LUMBAR SPINE WITH/WITHOUT IV CONTRAST 3T 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	1-2" above iliac crest

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	

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

IMAGING FORUMS, INC.

INFO PAGE

Scan Description	SURVEY	2 Step LOCALIZER	CORONAL T1	SAGITTAL T1	SAGITTAL T2	SAGITTAL T2 Fat Sat	AXIAL T2	AXIAL T1	AXIAL T2 Disc	SAGITTAL T1 +C Fat Sat	AXIAL T1 +C
Total scan duration	00:27.7	00:48.1	01:42.5	02:30.2	02:38.9	02:31.0	03:02.2	02:58.0	01:30.0	02:53.3	03:05.3
Rel. SNR	2.6	6.1	2.2	1.8	1.1	0.9	0.5	1.4	1.0	2.9	2.0
Act. TR (ms)	—	—	586	615	3783	3973	5062	489	3000	688	618
Act. TR/TE (ms)	10 / 6.9	204 / 2.3	—	—	—	—	—	—	—	—	—
Act. TE (ms)	—	—	10	10	90	100	100	10	90	10	10
ACQ matrix M x P	200 x 149	224 x 144	272 x 187	240 x 285	240 x 297	240 x 297	332 x 243	252 x 209	236 x 205	192 x 239	200 x 172
ACQ voxel MPS (mm)	2.00 / 2.68 / 10.00	2.01 / 2.00 / 5.00	0.99 / 1.45 / 4.00	0.79 / 0.95 / 4.00	0.79 / 0.90 / 4.00	0.79 / 0.90 / 4.00	0.60 / 0.82 / 4.00	0.79 / 0.96 / 4.00	0.85 / 0.97 / 4.00	0.99 / 1.13 / 4.00	0.90 / 1.05 / 4.00
REC voxel MPS (mm)	1.39 / 1.39 / 10.00	0.88 / 0.88 / 5.00	0.34 / 0.34 / 4.00	0.53 / 0.53 / 4.00	0.40 / 0.40 / 4.00	0.40 / 0.40 / 4.00	0.39 / 0.39 / 4.00	0.60 / 0.60 / 4.00	0.50 / 0.50 / 4.00	0.53 / 0.53 / 4.00	0.51 / 0.51 / 4.00
Scan percentage (%)	75	101	69	83	88	88	73	83	87	87	86
Packages	3	2	7	4	2	2	4	14	2	4	12
Min. slice gap (mm)	0	0	4	4	4	4	4	4	4	4	4
Act. slice gap (mm)	—	—	0.4	0.4	0.4	0.4	—	—	—	0.4	—
Optimal slices	—	—	6	8	—	—	20	6	—	8	8
Max. slices	—	—	—	16	—	—	—	—	—	16	48
TFE factor	300	—	—	—	—	—	—	—	—	—	—
TFE dur. shot / acq (ms)	3081.3 / 3040.7	—	—	—	—	—	—	—	—	—	—
