\\USER\UserProtocols\Renzo\190907_TUCCOS\Quin_pilot_250_V1

TA: 1:05 PAT: Off Voxel size: 1.0×1.0×3.0 mm Rel. SNR: 1.00 SIEMENS: tfl			
Properties		Interpolation	Off
Prio Recon	Off	PAT mode	None
Before measurement		l = ===	O#
After measurement		Image Filter	Off
Load to viewer	On	Distortion Corr.	Off
Inline movie	Off	Prescan Normalize	Off
Auto store images	On	Normalize	Off Off
Load to stamp segments	Off	B1 filter	
Load images to graphic	Off	Raw filter	Off Off
segments		Elliptical filter	Oli
Auto open inline display	Off	Geometry	
Start measurement without	Off	Multi-slice mode	Sequential
further preparation		Series	Ascending
Wait for user to start	Off		
Start measurements	single	Table position	Н
Routine		Table position	0 mm
Slice group 1		Inline Composing	Off
Slices	9	System	
Dist. factor	20 %	V32	Off
Position	R4.0 A23.3 F1.6	A32	On
Orientation	S > C-3.6		OII
Phase enc. dir.	A >> P	Positioning mode	REF
Rotation	0.00 deg	MSMA	S - C - T
Slice group 2	9	Sagittal	R >> L
Slices	5	Coronal	A >> P
Dist. factor	80 %	Transversal	F >> H
Position	L0.0 A31.9 F4.8	Save uncombined	Off
Orientation	Transversal	Coil Combine Mode	Adaptive Combine
Phase enc. dir.	A >> P	AutoAlign	
Rotation	0.00 deg	Auto Coil Select	Default
Slice group 3	-	Shim mode	Tuno un
Slices	7	Adjust with body coil	Tune up Off
Dist. factor	50 %	Confirm freq. adjustment	Off
Position	R2.4 P21.6 F0.6	Assume Silicone	Off
Orientation	Coronal	! Ref. amplitude 1H	270.000 V
Phase enc. dir.	R >> L	Adjustment Tolerance	Auto
Rotation	0.00 deg	Adjust volume	Adio
Phase oversampling	0 %	Position	Isocenter
FoV read	200 mm	Orientation	Transversal
FoV phase	100.0 %	Rotation	0.00 deg
Slice thickness	3.0 mm	R >> L	350 mm
TR	3000 ms	A >> P	263 mm
TE .	3.22 ms	F >> H	350 mm
Averages	1	<u>I</u>	·
Concatenations	21	Physio	
Filter	None	1st Signal/Mode	None
Coil elements	A32	Dark blood	Off
Contrast	_	Resp. control	Off
TD	0 ms	•	VIII
Magn. preparation	Slice-sel. IR	Inline	
<u>Ti</u>	1100 ms	Subtract	Off
Flip angle	6 deg	Std-Dev-Sag	Off
Fat suppr.	None	Std-Dev-Cor	Off
Water suppr.	None	Std-Dev-Tra	Off
Averaging mode	Long term	Std-Dev-Time	Off
Reconstruction	Magnitude	MIP-Sag	Off
Measurements	1	MIP-Cor	Off
Multiple series	Each measurement	MIP-Tra	Off
•		MIP-Time	Off
Resolution	100	Save original images	On
Base resolution	192		
Phase resolution	100 %	Sequence	
Phase partial Fourier	Off	1/+	

Introduction Dimension Asymmetric echo Bandwidth Flow comp. Echo spacing	On 2D Off 240 Hz/Px No 6.5 ms
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slice-sel.
RF spoiling	On

