

CTA TAVR

Updated
5/6/2024

Indications - pre operative evaluation for aortic valve stenosis.
Bill under CT Angio CAP w/ and w/o Contrast Charge.

GENERAL SCAN NOTES

Move the patient's arms over his/her head if possible. Remove any metal from the imaging field of view.

Topogram - lung apices through pubic symphysis (obtained during end inspiration).

Craniocaudal scan coverage:

Pre contrast - **chest only** (lung apices through lung bases) (obtained during end inspiration).

Cardiac phase - **heart only** (above carina through apex of left ventricle) (obtained during end inspiration).

Angio phase - **CAP** (lung apices through pubic symphysis) (obtained during end inspiration).

Venous phase - **abdomen/pelvis** (lung bases through pubic symphysis) (obtained during end inspiration).

Adjust FOV (field of view) on topogram to smallest without cropping anatomy.

EKG gating:

Only used for the angio phase of the chest.

IV Contrast:

Administer 100 mL **Omnipaque-350** at **4 mL/sec** then decrease rate to **2 mL/sec** for additional 25 mL contrast.

20-gauge or larger in forearm or more proximal.

Bolus track off aortic arch triggered at **100 HU**.

SIEMENS PARAMETERS & RECONS

For the **Pre Contrast** phase:

	Scan Mode	kV	mAs	Care Dose	Care kV & Lvl	Pitch	Acq	Coll	Rot Time	Scan Time
Go Top 64	spiral	100	62	on	on 70	1.50	64	0.6	0.33	1.7
Drive 128	spiral	120	66	on	on	1.20	128	0.6	0.5	3.3
Force 192	spiral	110	51	on	on	1.20	192	0.6	0.5	2.2

For the **Cardiac** phase:

Go Top 64	spiral	100	62	on	on 70	1.50	64	0.6	0.33	0.9
Drive 128	spiral	100	282	on	on	0.17	128	0.6	0.285	6.5
Force 192	spiral	100	288	on	on	0.15	192	0.6	0.25	4.3

For the **Angio** phase:

Go Top 64	spiral	100	101	on	on 115	1.50	64	0.6	0.33	4.6
Drive 128	spiral	100	120	on	on	2.35	128	0.6	0.285	2.5
Force 192	spiral	80	174	on	on	2.00	192	0.6	0.25	1.7

For the **Venous** phase:

Go Top 64	spiral	120	112	on	on 145	0.80	64	0.6	0.5	8.1
Drive 128	spiral	100	120	on	on	2.35	128	0.6	0.285	1.6
Force 192	spiral	80	174	on	on	2.00	192	0.6	0.25	1.1

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PRE CONTRAST PHASE

Name of Series	Thick	Interval	Kernel	Window	IR Lvl	Recon Anatomy	Recon Direction
AX CHEST PRE	5.0	5.0	Br40	mediastinum	3	chest	head/feet

CARDIAC PHASE

AX HEART 65%	3.0	3.0	Br40	cardiac	3	heart	head/feet
COR HEART 65%	3.0	3.0	Br40	cardiac	3	heart	front/back
SAG HEART 65%	3.0	3.0	Br40	cardiac	3	heart	left/right
AX MULTI 20-80%	1.5	1.0	Br40	cardiac	2	heart	head/feet
AX HEART THINS	1.0	1.0	Br40	cardiac	2	heart	head/feet

ANGIO PHASE

AX ANGIO	3.0	3.0	Br40	mediastinum	2	CAP	head/feet
AX ANGIO THINS	1.0	1.0	Br40	mediastinum	2	CAP	head/feet
COR ANGIO CHEST	3.0	3.0	Br40	mediastinum	2	chest	front/back
SAG ANGIO CHEST	3.0	3.0	Br40	mediastinum	2	chest	left/right
COR ANGIO AP	3.0	3.0	Br40	mediastinum	2	AP	front/back
SAG ANGIO AP	3.0	3.0	Br40	mediastinum	2	AP	left/right

VENOUS PHASE

AX VENOUS	3.0	3.0	Br40	mediastinum	3	AP	head/feet
COR VENOUS	3.0	3.0	Br40	mediastinum	3	AP	front/back
SAG VENOUS	3.0	3.0	Br40	mediastinum	3	AP	left/right