Act. WFS (pix) / BW (Hz)	0.532 / 817.0	1.129 / 384.9	—	—	—	—	—	—	—	—	—
Min. WFS (pix) / Max. BW (Hz)	0.511 / 850.3	0.245 / 1771.5	—	—	—	—	—	—	—	—	—
Min. TR/TE (ms)	10 / 4.7	—	—	—	—	—	—	—	—	—	—
WFS (pix) / BW (Hz)	—	—	1.295 / 335.4	1.293 / 336.0	1.293 / 336.0	1.293 / 336.0	1.200 / 362.0	2.461 / 176.5	1.956 / 222.1	1.295 / 335.6	2.085 / 208.3
Full flow comp.	—	—	no	no	no	no	yes	yes	yes	no	—
TSE es / shot (ms)	—	—	8.0 / 56	10.0 / 50	8.0 / 192	8.0 / 200	8.3 / 200	10.0 / 70	8.0 / 144	10.0 / 50	8.0 / 56
TEeff / TEequiv (ms)	—	—	10 / 10	8 / 8	90 / 76	100 / 84	100 / 73	8 / 8	90 / 79	8 / 8	10 / 10
Min. TR (ms)	—	—	586	615	3783	3973	5062	489	2133	688	618
SPAIR offset act./default (Hz)	—	—	—	—	—	220 [220]	—	—	—	—	—
Local torso SAR	< 10 %	< 50 %	< 100 %	< 100 %	< 100 %	< 100 %	< 100 %	< 100 %	< 71 %	< 100 %	< 100 %
Whole body SAR / level	< 0.2 W/kg / normal	< 1.2 W/kg / normal	< 2.0 W/kg / normal	< 2.0 W/kg / normal	< 2.1 W/kg / 1st level	< 2.3 W/kg / 1st level	< 2.0 W/kg / normal	< 2.0 W/kg / normal	< 1.4 W/kg / normal	< 2.0 W/kg / normal	< 2.0 W/kg / normal
SED	0.0 kJ/kg	< 0.1 kJ/kg	< 0.2 kJ/kg	< 0.3 kJ/kg	< 0.3 kJ/kg	< 0.4 kJ/kg	< 0.4 kJ/kg	< 0.3 kJ/kg	< 0.1 kJ/kg	< 0.3 kJ/kg	< 0.4 kJ/kg
Coil Power	—	24%	40%	40%	43%	48%	40%	40%	28%	40%	40%
Max B1+rms	0.52 uT	1.14 uT	1.48 uT	1.48 uT	1.56 uT	1.63 uT	1.47 uT	1.48 uT	1.28 uT	1.47 uT	1.48 uT
PNS / level	9 % / normal	60 % / normal	37 % / normal	41 % / normal	45 % / normal	47 % / normal	59 % / normal	59 % / normal	39 % / normal	47 % / normal	43 % / normal
dB/dt	15.4 T/s	49.5 T/s	40.9 T/s	41.7 T/s	41.2 T/s	40.0 T/s	34.5 T/s	45.2 T/s	34.1 T/s	41.2 T/s	40.1 T/s
Sound Pressure Level (dB)	1.3	17.5	14.8	16.8	19.9	17.6	22.9	17.4	12.9	17.1	13.3