SIEWE	INO INIAGINE I OIVI INVESTIÇ	gational_Device_71 syngo	IVIK DI/	
\\USER\UserProtocols\Renzo\190907_TUCCOS\VASO_139MAGECSSSI_setup				
TA: 0:22 PA	T: 6 Voxel size: 0.8×0.8×0	.8 mm Rel. SNR: 1.00 US	SER: VASO_139	
Dranartica		PAT mode	GRAPPA	
Properties	0"	— Accel. factor PE	3	
Prio Recon	Off	Ref. lines PE	45	
Before measurement		Accel. factor 3D	2	
After measurement	00	Ref. lines 3D	24	
Load to viewer Inline movie	On Off	Reference scan mode	Separate	
Auto store images	On	Prescan Normalize	Off	
Load to stamp segments	Off	Raw filter	Off	
Load images to graphic	Off	Elliptical filter	Off	
segments	Oli	Hamming	Off	
Auto open inline display	Off	1	Oli	
Start measurement without	On	Geometry		
further preparation	.	Multi-slice mode	Interleaved	
Wait for user to start	Off	Series	Ascending	
Start measurements	single	Special sat.	Parallel F	
Double -	3	Gap	25.0 mm	
Routine		Thickness	100 mm	
Slab group 1 Slabs	4			
Dist. factor	1 50 %	Table position	H	
Position	R6.1 A15.0 H5.7	Table position	0 mm	
Orientation	T > C-16.4 > S1.0	Inline Composing	Off	
Phase enc. dir.	A >> P	System		
Rotation	0.00 deg	V32	Off	
Phase oversampling	0 %	A32	On	
Slice oversampling	8.3 %	Destination and de	FIV	
Slices per slab	96	Positioning mode	FIX S - C - T	
FoV read	133.0 mm	MSMA Sogittal	S - C - 1 R >> L	
FoV phase	133.3 %	Sagittal Coronal	A >> P	
Slice thickness	0.80 mm	Transversal	F >> H	
TR	4489.60 ms	Save uncombined	Off	
TE	24 ms	Coil Combine Mode	Sum of Squares	
Averages	1	AutoAlign		
Concatenations	1	Auto Coil Select	Default	
Filter	None			
Coil elements	A32	Shim mode	Standard	
Contrast		Adjust with body coil	Off	
Perfusion mode	SS-SI VASO	Confirm freq. adjustment	Off	
TI2	650 ms	Assume Silicone	Off	
TI1	50 ms	! Ref. amplitude 1H	220.000 V	
Ti1s	50 ms	Adjustment Tolerance	Auto	
Flip angle	4 deg	Adjust volume ! Position	R4.6 A18.4 H6.7	
Fat suppr.	Fat sat.	! Orientation	T > C-9.9 > S0.6	
Fat sat. mode	Strong	! Orientation ! Rotation		
		! Rotation ! A >> P	90.00 deg 190 mm	
Averaging mode	Long term	! R >> L	190 mm	
Reconstruction	Magnitude	! F >> H	87 mm	
Measurements	5	ı	O7 111111	
Delay in TR	0 ms	Physio		

	Ref lines 3D	24
On		Separate
		Off
		Off
Off	•	Off
	Hamming	Off
	Geometry	
On		Interleaved
		Ascending
		Ascending
single	Special sat.	Parallel F
	Gap	25.0 mm
	Thickness	100 mm
1	T 11 99	
		H
		0 mm
	Inline Composing	Off
	System	
		Off
		On
		<u> </u>
	Positioning mode	FIX
	MSMA	S - C - T
	Sagittal	R >> L
	Coronal	A >> P
	Transversal	F >> H
	Save uncombined	Off
24 ms		Sum of Squares
1		
1		Default
None		
A32		Standard
		Off
CC CL \/ACO		Off
		Off
		220.000 V
		Auto
	Adjust volume	
	! Position	R4.6 A18.4 H6.7
	! Orientation	T > C-9.9 > S0.6
Strong	! Rotation	90.00 deg
Long term	! A >> P	190 mm
	! R >> L	140 mm
S	! F >> H	87 mm
_	Dhysis	
	1st Signal/Mode	None
PICORE Q2T	BOLD	
50 ms		Off
50 ms		Off
650.0 ms	1 Spatial litter	5 11
100 cm/s	Sequence	
	Introduction	On
	Dimension	3D
	Reordering	Linear
162	Redidening	Ziiloai
100 %	Contrasts	1
100 % 100 %	_	
100 % 100 % 6/8	Contrasts Bandwidth	1
100 % 100 %	Contrasts Bandwidth Free echo spacing	1 1144 Hz/Px Off
100 % 100 % 6/8	Contrasts Bandwidth	1 1144 Hz/Px
-	Off On Off Off Off Off Off Off On Off On Off Single 1 50 % R6.1 A15.0 H5.7 T > C-16.4 > S1.0 A >> P 0.00 deg 0 % 8.3 % 96 133.0 mm 133.3 % 0.80 mm 4489.60 ms 24 ms 1 1 None A32 SS-SI VASO 650 ms 50 ms 50 ms 50 ms 50 ms 4 deg Fat sat. Strong Long term Magnitude 5 0 ms Off PICORE Q2T 50 ms 50 ms 50 ms	On Ref. lines 3D Off Reference scan mode On Prescan Normalize Raw filter Elliptical filter Hamming Geometry Multi-slice mode Series single Special sat. Gap Thickness 1 Table position 50 % R6.1 A15.0 H5.7 T > C-16.4 > S1.0 Asystem A >> P System 0.00 deg V32 0.% A32 8.3 % Positioning mode MSMA Sagittal 133.0 mm Sagittal 133.3 % Coronal 0.80 mm Transversal 4489.60 ms Save uncombined 24 ms Coil Combine Mode 1 Auto Coil Select None A32 SS-SI VASO Shim mode 4 deg Prosition 50 ms Prosition 50 ms Prosition 1 Ref. amplitude 1H Adjust wolume 1

