PEDIATRIC KNEE SYNOVITIS 3T

INSTRUCTIONS AND PATIENT PREPARATION

Anatomical Region	Knee Synovitis
Field Strength	3.0T
Coil	See the Coil Configuration row in the first parameters table below (varies by sequence).
Position & Landmark	Feet first, supine. Landmark: center of the coil in use (typically central to the ROI).
Contrast	Weight-based gadolinium contrast per your institution's protocol, supervising radiologist, and the agent's FDA prescribing information. Postcontrast sequences are marked **+C**.

PATIENT POSITION

Scan Description	RT 3-Plane Loc	LT 3-Plane Loc	Sag PD DL	Sag T2 Fat DL	Ax T2 Fat DL	Cor PD Fat DL	Sag PD Cube Fat DL	Cor PD DL	Cor T1 DL	Pre Ax T1 FAT	+C Ax T1 FAT	+C Sag T1 FAT
Coil Configuration	QED18chKnee	QED18chKnee	QED18chKnee	QED18chKnee	QED18chKnee	QED18chKnee	QED18chKnee	QED18chKnee	QED18chKnee	QED18chKnee	QED18chKnee	QED18chKnee
Plane	3-PLANE	3-PLANE	OBLIQUE	OBLIQUE	OBLIQUE	OBLIQUE	OBLIQUE	OBLIQUE	OBLIQUE	OBLIQUE	OBLIQUE	OBLIQUE

IMAGING PARAMETERS

Scan Description	RT 3-Plane Loc	LT 3-Plane Loc	Sag PD DL	Sag T2 Fat DL	Ax T2 Fat DL	Cor PD Fat DL	Sag PD Cube Fat DL	Cor PD DL	Cor T1 DL	Pre Ax T1 FAT	+C Ax T1 FAT	+C Sag T1 FAT
Imaging Mode	2D	2D	2D	2D	2D	2D	3D	2D	2D	2D	2D	2D
Imaging Options	Seq, EDR, TRF, Fast, SS, ARC	Seq, EDR, TRF, Fast, SS, ARC	EDR, TRF, Fast, FR, ARC	EDR, TRF, Fast, FR, ARC	FC, EDR, TRF, Fast, FR, ARC	EDR, TRF, Fast, FR, ARC	EDR, Fast, ZIP512, FR, ARC	EDR, TRF, Fast, FR, ARC	EDR, TRF, Fast, FR, ARC	EDR, TRF, Fast, ARC	EDR, TRF, Fast, ARC	FC, EDR, TRF, Fast
Pulse Sequence	Spin Echo	Spin Echo	FSE-XL	FSE-XL	FSE-XL	FSE-XL	Cube	FSE-XL	FSE-XL	FSE-XL	FSE-XL	FSE-XL
ARC Phase	2	2	2	2	2	2	2	2	2	2	2	—
ARC Slice	—	—	—	—	—	—	2	—	—	—	—	—

IMAGE RECON

Scan Description	RT 3-Plane Loc	LT 3-Plane Loc	Sag PD DL	Sag T2 Fat DL	Ax T2 Fat DL	Cor PD Fat DL	Sag PD Cube Fat DL	Cor PD DL	Cor T1 DL	Pre Ax T1 FAT	+C Ax T1 FAT	+C Sag T1 FAT
Recon DL Strength	Off	Off	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Intensity Correction	NONE	NONE	SCENIC	SCENIC	SCENIC	SCENIC	SCENIC	SCENIC	PURE	SCENIC	SCENIC	SCENIC
Intensity Filter	None	None	None	None	None	None	None	None	None	None	None	None
Save Original	Off	Off	Off	Off	On	Off	On	On	Off	Off	Off	Off

SCAN RANGE

Scan Description	RT 3-Plane Loc	LT 3-Plane Loc	Sag PD DL	Sag T2 Fat DL	Ax T2 Fat DL	Cor PD Fat DL	Sag PD Cube Fat DL	Cor PD DL	Cor T1 DL	Pre Ax T1 FAT	+C Ax T1 FAT	+C Sag T1 FAT
FOV	26	26	14	14	14	14	16	14	14	18	18	14
Slice Thickness	5	5	3	3	3	3	0.7	3	3	3	3	3
Slice Spacing	5	5	0.3	0.3	0.3	0	—	0	0	1	1	0.5
Overlap Locations	0	0	0	0	0	0	0	0	0	0	0	0
No Phase Wrap	1	1	1.25	1.25	2	1.5	1	1.2	1.2	1	1	1
Slices per Slab	—	—	—	—	—	—	202	—	—	—	—	—
No Slab Wrap	—	—	—	—	—	—	1.02	—	—	—	—	—
Slice Resolution(%)	—	—	—	—	—	—	100	—	—	—	—	—
Number of Slices	—	—	—	—	—	—	—	—	—	30	30	26

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MR Gadopiclenol (VUEWAY®) Protocol for GE MRI Scanners
Pediatric

