\\USER\Alan\History\20230621_0900_Traveling_Spine_qMRI\localizer

SIEMENS: gre

PAT: Off Voxel size: 1.0×1.0×5.0 mm Rel. SNR: 1.00

TA: 0:13

			3 -
		Base resolution	256
Properties		- Phase resolution	100 %
Prio Recon	Off	Phase partial Fourier	Off
Before measurement		Interpolation	On
After measurement			
Load to viewer	On	PAT mode	None
Inline movie	Off	Imaga Filtor	Off
Auto store images	On	Image Filter	_
Load to stamp segments	Off	Distortion Corr.	On 3D
Load images to graphic	Off	Mode	2D Off
segments		Unfiltered images	
Auto open inline display	Off	Prescan Normalize	Off
Start measurement without	On	Normalize	Off
further preparation		B1 filter	Off
Wait for user to start	Off	Raw filter	Off
Start measurements	single	Elliptical filter	On
Į.	- 3 -	Mode	Inplane
Routine		- Geometry	
Slice group 1		Multi-slice mode	Sequential
Slices	3	Series	Interleaved
Dist. factor	20 %		
Position	Isocenter	Saturation mode	Standard
Orientation	Sagittal	Special sat.	None
Phase enc. dir.	A >> P		
Rotation	0.00 deg	Table position	H
Slice group 2	•	Table position	0 mm
Slices	1	Inline Composing	Off
Dist. factor	20 %		
Position	Isocenter	Tim CT mode	Off
Orientation	Coronal	Cyatam	
Phase enc. dir.	R >> L	System	
Rotation	0.00 deg	C15	On
Slice group 3	0.00 deg	C16	On
Slices	1	C17	On
Dist. factor	20 %	C18	On
		C19	On
Position	Isocenter	C20	On
Orientation	Transversal	C21	On
Phase enc. dir.	A >> P	C22	On
Rotation	0.00 deg	Ch1	On
Phase oversampling	0 %	Ch2	On
FoV read	250 mm	Ch3	On
FoV phase	100.0 %	Ch4	On
Slice thickness	5.0 mm	Ch5	On
TR	8.6 ms	Ch6	On
TE	3.69 ms	Ch7	On
Averages	1	Ch8	On
Concatenations	5	Ch9	On
Filter	Distortion Corr.(2D), Elliptical	C10	On
	filter	C11	On
Coil elements	C10-22;Ch1-9	C12	On
0		C13	On
Contrast		- C14	On
TD	0 ms	014	
MTC	Off	Positioning mode	FIX
Magn. preparation	None	MSMA	S - C - T
Flip angle	20 deg	Sagittal	R >> L
Fat suppr.	None	Coronal	A >> P
Water suppr.	None	Transversal	F >> H
SWI	Off	Save uncombined	Off
Averaging mode	Short term	Coil Combine Mode	Sum of Squares
Averaging mode Reconstruction		AutoAlign	
	Magnitude	Auto Coil Select	Off
Measurements	I Fook moosurement		J.,
Multiple series	Each measurement	Shim mode	Tune up
Resolution		Adjust with body coil	Off
		Confirm freq. adjustment	Off

Assume Silicone ? Ref. amplitude 1H Adjustment Tolerance Adjust volume Position	Off 0.000 V Auto
Orientation	Transversal
Rotation	0.00 deg
R >> L	350 mm
A >> P	263 mm
F >> H	350 mm
Physio	
1st Signal/Mode	None
Segments	1
	· · · · · · · · · · · · · · · · · · ·
Tagging	None
Dark blood	Off
Resp. control	Off
·	Oli
Inline	
Subtract	Off
Liver registration	Off
Std-Dev-Sag	Off
Std-Dev-Cor	Off
Std-Dev-Tra	Off
Std-Dev-Time	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On
Wash - In	Off
Wash - Out	Off
TTP	Off
PEI	Off
MIP - time	Off
MapIt	None
Contrasts	1
Sequence	
Introduction	On
Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Allowed
Bandwidth	320 Hz/Px
Flow comp.	No
	Normal
RF pulse type	Normal
Gradient mode Excitation	Normal Slice-sel.
EXUITATION	Silue-sel.

On

RF spoiling

\\USER\Alan\History\20230621_0900_Traveling_Spine_qMRI\localizer_cor TA: 0:15 PAT: Off Voxel size: 1.0×1.0×5.0 mm Rel. SNR: 1.00 SIEMENS: gre

		Elliptical filter	On
Properties		Mode	Inplane
Prio Recon	Off		•
Before measurement		Geometry	Convential
After measurement	On	Multi-slice mode	Sequential
Load to viewer	On	Series	Interleaved
Inline movie	Off	Saturation mode	Standard
Auto store images	On O#	Special sat.	None
Load to stamp segments	Off	-	
Load images to graphic	Off	Table position	H
segments	Off	Table position	0 mm
Auto open inline display		Inline Composing	Off
Start measurement without	On		
further preparation	Off	Tim CT mode	Off
Wait for user to start		System	
Start measurements	single	C15	On
Routine		C16	On
Slice group 1		C17	On
Slices	7	C18	On
Dist. factor	10 %	C19	On
Position	L1.8 P5.4 H6.6	C20	On
Orientation	C > T-6.0	C21	On
Phase enc. dir.	R >> L	C22	On
Rotation	0.00 deg	Ch1	On
Phase oversampling	0 %	Ch2	On
FoV read	320 mm	Ch3	On
FoV phase	100.0 %	Ch4	On
Slice thickness	5.0 mm	Ch5	On
TR	7.8 ms	Ch6	On
TE	3.12 ms	Ch7	On
Averages	1	Ch8	On
Concatenations	7	Ch9	On
Filter	Distortion Corr.(2D), Elliptical	C10	On
	filter	C11	On
Coil elements	C10-22;Ch1-9	C12	On
Contract		C13	On
Contrast TD	0 ma	C14	On
MTC	0 ms Off		
	_	Positioning mode	FIX
Magn. preparation	None	MSMA	S - C - T
Flip angle	20 deg None	Sagittal	R >> L
Fat suppr	None	Coronal	A >> P
Water suppr.	Off	Transversal	F >> H
SWI	OII	Save uncombined	Off
Averaging mode	Short term	Coil Combine Mode	Adaptive Combine
Reconstruction	Magnitude	AutoAlign	
Measurements	1	Auto Coil Select	Off
Multiple series	Each measurement	Shim mode	Tune up
Resolution		Adjust with body coil	Off
Base resolution	320	Confirm freq. adjustment	Off
Phase resolution	100 %	Assume Silicone	Off
Phase resolution Phase partial Fourier	6/8	? Ref. amplitude 1H	0.000 V
Interpolation	Off	Adjustment Tolerance	Auto
	OII	Adjust volume	
PAT mode	None	! Position	Isocenter
Image Filter	Off	! Orientation	Transversal
Distortion Corr.	On	! Rotation	0.00 deg
Mode	2D	! R >> L	350 mm
Unfiltered images	Off	! A >> P	263 mm
Prescan Normalize	Off	! F >> H	350 mm
Normalize	Off	Physio	
B1 filter	Off	1st Signal/Mode	None
Raw filter	Off	Segments	1
1			•
		3/⊥	

Tagging Dark blood	None Off
Resp. control	Off
Inline	
Subtract	Off
Liver registration	Off Off
Std-Dev-Sag Std-Dev-Cor	Off
Std-Dev-Tra	Off
Std-Dev-Time	Off
MIP-Sag	Off
MIP-Cor	Off Off
MIP-Tra MIP-Time	Off
Save original images	On
Wash - In	Off
Wash - Out	Off
TTP	Off
PEI	Off
MIP - time	Off
MapIt	None
Contrasts	1
Sequence	
Introduction	On
Dimension	2D
Phase stabilisation	Off Allowed
Asymmetric echo Bandwidth	260 Hz/Px
Flow comp.	No
RF pulse type	Normal
Gradient mode	Whisper
Excitation	Slice-sel.
RF spoiling	On

