



School of Medicine
and Public Health

UNIVERSITY OF WISCONSIN-MADISON

Series Description & Hanging Protocols Manual

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Table of Contents

Introduction	Page 2
Naming Scheme	Page 3
Abdominal	Pages 4-13
Neuroradiology	Pages 14-19
Chest/Thoracic	Page 20
Cardiovascular	Pages 21-22
Musculoskeletal	Pages 23-24
Pediatrics	Page 25
Dual Energy CT (DECT)	Page 26

Introduction

The Series Description & Hanging Protocols Manual is a guide for building and organizing CT protocol series names. Series names are instrumental in developing hanging protocols and thereby facilitating efficient interpretation by the radiologist/physician. A schema is presented herein allowing any arbitrary CT protocol image reconstruction to be named at the series level. We provide examples using the UW-Madison CT protocols set, but the schema we present can be used on any CT protocol.

The schema presented on Page 3 outlines the six (6) modifiers used to construct series level protocol names. Normally, not all six modifiers are used on a single series. Typically, a series name will only consist of one to two modifiers.

There is potential for confusion related to the use of exam split. Exam split allows one to break apart phases scanned within the same series. Scanning multiple groups within the same series is common in multiphase studies such as early arterial, late arterial, and venous (e.g., triphasic liver). Exam split allows the separation of individual phases into separate groups, which can then be viewed simultaneously. For it to succeed, however, series description names for each phase must differ. Without exam split, all phases will have the same series name. We include two sets of series names for sites/scanners with and without exam split. For multi-group protocols, we start the series name with a word including "PHASIC". At UW-Madison, our PACS vendor (McKesson) recognizes this and will break apart the images into separate "hangable" image stacks. This may reflect a UW-Madison specific work-around and you should discuss this issue with your local radiologists and PACS support team.

We have found that series names often assist CT technologists in properly scanning patients. Some names provide CT technologists with workflow information (i.e., reminders for proper timing delays) at the scanner. For this reason, we defer to technologist friendly versions of names where two names could be appropriate. For example, in CT urography, a delayed phase of 10 minutes could be named "UROGRAPHIC". We prefer to name such a phase "DELAY 10 MINUTES" as this serves as a reminder for the technologist on the amount of time delay and serves as a permanent record of the contrast dynamic for the interpreting radiologist in a more quantitative form.

Note, the protocol level names currently used by UW-Madison do not follow a universally-accepted naming convention. The most popular existing naming conventions, RADLEX and LOINC, each still have issues, which have kept our protocols from being efficiently mapped.

Our naming schema reflects a multi-year effort of trialing different naming conventions at UW-Madison. We have iterated to the present solution with the help of trialing our protocols on other health centers ranging in size from a rural single scanner to other large academic centers. We are confident our naming convention is vendor- and site-specific neutral. If you are having issues naming your series using our schema, please feel free to reach out to our team.

Sincerely,

The UW CT Protocol Optimization Team at the University of Wisconsin-Madison

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UW-Madison CT Protocol Series Naming Scheme

Each series description is composed of 6 possible modifiers:

Thickness	Recon Type	Time	Contrast**	Energy***	Special Options****
THIN (default is to leave empty which denotes a thick recon)	ST (soft tissue) BONE LUNG	LATE (i.e. for differentiating early and late arterial phases) DELAY XX MINUTES (i.e., XX is the number of minutes the phase is delayed and varies by protocol) TIMING BOLUS* (default is empty)	W/C W/O CTA CTV (CT venogram) ARTERIAL LATE ARTERIAL (default is empty)	50 keV 67 keV 140 keV QC VNC (virtual non contrast) VUE (virtual unenhanced) Water (Iodine) Iodine (Water) (default is empty, only used for DECT)	MAR (metal artifact reduction) SSF (snap shot freeze) XX-XX% (i.e., cardiac phase range) XX% (i.e., centered cardiac phase) EXP (expiration) INSP (inspiration) EXP HI-RES (high resolution) INSP HI-RES ABER (abduction and external rotation) TAVI PRO (prospective) RETRO (retrospective) LT (left side) RT (right side) (default is empty, use sparingly)
Slice Thickness Modifiers by Section	THIN	THICK			
Abdominal/Pediatric/Thoracic/Neuro/CV	<2.5 mm	>=2.5 mm			
MSK	<1 mm	>=1 mm			

*A timing bolus series normally only has 1 reconstruction; therefore, no modifiers are needed for naming a timing bolus series other than the label "TIMING BOLUS".
 **If the series is single phase and non contrast, this modifier is empty. If a protocol has multiple series, the non contrast series has the "W/O" modifier. In general, it is preferred to use time to specify specific contrast phases (i.e., use "DELAY 10 MINUTES" instead of "UROGRAPHIC" to denote a delayed CT urography phase).