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ACQUISITION TIMING

Scan Description	RT 3-Plane Loc	LT 3-Plane Loc	Sag PD DL	Sag T2 Fat DL	Ax T2 Fat DL	Cor PD Fat DL	Sag PD Cube Fat DL	Cor PD DL	Cor T1 DL	Pre Ax T1 FAT	+C Ax T1 FAT	+C Sag T1 FAT
Acq Voxel Size	0.8 X 1.0 X 5.0	0.8 X 1.0 X 5.0	0.4 X 0.4 X 3.0	0.4 X 0.5 X 3.0	0.4 X 0.5 X 3.0	0.4 X 0.5 X 3.0	0.6 X 0.6 X 0.7	0.4 X 0.5 X 3.0	0.5 X 0.6 X 3.0	0.6 X 0.7 X 3.0	0.6 X 0.7 X 3.0	0.4 X 0.6 X 3.0
Freq	320	320	384	320	320	320	256	320	288	320	320	320
Phase	256	256	312	256	256	288	256	288	224	256	256	224
Freq DIR	Unswap	Unswap	Unswap	Unswap	Swap	Unswap	Unswap	Unswap	Unswap	R/L	R/L	S/I
# of Acq. Before Pause	0	0	—	—	—	—	—	—	—	0	0	0
Phase FOV	1	1	1	1	1	1	1	1	1	1	1	1
Auto Shim	Auto	Auto	Auto	Auto	Auto	Auto	Auto	Auto	Auto	Auto	Auto	Auto
Phase Correct	Off	Off	On	On	On	On	Off	On	On	On	On	On
RF Drive Mode	Single	Single	Single	Single	Single	Single	Single	Single	Single	Single	Single	Single
Excitation Mode	Selective	Selective	Selective	Selective	Selective	Selective	Selective	Selective	Selective	Selective	Selective	Selective
NEX	—	—	1	1	1	1	1	1	1	1	1	1
Fat Shift DIR	—	—	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal (L)	Normal (L)	Normal (S)
Flow Comp Direction	—	—	—	—	Slice	—	—	—	—	—	—	Freq

SCAN TIMING

Scan Description	RT 3-Plane Loc	LT 3-Plane Loc	Sag PD DL	Sag T2 Fat DL	Ax T2 Fat DL	Cor PD Fat DL	Sag PD Cube Fat DL	Cor PD DL	Cor T1 DL	Pre Ax T1 FAT	+C Ax T1 FAT	+C Sag T1 FAT
TE	80	80	22	50	65	33	Maximum	18	24	20	20	24
Number of Echoes	1	1	1	1	1	1	1	1	1	1	1	1
TR	Minimum	Minimum	4165	5216	3271	3624	1000	3794	754	800	800	800
Receiver Bandwidth	62.5	62.5	83.33	90.91	62.5	62.5	50	90.91	62.5	62.5	62.5	62.5
Flip Angle	—	—	142	142	142	142	—	142	111	142	142	142
Echo Train Length	—	—	6	13	15	8	40	8	3	4	4	4

CONTRAST

Scan Description	RT 3-Plane Loc	LT 3-Plane Loc	Sag PD DL	Sag T2 Fat DL	Ax T2 Fat DL	Cor PD Fat DL	Sag PD Cube Fat DL	Cor PD DL	Cor T1 DL	Pre Ax T1 FAT	+C Ax T1 FAT	+C Sag T1 FAT
Contrast Yes/No	No	No	No	No	No	No	No	No	No	No	+C	+C

OTHERS

Scan Description	RT 3-Plane Loc	LT 3-Plane Loc	Sag PD DL	Sag T2 Fat DL	Ax T2 Fat DL	Cor PD Fat DL	Sag PD Cube Fat DL	Cor PD DL	Cor T1 DL	Pre Ax T1 FAT	+C Ax T1 FAT	+C Sag T1 FAT
Anatomical Region	Knee	Knee	Knee	Knee	Knee	Knee	Knee	Knee	Knee	Knee	Knee	Knee
3D Geometry Correction	—	—	Off	Off	Off	Off	Off	Off	—	—	—	—

AIRX

Scan Description	RT 3-Plane Loc	LT 3-Plane Loc	Sag PD DL	Sag T2 Fat DL	Ax T2 Fat DL	Cor PD Fat DL	Sag PD Cube Fat DL	Cor PD DL	Cor T1 DL	Pre Ax T1 FAT	+C Ax T1 FAT	+C Sag T1 FAT
Anatomical Reference	—	—	None	None	None	None	None	None	None	None	None	None
Anatomical Plane	—	—	None	None	None	None	None	None	None	None	None	None

SATURATION

Scan Description	RT 3-Plane Loc	LT 3-Plane Loc	Sag PD DL	Sag T2 Fat DL	Ax T2 Fat DL	Cor PD Fat DL	Sag PD Cube Fat DL	Cor PD DL	Cor T1 DL	Pre Ax T1 FAT	+C Ax T1 FAT	+C Sag T1 FAT
Fat/Water Saturation	—	—	—	Fat Classic	Fat Classic	Fat Classic	Fat	—	—	Fat	Fat	Fat
SAT Location S	—	—	—	—	—	—	—	—	—	Default	Default	—
SAT Location I	—	—	—	—	—	—	—	—	—	Default	Default	—

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TRACKER

Scan Description	RT 3-Plane Loc	LT 3-Plane Loc	Sag PD DL	Sag T2 Fat DL	Ax T2 Fat DL	Cor PD Fat DL	Sag PD Cube Fat DL	Cor PD DL	Cor T1 DL	Pre Ax T1 FAT	+C Ax T1 FAT	+C Sag T1 FAT
Tracker Length	—	—	—	—	—	—	200	—	—	—	—	—
Tracker Thickness	—	—	—	—	—	—	20	—	—	—	—	—

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