GE HealthCare

LightSpeed™ VCT

Reference Protocol Guide

5761709-1EN
Revision 3
GE Medical Systems, LLC does business as GE HealthCare

This manual supports the following configurations:

- LightSpeed™ VCT
- LightSpeed™ VCT XT
- LightSpeed™ VCT XTe

Not all configurations are available in all regions.

This product is certified as a LightSpeed™ Multislice CT System.

LightSpeed™ VCT
Reference Protocol Guide, English
5761709-1EN
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GE HealthCare

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Reference Adult Protocols - Installed Options : ASiR, Sub 0.4sec, VCT85kW and VCT Hi Power

Head

Table 2-1

[Interval]* - For Helical acquisitions, Interval unless otherwise indicated is equal to the slice thickness.
For Axial and Cine acquisitions, Interval unless otherwise indicated is equal to the Beam Collimation/Detector Coverage.

Protocol Number	Protocol Name	Post Process	Scan Type	SFOV	Pitch Table Speed Row	Rotation Time (s)	Slice Thickness (mm) [Interval]* (mm)	Beam Collimation (mm)	kV	mA Min-Max NI Avg mA	Dose Reduction (%)	Recon Type	ASiR (%)	CTDI vol (mGy) ASiR	DLP (mGy·cm) ASiR	Scan Length (mm)	Phantom (cm)	Description
21.1	Routine Head 1s Group1		Axial	Head	4i	1	5	20	140	120	40	Stnd	40	32.00	192.01	55	16	Routine head protocol for evaluation of the brain for abnormalities.
	Group2		Axial	Head	4i	1	5	20	120	190	40	Stnd	40	36.47	291.78	75	16	
21.2	Routine Head 2s Group1		Axial	Head	4i	2	5	20	140	60	40	Stnd	40	32.00	192.01	55	16	Routine head protocol for evaluation of the brain for abnormalities.
	Group2		Axial	Head	4i	2	5	20	120	95	40	Stnd	40	36.47	291.78	75	16	
21.3	Trauma Head 2.5mm		Axial	Head	8i	0.5	2.5	20	140	335	40	Stnd	40	44.67	625.37	137.5	16	Emergency head protocol for evaluation of the brain and cranium for abnormalities.
21.4	Routine Head 0.5s Group1		Axial	Head	4i	0.5	5	20	140	240	40	Stnd	40	32.00	192.01	55	16	Routine head protocol for evaluation of the brain for abnormalities.
	Group2		Axial	Head	4i	0.5	5	20	120	360	40	Stnd	40	35.52	284.17	75	16	
21.5	Circle of Willis 0.4s.	MIROI	Axial	Head	1i	1	5 [0]	5	120	50	0	Stnd	0	125.58	62.79	0	16	Test bolus for CTangiography of the head for evaluation of carotid and cerebral vasculature.
			Helical	Head	0.531:1 10.625	0.4	0.625	20	120	180	40	Stnd Plus IQE	50	26.02	252.82	80	16	CT angiography of the head for evaluation of carotid and cerebral vasculature.
21.6	CoW/ Carotid 0.625mm 0.4s.Smart mA	MIROI	Axial	Head	1i	1	5 [0]	5	120	80	0	Stnd	0	180.84	90.42	0	16	Test bolus for CTangiography of the head for evaluation of carotid and cerebral vasculature.
			Helical	Head	0.531:1 10.625	0.4	0.625	20	120	SmartmA 100-650mA NI=8 Avg mA 415	30	Stnd Plus IQE	40	61.66	1155.86	170	16	CT angiography of the head for evaluation of carotid and cerebral vasculature.
21.8	Helical Head	DMPR	Helical	Head	0.531:1 10.625	0.5	0.625	20	120	180	40	Stnd Plus IQE	40	32.52	527.31	145	16	Helical scan mode for evaluation of the brain for cerebral abnormality.
21.10	VHS Head 4D CTA	MIROI	Axial	Head	1i	1	5 [0]	5	120	50	0	Stnd	0	125.58	62.79	0	16	Test bolus for CTangiography of the head for evaluation of carotid and cerebral vasculature.

Protocol Number	Protocol Name	Post Process	Scan Type	SFOV	Pitch Table Speed Row	Rotation Time (s)	Slice Thickness (mm) [Interval]* (mm)	Beam Collimation (mm)	kV	mA Min-Max NI Avg mA	Dose Reduction (%)	Recon Type	ASiR (%)	CTDI vol (mGy) ASiR	DLP (mGy·cm) ASiR	Scan Length (mm)	Phantom (cm)	Description
			Helical-S	Head	0.984:1 39.375 18 pass	0.4	5 [10]	40	120	150	50	Stnd Plus	50	248.10	3101.19	110	16	CT angiography of the head using Volume Helical scan mode for evaluation of cerebral vasculature.
21.11	VHS Perfusion 350-370 Strength Contrast		Axial	Head	4i	1	5	20	120	200	40	Stnd	40	38.39	537.48	135	16	Non-Enhance Brain, evaluation for hemorrhage or infarction.
		Perfusion	Helical-S/P	Head	0.984:1 39.375 28 pass	0.4	5	40	80	200	0	Stnd	50	186.02	2325.25	110	16	CT Perfusion using Volume Helical scan mode for evaluation of cerebral perfusion over time.
			Axial	Head	4i	1	5	20	120	200	40	Stnd	40	38.39	537.48	135	16	Post Contrast Brain, Evaluation for residual tissue enhancement.
21.12	CT Perfusion 300-320 Strength Contrast		Axial	Head	4i	1	5	20	120	200	40	Stnd	40	38.39	537.48	135	16	Non-Enhance Brain, evaluation for hemorrhage or infarction.
		Perfusion	Cine	Head	8i	1	5 [0]	40	80	200	0	Stnd	0	652.82	2611.27	35	16	CT Perfusion using Cine scan mode for evaluation of cerebral perfusion over time.
			Axial	Head	4i	1	5	20	120	200	40	Stnd	40	38.39	537.48	135	16	Non-Enhance Brain, evaluation for hemorrhage or infarction.
21.13	CT Perfusion 350-370 Strength Contrast		Axial	Head	4i	1	5	20	120	200	40	Stnd	40	38.39	537.48	135	16	Non-Enhance Brain, evaluation for hemorrhage or infarction.
		Perfusion	Cine	Head	8i	1	5 [0]	40	80	200	0	Stnd	0	587.55	2350.19	35	16	CT Perfusion using Cine scan mode for evaluation of cerebral perfusion over time.
			Axial	Head	4i	1	5	20	120	200	40	Stnd	40	38.39	537.48	135	16	Post Contrast Brain, Evaluation for residual tissue enhancement.
21.14	CT Perfusion Brain Tumor - Dual Phase		Axial	Head	4i	1	5	20	120	200	40	Stnd	40	38.39	537.48	135	16	Non-Enhance Brain, evaluation for hemorrhage or infarction.
	Group 1	Perfusion	Cine	Head	8i	1	5 [0]	40	80	200	0	Stnd	0	587.55	2350.19	35	16	CT Perfusion using Cine scan mode for evaluation of cerebral perfusion over time.
	Group 2	Perfusion	Axial	Head	8i	1	5 [0]	40	80	200	0	Stnd	0	130.54	522.15	35	16	Delayed phase CT Perfusion using Axial scan mode for evaluation of Brain tumor permeability.

Protocol Number	Protocol Name	Post Process	Scan Type	SFOV	Pitch Table Speed Row	Rotation Time (s)	Slice Thickness (mm) [Interval]* (mm)	Beam Collimation (mm)	kV	mA Min-Max NI Avg mA	Dose Reduction (%)	Recon Type	ASiR (%)	CTDI vol (mGy) ASiR	DLP (mGy·cm) ASiR	Scan Length (mm)	Phantom (cm)	Description
			Axial	Head	4i	1	5	20	120	200	40	Stnd	40	38.39	537.48	135	16	Post Contrast Brain, Evaluation for residual tissue enhancement.
21.15	CT Perfusion 350-370 Strength Contrast (Axial)		Axial	Head	4i	1	5	20	120	200	40	Stnd	40	38.39	537.48	135	16	Non-Enhance Brain, evaluation for hemorrhage or infarction.
		Perfusion	Axial	Head	8i	1	5 [0]	40	80	200	0	Stnd	0	287.18	1148.73	35	16	CT Perfusion using Axial scan mode for evaluation of cerebral perfusion over time.
			Axial	Head	4i	1	5	20	120	200	40	Stnd	40	38.39	537.48	135	16	Post Contrast Brain, Evaluation for residual tissue enhancement.
21.16	CT Perfusion 350-370 Strength Contrast (Axial Shuttle Mode)		Axial	Head	4i	1	5	20	120	200	40	Stnd	40	38.39	537.48	135	16	Non-Enhance Brain, evaluation for hemorrhage or infarction.
		Perfusion	Axial-S	Head	8i 17 pass	0.4	5	40	80	500	0	Stnd	0	221.91	1775.31	75	16	CT Perfusion using Volume Shuttle (Axial) scan mode for evaluation of cerebral perfusion over time.
			Axial	Head	4i	1	5	20	120	200	40	Stnd	40	38.39	537.48	135	16	Post Contrast Brain, Evaluation for residual tissue enhancement.

Orbit

Table 2-2

[Interval]* - For Helical acquisitions, Interval unless otherwise indicated is equal to the slice thickness.
For Axial and Cine acquisitions, Interval unless otherwise indicated is equal to the Beam Collimation/Detector Coverage.

ProtocolNumber	Protocol Name	Post Process	Scan Type	SFOV	Pitch Table Speed Row	Rotation Time (seconds)	Slice Thickness (mm) [Interval]* (mm)	Beam Collimation (mm)	kV	mA Min-Max NI Avg mA	Dose Reduction (%)	Recon Type	ASiR (%)	CTDI vol (mGy) ASiR	DLP (mGy·cm) ASiR	Scan Length (cm)	Phantom (cm)	Description
22.1	Sinus Supine Helical + DMPR	DMPR	Helical	Head	0.531:1 10.625	0.4	0.625	20	120	85	30	Bone Plus IQE	50	12.29	112.48	74.375	16	Routine Helical Sinus protocol, Evaluation for any abnormality
22.3	Orbits Helical + DMPR	DMPR	Helical	Head	0.531:1 10.625	0.5	0.625	20	120	155	30	Stnd Plus IQE	40	28.00	221.29	61.875	16	Routine Helical Orbit protocol, Evaluation for abnormality soft tissues and bone structures of the face.
22.6	Helical IAC 0.625mm Axial mode - Use Reformat for Coronal		Helical	Head	0.531:1 10.625	0.6	0.625	20	140	190	30	Stnd Plus IQE	40	57.23	319.79	38.75	16	Axial scan mode, Evaluation for inner ear abnormalities in Axial plane
22.8	Axial and Coronal IAC		Axial	Head	16i	1	1.25	20	140	195	30	Stnd	40	52.00	208.01	38.75	16	Helical scan mode, Evaluation for inner ear abnormalities in Axial plane
			Axial	Head	16i	1	1.25	20	140	235	30	Stnd	40	62.67	250.68	38.75	16	Helical scan mode, Evaluation for inner ear abnormalities in Coronal plane

Neck

Table 2-3

[Interval]* - For Helical acquisitions, Interval unless otherwise indicated is equal to the slice thickness.
For Axial and Cine acquisitions, Interval unless otherwise indicated is equal to the Beam Collimation/Detector Coverage.