***This is where DECT names are detailed. Energy here refers to monochromatic energy level. Only 50, 67, and 140 are shown; your practice will likely use different energy levels. These levels do not refer to the beam energy used in SECT (i.e., 120 kV). SECT energy levels should not be specified. Basis material images should be denoted using <material name> (<partner basis material name>).

****We do not have orthopedic device modifiers in the list as they vary site to site. The "Special Options" modifier should capture vendor/device/practice-specific naming conventions.

Examples:

- "5 mm soft tissue recon from a non contrast single energy scan" → "ST"
- "0.5 mm bone recon at 140 keV from a non contrast DECT scan" → "THIN BONE 140 keV"
- "1.25 mm soft tissue recon from an angio phase single energy scan" → "THIN ST CTA"
- "0.6 mm soft tissue recon from the CTA phase centered at 75% R-R of a gated single energy cardiac scan" → "THIN ST CTA 75%"

Abdominal

Protocol Name	Series or Group	Recon #	Series Description
Abd/Pelvis	Series 2	Recon 1	ST
		Recon 2	THIN ST
Body Pelvis	Series 2	Recon 1	ST
		Recon 2	THIN ST
Abd/Pelvis - Flank Pain	Series 2	Recon 1	ST
		Recon 2	THIN ST
Low Dose Renal Stone / Flank Pain	Series 2	Recon 1	ST
		Recon 2	THIN ST
Chest/Abd/Pelvis without IV Contrast	Series 2, Group 1	Recon 1	ST
		Recon 2	THIN ST
		Recon 3	THIN LUNG
	Series 2, Group 2	Recon 1	ST
		Recon 2	THIN ST
Chest/Abd/Pelvis with IV Contrast	Series 2, Group 1	Recon 1	ST W/C
		Recon 2	THIN ST W/C
		Recon 3	LUNG W/C
	Series 2, Group 2	Recon 1	ST W/C
Abd/Pelvis - Colonography	Series 2	Recon 1	ST
		Recon 2	THIN ST
		Recon 3	BONE DENSITY
	Series 3		PRONE SCOUT
			PRONE SCOUT
	Series 4	Recon 1	THIN ST
	Series 5		DECUB SCOUT

Protocol Name	Series or Group	Recon #	Series Description
			DECUB SCOUT
	Series 6	Recon 1	THIN ST
Abd/Pelvis – Colonography with IV Contrast	Series 2	Recon 1	ST
	Series 3		SUPINE SCOUT
			SUPINE SCOUT
	Series 4	Recon 1	ST
		Recon 2	THIN ST W/C
		Recon 3	BONE DENSITY
	Series 5		DECUB SCOUT
			DECUB SCOUT
	Series 6		THIN ST
		Recon 2	THIN ST W/C
Abd/Pelvis - Urography	Series 2	Recon 1	ST W/O
		Recon 2	THIN ST W/O
	Series 3	Recon 1	ST W/C
		Recon 2	THIN ST W/C
Urothelial Tumor Follow-up	Series 2	Recon 1	ST W/C
		Recon 2	THIN ST W/C
	Series 3	Recon 1	ST W/C DELAY 10 MINUTES
		Recon 2	THIN ST W/C DELAY 10 MINUTES
Abd-Liver - Biphasic (WITH EXAM SPLIT)	Series 2, Group 1	Recon 1	ST ARTERIAL W/C
		Recon 2	THIN ST ARTERIAL W/C
	Series 2, Group 2	Recon 1	ST W/C
		Recon 2	THIN ST W/C