\\USER\Alan\History\20230621_0900_Traveling_Spine_qMRI\localizer_sag
TA: 0:11 PAT: Off Voxel size: 1.0×1.0×5.0 mm Rel. SNR: 1.00 SIEMENS: gre

D		Elliptical filter	On
Properties	~"	- Mode	Inplane
Prio Recon	Off		•
Before measurement		Geometry	
After measurement	_	Multi-slice mode	Sequential
Load to viewer	On	Series	Interleaved
Inline movie	Off	Saturation mode	Standard
Auto store images	On		None
Load to stamp segments	Off	Special sat.	
Load images to graphic	Off	—	
segments		Table position	H
Auto open inline display	Off	Table position	0 mm
Start measurement without	On	Inline Composing	Off
further preparation		Tim CT mode	Off
Wait for user to start	Off	1 mode	Oli
Start measurements	single	System	
ı	g	C15	On
Routine		C16	On
Slice group 1		C17	On
Slices	5	C18	On
Dist. factor	100 %	C19	On
Position	L4.0 P6.5 H0.8	C20	On
Orientation	Sagittal	C21	On
Phase enc. dir.	A >> P	C22	On
Rotation	0.00 deg	Ch1	On
Phase oversampling	0 %	Ch2	On
FoV read	320 mm	Ch3	On
FoV phase	100.0 %	Ch4	On
Slice thickness	5.0 mm	Ch5	On
TR	7.8 ms		
TE	3.12 ms	Ch6	On On
Averages	1	Ch7	On
Concatenations	5	Ch8	On
Filter	Distortion Corr.(2D), Elliptical	Ch9	On
Filler	filter	C10	On
Coil alamanta		C11	On
Coil elements	C10-22;Ch1-9	C12	On
Contrast		C13	On
TD	0 ms	C14	On
MTC	Off	Positioning mode	FIX
Magn. preparation	None	MSMA	S - C - T
Flip angle	20 deg	Sagittal	R >> L
Fat suppr.	None	Coronal	A >> P
Water suppr.	None	Transversal	F >> H
SWI	Off		Off
		Save uncombined	
Averaging mode	Short term	Coil Combine Mode	Adaptive Combine
Reconstruction	Magnitude	AutoAlign	 O#
Measurements	1	Auto Coil Select	Off
Multiple series	Each measurement	Shim mode	Tune up
Resolution		Adjust with body coil	Off
Base resolution	320	Confirm freq. adjustment	Off
Phase resolution	100 %	Assume Silicone	Off
	6/8	? Ref. amplitude 1H	0.000 V
Phase partial Fourier	Off	Adjustment Tolerance	Auto
Interpolation		Adjust volume	
PAT mode	None	! Position	Isocenter
Image Filter	Off	! Orientation	Transversal
Distortion Corr.	On	! Rotation	0.00 deg
Mode	2D	! R >> L	350 mm
Unfiltered images	Off	! A >> P	263 mm
Prescan Normalize	Off	! F >> H	350 mm
Normalize	Off	Physio	
B1 filter	Off	1st Signal/Mode	None
Raw filter	Off	Segments	None 1
1.4.1.1.1.01			
		5/+	

	Tagging Dark blood	None Off
	Resp. control	Off
I	nline	
	Subtract	Off
	Liver registration	Off
	Std-Dev-Sag	Off
	Std-Dev-Cor	Off
	Std-Dev-Tra	Off
	Std-Dev-Time	Off
	MIP-Sag	Off
	MIP-Cor	Off
	MIP-Tra	Off
	MIP-Time	Off
	Save original images	On
	Wash - In	Off
	Wash - Out	Off
	TTP	Off
	PEI	Off
	MIP - time	Off
-		
	MapIt	None
	Contrasts	1
5	Sequence	
	Introduction	On
	Dimension	2D
	Phase stabilisation	Off
	Asymmetric echo	Allowed
	Bandwidth	260 Hz/Px
	Flow comp.	No
	RF pulse type	Normal
	Gradient mode	Whisper
	Excitation	Slice-sel.
	RF spoiling	On
•		

\\USER\Alan\History\20230621_0900_Traveling_Spine_qMRI\preSatTFL_sag_2p5mm_FOV320_RefV300V_sa TA: 1:20 PAT: Off Voxel size: 2.5×2.5×2.5 mm Rel. SNR: 1.00 USER: tfl_WIP543_B1map B1 filter Off Properties Raw filter Off Prio Recon Off Elliptical filter Off Before measurement After measurement Geometry Multi-slice mode Load to viewer On Interleaved Inline movie Off Series Interleaved Auto store images On Load to stamp segments Off Table position Load images to graphic Off Table position 0 mm segments Inline Composing Off Off Auto open inline display System Start measurement without On C15 On further preparation C16 On Off Wait for user to start C17 On Start measurements single C18 On Routine C19 On Slice group 1 C20 On Slices 28 C21 On Dist. factor 100 % C22 On Position L4.0 P6.5 H0.8 Ch1 On Orientation Sagittal Ch2 On Phase enc. dir. A >> P Ch3 On Rotation 0.00 deg Ch4 On Slice group 2 Ch₅ On Slices 28 Ch6 On Dist. factor 100 % Ch7 On Position L2.5 A32.0 H0.0 Ch8 On Sagittal Orientation Ch9 On A >> P Phase enc. dir. C10 On Rotation 0.00 deg C11 On Phase oversampling 0 % C12 On FoV read 320 mm C13 On FoV phase 68.8 % C14 On Slice thickness 2.5 mm Positioning mode FIX TR 20000 ms **MSMA** S-C-T TE 2.84 ms Sagittal R >> L **Averages** Coronal A >> P Concatenations 2 Transversal F >> H Filter None Save uncombined Off Coil elements C10-22;Ch1-9 Coil Combine Mode Sum of Squares Contrast AutoAlign TD 0 ms Auto Coil Select Default Magn. preparation None Shim mode Standard Flip angle 10 deg Adjust with body coil Off Fat suppr. None Confirm freq. adjustment Off Water suppr. None Assume Silicone Off Averaging mode Long term ! Ref. amplitude 1H 300.000 V Reconstruction Magnitude Adjustment Tolerance Auto Measurements Adjust volume Multiple series Each measurement ! Position L1.3 P6.0 F1.8 ! Orientation Sagittal Resolution ! Rotation -5.61 deg Base resolution 128 !F>>H 114 mm Phase resolution 100 % ! A >> P 40 mm Phase partial Fourier Off !R >> L 45 mm Interpolation Off Physio PAT mode None 1st Signal/Mode None Image Filter Off Off Dark blood Distortion Corr. Off Off Prescan Normalize Off Resp. control Off Normalize

Inline

Subtract	Off
Std-Dev-Sag	Off
Std-Dev-Cor	Off
Std-Dev-Tra	Off
Std-Dev-Time	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On

Sequence

_	oquence	
	Introduction	Off
	Dimension	2D
	Reordering	Centric
	Asymmetric echo	Allowed
	Bandwidth	400 Hz/Px
	Flow comp.	No
	Echo spacing	5.7 ms
	EPI factor	1
	RF pulse type	Low SAR
	Gradient mode	Normal
	Excitation	Slice-sel.
	RF spoiling	On
	Prep Pulse	SINC
	Sat Flip Angle	90 deg
	Sat Thick	5.0 mm
	RF Duration	2000 us
	no ref scans	1 #
	TX array B1 mapping	Off
1	=apping	•