Protocol Number	Protocol Name	Post Process	Scan Type	SFOV	Pitch Table Speed Row	Rotation Time (seconds)	Slice Thickness (mm) [Interval]* (mm)	Beam Collimation (mm)	kV	mA Min-Max NI Avg mA	Dose Reduction (%)	Recon Type	ASiR (%)	CTDI vol (mGy) ASiR	DLP (mGy·cm) ASiR	Scan Length (cm)	Phantom (cm)	Description
23.1	C-Spine C5-C7 Axial		Axial	SmallBody	8i	0.5	2.5	20	140	520	20	Stnd	40	28.28	395.86	137.5	32	C-Spine C5-C7 area Axial mode, Evaluation for soft tissue, disc and bone abnormalitities.
23.2	C-Spine C1-C4 Axial		Axial	SmallBody	8i	1	2.5	20	120	190	20	Stnd	40	14.17	113.36	77.5	32	C-Spine C1-C4 area Axial mode, Evaluation for soft tissue, disc and bone abnormalitities.
23.3	C-Spine Helical + DMPR	DMPR	Helical	SmallBody	0.516:1 20.625	0.8	0.625	40	120	270	20	Bone Plus IQE	40	29.20	421.46	110	32	C-Spine Helical mode with DMPR, Evaluation for soft tissue, disc and bone abnormalitities.
23.4	C-Spine Helical + DMPR/ SmartmA	DMPR	Helical	SmallBody	0.516:1 20.625	0.8	0.625	40	120	SmartmA 100-650mA NI=11.34 Avg mA 250	20	Bone Plus IQE	40	27.04	390.24	110	32	C-Spine Helical mode with DMPR and SmartmA, Evaluation for soft tissue, disc and bone abnormalitities.
23.8	Carotid 0.625mm 0.4s. 0.5:1 SmartmA/ SmartPrep		Helical	SmallBody	0.516:1 20.625	0.4	0.625	40	140	SmartmA 100-650mA NI=11 Avg mA 345	40	Stnd Plus IQE	50	26.46	541.51	170	32	Carotid CTA (pitch 0.5:1) with SmartmA and SmartPrep, Evaluation of carotid vasculature.
23.9	Carotid 0.625mm 0.4s. 0.9:1 SmartmA/ SmartPrep		Helical	SmallBody	0.984:1 39.375	0.4	0.625	40	120	SmartmA 80-700mA NI=11 Avg mA 375	40	Stnd Plus IQE	50	10.62	215.89	170	32	Carotid CTA (pitch 0.9:1) with SmartmA and SmartPrep, Evaluation of carotid vasculature.
23.10	Carotid/ CoW 0.625mm 0.4s. AutomA	MIROI	Axial	SmallBody	1i	1	5 [0]	5	120	80	0	Stnd	0	99.00	49.50	0	32	Test bolus for Carotid CTA (pitch 0.5:1) of the head for evaluation of carotid and cerebral vasculature.
			Helical	SmallBody	0.516:1 20.625	0.4	0.625	40	140	AutomA 80-650mA NI=11 Avg mA 360	40	Stnd Plus IQE	50	27.61	565.06	170	32	Carotid and Brain CTA (pitch 0.5:1) with AutomA, Evaluation of carotid and cerebral vasculature.
23.11	Carotid/ CoW 0.625mm 0.4s.SmartmA/ SmartPrep		Helical	SmallBody	0.969:1 19.375	0.4	0.625	20	140	SmartmA 100-650mA NI=11 Avg mA 390	40	Stnd Plus IQE	50	17.51	330.81	170	32	Carotid CTA (pitch 0.9:1) with SmartmA and SmartPrep, Evaluation of carotid and cerebral vasculature.
23.12	Soft Tissue Neck 2.5mm AutomA		Helical	SmallBody	0.984:1 39.375	0.5	2.5	40	120	AutomA 100-335mA NI=9.1 Avg mA 175	30	Stnd Plus	30	6.20	113.26	150	32	Neck with AutomA, Evaluation of soft tissue structures for abnormality

Protocol Number	Protocol Name	Post Process	Scan Type	SFOV	Pitch Table Speed Row	Rotation Time (seconds)	Slice Thickness (mm) [Interval]* (mm)	Beam Collimation (mm)	kV	mA Min-Max NI Avg mA	Dose Reduction (%)	Recon Type	ASiR (%)	CTDI vol (mGy) ASiR	DLP (mGy·cm) ASiR	Scan Length (cm)	Phantom (cm)	Description
23.13	Soft Tissue Neck + DMPR/ SmartmA	DMPR	Helical	SmallBody	0.969:1 19.375	0.5	0.625	20	120	SmartmA 100-600mA NI=12.6 Avg mA 255	40	Stnd Plus IQE	50	9.82	165.46	150	32	Neck with DMPR and SmartmA, Evaluation of soft tissue structures for abnormality

Upper Extremity

Table 2-4

[Interval]* - For Helical acquisitions, Interval unless otherwise indicated is equal to the slice thickness.
For Axial and Cine acquisitions, Interval unless otherwise indicated is equal to the Beam Collimation/Detector Coverage.

Protocol Number	Protocol Name	Post Process	Scan Type	SFOV	Pitch Table Speed Row	Rotation Time (seconds)	Slice Thickness (mm) [Interval]* (mm)	Beam Collimation (mm)	kV	mA Min-Max NI Avg mA	Dose Reduction (%)	Recon Type	ASiR (%)	CTDI vol (mGy) ASiR	DLP (mGy·cm) ASiR	Scan Length (cm)	Phantom (cm)	Description
24.1	Shoulder 1.25mm + DMPR	DMPR	Helical	LargeBody	0.516:1 20.625	0.6	1.25 [0.625]	40	140	360	40	Stnd Plus IQE	40	47.03	632.79	100	32	Shoulder with DMPR, Evaluation of soft tissue and bone of shoulder area
24.2	Shoulder 1.25mm + DMPR/ SmartmA	DMPR	Helical	LargeBody	0.516:1 20.625	0.6	1.25 [0.625]	40	140	SmartmA 100-650mA NI=20 Avg mA 355	40	Stnd Plus IQE	40	46.37	624.00	100	32	Shoulder with DMPR and SmartmA, Evaluation of soft tissue and bone of shoulder area

Chest

Table 2-5

[Interval]* - For Helical acquisitions, Interval unless otherwise indicated is equal to the slice thickness.
For Axial and Cine acquisitions, Interval unless otherwise indicated is equal to the Beam Collimation/Detector Coverage.

Protocol Number	Protocol Name	Post Process	Scan Type	SFOV	Pitch Table Speed Row	Rotation Time (seconds)	Slice Thickness (mm) [Interval]* (mm)	Beam Collimation (mm)	kV	mA Min-Max NI Avg mA	Dose Reduction (%)	Recon Type	ASiR (%)	CTDI vol (mGy) ASiR	DLP (mGy·cm) ASiR	Scan Length (cm)	Phantom (cm)	Description
25.1	Routine Chest 0.4s. 5mm SmartmA		Helical	LargeBody	1.375:1 55.0	0.4	5	40	120	SmartmA 100-650mA NI=13 Avg mA 250	50	Stnd Plus	50	5.76	142.87	200	32	Chest with SmartmA, Evaluation of mediastinum and lungs fields
25.2	Routine Chest 0.4s.+ DMPR/ SmartmA	DMPR	Helical	LargeBody	0.984:1 39.375	0.4	0.625	40	120	SmartmA 100-750mA NI=22 Avg mA 310	50	Stnd Plus	50	9.98	232.46	200	32	Chest with SmartmA and DMPR, Evaluation of mediastinum and lungs fields
25.3	Chest with HiRes 0.4s. SmartmA		Helical	LargeBody	0.969:1 19.375	0.4	5	20	120	SmartmA 80-650mA NI=12 Avg mA 300	40	Chest Plus	40	10.50	229.59	200	32	Chest with SmartmA, Evaluation of mediastinum and lung fields with higher resolution images of the lungs
25.4	Hi Res Chest 0.5s. Axial		Axial	LargeBody	1i	0.5	1.25 [10]	1.25	120	190	50	Bone+	50	2.22	53.35	230	32	Axial scan mode, Evaluation of mediastinum and lung fields in high resolution mode
25.5	Chest Abd Pelvis 0.4/ 0.5s. SmartmA 5mm (2 groups) Group1		Helical	LargeBody	0.984:1 39.375	0.4	5	40	120	SmartmA 100-650mA NI=13 Avg mA 185	50	Stnd Plus	50	5.96	108.95	150	32	Multi group scan for Chest, Abdomen, Pelvis (0.4/0.5sec) with SmartmA, Evaluation of chest and abdominal anatomy for abnormalities
	Group2		Helical	LargeBody	1.375:1 55.0	0.5	5	40	120	SmartmA 100-650mA NI=13 Avg mA 185	50	Stnd Plus	50	5.33	182.72	295	32	
25.6	Chest Abd Pelvis 0.5s + DMPR SmartPrep	DMPR	Helical	LargeBody	1.375:1 55.0	0.5	0.625	40	120	SmartmA 100-750mA NI=22 Avg mA 270	50	Stnd Plus	50	7.78	387.24	450	32	Helical scan mode (0.5sec) with SmartmA, Evaluation of chest and abdominal anatomy for abnormalities
25.7	Pulmonary Embolis 0.5s.	MIROI	Axial	LargeBody	1i	1	5 [0]	5	120	80	0	Stnd	0	93.89	46.95	0	32	Timing Bolus for Helical scan mode 1.25mm thickness and helical pitch of 0.9:1, evaluation of Chest for pulmonary embolism
			Helical	LargeBody	0.984:1 39.375	0.5	1.25	40	120	350	40	Stnd	40	14.09	300.25	180	32	Helical scan mode 1.25mm thickness and helical pitch of 0.9:1, Evaluation Chest for pulmonary embolism

