PEDIATRIC ORBITS 3T

INSTRUCTIONS AND PATIENT PREPARATION

Anatomical Region	Orbits
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	3-Plane Loc	Sag T1 Cube DL	Ax T2 PROPELLER Fat	Ax DWI	ORB-Ax T1 DL	ORB-Ax DWI Prop	ORB-Ax T2 Cube FOCUS	ORB-COR T2 Flex DL	+C Sag T2 FLAIR	+C Ax T1 BRAVO Stealth	+C Cor T1 Cube VASC	+C ORB-Ax T1 Flex DL	+c ORB-Ax LAVA Star
Coil Configuration	GE19chGEMHNUFace	GE40chGEMPA, GE19chGEMHNUFace	GE19chGEMHNUFace	GE19chGEMHNUFace	GE19chGEMHNUFace	GE19chGEMHNUFace	GE19chGEMHNUFace	GE48chHeadPos, GE48chHeadAnt	GE19chGEMHNUFace	GE19chGEMHNUFace	GE19chGEMHNUFace	GE48chHeadPos, GE48chHeadAnt	—
Plane	3-PLANE	SAGITTAL	OBLIQUE	OBLIQUE	OBLIQUE	OBLIQUE	OBLIQUE	OBLIQUE	SAGITTAL	OBLIQUE	CORONAL	OBLIQUE	—

IMAGING PARAMETERS

Scan Description	3-Plane Loc	Sag T1 Cube DL	Ax T2 PROPELLER Fat	Ax DWI	ORB-Ax T1 DL	ORB-Ax DWI Prop	ORB-Ax T2 Cube FOCUS	ORB-COR T2 Flex DL	+C Sag T2 FLAIR	+C Ax T1 BRAVO Stealth	+C Cor T1 Cube VASC	+C ORB-Ax T1 Flex DL	+c ORB- Ax LAVA Star
Imaging Mode	2D	3D	2D	2D	2D	2D	3D	2D	3D	3D	3D	2D	3D
Imaging Options	Seq, EDR, TRF, Fast, SS, ARC	EDR, Fast, ZIP512, FR, ARC, HS	EDR, TRF, Fast, FR, ARC	Asset	FC, TRF, Fast	EDR, TRF, DIFF, ARC, DWDuo	FC, EDR, Fast, ZIP512, FR, ARC, HS	EDR, Fast, ARC, Flex	EDR, Fast, ZIP512, T2P, ARC, IrP	EDR, Fast, ZIP512, ARC, IrP	EDR, Fast, FR, ARC	FC, EDR, TRF, Fast, ARC, Flex	EDR, Fast, ARC, Star
Pulse Sequence	Spin Echo	Cube	PROPELLER	DW EPI	FSE-XL	DW PROPELLER	Cube	FSE-XL	Cube T2 FLAIR	BRAVO	Cube	FSE-XL	LAVA
ARC Phase	2	2	2	—	—	2	2	2	2	2	2	2	1.25
ARC Slice	—	2	—	—	—	—	1	—	2	1	2	—	2
HyperSense	—	1.2	—	—	—	—	1.2	—	—	—	—	—	—
Phase	—	—	—	2	—	—	—	—	—	—	—	—	—
PSD Name	—	—	—	—	—	—	—	—	—	—	—	—	efgre3d_aspir

IMAGE RECON

Scan Description	3-Plane Loc	Sag T1 Cube DL	Ax T2 PROPELLER Fat	Ax DWI	ORB-Ax T1 DL	ORB-Ax DWI Prop	ORB-Ax T2 Cube FOCUS	ORB-COR T2 Flex DL	+C Sag T2 FLAIR	+C Ax T1 BRAVO Stealth	+C Cor T1 Cube VASC	+C ORB-Ax T1 Flex DL	+c ORB- Ax LAVA Star
Recon DL Strength	Off	High	—	—	High	Medium	Medium	Medium	Off	—	Off	Medium	Off
Intensity Correction	NONE	PURE	PURE	PURE	PURE	PURE	SCENIC	PURE	NONE	PURE	PURE	PURE	NONE
Intensity Filter	None	None	None	None	None	None	None	None	None	None	None	None	A - Little sharpening, some smoothing
Save Original	Off	On	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off

SCAN RANGE

Scan Description	3-Plane Loc	Sag T1 Cube DL	Ax T2 PROPELLER Fat	Ax DWI	ORB-Ax T1 DL	ORB-Ax DWI Prop	ORB-Ax T2 Cube FOCUS	ORB-COR T2 Flex DL	+C Sag T2 FLAIR	+C Ax T1 BRAVO Stealth	+C Cor T1 Cube VASC	+C ORB-Ax T1 Flex DL	+c ORB- Ax LAVA Star
FOV	30	24	22	24	14	20	15.5	16	23	23	24	16	18
Slice Thickness	10	0.6	4	5	3	3	0.3	3	0.8	0.6	0.5	3	1
Slice Spacing	5	—	0	0.5	0.2	0.5	—	0.5	—	—	—	0.2	—
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	1.5
Slices per Slab	—	312	—	—	—	—	120	—	236	272	392	—	110
No Slab Wrap	—	1.03	—	—	—	—	1.27	—	1.03	—	1.02	—	1.07
Slice Resolution(%)	—	50	—	—	—	—	50	—	50	50	50	—	50
Number of Slices	—	—	—	—	13	—	1	—	—	1	—	13	—

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Supported by an educational grant from Bracco Diagnostics Inc.

