PEDIATRIC EXTREMITY TUMOR / INFECTION 3T

INSTRUCTIONS AND PATIENT PREPARATION

Anatomical Region	Extremity Tumor / Infection
Field Strength	3.0T
Coil	See the Coil Configuration row in the first parameters table below (varies by sequence).
Position & Landmark	Feet 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	RT-3-Plane Loc	LT-3-Plane Loc	Cor STIR DL	Cor T1 DL	Cor T1 Fat DL	Ax STIR DL	Ax T1 DL	Ax DWI DL	+c Cor T1 Fat DL	+c Ax T1 Fat DL	+c Sag T1 Fat DL
Coil Configuration	Neo16chFlexS	Neo16chFlexS	GE40chGEMPA, GE16chTDIAA	GE40chGEMPA, GE16chTDIAA	GE40chGEMPA, GE16chTDIAA	GE40chGEMPA, GE16chTDIAA	GE40chGEMPA, GE16chTDIAA	GE40chGEMPA	GE40chGEMPA, GE16chTDIAA	GE40chGEMPA, GE16chTDIAA	GE40chGEMPA, GE16chTDIAA
Plane	3-PLANE	3-PLANE	OBLIQUE	OBLIQUE	OBLIQUE	OBLIQUE	OBLIQUE	OBLIQUE	OBLIQUE	OBLIQUE	OBLIQUE

IMAGING PARAMETERS

Scan Description	RT-3-Plane Loc	LT-3-Plane Loc	Cor STIR DL	Cor T1 DL	Cor T1 Fat DL	Ax STIR DL	Ax T1 DL	Ax DWI DL	+c Cor T1 Fat DL	+c Ax T1 Fat DL	+c Sag T1 Fat DL
Imaging Mode	2D	2D	2D	2D	2D	2D	2D	2D	2D	2D	2D
Imaging Options	Seq, EDR, TRF, Fast, SS, ARC	Seq, EDR, TRF, Fast, SS, ARC	FC, Seq, EDR, TRF, Fast, ARC, IrP	EDR, TRF, Fast, ARC	EDR, TRF, Fast, ARC	FC, Seq, EDR, TRF, Fast, ARC, IrP	EDR, TRF, Fast	EDR, Asset	EDR, TRF, Fast, ARC	EDR, TRF, Fast	EDR, TRF, Fast
Pulse Sequence	Spin Echo	Spin Echo	FSE-XL	FSE-XL	FSE-XL	FSE-XL	FSE-XL	DW EPI	FSE-XL	FSE-XL	FSE-XL
ARC Phase	2	2	2	1.5	1.5	2	—	—	1.5	—	—
PSD Name	—	—	frfse-xl	—	—	frfse-xl	—	—	—	—	—
Phase	—	—	—	—	—	—	—	2	—	—	—

IMAGE RECON

Scan Description	RT-3-Plane Loc	LT-3-Plane Loc	Cor STIR DL	Cor T1 DL	Cor T1 Fat DL	Ax STIR DL	Ax T1 DL	Ax DWI DL	+c Cor T1 Fat DL	+c Ax T1 Fat DL	+c Sag T1 Fat DL
Recon DL Strength	Off	Off	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Intensity Correction	NONE	NONE	SCENIC	SCENIC	SCENIC	SCENIC	SCENIC	PURE	SCENIC	SCENIC	SCENIC
Intensity Filter	None	None	None	None	None	None	None	None	None	None	None
Save Original	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off

SCAN RANGE

Scan Description	RT-3-Plane Loc	LT-3-Plane Loc	Cor STIR DL	Cor T1 DL	Cor T1 Fat DL	Ax STIR DL	Ax T1 DL	Ax DWI DL	+c Cor T1 Fat DL	+c Ax T1 Fat DL	+c Sag T1 Fat DL
FOV	28	28	14	14	14	16	14	16	14	14	14
Slice Thickness	5	5	4	4	4	4	4	4	4	4	4
Slice Spacing	5	5	1	1	1	1	1	1	1	1	1
Overlap Locations	0	0	0	0	0	0	0	0	0	0	0
No Phase Wrap	1	1	1.5	1.5	1.5	1	1	—	1.5	1	1
Number of Slices	—	—	—	20	20	—	38	—	20	38	38

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ACQUISITION TIMING

Scan Description	RT-3-Plane Loc	LT-3-Plane Loc	Cor STIR DL	Cor T1 DL	Cor T1 Fat DL	Ax STIR DL	Ax T1 DL	Ax DWI DL	+c Cor T1 Fat DL	+c Ax T1 Fat DL	+c Sag T1 Fat DL
Acq Voxel Size	0.7 X 1.1 X 5.0	0.7 X 1.1 X 5.0	0.4 X 0.5 X 4.0	0.4 X 0.4 X 4.0	0.4 X 0.4 X 4.0	0.5 X 0.6 X 4.0	0.4 X 0.5 X 4.0	2.0 X 1.1 X 4.0	0.4 X 0.4 X 4.0	0.4 X 0.5 X 4.0	0.4 X 0.5 X 4.0
Freq	384	384	320	384	384	320	320	80	384	320	320
Phase	256	256	256	320	320	256	256	140	320	256	256
Freq DIR	Unswap	Unswap	Unswap	S/I	S/I	Unswap	R/L	Unswap	S/I	R/L	R/L
# of Acq. Before Pause	0	0	—	0	0	—	0	—	0	0	0
Phase FOV	1	1	1	1	1	1	1	0.8	1	1	1
Auto Shim	Auto	Auto	Auto	Auto	Auto	Auto	Auto	On	Auto	Auto	Auto
Phase Correct	Off	Off	Off	On	On	Off	Off	On	On	Off	On
RF Drive Mode	Preset	Preset	Preset	Preset	Preset	Preset	Preset	Preset	Preset	Preset	Preset
Excitation Mode	Selective	Selective	Selective	Selective	Selective	Selective	Selective	Selective	Selective	Selective	Selective
NEX	—	—	1	1	1	1	1	—	1	1	1
Flow Comp Direction	—	—	Freq	—	—	Slice	—	—	—	—	—
Fat Shift DIR	—	—	Normal	Normal (I)	Normal (I)	Normal	Normal (L)	—	Normal (I)	Normal (L)	Normal (L)

