PEDIATRIC CNS LESION ACCELERATED 3T

INSTRUCTIONS AND PATIENT PREPARATION

Anatomical Region	CNS Lesion Accelerated
Field Strength	3.0T
Coil	See the Coil Configuration row in the first parameters table below (varies by sequence).
Position & Landmark	Head 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	3Plane Loc	Sag T2 SSFSE	Ax T2 SSFSE	Cor T2 SSFSE	Sag T1 Cube	Ax T1 BRAVO 2.4mm	+C Ax T2 PROPELLER Fat	+C Ax T2* GRE	+C Ax DWI	+C Ax T1 BRAVO Stealth	+C Sag T2 CUBE FLAIR	+C Sag T1 Cube
Coil Configuration	GE19chGEMHNUFace	GE48chHeadAnt, GE48chHeadPos	GE48chHeadAnt, GE48chHeadPos	GE48chHeadAnt, GE48chHeadPos	GE19chGEMHNUFace	GE19chGEMHNUFace	GE19chGEMHNUFace	GE19chGEMHNUFace	GE19chGEMHNUFace	GE19chGEMHNUFace	GE19chGEMHNUFace	GE19chGEMHNUFace
Plane	3-PLANE	OBLIQUE	OBLIQUE	OBLIQUE	SAGITTAL	OBLIQUE	OBLIQUE	OBLIQUE	OBLIQUE	OBLIQUE	SAGITTAL	SAGITTAL

IMAGING PARAMETERS

Scan Description	3Plane Loc	Sag T2 SSFSE	Ax T2 SSFSE	Cor T2 SSFSE	Sag T1 Cube	Ax T1 BRAVO 2.4mm	+C Ax T2 PROPELLER Fat	+C Ax T2* GRE	+C Ax DWI	+C Ax T1 BRAVO Stealth	+C Sag T2 CUBE FLAIR	+C Sag T1 Cube
Imaging Mode	2D	2D	2D	2D	3D	3D	2D	2D	2D	3D	3D	3D
Imaging Options	Seq, EDR, TRF, Fast, SS, ARC	EDR, TRF, Fast, SS, ARC	EDR, TRF, Fast, SS, ARC	EDR, TRF, Fast, SS, ARC	EDR, Fast, ZIP512, FR, ARC, HS	EDR, Fast, ZIP512, ARC, IrP	EDR, TRF, Fast, FR, ARC	EDR	Asset	EDR, Fast, ZIP512, ARC, IrP	EDR, Fast, ZIP512, T2P, ARC, HS, IrP	EDR, Fast, FR, ARC, HS
Pulse Sequence	Spin Echo	Spin Echo	Spin Echo	Spin Echo	Cube	BRAVO	PROPELLER	Gradient Echo	DW EPI	BRAVO	Cube T2 FLAIR	Cube
ARC Phase	2	2	2	2	2	2	2	—	—	2	2	2
ARC Slice	—	—	—	—	2	1	—	—	—	1	2	2
HyperSense	—	—	—	—	1.5	—	—	—	—	—	1.5	1.5
Phase	—	—	—	—	—	—	—	—	2	—	—	—

IMAGE RECON

Scan Description	3Plane Loc	Sag T2 SSFSE	Ax T2 SSFSE	Cor T2 SSFSE	Sag T1 Cube	Ax T1 BRAVO 2.4mm	+C Ax T2 PROPELLER Fat	+C Ax T2* GRE	+C Ax DWI	+C Ax T1 BRAVO Stealth	+C Sag T2 CUBE FLAIR	+C Sag T1 Cube
Recon DL Strength	Off	Medium	Medium	Medium	—	—	Off	Off	—	—	—	—
Intensity Correction	NONE	SCENIC	SCENIC	SCENIC	PURE	PURE	PURE	PURE	PURE	PURE	PURE	PURE
Intensity Filter	None	None	None	None	None	None	None	None	None	None	None	None
Save Original	Off	Off	Off	Off	On	Off	Off	Off	Off	Off	Off	Off