\\USER\Alan\History\20230621_0900_Traveling_Spine_qMRI\preSatTFL_sag_2p5mm_FOV320_RefV354V_sa TA: 1:20 PAT: Off Voxel size: 2.5×2.5×2.5 mm Rel. SNR: 1.00 USER: tfl_WIP543_B1map B1 filter Off Properties Raw filter Off Prio Recon Off Elliptical filter Off Before measurement After measurement Geometry Multi-slice mode Load to viewer On Interleaved Inline movie Off Series Interleaved Auto store images On Load to stamp segments Off Table position Load images to graphic Off Table position 0 mm segments Inline Composing Off Off Auto open inline display System Start measurement without On C15 On further preparation C16 On Off Wait for user to start C17 On Start measurements single C18 On Routine C19 On Slice group 1 C20 On Slices 28 C21 On Dist. factor 100 % C22 On Position L4.0 P6.5 H0.8 Ch1 On Orientation Sagittal Ch2 On Phase enc. dir. A >> P Ch3 On Rotation 0.00 deg Ch4 On Slice group 2 Ch5 On Slices 28 Ch6 On Dist. factor 100 % Ch7 On Position L2.5 A32.0 H0.0 Ch8 On Sagittal Orientation Ch9 On A >> P Phase enc. dir. C10 On Rotation 0.00 deg C11 On Phase oversampling 0 % C12 On FoV read 320 mm C13 On FoV phase 68.8 % C14 On Slice thickness 2.5 mm Positioning mode FIX TR 20000 ms **MSMA** S-C-T TE 2.84 ms Sagittal R >> L **Averages** Coronal A >> P Concatenations 2 Transversal F >> H Filter None Save uncombined Off Coil elements C10-22;Ch1-9 Coil Combine Mode Sum of Squares Contrast AutoAlign TD 0 ms Auto Coil Select Default Magn. preparation None Shim mode Standard Flip angle 10 deg Adjust with body coil Off Fat suppr. None Confirm freq. adjustment Off Water suppr. None Assume Silicone Off Averaging mode Long term ! Ref. amplitude 1H 354,000 V Reconstruction Magnitude Adjustment Tolerance Auto Measurements Adjust volume Multiple series Each measurement ! Position L1.3 P6.0 F1.8 ! Orientation Sagittal Resolution ! Rotation -5.61 deg Base resolution 128 !F>>H 114 mm Phase resolution 100 % ! A >> P 40 mm Phase partial Fourier Off !R >> L 45 mm Interpolation Off Physio PAT mode None 1st Signal/Mode None Image Filter Off Off Dark blood Distortion Corr. Off Off Prescan Normalize Off

Inline

Off

Normalize

Resp. control

Subtract	Off
Std-Dev-Sag	Off
Std-Dev-Cor	Off
Std-Dev-Tra	Off
Std-Dev-Time	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On

Sequence

Sequence	
Introduction	Off
Dimension	2D
Reordering	Centric
Asymmetric echo	Allowed
Bandwidth	400 Hz/Px
Flow comp.	No
Echo spacing	5.7 ms
EDI fostor	
EPI factor	1
RF pulse type	Low SAR
Gradient mode	Normal
Excitation	Slice-sel.
RF spoiling	On
Prep Pulse	SINC
Sat Flip Angle	80 deg
Sat Thick	5.0 mm
RF Duration	2000 us
no ref scans	1 #
TX array B1 mapping	Off

Off	Inline Composing	
	System	
		On
On		On
		On
		On
		On
Off		On
		On
		On
On	Ch1	On
		On
Off	Ch3	On
single	Ch4	On
G	Ch5	On
		On
		On
		On
10 %		On
L4.0 P6.5 H0.8		On
Sagittal		On
A >> P		_
		On
		On
	C14	On
	Positioning mode	FIX
		S-C-T
		R >> L
		A >> P
4.08 ms		F >> H
1		Off
1	Coil Combine Mode	Adaptive Combine
None	AutoAlign	
C10-22;Ch1-9	Auto Coil Select	Default
	Chim made	Ctondord
O#		Standard Off
		Off
•		Off
None		Off
Short term		0.000 V
		Auto
1	Adjust volume	
0#	! Position	L1.3 P6.0 F1.8
Oli	! Orientation	Sagittal
	! Rotation	-5.61 deg
192	!F>> H	114 mm
		40 mm
		45 mm
	1	40 111111
OII	Composing	
Off	Soguence	
Off		On
		On
		2D
		Off
		2
	Bandwidth	965 Hz/Px
Oil	Flow comp.	No
		Normal
Interleaved		Normal
		Normal
	RF spoiling	On
None	9	
	Sagittal A >> P 0.00 deg 0 % 192 mm 100.0 % 2.0 mm 200.0 ms 3.06 ms 4.08 ms 1 1 None C10-22;Ch1-9 Off 32 deg None Short term Magn./Phase 1 Off 192 100 % Off Off Off Off	On C15 Off C17 On C18 Off C19 Off C20 C21 C6 C6 C22 On Ch1 Ch2 Ch Ch3 Single C6 Ch3 Single Ch4 Ch5 Ch6 Ch6 Ch7 Ch7 Ch8 Ch0 Ch7 Ch8 Ch0 Ch9 C12 Ch9 C12 C10 C12 C11 C12 C12 C12 C13 C14 C19 C12 C14 C12 C15 C14 C19 Positioning mode MSMA Sagittal C10 Coronal Transversal Save uncombined C0il Combine Mode AutoAlign Auto Coil Select Shim mode

\\USER\Alan\History\20230621_0900_Traveling_Spine_qMRI\b0map_gre_field_sag_1x1x2_7sl_RefV354 TA: 1:19 Voxel size: 1.0×1.0×2.0 mm Rel. SNR: 1.00 SIEMENS: gre_field_mapping

Properties		Table position Inline Composing	0 mm Off
Prio Recon	Off	1	Oil
Before measurement		System	
After measurement		C15	On
Load to viewer	On	C16	On
Inline movie	Off	C17	On
Auto store images	On	C18	On
Load to stamp segments	Off	C19	On
Load images to graphic	Off	C20	On
segments		C21	On
Auto open inline display	Off	C22	On
Start measurement without	On	Ch1	On
further preparation		Ch2	On
Wait for user to start	Off	Ch3	On
Start measurements	single	Ch4	On
	Sirigio	Ch5	On
Routine		Ch6	On
Slice group 1		Ch7	On
Slices	7		
Dist. factor	10 %	Ch8	On On
Position	L4.0 P6.5 H0.8	Ch9	On On
Orientation	Sagittal	C10	On On
Phase enc. dir.	A >> P	C11	On
Rotation	0.00 deg	C12	On
Phase oversampling	0 %	C13	On
FoV read	192 mm	C14	On
FoV phase	100.0 %	Positioning mode	FIX
Slice thickness	2.0 mm	MSMA	S-C-T
TR	200.0 ms		R >> L
TE 1		Sagittal	R >> L A >> P
	3.06 ms	Coronal	
TE 2	4.08 ms	Transversal	F >> H
Averages	1	Save uncombined	Off
Concatenations	1	Coil Combine Mode	Adaptive Combine
Filter	None	AutoAlign	
Coil elements	C10-22;Ch1-9	Auto Coil Select	Default
Contrast		Shim mode	Standard
MTC	Off	Adjust with body coil	Off
Flip angle	32 deg	Confirm freq. adjustment	Off
Fat suppr.	None	Assume Silicone	Off
ι αι συρρι.			354.000 V
Averaging mode	Short term	! Ref. amplitude 1H	
Reconstruction	Magn./Phase	Adjustment Tolerance	Auto
Measurements	1	Adjust volume	140 00 0 540
Multiple series	Off	! Position	L1.3 P6.0 F1.8
•	-	! Orientation	Sagittal
Resolution		! Rotation	-5.61 deg
Base resolution	192	!F>>H	114 mm
Phase resolution	100 %	! A >> P	40 mm
Phase partial Fourier	Off	! R >> L	45 mm
Interpolation	Off	Composing	
		Composing	
Image Filter	Off	Sequence	
Distortion Corr.	Off	Introduction	On
Prescan Normalize	Off	Dimension	2D
Normalize	Off	Asymmetric echo	Off
B1 filter	Off	Contrasts	2
Raw filter	Off		
Elliptical filter	Off	Bandwidth	965 Hz/Px
·		Flow comp.	No
Geometry		RF pulse type	Normal
Multi-slice mode	Interleaved	Gradient mode	Normal
	Interleaved Interleaved	Gradient mode RF spoiling	Normal On
Multi-slice mode		Gradient mode RF spoiling	Normal On

