosis (1085)		
	Hemodynamic/Echo Data Available: ☐ Yes ☐ No AoHemoDatAvail (1090)		
	(If Yes →)	Aortic/Neo-aortic/Truncal Valve Area: _____ cm^2 VDAoVA (1095)	
		Mean Gradient: _____ mmHg VDGradA (1100)	
		☐Aortic/Neo-Aortic/Truncal Jet Velocity (V_{max}): _____ m/s VDVMax (1105)	
(if DiagnosisMulti contains (600, 610, 620, 550, 2500, 2510, 2520, 560, OR 570) AND =>18 →)	Aortic/Neo-aortic/Truncal Valve Disease: ☐ Yes ☐ No VDAort (1110)		

(If Yes →)	Aortic/Neo-aortic/Truncal Valve Disease Etiology: ++ *Choose PRIMARY Etiology (one) ↓* VDAoPrimEt (1115)		
☐	Bicuspid valve disease	☐	Primary Aortic Disease, Atherosclerotic Aneurysm
☐	Unicuspid valve disease	☐	Primary Aortic Disease, Ehlers-Danlos Syndrome
☐	Quadricuspid valve disease	☐	Primary Aortic Disease, Hypertensive Aneurysm
☐	Congenital (other than Bicuspid, Unicuspid, or Quadricuspid)	☐	Primary Aortic Disease, Idiopathic Root Dilation
☐	Degenerative- Calcified	☐	Primary Aortic Disease, Inflammatory
☐	Degenerative- Leaflet prolapse with or without annular dilation	☐	Primary Aortic Disease, Loeys-Dietz Syndrome
☐	Degenerative- Pure annular dilation without leaflet prolapse	☐	Primary Aortic Disease, Marfan Syndrome
☐	Degenerative- Commissural rupture	☐	Primary Aortic Disease, Other Connective tissue disorder

Ascending Aorta – Case #2 – adult valve diagnosis

Aortic/Neo-aortic/Truncal Valve

(if DiagnosisMulti contains (600, 610, OR 620) AND =>18 →)

Aortic/Neo-aortic/Truncal Valve Insufficiency: ☐None/Trivial/Trace ☐ Mild ☐ Moderate ☐ Severe ☐ Not Documented

AVInsufA (1080)

Aortic/Neo-aortic/Truncal Valve Stenosis: ☐ None ☐ Mild ☐ Moderate ☐ Severe ☐ Not Documented

AVStenosis (1085)

Hemodynamic/Echo Data Available: ☐ Yes ☐ No

AoHemoDatAvail (1090)

(if DiagnosisMulti contains (550, 2500, 2510, 2520, 560, 570, 610 OR 620) AND =>18 →)

(If Yes →)

Aortic/Neo-aortic/Truncal Valve Area: _____ cm^2

VDAoVA (1095)

Mean Gradient: _____ mmHg

VDGradA (1100)

☐Aortic/Neo-Aortic/Truncal Jet Velocity (V_{max}): _____ m/s

VDVMax (1105)

(if DiagnosisMulti contains (600, 610, 620, 550, 2500, 2510, 2520,

Aortic/Neo-aortic/Truncal Valve Disease: ☐ Yes ☐ No

VDAort (1110)

PRIMARY Etiology (one) ↓

☐ Primary Aortic Disease, Atherosclerotic Aneurysm

☐ Primary Aortic Disease, Ehlers-Danlos

☐ Unicuspid valve disease

☐ Degenerative- Commissural rupture

☐ disorder

```
Aortic Val/Asc Aor Doppler:
Peak velocity across valve: 3.59 m/s     Peak grad.     52 mmHg Mean grad. 27 mmHg
Pressure recovery:          10 mmHg   Pred. peak-peak: 42 mmHg
Aortic Valve Area (VTI)     0.93 cm?
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Semilunar Valves:
There is a normal appearing and normal size pulmonary valve. There is no pulmonary valve stenosis. There is trivial (normal finding) pulmonary valve
regurgitation.
There is moderate to severe aortic valve stenosis. The peak instantaneous gradient across the aortic valve is 52 mmHg. There is mild aortic valve
regurgitation. There is no aortic sinus dilation. The aortic valve is likely bicommissural and is heavily
thickened (likely calcified) with limited excursion. Reported annulus dimension may be an underestimate (due to echobright thickening of the leaflets at
the annulus). Aortic valve gradient may underestimate degree of stenosis (calculated valve area 0.93
cm2).
```

Ascending Aorta – Case #2– adult valve diagnosis

(CANNOT BE FUNDAMENTAL)

Aortic/Neo-aortic/Truncal Valve

(if DiagnosisMulti contains (600, 610, OR 620) AND =>18 →)

Aortic/Neo-aortic/Truncal Valve Insufficiency: ++ ☐None/Trivial/Trace ☐ Mild ☐ Moderate ☐ Severe ☐ Not Documented
VDInsufA (1080)

Aortic/Neo-aortic/Truncal Valve Stenosis: ☐ None ☐ Mild ☐ Moderate ☐ Severe ☐ Not Documented
AVStenosis (1085)

Hemodynamic/Echo Data Available: ☐ Yes ☐ No
AoHemoDatAvail (1090)

(if DiagnosisMulti contains (550, 2500, 2510, 2520, 560, 570, 610 OR 620) AND =>18 →)

(If Yes →)

Aortic/Neo-aortic/Truncal Valve Area: 0.93 cm^2
VDAoVA (1095)

Mean Gradient: 27.00 mmHg
VDGradA (1100)

☐Aortic/Neo-Aortic/Truncal Jet Velocity (V_{max}): 3.59 m/s
VD[illegible]Max (1105)

(if DiagnosisMulti contains (600, 610, 620, 550, 2500, 2510, 2520, 560, OR 570) AND =>18 →)

Aortic/Neo-aortic/Truncal Valve Disease: ☐ Yes ☐ No
VDAort (1110)

(If Yes →)

Aortic/Neo-aortic/Truncal Valve Disease Etiology: ++ *Choose PRIMARY Etiology (one)* ↓
VDAoPrimEt (1115)

☐	Bicuspid valve disease	☐	Primary Aortic Disease, Atherosclerotic Aneurysm
☐	Unicuspid valve disease	☐	Primary Aortic Disease, Ehlers-Danlos Syndrome
☐	Quadricuspid valve disease	☐	Primary Aortic Disease, Hypertensive Aneurysm
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☐	Degenerative- Calcified	☐	Primary Aortic Disease, Inflammatory
☐	Degenerative- Leaflet prolapse with or without annular dilation	☐	Primary Aortic Disease, Loeys-Dietz Syndrome
☐	Degenerative- Pure annular dilation without leaflet prolapse	☐	Primary Aortic Disease, Marfan Syndrome
☐	Degenerative- Commissural rupture	☐	Primary Aortic Disease, Other Connective tissue disorder