RF pulse type Gradient mode Excitation RF spoiling	Normal Normal Slab-sel. On
Ampl MAGEC FA ph.skip 4 Robert (the one) MAGEC SS-SI? Maxwell Correction log physio files FFT scale dummy prepscan time z shim RF duration RF BWTP Renzo: Delta TI EFFECTIVE TR PatPartitions EPI phase correction PAT refscan mode FlashRef BaseRes FlashRef BW FlashRef TE FlashRef FA use CAIPI	100 12 in deg 1 On Off Off Off 2.50 3 s 0.00 mT/m*ms 2000 us 25.0 71 ms 233459 ms 52 local Flash 162 100 Hz/px 7000 us 5 deg Off

\\USER\User	Protocols	\Renzo\190907_TUCCOS\V	'ASO_139MAGE(CSSSI_CAIPI_looksbad	
TA: 8:18	PAT: 6	Voxel size: 0.8×0.8×0.8 mm	Rel. SNR: 1.00	USER: VASO_139	

Properties		PAT mode	GRAPPA
Prio Recon	Off	Accel. factor PE	3
Before measurement	Oli	Ref. lines PE	45
After measurement		Accel. factor 3D	2
Load to viewer	On	Ref. lines 3D	24
Inline movie	Off	Reference scan mode	Separate
Auto store images	On	Prescan Normalize	Off
Load to stamp segments	Off	Raw filter	Off
Load images to graphic	Off	Elliptical filter	Off
segments		Hamming	Off
Auto open inline display	Off		
Start measurement without	On	Geometry	
further preparation		Multi-slice mode	Interleaved
Wait for user to start	Off	Series	Ascending
Start measurements	single	Special sat.	Parallel F
Routine	3	Gap	25.0 mm
Slab group 1		Thickness	100 mm
Slabs	1	Table position	Н
Dist. factor	50 %	Table position	0 mm
Position	R6.1 A15.0 H5.7	Inline Composing	Off
Orientation	T > C-16.4 > S1.0	1	5
Phase enc. dir.	A >> P	System	
Rotation	0.00 deg	V32	Off
Phase oversampling	0 %	A32	On
Slice oversampling	8.3 %	Desitioning mode	FIV
Slices per slab	96	Positioning mode	FIX S - C - T
FoV read	133.0 mm	MSMA Societal	8 - C - 1 R >> L
FoV phase	133.3 %	Sagittal	A >> P
Slice thickness	0.80 mm	Coronal	F >> H
TR	4489.60 ms	Transversal	
TE	24 ms	Save uncombined	Off
Averages	1	Coil Combine Mode	Sum of Squares
Concatenations	1	AutoAlign	Defectly
Filter	None	Auto Coil Select	Default
Coil elements	A32	Shim mode	Standard
1		Adjust with body coil	Off
Contrast	00.011/400	Confirm freq. adjustment	Off
Perfusion mode	SS-SI VASO	Assume Silicone	Off
TI2	650 ms	! Ref. amplitude 1H	220.000 V
TI1	50 ms	Adjustment Tolerance	Auto
TI1s	50 ms	Adjust volume	
Flip angle	4 deg	! Position	R4.6 A18.4 H6.7
Fat suppr.	Fat sat.	! Orientation	T > C-9.9 > S0.6
Fat sat. mode	Strong	! Rotation	90.00 deg
Averaging mode	Long term	! A >> P	190 mm
Reconstruction	Magnitude	! R >> L	140 mm
Measurements	111	! F >> H	87 mm
Delay in TR	0 ms	Physio	
Multiple series	Off	1st Signal/Mode	None
	-		INOTIC
Perfusion mode	PICORE Q2T	BOLD	<u> </u>
Inversion time 1	50 ms	Motion correction	Off
Saturation stop time	50 ms	Spatial filter	Off
Inversion time 2	650.0 ms	Soguence	
Flow limit	100 cm/s	Sequence Introduction	On
Resolution		Dimension	3D
Base resolution	162	Reordering	Linear
Phase resolution	100 %	Contrasts	Linear 1
Slice resolution	100 %	Bandwidth	
Phase partial Fourier	6/8		1144 Hz/Px Off
Slice partial Fourier	Off	Free echo spacing	_
Interpolation	Off	Echo spacing	0.98 ms
1 2 200		EPI factor	216