\\USER\Alan\History\20230621_0900_Traveling_Spine_qMRI\t2_tse_sag_2D_5sl_p2_trig
TA: 2:20 PAT: 2 Voxel size: 0.6×0.6×2.2 mm Rel. SNR: 1.00 SIEMENS: tse

		Normalize	Off
Properties		B1 filter	On
Prio Recon	Off	Intensity	Medium
Before measurement		Unfiltered images	Off
After measurement		Raw filter	Off
Load to viewer	On	Elliptical filter	Off
Inline movie	Off	Emplical filter	Oil
Auto store images	On	Geometry	
Load to stamp segments	Off	Multi-slice mode	Interleaved
Load images to graphic	Off	Series	Interleaved
segments			
Auto open inline display	Off	Special sat.	None
Start measurement without	On		
further preparation	911	Table position	Н
Wait for user to start	Off	Table position	0 mm
		Inline Composing	Off
Start measurements	single		-
Routine		Tim CT mode	Off
Slice group 1		System	
Slices	5	C15	On
Dist. factor	40 %	C16	On
Position	L4.0 P6.5 H0.8	C17	On
Orientation	Sagittal		_
Phase enc. dir.	H >> F	C18	On
Rotation		C19	On
	90.00 deg	C20	On
Phase oversampling	60 %	C21	On
FoV read	192 mm	C22	On
FoV phase	100.0 %	Ch1	On
Slice thickness	2.2 mm	Ch2	On
TR	4000 ms	Ch3	On
TE	34 ms	Ch4	On
Averages	1	Ch5	On
Concatenations	1	Ch6	On
Filter	Distortion Corr.(2D), B1 filter		_
Coil elements	C10-22;Ch1-9	Ch7	On
Coll elements	C10-22,C111-9	Ch8	On
Contrast		Ch9	On
MTC	Off	C10	On
Magn. preparation	None	C11	On
Flip angle	120 deg	C12	On
Fat suppr.	Fat sat.	C13	On
Fat sat. mode		C14	On
147	Strong		
Water suppr.	None O#	Positioning mode	FIX
Restore magn.	Off	MSMA	S - C - T
Averaging mode	Short term	Sagittal	R >> L
Reconstruction	Magnitude	Coronal	A >> P
Measurements	1	Transversal	F >> H
Multiple series	Each measurement	Save uncombined	Off
Multiple Series	Lacifileasurement	Coil Combine Mode	Adaptive Combine
Resolution		AutoAlign	
Base resolution	320	Auto Coil Select	Default
Phase resolution	98 %		
Phase partial Fourier	Off	Shim mode	Standard
Trajectory	Cartesian	Adjust with body coil	Off
	Off	Confirm freq. adjustment	Off
Interpolation		Assume Silicone	Off
PAT mode	GRAPPA	! Ref. amplitude 1H	354.000 V
Accel, factor PE	2	Adjustment Tolerance	Auto
Ref. lines PE	24	Adjust volume	, 1010
Reference scan mode	Integrated	! Position	L1.3 P6.0 F1.8
	magrateu		
Image Filter	Off	! Orientation	Sagittal
Distortion Corr.	On	! Rotation	-5.61 deg
Mode	2D	! F >> H	114 mm
Unfiltered images	Off	! A >> P	40 mm
Prescan Normalize	Off	! R >> L	45 mm
1 1630att Notitialize	Oil	•	

Physio

1st Signal/Mode	None
Dark blood	Off
Resp. control	Off
Inline	
Subtract	Off
Std-Dev-Sag	Off
Std-Dev-Cor	Off
Std-Dev-Tra	Off
Std-Dev-Time	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On

Sequence

Off
2D
Off
On
1
579 Hz/Px
No
0 s
11.2 ms
Turbo factor
8
33
Normal
Normal

TA: 8:37 PAT: 2	2 Voxel size: 0.7×0.7×0.7 m		t: tfl_wip944_b17stx
		Distortion Corr.	On
Properties		- Mode	3D
Prio Recon	Off	Unfiltered images	Off
Before measurement		Prescan Normalize	Off
After measurement		Normalize	Off
Load to viewer	On	B1 filter	Off
Inline movie	Off	Raw filter	Off
Auto store images	On	Elliptical filter	Off
Load to stamp segments	Off	1 .	
Load images to graphic	Off	Geometry	
segments		Multi-slice mode	Single shot
Auto open inline display	Off	Series	Ascending
Start measurement without	On		
further preparation		Table position	Н
Wait for user to start	Off	Table position	0 mm
Start measurements	single	Inline Composing	Off
Routine		System	
Slab group 1		_ C15	On
Slabs	1	C16	On
Dist. factor	50 %	C17	On
Position	L0.0 P5.9 H9.6	C18	On
Orientation	C > T-5.2	C19	On
Phase enc. dir.	R >> L	C20	On
Rotation	0.00 deg	C20	On
Phase oversampling	0.00 deg 0 %	C21	On
Slice oversampling	0.0 %	Ch1	On On
Slices per slab	192		_
FoV read	260 mm	Ch2	On
		Ch3	On
FoV phase	65.2 %	Ch4	On
Slice thickness TR	0.70 mm	Ch5	On
	5000 ms	Ch6	On
TE	2.12 ms	Ch7	On
Averages	1	Ch8	On
Concatenations	1	Ch9	On
Filter	Distortion Corr.(3D)	C10	On
Coil elements	C10-22;Ch1-9	C11	On
Contrast		C12	On
Magn. preparation	Non-sel. IR	- C13	On
TI1	700 ms	C14	On
TI 2	2400 ms	Positioning mode	FIX
Flip angle 1	4 deg	MSMA	S - C - T
Flip angle 2	5 deg	Sagittal	R >> L
Fat suppr.	None	Coronal	A >> P
Water suppr.	None	Transversal	F >> H
2nd Inversion Contrast	On	Save uncombined	Off
		Coil Combine Mode	Adaptive Combine
Averaging mode	Long term	AutoAlign	
Reconstruction	Magnitude	Auto Coil Select	Default
Measurements	1	·····	
Multiple series	Each measurement	Shim mode	Standard
Resolution		Adjust with body coil	Off
Base resolution	368	 Confirm freq. adjustment 	Off
Phase resolution	100 %	Assume Silicone	Off
Slice resolution	100 %	! Ref. amplitude 1H	354.000 V
Phase partial Fourier	6/8	Adjustment Tolerance	Auto
Slice partial Fourier	Off	Adjust volume	
		! Position	L1.3 P6.0 F1.8
PAT mode	GRAPPA	! Orientation	Sagittal
Accel. factor PE	2	! Rotation	-5.61 deg
Ref. lines PE	28	! F >> H	114 mm
Accel. factor 3D	1	! A >> P	40 mm
Reference scan mode	Integrated	! R >> L	45 mm
Image Filter	Off	Physio	
I IIIaye i IIIei	OII	i ilysio	

1st Signal/Mode	None
Dark blood	Off
Resp. control	Off
Composing	
Sequence	
Introduction Dimension Elliptical scanning Asymmetric echo Contrasts Bandwidth Flow comp. Echo spacing	On 3D Off Allowed 1 220 Hz/Px No 6.3 ms
RF pulse type Gradient mode Excitation RF spoiling	Normal Normal Non-sel. On
FFT Scale Factor LIN/PAR Swap Ext. INV Pulse Flip Angle Uniform Image Head Mask on UNI T1 Map Complex Div. Image Denoise Weighting FLAWS	100 % Off On 360 On Off On Off On Off