Ascending Aorta – Case #2

PROCEDURE

☐ VAD without CPB			☐ Other		
	(If Operation Type contains 'CPB Cardiovascular' OR 'No CPB Cardiovascular') AND =>18 →)	Coronary Artery Bypass Procedure Performed: OpCAB18 (1760)	☐ Yes, Planned ☐ Yes, Unplanned due to surgical complication ☐ Yes, Unplanned due to unsuspected disease or anatomy ☐ No *(If Yes, complete section L2)*		
		Aorta Procedure Performed: AortProc (1765)	☐ Yes, Planned ☐ Yes, Unplanned due to surgical complication ☐ Yes, Unplanned due to unsuspected disease or anatomy ☐ ☐No *(If Yes, complete section R)*		
		Valve Procedure Performed: OpValve18 (1770)	☐ Yes ☐ No		
		(If Yes →)	Was a valve explanted: ☐ Yes ☐ No ValExp (1775) *(If Yes, complete section M)*		
			Aortic/Neo-Aortic/Truncal Valve Procedure Performed: VSAV (1780)	☐ Yes, planned ☐ Yes, unplanned due to surgical complication ☐ Yes, unplanned due to unsuspected disease or anatomy ☐ No	
				(If Yes →)	Was a procedure performed on the Aorta? ☐ Yes ☐ No *(If 'Yes' complete R; If 'No' complete M3)* AVAortaProcPerf (1785)
			Mitral/Common AV/Systemic AV Valve Procedure Performed: VSMV (1790)	☐ Yes, planned ☐ Yes, unplanned due to surgical complication ☐ Yes, unplanned due to unsuspected disease or anatomy ☐ No *(If Yes complete M4)*	
			Tricuspid/Non-Systemic AV Valve Procedure Performed: VSTV (1795)	☐ Yes, planned ☐ Yes, unplanned due to surgical complication ☐ Yes, unplanned due to unsuspected disease or anatomy ☐ No *(If Yes complete M5)*	
			Pulmonary/Neo-Pulmonary Valve Procedure Performed: VSPV (1800)	☐ Yes, planned ☐ Yes, unplanned due to surgical complication ☐ Yes, unplanned due to unsuspected disease or anatomy ☐ No *(If Yes complete M6)*	

	☐ VAD without CPB			
	(If Operation … Cardiovascular … Cardiovascular …	Coronary Art… Byp…		omy y
				☐ Yes, unplanned due to surgical complication ☐ Yes, unplanned due to unsuspected disease or anatomy ☐ No
			(If Yes →)	Was a procedure performed on the Aorta? ☐ Yes ☐ No *(If 'Yes' complete R; If 'No' complete M3)* AVAortaProcPerf (1785)
			Mitral/Common AV/Systemic AV Valve Procedure Performed: VSMV (1790)	☐ Yes, planned ☐ Yes, unplanned due to surgical complication ☐ Yes, unplanned due to unsuspected disease or anatomy ☐ No *(If Yes complete M4)*
			Tricuspid/Non-Systemic AV Valve Procedure Performed: VSTV (1795)	☐ Yes, planned ☐ Yes, unplanned due to surgical complication ☐ Yes, unplanned due to unsuspected disease or anatomy ☐ No *(If Yes complete M5)*
			Pulmonary/Neo-Pulmonary Valve Procedure Performed: VSPV (1800)	☐ Yes, planned ☐ Yes, unplanned due to surgical complication ☐ Yes, unplanned due to unsuspected disease or anatomy ☐ No *(If Yes complete M6)*

- All adult Ross procedures are collected as:
  Aorta Procedure, Aortic Valve Procedure, and Pulmonary Valve Procedure

- Do not add a separate Pulm Valve procedure code

Ascending Aorta – Case #2 – adult valve procedure(s)

	Other Cardiac Procedures,except Afib OpOCard (1805)	☐ Yes, planned ☐ Yes, unplanned due to surgical complication ☐ Yes, unplanned due to unsuspected disease or anatomy ☑ No *(If Yes, Complete Section N)*
	Other Non-Cardiac OpONCard (1810)	☐ Yes ☑ No *(If Yes, Complete Section O)*
	A-fib procedure: AFibProc (1815)	☐ Yes ☑ No *(If Yes, Complete Section P)*

Ascending Aorta – Case #2 – adult valve procedure(s)

M6. Pulmonary or Neo-Pulmonary Valve Procedure

(If Pulmonary or Neo-Pulmonary Valve Procedure Performed = Yes ⇩)

Procedure Performed:
OpPulm (3150)

- ☐ Repair/Leaflet Reconstruction
- ☐ Annus or Thrombus removal
- ☑ Replacement *(If Replacement→)* Transcatheter Replacement: ☐ Yes ☑ No
  VSTCVPu (3155)
- ☐ Valvectomy

Implant: ☑ Yes ☐ No *(If Yes ⇩)*
PulmonicImplant (3165)

Implant Type:
VSPuTypeImp (3170)
☐ Surgeon Fashioned ☑ Commercially Supplied

(If Surgeon Fashioned →)
Material: ☐ PTFE (Gore-Tex) ☐ Pericardium ☐ Other
VSPuImpMat (3175)

(If Commercially Supplied →)
Device Type:
PulmonicImplantTy (3180)

- ☐ Mechanical Valve
- ☐ Annuloplasty Device
- ☐ Bioprosthetic Valve
- ☑ Homograft
- ☐ Transcatheter Valve
- ☐ Other
- ☐ Transcatheter device implanted open heart

Implant Model Number: _____
VSPuIm (3185)

Size: _____
VSPuImSz (3190)

Unique Device Identifier (UDI): _____
VSPuImUDI (3195)

Ascending Aorta – Case #2 – adult valve procedure(s)

M6. Pulmonary or Neo-Pulmonary Valve Procedure

(If Pulmonary or Neo-Pulmonary Valve Procedure Performed = Yes ⇩)

Procedure Performed:
OpPulm (3150)

- ☐ Repair/Leaflet Reconstruction
- ☐ Pannus or Thrombus removal
- ☑ Replacement *(If Replacement→)* Transcatheter Replacement: ☐ Yes ☑ No
  VSTCVPu (3155)
- ☐ Valvectomy

Implant: ☑ Yes ☐ No *(If Yes ⇩)*
PulmonicImplant (3165)

Implant Type:
VSPuTypeImp (3170)
☐ Surgeon Fashioned ☑ Commercially Supplied

(If Surgeon Fashioned →) Material: ☐ PTFE (Gore-Tex) ☐ Pericardium ☐ Other
VSPuImpMat (3175)

(If Commercially Supplied →) Device Type:
PulmonicImplantTy (3180)

- ☐ Mechanical Valve
- ☐ Bioprosthetic Valve
- ☐ Transcatheter Valve
- ☐ Annuloplasty Device
- ☑ Homograft
- ☐ Other

Implants/Explants

Implants

VALVE, PULMONARY ALLOGRAFT W/ CONDUIT >27MM FROZEN - S12695833

Inventory Item: VALVE, PULMONARY ALLOGRAFT W/ CONDUIT >27MM FROZEN
Implant name: VALVE, PULMONARY ALLOGRAFT W/ CONDUIT >27MM FROZEN - S12695833
Manufacturer: CRYOLIFE M
Action: Implanted
Device Identifier:
Lot no.: 12695833

Serial no.: 12695833
Laterality: Midline
Date of Manufacture:
Number Used: 1
Device Identifier Type:
Exp. Date: 11/7/2028

Model/Cat no.: SGPV00XL
Area: Pulmonary Valve
Supplier: CRYOLIFE CARDIOVASCULAR INC

Ascending Aorta – Case #2 – adult valve procedure(s)

R. Aorta Procedures
(If AortProc = Yes ✓)

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

FamHistAorta (3385)

Patient's genetic history: PatGenHist (3390)
☐ Marfan ☐ Ehlers-Danlos ☐ Loeys-Dietz ☐ Non-Specific familial thoracic aortic syndrome
☑ Aortic Valve Morphology ☐ Turner syndrome ☐ Other- ☐ Unknown ☐ None

Aortic Valve Morphology	Variant aortic valve morphology including bicuspid, unicuspid, and quadricuspid valves.