SCAN TIMING

Scan Description	RT-3-Plane Loc	LT-3-Plane Loc	Cor STIR DL	Cor T1 DL	Cor T1 Fat DL	Ax STIR DL	Ax T1 DL	Ax DWI DL	+c Cor T1 Fat DL	+c Ax T1 Fat DL	+c Sag T1 Fat DL
TE	82.5	82.5	40	20	20	40	20	Minimum	20	20	20
Number of Echoes	1	1	1	1	1	1	1	1	1	1	1
TR	Minimum	Minimum	3400	564	727	3400	701	5000	727	689	692
Receiver Bandwidth	62.5	62.5	62.5	62.5	62.5	62.5	62.5	—	62.5	62.5	62.5
Flip Angle	—	—	111	111	111	111	111	—	111	111	111
TI	—	—	180	—	—	180	—	—	—	—	—
Echo Train Length	—	—	8	4	4	8	5	—	4	5	5
Number of Shots	—	—	—	—	—	—	—	1	—	—	—

CONTRAST

Scan Description	RT-3-Plane Loc	LT-3-Plane Loc	Cor STIR DL	Cor T1 DL	Cor T1 Fat DL	Ax STIR DL	Ax T1 DL	Ax DWI DL	+c Cor T1 Fat DL	+c Ax T1 Fat DL	+c Sag T1 Fat DL
Contrast Yes/No	No	No	No	No	No	No	No	No	+C	+C	No

OTHERS

Scan Description	RT-3-Plane Loc	LT-3-Plane Loc	Cor STIR DL	Cor T1 DL	Cor T1 Fat DL	Ax STIR DL	Ax T1 DL	Ax DWI DL	+c Cor T1 Fat DL	+c Ax T1 Fat DL	+c Sag T1 Fat DL
Anatomical Region	Extremity	Extremity	Leg	Leg	Leg	Leg	Leg	Cervical spine	Leg	Leg	Leg
3D Geometry Correction	—	—	—	Off	Off	—	—	Off	Off	—	—

AIRX

Scan Description	RT-3-Plane Loc	LT-3-Plane Loc	Cor STIR DL	Cor T1 DL	Cor T1 Fat DL	Ax STIR DL	Ax T1 DL	Ax DWI DL	+c Cor T1 Fat DL	+c Ax T1 Fat DL	+c Sag T1 Fat DL
Anatomical Reference	—	—	None	None	None	None	None	—	None	None	None
Anatomical Plane	—	—	None	None	None	None	None	—	None	None	None

SATURATION

Scan Description	RT-3-Plane Loc	LT-3-Plane Loc	Cor STIR DL	Cor T1 DL	Cor T1 Fat DL	Ax STIR DL	Ax T1 DL	Ax DWI DL	+c Cor T1 Fat DL	+c Ax T1 Fat DL	+c Sag T1 Fat DL
Fat/Water Saturation	—	—	—	—	Fat	—	—	—	Fat	Fat	Fat
SAT Location S	—	—	—	—	—	—	Default	—	—	Default	Default
SAT Location I	—	—	—	—	—	—	Default	—	—	Default	Default

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DIFFUSION

Scan Description	RT-3-Plane Loc	LT-3-Plane Loc	Cor STIR DL	Cor T1 DL	Cor T1 Fat DL	Ax STIR DL	Ax T1 DL	Ax DWI DL	+c Cor T1 Fat DL	+c Ax T1 Fat DL	+c Sag T1 Fat DL
Multi b-values	—	—	—	—	—	—	—	800.0;	—	—	—
Optimized TE	—	—	—	—	—	—	—	On	—	—	—
Multi NEX Values	—	—	—	—	—	—	—	8.0;	—	—	—
Diffusion Directions	—	—	—	—	—	—	—	All	—	—	—
Number of Diffusion Directions	—	—	—	—	—	—	—	3	—	—	—
Number of T2 Images	—	—	—	—	—	—	—	1	—	—	—
NEX For T2	—	—	—	—	—	—	—	2	—	—	—
Dual Spin Echo	—	—	—	—	—	—	—	Off	—	—	—
# Synthetic b-values	—	—	—	—	—	—	—	0	—	—	—
Recon All Images	—	—	—	—	—	—	—	On	—	—	—
Real Time Field Adjustment	—	—	—	—	—	—	—	On	—	—	—

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