SCAN RANGE

Scan Description	3Plane Loc	Sag T2 SSFSE	Ax T2 SSFSE	Cor T2 SSFSE	Sag T1 Cube	Ax T1 BRAVO 2.4mm	+C Ax T2 PROPELLER Fat	+C Ax T2* GRE	+C Ax DWI	+C Ax T1 BRAVO Stealth	+C Sag T2 CUBE FLAIR	+C Sag T1 Cube
FOV	30	20	20	20	24	22	20	20	22	22	25	24
Slice Thickness	10	4	4	4	1.2	1.2	4	4	4	0.6	0.9	0.9
Slice Spacing	5	0	0	0	—	—	0	0.5	0.5	—	—	—
Overlap Locations	0	0	0	0	0	0	0	0	—	0	0	0
No Phase Wrap	1	1	1	1	1	1	1	1	1	1	1	1
Number of Slices	—	1	1	1	—	1	—	31	34	1	—	—
Slices per Slab	—	—	—	—	152	124	—	—	—	272	200	232
Slice Resolution(%)	—	—	—	—	50	50	—	—	—	50	50	50

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Supported by an educational grant from Bracco Diagnostics Inc.

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

NW
IMAGING FORUMS, INC

ACQUISITION TIMING

Scan Description	3Plane Loc	Sag T2 SSFSE	Ax T2 SSFSE	Cor T2 SSFSE	Sag T1 Cube	Ax T1 BRAVO 2.4mm	+C Ax T2 PROPELLER Fat	+C Ax T2* GRE	+C Ax DWI	+C Ax T1 BRAVO Stealth	+C Sag T2 CUBE FLAIR	+C Sag T1 Cube
Acq Voxel Size	1.0 X 1.6 X 10.0	0.8 X 1.0 X 4.0	0.8 X 1.0 X 4.0	0.8 X 1.0 X 4.0	1.0 X 1.0 X 2.4	0.9 X 0.9 X 2.4	0.5 X 0.5 X 4.0	0.9 X 0.9 X 4.0	1.7 X 1.7 X 4.0	0.9 X 0.9 X 1.2	1.0 X 1.0 X 1.8	0.8 X 0.8 X 1.8
Freq	288	256	256	256	240	256	384	224	128	256	256	288
Phase	192	192	192	192	240	256	—	224	128	256	256	288
Freq DIR	Unswap	Unswap	Unswap	Unswap	S/I	Unswap	Unswap	Unswap	R/L	A/P	S/I	S/I
# of Acq. Before Pause	0	0	0	0	—	—	—	—	—	—	—	—
Phase FOV	1	1	1	1	1	0.8	—	0.75	1	0.8	0.9	0.8
Auto Shim	Auto	Auto	Auto	Auto	Auto	Auto	On	Auto	Auto	Auto	Auto	Auto
Phase Correct	Off	Off	Off	Off	Off	Off	Off	Off	On	Off	Off	Off
RF Drive Mode	Preset	Preset	Preset	Preset	Preset	Preset	Preset	Preset	Preset	Preset	Optimized	Preset
Excitation Mode	Selective	Selective	Selective	Selective	Selective	Selective	Selective	Selective	Selective	Selective	Non-Selective	Selective
NEX	—	1	1	1	1	1	1.5	0.75	—	1	1	1
Fat Shift DIR	—	—	—	—	—	Reversed	Normal	—	—	Reversed	—	—

SCAN TIMING

Scan Description	3Plane Loc	Sag T2 SSFSE	Ax T2 SSFSE	Cor T2 SSFSE	Sag T1 Cube	Ax T1 BRAVO 2.4mm	+C Ax T2 PROPELLER Fat	+C Ax T2* GRE	+C Ax DWI	+C Ax T1 BRAVO Stealth	+C Sag T2 CUBE FLAIR	+C Sag T1 Cube
TE	80	Min Full	Min Full	Min Full	Minimum	—	100	25	Minimum	—	Maximum	24
Number of Echoes	1	1	1	1	1	1	1	1	1	1	1	1
TR	1000	Minimum	Minimum	Minimum	500	—	8556	934	8500	—	6000	550
Receiver Bandwidth	83.33	83.33	83.33	83.33	62.5	31.25	50	31.25	—	31.25	35.71	62.5
Flip Angle	—	130	130	130	—	12	142	20	—	12	—	—
Echo Train Length	—	—	—	—	20	—	26	—	—	—	170	24
TI	—	—	—	—	—	450	—	—	—	450	1700	—
Recovery Time	—	—	—	—	—	0	—	—	—	0	—	—
Number of Shots	—	—	—	—	—	—	—	—	1	—	—	—