Protocol Number	Protocol Name	Post Process	Scan Type	SFOV	Pitch Table Speed Row	Rotation Time (seconds)	Slice Thickness (mm) [Interval]* (mm)	Beam Collimation (mm)	kV	mA Min-Max NI Avg mA	Dose Reduction (%)	Recon Type	ASiR (%)	CTDIvol (mGy) ASiR	DLP (mGy·cm) ASiR	Scan Length (cm)	Phantom (cm)	Description
25.8	Pulmonary Embolis 0.5s. SmartmA	MIROI	Axial	LargeBody	1i	1	5 [0]	5	120	80	0	Stnd	0	93.89	46.95	0	32	Timing Bolus for Helical scan mode 1.25mm thickness and helical pitch of 0.9:1 with SmartmA, evaluation of Chest for pulmonary embolism
			Helical	LargeBody	0.984:1 39.375	0.5	1.25	40	120	SmartmA 100-750mA NI=20 Avg mA 300	40	Stnd	40	12.07	256.93	180	32	Helical scan mode 1.25mm thickness and helical pitch of 0.9:1 with SmartmA, Evaluation Chest for pulmonary embolism
25.9	Aortic Dissection 0.625mm + DMPR/ SmartmA/ SmartPrep	DMPR	Helical	LargeBody	1.375:1 55.0	0.5	0.625	40	120	SmartmA 100-750mA NI=22 Avg mA 360	40	Stnd Plus	40	10.37	361.20	300	32	Helical scan mode 0.625mm thickness and helical pitch of 1.375:1 with SmartmA, SmartPrep and DMPR, Evaluation for aortic dissection
25.10	Aortic Dissection 1.25mm + DMPR/ SmartmA/ SmartPrep	DMPR	Helical	LargeBody	1.375:1 55.0	0.5	1.25 [0.8]	40	120	SmartmA 100-750mA NI=20 Avg mA 330	40	Stnd Plus	40	9.51	330.68	300	32	Helical scan mode 1.25mm thickness and helical pitch of 1.375:1 with SmartmA, SmartPrep and DMPR, Evaluation for aortic dissection
25.11	Lung Assessment	Advanced Lung Analysis	Helical	LargeBody	0.969:1 19.375	0.5	1.25	20	120	120	0	Bone	0	5.25	114.77	200	32	Helical scan mode for acquisition of data for Advanced Lung Analysis (ALA) software for lung nodule assessment
25.12	Gated Chest Cardiac Helical		Helical	LargeBody	1.375:1 55.0	0.4	5	40	120	60	0	Stnd Plus	0	1.38	13.55	50	32	Localizer scan for Helical Gated scan for evaluation of thoracic vasculature
		MIROI	Axial	LargeBody	1i	1	5 [0]	5	120	60	0	Stnd	0	98.59	49.29	0	32	Timing bolus scan for Helical Gated scan for evaluation of thoracic vasculature
			Cardiac SEG	CardiacLarge	0.160:1 6.4	0.35	0.625	40	120	ECG Mod 110-270mA Phase 70-80 Avg mA 270	40	Stnd SS Seg	40	30.98	1037.93	300	32	Helical Gated scan for evaluation of thoracic vasculature
25.13	Gated Chest SnapShot Pulse		Helical	LargeBody	1.375:1 55.0	0.4	5	40	120	60	0	Stnd Plus	0	1.38	13.55	50	32	Localizer scan for Cine Gated scan for evaluation of thoracic vasculature
		MIROI	Axial	LargeBody	1i	1	5 [0]	5	120	60	0	Stnd	0	98.59	49.29	0	32	Timing bolus scan for Cine Gated scan for evaluation of thoracic vasculature
			Cardiac Pulse Cine	CardiacLarge	56i	0.35	0.625 [35]	40	120	270	40	Stnd SS Seg	40	14.42	454.39	314.375	32	Cine Gated scan for evaluation of thoracic vasculature
25.14	SmartScore - Gated 0.35s	Smart Score	Cine	LargeBody	8i	0.35	2.5	20	120	430	0	Stnd Segment	0	8.99	89.95	97.5	32	Cine gated scan mode for acquisition of data for coronary artery calcification analysis

Protocol Number	Protocol Name	Post Process	Scan Type	SFOV	Pitch Table Speed Row	Rotation Time (seconds)	Slice Thickness (mm) [Interval]* (mm)	Beam Collimation (mm)	kV	mA Min-Max NI Avg mA	Dose Reduction (%)	Recon Type	ASiR (%)	CTDIvol (mGy) ASiR	DLP (mGy·cm) ASiR	Scan Length (cm)	Phantom (cm)	Description
25.15	SnapShot Pulse 30-65 BPM		Helical	LargeBody	1.375:1 55.0	0.4	5	40	120	60	0	Stnd Plus	0	1.38	13.55	50	32	Localizer scan for Prospectively gated Cardiac Cine scan for evaluation of coronary arteries, intended for stable heart rates 30-65 bpm
		MIROI	Axial	LargeBody	1i	1	5 [0]	5	120	60	0	Stnd	0	98.59	49.29	0	32	Timing bolus scan for Prospectively gated Cardiac Cine scan for evaluation of coronary arteries, intended for stable heart rates 30-65 bpm
			Cardiac Pulse Cine	CardiacSmall	56i	0.35	0.625 [35]	40	120	270	40	Stnd SS Seg	40	12.69	133.24	104.375	32	Prospectively gated Cardiac Cine scan for evaluation of coronary arteries, intended for stable heart rates 30-65 bpm
25.16	SnapShot Segment 30-74 BPM		Helical	LargeBody	1.375:1 55.0	0.4	5	40	120	60	0	Stnd Plus	0	1.38	13.55	50	32	Localizer scan for Retrospectively gated Cardiac Helical scan for evaluation of coronary arteries, intended for heart rates 30-74 bpm
		MIROI	Axial	LargeBody	1i	1	5 [0]	5	120	60	0	Stnd	0	98.59	49.29	0	32	Timing bolus scan for Retrospectively gated Cardiac Helical scan for evaluation of coronary arteries, intended for heart rates 30-74 bpm
			Cardiac SEG	CardiacLarge	0.160:1 6.4	0.35	0.625	40	120	ECG Mod 120-270mA Phase 70-80 Avg mA 270	40	Stnd SS Seg	40	33.25	448.83	100	32	Retrospectively gated Cardiac Helical scan for evaluation of coronary arteries, intended for heart rates 30-74 bpm
25.17	SnapShot Burst 75-113 BPM		Helical	LargeBody	1.375:1 55.0	0.4	5	40	120	60	0	Stnd Plus	0	1.38	13.55	50	32	Localizer scan for Retrospectively gated Cardiac Helical scan for evaluation of coronary arteries, intended for heart rates 75-113 bpm
		MIROI	Axial	LargeBody	1i	1	5 [0]	5	120	60	0	Stnd	0	98.59	49.29	0	32	Timing bolus scan for Retrospectively gated Cardiac Helical scan for evaluation of coronary arteries, intended for heart rates 75-113 bpm
			Cardiac SSB	CardiacLarge	0.160:1 6.4	0.35	0.625	40	120	ECG Mod 120-270mA Phase 70-80 Avg mA 270	40	Stnd SSB	40	33.25	448.83	100	32	Retrospectively gated Cardiac Helical scan for evaluation of coronary arteries, intended for heart rates 75-113 bpm
25.18	SnapShot Burst Plus 114+ BPM		Helical	LargeBody	1.375:1 55.0	0.4	5	40	120	60	0	Stnd Plus	0	1.38	13.55	50	32	Localizer scan for Retrospectively gated Cardiac Helical scan for evaluation of coronary arteries, intended for heart rates over 113 bpm

Protocol Number	Protocol Name	Post Process	Scan Type	SFOV	Pitch Table Speed Row	Rotation Time (seconds)	Slice Thickness (mm) [Interval]* (mm)	Beam Collimation (mm)	kV	mA Min-Max NI Avg mA	Dose Reduction (%)	Recon Type	ASiR (%)	CTDIvol (mGy) ASiR	DLP (mGy·cm) ASiR	Scan Length (cm)	Phantom (cm)	Description
		MIROI	Axial	LargeBody	1i	1	5 [0]	5	120	60	0	Stnd	0	98.59	49.29	0	32	Timing bolus scan for Retrospectively gated Cardiac Helical scan for evaluation of coronary arteries, intended for heart rates over 113 bpm
			Cardiac SSBP	CardiacLarge	0.160:1 6.4	0.35	0.625	40	120	ECG Mod 120-270mA Phase 70-80 Avg mA 270	40	Stnd SSB	40	33.25	448.83	100	32	Retrospectively gated Cardiac Helical scan for evaluation of coronary arteries, intended for heart rates over 113 bpm
25.19	Advantage 4D		Helical	LargeBody	1.375:1 55.0	0.6	5	40	120	170	40	Stnd Plus	40	5.88	145.59	200	32	Localizer scan for Advantage 4D sereis
		Advantage 4D	Cine	LargeBody	8i	1	2.5	20	120	70	30	Stnd	30	35.67	570.67	157.5	32	Cine scan mode for acquisition data for Advantage 4D for retrospective gating
25.20	VHS Chest 4D CTA SmartPrep		Helical-S	LargeBody	1.375:1 55.0 11 pass	0.4	5 [10]	40	120	SmartmA 150-500mA NI=14 Avg mA 210	40	Stnd Plus	40	67.29	2119.57	300	32	Volume Helical scan mode with SmartPrep for timr resolved CT angiography of chest vasculature

Abdomen

Table 2-6

[Interval]* - For Helical acquisitions, Interval unless otherwise indicated is equal to the slice thickness.
For Axial and Cine acquisitions, Interval unless otherwise indicated is equal to the Beam Collimation/Detector Coverage.

Protocol Number	Protocol Name	Post Process	Scan Type	SFOV	Pitch Table Speed Row	Rotation Time (seconds)	Slice Thickness (mm) [Interval]* (mm)	Beam Collimation (mm)	kV	mA Min-Max NI Avg mA	Dose Reduction (%)	Recon Type	ASiR (%)	CTDI vol (mGy) ASiR	DLP (mGy·cm) ASiR	Scan Length (cm)	Phantom (cm)	Description
26.1	Abdomen Pelvis 0.5s. 5mm SmartmA		Helical	LargeBody	1.375:1 55.0	0.5	5	40	120	SmartmA 50-650mA NI=11.57 Avg mA 250	50	Stnd Plus	50	7.2	322.54	400	32	Basic Abdomen Pelvis (0.5sec) with Smart mA, Evaluation for abnormalities of abdominal and pelvic structures
26.2	Abdomen Pelvis 0.6s. 5mm + DMPR SmartmA/ SmartPrep	DMPR	Helical	LargeBody	0.984:1 39.375	0.6	0.625	40	120	SmartmA 80-750mA NI=18 Avg mA 260	50	Stnd Plus	50	12.56	543.37	400	32	Basic Abdomen Pelvis (0.6sec) with Smart mA, SmartPrep and DMPR, Evaluation for abnormalities of abdominal and pelvic structures
26.4	Renal Stone 0.5s. 5mm		Helical	LargeBody	1.375:1 55.0	0.5	5	40	120	190	50	Stnd Plus	50	5.47	245.13	400	32	Helical scan, Evaluationof kidney, ureters andbladder for renal stones
26.5	Renal Stone 0.5s. 5mm SmartmA		Helical	LargeBody	1.375:1 55.0	0.5	5	40	120	SmartmA 50-650mA NI=12 Avg mA 190	50	Stnd Plus	50	5.47	245.13	400	32	Helical scan with SmartmA, Evaluationof kidney, ureters andbladder for renal stones
26.7	AAA 0.5s. + DMPR 0.625mm	MIROI	Axial	LargeBody	1i	1	5 [0]	5	120	80	0	Stnd	0	112.67	56.34	0	32	Timing bolus for Helical scan with DMPR, Evaluation for abdominal aortic aneurysm
		DMPR	Helical	LargeBody	1.375:1 55.0	0.5	0.625	40	140	340	50	Stnd Plus	50	13.88	496.35	309.375	32	Helical scan with DMPR, Evaluation for abdominal aortic aneurysm
26.8	AAA 0.6s. + DMPR 0.625mm SmartmA/ SmartPrep	DMPR	Helical	LargeBody	1.375:1 55.0	0.6	0.625	40	120	SmartmA 100-700mA NI=19 Avg mA 275	50	Stnd Plus	50	9.51	339.51	309.375	32	Helical scan with DMPR, Smart mA and SmartPrep, Evaluation for abdominal aortic aneurysm
26.10	Dual Phase Liver		Helical	LargeBody	1.375:1 55.0	0.6	5	40	120	150	50	Stnd Plus	50	5.19	92.16	130	32	Non contrast evaluation of upper abdominal structures including liver
		MIROI	Axial	LargeBody	1i	1	5 [0]	5	120	80	0	Stnd	0	112.67	56.34	0	32	Timing bolus for Multi-Group acquisition for early arterial and potal venous phase of the liver
	Group1		Helical	LargeBody	1.375:1 55.0	0.5	2.5	40	120	275	50	Stnd Plus	50	7.92	140.87	130	32	Acquisition for early arterial phase of the liver
	Group2		Helical	LargeBody	1.375:1 55.0	0.5	5	40	120	210	50	Stnd Plus	50	6.05	270.94	400	32	Acquisition for portal venous phase of the liver