Droportios		MTC	Off
Properties Prio Recon	Off	Magn. preparation	None
Before measurement	Oii	Fat suppr.	None
After measurement		Extra Fat Suppr.	on
Load to viewer	On	Saturation Mode	skewed
Inline movie	Off	Averaging mode	Long term
Auto store images	On	Reconstruction	Magnitude
Load to stamp segments	Off	Delay in TR	0 ms
Load images to graphic	Off	į · · · · ·	0 1113
segments		Resolution	
Auto open inline display	Off	Base resolution	128
Start measurement without	On	Phase resolution	100 %
further preparation		Phase partial Fourier	5/8
Wait for user to start	Off	Interpolation	Off
Start measurements	single	PAT mode	GRAPPA
Double -	Ü	Accel, factor PE	2
Routine		Ref. lines PE	24
Slice group 1		Reference Scan Mode	multi-shot EPI
Slices	1		
Dist. factor	10 %	Distortion Corr.	Off
Position	L0.0 P6.3 H45.2	Prescan Normalize	Off
Orientation Phase enc. dir.	T > C-3.3 L >> R	Raw filter	Off
	=:::::	Elliptical filter	Off
Rotation	-90.00 deg	Hamming	Off
Slice group 2 Slices	1	Geometry	
Dist. factor	10 %	Multi-slice mode	Interleaved
Position	L0.0 P6.0 H31.5	Series	Descending
Orientation	T > C-3.6		
Phase enc. dir.	1 > C-3.6 L >> R	Special sat.	None
Rotation	-90.00 deg		
Slice group 3	-90.00 deg	Table position	Н
Slices	1	Table position	0 mm
Dist. factor	10 %	Inline Composing	Off
Position	L0.0 P5.4 H16.3	System	
Orientation	T > C-2.8	C15	On
Phase enc. dir.	L >> R	C16	On
Rotation	-90.00 deg	C17	On
	50.50 dog	C18	On
Slice group 4			On
Slice group 4	1	1 619	
Slices	1 10 %	C19 C20	
Slices Dist. factor	10 %	C20	On
Slices Dist. factor Position	10 % L0.0 P5.5 H2.3		
Slices Dist. factor Position Orientation	10 % L0.0 P5.5 H2.3 T > C0.6	C20 C21	On On
Slices Dist. factor Position	10 % L0.0 P5.5 H2.3 T > C0.6 L >> R	C20 C21 C22	On On On
Slices Dist. factor Position Orientation Phase enc. dir. Rotation	10 % L0.0 P5.5 H2.3 T > C0.6	C20 C21 C22 Ch1	On On On On
Slices Dist. factor Position Orientation Phase enc. dir.	10 % L0.0 P5.5 H2.3 T > C0.6 L >> R	C20 C21 C22 Ch1 Ch2	On On On On On
Slices Dist. factor Position Orientation Phase enc. dir. Rotation Slice group 5	10 % L0.0 P5.5 H2.3 T > C0.6 L >> R -90.00 deg	C20 C21 C22 Ch1 Ch2 Ch3 Ch4 Ch5	On On On On On On
Slices Dist. factor Position Orientation Phase enc. dir. Rotation Slice group 5 Slices	10 % L0.0 P5.5 H2.3 T > C0.6 L >> R -90.00 deg	C20 C21 C22 Ch1 Ch2 Ch3 Ch4 Ch5 Ch6	On On On On On On On
Slices Dist. factor Position Orientation Phase enc. dir. Rotation Slice group 5 Slices Dist. factor	10 % L0.0 P5.5 H2.3 T > C0.6 L >> R -90.00 deg 1 10 %	C20 C21 C22 Ch1 Ch2 Ch3 Ch4 Ch5	On
Slices Dist. factor Position Orientation Phase enc. dir. Rotation Slice group 5 Slices Dist. factor Position	10 % L0.0 P5.5 H2.3 T > C0.6 L >> R -90.00 deg 1 10 % L0.0 P5.6 F12.2	C20 C21 C22 Ch1 Ch2 Ch3 Ch4 Ch5 Ch6	On
Slices Dist. factor Position Orientation Phase enc. dir. Rotation Slice group 5 Slices Dist. factor Position Orientation	10 % L0.0 P5.5 H2.3 T > C0.6 L >> R -90.00 deg 1 10 % L0.0 P5.6 F12.2 T > C3.4	C20 C21 C22 Ch1 Ch2 Ch3 Ch4 Ch5 Ch6 Ch7 Ch8 Ch9	On O
Slices Dist. factor Position Orientation Phase enc. dir. Rotation Slice group 5 Slices Dist. factor Position Orientation Phase enc. dir.	10 % L0.0 P5.5 H2.3 T > C0.6 L >> R -90.00 deg 1 10 % L0.0 P5.6 F12.2 T > C3.4 L >> R	C20 C21 C22 Ch1 Ch2 Ch3 Ch4 Ch5 Ch6 Ch7 Ch8 Ch9 C10	On O
Slices Dist. factor Position Orientation Phase enc. dir. Rotation Slice group 5 Slices Dist. factor Position Orientation Phase enc. dir. Rotation	10 % L0.0 P5.5 H2.3 T > C0.6 L >> R -90.00 deg 1 10 % L0.0 P5.6 F12.2 T > C3.4 L >> R -90.00 deg	C20 C21 C22 Ch1 Ch2 Ch3 Ch4 Ch5 Ch6 Ch7 Ch8 Ch9 C10 C11	On O
Slices Dist. factor Position Orientation Phase enc. dir. Rotation Slice group 5 Slices Dist. factor Position Orientation Phase enc. dir. Rotation Phase oversampling	10 % L0.0 P5.5 H2.3 T > C0.6 L >> R -90.00 deg 1 10 % L0.0 P5.6 F12.2 T > C3.4 L >> R -90.00 deg 0 %	C20 C21 C22 Ch1 Ch2 Ch3 Ch4 Ch5 Ch6 Ch7 Ch8 Ch9 C10 C11	On O
Slices Dist. factor Position Orientation Phase enc. dir. Rotation Slice group 5 Slices Dist. factor Position Orientation Phase enc. dir. Rotation Phase oversampling FoV read	10 % L0.0 P5.5 H2.3 T > C0.6 L >> R -90.00 deg 1 10 % L0.0 P5.6 F12.2 T > C3.4 L >> R -90.00 deg 0 % 105 mm 100.0 % 3.0 mm	C20 C21 C22 Ch1 Ch2 Ch3 Ch4 Ch5 Ch6 Ch7 Ch8 Ch9 C10 C11 C12 C13	On O
Slices Dist. factor Position Orientation Phase enc. dir. Rotation Slice group 5 Slices Dist. factor Position Orientation Phase enc. dir. Rotation Phase oversampling FoV read FoV phase	10 % L0.0 P5.5 H2.3 T > C0.6 L >> R -90.00 deg 1 10 % L0.0 P5.6 F12.2 T > C3.4 L >> R -90.00 deg 0 % 105 mm 100.0 %	C20 C21 C22 Ch1 Ch2 Ch3 Ch4 Ch5 Ch6 Ch7 Ch8 Ch9 C10 C11	On O
Slices Dist. factor Position Orientation Phase enc. dir. Rotation Slice group 5 Slices Dist. factor Position Orientation Phase enc. dir. Rotation Phase oversampling FoV read FoV phase Slice thickness	10 % L0.0 P5.5 H2.3 T > C0.6 L >> R -90.00 deg 1 10 % L0.0 P5.6 F12.2 T > C3.4 L >> R -90.00 deg 0 % 105 mm 100.0 % 3.0 mm	C20 C21 C22 Ch1 Ch2 Ch3 Ch4 Ch5 Ch6 Ch7 Ch8 Ch9 C10 C11 C12 C13 C14	On O
Slices Dist. factor Position Orientation Phase enc. dir. Rotation Slice group 5 Slices Dist. factor Position Orientation Phase enc. dir. Rotation Phase oversampling FoV read FoV phase Slice thickness TR	10 % L0.0 P5.5 H2.3 T > C0.6 L >> R -90.00 deg 1 10 % L0.0 P5.6 F12.2 T > C3.4 L >> R -90.00 deg 0 % 105 mm 100.0 % 3.0 mm 650 ms 57.2 ms 3	C20 C21 C22 Ch1 Ch2 Ch3 Ch4 Ch5 Ch6 Ch7 Ch8 Ch9 C10 C11 C12 C13 C14 Positioning mode	On O
Slices Dist. factor Position Orientation Phase enc. dir. Rotation Slice group 5 Slices Dist. factor Position Orientation Phase enc. dir. Rotation Phase oversampling FoV read FoV phase Slice thickness TR TE	10 % L0.0 P5.5 H2.3 T > C0.6 L >> R -90.00 deg 1 10 % L0.0 P5.6 F12.2 T > C3.4 L >> R -90.00 deg 0 % 105 mm 100.0 % 3.0 mm 650 ms 57.2 ms 3 3	C20 C21 C22 Ch1 Ch2 Ch3 Ch4 Ch5 Ch6 Ch7 Ch8 Ch9 C10 C11 C12 C13 C14 Positioning mode MSMA	On O
Slices Dist. factor Position Orientation Phase enc. dir. Rotation Slice group 5 Slices Dist. factor Position Orientation Phase enc. dir. Rotation Phase enc. dir. Rotation Phase oversampling FoV read FoV phase Slice thickness TR TE Averages	10 % L0.0 P5.5 H2.3 T > C0.6 L >> R -90.00 deg 1 10 % L0.0 P5.6 F12.2 T > C3.4 L >> R -90.00 deg 0 % 105 mm 100.0 % 3.0 mm 650 ms 57.2 ms 3 3 None	C20 C21 C22 Ch1 Ch2 Ch3 Ch4 Ch5 Ch6 Ch7 Ch8 Ch9 C10 C11 C12 C13 C14 Positioning mode MSMA Sagittal	On O
Slices Dist. factor Position Orientation Phase enc. dir. Rotation Slice group 5 Slices Dist. factor Position Orientation Phase enc. dir. Rotation Phase enc. dir. Rotation Phase oversampling FoV read FoV phase Slice thickness TR TE Averages Concatenations	10 % L0.0 P5.5 H2.3 T > C0.6 L >> R -90.00 deg 1 10 % L0.0 P5.6 F12.2 T > C3.4 L >> R -90.00 deg 0 % 105 mm 100.0 % 3.0 mm 650 ms 57.2 ms 3 3	C20 C21 C22 Ch1 Ch2 Ch3 Ch4 Ch5 Ch6 Ch7 Ch8 Ch9 C10 C11 C12 C13 C14 Positioning mode MSMA Sagittal Coronal	On O
Slices Dist. factor Position Orientation Phase enc. dir. Rotation Slice group 5 Slices Dist. factor Position Orientation Phase enc. dir. Rotation Phase enc. dir. Rotation Phase oversampling FoV read FoV phase Slice thickness TR TE Averages Concatenations Filter Coil elements	10 % L0.0 P5.5 H2.3 T > C0.6 L >> R -90.00 deg 1 10 % L0.0 P5.6 F12.2 T > C3.4 L >> R -90.00 deg 0 % 105 mm 100.0 % 3.0 mm 650 ms 57.2 ms 3 3 None	C20 C21 C22 Ch1 Ch2 Ch3 Ch4 Ch5 Ch6 Ch7 Ch8 Ch9 C10 C11 C12 C13 C14 Positioning mode MSMA Sagittal Coronal Transversal	On O
Slices Dist. factor Position Orientation Phase enc. dir. Rotation Slice group 5 Slices Dist. factor Position Orientation Phase enc. dir. Rotation Phase enc. dir. Rotation Phase oversampling FoV read FoV phase Slice thickness TR TE Averages Concatenations Filter	10 % L0.0 P5.5 H2.3 T > C0.6 L >> R -90.00 deg 1 10 % L0.0 P5.6 F12.2 T > C3.4 L >> R -90.00 deg 0 % 105 mm 100.0 % 3.0 mm 650 ms 57.2 ms 3 3 None	C20 C21 C22 Ch1 Ch2 Ch3 Ch4 Ch5 Ch6 Ch7 Ch8 Ch9 C10 C11 C12 C13 C14 Positioning mode MSMA Sagittal Coronal	On O

Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
	
! Ref. amplitude 1H	354.000 V
Adjustment Tolerance	Auto
Adjust volume ! Position	1.1.0 D7.4 U16.0
	L1.8 P7.4 H16.0 S > T-0.5 > C0.2
! Orientation ! Rotation	
! F >> H	-0.00 deg 75 mm
! A >> P	32 mm
!R>>L	42 mm
! K >> L	42 111111
Physio	
1st Signal/Mode	Pulse/Trigger
Average cycle	799 ± 1 ms
Acquisition window	650 ms
Trigger pulse	1
Trigger delay	0 ms
Phases	1
PMU Recording	off
Resp. control	Off
Diff	
Diffusion mode	3-Scan Trace
Diff. weightings	1
Diff. weightings b-value	
b-value	1
	1 0 s/mm²
b-value Diff. weighted images	1 0 s/mm² Off
b-value Diff. weighted images Trace weighted images	1 0 s/mm² Off On
b-value Diff. weighted images Trace weighted images Average ADC maps	1 0 s/mm² Off On Off
b-value Diff. weighted images Trace weighted images Average ADC maps Individual ADC maps	1 0 s/mm² Off On Off Off
b-value Diff. weighted images Trace weighted images Average ADC maps Individual ADC maps FA maps	1 0 s/mm² Off On Off Off Off
b-value Diff. weighted images Trace weighted images Average ADC maps Individual ADC maps FA maps Mosaic	1 0 s/mm² Off On Off Off Off Off
b-value Diff. weighted images Trace weighted images Average ADC maps Individual ADC maps FA maps Mosaic Tensor	1 0 s/mm² Off On Off Off Off Off
b-value Diff. weighted images Trace weighted images Average ADC maps Individual ADC maps FA maps Mosaic Tensor Noise level Diff. directions	1 0 s/mm² Off On Off Off Off Off Off Off
b-value Diff. weighted images Trace weighted images Average ADC maps Individual ADC maps FA maps Mosaic Tensor Noise level Diff. directions	1 0 s/mm² Off On Off Off Off Off Off 40 3
b-value Diff. weighted images Trace weighted images Average ADC maps Individual ADC maps FA maps Mosaic Tensor Noise level Diff. directions Sequence Introduction	1 0 s/mm² Off On Off Off Off Off Off 40 3
b-value Diff. weighted images Trace weighted images Average ADC maps Individual ADC maps FA maps Mosaic Tensor Noise level Diff. directions Sequence Introduction Bandwidth	1 0 s/mm² Off On Off Off Off Off Off 40 3
b-value Diff. weighted images Trace weighted images Average ADC maps Individual ADC maps FA maps Mosaic Tensor Noise level Diff. directions Sequence Introduction Bandwidth Optimization	1 0 s/mm² Off On Off Off Off Off Off Off Off 40 3 Off 1116 Hz/Px None
b-value Diff. weighted images Trace weighted images Average ADC maps Individual ADC maps FA maps Mosaic Tensor Noise level Diff. directions Sequence Introduction Bandwidth Optimization Free echo spacing	1 0 s/mm² Off On Off Off Off Off Off Off 40 3 Off 1116 Hz/Px None Off
b-value Diff. weighted images Trace weighted images Average ADC maps Individual ADC maps FA maps Mosaic Tensor Noise level Diff. directions Sequence Introduction Bandwidth Optimization	1 0 s/mm² Off On Off Off Off Off Off Off Off 40 3 Off 1116 Hz/Px None
b-value Diff. weighted images Trace weighted images Average ADC maps Individual ADC maps FA maps Mosaic Tensor Noise level Diff. directions Sequence Introduction Bandwidth Optimization Free echo spacing Echo spacing EPI factor	1 0 s/mm² Off On Off Off Off Off Off Off 40 3 Off 1116 Hz/Px None Off
b-value Diff. weighted images Trace weighted images Average ADC maps Individual ADC maps FA maps Mosaic Tensor Noise level Diff. directions Sequence Introduction Bandwidth Optimization Free echo spacing Echo spacing EPI factor RF pulse type	1 0 s/mm² Off On Off Off Off Off Off Off Off 40 3 Off 1116 Hz/Px None Off 1.02 ms 128 Normal
b-value Diff. weighted images Trace weighted images Average ADC maps Individual ADC maps FA maps Mosaic Tensor Noise level Diff. directions Sequence Introduction Bandwidth Optimization Free echo spacing Echo spacing EPI factor	1 0 s/mm² Off On Off Off Off Off Off Off Off Off
b-value Diff. weighted images Trace weighted images Average ADC maps Individual ADC maps FA maps Mosaic Tensor Noise level Diff. directions Sequence Introduction Bandwidth Optimization Free echo spacing Echo spacing EPI factor RF pulse type	1 0 s/mm² Off On Off Off Off Off Off Off Off 40 3 Off 1116 Hz/Px None Off 1.02 ms 128 Normal