RF pulse type Gradient mode Excitation RF spoiling	Normal Normal Slab-sel. On
Ampl MAGEC FA ph.skip 4 Robert (the one) MAGEC SS-SI? Maxwell Correction log physio files FFT scale dummy prepscan time z shim RF duration RF BWTP Renzo: Delta TI EFFECTIVE TR PatPartitions EPI phase correction PAT refscan mode FlashRef BaseRes FlashRef BW FlashRef TE FlashRef FA use CAIPI CAIPI shift kz CAIPI shift ky	100 12 in deg 1 On Off Off Off 2.50 3 s 0.00 mT/m*ms 2000 us 25.0 71 ms 233459 ms 52 local Flash 162 100 Hz/px 7000 us 5 deg On 0
- · <i>J</i>	

\\USER\L	JserProtoc	cols\Renzo\190907_TUCCO	S\VASO_139MA	GECSSSI_noCAIPI	
TA: 8:19	PAT: 3	Voxel size: 0.8×0.8×0.8 mm	Rel. SNR: 1.00	USER: VASO_139	

Properties	0"	PAT mode Accel. factor PE	GRAPPA 3
Prio Recon	Off	Ref. lines PE	45
Before measurement		Accel. factor 3D	1
After measurement Load to viewer	On	Ref. lines 3D	24
Inline movie	Off	Reference scan mode	Separate
Auto store images	On	Prescan Normalize	Off
Load to stamp segments	Off	Raw filter	Off
Load images to graphic	Off	Elliptical filter	Off
segments		Hamming	Off
Auto open inline display	Off		Oli
Start measurement without	On	Geometry	
further preparation		Multi-slice mode	Interleaved
Wait for user to start	Off	Series	Ascending
Start measurements	single	Special sat.	Parallel F
Routine	<u> </u>	Gap	25.0 mm
Slab group 1		Thickness	100 mm
Slabs	1	Table position	Н
Dist. factor	50 %	Table position	0 mm
Position	R6.1 A15.0 H5.7	Inline Composing	Off
Orientation	T > C-16.4 > S1.0	1	J
Phase enc. dir.	A >> P	System	
Rotation	0.00 deg	V32	Off
Phase oversampling	0 %	A32	On
Slice oversampling	8.3 %	Positioning mode	REF
Slices per slab	96	MSMA	S - C - T
FoV read	133.0 mm	Sagittal	R >> L
FoV phase	133.3 %	Coronal	A >> P
Slice thickness	0.82 mm	Transversal	F >> H
TR	8324.60 ms	Save uncombined	Off
TE	24 ms	Coil Combine Mode	Sum of Squares
Averages	1	AutoAlign	
Concatenations	1	Auto Coil Select	Default
Filter	None		
Coil elements	A32	Shim mode	Standard
Contrast		Adjust with body coil	Off
Perfusion mode	SS-SI VASO	Confirm freq. adjustment	Off Off
TI2	650 ms	Assume Silicone	220.000 V
TI1	50 ms	! Ref. amplitude 1H Adjustment Tolerance	220.000 V Auto
TI1s	50 ms	•	Auto
Flip angle	4 deg	Adjust volume ! Position	R4.6 A18.4 H6.7
Fat suppr.	Fat sat.	! Orientation	T > C-9.9 > S0.6
Fat sat. mode	Strong	! Rotation	90.00 deg
Avoraging mode	Long torm	! A >> P	190 mm
Averaging mode	Long term	! R >> L	140 mm
Reconstruction Measurements	Magnitude 60	!F>> H	87 mm
Delay in TR		1	······
Multiple series	0 ms Off	Physio	
ininitible selles		1st Signal/Mode	None
Perfusion mode	PICORE Q2T	BOLD	
Inversion time 1	50 ms	Motion correction	Off
Saturation stop time	50 ms	Spatial filter	Off
Inversion time 2	650.0 ms	1 .	
Flow limit	100 cm/s	Sequence	0.5
Resolution		Introduction	On
Base resolution	162	Dimension	3D
Phase resolution	100 %	Reordering	Linear
Slice resolution	100 %	Contrasts	1 1144 Hz/Dy
Phase partial Fourier	6/8	Bandwidth	1144 Hz/Px Off
Slice partial Fourier	Off	Free echo spacing	_
Interpolation	Off	Echo spacing	0.98 ms
J		EPI factor	216