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

IMAGING FORUMS, INC

ACQUISITION TIMING

Scan Description	3-Plane Loc	Sag T1 Cube DL	Ax T2 PROPELLER Fat	Ax DWI	ORB-Ax T1 DL	ORB-Ax DWI Prop	ORB-Ax T2 Cube FOCUS	ORB-COR T2 Flex DL	+C Sag T2 FLAIR	+C Ax T1 BRAVO Stealth	+C Cor T1 Cube VASC	+C ORB-Ax T1 Flex DL	+c ORB- Ax LAVA Star
Acq Voxel Size	1.2 X 2.3 X 10.0	0.8 X 0.8 X 1.2	0.6 X 0.6 X 4.0	1.9 X 1.9 X 5.0	0.4 X 0.6 X 3.0	1.6 X 1.6 X 3.0	0.6 X 0.6 X 0.6	0.5 X 0.6 X 3.0	0.9 X 0.9 X 1.6	0.9 X 0.9 X 1.2	0.8 X 0.8 X 1.0	0.5 X 0.7 X 3.0	0.6 X 0.6 X 2.0
Freq	256	288	384	128	320	128	260	320	256	256	288	320	288
Phase	128	288	—	128	224	—	260	256	256	256	288	224	—
Freq DIR	Unswap	S/I	Unswap	Swap	Unswap	Unswap	R/L	Unswap	S/I	A/P	S/I	Unswap	Unswap
# of Acq. Before Pause	0	—	—	—	—	—	—	—	—	—	—	0	—
Phase FOV	1	1	—	1	1	—	0.9	1	0.9	1	0.7	1	—
Auto Shim	Auto	Auto	On	Auto	Auto	On	Auto	Auto	Auto	Auto	Auto	Auto	Auto
Phase Correct	Off	Off	Off	On	On	Off	Off	Off	Off	Off	Off	Off	Off
RF Drive Mode	Preset	Preset	Preset	Preset	Preset	Preset	Preset	Preset	Optimized	Preset	Preset	Preset	Preset
Excitation Mode	Selective	Selective	Selective	Selective	Selective	Selective	Focus	Selective	Selective	Selective	Selective	Selective	Selective
NEX	—	1	2	—	1	—	2	1	1	1	1	1	2
Fat Shift DIR	—	Normal (S)	Normal	—	Normal	Normal	Normal (L)	Normal	Normal (S)	Reversed	Normal (I)	Normal	Normal
Flow Comp Direction	—	—	—	—	Slice	—	Slice	—	—	—	—	Slice	—

SCAN TIMING

Scan Description	3-Plane Loc	Sag T1 Cube DL	Ax T2 PROPELLER Fat	Ax DWI	ORB-Ax T1 DL	ORB-Ax DWI Prop	ORB-Ax T2 Cube FOCUS	ORB-COR T2 Flex DL	+C Sag T2 FLAIR	+C Ax T1 BRAVO Stealth	+C Cor T1 Cube VASC	+C ORB-Ax T1 Flex DL	+c ORB- Ax LAVA Star
TE	80	Minimum	100	Minimum	Min Full	—	220	85	Maximum	—	24	Min Full	—
Number of Echoes	1	1	1	1	1	1	1	1	1	1	1	1	1
TR	1000	500	3349	8500	800	5727	1981	4000	6000	—	550	700	—
Receiver Bandwidth	83.33	62.5	50	—	41.67	83.33	62.5	62.5	35.71	31.25	62.5	62.5	62.5
Echo Train Length	—	20	26	—	4	20	130	19	170	—	24	4	—
Flip Angle	—	—	142	—	120	110	—	125	—	12	—	120	12
Number of Shots	—	—	—	1	—	—	—	—	—	—	—	—	—
TI	—	—	—	—	—	—	—	—	1740	450	—	—	23
Recovery Time	—	—	—	—	—	—	—	—	—	0	—	—	—

CONTRAST

Scan Description	3-Plane Loc	Sag T1 Cube DL	Ax T2 PROPELLER Fat	Ax DWI	ORB-Ax T1 DL	ORB-Ax DWI Prop	ORB-Ax T2 Cube FOCUS	ORB-COR T2 Flex DL	+C Sag T2 FLAIR	+C Ax T1 BRAVO Stealth	+C Cor T1 Cube VASC	+C ORB-Ax T1 Flex DL	+c ORB- Ax LAVA Star
Contrast Yes/No	No	No	No	No	No	No	No	No	+C	+C	+C	+C	No