Protocol Number	Protocol Name	Post Process	Scan Type	SFOV	Pitch Table Speed Row	Rotation Time (seconds)	Slice Thickness (mm) [Interval]* (mm)	Beam Collimation (mm)	kV	mA Min-Max NI Avg mA	Dose Reduction (%)	Recon Type	ASiR (%)	CTDIvol (mGy) ASiR	DLP (mGy·cm) ASiR	Scan Length (cm)	Phantom (cm)	Description
26.11	Tri Phase Liver		Helical	LargeBody	1.375:1 55.0	0.6	5	40	120	150	50	Stnd Plus	50	5.19	92.16	130	32	Non contrast evaluation of upper abdominal structures including liver
		MIROI	Axial	LargeBody	1i	1	5 [0]	5	120	80	0	Stnd	0	112.67	56.34	0	32	Timing bolus for Multi-Group acquisition for early arterial, late arterial and potal venous phase of the liver
	Group1		Helical	LargeBody	1.375:1 55.0	0.5	2.5	40	120	275	50	Stnd Plus	50	7.92	140.87	130	32	Acquisition for early arterial phase of the liver
	Group2		Helical	LargeBody	1.375:1 55.0	0.5	5	40	120	225	50	Stnd Plus	50	6.48	290.29	400	32	Acquisition for late arterial phase of the liver
	Group3		Helical	LargeBody	1.375:1 55.0	0.5	5	40	120	225	50	Stnd Plus	50	6.48	290.29	400	32	Acquisition for portal venous phase of the liver
26.12	Dual Phase Pancreas SmartmA/ SmartPrep		Helical	LargeBody	0.984:1 39.375	0.5	5	40	120	SmartmA 80-650mA NI=12 Avg mA 200	50	Stnd Plus	50	8.05	82.74	70	32	Non contrast evaluation of upper abdominal structures including pancreas
	Group1		Helical	LargeBody	0.984:1 39.375	0.5	2.5	40	120	SmartmA 50-700mA NI=15 Avg mA 260	50	Stnd Plus	50	10.46	191.28	150	32	Acquisition with SmartmA and SmartPrep for arterial phase of the pancreas
	Group2		Helical	LargeBody	0.984:1 39.375	0.5	5	40	120	SmartmA 50-700mA NI=15 Avg mA 225	50	Stnd Plus	50	9.06	319.47	320	32	Acquisition for venous phase of the pancreas
26.13	Dual Phase Liver SmartmA/ SmartPrep		Helical	LargeBody	1.375:1 55.0	0.5	5	40	120	SmartmA 80-500mA NI=12 Avg mA 160	50	Stnd Plus	50	4.61	81.96	130	32	Non contrast evaluation of upper abdominal structures including liver
	Group1		Helical	LargeBody	1.375:1 55.0	0.5	2.5	40	120	SmartmA 50-700mA NI=15 Avg mA 275	50	Stnd Plus	50	7.92	140.87	130	32	Acquisition with SmartmA and SmartPrep for early arterial phase of the liver
	Group2		Helical	LargeBody	0.984:1 39.375	0.5	5	40	120	SmartmA 50-700mA NI=11 Avg mA 225	50	Stnd Plus	50	9.06	391.91	400	32	Acquisition with SmartmA and SmartPrep for portal venous phase of the liver
26.14	Tri Phase Liver SmartmA/ SmartPrep		Helical	LargeBody	0.984:1 39.375	0.5	5	40	120	SmartmA 80-500mA NI=12 Avg mA 200	50	Stnd Plus	50	8.05	131.04	130	32	Non contrast evaluation of upper abdominal structures including liver
	Group1		Helical	LargeBody	1.375:1 55.0	0.5	2.5	40	120	SmartmA 50-700mA NI=15 Avg mA 275	50	Stnd Plus	50	7.92	140.87	130	32	Acquisition with SmartmA and SmartPrep for early arterial phase of the liver
	Group2		Helical	LargeBody	1.375:1 55.0	0.5	5	40	120	SmartmA 50-700mA NI=11 Avg mA 225	50	Stnd Plus	50	6.48	290.29	400	32	Acquisition with SmartmA and SmartPrep for late arterial phase of the liver
	Group3		Helical	LargeBody	1.375:1 55.0	0.5	5	40	120	SmartmA 50-700mA NI=11 Avg mA 225	50	Stnd Plus	50	6.48	290.29	400	32	Acquisition with SmartmA and SmartPrep for portal venous phase of the liver
26.15	VHS Liver Perfusion		Helical	LargeBody	0.984:1 39.375	0.6	5	40	120	85	50	Stnd	50	4.11	66.80	130	32	Non contrast evaluation of upper abdominal structures including liver

Protocol Number	Protocol Name	Post Process	Scan Type	SFOV	Pitch Table Speed Row	Rotation Time (seconds)	Slice Thickness (mm) [Interval]* (mm)	Beam Collimation (mm)	kV	mA Min-Max NI Avg mA	Dose Reduction (%)	Recon Type	ASiR (%)	CTDIvol (mGy) ASiR	DLP (mGy·cm) ASiR	Scan Length (cm)	Phantom (cm)	Description
		Perfusion	Helical-S/P	LargeBody	1.375:1 55.0 21 pass	0.4	5	40	120	150	50	Stnd Plus	50	109.99	1704.89	140	32	Volume Helical scan mode for evaluation of liver tomor perfusion over time
26.16	VHS 4D CTA		Helical	LargeBody	0.984:1 39.375	0.6	5	40	120	170	50	Stnd	50	8.21	133.61	130	32	Localizer scan for Volume Helical Shuttle scan mode for evaluation of abdominal vasculature
		MIROI	Axial	LargeBody	1i	1	5 [0]	5	120	80	0	Stnd	0	112.67	56.34	0	32	Timing bolus scan for Volume Helical Shuttle scan mode for evaluation of abdominal vasculature
			Helical-S	LargeBody	1.375:1 55.0 18 pass	0.5	5 [10]	40	140	SmartmA 150-650mA NI=12 Avg mA 175	50	Stnd Plus	50	162.84	3175.35	180	32	Volume Helical Shuttle scan mode for time resolved CT angiography of abdominal vasculature
26.17	Runoff 0.625mm	MIROI	Axial	LargeBody	1i	1	5 [0]	5	120	80	0	Stnd	0	112.67	56.34	0	32	Timing bolus scan for evaluation of vascular structure of abdomen, femurs and lower extremities (Runoff)
			Helical	LargeBody	1.375:1 55.0	0.5	0.625	40	140	410	40	Stnd Plus	40	16.74	1648.79	936.875	32	Helical scanmode 0.625mm, Evaluation of vascular structure of abdomen, femurs and lower extremities (Runoff)
26.18	Runoff 1.25mm	MIROI	Axial	LargeBody	1i	1	5 [0]	5	120	80	0	Stnd	0	112.67	56.34	0	32	Timing bolus scan for evaluation of vascular structure of abdomen, femurs and lower extremities (Runoff)
			Helical	LargeBody	1.375:1 55.0	0.5	1.25 [0.7]	40	140	350	40	Stnd Plus	40	14.29	1496.13	998.9	32	Helical scanmode 1.25mm, Evaluation of vascular structure of abdomen, femurs and lower extremities (Runoff)
26.19	Runoff 0.625mm SmartmA/ SmartPrep		Helical	LargeBody	1.375:1 55.0	0.5	0.625	40	140	SmartmA 100-700mA NI=19 Avg mA 330	40	Stnd Plus	40	13.47	1326.48	936.875	32	Helical scanmode 0.625mm with SmartmA and SmartPrep, Evaluation of vascular structure of abdomen, femurs and lower extremities (Runoff)
26.20	Runoff 1.25mm SmartmA/ SmartPrep		Helical	LargeBody	1.375:1 55.0	0.5	1.25 [0.7]	40	140	SmartmA 100-700mA NI=20 Avg mA 360	40	Stnd Plus	40	14.70	1538.87	998.9	32	Helical scanmode 1.25mm with SmartmA and SmartPrep, Evaluation of vascular structure of abdomen, femurs and lower extremities (Runoff)
26.22	CT Colonography 1.25mm	Advantage CTC Pro	Helical	LargeBody	1.375:1 55.0	0.5	1.25	40	120	100	50	Stnd Plus	50	2.88	129.02	400	32	Helical scan mode supine acquisition for using Advantage CTC Pro for evaluation of the colon
		Advantage CTC Pro	Helical	LargeBody	1.375:1 55.0	0.5	1.25	40	120	100	50	Stnd Plus	50	2.88	129.02	400	32	Helical scan mode prone acquisition for using Advantage CTC Pro for evaluation of the colon

Protocol Number	Protocol Name	Post Process	Scan Type	SFOV	Pitch Table Speed Row	Rotation Time (seconds)	Slice Thickness (mm) [Interval]* (mm)	Beam Collimation (mm)	kV	mA Min-Max NI Avg mA	Dose Reduction (%)	Recon Type	ASiR (%)	CTDIvol (mGy) ASiR	DLP (mGy·cm) ASiR	Scan Length (cm)	Phantom (cm)	Description
26.41	Body Interventional 5mm/3i		Helical	LargeBody	1.375:1 27.50	0.5	5	20	120	SmartmA 50-650mA NI=11.57 Avg mA 360	0	Stnd	0	11.41	251.58	195	32	Localization scan for CT interventional scan
			SmartView SEG	LargeBody	3i	0.4	5	10	120	80	0	Stnd Segment	0	684.58	684.58	0	32	CT Fluoro scan for interventional scan
26.42	Body Interventional 5mm/1i		Helical	LargeBody	1.375:1 27.50	0.5	5	20	120	SmartmA 50-650mA NI=11.57 Avg mA 360	0	Stnd	0	11.41	251.58	195	32	Localization scan for CT interventional scan
			SmartView SEG	LargeBody	1i	0.4	5	5	120	80	0	Stnd Segment	0	845.04	422.52	0	32	CT Fluoro scan for interventional scan

L-Spine

Table 2-7

[Interval]* - For Helical acquisitions, Interval unless otherwise indicated is equal to the slice thickness.
For Axial and Cine acquisitions, Interval unless otherwise indicated is equal to the Beam Collimation/Detector Coverage.