RF pulse type Gradient mode Excitation RF spoiling	Normal Normal Slab-sel. On
Ampl MAGEC FA ph.skip 4 Robert (the one) MAGEC SS-SI? Maxwell Correction log physio files FFT scale dummy prepscan time z shim RF duration RF BWTP Renzo: Delta TI EFFECTIVE TR PatPartitions EPI phase correction PAT refscan mode FlashRef BaseRes FlashRef BW FlashRef TE FlashRef FA use CAIPI	100 12 in deg 1 On Off Off Off 2.50 3 s 0.00 mT/m*ms 2000 us 25.0 71 ms 842504 ms 104 local Flash 162 100 Hz/px 7000 us 5 deg Off

 $\verb|\USER\USEP| TO COS\VASO_139 MAGECSS SI_accel_witout_CAIPI_no MOSAIC| \\$

Properties		PAT mode Accel. factor PE	GRAPPA 3
Prio Recon	Off	Ref. lines PE	45
Before measurement		Accel. factor 3D	2
After measurement Load to viewer	On	Ref. lines 3D	24
Inline movie	Off	Reference scan mode	Separate
Auto store images	On	Prescan Normalize	Off
Load to stamp segments	Off	Raw filter	Off
Load images to graphic	Off	Elliptical filter	Off
segments	Oli	Hamming	Off
Auto open inline display	Off	Hamming	Oli
Start measurement without	On	Geometry	
further preparation	Oli	Multi-slice mode	Interleaved
Wait for user to start	Off	Series	Ascending
Start measurements	single	Special set	Parallel F
ı	Sirigio	Special sat.	25.0 mm
Routine		Gap Thickness	100 mm
Slab group 1		THICKHESS	
Slabs	1	Table position	Н
Dist. factor	50 %	Table position	0 mm
Position	R6.1 A15.0 H5.7	Inline Composing	Off
Orientation	T > C-16.4 > S1.0	1	
Phase enc. dir.	A >> P	System	0"
Rotation	0.00 deg	V32	Off
Phase oversampling	0 %	A32	On
Slice oversampling	8.3 %	Positioning mode	FIX
Slices per slab	96	MSMA	S - C - T
FoV read	133.0 mm	Sagittal	R >> L
FoV phase	133.3 %	Coronal	A >> P
Slice thickness	0.80 mm	Transversal	F >> H
TR	4489.60 ms	Save uncombined	Off
TE	24 ms	Coil Combine Mode	Sum of Squares
Averages	1	AutoAlign	
Concatenations	1	Auto Coil Select	Default
Filter	None		
Coil elements	A32	Shim mode	Standard
Contrast		Adjust with body coil	Off
Perfusion mode	SS-SI VASO	Confirm freq. adjustment	Off
TI2	650 ms	Assume Silicone	Off
TI1	50 ms	! Ref. amplitude 1H	220.000 V
TI1s	50 ms	Adjustment Tolerance	Auto
Flip angle	4 deg	Adjust volume	B4044041107
Fat suppr.	Fat sat.	! Position	R4.6 A18.4 H6.7
Fat sat. mode	Strong	! Orientation	T > C-9.9 > S0.6
	·····	! Rotation	90.00 deg
Averaging mode	Long term	! A >> P	190 mm
Reconstruction	Magnitude	! R >> L	140 mm
Measurements	111	! F >> H	87 mm
Delay in TR	0 ms	Physio	
Multiple series	Off	1st Signal/Mode	None
Perfusion mode	PICORE Q2T		
Inversion time 1	50 ms	BOLD	
Saturation stop time	50 ms	Motion correction	Off
Inversion time 2	650.0 ms	Spatial filter	Off
Flow limit	100 cm/s	Sequence	
į.	100 011/3	Introduction	On
Resolution		Dimension	3D
Base resolution	162	Reordering	Linear
Phase resolution	100 %	Contrasts	1
Slice resolution	100 %	Bandwidth	1144 Hz/Px
Phase partial Fourier	6/8	Free echo spacing	Off
Slice partial Fourier	Off	Echo spacing	0.98 ms
Interpolation	Off		
		EPI factor	216