Prior aortic intervention: PriorAorta (3395)

Location				
	Select all that apply	*Select all that apply*	*Select all that apply*	*Select all that apply*
Root (Zone 0 –A)	☐ Yes ☐ No PriorRepRoot (3400)	☐ Open ☐ Endovascular ☐ Hybrid PriorRepTyRoot (3405)	☐ Yes ☐ No PriorFailRoot (3410)	☐ Yes ☐ No PriorProgRoot (3415)
Ascending (Zone 0 – B&C)	☐ Yes ☐ No PriorRepAsc (3420)	☐ Open ☐ Endovascular ☐ Hybrid PriorRepTyAsc (3425)	☐ Yes ☐ No PriorFailAsc (3430)	☐ Yes ☐ No PriorProgAsc (3435)
Arch (Zones 1,2,3)	☐ Yes ☐ No PriorRepArch (3440)	☐ Open ☐ Endovascular ☐ Hybrid PriorRepTyArch (3445)	☐ Yes ☐ No PriorFailArch (3450)	☐ Yes ☐ No PriorProgArch (3455)
Descending (Zones 4,5)	☐ Yes ☐ No PriorRepDesc (3460)	☐ Open ☐ Endovascular ☐ Hybrid PriorRepTyDesc (3465)	☐ Yes ☐ No PriorFailDesc (3470)	☐ Yes ☐ No PriorProgDesc (3475)
Suprarenal abdominal (Zones 6,7)	☐ Yes ☐ No PriorRepSupraAb (3480)	☐ Open ☐ Endovascular ☐ Hybrid PriorRepTySupraAb (3485)	☐ Yes ☐ No PriorFailSupraAb (3490)	☐ Yes ☐ No PriorProgSupraAb (3495)
Infrarenal abdominal (Zone 8,9,10,11)	☐ Yes ☐ No PriorRepInfraAb (3500)	☐ Open ☐ Endovascular ☐ Hybrid PriorRepTyInfraAb (3505)	☐ Yes ☐ No PriorFailInfraAb (3510)	☐ Yes ☐ No PriorProgInfraAb (3515)

Current Procedure with Endoleak involvement: ☐ Yes ☐ No
Endoleak (3520)

Ascending Aorta – Case #2 – adult valve procedure(s)

R. Aorta Procedures
(If AortProc = Yes ↓)

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

FamHistAorta (3385)

Patient's genetic history: ☐ Marfan ☐ Ehlers-Danlos ☐ Loeys-Dietz ☐ Non-Specific familial thoracic aortic syndrome ☑ Aortic Valve Morphology ☐ Turner syndrome ☐ Other- ☐ Unknown ☐ None
PatGenHist (3390)

Prior aortic intervention: ☐ Yes ☑ No ☐ Unknown *(If Yes ↓)*
PriorAorta (3395)

Location	Previous repair location(s)	Repair Type	Repair failure *(If Yes ↓)*	Disease progression *(If Yes ↓)*
	Select all that apply	*Select all that apply*	*Select all that apply*	*Select all that apply*
Root (Zone 0 –A)	☐ Yes ☐ No PriorRepRoot (3400)	☐ Open ☐ Endovascular ☐ Hybrid PriorRepTyRoot (3405)	☐ Yes ☐ No PriorFailRoot (3410)	☐ Yes ☐ No PriorProgRoot (3415)
Ascending (Zone 0 – B&C)	☐ Yes ☐ No PriorRepAsc (3420)	☐ Open ☐ Endovascular ☐ Hybrid PriorRepTyAsc (3425)	☐ Yes ☐ No PriorFailAsc (3430)	☐ Yes ☐ No PriorProgAsc (3435)
Arch (Zones 1,2,3)	☐ Yes ☐ No PriorRepArch (3440)	☐ Open ☐ Endovascular ☐ Hybrid PriorRepTyArch (3445)	☐ Yes ☐ No PriorFailArch (3450)	☐ Yes ☐ No PriorProgArch (3455)
Descending (Zones 4,5)	☐ Yes ☐ No PriorRepDesc (3460)	☐ Open ☐ Endovascular ☐ Hybrid PriorRepTyDesc (3465)	☐ Yes ☐ No PriorFailDesc (3470)	☐ Yes ☐ No PriorProgDesc (3475)
Suprarenal abdominal (Zones 6,7)	☐ Yes ☐ No PriorRepSupraAb (3480)	☐ Open ☐ Endovascular ☐ Hybrid PriorRepTySupraAb (3485)	☐ Yes ☐ No PriorFailSupraAb (3490)	☐ Yes ☐ No PriorProgSupraAb (3495)
Infrarenal abdominal (Zone 8,9,10,11)	☐ Yes ☐ No PriorRepInfraAb (3500)	☐ Open ☐ Endovascular ☐ Hybrid PriorRepTyInfraAb (3505)	☐ Yes ☐ No PriorFailInfraAb (3510)	☐ Yes ☐ No PriorProgInfraAb (3515)

Current Procedure with Endoleak involvement: ☐ Yes ☑ No
Endoleak (3520)

Ascending Aorta – Case #2 – adult valve procedure(s)

Current Procedure with Aorta Infection: Infection (3565)	☐ Yes ☑ No
(If Yes →)	Aorta Infection Type: InfecType (3570) ☐ Graft infection ☐ Valvular endocarditis ☐ Nonvalvular endocarditis ☐ Native aorta ☐Multiple infection types
Current Procedure with Trauma: Trauma (3575)	☐ Yes ☑ No
(If Yes, select all that apply →) AorticTraumaLoc (3580)	☐ Root ☐ Ascending ☐ Arch ☐ Descending ☐ Thoracoabdominal ☐ Abdominal
Presenting Symptom: Presentation (3585)	☐ Pain ☐ CHF ☐ Cardiac Arrest ☐ Syncope ☐ Infection ☐ Asymptomatic ☐ Injury related to Surgical Complication ☐Neuro Deficit ☑ Other ☐ Unknown
(If Neuro Deficit→) AortPresNeuroDef (3590)	☐ Stroke ☐ Limb numbness ☐ Paralysis ☐ Hoarseness (acute vocal cord dysfunction)

History of Present Illness

[redacted] is a 37 y.o. male with known bicuspid aortic valve disease and aortic stenosis.

