

# CTA Upper Extremity

Updated  
4/27/2024

Indications - peripheral artery disease, claudication, ischemia, absent pulses, aneurysm, trauma.  
Bill under CT Angiography UE charges.

## GENERAL SCAN NOTES

Remove any metal from the imaging field of view.

Symptomatic arm (or both) over head with head tilted away from symptomatic arm.

Topogram - mid chest to cover arch through fingers (obtained during end inspiration).

Craniocaudal scan coverage - mid chest to cover arch through fingers (obtained during end inspiration).

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

IV Contrast:

Administer weight-based **Omnipaque-350** - **1 mL/kg** up to **150 mL** (100 mL minimum).

Inject at **4 mL/sec** followed by 40 mL saline flush, 20-gauge or larger in forearm or more proximal.

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

**A peripheral IV must be on the side opposite from the more symptomatic arm.**

A central line used for injection can be in either arm.

For **GE scanners**, it is essential for the 1st recon thickness on the scanner to match the 1st recon thickness in this protocol book for the prescribed Noise Index to be valid. The 1st recon should generally be the thickest recon in the protocol.

## SIEMENS PARAMETERS & RECONS

	Scan Mode	kV	mAs	Care Dose	Care kV & Lvl	Pitch	Acq	Coll	Rot Time	Scan Time
Sensation 16	spiral	120	150	on	NA	1.15	16	0.75	0.5	29.0
Go Up 32	spiral	110	111	on	on 145	1.20	32	0.7	0.8	23.8
Sensation 64	spiral	120	150	on	NA	1.20	64	0.6	0.5	17.4
Definition 64	spiral	120	120	on	on	1.40	64	0.6	0.3	8.9
Go Top 64	spiral	100	115	on	on 145	1.20	64	0.6	0.33	5.7
Drive 128	spiral	120	84	on	on	1.20	128	0.6	0.285	4.9
Force 192	spiral	120	84	on	on	1.20	128	0.6	0.25	4.3

Name of Series	Thick	Interval	Kernel	Window	IR Lvl	Recon Direction
AX ANGIO*	2.0	2.0	Br40 / B41f	mediastinum	3	shoulder/hand
AX ANGIO THINS*	1.0	1.0	Br40 / B41f	mediastinum	3	shoulder/hand
COR ANGIO	2.0	2.0	Br40 / B41f	mediastinum	3	front/back
SAG ANGIO	2.0	2.0	Br40 / B41f	mediastinum	3	left/right
3D VRT (spin)	0.75	0.5	Bv36 / B31f	CT angio		

\*The axial recons are along the long axis of the arms.

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## GE PARAMETERS & RECONS

	Scan Type	SFOV	kV	mA Range	Noise Index	Smart mA	Slice Thick	Beam Coll	Pitch	Speed	Rot Time	Dose Red	ASIR	Scan Time
LS 16	helical	large	120	100-440	16.36	on	2.5	20	1.375	27.50	0.5	NA	NA	14.5
Opt 540	helical	large	120	100-440	16.36	on	2.5	20	1.375	27.50	0.5	NA	NA	14.5
LS VCT 64	helical	large body	120	100-600	14.14	on	2.5	40	0.984	39.375	0.5	40	40	10.2
Disc VCT 64	helical	large body	120	100-600	14.14	on	2.5	40	0.984	39.375	0.5	40	40	10.2

Name of Series	Thickness	Interval	Recon Algorithm	Window Width/Level	Recon Direction
<b>AX ANGIO*</b>	<b>2.5</b>	<b>2.5</b>	<b>std full</b>	<b>400/40</b>	<b>shoulder/hand</b>
AX ANGIO THINS*	1.25	1.25	std full	400/40	shoulder/hand
COR ANGIO	2.5	2.5	std full	400/40	front/back
SAG ANGIO	2.5	2.5	std full	400/40	left/right
3D VRT (spin)	0.625	0.625	std full	400/40	

**Must be first recon.**

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## PHILIPS PARAMETERS & RECONS

	Scan Mode	kV	Avg mAs	Dose Index	3D Dose	Pitch	Detect	Colli	Rot Time	Scan Time
Incisive 128	helical	120	103	20	on	1.00	64	0.625	0.75	15.0

Name of Series	Thick	Interval	Filter	Window	iDose	Recon Direction
AX ANGIO*	2.0	2.0	B	mediastinum	3	shoulder/hand
AX ANGIO THINS*	1.0	1.0	B	mediastinum	3	shoulder/hand
COR ANGIO	2.0	2.0	B	mediastinum	3	front/back
SAG ANGIO	2.0	2.0	B	mediastinum	3	left/right
3D VRT (spin)	0.75	0.5				

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