Protocol Name	Series or Group	Recon #	Series Description
Abd-Liver - Biphasic	Series 2, Group 1	Recon 1	BIPHASIC ST W/C
(W/O EXAM SPLIT)			
		Recon 2	BIPHASIC ST THIN W/C
	Series 2, Group 2	Recon 1	BIPHASIC ST W/C
		Recon 2	BIPHASIC ST THIN W/C
Abd-Liver – TRIPHASIC, LIVER DONOR WORK UP	Series 2, Group 1	Recon 1	ST W/O
(WITH EXAM SPLIT)			
		Recon 2	THIN ST W/O
	Series 4, Group 1	Recon 1	ST ARTERIALW/C
		Recon 2	THIN ST ARTERIAL W/C
	Series 4, Group 2	Recon 1	ST LATE ARTERIAL W/C
		Recon 2	THIN ST LATE ARTERIAL W/C
	Series 4 Group 3	Recon 1	ST W/C
		Recon 2	THIN ST W/C
Abd-Liver – TRIPHASIC, LIVER DONOR WORK UP	Series 2, Group 1	Recon 1	ST W/O
(W/O EXAM SPLIT)			
		Recon 2	THIN ST W/O

Protocol Name	Series or Group	Recon #	Series Description
	Series 4, Group 1	Recon 1	TRIPHASIC ST W/C
		Recon 2	TRIPHASIC THIN ST W/C
	Series 4, Group 2	Recon 1	TRIPHASIC ST W/C
		Recon 2	TRIPHASIC THIN ST W/C
	Series 4 Group 3	Recon 1	TRIPHASIC ST W/C
		Recon 2	TRIPHASIC THIN ST W/C
Abd-Adrenal Gland - Adenoma	Series 2	Recon1	ST W/O
	Series 3	Recon1	ST W/C
		Recon 2	THIN ST W/C
	Series 4	Recon 1	THIN ST DELAY 15 MINUTES
Abd-Liver - Cholangiocarcinoma	Series 2	Recon 1	ST W/C
		Recon 2	THIN ST W/C
	Series 3	Recon 1	ST DELAY 12 MINUTES
Abd-Pancreas - Pancreas Cancer (Neoplasm Screening)	Series 2	Recon 1	ST W/O
(WITH EXAM SPLIT)	Series 3, Group 1	Recon 1	ST ARTERIAL
		Recon 2	THIN ST ARTERIAL
	Series 3, Group 2	Recon 1	ST W/C
		Recon 2	THIN ST W/C

Protocol Name	Series or Group	Recon #	Series Description
Abd-Pancreas - Pancreas Cancer (Neoplasm Screening)	Series 2	Recon 1	ST W/O
(W/O EXAM SPLIT)			
	Series 3, Group 1	Recon 1	PHASIC ST
		Recon 2	PHASIC THIN ST
	Series 3, Group 2	Recon 1	PHASIC ST
		Recon 2	PHASIC THIN ST
CTA Abd-Pancreas - Transplant	Series 2	Recon 1	ST W/O
(WITH EXAM SPLIT)			
	Series 3, Group 1	Recon 1	ST CTA
		Recon 2	THIN ST CTA
	Series 3, Group 2	Recon 1	ST W/C
		Recon 2	THIN ST W/C
CTA Abd-Pancreas - Transplant	Series 2	Recon 1	ST W/O
(W/O EXAM SPLIT)			
	Series 3, Group 1	Recon 1	PHASIC ST
		Recon 2	PHASIC THIN ST
	Series 3, Group 2	Recon 1	PHASIC ST
		Recon 2	PHASIC THIN ST
Abd/Pelvis - Kidney Tumor	Series 2	Recon 1	ST W/O
	Series 3	Recon 1	ST W/C
		Recon 2	THIN ST W/C
	Series 4	Recon 1	ST DELAY 2 MINUTES

Protocol Name	Series or Group	Recon #	Series Description
CTA Abd - Renal Donor	Series 2	Recon 1	ST W/O
	Series 3	Recon 1	THIN ST CTA
	Series 4	Recon 1	ST W/C
		Recon 2	THIN ST W/C
Abd-Small Bowel - Enterography	Series 2	Recon 1	ST W/C
		Recon 2	THIN ST W/C
CTA Abd - Obscure GI Bleed	Series 2	Recon 1	ST W/O
	Series 3	Recon 1	ST W/C
		Recon 2	THIN ST W/C
	Series 4	Recon 1	ST DELAY 3 MINUTES
		Recon 2	THIN ST DELAY 3 MINUTES
CTA Abd - Mesenteric Ischemia	Series 2	Recon 1	THIN ST CTA
	Series 3	Recon 1	ST W/C
		Recon2	THIN ST W/C
Trauma - Chest	Series 2	Recon 1	ST W/C
		Recon 2	THIN ST W/C
		Recon 3	LUNG W/C
		Recon 4	BONE T-SPINE
		Recon 5	THIN ST T-SPINE
		Recon 6	THIN BONE T-SPINE
Trauma - Chest/Abd/Pelvis	Series 2, Group 1	Recon 1	ST W/C
		Recon 2	THIN ST W/C
		Recon 3	LUNG W/C
		Recon 4	BONE T-SPINE
		Recon 5	THIN ST T-SPINE

