NW
IMAGING FORUMS, INC.

PEDIATRIC BRAIN/ORBIT RETINOBLASTOMA 1.5T

INSTRUCTIONS AND PATIENT PREPARATION

Instructions	Retinoblastoma (RB) orbit and whole-brain imaging.
Position	Head first supine
Coil	Head 20 or Head 64
Patient Preparation	Landmark per department pediatric protocol — pending sign-off.
Coverage	**Whole Brain coverage** — Pre-contrast Sag 3D T1 MPRAGE, TRAN rDWI; Post-contrast TRAN T2 FLAIR, SAG 3D T1 SPACE FS **Orbit coverage** — TRAN CISS, COR CISS, TRAN T1 VIBE DIXON PRE & POST • Superior — Superior margin of midbrain • Inferior — Mid maxilla • Anterior — Tip of nose • Posterior — Mid pons • Left to Right — Skin to skin

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	TRAN CISS	COR CISS	Tran_T1_VIBE_Dixon	TRANS rDWI	Post Tran_T1_VIBE_Dixon	Post TRAN T2 FLAIR	Post SAG 3D T1 SPACE FS
Sequence Name	tfl	ci	ci	fl	resolve	fl	tir	spcR
Mode	Single Shot	Sequential	Sequential	—	Interleaved	—	Interleaved	—
PAT Mode	GRAPPA	—	—	None	—	None	None	GRAPPA
Dimension	3D	3D	3D	3D	2D	3D	2D	3D
Acceleration Factor PE	2	—	—	—	2	—	—	2
Acceleration Factor 3D	1	—	—	—	—	—	—	1

SCAN PARAMETERS

Scan Description	SAG 3D T1 MPRAGE	TRAN CISS	COR CISS	Tran_T1_VIBE_Dixon	TRANS rDWI	Post Tran_T1_VIBE_Dixon	Post TRAN T2 FLAIR	Post SAG 3D T1 SPACE FS
TR	1540.0 ms	8.11 ms	8.15 ms	6.68 ms	5570.0 ms	6.68 ms	10000.0 ms	900.0 ms
TE	2.82 ms	3.70 ms	3.72 ms	2.39 ms / 4.77 ms	66 ms / 107 ms	2.39 ms / 4.77 ms	107.00 ms	18.00 ms
TI	900 ms	—	—	—	—	—	2600 ms	—
Flip Angle	15 deg	50 deg	50 deg	11 deg	180 deg	11 deg	130 deg / 90 deg	120 deg / 90 deg
Turbo Factor	132	—	—	—	—	—	12	44
Bandwidth	150 Hz/Px	454 Hz/Px	444 Hz/Px	740 Hz/Px	744 Hz/Px	740 Hz/Px	349 Hz/Px	434 Hz/Px
EPI Factor	—	—	—	—	101	—	—	—
Fat Saturation Mode	—	—	—	—	Strong	—	Strong	Strong
Fat Suppression	Standard	Standard	Standard	Dixon	Fat Saturation	Dixon	Fat Saturation	SPAIR
Gradient Mode	Normal	Fast	Fast	Fast	Fast	Fast	Fast	Fast
RF Pulse Type	Fast	Low SAR	Low SAR	Fast	Normal	Fast	Low SAR	Normal
Asymmetric Echo	Allowed	Allowed	Allowed	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 3D T1 MPRAGE	TRAN CISS	COR CISS	Tran_T1_VIBE_Dixon	TRANS rDWI	Post Tran_T1_VIBE_Dixon	Post TRAN T2 FLAIR	Post SAG 3D T1 SPACE FS
Base Resolution	192	256	256	160	168	160	256	256
Phase Resolution	100 %	100 %	100 %	90 %	100 %	90 %	80 %	100 %
Slice Resolution	75 %	100 %	100 %	75 %	—	75 %	—	75 %
Averages	1	1	1	1	—	1	1	1.0
Concatenations	1	—	—	1	1	1	2	1
b-value	—	—	—	—	0 s/mm²/800 s/mm²	—	—	—
FoV Read	192 mm	130 mm	130 mm	130 mm	220 mm	130 mm	210 mm	192 mm
FoV Phase	100.0 %	115.6 %	115.6 %	117.5 %	100.0 %	117.5 %	93.8 %	100.0 %
Phase Encoding Dir.	A >> P	R >> L	R >> L	R >> L	A >> P	R >> L	R >> L	A >> P
Phase Oversampling	20 %	10 %	5%	15 %	20 %	15 %	0%	10 %
Slice Oversampling	10.0 %	62.5 %	33.3 %	100.0 %	—	100.0 %	—	8.3 %
Phase Partial Fourier	Off	Off	Off	Off	Off	Off	Off	Off
Slice Partial Fourier	Off	Off	Off	Off	—	Off	—	Off
Flow Compensation	None	None	None	—	—	—	None	None

SCANNING RANGE

Scan Description	SAG 3D T1 MPRAGE	TRAN CISS	COR CISS	Tran_T1_VIBE_Dixon	TRANS rDWI	Post Tran_T1_VIBE_Dixon	Post TRAN T2 FLAIR	Post SAG 3D T1 SPACE FS
Elliptical Filter	On	On	On	Off	—	Off	Off	Off
Normalize	Prescan	Prescan	Prescan	Prescan	Off	Prescan	Prescan	Prescan
Distortion Correction	2D	2D	2D	2D	2D	2D	2D	2D
Slice Thickness	1.00 mm	1.45 mm	1.45 mm	0.8 mm	4.0 mm	0.8 mm	4.0 mm	0.80 mm
Distance Factor	0%	0%	0%	0%	0%	0%	0%	—
Slices	160	64	60	120	37	120	41	192
Acquisition Time	3:17 min	7:13 min	5:20 min	3:56 min	4:46 min	3:56 min	5:42 min	6:36 min

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