The patient recently has had decreased exercise tolerance and worsening fatigue.

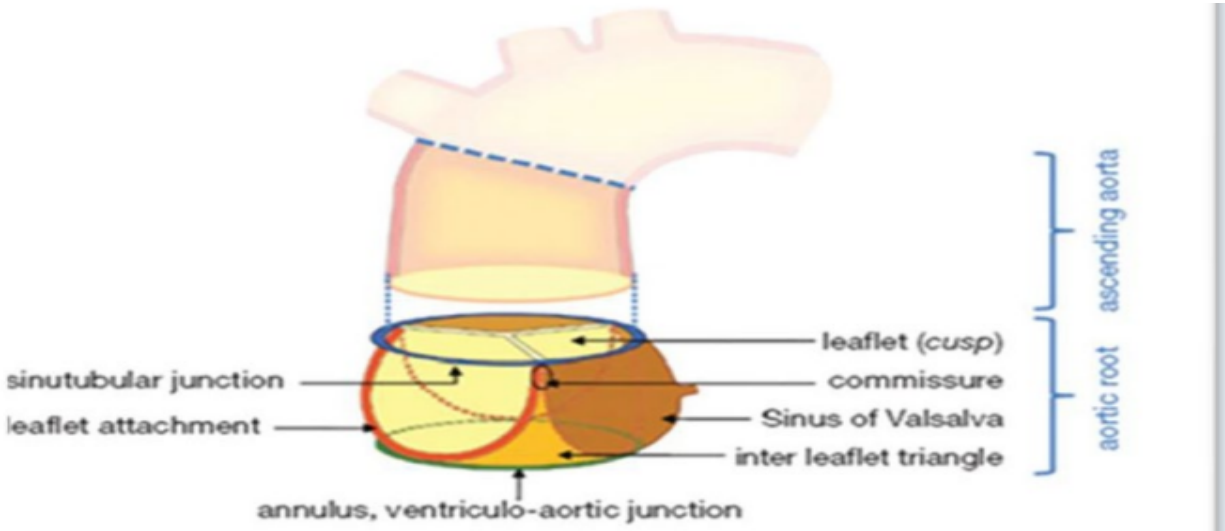
rtic valve area 0.9 cm^2 and mean gradient of 28 mmHg. A CT angiogram was

Ascending Aorta – Case #2 – adult valve procedure(s)

Primary Indication: PrimIndic (3595)		☐ Aneurysm ☐ Dissection ☐ Other
(if Aneurysm →)	Etiology: AnEtilogy (3600)	☐ Atherosclerosis ☐ Infection ☐ Inflammatory ☐ Connective Tissue/Syndromic Dissorder ☐ Ulcerative Plaque/Penetrating Ulcer ☐ Pseudoaneurysm ☐ Mycotic ☐ Traumatic transection ☐ Intercostal visceral patch ☐ Anastomotic site ☐ Aortic Valve Morphology ☐ Chronic Dissection ☐ Congenital Structural cardiac abnormality ☐ Unknown
	Type: AnType (3605)	☐ Fusiform ☐ Saccular ☐ Unknown
	Rupture: AnRupt (3610)	☐ Yes ☐ No (If Yes →) Contained rupture: ☐ Yes ☐ No AnRuptCon (3615)
	Location of Maximum Diameter: AnLoc (3620)	☐ 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

Ao Val & Arch Diam:		Z Score
AoV annulus, s:	1.85 cm	-1.78
Ao sinus, s:	3.30 cm	+1.14
Ao ST junct, s:	2.40 cm	-0.07
Ascending Ao:	4.20 cm	+5.47

Pg 805 of the TM (updated July 2024)



aortic valve: Three leaflets only

aortic root: All components *(Sinuses of Valsalva, inter leaflet triangles, sinutubular junction, leaflet attachments, leaflets, annulus)*

Descriptions:

- Zone 0 Below sinotubular junction (STJ): the boundary between the aortic root and the ascending aorta. The aortic root, aortic annulus, and the sinus of Valsalva are below the STJ and are in Zone 0 (see figure).
- Zone 0 STJ to mid-ascending: the segment of the ascending aorta between the STJ and the mid-point of the ascending aorta (i.e., proximal tubular ascending aorta) and is in Zone 0 (see figure).
- Zone 0 Mid-ascending to distal ascending: the segment of the ascending aorta betweenthe mid-point of the ascending aorta and the origin of the innominate artery or first branch vessel off the aortic arch and is in Zone 0 (see figure).

Additional Anatomical Information

Root

Aorto-annular ectasia: ☐ Yes ☐ No ☐ Unknown
RootAAnnEctasia (3725)

Asymmetric Root Dilation: ☐ Yes ☐ No ☐ Unknown *(If Yes →)* Dilation Location *(select all that apply)*:
RootDilaAsym (3730) RootDilaAsym (3735) ☐ Right ☐ Left ☐ Non-coronary

Sinus of Valsalva aneurysm: ☐ Yes ☐ No ☐ Unknown *(If Yes →)* SV Aneurysm Location *(select all that apply)*: ☐ Right ☐ Left ☐ Non-coronary
RootSinus (3740) RootSinusLocMult (3745)

Arch Anomalies ☐ Yes ☐ No *(If Yes ↓)*
ArchAnom (3750)

Arch Anomalies Type(s): *select all that apply*
ArchAnomTy (3755)

☐ Arch Type Right ☐ Aberrant Right Subclavian ☐ Kommerell/Ductus Bulge
☐ Variant vertebral origin ☐ Aberrant Left Subclavian ☐ Bovine:

Patent internal mammary artery bypass graft: ☐ Yes ☐ No ☐ N/A
ArchPatIMA (3760)

Ascending

Asymmetric Dilatation: ☐ Yes ☐ No ☐ Unknown
AscAsymDil (3765)

Proximal coronary bypass grafts: ☐ Yes ☐ No ☐ Unknown
AscProxGr (3770)

Measurements (Largest Diameter)

Treated Zone with the Largest Diameter:
TrtZnLrgDiam (3775)
☐ 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

Measurement: 42 mm
TrtZnLrgDiamMeas (3780)

Method Obtained:
TrtZnLrgDiamMeasMeth (3785)
☐ 3D or 4D Reconstruction ☐ PreOp CT ☐ PreOp MRI ☐ PreOp Echo ☐ Intraoperatively

Proximal to Treated Zone(s) (Largest Diameter) Available: ☐ Yes ☐ No
ProxTreatZoneAvail (3790) *(If Yes →)*

Location:
ProxTreatZoneAvailLoc (3795)
☐ 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

Measurement: 24 mm
ProxTreatZoneAvailMeas (3800)