Protocol Name	Series or Group	Recon #	Series Description
		Recon 6	THIN BONE T-SPINE
	Series 2, Group 2	Recon 1	ST W/C
		Recon 2	THIN ST W/C
		Recon 3	BONE L-SPINE
		Recon 4	THIN ST L-SPINE
		Recon 5	THIN BONE L-SPINE
	Series 3	Recon 1	ST W/C DELAY 7 MINUTES
		Recon 2	THIN ST W/C DELAY 7 MINUTES
Trauma - Abd/Pelvis (routine and penetrating trauma)	Series 2	Recon1	ST W/C
		Recon 2	THIN ST W/C
		Recon 3	BONE L-SPINE
		Recon 4	THIN ST L-SPINE
		Recon 5	THIN BONE L-SPINE
	Series 3	Recon 1	ST DELAY 7 MINUTE
		Recon 2	THIN ST DELAY 7 MINUTE
High Image Quality Cancer Follow-up - Abd/Pelvis	Series 2	Recon 1	ST W/C
		Recon 2	THIN ST W/C
Cystogram	Series 2	Recon 1	ST W/O
		Recon 2	THIN ST W/O
	Series 3	Recon 1	ST CYSTOGRAM
		Recon 2	THIN ST CYSTOGRAM
Abd - Gastric Varices	Series 2	Recon 1	ST W/O
	Series 3	Recon 1	ST W/C

Protocol Name	Series or Group	Recon #	Series Description
		Recon 2	THIN ST W/C
Abd/Pelvis - Peritoneogram	Series 2	Recon 1	ST W/C
		Recon 2	THIN ST W/C
Abd/Pelvis Pre-IVC Filter Removal	Series 2	Recon 1	ST W/C
		Recon 2	THIN ST W/C
CTA Abd/Pelvis - Portosystemic Shunt Evaluation	Series 2	Recon 1	ST W/C
		Recon 2	THIN ST W/C
CTA Abd/Pelvis - TIPS Evaluation	Series 2, Group 1	Recon 1	ST CTA
(WITH EXAM SPLIT)			
		Recon 2	THIN ST CTA
	Series 2, Group 2	Recon 1	ST W/C
		Recon 2	THIN ST W/C
CTA Abd/Pelvis - TIPS Evaluation	Series 2, Group 1	Recon 1	PHASIC ST
(W/O EXAM SPLIT)			
		Recon 2	PHASIC THIN ST
	Series 2, Group 2	Recon 1	PHASIC ST
		Recon 2	PHASIC THIN ST
Abd-Liver - Hepatocellular Carcinoma (HCC)	Series 2, Group 1	Recon 1	ST CTA
(WITH EXAM SPLIT)			
		Recon 2	THIN ST CTA
	Series 2, Group 2	Recon 1	ST W/C
		Recon 2	THIN ST W/C
	Series 3	Recon 1	ST DELAY 3 MINUTES
Abd-Liver - Hepatocellular Carcinoma (HCC)		Recon 1	PHASIC ST

Protocol Name	Series or Group	Recon #	Series Description
(W/O EXAM SPLIT)	Series 2, Group 1		
		Recon 2	PHASIC THIN ST
	Series 2, Group 2	Recon 1	PHASIC ST
		Recon 2	PHASIC THIN ST
	Series 3	Recon 1	ST DELAY 3 MINUTES
Abd-Liver - Transplant Recipient Workup	Series 2	Recon 1	ST W/O
(WITH EXAM SPLIT)			
		Recon 2	THIN ST W/O
	Series 4, Group 1	Recon 1	ST ARTERIAL
		Recon 2	THIN ST ARTERIAL
	Series 4, Group 2	Recon 1	ST LATE ARTERIAL
		Recon 2	THIN ST LATE ARTERIAL
	Series 4 Group 3	Recon 1	ST W/C
		Recon 2	THIN ST W/C
	Series 5	Recon 1	ST DELAY 3 MINUTES
Abd-Liver - Transplant Recipient Workup	Series 2	Recon 1	ST W/O
(W/O EXAM SPLIT)			
		Recon 2	THIN ST W/O

