NW
IMAGING FORUMS, INC.

THORACIC SPINE WITH/WITHOUT IV CONTRAST 1.5T R5.6

INSTRUCTIONS AND PATIENT PREPARATION

Instructions	Patient change into hospital issued gown and pants
Position	Supine, head first
Coil	Posterior Body Coil and Anterior dStream Torso Coil
Landmark	Upper Chest

CONTRAST AGENT PARAMETERS

Contrast Agent	Dose	Injection Rate
Gadopiclenol (VUEWAY)	0.05 mmol/kg	Hand Bolus
Saline Flush	10-20 mL	Hand Flush
Comments	• Report agent administered and dose • Alternatively, can use the sequences to cover total spine and combine with selected sequences from the Cervical Spine and Lumbar Spine protocols	

INFO PAGE

Scan Description	SURVEY Tspine	LOCALIZER Count	SAGITTAL T1	SAGITTAL T2	SAGITTAL T2 Fat Sat	AXIAL T2	AXIAL T1	SAGITTAL T1 +C Fat Sat	AXIAL T1 +C
Total scan duration	00:24.0	00:24.1	02:44.7	01:51.3	02:01.4	03:06.7	02:03.6	02:42.8	02:21.6
Rel. SNR	1	1	1	1	1	1	1	1	1
Act. TR (ms)	—	2188	408	2854	3113	5187	718	424	659
Act. TE (ms)	—	120	7	90	90	80	8	7	8
Act. TR/TE (ms)	21 / 3.5	—	—	—	—	—	—	—	—
ACQ matrix M x P	256 x 191	112 x 162	180 x 289	180 x 328	180 x 328	288 x 208	252 x 199	180 x 290	252 x 199
ACQ voxel MPS (mm)	1.76 / 2.35 / 10.0	1.79 / 2.83 / 4.00	0.89 / 1.11 / 3.00	0.89 / 0.91 / 3.00	0.89 / 0.91 / 3.00	0.69 / 0.77 / 5.00	0.79 / 0.81 / 5.00	0.89 / 1.10 / 3.00	0.79 / 0.81 / 5.00
REC voxel MPS (mm)	1.41 / 1.41 / 10.0	1.43 / 1.43 / 4.00	0.57 / 0.57 / 3.00	0.47 / 0.47 / 3.00	0.47 / 0.47 / 3.00	0.45 / 0.45 / 5.00	0.50 / 0.50 / 5.00	0.57 / 0.57 / 3.00	0.50 / 0.50 / 5.00
Scan percentage (%)	75	63	80	98	98	90	98	80	98
Packages	3	1	2	1	1	2	4	2	5
Min. slice gap (mm)	0	0	3	0	0	5	5	3	5
Optimal slices	—	—	—	—	—	—	24	—	22
Max. slices	—	—	—	—	—	—	—	—	55
Act. WFS (pix) / BW (Hz)	0.645 / 336.7	—	—	—	—	—	—	—	—
Min. WFS (pix) / Max. BW (Hz)	0.294 / 739.8	—	—	—	—	—	—	—	—
WFS (pix) / BW (Hz)	—	1.135 / 191.4	0.672 / 323.0	0.535 / 406.1	0.535 / 406.1	0.686 / 316.8	0.670 / 324.2	0.672 / 323.0	0.670 / 324.2
Full flow comp.	—	—	no	no	no	no	no	no	no
TSE es / shot (ms)	—	10.9 / 229	7.0 / 35	9.0 / 198	9.0 / 198	8.0 / 208	8.0 / 40	7.0 / 35	8.0 / 40
TEeff / TEequiv (ms)	—	—	—	90 / 76	90 / 76	—	—	—	—
Min. TR (ms)	—	—	408	2854	3113	5187	718	424	659
Local torso SAR	< 14 %	< 86 %	< 75 %	< 64 %	< 59 %	< 97 %	< 50 %	< 74 %	< 50 %
Whole body SAR / level	< 0.4 W/kg / normal	< 2.2 W/kg / 1st level	< 1.9 W/kg / normal	< 1.6 W/kg / normal	< 1.5 W/kg / normal	< 2.5 W/kg / 1st level	< 1.3 W/kg / normal	< 1.9 W/kg / normal	< 1.3 W/kg / normal
SED	0.0 kJ/kg	< 0.1 kJ/kg	< 0.3 kJ/kg	< 0.2 kJ/kg	< 0.2 kJ/kg	< 0.5 kJ/kg	< 0.2 kJ/kg	< 0.3 kJ/kg	< 0.2 kJ/kg
Max B1+rms	1.61 uT	3.94 uT	3.67 uT	3.39 uT	3.26 uT	4.16 uT	2.99 uT	3.65 uT	3.00 uT
PNS / level	18 % / normal	49 % / normal	42 % / normal	50 % / normal	50 % / normal	40 % / normal	40 % / normal	47 % / normal	40 % / normal
dB/dt	12.8 T/s	39.7 T/s	40.6 T/s	46.0 T/s	46.0 T/s	34.7 T/s	36.0 T/s	40.6 T/s	35.4 T/s
Sound Pressure Level (dB)	4.4	7.9	13.5	13.9	13.7	8.4	7.4	13.9	7.4