Method Obtained:
DistTreatZoneAvailMeth (3825)
☐ 3D or 4D Reconstruction ☐ PreOp CT ☐ PreOp MRI ☐ PreOp Echo ☐ Intraoperatively

Distal to Treated Zone(s) (Largest Diameter) Available: ☐ Yes ☐ No
DistTreatZoneAvail (3810) *(If Yes →)*

Location:
DistTreatZoneAvailLoc (3815)
☐ 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

Measurement: mm
DistTreatZoneAvailMeas (3820)

Method Obtained:
DistTreatZoneAvailMeth (3825)
☐ 3D or 4D Reconstruction ☐ PreOp CT ☐ PreOp MRI ☐ PreOp Echo ☐ Intraoperatively

Review OpNote, H&P, pre/intra-op testing, other notes

Ascending Aorta – Case #2 – adult valve procedure(s)

Intervention

(If Aorta Procedure Performed = Yes ↓)

Aortic/Neo-Aortic/Truncal Valve or Root Procedure Performed:
VSAVAo (3830)

☑ Yes, planned ☐ Yes, unplanned due to surgical complication
☐ Yes, unplanned due to unsuspected disease or anatomy ☐ No
(If Yes ↓)

Which Valve: ☑ Aortic Valve ☐ Neo-Aortic Valve ☐ Truncal Valve ☐ No valve procedure performed
ANTAoValve (3835)

Procedure Performed:
VSAVPrAo (3840)
☑ Replacement *(If Replacement ↓)*

Transcatheter Valve Replacement: ☐ Yes ☑ No
VSTCVAo (3845)

(If Yes →) Approach:
VSTCVRAo (3850) ☐ Transapical ☐ Transaxillary ☐ Transfemoral ☐ Transaortic ☐ Subclavian
☐ Transiliac ☐ Transeptal ☐ Transcarotid ☐ Transcaval ☐ Other

Surgical valve Replacement: ☑ Yes ☐ No
VSAVSurgRepAo (3855)

(If Yes →) Device type: ☐ Mechanical ☐ Bioprosthetic ☐ Surgeon fashioned pericardium (Ozaki) ☑ Other
VSAVSurgTypeAo (3860)

(If Bioprosthetic→) Valve type: ☐ Stented ☐ Stentless subcoronary valve only
☐ Sutureless/rapid deployment
VSAVSurgBioTAo (3865)

Ascending Aorta – Case #2 – adult valve procedure(s)

Aortic annular enlargement ☐ Yes ☐ No
AnlrEnlAo (3885)

(If Yes →) Technique: ☐ Nicks-Nunez ☐ Manougian ☐ Konno ☐ Other ☐ Unknown
AnlrEnlTechAo (3890)

Replacement of non-coronary sinus (Modified Wheat/Modified Yacoub) ☐ Yes ☐ No
AVReplNonCorSinAo (3895)

Root Procedure: ☐ Yes ☐ No *(If Yes↓)*
VSAVRoot (3900)

Root Replacement with coronary ostial reimplantation ☐ Yes ☐ No
VSAVRootOReimp (3905)

(If Yes →) VSAVRootOReimpType (3910): ☐ Composite Valve Conduit ☐ Valve Sparing Root

(If Composite Valve Conduit →) VSAVRootOReimpTy (3915): ☐ Mechanical ☐ Bioprosthetic ☐ Homograft Root Replacement ☐ Autograft with Native Pulmonary Valve (Ross)

(If Bioprosthetic →) VSAVRepBioTy (3920): ☐Stented Valve Conduit ☐Stentless Valve Conduit ☐Stentless Biologic Full Root

(If Valve Sparing Root →) VSAVSparRtOp (3925): ☐ Valve sparing root reimplantation (David) ☐ Valve sparing root remodeling (Yacoub) ☐ Valve sparing root reconstruction (Florida Sleeve)

Coronary Reimplantation: VSAVCorReimp (3930): ☐None ☐Direct to Root Prosthesis (Button) ☐With Vein Graft Extension (SVG Cabrol) ☐With Dacron Graft Extension (Classic Cabrol)

Major root reconstruction/ debridement without coronary ostial reimplantation
VSAVRootRecon (3935) ☐ Yes ☐ No

Ascending Aorta – Case #2 – adult valve procedure(s)

Surgical Ascending/Arch Procedure ☑ Yes ☐ No *(If Yes ↓)*
ArchProc (3940)

Proximal Location: ☑ STJ-midascending ☐ Midascending to distal ascending ☐ Zone 1 ☐ Zone 2 ☐ Zone 3
ArchProxLoc (3945)

Distal Technique: ☐ Open/Unclamped ☑ Clamped
ArchDisTech (3950)

Distal Site: ☑ Ascending Aorta ☐ Hemiarch ☐ Zone 1 ☐ Zone 2 ☐ Zone 3 ☐ Zone 4
ArchDiscSite (3955)

Distal Extention: ☐ Yes, Elephant trunk ☐ Yes, Frozen Elephant trunk ☑ No
ArchDisExt (3960)

Arch Branch Reimplantation: ☐ Yes ☑ No *(If Yes ↓ - select all that apply)*
ArchBranReimp (3965)

Arch Branch Location: ArchBranReimpLoc (3970)

☐Innominate	☐Right Subclavian	☐Right Common Carotid	☐Left Common Carotid
☐Left Subclavian	☐Left Vertebral	☐Other	

Open Surgical Descending Thoracic Aorta or Thoracoabdominal Procedure *(If Yes ↓)*: ☐ Yes ☑ No
DescAortaProc (3975)

A 26 mm Valsalva graft was used to support the autograft. Keyholes were cut in appropriate locations for the left and right coronary artery. The previously placed subannular sutures were placed through the cuff of the Valsalva graft, and the graft was positioned down onto the autograft and tied down.

The ascending aorta replacement was then performed with a separate segment of 26 mm graft. The proximal anastomosis was completed by sewing the graft to the distal end of the pulmonary autograft. The graft was trimmed to the appropriate length, and the distal anastomosis was completed between the graft and the distal ascending aorta.

Ascending Aorta – Case #2 – adult valve procedure(s)

Additional Procedural Information

Spinal Drain Placement: ☐ Pre- aortic procedure ☐ Post- aortic procedure ☑ None
SpinalDrain (4200)

IntraOp Motor Evoked Potential: ☐ Yes ☑ No MotorEvoke (4205)	*(If Yes →)* Documented MEP abnormality ☐ Yes ☐ No ☐ Unknown MotorEvokeAb (4210)	
IntraOp Somatosensory Evoked Potential: ☐ Yes ☑ No SomatEvoke (4215)	*(If Yes →)* Documented SEP abnormality ☐ Yes ☐ No ☐ Unknown SomatEvokeAb (4220)	
IntraOp EEG: ☐ Yes ☑ No IntraOpEEG (4225)	*(If Yes →)* Documented EEG abnormality ☐ Yes ☐ No ☐ Unknown IntraOpEEGAb (4230)	
IntraOp Intravascular Ultrasound(IVUS): ☐ Yes ☑ No IntraOpIVUS (4235)		
IntraOp Transcutaneous Doppler: ☐ Yes ☑ No TransDoppler (4240)		
Intraoperative Angiogram: ☐ Yes ☑ No (If Yes →) IntraOpAng (4245)	Volume of contrast: _____ml IntraOpAngVol (4250)	Fluoroscopy time:_____ min IntraOpAngFlTm (4255)