Protocol Name	Series or Group	Recon #	Series Description
	Series 4, Group 1	Recon 1	PHASIC ST
		Recon 2	PHASIC THIN ST
	Series 4, Group 2	Recon 1	PHASIC ST
		Recon 2	PHASIC THIN ST
	Series 4 Group 3	Recon 1	PHASIC ST
		Recon 2	PHASIC THIN ST
	Series 5	Recon 1	ST DELAY 3 MINUTES

Neuroradiology

Protocol Name	Series or Group	Recon #	Series Description
Adult & Pediatric Brain - Routine and Pediatric NAT/Trauma (Helical Mode)	Series 2	Recon 1	ST
		Recon 2	BONE
		Recon 3	THIN ST
	Series 3	Recon 1	ST W/C
		Recon 2	BONE W/C
		Recon 3	THIN ST W/C
Adult & Pediatric Brain - Helical Scan with Angled Axial Reformations	Series 2	Recon 1	THIN ST
		Recon 2	THIN BONE
	Series 3	Recon 1	THIN ST W/C
		Recon 2	THIN BONE W/C
Adult & Pediatric Brain (Axial Mode)	Series 2	Recon 1	ST
		Recon 2	BONE
		Recon 3	THIN ST
	Series 3	Recon 1	ST W/C
		Recon 2	BONE W/C
		Recon 3	THIN ST W/C
Orbit - Routine	Series 2	Recon 1	THIN ST
		Recon 2	BONE
		Recon 3	THIN BONE
	Series 3	Recon 1	THIN ST W/C
		Recon 2	BONE W/C
		Recon 3	THIN BONE W/C
3D CT: (Craniosynostosis, Congenital Facial Anomaly)	Series 2	Recon 1	ST
		Recon 2	THIN BONE

Protocol Name	Series or Group	Recon #	Series Description
		Recon 3	THIN ST
Pituitary Gland and Cavernous Sinus	Series 2	Recon 1	ST
		Recon 2	BONE
		Recon 3	THIN ST
	Series 3	Recon 1	THIN ST W/C
		Recon 2	THIN BONE W/C
	Series 4	Recon 1	ST W/C
		Recon 2	BONE W/C
		Recon 3	THIN ST W/C
Sinuses - Diagnostic	Series 2	Recon 1	THIN ST
		Recon 2	THIN BONE
	Series 3	Recon 1	THIN ST W/C
		Recon 2	THIN BONE W/C
Adult Neck - Routine	Series 2	Recon 1	ST
		Recon 2	BONE
		Recon 3	THIN ST
		Recon 4	THIN BONE
	Series 3, Group 1	Recon 1	ST
		Recon 2	THIN BONE
	Series 3 Group 2	Recon 1	ST
		Recon 2	THIN BONE
Adult & Pediatric Neck (Salivary Gland)	Series 2	Recon 1	ST
		Recon 2	BONE
		Recon 3	THIN ST
		Recon 4	THIN BONE

Protocol Name	Series or Group	Recon #	Series Description
	Series 3	Recon 1	ST W/C
		Recon 2	BONE W/C
		Recon 3	THIN ST W/C
		Recon 4	THIN BONE W/C
	Series 4, Group 1	Recon 1	ST
		Recon 2	THIN BONE
	Series 4, Group 2	Recon 1	ST
		Recon 2	THIN BONE
Neck (Parathyroid Adenoma)	Series 2	Recon 1	THIN ST W/O
	Series 3	Recon 1	THIN ST W/C
	Series 4	Recon 1	ST W/C
		Recon 2	BONE W/C
		Recon 3	THIN ST W/C
		Recon 4	THIN BONE W/C
	Series 5	Recon 1	ST
	Group 1		
		Recon 2	THIN BONE
	Series 5	Recon 1	ST
	Group 2		
		Recon 2	THIN BONE
Adult/Peds Cervical Spine (without and with metal)	Series 2	Recon 1	THIN ST
		Recon 2	BONE
		Recon 3	THIN BONE
	Series 3	Recon 1	THIN ST W/C
		Recon 2	BONE W/C