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MR Gadopiclenol (VUEWAY®) Protocol for Philips Healthcare Systems
Central Nervous System

IMAGING FORUMS, INC.

GEOMETRY

Scan Description	SURVEY Tspine	LOCALIZER Count	SAGITTAL T1	SAGITTAL T2	SAGITTAL T2 Fat Sat	AXIAL T2	AXIAL T1	SAGITTAL T1 +C Fat Sat	AXIAL T1 +C
SmartSelect	yes	yes	yes	yes	yes	yes	yes	yes	yes
Coil 1 (exclude)	—	None	None	None	None	None	None	None	None
Uniformity	—	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR
FOV AP (mm)	—	200	160	160	160	200	200	160	200
FOV FH (mm)	450	457	320	298	298	287	287	320	323
FOV RL (mm)	450	39	49	49	49	161	162	49	162
FOV (mm)	(2) 32, (18) 40	—	—	—	—	—	—	—	—
ACQ voxel size AP (mm)	—	1.8	0.9	0.9	0.9	0.7	0.8	0.9	0.8
ACQ voxel size FH (mm)	1.8	2.6	1.1	0.9	0.9	—	—	1.1	—
ACQ voxel size RL (mm)	2.3	—	—	—	—	0.8	0.8	—	0.8
Slice thickness (mm)	10	4	3	3	3	5	5	3	5
Bar orientation	RL	—	—	—	—	—	—	—	—
VOI orientation	transverse	—	—	—	—	—	—	—	—
VOI size AP (mm)	30	—	—	—	—	—	—	—	—
VOI size FH (mm)	30	—	—	—	—	—	—	—	—
VOI size RL (mm)	30	—	—	—	—	—	—	—	—
Recon voxel size AP (mm)	—	1.4	0.6	0.5	0.5	0.4	0.5	0.6	0.5
Recon voxel size FH (mm)	1.4	1.4	0.6	0.5	0.5	—	—	0.6	—
Recon voxel size RL (mm)	1.4	—	—	—	—	0.4	0.5	—	0.5
Image shutter	yes	no	—	—	—	—	—	—	—
Fold-over suppression	oversampling	oversampling	oversampling	oversampling	oversampling	no	no	oversampling	no
F (mm)	—	120	320	250	250	—	—	320	—
H (mm)	—	120	320	250	250	—	—	320	—
L (mm)	225	—	—	—	—	—	—	—	—
R (mm)	225	—	—	—	—	—	—	—	—
Reconstruction matrix	320	320	560	640	640	448	400	560	400
SENSE	no	no	no	no	no	yes	yes	no	yes
P reduction (RL)	—	—	—	—	—	1	1	—	1
CS-SENSE	no	yes	yes	yes	yes	no	no	yes	no
reduction	—	1.2	1.8	1.1	1.1	—	—	1.9	—
denoising	—	system default	system default	system default	system default	—	—	system default	—
k-t Acceleration	no	no	no	no	no	no	no	no	no
Stacks	3	1	1	1	1	1	1	1	1
type	(20) parallel	parallel	parallel	parallel	parallel	parallel	parallel	parallel	parallel
slices	(20) 3	9	14	14	14	48	48	14	54
slice gap	user defined	user defined	user defined	user defined	user defined	user defined	user defined	user defined	user defined
gap (mm)	(2) 1, (18) 5	0.4	0.5	0.5	0.5	1	1	0.5	1
slice orientation	coronal, sagittal, (18) transverse	sagittal	sagittal	sagittal	sagittal	transverse	transverse	sagittal	transverse
fold-over direction	RL, FH, (18) AP	FH	FH	FH	FH	RL	RL	FH	RL
fat shift direction	F, P, (18) L	P	P	P	P	P	P	P	P
radial axis	RL, (2) AP, (17) RL	—	—	—	—	—	—	—	—

