PEDIATRIC SPINE DROP METASTASES 3T

INSTRUCTIONS AND PATIENT PREPARATION

Instructions	Post-contrast images only. Typically follows an MR Brain with/without contrast. Each sequence can be duplicated to cover the entire spine if needed. No NPO requirements. Free-breathing.
Position	Supine, head first
Coil	dStream Posterior coil
Landmark	Center at area of interest

CONTRAST AGENT PARAMETERS

Contrast Agent	Dose	Injection Rate	Dose Timing Method and Scan Delay
Gadopiclenol (VUEWAY)	0.1 mL/kg (single dose, weight-based)	Hand injection	IV placed prior to start of MRI
Saline Flush	5-10 mL	Hand injection	Following contrast
Comments	Single dose of VUEWAY 0.1 mL/kg based on patient weight; hand inject followed by 5-10 mL saline flush. Report agent administered and dose.		

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

IMAGING FORUMS, INC.

INFO PAGE

Scan Description	Survey	SG T1 DIXON POST CONTRAST	SG T2 3D POST CONTRAST	AX T1 3D POST CONTRAST
Total scan duration	00:43.0	04:08.8	04:04.4	01:29.8
Rel. SNR	5.4462347	6.63062191	1.2697475	2.15297008
Act. TR(ms)	—	457	1300	—
Act. TE(ms)	—	11	168	—
Act. TR/TE(ms)	24 / 4.0	—	—	4.2 / 2.3
Act. TR/TI(ms)	—	—	—	—
Act. TR/TE1/delta TE(ms)	—	—	—	—
ACQ matrix M x P	152 x 150	200 x 267	200 x 352	188 x 187
ACQ voxel MPS (mm)	1.97 / 2.00 / 4.00	0.80 / 0.90 / 3.00	0.80 / 0.80 / 1.60	0.80 / 0.80 / 3.00
REC voxel MPS (mm)	1.34 / 1.34 / 4.00	0.50 / 0.50 / 3.00	0.40 / 0.40 / 0.80	0.52 / 0.52 / 3.00
Scan percentage (%)	98.6842117	88.8888855	100	99.408287
Packages	3	2	—	—
TFE shots	—	—	—	—
TFE dur. shot / acq (ms)	—	—	—	374.2 / 368.7
TFE shot interval (ms)	—	—	—	374.188385
Min. TI delay	—	—	—	—
Min. slice gap (mm)	-0	3	—	—
EPIfactor	—	—	—	—
Act.slicegap (mm)	—	0.300000012	-0.800000012	0
Act. WFS (pix) / BW (Hz)	1.149 / 378.1	—	—	0.601 / 722.7
Min. WFS (pix) / Max. BW (Hz)	0.518 / 839.1	—	—	0.568 / 764.2
Min. TR/TE(ms)	—	—	—	4.2 / 1.90
Min. TR/TE1/delta TE(ms)	—	—	—	—
WFS (pix) / BW (Hz)	—	1.856 / 234.1	1.199 / 362.3	—
TSE es / shot(ms)	—	11.0 / 44	6.5 / 422	—
TEeff / TEequiv(ms)	—	11 / 11	168 / 119	—
Min. TR(ms)	—	457	483	—
Min. TR/TI(ms)	—	—	—	—
BW in EPI freq. dir. (Hz)	—	—	—	—
SPIR offset act./default (Hz)	—	—	—	—
Local torso SAR	< 24 %	< 100 %	< 37 %	< 29 %
Whole body SAR / level	< 0.8 W/kg / normal	< 2.9 W/kg / 1st level	< 1.1 W/kg / normal	< 0.9 W/kg / normal
SED	0.0 kJ/kg	< 0.7 kJ/kg	< 0.3 kJ/kg	< 0.1 kJ/kg
Coil Power	—	87 %	32 %	28 %
Max B1+rms	1.11 uT	2.18 uT	1.33 uT	1.24 uT
PNS / level	17 % / normal	45 % / normal	48 % / normal	76 % / normal
dB/dt	16.1 T/s	82.2 T/s	45.2 T/s	107.4 T/s
Sound Pressure Level (dB)	-2.40879846	9.97241497	6.0409112	16.7808495
Boil-off (hPa/h)	—	—	—	—
Max Boil-off (hPa/h)	—	—	—	—
Boil-off (hPa)	—	—	—	—

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NW
IMAGING FORUMS, INC.