Properties		MTC	Off
Prio Recon	Off	Magn. preparation	None
Before measurement		Fat suppr.	None
After measurement		Extra Fat Suppr. Saturation Mode	on
Load to viewer	On	Saturation Mode	skewed
Inline movie	Off	Averaging mode	Long term
Auto store images	On	Reconstruction	Magnitude
Load to stamp segments	Off	Delay in TR	0 ms
Load images to graphic	Off	Multiple series	Off
segments			
Auto open inline display	Off	Resolution	
Start measurement without	On	Base resolution	128
further preparation	5	Phase resolution	100 %
Wait for user to start	Off	Phase partial Fourier	5/8
Start measurements	single	Interpolation	Off
l	5g.5	PAT mode	GRAPPA
Routine		Accel. factor PE	2
Slice group 1		Ref. lines PE	24
Slices	1	Reference Scan Mode	multi-shot EPI
Dist. factor	10 %	Reference Scarrivioue	
Position	L0.0 P6.3 H45.2	Distortion Corr.	Off
Orientation	T > C-3.3	Prescan Normalize	Off
Phase enc. dir.	R >> L	Raw filter	Off
Rotation	90.00 deg	Elliptical filter	Off
Slice group 2	-	Hamming	Off
Slices	1		
Dist. factor	10 %	Geometry	
Position	L0.0 P6.0 H31.5	Multi-slice mode	Interleaved
Orientation	T > C-3.6	Series	Descending
Phase enc. dir.	R >> L	Special sat.	None
Rotation	90.00 deg		
Slice group 3	3	Table position	 Н
Slices	1	Table position	
Dist. factor	10 %	Table position	0 mm
Position	L0.0 P5.4 H16.3	Inline Composing	Off
Orientation	T > C-2.8	System	
Phase enc. dir.	R >> L	C15	On
Rotation	90.00 deg	C16	On
Slice group 4	00.00 409	C17	On
Slices	1	C18	On
Dist. factor	10 %	C19	On
Position	L0.0 P5.5 H2.3	C20	On
Orientation	T > C0.6	C21	On
Phase enc. dir.	R >> L	C22	On
Rotation	90.00 deg	Ch1	On
Slice group 5	55.05 dog	Ch2	On
Slices	1	Ch3	On
Dist. factor	10 %	Ch4	On
Position	L0.0 P5.6 F12.2	Ch5	On
Orientation	T > C3.4	Ch6	On
Phase enc. dir.	R >> L	Ch7	On
Rotation	90.00 deg	Ch8	On
Phase oversampling	90.00 deg 0 %	Ch9	On
FoV read	105 mm	C10	On
FoV read FoV phase	100.0 %	C11	On
1		C12	On
Slice thickness	3.0 mm	C12	On
TR TE	650 ms	C13	On
	57.2 ms		·····
Averages	3	Positioning mode	FIX
Concatenations	3 Name	MSMA	S - C - T
Filter	None	Sagittal	R >> L
Coil elements	C10-22;Ch1-9	Coronal	A >> P
Contrast		Transversal	F >> H
			Sum of Squares
		Coil Combine Mode	Sulli di Squales

	AutoAlign Auto Coil Select	 Default
	Shim mode Adjust with body coil Confirm freq. adjustment Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance	Standard Off Off Off 354.000 V Auto
	Adjust volume ! Position ! Orientation ! Rotation ! F >> H ! A >> P ! R >> L	L1.8 P7.4 H16.0 S > T-0.5 > C0.2 0.00 deg 75 mm 32 mm 42 mm
F	Physio	

1st Signal/Mode	Pulse/Trigger
Average cycle	$804 \pm 8 \text{ ms}$
Acquisition window	650 ms
Trigger pulse	1
Trigger delay	0 ms
Phases	1
PMU Recording	off
Resp. control	Off

Diff

Diffusion mode	MDDW
Diff. weightings	2
b-value 1	0 s/mm²
b-value 2	800 s/mm²
Diff. weighted images	On
Trace weighted images	Off
Average ADC maps	Off
Individual ADC maps	Off
FA maps	Off
Mosaic	Off
Tensor	Off
Noise level	40
Diff. directions	30

Sequence

Introduction	Off
Bandwidth	1116 Hz/Px
Optimization	None
Free echo spacing	Off
Echo spacing	1.02 ms
EPI factor	128
RF pulse type	Normal
Gradient mode	Fast*
Add. FFT Scale Factor	1.0

Properties	0#	Table position Inline Composing	0 mm Off
Prio Recon Before measurement	Off	System	
After measurement		C15	On
Load to viewer	On	C16	On
Inline movie	Off	C17	On
Auto store images	On O"	C18	On
Load to stamp segments	Off	C19	On
Load images to graphic	Off	C20	On
segments		C21	On
Auto open inline display	Off	C22	On
Start measurement without	On	Ch1	On
further preparation		Ch2	On
Wait for user to start	Off	Ch3	On
Start measurements	single	Ch4	On
		Ch5	On
outine		Ch6	On
Slice group 1		Ch7	On
Slices	7	Ch8	On
Dist. factor	10 %	Ch9	On
Position	L4.0 P6.5 H0.8	C10	On
Orientation	Sagittal	C10	On
Phase enc. dir.	A >> P		_
Rotation	0.00 deg	C12	On
Phase oversampling	0 %	C13	On
FoV read	192 mm	C14	On
FoV phase	100.0 %	Positioning mode	FIX
•		Positioning mode	S-C-T
Slice thickness	2.0 mm	MSMA	
TR	200.0 ms	Sagittal	R >> L
TE 1	3.06 ms	Coronal	A >> P
TE 2	4.08 ms	Transversal	F >> H
Averages	1	Save uncombined	Off
Concatenations	1	Coil Combine Mode	Adaptive Combine
Filter	None	AutoAlign	
Coil elements	C10-22;Ch1-9	Auto Coil Select	Default
		China mada	Chandand
ontrast MTC	0"	Shim mode	Standard
	Off	Adjust with body coil	Off
Flip angle	32 deg	Confirm freq. adjustment	Off
Fat suppr.	None	Assume Silicone	Off
Averaging mode	Short term	? Ref. amplitude 1H	0.000 V
Reconstruction		Adjustment Tolerance	Auto
	Magn./Phase	Adjust volume	
Measurements) O#	! Position	L1.8 P7.4 H16.0
Multiple series	Off	! Orientation	S > T-0.5 > C0.2
esolution		! Rotation	0.00 deg
Base resolution	192		75 mm
Phase resolution	100 %	! A >> P	32 mm
		!R>>L	42 mm
Phase partial Fourier	Off	: N >> L	4 2 IIIII
Interpolation	Off	Composing	
Image Filter	Off	Commence	
Distortion Corr.	Off	Sequence	0.5
Prescan Normalize	Off	Introduction	On
Normalize	Off	Dimension	2D
B1 filter	Off	Asymmetric echo	Off
Raw filter	Off	Contrasts	2
		Bandwidth	965 Hz/Px
Elliptical filter	Off	Flow comp.	No
seometry			Name
Multi-slice mode	Interleaved	RF pulse type	Normal
Series	Interleaved	Gradient mode	Normal
	·····	RF spoiling	On
Special sat.	None		
•			

