

 University Health™	Policy #: Rad Proc 13.14.12
SUBJECT: CT Kidneys 6.12	Effective: 10/2013 Reviewed: 03/07/2017
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Purpose: To provide computed tomography staff with the required protocol for performing CT Kidneys

Scope: All adult patients 18 years and older.

Clinical Indication: Renal mass, hematuria

Patient Preparation: Clear liquid diet (6 hours prior to exam)

Orientation: Feet first

Breathing: Inspiration

Oral Contrast: 2 16oz Cups Water

IV Contrast per Weight: 1ml/lb or 2ml/kg not to exceed 150ml injected @ 4ml/sec

Coverage: Dome of diaphragm through iliac crest; for pelvis continue through ischial tuberosities

Anatomic Reference: Xiphoid process;

Scan Delay: Fixed Delay relative to start injection time

Group 1: Non-contrast – Dome of diaphragm to iliac crest

Scan Mode	Thickness Speed Pitch	Table Interval	SFOV	kVp	Auto mA/ Noise Index	Prep Time (sec)	Recon Type
LS 16 0.8 sec Helical Full	5 27.50 1.375:1	5	Large	120	80-440 11.5	N	Standard
VCT 0.8 sec Helical Full	5 55.00 1.375:1	5	Large	120	80-600 11.5	N	Standard
AS 64 0.5 sec Helical	5 1	5	360	120	Ref MAS 250	N	Standard

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Group 2: Corticomedullary Phase – Top to bottom of kidneys

Scan Mode	Thickness Speed Pitch	Table Interval	SFOV	kVp	mA Auto mA/ Noise Index	Prep Time (sec)	Recon Type
LS 16 0.8 sec Helical	2.5 27.50 1.375:1	2.5	Large	120	80-440 11.5	30 sec.	Standard
VCT 64 0.8 sec Helical Full	2.5 55.00 1.375:1	2.5	Large	120	80-600 11.5	30 sec	Standard
AS 64 0.5 sec	3 1	3	380	120	Ref MAS 250	30 sec	Standard

Group 3: Nephrographic Phase - Dome of diaphragm to iliac crest

Scan Mode	Thickness Speed Pitch	Table Interval	SFOV	kVp	mA Auto mA/ Noise Index	Prep Time (sec)	Recon Type
LS 16 0.8 sec Helical	2.5 27.50 1.375:1	2.5	Large	120	80-440 11.5	60 sec	Standard
VCT 64 0.8 sec Helical Full	2.5 55.00 1.375:1	2.5	Large	120	80-600 11.5	60 sec	Standard
AS 64 0.5 sec	3 1	3	380	120	Ref MAS 250	60 sec	Standard

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Group 4: Excretory Phase – Top of kidneys through iliac crest

Scan Mode	Thickness Speed Pitch	Table Interval	SFOV	kVp	Auto mA/ Noise Index	Prep Time (sec)	Recon Type
LS 16 0.8 sec Helical Full	5 27.50 1.375:1	5	Large	120	80-440 11.5	7 min.	Standard
VCT 0.8 sec Helical Full	5 55.00 1.375:1	5	Large	120	80-600 11.5	7 min.	Standard
AS 64 0.5 sec Helical	5 1	5	360	120	Ref MAS 250	7 min.	Standard

Algorithm: Recon 1 & 2 Standard

Reformation: 2.0 Sagittal and Coronal reformations of the venous phase

Network: Recon 1 (5mm) to PACS. Recon 2 (1.25) auto transmit to AWSERV

Notes: Auto mA must be on and mA table checked prior to scanning. Full bladder (clamp Foley catheter).