GEOMETRY

Scan Description	Survey	SG T1 DIXON POST CONTRAST	SG T2 3D POST CONTRAST	AX T1 3D POST CONTRAST
Nucleus	—	—	—	—
SmartSelect	yes	yes	yes	yes
Coil 1 (exclude)	—	None	None	None
Uniformity	—	CLEAR	CLEAR	CLEAR
FOV AP (mm)	—	160	160	150
FOV FH (mm)	300	240	281.600006	240
FOV RL (mm)	300	49.2000008	64	150
stack RL (mm)	—	—	—	—
ACQ voxel size AP (mm)	—	0.800000012	0.800000012	0.800000012
ACQ voxel size FH (mm)	2	0.899999976	0.800000012	3
ACQ voxel size RL (mm)	2	—	1.60000002	0.800000012
Slice thickness (mm)	4	3	—	—
Recon voxel size AP (mm)	—	0.5	0.400000006	0.520833313
Recon voxel size FH (mm)	1.33928573	0.5	0.400000006	3
Recon voxel size RL (mm)	1.33928573	—	0.800000012	0.520833313
Fold-over suppression	oversampling	oversampling	oversampling	oversampling
Slice oversampling	—	—	user defined	default
oversample factor	—	—	1.79999995	—
ENCASE enable	—	—	—	no
RF select. FOS	—	—	—	—
Reconstruction matrix	224	480	704	288
SENSE	no	no	no	yes
Preduction (AP)	—	—	—	1.5
MB SENSE	—	—	—	—
CS-SENSE	no	no	yes	no
reduction	—	—	3	—
denoising	—	—	system default	—
k-t Acceleration	no	no	no	no
Stacks	3	1	1	1
current	—	—	—	—
type	parallel	parallel	—	—
slices	3	15	80	80
slice gap	user defined	default	—	—
gap (mm)	5	—	—	—
slice orientation	coronal	sagittal	sagittal	transverse
fold-over direction	FH	FH	FH	AP
fat shift direction	P	P	P	L
Minimum number of packages	1	1	—	—
Multi-chunk	—	—	no	no
Slice scan order	default	default	—	—
Stack scan order	ascend	—	—	—

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Stack sort order	no	—	—	—
O-MAR	—	no	no	—
Large table movement	no	no	no	no
Plan Align	yes	no	no	no
REST slabs	0	0	0	1
type	—	—	—	free
thickness (mm)	—	—	—	60
position	—	—	—	—
gap	—	—	—	—
power	—	—	—	1
Interactive positioning	no	no	no	no
Allow table movement	—	—	—	—
Patient position	head first	head first	head first	head first
Patient body position	head first	head first	head first	head first
Patient orientation	supine	supine	supine	supine
Patient body orientation	supine	supine	supine	supine

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IMAGING FORUMS, INC.

CONTRAST

Scan Description	Survey	SG T1 DIXON POST CONTRAST	SG T2 3D POST CONTRAST	AX T1 3D POST CONTRAST
Scan type	Imaging	Imaging	Imaging	Imaging
Scan mode	MS	MS	3D	3D
technique	FFE	SE	SE	FFE
Modified SE	—	no	no	—
3D non-selective	—	—	—	—
loop order	—	—	—	—
Contrast enhancement	no	—	—	T1
Acquisition mode	cartesian	cartesian	cartesian	cartesian
Fast Imaging mode	none	TSE	TSE	TFE
3D VIEW	—	—	Spine T2	—
shot mode	—	multishot	multishot	single-shot
TFE factor	—	—	—	87
TSE factor	—	4	62	—
startup echoes	—	0	2	user defined
shot interval	—	—	—	shortest
profile order	—	asymmetric	linear	linear
turbo direction	—	—	Y	Z
DRIVE	—	no	yes	—
ultrashort	—	yes	—	—
shift	—	—	—	—
fid reduction	—	default	default	—
Echoes	1	1	1	1
partial echo	no	no	no	no
shifted echo	no	—	—	no
TE	shortest	shortest	shortest	in-phase
(ms)	—	—	—	2.30192113
echospacing	—	user defined	—	—
(ms)	—	11	—	—
flyback	—	—	—	—
Flip angle (deg)	45	100	90	10
Refocusing control	—	constant	constant	—
angle (deg)	—	100	90	—
bright fat reduction	—	no	no	—
TR	shortest	range	user defined	shortest
(ms)	—	—	1300	—
minimum (ms)	—	400	—	—
maximum (ms)	—	775	—	—
Halfscan	no	no	yes	yes
factor	—	—	—	—
factor Y	—	—	0.800000012	0.699999988
factor Z	—	—	0.850000024	0.850000024