Protocol Number	Protocol Name	Post Process	Scan Type	SFOV	Pitch Table Speed Row	Rotation Time (seconds)	Slice Thickness (mm) [Interval]* (mm)	Beam Collimation (mm)	kV	mA Min-Max NI Avg mA	Dose Reduction (%)	Recon Type	ASiR (%)	CTDI vol (mGy) ASiR	DLP (mGy·cm) ASiR	Scan Length (cm)	Phantom (cm)	Description
27.1	L-Spine 3 Level Axial Group1		Axial	LargeBody	8i	1	2.5	20	120	225	30	Stnd	40	19.08	38.15	17.5	32	Axial scan mode, Evaluation of soft tissue and boney structures lumbar spine
	Group2		Axial	LargeBody	8i	1	2.5	20	120	225	30	Stnd	40	19.08	38.15	17.5	32	Axial scan mode, Evaluation of soft tissue and boney structures lumbar spine
	Group3		Axial	LargeBody	8i	1	2.5	20	140	250	30	Stnd	40	30.03	60.06	17.5	32	Axial scan mode, Evaluation of soft tissue and boney structures lumbar spine
27.3	L-Spine Survey Helical 2.5mm 0.6s. SmartmA		Helical	LargeBody	0.516:1 20.625	0.6	2.5	40	140	SmartmA 100-700mA NI=14 Avg mA 380	30	Stnd Plus	40	49.64	1040.25	175	32	Helical scan mode 2.5mm (0.6sec), Limted evaluation of lumbar spine
27.4	L-Spine Survey Helical 2.5mm 0.8s. SmartmA		Helical	LargeBody	0.516:1 20.625	0.8	2.5	40	140	SmartmA 100-700mA NI=14 Avg mA 365	30	Stnd Plus	40	63.57	1332.02	175	32	Helical scan mode 2.5mm (0.8sec), Limted evaluation of lumbar spine
27.6	L-Spine Helical 0.625mm + DMPR/ SmartmA	DMPR	Helical	LargeBody	0.516:1 20.625	0.6	0.625	40	140	SmartmA 100-715mA NI=20 Avg mA 485	30	Stnd Plus IQE	40	63.36	1327.68	175	32	Helical scan mode 0.625mm with DMPR and SmartmA, Evaluation of soft tissue and boney structures lumbar spine
27.7	L-Spine Helical 1.25mm + DMPR/ SmartmA - Large Patient	DMPR	Helical	LargeBody	0.516:1 20.625	1	1.25	40	140	SmartmA 100-715mA NI=18 Avg mA 490	30	Stnd Plus	40	106.68	2234.87	175	32	Helical scan mode 1.25mm with DMPR and SmartmA, Evaluation of soft tissue and boney structures lumbar spine

Pelvis

Table 2-8

[Interval]* - For Helical acquisitions, Interval unless otherwise indicated is equal to the slice thickness.
For Axial and Cine acquisitions, Interval unless otherwise indicated is equal to the Beam Collimation/Detector Coverage.

Protocol Number	Protocol Name	Post Process	Scan Type	SFOV	Pitch Table Speed Row	Rotation Time (seconds)	Slice Thickness (mm) [Interval]* (mm)	Beam Collimation (mm)	kV	mA Min-Max NI Avg mA	Dose Reduction (%)	Recon Type	ASiR (%)	CTDI vol (mGy) ASiR	DLP (mGy·cm) ASiR	Scan Length (cm)	Phantom (cm)	Description
28.1	Pelvis for Fracture + DMPR/ SmartmA	DMPR	Helical	LargeBody	0.984:1 39.375	0.8	1.25 [0.625]	40	120	SmartmA 100-700mA NI=20 Avg mA 300	40	Bone Plus IQE	40	19.32	258.70	101.25	32	Helical scan with DMPR and SmartmA, Evaluation of pelvis bony structures for fracture

Lower Extremity

Table 2-9

[Interval]* - For Helical acquisitions, Interval unless otherwise indicated is equal to the slice thickness.
For Axial and Cine acquisitions, Interval unless otherwise indicated is equal to the Beam Collimation/Detector Coverage.

Protocol Number	Protocol Name	Post Process	Scan Type	SFOV	Pitch Table Speed Row	Rotation Time (seconds)	Slice Thickness (mm) [Interval]* (mm)	Beam Collimation (mm)	kV	mA Min-Max NI Avg mA	Dose Reduction (%)	Recon Type	ASiR (%)	CTDI vol (mGy) ASiR	DLP (mGy·cm) ASiR	Scan Length (cm)	Phantom (cm)	Description
29.1	Lower Extremity Survey 2.5mm		Helical	LargeBody	0.516:1 20.625	0.5	2.5	40	120	175	30	Stnd Plus	30	13.45	126.94	60	32	Helical scan mode 2.5mm, Limited evaluation of lower extremity for abnormalities
29.2	Ankle 0.625 mm Single Joint		Helical	MediumBody	0.531:1 10.625	0.5	0.625	20	120	175	30	Stnd Plus IQE	40	14.50	75.64	35	32	Helical scan mode 0.625mm, Evaluation of soft tissue and bony anatomy of the ankle area
29.3	Ankle 0.625 mm Both Joints		Helical	LargeBody	0.531:1 10.625	0.5	0.625	20	120	210	30	Stnd Plus IQE	30	16.76	87.38	35	32	Helical scan mode 0.625mm, Evaluation of soft tissue and bony anatomy of the ankle area
29.4	Knee 0.625 mm Both Joints		Helical	LargeBody	0.531:1 10.625	0.6	0.625	20	120	AutomA 100-335mA NI=20 Avg mA 190	30	Stnd Plus IQE	30	18.19	94.84	35	32	Helical scan mode 0.625mm, Evaluation of soft tissue and bony anatomy of both knees

Reference Pediatric Protocols - Installed Options : ASiR, Sub 0.4 sec, VCT85kW and VCT Hi Power

Head

Table 3-1

[Interval]* - For Helical acquisitions, Interval unless otherwise indicated is equal to the slice thickness.
For Axial and Cine acquisitions, Interval unless otherwise indicated is equal to the Beam Collimation/Detector Coverage.

Protocol Number	Protocol Name	Post Process	Scan Type	SFOV	Pitch Table Speed Row	Rotation Time (seconds)	Slice Thickness (mm) [Interval]* (mm)	Beam Collimation (mm)	kV	mA Min-Max NI Avg mA	Dose Reduction (%)	Recon Type	ASiR (%)	CTDIvol (mGy) ASiR	DLP (mGy·cm) ASiR	Scan Length (mm)	Phantom (cm)	Description
31.1	PED HEAD TO 18 Months		Axial	Ped Head	4i	0.5	5	20	120	170	30	Stnd	30	14.47	173.68	115	16	Routine head (0.5s) for infant (up to 18 months) 5mm
31.2	PED HEAD 18 MOS TO 5YRS		Axial	SmallHead	4i	0.5	5	20	120	235	30	Stnd	30	20.01	240.08	115	16	Routine head (0.5s) for children (18 months to 5 years) 5mm
31.3	PED HEAD TO 5YRS TO 18YRS Group1		Axial	SmallHead	8i	1	2.5	20	120	170	30	Stnd	30	28.95	115.79	37.5	16	Routine head (1.0s) for children (5 years to 18 years) 2.5mm
	Group2		Axial	SmallHead	4i	1	5	20	120	125	30	Stnd	30	21.28	170.27	75	16	Routine head (1.0s) for children (5 years to 18 years) 5mm

Orbit

Table 3-2

[Interval]* - For Helical acquisitions, Interval unless otherwise indicated is equal to the slice thickness.
For Axial and Cine acquisitions, Interval unless otherwise indicated is equal to the Beam Collimation/Detector Coverage.

Protocol Number	Protocol Name	Post Process	Scan Type	SFOV	Pitch Table Speed Row	Rotation Time (seconds)	Slice Thickness (mm) [Interval]* (mm)	Beam Collimation (mm)	kV	mA Min-Max NI Avg mA	Dose Reduction (%)	Recon Type	ASiR (%)	CTDIvol (mGy) ASiR	DLP (mGy·cm) ASiR	Scan Length (mm)	Phantom (cm)	Description
32.1	Sinus Supine Helical + DMPR	DMPR	Helical	SmallHead	0.531:1 10.625	0.4	0.625	20	120	65	20	Bone Plus IQE	30	8.33	76.29	74.375	16	Routine Helical scan mode with DMPR, Evaluation of sinus area for abnormality in pediatric patients
32.3	Orbits Helical	DMPR	Helical	SmallHead	0.531:1 10.625	0.4	0.625	20	120	145	20	Stnd Plus IQE	30	18.59	146.96	61.875	16	Helical scan mode, Evaluation of orbital and face structures for abnormality in pediatric patients
32.6	Helical IAC 0.625mm Axial mode - Use Reformat for Coronal		Helical	SmallHead	0.531:1 10.625	0.4	0.625	20	120	130	20	Stnd Plus IQE	30	16.67	93.21	38.75	16	Helical scan mode, Evaluation of inner ear structures for abnormality in pediatric patients

Chest

Table 3-3

[Interval]* - For Helical acquisitions, Interval unless otherwise indicated is equal to the slice thickness.
For Axial and Cine acquisitions, Interval unless otherwise indicated is equal to the Beam Collimation/Detector Coverage.

Protocol Number	Protocol Name	Post Process	Scan Type	SFOV	Pitch Table Speed Row	Rotation Time (seconds)	Slice Thickness (mm) [Interval]* (mm)	Beam Collimation (mm)	kV	mA Min-Max NI Avg mA	Dose Reduction (%)	Recon Type	ASiR (%)	CTDIvol (mGy) ASiR	DLP (mGy·cm) ASiR	Scan Length (mm)	Phantom (cm)	Description
35.1.1	RC 6.0-7.5 kg (13.2-16.5 lbs)		Helical	PedBody	1.375:1 27.5	0.4	3.75	20	100	55	30	Stnd Plus	30	0.76	7.62	75	32	Weight and height based routine chest protocol
35.1.3	SnapShot Segment 30-74 BPM		Helical	SmallBody	1.375:1 55.0	0.4	2.5	40	80	85	30	Stnd Plus	30	0.59	5.80	50	32	Weight and height based protocol for localization
		MIROI	Axial	SmallBody	1i	1	5 [0]	5	80	50	0	Stnd	0	21.31	10.66	0	32	Timing bolus for Weight and height based cardiac protocol with ECG modulated mA (30-74 bpm)
			Cardiac SEG	CardiacSmall	0.160:1 6.4	0.35	0.625	40	80	ECG Mod 55-195mA Phase 40-80 AvgmA195	30	Stnd SS Seg	40	8.51	93.56	75	32	Weight and height based cardiac protocol with ECG modulated mA (30-74 bpm)
35.1.4	SnapShot Burst 75-104 BPM		Helical	SmallBody	1.375:1 55.0	0.4	2.5	40	80	85	30	Stnd Plus	30	0.59	5.80	50	32	Weight and height based protocol for localization
		MIROI	Axial	SmallBody	1i	1	5 [0]	5	80	50	0	Stnd	0	21.31	10.66	0	32	Timing bolus for Weight and height based cardiac protocol with ECG modulated mA (75-104 bpm)
			Cardiac SSB	CardiacSmall	0.160:1 6.4	0.35	0.625	40	80	ECG Mod 55-195mA Phase 40-80 AvgmA195	30	Stnd SSB	40	8.51	93.56	75	32	Weight and height based cardiac protocol with ECG modulated mA (75-104 bpm)
35.1.5	SnapShot Burst+ >105 BPM		Helical	SmallBody	1.375:1 55.0	0.4	2.5	40	80	85	30	Stnd Plus	30	0.59	5.80	50	32	Weight and height based protocol for localization
		MIROI	Axial	SmallBody	1i	1	5 [0]	5	80	50	0	Stnd	0	21.31	10.66	0	32	Timing bolus for Weight and height based cardiac protocol with ECG modulated mA (>105 bpm)
			Cardiac SSBP	CardiacSmall	0.160:1 6.4	0.35	0.625	40	80	ECG Mod 55-195mA Phase 35-85 AvgmA195	30	Stnd SSB	40	9.13	100.42	75	32	Weight and height based cardiac protocol with ECG modulated mA (>105 bpm)
35.1.7	Non ECG Gated		Helical	PedBody	0.984:1 39.375	0.4	0.625	40	80	SmartmA 50-200mA NI=18 AvgmA140	30	Stnd Plus	30	1.36	14.70	75	32	Weight and height based non ECG gated protocol for cardiac with SmartmA
35.2.1	RC 7.5-9.5 kg (16.5-20.9lbs)		Helical	PedBody	1.375:1 27.5	0.4	3.75	20	100	85	30	Stnd Plus	30	1.18	11.77	75	32	Weight and height based routine chest protocol
35.2.3	SnapShot Segment 30-74 BPM		Helical	SmallBody	1.375:1 55.0	0.4	2.5	40	80	85	30	Stnd Plus	30	0.59	5.80	50	32	Weight and height based protocol for localization