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

IMAGING FORUMS, INC.

GEOMETRY

Scan Description	SURVEY	2 Step LOCALIZER	CORONAL T1	SAGITTAL T1	SAGITTAL T2	SAGITTAL T2 Fat Sat	AXIAL T2	AXIAL T1	AXIAL T2 Disc	SAGITTAL T1 +C Fat Sat	AXIAL T1 +C
SmartSelect	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Coil 1 (exclude)	—	—	None	None	None	None	None	None	None	None	None
Uniformity	—	Body-tuned	Body-tuned	Body-tuned	Body-tuned	Body-tuned	Body-tuned	Body-tuned	Body-tuned	Body-tuned	Body-tuned
FOV AP (mm)	—	288	92	190	190	190	200	200	200	190	180
FOV (mm)	—	(2) 59, (18) 250	—	—	—	—	—	—	—	—	—
FOV FH (mm)	400	450	270	270	268	268	199	209	39	270	229
FOV RL (mm)	400	—	270	61	61	61	200	200	200	61	180
FOV (mm)	(2) 32, (18) 40	—	—	—	—	—	—	—	—	—	—
ACQ voxel size AP (mm)	—	2	—	0.8	0.8	0.8	0.6	0.8	0.9	1	0.9
ACQ voxel size FH (mm)	2	2	1.3	0.9	0.8	0.9	—	—	—	1.1	—
ACQ voxel size RL (mm)	2.7	—	1	—	—	—	0.7	0.9	0.9	—	1
Slice thickness (mm)	10	5	4	4	4	4	4	4	4	4	4
Bar orientation	RL	RL	—	—	—	—	—	—	—	—	—
VOI orientation	transverse	transverse	—	—	—	—	—	—	—	—	—
VOI size AP (mm)	30	30	—	—	—	—	—	—	—	—	—
VOI size RL (mm)	30	30	—	—	—	—	—	—	—	—	—
VOI size FH (mm)	30	30	—	—	—	—	—	—	—	—	—
Recon voxel size AP (mm)	—	0.9	—	0.5	0.4	0.4	0.4	0.6	0.5	0.5	0.5
Recon voxel size FH (mm)	1.4	0.9	0.3	0.5	0.4	0.4	—	—	—	0.5	—
Recon voxel size RL (mm)	1.4	—	0.3	—	—	—	0.4	0.6	0.5	—	0.5
Image shutter	—	no	—	—	—	—	—	—	—	—	—
Fold-over suppression	oversampling	oversampling	oversampling	oversampling	oversampling	oversampling	oversampling	oversampling	oversampling	oversampling	oversampling
A (mm)	—	25.9	—	—	—	—	—	—	—	—	—
F (mm)	—	—	153.3	269.6	269.6	269.6	—	—	—	269.8	—
H (mm)	—	—	179.5	269.6	269.6	269.6	—	—	—	269.4	—
L (mm)	200	—	—	—	—	—	100	100	100	—	90
P (mm)	—	25.9	—	—	—	—	—	—	—	—	—
R (mm)	200	—	—	—	—	—	100	100	100	—	90
Reconstruction matrix	288	512	784	512	672	672	512	336	400	512	352
SENSE	no	no	no	no	no	no	no	no	no	no	no
CS-SENSE	no	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
reduction	—	1.5	2.8	3	2	2	2.8	2.8	1.8	2.4	2.3
denoising	—	system default	system default	system default	system default	system default	system default	system default	system default	system default	system default
k-t Acceleration	no	no	no	no	no	no	no	no	no	no	no
Stacks	3	2	1	1	1	1	1	1	1	1	1
type	(20) parallel	(20) parallel	parallel	parallel	parallel	parallel	parallel	parallel	parallel	parallel	parallel
Slices	(20) 3	(2) 10, 3, (17) 1	21	14	14	14	40	42	8	14	46
slice gap	user defined	user defined	default	default	default	default	user defined	user defined	user defined	default	user defined
gap (mm)	(2) 1, (18) 5	(3) 1, (17) 10	—	—	—	—	1	1	1	—	1
Slice orientation	coronal, sagittal, (18) transverse	(3) sagittal, (17) transverse	coronal	sagittal	sagittal	sagittal	transverse	transverse	transverse	sagittal	transverse
Fold-over direction	RL, FH, (18) AP	(2) AP, FH, (17) AP	FH	FH	FH	FH	RL	RL	RL	FH	RL

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Fat shift direction	F, P, (18) L	(2) F, P, (17) L	L	P	P	P	P	P	P	P	P
radial axis	RL, (2) AP, (17) RL	(2) AP, (18) RL	—	—	—	—	—	—	—	—	—
radial angle (deg)	(20) 0	(20) 0	—	—	—	—	—	—	—	—	—
Minimum number of packages	1	1	1	1	1	1	1	1	1	1	1
Slice scan order	default	interleaved	default	default	default	default	default	default	default	default	default
Stack scan order	ascend	HF	—	—	—	—	—	—	—	—	—
Move table per stack	no	yes	—	—	—	—	—	—	—	—	—
O-MAR	—	—	no	no	no	no	no	no	no	no	no
Large table movement	no	no	no	no	no	no	no	no	no	no	no
Stack alignment	no	FH	—	—	—	—	—	—	—	—	—
Stack sort order	no	—	—	—	—	—	—	—	—	—	—
PlanAlign	yes	no	no	yes	yes	yes	yes	yes	yes	yes	yes
REST slabs	0	0	0	0	0	0	0	0	0	0	0
orientation	—	—	—	—	—	sagittal	—	—	—	—	—
Patient position	feet first	feet first	feet first	feet first	feet first	feet first	feet first	feet first	feet first	feet first	feet first
Patient body position	feet first	feet first	feet first	feet first	feet first	feet first	feet first	feet first	feet first	feet first	feet first
Patient orientation	supine	supine	supine	supine	supine	supine	supine	supine	supine	supine	supine
Patient body orientation	supine	supine	supine	supine	supine	supine	supine	supine	supine	supine	supine

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IMAGING FORUMS, INC.