Endovascular Balloon Fenestration of the Dissection Flap: ☐PreOp ☐IntraOp ☐PostOp ☑N/A
EndoBalFenDisFlap (4260)

Devices

Device(s) Inserted: ☑ Yes ☐ No *(If Yes, list aorta proximal to distal using device key ↓)*
ADevIns (4265)

Aortic Valve or Aortic Valve Composite Graft Implanted ☐ Yes ☑ No (If Yes↓)
AVAVCompGraftImplAo (4270)

Implant Model Number: _____
AVAVCompGrImplModelAo (4275)

Implant Size: _____
AVAVCompGrImplSize (4280)

Ascending Aorta – Case #2 – adult valve procedure(s)

For devices other than aortic valves and aortic valve composite grafts:				
Implant Method:	1=Open Surgical 2= Endovascular			
Outcome:	1= Unsucessfully implanted/maldeployed 2= Implanted/deployed and removed 3= Successfully implanted/deployed			
Model Number:	Enter device model number			
UDI:	Enter unique device identifier (not serial number)			
Location (Letter)	**Implant Method**	**Outcome**	**Model Number**	**UDI**
Below STJ	**1**	**3**	**XXXXXXX123**	ADevUDI01 (4310)
STJ to midascending	**1**	**3**	**XXXXXXX123**	ADevUDI02 (4335)
				ADevUDI03 (4360)
ADevLoc04 (4365)	ADevDelMeth04 (4370)	ADevOut04 (4375)	ADevModel04 (4380)	ADevUDI04 (4385)
ADevLoc05 (4390)	ADevDelMeth05 (4395)	ADevOut05 (4400)	ADevModel05 (4405)	ADevUDI05 (4410)
ADevLoc06 (4415)	ADevDelMeth06 (4420)	ADevOut06 (4425)	ADevModel06 (4430)	ADevUDI06 (4435)
ADevLoc07 (4440)	ADevDelMeth07 (4445)	ADevOut07 (4450)	ADevModel07 (4455)	ADevUDI07 (4460)
ADevLoc08 (4465)	ADevDelMeth08 (4470)	ADevOut08 (4475)	ADevModel08 (4480)	ADevUDI08 (4485)
ADevLoc09 (4490)	ADevDelMeth09 (4495)	ADevOut09 (4500)	ADevModel09 (4505)	ADevUDI09 (4510)
ADevLoc10 (4515)	ADevDelMeth10 (4520)	ADevOut10 (4525)	ADevModel10 (4530)	ADevUDI10 (4535)
ADevLoc11 (4540)	ADevDelMeth11 (4545)	ADevOut11 (4550)	ADevModel11 (4555)	ADevUDI11 (4560)
ADevLoc12 (4565)	ADevDelMeth12 (4570)	ADevOut12 (4575)	ADevModel12 (4580)	ADevUDI12 (4585)
ADevLoc13 (4590)	ADevDelMeth13 (4595)	ADevOut13 (4600)	ADevModel13 (4605)	ADevUDI13 (4610)
ADevLoc14 (4615)	ADevDelMeth14 (4620)	ADevOut14 (4625)	ADevModel14 (4630)	ADevUDI14 (4635)

Ascending Aorta – Case #2 – adult valve procedure(s)

For devices other than aortic valves and aortic valve composite grafts:				
Implant Method:	1=Open Surgical 2= Endovascular			
Outcome:	1= Unsucessfully implanted/maldeployed 2= Implanted/deployed and removed 3= Successfully implanted/deployed			
Model Number:	Enter device model number			
UDI:	Enter unique device identifier (not serial number)			
Location (Letter)	**Implant Method**	**Outcome**	**Model Number**	
Below STJ	**1**	**3**	**XXXXXXX123**	
STJ to midascending	**1**	**3**	**XXXXXXX123**	
ADevLoc04 (4365)	ADevDelMeth04 (4370)	ADevOut04 (4375)	ADevModel04 (4380)	ADevUDI
ADevLoc05 (4390)	ADevDelMeth05 (4395)	ADevOut05 (4400)	ADevModel05 (4405)	ADevUDI
ADevLoc06 (4415)	ADevDelMeth06 (4420)	ADevOut06 (4425)	ADevModel06 (4430)	ADevUDI
ADevLoc07 (4440)	ADevDelMeth07 (4445)	ADevOut07 (4450)	ADevModel07 (4455)	ADevUDI
ADevLoc08 (4465)	ADevDelMeth08 (4470)	ADevOut08 (4475)	ADevModel08 (4480)	ADevUDI08 (4485)
ADevLoc09 (4490)	ADevDelMeth09 (4495)	ADevOut09 (4500)	ADevModel09 (4505)	ADevUDI09 (4510)
ADevLoc10 (4515)	ADevDelMeth10 (4520)	ADevOut10 (4525)	ADevModel10 (4530)	ADevUDI10 (4535)
ADevLoc11 (4540)	ADevDelMeth11 (4545)	ADevOut11 (4550)	ADevModel11 (4555)	ADevUDI11 (4560)
ADevLoc12 (4565)	ADevDelMeth12 (4570)	ADevOut12 (4575)	ADevModel12 (4580)	ADevUDI12 (4585)
ADevLoc13 (4590)	ADevDelMeth13 (4595)	ADevOut13 (4600)	ADevModel13 (4605)	ADevUDI13 (4610)
ADevLoc14 (4615)	ADevDelMeth14 (4620)	ADevOut14 (4625)	ADevModel14 (4630)	ADevUDI14 (4635)