Protocol Number	Protocol Name	Post Process	Scan Type	SFOV	Pitch Table Speed Row	Rotation Time (seconds)	Slice Thickness (mm) [Interval]* (mm)	Beam Collimation (mm)	kV	mA Min-Max NI Avg mA	Dose Reduction (%)	Recon Type	ASiR (%)	CTDI vol (mGy) ASiR	DLP (mGy·cm) ASiR	Scan Length (mm)	Phantom (cm)	Description
		MIROI	Axial	SmallBody	1i 1	1	5 [0]	5	80	50	0	Stnd	0	21.31	10.66	0	32	Timing bolus for Weight and height based cardiac protocol with ECG modulated mA (30-74 bpm)
			Cardiac SEG	CardiacSmall	0.160:1 6.4	0.35	0.625	40	80	ECG Mod 55-210mA Phase 40-80 AvgmA210	30	Stnd SS Seg	40	9.13	100.39	75	32	Weight and height based cardiac protocol with ECG modulated mA (30-74 bpm)
35.2.4	SnapShot Burst 75-104 BPM		Helical	SmallBody	1.375:1 55.0	0.4	2.5	40	80	85	30	Stnd Plus	30	0.59	5.80	50	32	Weight and height based protocol for localization
		MIROI	Axial	SmallBody	1i 1	1	5 [0]	5	80	50	0	Stnd	0	21.31	10.66	0	32	Timing bolus for Weight and height based cardiac protocol with ECG modulated mA (75-104 bpm)
			Cardiac SSB	CardiacSmall	0.160:1 6.4	0.35	0.625	40	80	ECG Mod 55-210mA Phase 40-80 AvgmA210	30	Stnd SSB	40	9.13	100.39	75	32	Weight and height based cardiac protocol with ECG modulated mA (75-104 bpm)
35.2.5	SnapShot Burst+ >105 BPM		Helical	SmallBody	1.375:1 55.0	0.4	2.5	40	80	85	30	Stnd Plus	30	0.59	5.80	50	32	Weight and height based protocol for localization
		MIROI	Axial	SmallBody	1i 1	1	5 [0]	5	80	50	0	Stnd	0	21.31	10.66	0	32	Timing bolus for Weight and height based cardiac protocol with ECG modulated mA (>105 bpm)
			Cardiac SSBP	CardiacSmall	0.160:1 6.4	0.35	0.625	40	80	ECG Mod 55-210mA Phase 35-85 AvgmA210	30	Stnd SSB	40	9.82	107.99	75	32	Weight and height based cardiac protocol with ECG modulated mA (>105 bpm)
35.2.7	Non ECG Gated		Helical	PedBody	0.984:1 39.375	0.4	0.625	40	80	SmartmA 50-220mA NI=18 AvgmA155	30	Stnd Plus	30	1.51	16.28	75	32	Weight and height based non ECG gated protocol for cardiac with SmartmA
35.3.1	RC 9.5-11.5 kg (20.9-25.4lbs)		Helical	SmallBody	1.375:1 27.5	0.4	3.75	20	120	70	30	Stnd Plus	30	1.52	15.77	78.75	32	Weight and height based routine chest protocol
35.3.3	SnapShot Segment 30-74 BPM		Helical	SmallBody	1.375:1 55.0	0.4	2.5	40	80	85	30	Stnd Plus	30	0.59	5.80	50	32	Weight and height based protocol for localization
		MIROI	Axial	SmallBody	1i 1	1	5 [0]	5	80	50	0	Stnd	0	21.31	10.66	0	32	Timing bolus for Weight and height based cardiac protocol with ECG modulated mA (30-74 bpm)
			Cardiac SEG	CardiacSmall	0.160:1 6.4	0.35	0.625	40	80	ECG Mod 70-225mA Phase 40-80 AvgmA225	30	Stnd SS Seg	40	9.88	108.64	75	32	Weight and height based cardiac protocol with ECG modulated mA (30-74 bpm)
35.3.4	SnapShot Burst 75-104 BPM		Helical	SmallBody	1.375:1 55.0	0.4	2.5	40	80	85	30	Stnd Plus	30	0.59	5.80	50	32	Weight and height based protocol for localization
		MIROI	Axial	SmallBody	1i 1	1	5 [0]	5	80	50	0	Stnd	0	21.31	10.66	0	32	Timing bolus for Weight and height based cardiac protocol with ECG modulated mA (75-104 bpm)

Protocol Number	Protocol Name	Post Process	Scan Type	SFOV	Pitch Table Speed Row	Rotation Time (seconds)	Slice Thickness (mm) [Interval]* (mm)	Beam Collimation (mm)	kV	mA Min-Max NI Avg mA	Dose Reduction (%)	Recon Type	ASiR (%)	CTDI vol (mGy) ASiR	DLP (mGy·cm) ASiR	Scan Length (mm)	Phantom (cm)	Description
			Cardiac SSB	CardiacSmall	0.160:1 6.4	0.35	0.625	40	80	ECG Mod 70-225mA Phase 40-80 AvgmA225	30	Stnd SSB	40	9.88	108.64	75	32	Weight and height based cardiac protocol with ECG modulated mA (75-104 bpm)
35.3.5	SnapShot Burst+ >105 BPM		Helical	SmallBody	1.375:1 55.0	0.4	2.5	40	80	85	30	Stnd Plus	30	0.59	5.80	50	32	Weight and height based protocol for localization
		MIROI	Axial	SmallBody	1i	1	5 [0]	5	80	50	0	Stnd	0	21.31	10.66	0	32	Timing bolus for Weight and height based cardiac protocol with ECG modulated mA (>105 bpm)
			Cardiac SSBP	CardiacSmall	0.160:1 6.4	0.35	0.625	40	80	ECG Mod 70-225mA Phase 35-85 AvgmA225	30	Stnd SSB	40	10.57	116.23	75	32	Weight and height based cardiac protocol with ECG modulated mA (>105 bpm)
35.3.7	Non ECG Gated		Helical	PedBody	0.984:1 39.375	0.4	0.625	40	80	SmartmA 50-240mA NI=18 AvgmA170	30	Stnd Plus	30	1.65	17.85	75	32	Weight and height based non ECG gated protocol for cardiac with SmartmA
35.4.1	RC 11.5-14.5kg (25.4-32.0lbs)		Helical	SmallBody	1.375:1 27.5	0.4	5	20	120	65	30	Stnd Plus	30	1.41	16.23	90	32	Weight and height based routine chest protocol
35.4.3	SnapShot Segment 30-74 BPM		Helical	SmallBody	1.375:1 55.0	0.4	2.5	40	80	85	30	Stnd Plus	30	0.59	5.80	50	32	Weight and height based protocol for localization
		MIROI	Axial	SmallBody	1i	1	5 [0]	5	80	50	0	Stnd	0	21.31	10.66	0	32	Timing bolus for Weight and height based cardiac protocol with ECG modulated mA (30-74 bpm)
			Cardiac SEG	CardiacSmall	0.160:1 6.4	0.35	0.625	40	80	ECG Mod 70-240mA Phase 40-80 AvgmA240	30	Stnd SS Seg	40	10.50	115.46	75	32	Weight and height based cardiac protocol with ECG modulated mA (30-74 bpm)
35.4.4	SnapShot Burst 75-104 BPM		Helical	SmallBody	1.375:1 55.0	0.4	2.5	40	80	85	30	Stnd Plus	30	0.59	5.80	50	32	Weight and height based protocol for localization
		MIROI	Axial	SmallBody	1i	1	5 [0]	5	80	50	0	Stnd	0	21.31	10.66	0	32	Timing bolus for Weight and height based cardiac protocol with ECG modulated mA (75-104 bpm)
			Cardiac SSB	CardiacSmall	0.160:1 6.4	0.35	0.625	40	80	ECG Mod 70-240mA Phase 40-80 AvgmA240	30	Stnd SSB	40	10.50	115.46	75	32	Weight and height based cardiac protocol with ECG modulated mA (75-104 bpm)
35.4.5	SnapShot Burst+ >105 BPM		Helical	SmallBody	1.375:1 55.0	0.4	2.5	40	80	85	30	Stnd Plus	30	0.59	5.80	50	32	Weight and height based protocol for localization
		MIROI	Axial	SmallBody	1i	1	5 [0]	5	80	50	0	Stnd	0	21.31	10.66	0	32	Timing bolus for Weight and height based cardiac protocol with ECG modulated mA (>105 bpm)
			Cardiac SSBP	CardiacSmall	0.160:1 6.4	0.35	0.625	40	80	ECG Mod 70-240mA Phase 35-85 AvgmA240	30	Stnd SSB	40	11.25	123.79	75	32	Weight and height based cardiac protocol with ECG modulated mA (>105 bpm)

Protocol Number	Protocol Name	Post Process	Scan Type	SFOV	Pitch Table Speed Row	Rotation Time (seconds)	Slice Thickness (mm) [Interval]* (mm)	Beam Collimation (mm)	kV	mA Min-Max NI Avg mA	Dose Reduction (%)	Recon Type	ASiR (%)	CTDI vol (mGy) ASiR	DLP (mGy·cm) ASiR	Scan Length (mm)	Phantom (cm)	Description
35.4.7	Non ECG Gated		Helical	PedBody	0.984:1 39.375	0.4	0.625	40	80	SmartmA 50-280mA NI=18 AvgmA195	30	Stnd Plus	30	1.90	20.48	75	32	Weight and height based non ECG gated protocol for cardiac with SmartmA
35.5.1	RC 14.5-18.5kg (32.0-40.8lbs)		Helical	SmallBody	1.375:1 27.5	0.4	5	20	120	70	30	Stnd Plus	30	1.52	17.48	90	32	Weight and height based routine chest protocol
35.5.3	SnapShot Segment 30-74 BPM		Helical	SmallBody	1.375:1 55.0	0.4	2.5	40	80	85	30	Stnd Plus	30	0.59	5.80	50	32	Weight and height based protocol for localization
		MIROI	Axial	SmallBody	1i	1	5 [0]	5	80	50	0	Stnd	0	21.31	10.66	0	32	Timing bolus for Weight and height based cardiac protocol with ECG modulated mA (30-74 bpm)
			Cardiac SEG	CardiacSmall	0.160:1 6.4	0.35	0.625	40	80	ECG Mod 70-265mA Phase 40-80 AvgmA265	30	Stnd SS Seg	40	11.53	126.82	75	32	Weight and height based cardiac protocol with ECG modulated mA (30-74 bpm)
35.5.4	SnapShot Burst 75-104 BPM		Helical	SmallBody	1.375:1 55.0	0.4	2.5	40	80	85	30	Stnd Plus	30	0.59	5.80	50	32	Weight and height based protocol for localization
		MIROI	Axial	SmallBody	1i	1	5 [0]	5	80	50	0	Stnd	0	21.31	10.66	0	32	Timing bolus for Weight and height based cardiac protocol with ECG modulated mA (75-104 bpm)
			Cardiac SSB	CardiacSmall	0.160:1 6.4	0.35	0.625	40	80	ECG Mod 70-265mA Phase 40-80 AvgmA265	30	Stnd SSB	40	11.53	126.82	75	32	Weight and height based cardiac protocol with ECG modulated mA (75-104 bpm)
35.5.5	SnapShot Burst+ >105 BPM		Helical	SmallBody	1.375:1 55.0	0.4	2.5	40	80	85	30	Stnd Plus	30	0.59	5.80	50	32	Weight and height based protocol for localization
		MIROI	Axial	SmallBody	1i	1	5 [0]	5	80	50	0	Stnd	0	21.31	10.66	0	32	Timing bolus for Weight and height based cardiac protocol with ECG modulated mA (>105 bpm)
			Cardiac SSBP	CardiacSmall	0.160:1 6.4	0.35	0.625	40	80	ECG Mod 70-265mA Phase 35-85 AvgmA265	30	Stnd SSB	40	12.40	136.37	75	32	Weight and height based cardiac protocol with ECG modulated mA (>105 bpm)
35.5.7	Non ECG Gated		Helical	PedBody	0.984:1 39.375	0.4	0.625	40	80	SmartmA 50-300mA NI=18 AvgmA210	30	Stnd Plus	30	2.04	22.05	75	32	Weight and height based non ECG gated protocol for cardiac with SmartmA
35.6.1	RC 18.5-22.5kg (40.8-49.6lbs)		Helical	SmallBody	1.375:1 27.5	0.4	5	20	120	75	30	Stnd Plus	30	1.63	18.73	90	32	Weight and height based routine chest protocol
35.6.3	SnapShot Segment 30-74 BPM		Helical	SmallBody	1.375:1 55.0	0.4	2.5	40	80	85	30	Stnd Plus	30	0.59	5.80	50	32	Weight and height based protocol for localization
		MIROI	Axial	SmallBody	1i	1	5 [0]	5	80	50	0	Stnd	0	21.31	10.66	0	32	Timing bolus for Weight and height based cardiac protocol with ECG modulated mA (30-74 bpm)

