

CT Zimmer PSI Knee

Updated
5/5/2024

Indications - pre surgical evaluation prior to knee joint replacement.

Bill under CT LE w/o Contrast charge. Do not include separate hip, knee and ankle charges.

GENERAL SCAN NOTES

Move the patient's arms over his/her head if possible. Remove any metal from the imaging field of view.

Patient positioning:

Patient in supine position feet first with knees extended and toes pointing straight up.

Elevate contralateral leg if prosthesis present to minimize streak artifact.

Do not allow patient movement between or during the scans.

Topogram - iliac crests through feet.

Craniocaudal scan coverage (see image below):

3 cm above hip joint through bottom of talus.

FOV must be ≤ 250 mm (up to 320 mm if bilateral) and matrix must be 512 x 512 squared.

If bilateral cannot fit in FOV < 320 mm, scan with FOV of 500 mm and recon each leg at 250 mm.

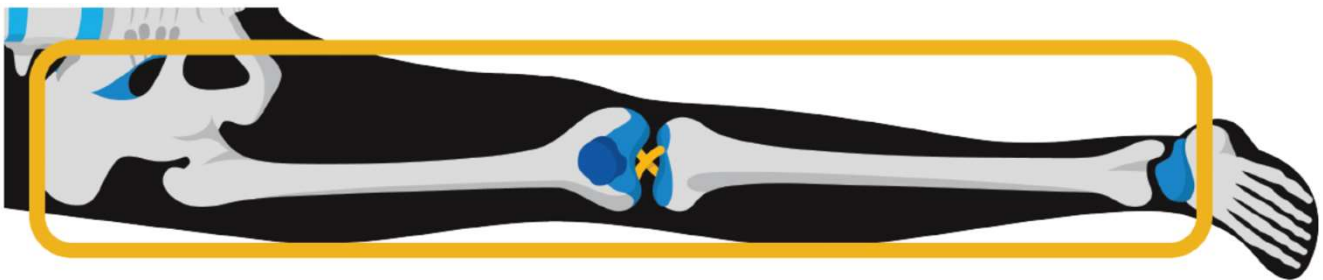
Only bones have to be included in FOV (soft tissues do not have to be included).

IV Contrast: not given for this protocol.

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.

Prepare an uncompressed DICOM disc containing only axial soft tissue images (do not send coronal and sagittal recons).

Zimmer Customer Support: 800-348-2759.



Craniocaudal Scan Coverage

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SIEMENS PARAMETERS & RECONS

	Scan Mode	kV	mAs	Care Dose	Care kV & Lvl	Pitch	Acq	Coll	Rot Time
Sensation 16	spiral	120	200	on	NA	0.80	16	0.75	0.5
Go Up 32	spiral	130	109	on	on 170	0.80	32	0.7	1.0
Sensation 64	spiral	120	200	on	NA	0.90	64	0.6	0.5
Definition 64	spiral	120	190	on	on	0.80	64	0.6	1.0
Go Top 64	spiral	120	131	on	on 170	0.80	64	0.6	1.0
Drive 128	spiral	120	133	on	on	0.80	128	0.6	1.0
Force 192	spiral	120	133	on	on	0.80	192	0.6	1.0

Name of Series	Thick	Interval	Kernel	Window	IR Lvl	Recon Direction
AX SOFT	1.5	0.75	Br40 / B31f	abdomen	3	head/feet
AX BONE	3.0	3.0	Br59 / B60f	bone/osteo	3	head/feet
COR BONE	3.0	3.0	Br59 / B60f	bone/osteo	3	front/back
SAG BONE	3.0	3.0	Br59 / B60f	bone/osteo	3	left/right

Zimmer specific recon.

Only the axial soft tissue images are sent to Zimmer.

GE PARAMETERS & RECONS

	Scan Type	SFOV	kV	mA Range	Noise Index	Smart mA	Slice Thick	Beam Coll	Pitch	Speed	Rot Time	Dose Red	ASIR
LS 16	helical	large	120	100-440	27.00	on	1.25	20	1.375	27.50	0.5	NA	NA
Opt 540	helical	large	120	100-440	27.00	on	1.25	20	1.375	27.50	0.5	NA	NA
LS VCT 64	helical	large body	120	120-450	16.26	on	1.25	40	0.984	39.37	0.5	30	70
Disc VCT 64	helical	large body	120	100-700	20.00	on	1.25	40	0.984	39.37	0.8	NA	NA

Name of Series	Thickness	Interval	Recon Algorithm/Mode	Window Width/Level	Recon Direction
AX SOFT	1.25	0.625	std full	400/40	head/feet
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

**Must be first recon.
Zimmer specific recon.**

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PHILIPS PARAMETERS & RECONS

	Scan Mode	kV	Avg mAs	Dose Index	3D Dose	Pitch	Detect	Colli	Rot Time
Incisive 128	helical	120	103	20	on	0.80	64	0.625	0.75

Name of Series	Thick	Interval	Filter	Window	iDose	Recon Direction
AX SOFT	1.5	0.75	B	abdomen	3	head/feet
AX BONE	3.0	3.0	YC	bone	3	head/feet
COR BONE	3.0	3.0	YC	bone	3	front/back
SAG BONE	3.0	3.0	YC	bone	3	left/right

Zimmer specific recon.

Only the axial soft tissue images are sent to Zimmer.