This is ONE graft

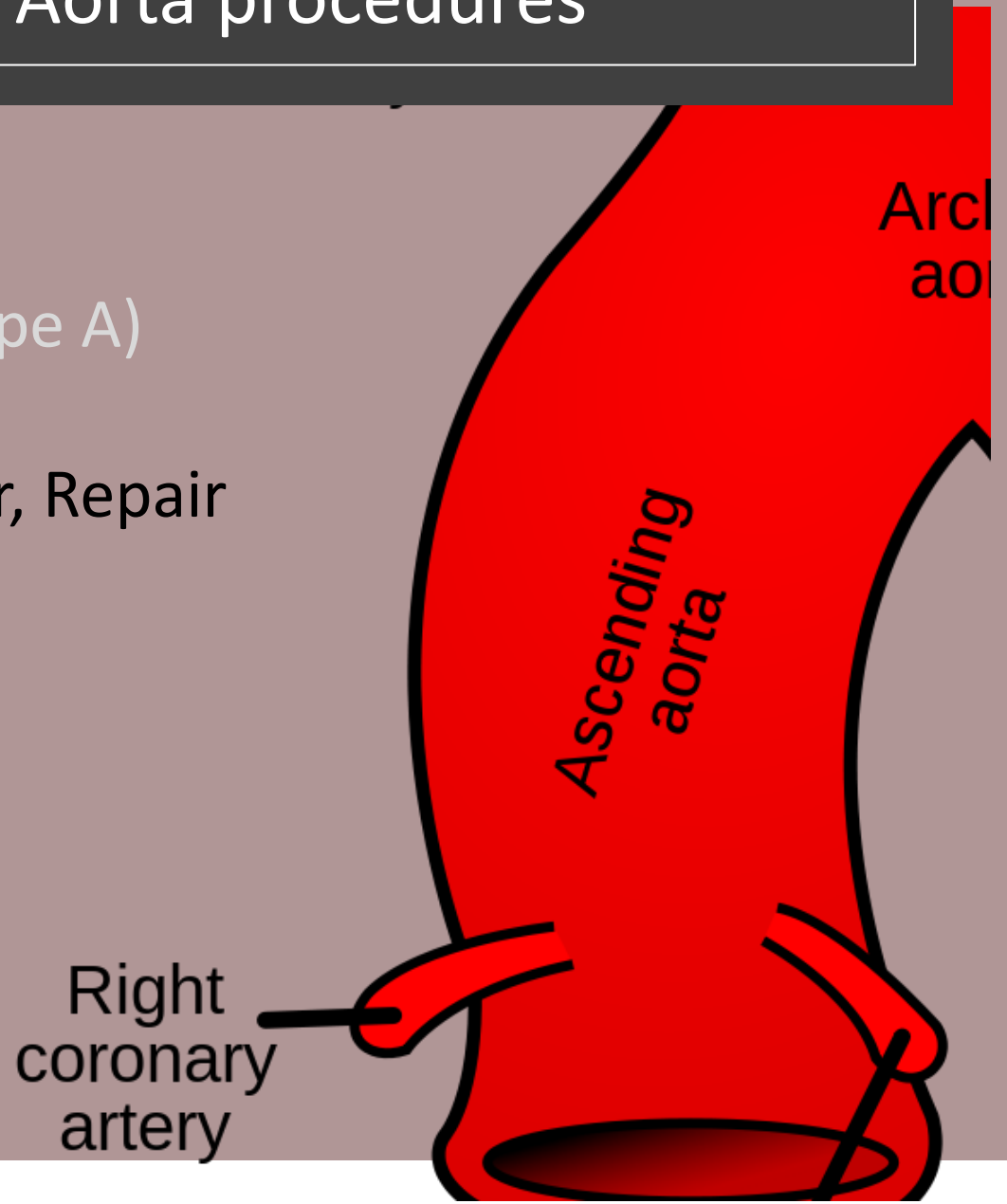
List proximal and distal location for each implant, if applicable

Ascending Aorta – Case #2 – adult valve procedure(s)

For devices other than aortic valves and aortic valve composite grafts:				
Implant Method:	1=Open Surgical 2= Endovascular			
Outcome:	1= Unsuccessfully implanted/maldeployed 2= Implanted/deployed and removed 3= Successfully implanted/deployed			
Model Number:	Enter device model number			
UDI:	Enter unique device identifier (not serial number)			
Location (Letter)	**Implant Method**	**Outcome**	**Model Number**	**UDI**
Proximal location (1)	evDelMeth01 (4295)	ADevOut01 (4300)	ADevModel01 (4305)	ADevUDI01 (4310)
Distal location (1)	ADevDelMeth02 (4320)	ADevOut02 (4325)	ADevModel02 (4330)	ADevUDI02 (4335)
Proximal location (2)	ADevDelMeth03 (4345)	ADevOut03 (4350)	ADevModel03 (4355)	ADevUDI03 (4360)
Distal location (2)	evDelMeth04 (4370)	ADevOut04 (4375)	ADevModel04 (4380)	ADevUDI04 (4385)
	ADevDelMeth05 (4395)	ADevOut05 (4400)	ADevModel05 (4405)	ADevUDI05 (4410)
	ADevDelMeth06 (4420)	ADevOut06 (4425)	ADevModel06 (4430)	ADevUDI06 (4435)
ADevLoc07 (4440)	ADevDelMeth07 (4445)	ADevOut07 (4450)	ADevModel07 (4455)	ADevUDI07 (4460)
ADevLoc08 (4465)	ADevDelMeth08 (4470)	ADevOut08 (4475)	ADevModel08 (4480)	ADevUDI08 (4485)
ADevLoc09 (4490)	ADevDelMeth09 (4495)	ADevOut09 (4500)	ADevModel09 (4505)	ADevUDI09 (4510)
ADevLoc10 (4515)	ADevDelMeth10 (4520)	ADevOut10 (4525)	ADevModel10 (4530)	ADevUDI10 (4535)
ADevLoc11 (4540)	ADevDelMeth11 (4545)	ADevOut11 (4550)	ADevModel11 (4555)	ADevUDI11 (4560)
ADevLoc12 (4565)	ADevDelMeth12 (4570)	ADevOut12 (4575)	ADevModel12 (4580)	ADevUDI12 (4585)
ADevLoc13 (4590)	ADevDelMeth13 (4595)	ADevOut13 (4600)	ADevModel13 (4605)	ADevUDI13 (4610)
ADevLoc14 (4615)	ADevDelMeth14 (4620)	ADevOut14 (4625)	ADevModel14 (4630)	ADevUDI14 (4635)

Ascending Aorta procedures

1. Aortic dissection repair (Type A)
2. Aortic aneurysm repair
3. Aortic stenosis, Supravalvar, Repair
4. Aorta, Other



Ascending Aorta – Case #3

10 month old patient with William's Syndrome, supravalvar aortic stenosis, pulmonary stenosis, LCA stenosis, and severe mitral valve regurgitation with dysplastic valve.

Patient requires patch augmentation of ascending aorta, pulmonary valve repair, patch augmentation of left coronary artery, and mitral valve repair.

Ascending Aorta – Case #3

Which is the BEST procedure to choose for ‘patch augmentation of the ascending aorta’?

a) Ross procedure
b) Valvuloplasty, Aortic
c) Aorta, Other
d) Aortic stenosis, Supravalvar, Repair

Ascending Aorta – Case #3

Which is the BEST procedure to choose for ‘patch augmentation of the ascending aorta’?

a) Ross procedure
b) Valvuloplasty, Aortic
c) Aorta, Other
d) Aortic stenosis, Supravalvar, Repair

Ascending Aorta – Case #3

Which is the BEST procedure to choose for 'patch

a) R
b) V
c) A
d) A

Aortic stenosis, Supravalvar, Repair	Repair of supravalvar aortic stenosis involving all techniques of patch aortoplasty and aortoplasty involving the use of all autologous tissue. In simple patch aortoplasty a diamond- shaped patch may be used, in the Doty technique an extended patch is placed (Y-shaped patch, incision carried into two sinuses), and in the Brom repair the ascending aorta is transected, any fibrous ridge is resected, and the three sinuses are patched separately.