Protocol Number	Protocol Name	Post Process	Scan Type	SFOV	Pitch Table Speed Row	Rotation Time (seconds)	Slice Thickness (mm) [Interval]* (mm)	Beam Collimation (mm)	kV	mA Min-Max NI Avg mA	Dose Reduction (%)	Recon Type	ASiR (%)	CTDI vol (mGy) ASiR	DLP (mGy·cm) ASiR	Scan Length (mm)	Phantom (cm)	Description
			Cardiac SEG	CardiacSmall	0.160:1 6.4	0.35	0.625	40	80	ECG Mod 70-280mA Phase 40-80 AvgmA280	30	Stnd SS Seg	40	12.16	133.72	75	32	Weight and height based cardiac protocol with ECG modulated mA (30-74 bpm)
35.6.4	SnapShot Burst 75-104 BPM		Helical	SmallBody	1.375:1 55.0	0.4	2.5	40	80	85	30	Stnd Plus	30	0.59	5.80	50	32	Weight and height based protocol for localization
		MIROI	Axial	SmallBody	1i	1	5 [0]	5	80	50	0	Stnd	0	21.31	10.66	0	32	Timing bolus for Weight and height based cardiac protocol with ECG modulated mA (75-104 bpm)
			Cardiac SSB	CardiacSmall	0.160:1 6.4	0.35	0.625	40	80	ECG Mod 70-280mA Phase 40-80 AvgmA280	30	Stnd SSB	40	12.16	133.72	75	32	Weight and height based cardiac protocol with ECG modulated mA (75-104 bpm)
35.6.5	SnapShot Burst+ >105 BPM		Helical	SmallBody	1.375:1 55.0	0.4	2.5	40	80	85	30	Stnd Plus	30	0.59	5.80	50	32	Weight and height based protocol for localization
		MIROI	Axial	SmallBody	1i	1	5 [0]	5	80	50	0	Stnd	0	21.31	10.66	0	32	Timing bolus for Weight and height based cardiac protocol with ECG modulated mA (>105 bpm)
			Cardiac SSBP	CardiacSmall	0.160:1 6.4	0.35	0.625	40	80	ECG Mod 70-280mA Phase 35-85 AvgmA280	30	Stnd SSB	40	13.09	144.01	75	32	Weight and height based cardiac protocol with ECG modulated mA (>105 bpm)
35.6.7	Non ECG Gated		Helical	PedBody	0.984:1 39.375	0.4	0.625	40	80	SmartmA 100-320mA NI=18 AvgmA225	30	Stnd Plus	30	2.19	23.63	75	32	Weight and height based non ECG gated protocol for cardiac with SmartmA
35.7.1	RC 22.5-31.5kg (49.6-69.5lbs)		Helical	LargeBody	1.375:1 55.0	0.4	5	40	120	75	30	Stnd Plus	30	1.73	22.98	85	32	Weight and height based routine chest protocol
35.7.3	SnapShot Segment 30-74 BPM		Helical	SmallBody	1.375:1 55.0	0.4	2.5	40	80	85	30	Stnd Plus	30	0.59	5.80	50	32	Weight and height based protocol for localization
		MIROI	Axial	SmallBody	1i	1	5 [0]	5	80	50	0	Stnd	0	21.31	10.66	0	32	Timing bolus for Weight and height based cardiac protocol with ECG modulated mA (30-74 bpm)
			Cardiac SEG	CardiacSmall	0.160:1 6.4	0.35	0.625	40	80	ECG Mod 75-295mA Phase 40-80 AvgmA295	30	Stnd SS Seg	40	12.81	140.96	75	32	Weight and height based cardiac protocol with ECG modulated mA (30-74 bpm)
35.7.4	SnapShot Burst 75-104 BPM		Helical	SmallBody	1.375:1 55.0	0.4	2.5	40	80	85	30	Stnd Plus	30	0.59	5.80	50	32	Weight and height based protocol for localization
		MIROI	Axial	SmallBody	1i	1	5 [0]	5	80	50	0	Stnd	0	21.31	10.66	0	32	Timing bolus for Weight and height based cardiac protocol with ECG modulated mA (75-104 bpm)
			Cardiac SSB	CardiacSmall	0.160:1 6.4	0.35	0.625	40	80	ECG Mod 75-295mA Phase 40-80 AvgmA295	30	Stnd SSB	40	12.81	140.96	75	32	Weight and height based cardiac protocol with ECG modulated mA (75-104 bpm)

Protocol Number	Protocol Name	Post Process	Scan Type	SFOV	Pitch Table Speed Row	Rotation Time (seconds)	Slice Thickness (mm) [Interval]* (mm)	Beam Collimation (mm)	kV	mA Min-Max NI Avg mA	Dose Reduction (%)	Recon Type	ASiR (%)	CTDI vol (mGy) ASiR	DLP (mGy·cm) ASiR	Scan Length (mm)	Phantom (cm)	Description
35.7.5	SnapShot Burst+ >105 BPM		Helical	SmallBody	1.375:1 55.0	0.4	2.5	40	80	85	30	Stnd Plus	30	0.59	5.80	50	32	Weight and height based protocol for localization
		MIROI	Axial	SmallBody	1i	1	5 [0]	5	80	50	0	Stnd	0	21.31	10.66	0	32	Timing bolus for Weight and height based cardiac protocol with ECG modulated mA (>105 bpm)
			Cardiac SSBP	CardiacSmall	0.160:1 6.4	0.35	0.625	40	80	ECG Mod 75-295mA Phase 35-85 AvgmA295	30	Stnd SSB	40	13.79	151.74	75	32	Weight and height based cardiac protocol with ECG modulated mA (>105 bpm)
35.7.7	Non ECG Gated		Helical	PedBody	0.984:1 39.375	0.4	0.625	40	80	SmartmA 100-360mA NI=18 AvgmA250	30	Stnd Plus	30	2.43	26.25	75	32	Weight and height based non ECG gated protocol for cardiac with SmartmA
35.8.1	RC 31.5-40.5kg (69.5-89.3lbs)		Helical	LargeBody	1.375:1 55.0	0.4	5	40	120	85	30	Stnd Plus	30	1.96	32.90	120	32	Weight and height based routine chest protocol
35.8.3	SnapShot Segment 30-74 BPM		Helical	SmallBody	1.375:1 55.0	0.4	2.5	40	100	85	30	Stnd Plus	30	1.10	10.76	50	32	Weight and height based protocol for localization
		MIROI	Axial	SmallBody	1i	1	5 [0]	5	100	50	0	Stnd	0	39.50	19.75	0	32	Timing bolus for Weight and height based cardiac protocol with ECG modulated mA (30-74 bpm)
			Cardiac SEG	CardiacSmall	0.160:1 6.4	0.35	0.625	40	100	ECG Mod 70-265mA Phase 40-80 AvgmA265	30	Stnd SS Seg	30	21.40	235.37	75	32	Weight and height based cardiac protocol with ECG modulated mA (30-74 bpm)
35.8.4	SnapShot Burst 75-104 BPM		Helical	SmallBody	1.375:1 55.0	0.4	2.5	40	100	85	30	Stnd Plus	30	1.10	10.76	50	32	Weight and height based protocol for localization
		MIROI	Axial	SmallBody	1i	1	5 [0]	5	100	50	0	Stnd	0	39.50	19.75	0	32	Timing bolus for Weight and height based cardiac protocol with ECG modulated mA (75-104 bpm)
			Cardiac SSB	CardiacSmall	0.160:1 6.4	0.35	0.625	40	100	ECG Mod 70-265mA Phase 40-80 AvgmA265	30	Stnd SSB	30	21.40	235.37	75	32	Weight and height based cardiac protocol with ECG modulated mA (75-104 bpm)
35.8.5	SnapShot Burst+ >105 BPM		Helical	SmallBody	1.375:1 55.0	0.4	2.5	40	100	85	30	Stnd Plus	30	1.10	10.76	50	32	Weight and height based protocol for localization
		MIROI	Axial	SmallBody	1i	1	5 [0]	5	100	50	0	Stnd	0	39.50	19.75	0	32	Timing bolus for Weight and height based cardiac protocol with ECG modulated mA (>105 bpm)
			Cardiac SSBP	CardiacSmall	0.160:1 6.4	0.35	0.625	40	100	ECG Mod 70-265mA Phase 35-85 AvgmA265	30	Stnd SSB	40	23.01	253.11	75	32	Weight and height based cardiac protocol with ECG modulated mA (>105 bpm)
35.8.7	Non ECG Gated		Helical	SmallBody	0.984:1 39.375	0.4	0.625	40	100	SmartmA 100-400mA NI=16 AvgmA280	30	Stnd Plus	30	5.06	54.57	75	32	Weight and height based non ECG gated protocol for cardiac with SmartmA

