

CT Arthrex Shoulder

Updated 04/15/26

Reviewed 04/15/26

Indications - pre surgical evaluation for shoulder joint replacement.

Bill under CT Shoulder w/o Contrast charge.

GENERAL SCAN NOTES

Remove any metal from the imaging field of view.

Arms in neutral position by patient's side.

Topogram - from above top of shoulder to proximal humerus.

Craniocaudal scan coverage - from above top of clavicle to proximal third of humerus.

Include entire ipsilateral scapula in FOV.

Matrix must be 512 x 512.

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.

SIEMENS PARAMETERS & RECONS

	Scan Mode	kV	mAs	Care Dose	Care kV & Lvl	Pitch	Acq	Coll	Rot Time	Scan Time
Sensation 16	spiral	120	200	on	NA	0.80	16	0.75	1.0	10.4
Go Up 32	spiral	130	84	on	on 130	0.80	32	0.7	1.0	5.6
Sensation 64	spiral	120	150	on	NA	0.90	64	0.6	1.0	5.8
Definition 64	spiral	120	165	on	on	0.80	64	0.6	1.0	6.5
Go Top 64	spiral	130	100	on	on 130	0.80	64	0.6	1.0	3.3
Drive 128	spiral	120	116	on	on	0.80	128	0.6	1.0	3.3
Force 192	spiral	120	116	on	on	0.80	192	0.6	1.0	2.2

Name of Series	Thick	Interval	Kernel	Window	IR Lvl	Recon Direction
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
AX SOFT	3.0	3.0	Br40 / B31f	abdomen	3	head/feet
AX THINS	0.625	0.625	Br40 / B31f	abdomen	3	head/feet

Arthrex specific recon.

If the scan parameters do not allow for 0.625 mm thickness, pick as close to 0.625 mm as the scanner will allow but no thicker than 1.0 mm. The interval must be the same thickness and the slice thickness.

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GE PARAMETERS & RECONS

	Scan Type	SFOV	kV	mA Range	Noise Index	Smart mA	Slice Thick	Beam Coll	Pitch	Speed	Rot Time	Dose Red	ASIR	Scan Time
LS 16	helical	large	120	100-440	12.50	on	2.5	10	0.938	9.37	0.5	NA	NA	5.3
Opt 540	helical	large	120	100-440	12.50	on	2.5	10	0.938	9.37	0.5	NA	NA	5.3
LS VCT 64	helical	large body	120	100-450	16.00	on	2.5	40	0.984	39.37	0.5	20	20	1.3
Disc VCT 64	helical	large body	140	100-610	14.14	on	2.5	40	0.516	20.625	0.6	NA	NA	2.9

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
AX THINS	0.625	0.625	std full	400/40	head/feet

Must be first recon.

Arthrex specific recon.

If the scan parameters do not allow for 0.625 mm thickness, pick as close to 0.625 mm as the scanner will allow but no thicker than 1.0 mm. The interval must be the same thickness and the slice thickness.

PHILIPS PARAMETERS & RECONS

	Scan Mode	kV	Avg mAs	Dose Index	3D Dose	Pitch	Detect	Colli	Rot Time	Scan Time
Incisive 128	helical	120	129	22	on	0.80	64	0.625	1.00	3.1

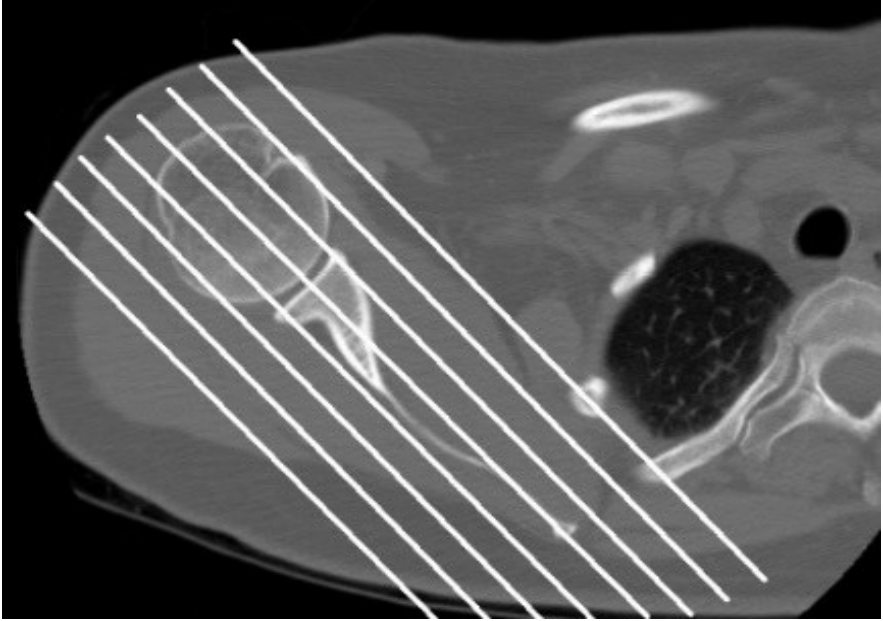
Name of Series	Thick	Interval	Filter	Window	iDose	Recon Direction
AX BONE	3.0	3.0	YC	bone	3	head/feet
COR BONE	3.0	3.0	YC	bone	3	front/back
SAG BONE	3.0	3.0	YC	bone	3	left/right
AX SOFT	3.0	3.0	B	abdomen	3	head/feet
AX THINS	0.625	0.625	B	abdomen	3	head/feet

Arthrex specific recon.