RF pulse type Gradient mode Excitation RF spoiling	Normal Normal Slab-sel. On
Ampl MAGEC FA ph.skip 4 Robert (the one) MAGEC SS-SI? Maxwell Correction log physio files FFT scale dummy prepscan time z shim RF duration RF BWTP Renzo: Delta TI EFFECTIVE TR PatPartitions EPI phase correction PAT refscan mode FlashRef BaseRes FlashRef BW FlashRef TE FlashRef FA use CAIPI	100 12 in deg 1 On Off Off Off 2.50 3 s 0.00 mT/m*ms 2000 us 25.0 71 ms 233459 ms 52 local Flash 162 100 Hz/px 7000 us 5 deg Off

\\USER\UserProtocols\Renzo\190907_TUCC	OS\RENZO_GRE7_setup_GRAPPA_2
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TA: 10:00 PAT: 2 Voxel size: 0.2×0.2×0.5 mm Rel. SNR: 1.00 USER: RENZO_GRE7

Properties		Geometry	
Prio Recon	Off	Multi-slice mode	Interleaved
Before measurement		Series	Interleaved
After measurement		Cotymptics and do	Chandand
Load to viewer	On	Saturation mode	Standard
Inline movie	Off	Special sat.	None
Auto store images	On	T. 1.1. 32	
Load to stamp segments	Off	Table position	H
Load images to graphic	Off	Table position Inline Composing	0 mm Off
segments		mine Composing	OII
Auto open inline display	Off	Tim CT mode	Off
Start measurement without	On	System	
further preparation	0"	V32	Off
Wait for user to start	Off	A32	On
Start measurements	single		-
Routine		Positioning mode	FIX
Slice group 1		MSMA	S - C - T
Slices	30	Sagittal	R >> L
Dist. factor	0 %	Coronal	A >> P
Position	R2.8 A17.6 F8.5	Transversal	F >> H
Orientation	T > C-24.2 > S0.1	Save uncombined	Off
Phase enc. dir.	R >> L	Coil Combine Mode	Adaptive Combine
Rotation	90.00 deg	AutoAlign	D-4
Phase oversampling	0 %	Auto Coil Select	Default
FoV read	192 mm	Shim mode	Standard
FoV phase	75.0 %	Adjust with body coil	Off
Slice thickness	0.5 mm	Confirm freq. adjustment	Off
TR TE	783 ms 15.0 ms	Assume Silicone	Off
		! Ref. amplitude 1H	220.000 V
Averages Concatenations	2 1	Adjustment Tolerance	Auto
Filter	None	Adjust volume	
Coil elements	A32	! Position	R4.6 A18.4 H6.7
ı	7102	! Orientation	T > C-9.9 > S0.6
Contrast		! Rotation	90.00 deg
MTC	Off	! A >> P	190 mm
Magn. preparation	None	! R >> L	140 mm
Flip angle	40 deg	! F >> H	87 mm
Fat suppr.	None	Physio	
Water suppr.	None	1st Signal/Mode	None
SWI	Off	Segments	1
Averaging mode	Short term		None
Reconstruction	Magn./Phase	Tagging Dark blood	Off
Measurements	1		OII
Multiple series	Each measurement	Resp. control	Off
Resolution		Inline	
Base resolution	960	Subtract	Off
Phase resolution	100 %	Liver registration	Off
Phase partial Fourier	Off	Std-Dev-Sag	Off
Interpolation	Off	Std-Dev-Cor	Off
DAT mode	CPAPPA	Std-Dev-Tra	Off
PAT mode Accel. factor PE	GRAPPA 2	Std-Dev-Time	Off
Ref. lines PE	45	MIP-Sag	Off
Reference scan mode	Integrated	MIP-Cor	Off
		MIP-Tra	Off
Image Filter	Off	MIP-Time	Off
Distortion Corr.	Off	Save original images	On
Prescan Normalize	Off	Wash - In	Off
Normalize	Off	Wash - Out	Off
B1 filter	Off	TTP	Off
Raw filter	Off	PEI	Off
Elliptical filter	Off	MIP - time	Off
		1	

