Gundersen Health System

Abdomen Renal Artery

Siemens Flash

Application Examples: Renal transplant, renal artery stenosis

Oral Contrast	Yes
IV Contrast / Volume / Injection Rate	Omnipaque 350 / P3T

Technical Factors

Unenhanced - Arterial – 90 seconds – Delayed	
Detector Collimator	Acq 128 x 0.6 mm
Care kV	On / 120 kV
Care Dose 4D	On / 150 mAs
Rotation Time (seconds)	0.5
Pitch	0.6
Typical CTDIvol	10.14 mGy ± 50%

Arterial Phase	
Care Bolus ROI Location / HU	Abdominal Aorta / 150
Monitoring Delay	20 seconds
Cycle Time	1.5 seconds
Scan Delay	**2 seconds**
Breath Hold	Inspiration
Typical CTDIvol	10.14 mGy ± 50%

90 seconds	
Scan Delay	Adjust to equal 90 seconds
Typical CTDIvol	10.14 mGy

Delayed	
Scan Delay	300 seconds
Typical CTDIvol	10.14 mGy ± 50%

Topogram: Lateral & AP, 512 mm

Unenhanced	**Recon Type**	**Width / Increment**	**Algorithm**	**Safire**	**Window**	**Series Description**	**Networking**	**Post Processing**
Recon 1	Axial	3 x 3	I41f	2	Abdomen	AXIAL WITHOUT	PACS	None

Arterial	**Recon Type**	**Width / Increment**	**Algorithm**	**Safire**	**Window**	**Series Description**	**Networking**	**Post Processing**
Recon 1	Axial	3 x 3	I41f	2	Abdomen	AXIAL ARTERIAL	PACS	None
Recon 2	Axial:COR	3 x 3	I30	2	Angio	COR MIP	PACS	Coronal MIP
Recon 3	Axial:SAG	3 x 3	I30	2	Angio	SAG MIP	PACS	Sagittal MIP
Recon 4	Axial	0.6 x 0.6	I31f	2	Abdomen	AXIAL ART 0.6 STND	TR & PACS	None

90 SEC	**Recon Type**	**Width / Increment**	**Algorithm**	**Safire**	**Window**	**Series Description**	**Networking**	**Post Processing**
Recon 1	Axial	3 x 3	I41f	2	Abdomen	AXIAL 90 SEC	PACS	None
Recon 2	3D:COR	3 x 3	I41f	2	Abdomen	COR	PACS	Coronal MPR
Recon 3	3D:SAG	3 x 3	I41f	2	Abdomen	SAG	PACS	Sagittal MPR
Recon 4	Axial	0.6 x 0.6	I31f	2	Abdomen	AXIAL 90 SEC 0.6 STND	TeraRecon	None

Delayed	**Recon Type**	**Width / Increment**	**Algorithm**	**Safire**	**Window**	**Series Description**	**Networking**	**Post Processing**
Recon 1	Axial	3 x 3	I41f	2	Abdomen	AXIAL DELAYED	PACS	None
Recon 2	Axial	0.6 x 0.6	I31f	2	Abdomen	AXIAL DELAYED 0.6 STND	TeraRecon	None

Patient Position: Patient lying supine with arms above head.

Scan Instructions: First, scan kidneys unenhanced, if requested. Take pre-monitoring slice at top of arterial scan range (just above kidneys) and place ROI in aorta. Add the (1) monitoring delay, (2) arterial scan delay, and (3) arterial scan time to determine the scan delay for the Cortical Medullary (CM) phase—Set to equal 90 seconds from the start of injection.

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Inject IV contrast and scan kidneys in arterial phase. Then, scan **liver and kidneys** in Cortical Medullary (CM) phase and pelvis if ordered. Lastly, scan kidneys in delayed phase, if requested.

Recons and Reformations: Adjust FoV to fit body contour or to previous FoV if available. Coronal & sagittal MPRs from CM phase.