CONTRAST

Scan Description	3Plane Loc	Sag T2 SSFSE	Ax T2 SSFSE	Cor T2 SSFSE	Sag T1 Cube	Ax T1 BRAVO 2.4mm	+C Ax T2 PROPELLER Fat	+C Ax T2* GRE	+C Ax DWI	+C Ax T1 BRAVO Stealth	+C Sag T2 CUBE FLAIR	+C Sag T1 Cube
Contrast Yes/No	No	No	No	No	No	No	+C	+C	+C	+C	+C	+C

OTHERS

Scan Description	3Plane Loc	Sag T2 SSFSE	Ax T2 SSFSE	Cor T2 SSFSE	Sag T1 Cube	Ax T1 BRAVO 2.4mm	+C Ax T2 PROPELLER Fat	+C Ax T2* GRE	+C Ax DWI	+C Ax T1 BRAVO Stealth	+C Sag T2 CUBE FLAIR	+C Sag T1 Cube
3D Geometry Correction	Off	Off	Off	Off	On	On	—	—	—	On	On	On
Anatomical Region	Head	Brain	Brain	Brain	Brain	Head	Head	Head	Head	Head	Brain	Head

AIRX

Scan Description	3Plane Loc	Sag T2 SSFSE	Ax T2 SSFSE	Cor T2 SSFSE	Sag T1 Cube	Ax T1 BRAVO 2.4mm	+C Ax T2 PROPELLER Fat	+C Ax T2* GRE	+C Ax DWI	+C Ax T1 BRAVO Stealth	+C Sag T2 CUBE FLAIR	+C Sag T1 Cube
Anatomical Reference	—	None	None	None	—	—	None	None	—	—	—	—
Anatomical Plane	—	None	None	None	—	—	None	None	—	—	—	—

GATING / TRIGGER

Scan Description	3Plane Loc	Sag T2 SSFSE	Ax T2 SSFSE	Cor T2 SSFSE	Sag T1 Cube	Ax T1 BRAVO 2.4mm	+C Ax T2 PROPELLER Fat	+C Ax T2* GRE	+C Ax DWI	+C Ax T1 BRAVO Stealth	+C Sag T2 CUBE FLAIR	+C Sag T1 Cube
Auto Trigger Type	—	—	—	—	Off	Off	—	—	Off	Off	Off	Off
Pause After Navigator Prescan	—	—	—	—	—	—	—	0	—	—	—	—

SATURATION

Scan Description	3Plane Loc	Sag T2 SSFSE	Ax T2 SSFSE	Cor T2 SSFSE	Sag T1 Cube	Ax T1 BRAVO 2.4mm	+C Ax T2 PROPELLER Fat	+C Ax T2* GRE	+C Ax DWI	+C Ax T1 BRAVO Stealth	+C Sag T2 CUBE FLAIR	+C Sag T1 Cube
Fat/Water Saturation	—	—	—	—	—	—	Fat	—	—	—	Fat	Fat

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

DIFFUSION

Scan Description	3Plane Loc	Sag T2 SSFSE	Ax T2 SSFSE	Cor T2 SSFSE	Sag T1 Cube	Ax T1 BRAVO 2.4mm	+C Ax T2 PROPELLER Fat	+C Ax T2* GRE	+C Ax DWI	+C Ax T1 BRAVO Stealth	+C Sag T2 CUBE FLAIR	+C Sag T1 Cube
Multi b-values	—	—	—	—	—	—	—	—	1000.0;	—	—	—
Optimized TE	—	—	—	—	—	—	—	—	On	—	—	—
Multi NEX Values	—	—	—	—	—	—	—	—	1;	—	—	—
Diffusion Directions	—	—	—	—	—	—	—	—	All	—	—	—
Number of Diffusion Directions	—	—	—	—	—	—	—	—	3	—	—	—
Number of T2 Images	—	—	—	—	—	—	—	—	1	—	—	—
NEX For T2	—	—	—	—	—	—	—	—	1	—	—	—
Dual Spin Echo	—	—	—	—	—	—	—	—	Off	—	—	—
# Synthetic b-values	—	—	—	—	—	—	—	—	0	—	—	—
Recon All Images	—	—	—	—	—	—	—	—	On	—	—	—
Real Time Field Adjustment	—	—	—	—	—	—	—	—	On	—	—	—

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