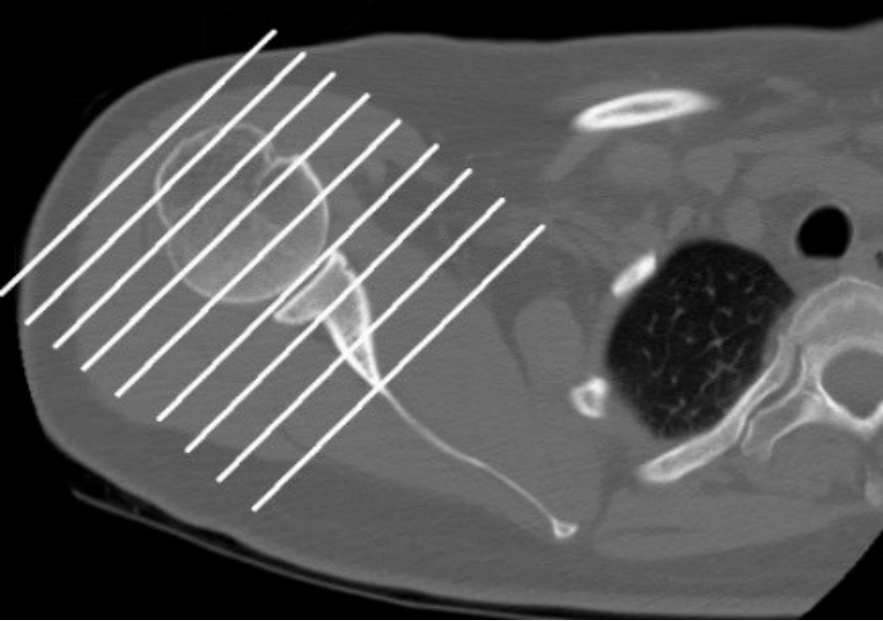
If the scan parameters do not allow for 0.625 mm thickness, pick as close to 0.625 mm as the scanner will allow but no thicker than 1.0 mm. The interval must be the same thickness and the slice thickness.

Company Representative: Christian Dennis - cdenn88@icloud.com, 904-806-0144

CT Arthrex Shoulder



Coronal Plane



Sagittal Plane

Preferred CT Data Specifications: Shoulder

Scan Protocol: CT shoulder without contrast; transfer DICOM to CD or upload directly to the facility's admin account.

- The Virtual Implant Positioning™ (VIP™) system uses only the thin axial images
- The medial and inferior borders of the scapula must be included in the scan
- Arthrograms will not be accepted
- Reformatted images will not be accepted
- Standard or soft-tissue filter/algorithm preferred
- Start the CT scan several slices above the AC joint and include the entire scapula and proximal third of the humerus
- If the patient has any metal implants on the contralateral side, position the arm above the patient's head to minimize metal artifacts in the scan
- If the patient has metal on the affected side, use the appropriate metal artifact reduction algorithm per the manufacturer

To minimize the number of rejections due to incompatible or inadequate imaging, Arthrex reserves the right to reject CT scans that have one or more parameters outside the recommendations below.

CT scans will be accepted for VIP preoperative planning for up to 6 months from the date of the scan.

Recommended CT Settings

Patient Position	Shoulder: Supine, arms at sides with shoulders in neutral rotation, shoulder centered in gantry
Slice Thickness	≤1 mm; minimum 0.2 mm; preferable 0.6 mm
Reconstruction Interval (collimation, scan spacing)	≤1 mm; preferably less
Acquisition	Spiral or helical mode
Field of View (FOV)	Start the CT scan several slices above the AC joint and include the entire scapula and proximal third of the humerus, using the smallest FOV possible
Span Spacing	Contiguous slices
Pitch	<1
Gantry Angle	0° (no tilt)
Reconstruction Filter/Algorithm	Standard or Soft Tissue (not smooth, not sharp, not bone, not detail) No contrast (arthrograms NOT acceptable) Raw DICOM (grayscale only; no formatting)
Scan Strength (kVp)	140 kVp if available; otherwise, 120 kVp
Dose Modulation (mA)	300 mA with dose modulation; if modulation is not available, then 200 mA or higher depending on patient size

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Arthrex, Inc.
Specifications for CT Scan Data Acquisition
Revision Level: 1