Protocol Name	Series or Group	Recon #	Series Description
		Recon 3	THIN BONE W/C
Adult/Peds Thoracic Spine (without and with metal)	Series 2	Recon 1	THIN ST
		Recon 2	THIN BONE
		Recon 3	BONE
	Series 3	Recon 1	THIN ST W/C
		Recon 2	THIN BONE W/C
		Recon 3	BONE W/C
Adult/Peds Lumbar Spine (without and with metal)	Series 2	Recon 1	THIN ST
		Recon 2	THIN BONE
		Recon 3	BONE
	Series 3	Recon 1	THIN ST W/C
		Recon 2	THIN BONE W/C
		Recon 3	BONE W/C
Vascular Imaging: CTA Neck Only (Cerebrovascular Disease)	Series 2	Recon 1	THIN ST W/C
		Recon 2	BONE W/C
Facial Trauma - Routine	Series 2	Recon 1	THIN ST
		Recon 2	THIN BONE
	Series 3	Recon 1	THIN ST W/C
		Recon 2	THIN BONE W/C
Stealth - Stereotactic Head (Whole Brain Treatment Planning)	Series 2	Recon 1	STEALTH
		Recon 2	BONE
Pediatric Stereotactic Head (0-6 years)	Series 2	Recon 1	STEALTH
Adult & Pediatric Temporal Bone (W/O Contrast)	Series 2	Recon 1	BONE
		Recon 2	THIN BONE RT

Protocol Name	Series or Group	Recon #	Series Description
		Recon 3	THIN BONE LT
		Recon 4	ST
Adult & Pediatric Temporal Bone (W/ Contrast Only or W/O & W/ Contrast)	Series 2	Recon 1	BONE W/O
		Recon 2	THIN BONE RT W/O
		Recon 3	THIN BONE LT W/O
		Recon 4	ST W/O
	Series 3	Recon 1	BONE W/C
		Recon 2	THIN BONE RT W/C
		Recon 3	THIN BONE LT W/C
		Recon 4	ST W/C
Pediatric Neck - Routine	Series 2	Recon1	ST
		Recon 2	BONE
		Recon 3	THIN ST
		Recon 4	THIN BONE
	Series 3	Recon1	ST
		Recon 2	THIN BONE
		Recon 1	ST
		Recon2	THIN BONE
Neck (Add on Options)	N/A	Recon 1	PERFUSION
Neck (Add on Options) Pediatric	N/A	Recon 1	PERFUSION*
Adult Cervical Spine	Series 2	Recon 1	THIN ST
		Recon 2	BONE
		Recon 3	THIN BONE
	Series 3	Recon 1	THIN ST W/C
		Recon 2	BONE W/C
		Recon 3	THIN BONE W/C

Protocol Name	Series or Group	Recon #	Series Description
Stealth (Stereotactic) Spine	Series 2	Recon 1	STEALTH
CTA Stroke Deluxe	Series 2	Recon 1	ST W/O
		Recon 2	BONE W/O
		Recon 3	THIN ST W/O
	Series 3	Recon 1	CTA
		Recon 2	BONE CTA
	Series 4	Recon 1	PERFUSION
	Series 5	Recon 1	ST W/C
CTA Head Only	Series 2	Recon 1	ST W/O
		Recon 2	BONE W/O
		Recon 3	THIN ST W/O
	Series 3		ST CTA
		Recon 2	BONE CTA
	Series 4	Recon 1	PERFUSION
	Series 5	Recon 1	ST W/C
CT Venography Head & Neck	Series 2	Recon 1	ST W/O
		Recon 2	BONE W/O
		Recon 3	THIN ST W/O
	Series 3	Recon 1	ST CTV
		Recon 2	BONE CTV
	Series 4	Recon 1	ST W/C
KLS Head	Series 2	Recon 1	KLS
		Recon 2	BONE