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radial angle (deg)	(20) 0	—	—	—	—	—	—	—	—
Stacks as Packages	yes	—	—	—	—	—	—	—	—
Minimum number of Packages	1	1	1	1	1	1	1	1	1
Slice scan order	default	default	default	default	default	default	FH	default	FH
Stack scan order	ascend	—	—	—	—	—	—	—	—
O-MAR	—	no	no	no	no	no	no	no	no
Move table per stack	no	—	—	—	—	—	—	—	—
Large table movement	no	no	no	no	no	no	no	no	no
Stack alignment	no	—	—	—	—	—	—	—	—
Stack sort order	no	—	—	—	—	—	—	—	—
PlanAlign	yes	yes	no	no	no	no	no	no	no
REST slabs	0	1	0	0	0	0	0	0	0
type	—	free	—	—	—	—	—	—	—
orientation	—	coronal	—	—	—	—	—	sagittal	—
thickness (mm)	—	80	—	—	—	—	—	—	—
Interactive positioning	no	no	no	no	no	no	no	no	no
Patient position	head first	head first	head first	head first	head first	head first	head first	head first	head first
Patient body position	head first	head first	head first	head first	head first	head first	head first	head first	head first
Patient orientation	supine	supine	supine	supine	supine	supine	supine	supine	supine
Patient body orientation	supine	supine	supine	supine	supine	supine	supine	supine	supine

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Central Nervous System

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IMAGING FORUMS, INC.

CONTRAST

Scan Description	SURVEYTspine	LOCALIZERCount	SAGITTALT1	SAGITTALT2	SAGITTALT2 Fat Sat	AXIALT2	AXIALT1	SAGITTALT1 +C Fat Sat	AXIALT1 +C
Scan type	Imaging	Imaging	Imaging	Imaging	Imaging	Imaging	Imaging	Imaging	Imaging
Scan mode	MS	MS	MS	MS	MS	MS	MS	MS	MS
technique	FFE	SE	SE	SE	SE	SE	SE	SE	SE
Contrast enhancement	no	—	—	—	—	—	—	—	—
Modified SE	—	no	no	no	no	no	no	no	no
Acquisition mode	cartesian	cartesian	cartesian	cartesian	cartesian	cartesian	cartesian	cartesian	cartesian
Fast Imaging mode	none	TSE	TSE	TSE	TSE	TSE	TSE	TSE	TSE
shot mode	—	multishot	multishot	multishot	multishot	multishot	multishot	multishot	multishot
TSE factor	—	21	5	21	21	26	5	5	5
TE spacing	—	—	—	user defined	user defined	user defined	—	—	—
(ms)	—	—	—	9	9	8	—	—	—
startup Echoes	—	—	—	—	—	—	—	—	—
profile order	—	linear	low_high	asymmetric	asymmetric	asymmetric	low_high	low_high	low_high
DRIVE	—	no	no	yes	yes	no	no	no	no
ultrashort	—	yes	no	yes	yes	no	no	no	no
fid reduction	—	default	strong	strong	strong	default	default	strong	default
Echoes	1	1	1	1	1	1	1	1	1
partial echo	no	no	no	no	no	no	no	no	no
shifted echo	no	—	—	—	—	—	—	—	—
TE	shortest	user defined	user defined	user defined	user defined	user defined	user defined	user defined	user defined
(ms)	—	120	7	90	90	80	8	7	8
Flip angle (deg)	45	90	90	90	90	90	90	90	90
Refocusing control	—	no	no	constant	constant	no	no	no	no
angle (deg)	—	—	—	110	110	—	—	—	—
TR	shortest	shortest	range	range	range	range	range	range	range
minimum (ms)	—	—	400	2500	2500	3000	400	400	400
maximum (ms)	—	—	600	4000	4000	6500	750	600	750
Halfscan	no	no	no	no	no	no	no	no	no
Water-fat shift	maximum	maximum	maximum	maximum	maximum	maximum	maximum	maximum	maximum
Shim	no	default	default	default	default	default	default	volume	default
ShimAlign	—	—	—	—	—	—	—	yes	—
mDIXON	—	no	no	no	no	no	no	no	no
Fat suppression	no	no	no	no	SPIR	no	no	SPIR	no
strength	—	—	—	—	strong	—	—	strong	—
frequency offset	—	—	—	—	default	—	—	default	—
Water suppression	no	no	no	no	no	no	no	no	no
MTC	no	no	no	no	no	no	no	no	no
Diffusion mode	no	no	no	no	no	no	no	no	no
T1 mapping	no	no	no	no	no	no	no	no	no
SAR mode	high	high	moderate	high	high	high	low	moderate	low
B1 mode	default	default	default	default	default	default	default	default	default
SAR allow first level	yes	yes	yes	yes	yes	yes	yes	yes	yes

