PEDIATRIC COMPLETE SPINE CORE 3T

INSTRUCTIONS AND PATIENT PREPARATION

Instructions	Core imaging used on all pediatric spine protocols. Optional sequences added based on clinical indication.
Position	Head first supine
Coil	Head coil, Spine coil, and Body 18 (anterior)
Contrast Timing	T2 is performed immediately post contrast to allow time for peak contrast enhancement on T1 imaging.
Patient Preparation	Landmark per department pediatric protocol — pending sign-off.
Coverage and Technique Notes	• 3 PLANE HASTE LOC UPPER AND LOWER THEN COMPOSED • SAG T1 FLAIR UPPER AND LOWER WITH SUBTRACTIONS OF PRE AND POST • TRAN VIBE THROUGH ENTIRE SPINE (ANGLE WITH THE CORD AND USE SET AND GO PROTOCOL WITHOUT COMPOSING)

CONTRAST AGENT PARAMETERS

Contrast Agent	Dose	Injection Rate	Dose Timing Method and Scan Delay
Gadopiclenol (VUEWAY)	0.05 mmol/kg	Hand Bolus or Power Injection	Per department pediatric contrast protocol — pending technologist/radiologist sign-off.
Comments	• Use minimal dose for patients with a GFR <60 mL/sec • Report agent administered and dose		

IMAGING PARAMETERS

Scan Description	SAG T1 FLAIR UPPER	SAG T1 FLAIR LOWER	Post SAG T2 DIXON UPPER	Post SAG T2 DIXON LOWER	Post SAG T1 FLAIR UPPER	Post SAG T1 FLAIR LOWER	Post TRAN VIBE UPPER	Post TRAN VIBE LOWER
Sequence Name	tir	tir	tseR_rr	tseR_rr	tir	tir	fl	fl
Mode	Interleaved	Interleaved	Interleaved	Interleaved	Interleaved	Interleaved	—	—
PAT Mode	GRAPPA	GRAPPA	None	None	GRAPPA	GRAPPA	GRAPPA	GRAPPA
Dimension	2D	2D	—	—	2D	2D	3D	3D
Acceleration Factor PE	2	2	—	—	2	2	2	2
Acceleration Factor 3D	—	—	—	—	—	—	1	1

SCAN PARAMETERS

Scan Description	SAG T1 FLAIR UPPER	SAG T1 FLAIR LOWER	Post SAG T2 DIXON UPPER	Post SAG T2 DIXON LOWER	Post SAG T1 FLAIR UPPER	Post SAG T1 FLAIR LOWER	Post TRAN VIBE UPPER	Post TRAN VIBE LOWER
TR	1560.0 ms	1560.0 ms	3600.0 ms	3600.0 ms	1560.0 ms	1560.0 ms	6.00 ms	6.00 ms
TE	9.10 ms	9.10 ms	108.00 ms	96.00 ms	9.10 ms	9.10 ms	2.46 ms	2.46 ms
TI	1000 ms	1000 ms	—	—	1000 ms	1000 ms	—	—
Flip Angle	140 deg	140 deg	150 deg	150 deg	140 deg	140 deg	12 deg	12 deg
Turbo Factor	8	8	18	18	8	8	—	—
Bandwidth	296 Hz/Px	296 Hz/Px	347 Hz/Px	347 Hz/Px	296 Hz/Px	296 Hz/Px	250 Hz/Px	250 Hz/Px
EPI Factor	—	—	—	—	—	—	—	—
Fat Saturation Mode	—	—	Strong	Strong	—	—	—	—
Fat Suppression	Standard	Standard	Dixon	Dixon	Standard	Standard	Standard	Standard
Gradient Mode	Fast	Fast	Fast	Fast	Fast	Fast	Fast	Fast
RF Pulse Type	Low SAR	Low SAR	Normal	Normal	Low SAR	Low SAR	Fast	Fast
Asymmetric Echo	—	—	Off	Off	—	—	Weak	Weak

Disclaimer: The MR Protocols information is provided by independent physicians and technologists and is not intended to provide definitive or complete medical instructional or treatment information. Products referenced herein should be used consistently with their package inserts, and any devices referenced herein should be used consistently with the operation instructions provided by their respective manufactures. Northwest Imaging Forums, Inc. and Bracco Diagnostics Inc. do not offer medical advice and shall not be responsible for any person's reliance on this protocol.

Supported by an educational grant from Bracco Diagnostics Inc.

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

IMAGING FORUMS, INC.

ACQUISITION PARAMETERS

Scan Description	SAG T1 FLAIR UPPER	SAG T1 FLAIR LOWER	Post SAG T2 DIXON UPPER	Post SAG T2 DIXON LOWER	Post SAG T1 FLAIR UPPER	Post SAG T1 FLAIR LOWER	Post TRAN VIBE UPPER	Post TRAN VIBE LOWER
Base Resolution	192	192	192	192	192	192	128	128
Phase Resolution	85 %	85 %	75 %	80 %	85 %	85 %	100 %	100 %
Slice Resolution	—	—	—	—	—	—	61 %	61 %
Averages	1	1	1	1	1	1	1	1
Concatenations	2	2	1	1	2	2	1	1
b-value	—	—	—	—	—	—	—	—
FoV Read	120 mm	120 mm	120 mm	120 mm	120 mm	120 mm	75 mm	75 mm
FoV Phase	250.0 %	250.0 %	250.0 %	250.0 %	250.0 %	250.0 %	187.5 %	187.5 %
Phase Encoding Dir.	H >> F	H >> F	H >> F	H >> F	H >> F	H >> F	A >> P	A >> P
Phase Oversampling	25 %	25 %	30 %	30 %	25 %	25 %	100 %	100 %
Slice Oversampling	—	—	—	—	—	—	100.0 %	100.0 %
Phase Partial Fourier	Off	Off	Off	Off	Off	Off	Off	Off
Slice Partial Fourier	—	—	—	—	—	—	Off	Off
Flow Compensation	None	None	Read	Read	None	None	—	—

SCANNING RANGE

Scan Description	SAG T1 FLAIR UPPER	SAG T1 FLAIR LOWER	Post SAG T2 DIXON UPPER	Post SAG T2 DIXON LOWER	Post SAG T1 FLAIR UPPER	Post SAG T1 FLAIR LOWER	Post TRAN VIBE UPPER	Post TRAN VIBE LOWER
Elliptical Filter	Off	Off	On	On	Off	Off	On	On
Normalize	Prescan	Prescan	Prescan	Prescan	Prescan	Prescan	Prescan	Prescan
Distortion Correction	2D	2D	2D	2D	2D	2D	2D	2D
Slice Thickness	3.0 mm	3.0 mm	3.0 mm	3.0 mm	3.0 mm	3.0 mm	3.0 mm	3.0 mm
Distance Factor	0%	0%	0%	0%	0%	0%	0%	0%
Slices	13	13	13	13	13	13	88	88
Acquisition Time	1:51 min	1:51 min	3:20 min	3:27 min	1:51 min	1:51 min	2:45 min	2:45 min

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