Chest/Thoracic

Protocol Name	Series or Group	Recon #	Series Description
Chest - Low Dose Follow-up/Screening	Series 2	Recon 1	ST
		Recon 2	THIN ST
		Recon 3	THIN LUNG
Chest - CTA for PE	Series 2	Recon 1	THIN ST CTA
		Recon 2	THIN LUNG CTA
Chest - Standard (Routine and High Resolution)	Series 2	Recon 1	ST
		Recon 2	THIN ST
		Recon 3	THIN LUNG
	Series 3	Recon 1	ST EXP HI-RES
	Series 4		PRONE SCOUT
			PRONE SCOUT
	Series 5	Recon 1	ST INSP HI-RES PRONE
Chest - Dynamic 3D Airway	Series 2	Recon 1	ST INSP
		Recon 2	THIN ST INSP
		Recon 3	THIN LUNG INSP
	Series 3	Recon 1	ST EXP
		Recon 2	THIN ST EXP
		Recon 3	THIN LUNG EXP
Veran	Series 2	Recon 1	ST INSP
		Recon 2	LUNG INSP
	Series 3	Recon 1	ST EXP
		Recon 2	THIN LUNG EXP

Cardiovascular

Protocol Name	Series or Group	Recon #	Series Description
Non-Gated CTA (Chest/Abd/Pelvis) and Gated chest and non-gated A/P CTA	Series 2	Recon 1	THIN ST W/O
	Series 3	Recon 1	THIN ST CTA
		Recon 2	LUNG CTA
	Series 4	Recon 1	THIN ST DELAY 2 MINUTES
Post-Endostent Non-con Volume Change (Abd/Pelvis only)	Series 2	Recon 1	THIN ST
Retrospectively-Gated CTA Chest	Series 2	Recon 1	THIN ST W/O
	Series 3	Recon 1	THIN ST CTA
		Recon 2	LUNG CTA
	Series 4	Recon 1	THIN ST DELAY 2 MINUTE
Upper Extremity CTA	Series 2	Recon1	ST W/O
	Series 3, Group 1	Recon 1	THIN ST CTA
	Series 3, Group 2	Recon 1	THIN ST CTA
Lower Extremity CTA	Series 2	Recon1	ST W/O
	Series 3 Group 1	Recon 1	THIN ST CTA
	Series 3, Group 2	Recon 1	THIN ST CTA
Prospectively-Gated CTA Chest (Non-Coronary)	Series 2	Recon 1	THIN ST W/O
	Series 3	Recon 1	THIN ST CTA
Abdominal Wall Flap CTA	Series 2	Recon 1	THIN ST CTA
Prospectively-Gated Coronary CTA	Series 2	Recon 1	ST W/O
		Recon 2	THIN LUNG W/O
	Series 3		TIMING BOLUS

Protocol Name	Series or Group	Recon #	Series Description
	Series 4		THIN ST CTA PRO
Retrospectively-Gated Coronary CTA	Series 2	Recon 1	ST W/O
			THIN LUNG W/O
	Series 3	Recon 1	TIMING BOLUS
	Series 4	Recon 1	THIN ST CTA RETRO
		Recon 2	LUNG CTA
TAVI CTA	Series 2	Recon 1	ST THIN CTA TAVR
	Group 2		
		Recon 2	4-94%
		Recon 3	35-65%
	Series 2	Recon 1	ST THIN CTA TAVR
	Group 3		
Subclavian CT Venogram	Series 2	Recon 1	THIN ST CTV
Prospectively-Gated CTA Chest Triple R/O ER (Non-Coronary)	Series 2	Recon 1	THIN ST W/O
	Series 3	Recon 1	THIN ST CTA
Prospectively-Gated Left Atrial Appendage	Series 2	Recon 1	THIN ST CTA
	Series 3	Recon 1	THIN ST Delay 1 MINUTE