\\USER\Alan\History\20230621_0900_Traveling_Spine_qMRI\t2s_gre_7lvl7sl_0p4_4te_2mm_notrig_Pstab TA: 5:10 PAT: Off Voxel size: 0.3×0.3×3.0 mm Rel. SNR: 1.00 SIEMENS: gre

Properties		Phase enc. dir.	A >> P
Prio Recon	Off	Rotation	0.00 deg
Before measurement		Phase oversampling	0 %
After measurement		FoV read	128 mm
Load to viewer	On	FoV phase	100.0 %
Inline movie	Off	Slice thickness	3.0 mm
Auto store images	On	TR	400 ms
Load to stamp segments	Off	TE 1	4.68 ms
Load images to graphic	Off	TE 2	9.08 ms
segments		TE 3	13.48 ms
Auto open inline display	Off	TE 4	17.88 ms
Start measurement without	On	TE 5	22.28 ms
further preparation	311	Averages	1
Wait for user to start	Off	Concatenations	1
Start measurements	single	Filter	None
I	Single	Coil elements	C10-22;Ch1-9
Routine Slice group 1		Contrast	
Slices	2	MTC	Off
Dist. factor	100 %	Magn. preparation	None
Position	L0.0 P6.3 H45.2	Flip angle	39 deg
Orientation	T > C-3.3	Fat suppr.	None
		Water suppr.	None
Phase enc. dir.	A >> P	SWI	Off
Rotation	0.00 deg	A	Ch aut tauma
Slice group 2	0	Averaging mode	Short term
Slices	2	Reconstruction	Magnitude
Dist. factor	100 %	Measurements	2
Position	L0.0 P6.0 H31.5	Pause after meas. 1	0.0 s
Orientation	T > C-3.6	Multiple series	Each measurement
Phase enc. dir.	A >> P	Resolution	
Rotation	0.00 deg	Base resolution	512
Slice group 3		Phase resolution	100 %
Slices	2		
Dist. factor	100 %	Phase partial Fourier	6/8
Position	L0.0 P5.4 H16.3	Interpolation	Off
Orientation	T > C-2.8	PAT mode	None
Phase enc. dir.	A >> P		
Rotation	0.00 deg	Image Filter	Off
Slice group 4	3	Distortion Corr.	Off
Slices	2	Prescan Normalize	Off
Dist. factor		Normalize	Off
Position	L0.0 P5.5 H2.3	B1 filter	Off
Orientation	T > C0.6	Raw filter	Off
Phase enc. dir.	A >> P	Elliptical filter	Off
Rotation	0.00 deg	Coometry	
Slice group 5	5.55 dog	Geometry Multiplica mode	Intoriogyad
Slices	2	Multi-slice mode	Interleaved
Dist. factor	100 %	Series	Interleaved
Position	L0.0 P5.6 F12.2	Saturation mode	Standard
Orientation	T > C3.4	Special sat.	None
Phase enc. dir.	1 > C3.4 A >> P		
		Table position	Н
Rotation	0.00 deg	Table position	0 mm
Slice group 6	4	Inline Composing	Off
Slices	1		OII
Dist. factor	100 %	Tim CT mode	Off
Position	L0.0 P7.3 F26.6	ı	
Orientation	T > C4.9	System	
Phase enc. dir.	A >> P	C15	On
Rotation	0.00 deg	C16	On
Slice group 7		C17	On
		_	_
Slices	1	C18	On
Slices Dist. factor	100 %	C18 C19	On On
Slices		C18	On

On 2D

On Off

No

No

No

No

Bipolar Normal

Fast Slice-sel. On

250 Hz/Px

250 Hz/Px

250 Hz/Px

250 Hz/Px

250 Hz/Px No

1	000	0	
	C22 Ch1	On On	Sequence
	Ch2	On	Introduction
	Ch3	On	Dimension
	Ch4	On	Phase stabilisation
	Ch5	On	Asymmetric echo Bandwidth 1
	Ch6	On	Bandwidth 2
	Ch7	On	Bandwidth 3
	Ch8	On	Bandwidth 4
	Ch9 C10	On On	Bandwidth 5
	C10	On	Flow comp. 1
	C12	On	Flow comp. 2
	C13	On	Flow comp. 3
	C14	On	Flow comp. 4 Flow comp. 5
-	Positioning mode	FIX	Readout mode
	MSMA	S - C - T	
	Sagittal	R >> L	RF pulse type
	Coronal	A >> P	Gradient mode Excitation
	Transversal	F >> H	RF spoiling
	Save uncombined	Off	IXI Spoiling
	Coil Combine Mode	Adaptive Combine	
	AutoAlign Auto Coil Select	Default	
-	Shim mode	Standard	
	Adjust with body coil	Off	
	Confirm freq. adjustment	Off	
	Assume Silicone	Off	
	! Ref. amplitude 1H	354.000 V	
	Adjustment Tolerance	Auto	
	Adjust volume ! Position	L1.3 P6.0 F1.8	
	! Orientation	Sagittal	
	! Rotation	-5.61 deg	
	! F >> H	114 mm	
	! A >> P	40 mm	
	! R >> L	45 mm	
ı	Physio		
	1st Signal/Mode	None	
	Segments	1	
	Tagging	None	
	Dark blood	Off	
-	Resp. control	Off	
١,		3 11	
Г	nline Subtract	Off	
	Liver registration	Off	
	Std-Dev-Sag	Off	
	Std-Dev-Cor	Off	
	Std-Dev-Tra	Off	
	Std-Dev-Time	Off	
	MIP-Sag	Off	
	MIP-Cor MIP-Tra	Off Off	
	MIP-Time	Off	
	Save original images	On	
-	Wash - In	Off	
	Wash - Out	Off	
	TTP	Off	
	PEI	Off	
	MIP - time	Off	
-	Maplt	None	
	Contrasts	5	

Table of contents

\\USER

Alan		
	History	
		20230621_0900_Traveling_Spine_qMRI
		localizer
		localizer_cor
		localizer_sag
		preSatTFL_sag_2p5mm_FOV320_RefV300V_satFA90
		preSatTFL_sag_2p5mm_FOV320_RefV354V_satFA80
		b0map_gre_field_sag_1x1x2_7sl
		b0map_gre_field_sag_1x1x2_7sl_RefV354
		t2_tse_sag_2D_5sl_p2_trig
		t1_mp2rage_cor_nonSelHS1_0p7iso
		dti_ep2d511F_5s_LR_rev_b0
		dti_ep2d511F_5s_RL_fwd
		b0map_gre_field_sag_1x1x2_7sl
		t2s_gre_7lvl7sl_0p4_4te_2mm_notrig_Pstab