

CT Peds Extremity

Updated
5/4/2024

Indications - pain, trauma, fracture, extremity weakness, mass, infection.

NEVER perform a multiphase or without and with exam on a pediatric patient unless approved by a rad.

GENERAL SCAN NOTES

Remove any metal from the imaging field of view.

Topogram/Coverage - As per adult MSK protocols.

Scan through entire fracture if one is present.

Adjust FOV (field of view) on topogram to smallest without cropping anatomy.

IV Contrast: Weight-based Omnipaque-300, inject at 2 mL/sec, 22-gauge or larger, 60 secs scan delay.

For **GE scanners**, it is essential for the 1st recon thickness on the scanner to match the 1st recon thickness in this protocol book for the prescribed Noise Index to be valid. The 1st recon should generally be the thickest recon in the protocol.

SIEMENS PARAMETERS & RECONS

	Scan Mode	kV	mAs	Care Dose	Care kV & Lvl	Pitch	Acq	Coll	Rot Time
Sensation 16	spiral	120	60	on	NA	0.80	16	0.75	1.00
Go Up 32	spiral	110	161	on	on 170	1.50	32	0.7	1.00
Sensation 64	spiral	120	60	on	NA	0.90	64	0.6	1.00
Definition 64	spiral	100	77	on	on	0.80	64	0.6	1.00
Go Top 64	spiral	100	224	on	on 170	1.50	64	0.6	1.00
Drive 128	spiral	100	54	on	on	0.80	128	0.6	1.00
Force 192	spiral	100	35	on	off	0.80	192	0.6	1.00

Name of Series	Thick	Interval	Kernel	Window	IR Lvl	Recon Direction
AX BONE	2.0	2.0	Br59 / B60s	bone/osteo	3	head/feet
COR BONE	2.0	2.0	Br59 / B60s	bone/osteo	3	front/back
SAG BONE	2.0	2.0	Br59 / B60s	bone/osteo	3	left/right
AX SOFT	2.0	2.0	Br40 / B30s	abdomen	3	head/feet

Add the following recons if the indication is **soft tissue** related.

COR SOFT	2.0	2.0	Br40 / B30s	abdomen	3	front/back
SAG SOFT	2.0	2.0	Br40 / B30s	abdomen	3	left/right

Perform all reconstructions using the planes prescribed on the images in the adult MSK protocols.

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GE PARAMETERS & RECONS

For **LightSpeed 16** and **Optima 540** scanners:

	Scan Type	kV	mA Range	Noise Index	Smart mA	Slice Thick	Beam Coll	Pitch	Speed	Rot Time
0-20 lbs (0-9 kgs)	helical	80	50-100	11.31	on	2.5	20	1.375	27.50	0.5
21-60 lbs (9-27.2 kgs)	helical	100	50-100	14.14	on	2.5	20	1.375	27.50	0.5
61-100 lbs (27.3-45.4 kgs)	helical	100	50-100	16.97	on	2.5	20	1.375	27.50	0.5
101-200 lbs (45.5-90.7 kgs)	helical	120	50-100	19.80	on	2.5	20	1.375	27.50	0.5
>200 lbs (>90.8 kgs)	helical	120	50-150	25.46	on	2.5	20	1.375	27.50	0.5

For **LightSpeed & Discovery VCT 64** scanners:

0-20 lbs (0-9 kgs)	helical	80	50-100	11.31	on	2.5	40	1.375	55.00	0.5
21-60 lbs (9-27.2 kgs)	helical	100	50-100	14.14	on	2.5	40	1.375	55.00	0.5
61-100 lbs (27.3-45.4 kgs)	helical	100	50-100	16.97	on	2.5	40	1.375	55.00	0.5
101-200 lbs (45.5-90.7 kgs)	helical	120	50-100	19.80	on	2.5	40	1.375	55.00	0.5
>200 lbs (>90.8 kgs)	helical	120	50-150	25.46	on	2.5	40	1.375	55.00	0.5

Name of Series	Thickness	Interval	Recon Algorithm	Window Width/Level	Recon Direction
AX BONE	2.5	2.5	bone full	2500/480	head/feet
COR BONE	2.5	2.5	bone full	2500/480	front/back
SAG BONE	2.5	2.5	bone full	2500/480	left/right
AX SOFT	2.5	2.5	std full	400/40	head/feet

Must be first recon.

Add the following recons if the indication is **soft tissue** related.

COR SOFT	2.5	2.5	std full	400/40	front/back
SAG SOFT	2.5	2.5	std full	400/40	left/right

PHILIPS PARAMETERS & RECONS

	Scan Mode	kV	Avg mAs	Dose Index	3D Dose	Pitch	Detect	Colli	Rot Time
Incisive 128	helical	120	94	23	on	1.00	64	0.625	0.75

Name of Series	Thick	Interval	Filter	Window	iDose	Recon Direction
AX BONE	3.0	3.0	YC	bone	2	head/feet
COR BONE	3.0	3.0	YC	bone	2	front/back
SAG BONE	3.0	3.0	YC	bone	2	left/right
AX SOFT	3.0	3.0	B	abdomen	2	head/feet

Add the following recons if the indication is **soft tissue** related.

COR SOFT	3.0	3.0	B	abdomen	2	front/back
SAG SOFT	3.0	3.0	B	abdomen	2	left/right