Musculoskeletal

Protocol Name	Series or Group	Recon #	Series Description
Bony Pelvis/Hips/SI/Femur/FAI (Without and with metal)	Series 2	Recon 1	BONE
		Recon 2	ST
Femoral Anteversion	Series 2, Group 1	Recon 1	BONE
	Series 2, Group 2	Recon 1	BONE
	Series 2, Group 3	Recon 1	BONE
Knee/Tibia (with and without metal)	Series 2	Recon 1	THIN BONE
		Recon 2	THIN ST
Ankle/Foot/Distal Tibia (with and without metal)	Series 2	Recon 1	THIN BONE
		Recon 2	THIN ST
Shoulder/Humerus (with and without metal)	Series 2	Recon 1	BONE
		Recon 2	ST
	Series 3		ABER SCOUT
			ABER SCOUT
	Series 4	Recon 1	BONE ABER
			ST ABER
Elbow/Forearm (with and without metal)	Series 2	Recon 1	THIN BONE
		Recon 2	THIN ST
Wrist (with and without metal)	Series 2	Recon 1	THIN BONE
		Recon 2	THIN ST
Mako Knee	Series 2, Group 1	Recon 1	BONE MAKO KNEE
	Series 2, Group 2	Recon 1	BONE MAKO KNEE

Protocol Name	Series or Group	Recon #	Series Description
	Series 2, Group 3	Recon 1	BONE MAKO KNEE
Mako Hip	Series 2, Group 1	Recon 1	BONE MAKO HIP
	Series 2, Group 2	Recons 2	BONE MAKO HIP
Chest Wall/Clavicle/AC Joint/SC Joint/Sternum/Ribs	Series 2	Recon 1	BONE
		Recon 2	ST
Soft Tissue Extremity with IV Contrast	Series 2	Recon 1	THIN ST W/C
		Recon 2	BONE W/C
Hip Preservation CT	Series 2, Group 1	Recon 1	THIN BONE
		Recon 2	THIN ST
	Series 2, Group 1	Recon 1	THIN BONE
		Recon 2	THIN ST
Biomet Shoulder Right	Series 2	Recon 1	BIOMET SET RT
Biomet Shoulder Left	Series 2	Recon 1	BIOMET SET LT

Pediatrics

Protocol Name	Series or Group	Recon #	Series Description
Routine Abdomen/Pelvis (Newborn - 18 years)	Series 2	Recon 1	ST
		Recon 2	THIN ST
Renal Stone/Flank Pain (Newborn - 18 years)	Series 2	Recon 1	ST
		Recon 2	THIN ST
Pediatric Chest Dynamic 3D Airway	Series 2	Recon 1	ST INSP HI-RES
		Recon 2	THIN ST INSP HI-RES
		Recon 3	LUNG INSP HI-RES
		Recon 4	THIN LUNG INSP HI-RES
	Series 3	Recon 1	ST EXP HI-RES
		Recon 2	THIN ST EXP HI-RES
		Recon 3	LUNG EXP HI-RES
		Recon 4	THIN LUNG EXP HI-RES
Chest Pectus (Newborn - 18 years)	Series 2	Recon 1	ST
		Recon 2	THIN ST
		Recon 3	LUNG
		Recon 4	THIN LUNG
CTA Chest for PE (Newborn - 18 years)	Series 2	Recon 1	LUNG CTA
		Recon 2	THIN LUNG CTA
		Recon 3	THIN ST CTA
Routine Chest/Abdomen/Pelvis (Newborn - 18 years)	Series 2	Recon 1	ST
		Recon 2	THIN ST
		Recon 3	LUNG
		Recon 4	THIN LUNG

Dual Energy CT (DECT)

Protocol Name	Series or Group	Recon #	Series Description
Adult Brain: Post Thrombolysis Helical (GSI Dual Energy)	Series 2	Recon 1	QC
	Series 3	Recon 1	ST 67keV MAR
	Series 3		THIN BONE 67keV MAR
			THIN ST 67keV MAR
CTA Abd - Mesenteric Ischemia (GSI)	Series 2	Recon 1	THIN ST CTA
	Series 3	Recon 1	ST W/C 50 keV
		Recon2	THIN ST W/C 50 keV
Abd-Liver - Hepatocellular Carcinoma (HCC) (GSI)	Series 2, Group 1	Recon 1	ST CTA 50 keV
		Recon 2	THIN ST CTA 50 keV
	Series 2, Group 2	Recon 1	ST W/C
		Recon 2	THIN ST W/C
	Series 3	Recon 1	ST DELAY 3 MINUTES
Abd-Pancreas - Pancreas Cancer (Neoplasm Screening)	Series 2	Recon 1	ST W/O
	Series 3, Group 1	Recon 1	ST ARTERIAL 50 keV
		Recon 2	THIN ST ARTERIAL 50 keV
	Series 3, Group 2	Recon 1	ST W/C
		Recon 2	THIN ST W/C