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Water-fat shift	maximum	maximum	user defined	user defined
(pixels)	—	—	1.20000005	0.600000024
IR delay (ms)	—	—	—	—
dual	—	—	—	—
power	—	—	—	—
RF Shims	—	adaptive	adaptive	fixed
Shim	—	default	default	auto
mDIXON	no	yes	no	no
Fat suppression	no	no	no	no
strength	—	—	—	—
power	—	—	—	—
inversion delay	—	—	—	—
suppr. level	—	—	—	—
frequency offset	—	—	—	—
offset (Hz)	—	—	—	—
Grad Rev Fat suppr	—	no	no	—
Water suppression	no	no	no	no
TFE prepulse	—	—	—	no
slice selection	—	—	—	—
delay	—	—	—	—
(ms)	—	—	—	—
BB pulse	—	no	no	—
MTC	no	no	no	no
T2prep	—	—	—	no
echo time(ms)	—	—	—	—
refocusing pulses	—	—	—	—
APT	—	no	no	—
Custom prepulse	no	no	no	no
MDME	no	no	no	no
Diffusion mode	no	no	no	no
sequence	—	—	—	—
gradient expert mode	—	—	—	—
gradient overplus	—	—	—	—
direction	—	—	—	—
nr of b-factors	—	—	—	—
b-factor order	—	—	—	—
max b-factor	—	—	—	—
average high b	—	—	—	—
T1 mapping	no	no	no	no
Transmit channels	—	both	both	both
SAR mode	high	high	high	high
B1 mode	default	default	default	default
SAR allow first level	yes	yes	yes	yes

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Patient pregnancy	no	no	no	no
Patient WB SAR [W/kg]	0	0	0	0
Patient Head SAR [W/kg]	0	0	0	0
Patient max. dB/dt [T/s]	0	0	0	0
Max slewrate [T/m/s]	0	0	0	0
Max. B1+rms [uT]	0	0	0	0
PNS mode	low	low	moderate	high
Gradient mode	regular	maximum	default	maximum
SofTone mode	no	no	no	no

MOTION

Scan Description	Survey	SG T1 DIXON POST CONTRAST	SG T2 3D POST CONTRAST	AX T1 3D POST CONTRAST
Cardiac synchronization	no	no	no	no
Heart rate > 250 bpm	no	no	no	no
Respiratory compensation	no	no	no	no
Navigator respiratory comp	no	no	no	no
Flow compensation	no	sensitized	no	no
Temporal slice spacing	default	default	—	—
Motion smoothing	—	yes	no	no
fMRI echo stabilisation	no	—	—	no
NSA	2	1	1	2
MRE enable	no	no	no	no

DYNAMIC ANGIO

Scan Description	Survey	SG T1 DIXON POST CONTRAST	SG T2 3D POST CONTRAST	AX T1 3D POST CONTRAST
Angio / Contrast enh.	no	—	—	contrast enh.
Quantitative flow	no	—	—	no
CENTRA	—	—	no	—
Manual start	no	no	no	no
Dynamic study	no	no	no	no
Arterial Spin labeling	no	no	no	no

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POST PROCESSING

Scan Description	Survey	SG T1 DIXON POST CONTRAST	SG T2 3D POST CONTRAST	AX T1 3D POST CONTRAST
Preparation phases	—	auto	auto	full
Interactive F0	no	no	no	no
Quick Survey	default	default	default	default
SmartPlan survey	no	no	no	no
B0 field map	no	no	no	no
B1 field map	no	no	no	no
MIP/MPR	no	no	no	no
SWIp	no	—	—	no
Images	no	—	no	no
Autoview image	M	—	M	M
Calculated images	no	—	no	no
Reference tissue	Skeletal muscle	Skeletal muscle	Skeletal muscle	Lung
Recon compression	No	No	No	No
Preset window contrast	hard	intermediate	intermediate	soft
Reconstruction mode	real time	real time	real time	real time
Save raw data	no	no	no	no
Hardcopy protocol	no	no	no	no
Image filter	system default	system default	system default	system default
Uniformity correction	no	no	no	no
Geometry correction	default	default	default	default
EPI geometry correction	—	—	—	—
ADC correction	—	—	—	—
Elliptical k-space shutter	—	—	default	default
Free rotatable	no	no	no	no

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