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

MOTION

Scan Description	SURVEY Tspine	LOCALIZER Count	SAGITTAL T1	SAGITTAL T2	SAGITTAL T2 Fat Sat	AXIAL T2	AXIAL T1	SAGITTAL T1 +C Fat Sat	AXIAL T1 +C
Cardiac synchronization	no	no	no	no	no	no	no	no	no
Respiratory compensation	no	no	no	no	no	no	no	no	no
Navigator respiratory comp	no	no	no	no	no	no	no	no	no
Flow compensation	no	no	sensitized	sensitized	sensitized	sensitized	sensitized	sensitized	sensitized
Temporal slice spacing	default	default	default	default	default	default	default	default	default
fMRI echo stabilisation	no	—	—	—	—	—	—	—	—
Motion smoothing	—	no	yes	yes	yes	yes	yes	yes	yes
NSA	1	1	2	1	1	2	1	2	1
SMART	—	—	yes	—	—	yes	—	yes	—
MRE enable	no	no	no	no	no	no	no	no	no

DYNAMIC ANGIO

Scan Description	SURVEY Tspine	LOCALIZER Count	SAGITTAL T1	SAGITTAL T2	SAGITTAL T2 Fat Sat	AXIAL T2	AXIAL T1	SAGITTAL T1 +C Fat Sat	AXIAL T1 +C
Angio / Contrast enh.	no	—	—	—	—	—	—	—	—
Quantitative flow	no	—	—	—	—	—	—	—	—
Manual start	no	no	no	no	no	no	no	no	no
Dynamic study	no	no	no	no	no	no	no	no	no
Arterial Spin labeling	no	no	no	no	no	no	no	no	no

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POST PROCESSING

Scan Description	SURVEY Tspine	LOCALIZER Count	SAGITTAL T1	SAGITTAL T2	SAGITTAL T2 Fat Sat	AXIAL T2	AXIAL T1	SAGITTAL T1 +C Fat Sat	AXIAL T1 +C
Preparation phases	—	auto	auto	auto	auto	auto	auto	auto	auto
Interactive F0	no	no	no	no	no	no	no	select	no
Quick Survey	default	default	default	default	default	default	default	default	default
MIP/MPR	no	no	no	no	no	no	no	no	no
SWIp	no	—	—	—	—	—	—	—	—
Images	M, (3) no	M, (3) no	M, (3) no	M, (3) no	M, (3) no	M, (3) no	M, (3) no	M, (3) no	M, (3) no
Autoview image	M	M	M	no	no	M	M	M	M
Calculated images	(4) no	(4) no	(4) no	(4) no	(4) no	(4) no	(4) no	(4) no	(4) no
Reference tissue	Skeletal muscle	Skeletal muscle	Skeletal muscle	Skeletal muscle	Skeletal muscle	Skeletal muscle	Skeletal muscle	Skeletal muscle	Skeletal muscle
Recon compression	No	No	No	No	No	No	No	No	No
Preset window contrast	hard	hard	intermediate	intermediate	intermediate	intermediate	intermediate	intermediate	intermediate
Reconstruction mode	real time	immediate	real time	real time	real time	real time	real time	real time	real time
Save raw data	no	no	no	no	no	no	no	no	no
Hardcopy protocol	no	no	no	no	no	no	no	no	no
Image filter	system default	system default	system default	system default	system default	system default	system default	system default	system default
Uniformity correction	no	no	no	no	no	no	no	no	no
Geometry correction	default	default	default	default	default	default	default	default	default
Free rotatable	no	no	no	no	no	no	no	no	no
IF_info_seperator	1634755923	0	1634755923	1634755923	1634755923	1634755923	1634755923	1634755923	1634755923

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