PEDIATRIC BRAIN TUMOR CORE 3T

INSTRUCTIONS AND PATIENT PREPARATION

Instructions	Core imaging used on all pediatric brain protocols. Optional sequences added based on clinical indication.
Position	Head first supine
Coil	Head 20 or Head 64
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.

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 3D T1 MPRAGE	TRANS rDWI	TRAN SWI	Post TRAN T2 TSE	Post TRAN T2 FLAIR FS DR	Post SAG 3D T1 SPACE FS	Post SAG 3D T1 MPRAGE
Sequence Name	tfl	resolve	swi_r	tseR_rs	tir	spcR	tfl
Mode	Single Shot	Interleaved	Interleaved	Interleaved	Interleaved	—	Single Shot
PAT Mode	GRAPPA	—	GRAPPA	GRAPPA	GRAPPA	CS	GRAPPA
Dimension	3D	2D	3D	2D	2D	3D	3D
Acceleration Factor PE	2	2	2	2	2	—	2
Acceleration Factor 3D	1	—	1	—	—	—	1

SCAN PARAMETERS

Scan Description	SAG 3D T1 MPRAGE	TRANS rDWI	TRAN SWI	Post TRAN T2 TSE	Post TRAN T2 FLAIR FS DR	Post SAG 3D T1 SPACE FS	Post SAG 3D T1 MPRAGE
TR	1700.0 ms	5720.0 ms	28.0 ms	4880.0 ms	10000.0 ms	900.0 ms	1700.0 ms
TE	2.28 ms	54 ms / 92 ms	20.00 ms	95.00 ms	106.00 ms	19.00 ms	2.28 ms
TI	900 ms	—	—	—	2600 ms	—	900 ms
Flip Angle	8 deg	180 deg	15 deg	148 deg	130 deg	—	8 deg
Turbo Factor	192	—	—	19	12	44	192
Bandwidth	200 Hz/Px	766 Hz/Px	120 Hz/Px	217 Hz/Px	349 Hz/Px	434 Hz/Px	200 Hz/Px
EPI Factor	—	96	—	—	—	—	—
Fat Saturation Mode	—	Strong	—	—	Strong	Strong	—
Fat Suppression	Standard	Fat Saturation	Standard	Standard	Fat Saturation	Fat Saturation	Standard
Gradient Mode	Normal	Fast	Normal	Fast	Fast	Fast	Normal
RF Pulse Type	Normal	Normal	Fast	Normal	Low SAR	Normal	Normal
Asymmetric Echo	Allowed	—	Off	—	—	—	Allowed

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 3D T1 MPRAGE	TRANS rDWI	TRAN SWI	Post TRAN T2 TSE	Post TRAN T2 FLAIR FS DR	Post SAG 3D T1 SPACE FS	Post SAG 3D T1 MPRAGE
Base Resolution	192	192	384	384	256	256	192
Phase Resolution	100 %	100 %	80 %	100 %	80 %	100 %	100 %
Slice Resolution	100 %	—	100 %	—	—	75 %	100 %
Averages	1	—	1	1	1	1.0	1
Concatenations	1	1	1	2	2	1	1
b-value	—	0 s/mm²/1000 s/mm²	—	—	—	—	—
FoV Read	200 mm	220 mm	220 mm	210 mm	210 mm	192 mm	200 mm
FoV Phase	100.0 %	100.0 %	87.5 %	93.8 %	93.8 %	100.0 %	100.0 %
Phase Encoding Dir.	A >> P	A >> P	R >> L	R >> L	R >> L	A >> P	A >> P
Phase Oversampling	20 %	0%	0%	0%	0%	10 %	20 %
Slice Oversampling	20.0 %	—	20.0 %	—	—	16.7 %	20.0 %
Phase Partial Fourier	Off	Off	Off	Off	Off	Off	Off
Slice Partial Fourier	Off	—	Off	—	—	Off	Off
Flow Compensation	None	—	On	Slice	None	None	None

SCANNING RANGE

Scan Description	SAG 3D T1 MPRAGE	TRANS rDWI	TRAN SWI	Post TRAN T2 TSE	Post TRAN T2 FLAIR FS DR	Post SAG 3D T1 SPACE FS	Post SAG 3D T1 MPRAGE
Elliptical Filter	Off	—	Off	Off	Off	Off	Off
Normalize	Prescan	Prescan	Prescan	Prescan	Prescan	Prescan	Prescan
Distortion Correction	2D	2D	2D	2D	2D	2D	2D
Slice Thickness	1.00 mm	4.0 mm	1.20 mm	4.0 mm	4.0 mm	0.80 mm	1.00 mm
Distance Factor	0%	0%	0%	0%	0%	—	0%
Slices	160	41	80	39	41	192	160
Acquisition Time	3:37 min	3:45 min	6:37 min	1:54 min	3:22 min	4:32 min	3:37 min

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