

# **CTA Perfusion**

Updated 05/02/24

Reviewed 05/14/25

Indications - stroke, focal neurological deficits, arterial thrombus/occlusion.

**The following requirements must be met for this protocol to be performed:**

The patient has stroke-like symptoms.

The patient has had symptoms for less than 24 hours.

The patient's NIH stroke scale is greater than or equal to 6.

A perfusion scan has been approved by a Neurologist (for all patients including ER patients).

## **GENERAL SCAN NOTES**

Remove any metal from the imaging field of view.

Position patient's head so that the orbitomeatal line is perpendicular to table top. Neutral position from side to side.

Scan Order:

### **Noncontrast head:**

Perform routine spiral/helical scan if one has not been performed within last 6 hours.

### **CTA Head +/- Neck:**

IV Contrast:

Administer **75 mL Omnipaque-350**.

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**.

Wait 3 minutes between CTA and perfusion scans.

### **Perfusion:**

IV Contrast:

Administer 1 or 2 injections of **50 mL Omnipaque-350** each.

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

For scanners requiring 2 scans, do NOT overlap scans. Second scan must start where the last image of the first scan ended.

iSchemaView RAPID Support - 650-388-9767 extension 2 or support@irapid.com.

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## SIEMENS PARAMETERS & RECONS

	Scan Mode	kV	mAs	Care Dose	Care kV & Lvl	4D Range		Pitch	Acq	Coll	Rot Time
						mm	sec				
Drive 128	sequential	80	150	off	off	150	1.5	1.02	32	1.2	0.285
Force 192	sequential	70	200	off	off	114	1.5	0.50	48	1.2	0.25

	Scan Mode	kV	mAs	Care Dose	Care kV & Lvl	Pitch	Acq	Coll	Rot Time
Go Up 32	sequential	80	96	off	off	0.00	32	0.7	0.8
Go Top 64	sequential	70	132	on	on 78	0.50	64	0.6	0.33

	Scan Mode	kV	mAs	Care Dose	# Detect	Colli- mation	Feed / Scan	Scan Time	Cycle Time
Sensation 64	sequential	80	125	off	24	1.2	0.0	0.5	1.5

Name of Series	Thick	Interval	Kernel	Window	Recon Direction
PERFUSION	5.0	3.0	Hr36 / H22f	cerebrum	feet/head

Send perfusion images to RAPID for color maps to be generated.

## GE PARAMETERS & RECONS

	Scan Type	SFOV	kV	Manual mA	Smart mA	Slice Thick	Beam Coll	Pitch	Speed	Rot Time	Dose Red	ASIR
LS VCT 64	axial	head	80	125	off	5.0	40	8i		0.8	20	20

Name of Series	Thickness	Interval	Recon Algorithm	Window Width/Level	Recon Direction
PERFUSION SLAB 1	5.0	0.0	full	150/35	feet/head
PERFUSION SLAB 2	5.0	0.0	full	150/35	feet/head

## PHILIPS PARAMETERS & RECONS

	Scan Mode	kV	mAs	Dose Index	3D Dose	# Detect	Colli- mation	Feed / Scan	Scan Time	Cycle Time
Incisive 128	axial	80	100	NA	NA	64	0.625	0.0	0.5	2.0

Name of Series	Thick	Interval	Filter	Window	iDose	Recon Direction
PERFUSION SLAB 1	10.0	10.0	UA	brain	1	feet/head
PERFUSION SLAB 2	10.0	10.0	UA	brain	1	feet/head