OTHERS

Scan Description	3-Plane Loc	Sag T1 Cube DL	Ax T2 PROPELLER Fat	Ax DWI	ORB-Ax T1 DL	ORB-Ax DWI Prop	ORB-Ax T2 Cube FOCUS	ORB-COR T2 Flex DL	+C Sag T2 FLAIR	+C Ax T1 BRAVO Stealth	+C Cor T1 Cube VASC	+C ORB-Ax T1 Flex DL	+c ORB- Ax LAVA Star
Anatomical Region	Brain	Neck	Brain	Brain	Brain	Brain	Head	Orbital structure	Brain	Brain	Brain	Brain	Neck
3D Geometry Correction	—	On	—	—	—	—	On	—	On	On	On	—	—

SATURATION

Scan Description	3-Plane Loc	Sag T1 Cube DL	Ax T2 PROPELLER Fat	Ax DWI	ORB-Ax T1 DL	ORB-Ax DWI Prop	ORB-Ax T2 Cube FOCUS	ORB-COR T2 Flex DL	+C Sag T2 FLAIR	+C Ax T1 BRAVO Stealth	+C Cor T1 Cube VASC	+C ORB-Ax T1 Flex DL	+c ORB- Ax LAVA Star
Fat/Water Saturation	—	—	Fat	—	—	Fat	—	—	Fat	—	Fat	—	Fat Special
SAT Location S	—	—	—	—	—	—	—	—	—	—	—	Default	—
SAT Location I	—	—	—	—	—	—	—	—	—	—	—	Default	—

GATING / TRIGGER

Scan Description	3-Plane Loc	Sag T1 Cube DL	Ax T2 PROPELLER Fat	Ax DWI	ORB-Ax T1 DL	ORB-Ax DWI Prop	ORB-Ax T2 Cube FOCUS	ORB-COR T2 Flex DL	+C Sag T2 FLAIR	+C Ax T1 BRAVO Stealth	+C Cor T1 Cube VASC	+C ORB-Ax T1 Flex DL	+c ORB- Ax LAVA Star
Auto Trigger Type	—	—	Off	Off	—	—	—	—	—	Off	—	—	—

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

IMAGING FORUMS, INC

DIFFUSION

Scan Description	3-Plane Loc	Sag T1 Cube DL	Ax T2 PROPELLER Fat	Ax DWI	ORB-Ax T1 DL	ORB-Ax DWI Prop	ORB-Ax T2 Cube FOCUS	ORB-COR T2 Flex DL	+C Sag T2 FLAIR	+C Ax T1 BRAVO Stealth	+C Cor T1 Cube VASC	+C ORB-Ax T1 Flex DL	+c ORB- Ax LAVA Star
Multi b-values	—	—	—	1000.0;	—	1000.0;	—	—	—	—	—	—	—
Optimized TE	—	—	—	On	—	On	—	—	—	—	—	—	—
Multi NEX Values	—	—	—	1;	—	4.0;	—	—	—	—	—	—	—
Diffusion Directions	—	—	—	All	—	All	—	—	—	—	—	—	—
Number of Diffusion Directions	—	—	—	3	—	3	—	—	—	—	—	—	—
Number of T2 Images	—	—	—	1	—	—	—	—	—	—	—	—	—
NEX For T2	—	—	—	1	—	2	—	—	—	—	—	—	—
Dual Spin Echo	—	—	—	Off	—	Off	—	—	—	—	—	—	—
# Synthetic b-values	—	—	—	0	—	—	—	—	—	—	—	—	—
Recon All Images	—	—	—	On	—	On	—	—	—	—	—	—	—
Real Time Field Adjustment	—	—	—	On	—	—	—	—	—	—	—	—	—

AIRX

Scan Description	3-Plane Loc	Sag T1 Cube DL	Ax T2 PROPELLER Fat	Ax DWI	ORB-Ax T1 DL	ORB-Ax DWI Prop	ORB-Ax T2 Cube FOCUS	ORB-COR T2 Flex DL	+C Sag T2 FLAIR	+C Ax T1 BRAVO Stealth	+C Cor T1 Cube VASC	+C ORB-Ax T1 Flex DL	+c ORB- Ax LAVA Star
Anatomical Reference	—	—	—	—	None	None	None	None	—	—	—	None	—
Anatomical Plane	—	—	—	—	None	None	None	None	—	—	—	None	—

OPTIONAL

Scan Description	3-Plane Loc	Sag T1 Cube DL	Ax T2 PROPELLER Fat	Ax DWI	ORB-Ax T1 DL	ORB-Ax DWI Prop	ORB-Ax T2 Cube FOCUS	ORB-COR T2 Flex DL	+C Sag T2 FLAIR	+C Ax T1 BRAVO Stealth	+C Cor T1 Cube VASC	+C ORB-Ax T1 Flex DL	+c ORB- Ax LAVA Star
Coil Configuration	—	—	—	—	—	—	—	—	—	—	—	—	Neo16chRadOncHeadAnt, Neo9chRadOncHeadNeckPos
Plane	—	—	—	—	—	—	—	—	—	—	—	—	OBLIQUE

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