Ascending Aorta – Case #3

Other procedures performed include: pulmonary valvotomy and supravalvar pulmonary stenosis repair. How is **pulmonary valvotomy** captured in the procedure list?

a) Valvuloplasty, Pulmonary or neo-pulmonary
b) PA, reconstruction (plasty), Main (trunk)
c) Valve surgery, Other, Pulmonary or neo-pulmonary
d) Pulmonary stenosis, Supravalvar, Repair

Ascending Aorta – Case #3

Other procedures performed include: pulmonary valvotomy and supravalvar pulmonary stenosis repair. How is **pulmonary valvotomy** captured in the procedure list?

a) **Valvuloplasty, Pulmonary or neo-pulmonary**
b) PA, reconstruction (plasty), Main (trunk)
c) Valve surgery, Other, Pulmonary or neo-pulmonary
d) Pulmonary stenosis, Supravalvar, Repair

Ascending Aorta – Case #3

Other procedures performed include: pulmonary valvotomy and supravalvar pulmonary stenosis repair. How is **pulmonary valvotomy** captured in the procedure list?

a) Valvuloplasty, Pulmonary or neo-pulmonary

b) I

c) V

d) I

590	Valvuloplasty, Pulmonary or neo-pulmonary	Valvuloplasty of the pulmonary/neo-pulmonary valve may include a range of techniques including but not limited to: valvotomy with or without bypass, commissurotomy, and valvuloplasty.

Ascending Aorta – Case #3

Other procedures performed include: pulmonary valvotomy and supravalvar pulmonary stenosis repair. How is **supravalvar pulmonary stenosis repair** captured in the procedure list?

a) Valvuloplasty, Pulmonary or neo-pulmonary
b) PA, reconstruction (plasty), Main (trunk)
c) Valve surgery, Other, Pulmonary or neo-pulmonary
d) Pulmonary stenosis, Supravalvar, Repair

Ascending Aorta – Case #3

Other procedures performed include: pulmonary valvotomy and supravalvar pulmonary stenosis repair. How is **supravalvar pulmonary stenosis repair** captured in the procedure list?

a) Valvuloplasty, Pulmonary or neo-pulmonary
b) PA, reconstruction (plasty), Main (trunk)
c) Valve surgery, Other, Pulmonary or neo-pulmonary
d) Pulmonary stenosis, Supravalvar, Repair

Ascending Aorta – Case #3

Other procedures performed include: pulmonary valvotomy and supravalvar pulmonary stenosis repair.

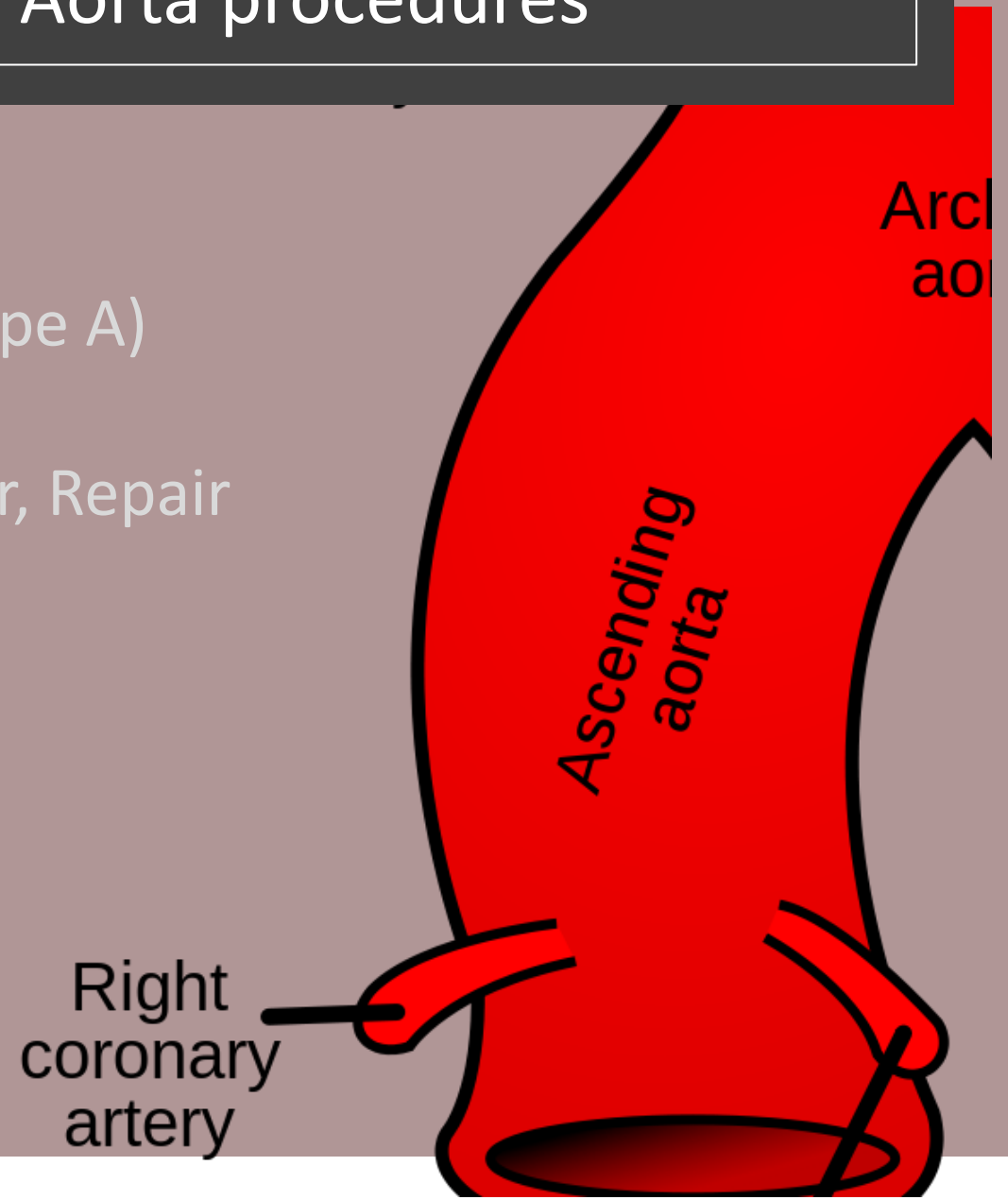
How is **supravalvar pulmonary stenosis repair**

a) Va
b) PA
c) Va
d) Pu

530	PA, reconstruction (plasty), Main (trunk)	Reconstruction of the main pulmonary artery (MPA) trunk commonly using patch material. Includes reduction main pulmonary arterioplasty. Coding Notes: If balloon angioplasty is performed or a stent is placed in the main pulmonary artery intraoperatively, this code may be used in addition to the balloon dilation or stent placement procedure codes.

Ascending Aorta procedures

1. Aortic dissection repair (Type A)
2. Aortic aneurysm repair
3. Aortic stenosis, Supravalvar, Repair
4. Aorta, Other



Ascending Aorta – Case #4

Aorta, Other