Maplt	None
Contrasts	1
Sequence	
Introduction	On
Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Off
Bandwidth	70 Hz/Px
Flow comp.	Slice
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slice-sel.
RF spoiling	On

\\USER\UserProtocols\Renzo\190907_TUCCOS\MP2RAGE_slab_0.5x05x0.5_T1_POCS8

USER: tfl_wip900b17a

Voxel size: 0.5×0.5×0.5 mm Rel. SNR: 1.00

TA: 3:38

PAT: 2

.		Distortion Corr.	Off
Properties		Prescan Normalize	Off
Prio Recon	Off	Raw filter	Off
Before measurement			Off
After measurement		Elliptical filter	Oli
Load to viewer	On	Geometry	
Inline movie	Off	Multi-slice mode	Single shot
Auto store images	On	Series	Interleaved
	Off		
Load to stamp segments			
Load images to graphic	Off	Table position	Н
segments		Table position	0 mm
Auto open inline display	Off	Inline Composing	Off
Start measurement without	On		
further preparation		System	
Wait for user to start	Off	V32	Off
Start measurements	single	A32	On
Gtart measurements	Sirigio		
Routine		Positioning mode	FIX
Slab group 1		MSMA	S - C - T
Slabs	1	Sagittal	R >> L
Dist. factor	50 %	Coronal	A >> P
		Transversal	F >> H
Position	R2.8 A17.6 F8.5	Save uncombined	Off
Orientation	T > C-24.2 > S0.1		
Phase enc. dir.	R >> L	Coil Combine Mode	Adaptive Combine
Rotation	90.00 deg	AutoAlign	
Phase oversampling	0 %	Auto Coil Select	Default
Slice oversampling	0.0 %	Shim mode	Ctandard
Slices per slab	48		Standard
FoV read	191 mm	Adjust with body coil	Off
		Confirm freq. adjustment	Off
FoV phase	100.0 %	Assume Silicone	Off
Slice thickness	0.50 mm	! Ref. amplitude 1H	277.000 V
TR	6000 ms	Adjustment Tolerance	Auto
TE	4.66 ms	Adjust volume	71010
Averages	1	! Position	R4.6 A18.4 H6.7
Concatenations	1		
Filter	None	! Orientation	T > C-9.9 > S0.6
Coil elements	A32	! Rotation	90.00 deg
Coll elements	A32	! A >> P	190 mm
Contrast		! R >> L	140 mm
Magn. preparation	Non-sel. IR		87 mm
TI 1	961 ms	1 Di :	
TI 2	2900 ms	Physio	
		1st Signal/Mode	None
Flip angle 1	6 deg	Dayle blood	O#
Flip angle 2	7 deg	Dark blood	Off
Fat suppr.	None	Resp. control	Off
Water suppr.	None	i '	OII
2nd Inversion Contrast	On	Composing	
Averaging mode	Long term	Sequence	
Reconstruction	Magn./Phase	Introduction	On
Measurements	1	Dimension	3D
Multiple series	Each measurement	Elliptical scanning	Off
•		Asymmetric echo	Off
Resolution		— Contrasts	1
Base resolution	380	Bandwidth	190 Hz/Px
Phase resolution	100 %		
Slice resolution	100 %	Flow comp.	No
Phase partial Fourier	Off	Echo spacing	9.5 ms
	-	DE pulso tuns	Normal
Slice partial Fourier	6/8	RF pulse type	Normal
PAT mode	GRAPPA	Gradient mode	Fast
Accel. factor PE	2	Excitation	Slab-sel.
		RF spoiling	On
Ref. lines PE	24		
Accel. factor 3D	1	FFT Scale Factor	150 %
Reference scan mode	Integrated	Morphometry Analysis	Off
Image Filter	Off	FID MoCo Logging	Off
		FID Coil Phase Corr.	Off

LIN/PAR Swap	On
Ext. INV Pulse	On
Flip Angle	1400
Phase Filter	0 px
Uniform Image	On
Head Mask on UNI	Off
T1 Map	On
Complex Div. Image	On
Denoise Weighting	150
FLAWS	Off