CONTRAST

Scan Description	SURVEY	2 Step LOCALIZER	CORONALT1	SAGITTALT1	SAGITTALT2	SAGITTALT2 Fat Sat	AXIALT2	AXIALT1	AXIAL T2 Disc	SAGITTALT1 +C Fat Sat	AXIALT1 +C
Scan type	Imaging	Imaging	Imaging	Imaging	Imaging	Imaging	Imaging	Imaging	Imaging	Imaging	Imaging
Scan mode	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS
technique	FFE	FFE	SE	SE	SE	SE	SE	SE	SE	SE	SE
Contrast enhancement	T1	no	—	—	—	—	—	—	—	—	—
Modified SE	—	—	no	no	no	no	no	no	no	no	no
Acquisition mode	cartesian	cartesian	cartesian	cartesian	cartesian	cartesian	cartesian	cartesian	cartesian	cartesian	cartesian
Fast Imaging mode	TFE	none	TSE	TSE	TSE	TSE	TSE	TSE	TSE	TSE	TSE
shot mode	single-shot	—	multishot	multishot	multishot	multishot	multishot	multishot	multishot	multishot	multishot
TSE factor	—	—	7	5	23	25	23	7	17	5	7
TE spacing	—	—	user defined	user defined	user defined	user defined	—	user defined	user defined	user defined	user defined
(ms)	—	—	8	10	8	8	—	10	8	10	8
TFE startup echoes	default	—	—	—	—	—	—	—	—	—	—
startup echoes	—	—	—	—	—	—	—	—	—	—	—
profile order	linear	—	asymmetric	asymmetric	asymmetric	asymmetric	linear	asymmetric	asymmetric	asymmetric	asymmetric
DRIVE	—	—	no	no	yes	no	yes	no	yes	no	no
ultrashort	—	—	yes	yes	no	yes	yes	yes	yes	yes	yes
fid reduction	—	—	strong	strong	strong	strong	default	default	default	strong	default
Echoes	1	1	1	1	1	1	1	1	1	1	1
partial echo	no	no	no	no	no	no	no	no	no	no	no
shifted echo	no	no	—	—	—	—	—	—	—	—	—
TE	in-phase	shortest	user defined	user defined	user defined	user defined	user defined	user defined	user defined	user defined	user defined
(ms)	6.9	—	10	10	90	100	100	10	90	10	10
Flip angle (deg)	20	45	80	80	90	90	90	90	90	80	90
Refocusing control	—	—	constant	constant	constant	constant	T2-optimized	constant	constant	constant	constant
angle (deg)	—	—	110	110	110	110	—	90	120	110	90
min. angle (deg)	—	—	—	—	—	—	80	—	—	—	—
mid. angle (deg)	—	—	—	—	—	—	100	—	—	—	—
max. angle (deg)	—	—	—	—	—	—	120	—	—	—	—
TR	shortest	shortest	range	range	range	range	range	range	range	range	range
minimum (ms)	—	—	450	450	2000	2500	2000	400	3000	400	400
maximum (ms)	—	—	700	700	5000	5000	6000	650	5000	700	650
Halfscan	no	no	no	no	no	no	no	no	no	no	no
Water-fat shift	minimum	maximum	user defined	user defined	user defined	user defined	user defined	maximum	maximum	user defined	maximum
(pixels)	—	—	1.3	1.3	1.3	1.3	1.2	—	—	1.3	—
RF Shims	—	fixed	adaptive	adaptive	adaptive	adaptive	adaptive	adaptive	adaptive	adaptive	adaptive
Shim	—	auto	default	default	default	volume	default	default	default	default	default
ShimAlign	—	—	—	—	—	no	—	—	—	—	—
mDIXON	no	no	no	no	no	no	no	no	no	no	no
Fat suppression	no	no	no	no	no	SPAIR	no	no	no	SPIR	no
strength	—	—	—	—	—	—	—	—	—	strong	—
power	—	—	—	—	—	1	—	—	—	—	—
inversion delay	—	—	—	—	—	auto	—	—	—	—	—