Protocol Number	Protocol Name	Post Process	Scan Type	SFOV	Pitch Table Speed Row	Rotation Time (seconds)	Slice Thickness (mm) [Interval]* (mm)	Beam Collimation (mm)	kV	mA Min-Max NI Avg mA	Dose Reduction (%)	Recon Type	ASiR (%)	CTDI vol (mGy) ASiR	DLP (mGy·cm) ASiR	Scan Length (mm)	Phantom (cm)	Description
35.9.1	RC 40.5-55.0kg(89.3-121.3lbs)		Helical	LargeBody	1.375:1 55.0	0.4	5	40	120	90	30	Stnd Plus	30	2.07	41.06	150	32	Weight and height based routine chest protocol
35.9.3	SnapShot Segment 30-74 BPM		Helical	SmallBody	1.375:1 55.0	0.4	2.5	40	100	85	30	Stnd Plus	30	1.10	10.76	50	32	Weight and height based protocol for localization
		MIROI	Axial	SmallBody	1i	1	5 [0]	5	100	50	0	Stnd	0	39.50	19.75	0	32	Timing bolus for Weight and height based cardiac protocol with ECG modulated mA (30-74 bpm)
			Cardiac SEG	CardiacSmall	0.160:1 6.4	0.35	0.625	40	100	ECG Mod 70-295mA Phase 40-80 AvgmA295	30	Stnd SS Seg	30	23.71	260.86	75	32	Weight and height based cardiac protocol with ECG modulated mA (30-74 bpm)
35.9.4	SnapShot Burst 75-104 BPM		Helical	SmallBody	1.375:1 55.0	0.4	2.5	40	100	85	30	Stnd Plus	30	1.10	10.76	50	32	Weight and height based protocol for localization
		MIROI	Axial	SmallBody	1i	1	5 [0]	5	100	50	0	Stnd	0	39.50	19.75	0	32	Timing bolus for Weight and height based cardiac protocol with ECG modulated mA (75-104 bpm)
			Cardiac SSB	CardiacSmall	0.160:1 6.4	0.35	0.625	40	100	ECG Mod 70-295mA Phase 40-80 AvgmA295	30	Stnd SSB	30	23.71	260.86	75	32	Weight and height based cardiac protocol with ECG modulated mA (75-104 bpm)
35.9.5	SnapShot Burst+ >105 BPM		Helical	SmallBody	1.375:1 55.0	0.4	2.5	40	100	85	30	Stnd Plus	30	1.10	10.76	50	32	Weight and height based protocol for localization
		MIROI	Axial	SmallBody	1i	1	5 [0]	5	100	50	0	Stnd	0	39.50	19.75	0	32	Timing bolus for Weight and height based cardiac protocol with ECG modulated mA (>105 bpm)
			Cardiac SSBP	CardiacSmall	0.160:1 6.4	0.35	0.625	40	100	ECG Mod 70-295mA Phase 35-85 AvgmA295	30	Stnd SSB	40	25.57	281.32	75	32	Weight and height based cardiac protocol with ECG modulated mA (>105 bpm)
35.9.7	Non ECG Gated		Helical	SmallBody	0.984:1 39.375	0.4	0.625	40	100	SmartmA 100-440mA NI=16 AvgmA310	30	Stnd Plus	30	5.60	60.42	75	32	Weight and height based non ECG gated protocol for cardiac with SmartmA

Abdomen

Table 3-4

[Interval]* - For Helical acquisitions, Interval unless otherwise indicated is equal to the slice thickness.
For Axial and Cine acquisitions, Interval unless otherwise indicated is equal to the Beam Collimation/Detector Coverage.

Protocol Number	Protocol Name	Post Process	Scan Type	SFOV	Pitch Table Speed Row	Rotation Time (seconds)	Slice Thickness (mm) [Interval]* (mm)	Beam Collimation (mm)	kV	mA Min-Max NI Avg mA	Dose Reduction (%)	Recon Type	ASiR (%)	CTDIvol (mGy) ASiR	DLP (mGy·cm) ASiR	Scan Length (mm)	Phantom (cm)	Description
36.1.1	Abd 6.0-7.5kg (13.2-16.5lbs)		Helical	PedBody	1.375:1 27.5	0.4	3.75	20	120	70	30	Stnd Plus	30	1.52	15.77	78.75	32	Weight and height based routine abdomen protocol
36.2.1	Abd 7.5-9.5kg (16.5-20.9lbs)		Helical	PedBody	1.375:1 27.5	0.4	3.75	20	120	110	30	Stnd Plus	30	2.39	27.47	90	32	Weight and height based routine abdomen protocol
36.3.1	Abd 9.5-11.5kg (20.9-25.4lbs)		Helical	PedBody	1.375:1 27.5	0.4	3.75	20	120	125	30	Stnd Plus	30	2.71	34.26	101.25	32	Weight and height based routine abdomen protocol
36.4.1	Abd 11.5-14.5kg (25.4-32.0lbs)		Helical	SmallBody	1.375:1 27.5	0.4	5	20	120	85	30	Stnd Plus	30	1.84	24.91	110	32	Weight and height based routine abdomen protocol
36.5.1	Abd 14.5-18.5kg (32.0-40.8lbs)		Helical	SmallBody	1.375:1 27.5	0.4	5	20	120	95	30	Stnd Plus	30	2.06	27.84	110	32	Weight and height based routine abdomen protocol
36.6.1	Abd 18.5-22.5kg (40.8-49.6lbs)		Helical	Medium Body	1.375:1 27.5	0.4	5	20	120	85	30	Stnd Plus	30	2.18	33.77	130	32	Weight and height based routine abdomen protocol
36.7.1	Abd 22.5-31.5kg(49.6-69.5lbs)		Helical	LargeBody	1.375:1 55.0	0.4	5	40	120	105	30	Stnd Plus	30	2.42	47.91	150	32	Weight and height based routine abdomen protocol
36.8.1	Abd 31.5-40.5kg(69.5-89.3lbs)		Helical	LargeBody	1.375:1 55.0	0.4	5	40	120	120	30	Stnd Plus	30	2.77	54.75	150	32	Weight and height based routine abdomen protocol
36.9.1	Abd 40.5-55.0kg(89.3-121.3lbs)		Helical	LargeBody	1.375:1 55.0	0.4	5	40	120	140	30	Stnd Plus	30	3.23	80.01	200	32	Weight and height based routine abdomen protocol

Miscellaneous

Table 3-5

[Interval]* - For Helical acquisitions, Interval unless otherwise indicated is equal to the slice thickness.
For Axial and Cine acquisitions, Interval unless otherwise indicated is equal to the Beam Collimation/Detector Coverage.

Protocol Number	Protocol Name	Post Process	Scan Type	SFOV	Pitch Table Speed Row	Rotation Time (seconds)	Slice Thickness (mm) [Interval]* (mm)	Beam Collimation (mm)	kV	mA Min-Max NI Avg mA	Dose Reduction (%)	Recon Type	ASiR (%)	CTDI vol (mGy) ASiR	DLP (mGy·cm) ASiR	Scan Length (mm)	Phantom (cm)	Description
40.1	Pink Zone Routine 0-20 lbs/0-9 kg		Helical	PedBody	1.375:1 55.0	0.5	5	40	80	SmartmA 65-130mA NI=5 Avg mA 70	0	Stnd	0	0.61	8.70	95	32	Pediatric and Small patient Routine procedure based protocols
40.2	Pink Zone Routine 21-60 lbs/9.1-27.2 kg		Helical	PedBody	1.375:1 55.0	0.5	5	40	100	SmartmA 80-160mA NI=7 Avg mA 70	0	Stnd	0	1.13	27.47	195	32	Pediatric and Small patient Routine procedure based protocols
40.3	Pink Zone Routine 61-100 lbs/27.3-45.4 kg		Helical	Medium Body	1.375:1 55.0	0.5	5	40	120	SmartmA 95-190mA NI=10 Avg mA 70	0	Stnd	0	2.09	71.81	295	32	Pediatric and Small patient Routine procedure based protocols
40.4	Pink Zone Routine 101-200 lbs/45.4-90.7 kg		Helical	LargeBody	1.375:1 55.0	0.5	5	40	120	SmartmA 110-220mA NI=12 Avg mA 70	0	Stnd	0	2.02	89.30	395	32	Pediatric and Small patient Routine procedure based protocols
40.5	Pink Zone Routine >200 lbs/>90.8 kg		Helical	LargeBody	1.375:1 55.0	0.5	5	40	120	SmartmA 125-300mA NI=15 Avg mA 70	0	Stnd	0	2.02	89.30	395	32	Pediatric and Small patient Routine procedure based protocols
40.7	Green Zone Lower Dose 0-20 lbs/0-9 kg		Helical	PedBody	1.375:1 55.0	0.5	5	40	80	SmartmA 50-100mA NI=7 Avg mA 70	0	Stnd	0	0.61	8.70	95	32	Pediatric and Small patient Lower Dose procedure based protocols
40.8	Green Zone Lower Dose 21-60 lbs/9.1-27.2 kg		Helical	PedBody	1.375:1 55.0	0.5	5	40	100	SmartmA 60-120mA NI=9 Avg mA 70	0	Stnd	0	1.13	27.47	195	32	Pediatric and Small patient Lower Dose procedure based protocols
40.9	Green Zone Lower Dose 61-100 lbs/27.3-45.4 kg		Helical	Medium Body	1.375:1 55.0	0.5	5	40	120	SmartmA 70-140mA NI=11 Avg mA 70	0	Stnd	0	2.09	71.81	295	32	Pediatric and Small patient Lower Dose procedure based protocols
40.10	Green Zone Lower Dose 101-200 lbs/45.4-90.7 kg		Helical	LargeBody	1.375:1 55.0	0.5	5	40	120	SmartmA 80-160mA NI=13 Avg mA 70	0	Stnd	0	2.02	89.30	395	32	Pediatric and Small patient Lower Dose procedure based protocols
40.11	Green Zone Lower Dose >200 lbs/>90.8 kg		Helical	LargeBody	1.375:1 55.0	0.5	5	40	120	SmartmA 90-240mA NI=16 Avg mA 70	0	Stnd	0	2.02	89.30	395	32	Pediatric and Small patient Lower Dose procedure based protocols
40.13	Grey Zone CT Angio 0-20 lbs/0-9 kg		Helical	PedBody	1.375:1 55.0	0.5	2.5	40	80	SmartmA 100-200mA NI=5 Avg mA 140	0	Stnd	0	1.22	17.71	97.5	32	Pediatric and Small patient Angio procedure based protocols

Protocol Number	Protocol Name	Post Process	Scan Type	SFOV	Pitch Table Speed Row	Rotation Time (seconds)	Slice Thickness (mm) [Interval]* (mm)	Beam Collimation (mm)	kV	mA Min-Max NI Avg mA	Dose Reduction (%)	Recon Type	ASiR (%)	CTDI vol (mGy) ASiR	DLP (mGy·cm) ASiR	Scan Length (mm)	Phantom (cm)	Description
40.14	Grey Zone CT Angio 21-60 lbs/9.1-27.2 kg		Helical	SmallBody	1.375:1 55.0	0.5	2.5	40	100	SmartmA 120-240mA NI=9.9 Avg mA 140	0	Stnd	0	2.26	55.50	197.5	32	Pediatric and Small patient Angio procedure based protocols
40.15	Grey Zone CT Angio 61-100 lbs/ 27.3-45.4 kg		Helical	LargeBody	1.375:1 55.0	0.5	2.5	40	120	SmartmA 120-240mA NI=10 Avg mA 140	0	Stnd	0	4.03	139.28	297.5	32	Pediatric and Small patient Angio procedure based protocols
40.16	Grey Zone CT Angio 101-200 lbs/ 45.4-90.7 kg		Helical	LargeBody	1.375:1 55.0	0.5	2.5	40	120	SmartmA 120-240mA NI=12 Avg mA 140	0	Stnd	0	4.03	179.62	397.5	32	Pediatric and Small patient Angio procedure based protocols
40.17	Grey Zone CT Angio >200 lbs/ >90.8 kg		Helical	LargeBody	1.375:1 55.0	0.5	2.5	40	120	SmartmA 120-300mA NI=15 Avg mA 140	0	Stnd	0	4.03	179.62	397.5	32	Pediatric and Small patient Angio procedure based protocols