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suppr. level	—	—	—	—	—	strong	—	—	—	—	—
frequency offset	—	—	—	—	—	user defined	—	—	—	default	—
offset (Hz)	—	—	—	—	—	220	—	—	—	—	—
Water suppression	no	no	no	no	no	no	no	no	no	no	no
BB pulse	—	—	no	no	no	no	no	no	no	no	no
TFE prepulse	no	—	—	—	—	—	—	—	—	—	—
MTC	no	no	no	no	no	no	no	no	no	no	no
Diffusion mode	no	no	no	no	no	no	no	no	no	no	no
T1 mapping	no	no	no	no	no	no	no	no	no	no	no
SAR mode	low	low	high	high	high	high	high	high	high	high	high
B1 mode	default	default	default	default	default	default	default	default	default	default	default
SAR allow first level	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Patient pregnancy	no	no	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	low	low	low	low	low	low	low	low	low	low
Gradient mode	regular	maximum	default	default	default	default	default	default	default	default	default
SofTone mode	yes	no	no	no	no	no	no	no	no	no	no

MOTION

Scan Description	SURVEY	2 Step LOCALIZER	CORONAL T1	SAGITTAL T1	SAGITTAL T2	SAGITTAL T2 Fat Sat	AXIAL T2	AXIAL T1	AXIAL T2 Disc	SAGITTAL T1 +C Fat Sat	AXIAL T1 +C
Cardiac synchronization	no	no	no	no	no	no	no	no	no	no	no
Respiratory compensation	no	no	no	no	no	no	no	no	no	no	no
Navigator respiratory comp	no	no	no	no	no	no	no	no	no	no	no
Flow compensation	no	no	sensitized	sensitized	sensitized	sensitized	yes	yes	yes	sensitized	no
direction	—	—	—	—	—	—	in-plane	in-plane	through-plane	—	—
Temporal slice spacing	default	default	default	default	default	default	default	default	default	default	default
fMRI echo stabilisation	no	no	—	—	—	—	—	—	—	—	—
Motion smoothing	—	—	yes	yes	yes	yes	yes	yes	yes	yes	yes
NSA	1	1	1	1	1	1	1	1	1	1	1
MRE enable	no	no	no	no	no	no	no	no	no	no	no

DYNAMIC ANGIO

Scan Description	SURVEY	2 Step LOCALIZER	CORONAL T1	SAGITTAL T1	SAGITTAL T2	SAGITTAL T2 Fat Sat	AXIAL T2	AXIAL T1	AXIAL T2 Disc	SAGITTAL T1 +C Fat Sat	AXIAL T1 +C
Angio / Contrast enh.	no	no	—	—	—	—	—	—	—	—	—
Quantitative flow	no	no	—	—	—	—	—	—	—	—	—
Manual start	no	no	no	no	no	no	no	no	no	no	no
Dynamic study	no	no	no	no	no	no	no	no	no	no	no
Arterial Spin labeling	no	no	no	no	no	no	no	no	no	no	no

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IMAGING FORUMS, INC.

POST PROCESSING

Scan Description	SURVEY	2 Step LOCALIZER	CORONAL T1	SAGITTAL T1	SAGITTAL T2	SAGITTAL T2 Fat Sat	AXIAL T2	AXIAL T1	AXIAL T2 Disc	SAGITTAL T1 +C Fat Sat	AXIAL T1 +C
Preparation phases	—	auto	auto	auto	auto	auto	auto	auto	auto	auto	auto
Interactive F0	no	no	no	no	no	no	no	no	no	no	no
Quick Survey	default	default	default	default	default	default	default	default	default	default	default
B0 field map	no	no	no	no	no	no	no	no	no	no	no
MIP/MPR	no	no	no	no	no	no	no	no	no	no	no
SWIp	no	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	M, (3) no	M, (3) no
Autoview image	M	M	M	M	M	M	M	M	M	M	M
Calculated images	(4) no	(4) no	(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	Skeletal muscle	Skeletal muscle
Recon compression	No	No	No	No	No	No	No	No	No	No	No
Preset window contrast	hard	hard	intermediate	intermediate	intermediate	intermediate	intermediate	hard	intermediate	intermediate	hard
Reconstruction mode	real time	real time	real time	real time	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	no	no
Hardcopy protocol	no	no	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	system default	system default
Uniformity correction	no	no	no	no	no	no	no	no	no	no	no
Geometry correction	default	default	default	default	default	default	default	default	default	default	default
Free rotatable	no	no	no	no	no	no	no	no	no	no	no
IF_info_seperator	1634755923	0	1634755923	1634755923	1634755923	1634755923	1634755923	1634755923	1634755923	1634755923	1634755923

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