\\USER\UserProtocols\Renzo\T1_3D_EPI_setup\Quin_pilot_250V

TA: 0:59 PAT: Off Voxel size: 1.1×1.1×5.0 mm Rel. SNR: 1.00 SIEMENS: tfl			
Properties		Interpolation	Off
Prio Recon	Off	PAT mode	None
Before measurement			
After measurement		Image Filter	Off
Load to viewer	On	Distortion Corr.	Off
Inline movie	Off	Prescan Normalize	Off
Auto store images	On	Normalize	Off
Load to stamp segments	Off	B1 filter	Off
Load images to graphic	Off	Raw filter	Off
segments		Elliptical filter	Off
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	H
Douting		Table position	0 mm
Routine		Inline Composing	Off
Slice group 1	44		Jii
Slices	11	System	
Dist. factor	80 %	V32	Off
Position	L0.0 A18.9 F0.7	A32	On
Orientation	Sagittal	Positioning mode	REF
Phase enc. dir.	A >> P	Positioning mode MSMA	S-C-T
Rotation	0.00 deg	_	
Slice group 2		Sagittal	R >> L
Slices	3	Coronal	A >> P
Dist. factor	100 %	Transversal	F >> H
Position	L0.0 A16.2 H45.9	Save uncombined	Off
Orientation	Transversal	Coil Combine Mode	Adaptive Combine
Phase enc. dir.	A >> P	AutoAlign	Default
Rotation	0.00 deg	Auto Coil Select	Default
Slice group 3	_	Shim mode	Tune up
Slices	5	Adjust with body coil	Off
Dist. factor	100 %	Confirm freq. adjustment	Off
Position	L0.0 A8.1 H1.7	Assume Silicone	Off
Orientation	Coronal	! Ref. amplitude 1H	220.000 V
Phase enc. dir.	R >> L	Adjustment Tolerance	Auto
Rotation	0.00 deg	Adjust volume	
Phase oversampling	0 %	Position	Isocenter
FoV read	220 mm	Orientation	Transversal
FoV phase	100.0 %	Rotation	0.00 deg
Slice thickness	5.0 mm	R >> L	350 mm
TR	3000 ms	A >> P	263 mm
TE Averages	3.12 ms	F >> H	350 mm
	10	Physio	
Concatenations Filter	19 None	1st Signal/Mode	None
Coil elements	A32	15t Signal/Mode	
Contrast	A32	Dark blood	Off
TD	0 ms	Resp. control	Off
Magn. preparation	Slice-sel. IR	Inline	
TI	1100 ms		O#
Flip angle	6 deg	Subtract Std Doy Sog	Off Off
Fat suppr.	None	Std-Dev-Sag	Off Off
Water suppr.	None	Std-Dev-Cor	Off Off
•••ater suppr.	140116	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	1	
Phase resolution	100 % Off	Sequence	
Phase partial Fourier	OII	1/+	

Introduction Dimension Asymmetric echo Bandwidth Flow comp. Echo spacing	On 2D Off 240 Hz/Px No 6.4 ms
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slice-sel.
RF spoiling	On

\\USER\UserProtocols\Renzo\T1_3D_EPI_setup\MAFI_6mm

TA: 2:17	Voxel size: 6.0×6.0×6.0 mm	•	Renzo\MAFI
Properties		Geometry	
Prio Recon	Off	Multi-slice mode	Sequential
Before measurement		Series	Ascending
After measurement		Chaoial ant	None
Load to viewer	On	Special sat.	None
Inline movie	Off	Table position	Н
Auto store images	On	Table position	0 mm
Load to stamp segments	Off	Inline Composing	Off
Load images to graphic	Off	System	
segments	0"	V32	Off
Auto open inline display	Off On	A32	On
Start measurement without further preparation	On		
Wait for user to start	Off	Positioning mode	REF
Start measurements	single	MSMA	S-C-T
	Sirigie	Sagittal	R >> L
Routine		Coronal Transversal	A >> P F >> H
Slab group 1		Save uncombined	Г >> П Off
Slabs	1	Coil Combine Mode	Adaptive Combine
Dist. factor	0 %	AutoAlign	
Position	R2.7 A23.8 F15.1	Auto Coil Select	Default
Orientation	Sagittal	7 tato Con Coloct	
Phase enc. dir. Rotation	A >> P 0.00 deg	Shim mode	Standard
Phase oversampling	0.00 deg 0 %	Adjust with body coil	Off
Slice oversampling	0.0 %	Confirm freq. adjustment	Off
Slices per slab	28	Assume Silicone	Off
FoV read	192 mm	! Ref. amplitude 1H	270.000 V
FoV phase	100.0 %	Adjustment Tolerance	Auto
Slice thickness	6.00 mm	Adjust volume	D4 4 400 0 H07 0
TR	150 ms	! Position	R1.4 A23.2 H27.6
TE 1	1.080 ms	! Orientation ! Rotation	Sagittal 0.00 deg
TE 2	1.080 ms	! F >> H	86 mm
TE 3	2.09 ms	! A >> P	152 mm
TE 4	3.100 ms	!R >> L	157 mm
Averages	1	1	107 111111
Concatenations	1	Physio	
Filter	None	1st Signal/Mode	None
Coil elements	A32	Inline	
Contrast		Subtract	Off
MTC	Off	Std-Dev-Sag	Off
Flip angle	90 deg	Std-Dev-Cor	Off
Fat suppr.	None	Std-Dev-Tra	Off
Water suppr.	None	Std-Dev-Time	Off
Averaging mode	Short term	MIP-Sag	Off
Reconstruction	Magn./Phase	MIP-Cor	Off
Measurements	1	MIP-Tra	Off
Multiple series	Off	MIP-Time	Off
Resolution		Save original images	On
Base resolution	32	Sequence	
Phase resolution	100 %	Introduction	Off
Slice resolution	100 %	Dimension	3D
Phase partial Fourier	Off	Contrasts	4
Interpolation	Off	Bandwidth	1560 Hz/Px
Image Filter	Off	Gradient mode	Fast
Distortion Corr.	Off	RF spoiling	On
Prescan Normalize	Off		-
Normalize	Off	Online ICE	Off
B1 filter	Off	RF pulse type Pulse duration	square
Raw filter	Off	Spoil me!	500 us On
Elliptical filter	Off	TR2/TR1	5
-			U

N dummy TRs Sample T1 20 1800 ms 0.6000 Diffusion damping d= bD Diffusion coefficient D $2.2000 \ \mu m2/ms$ RF spoil phase increment 129.3 deg Number of pulse shapes TX/RX Nucleus 1H TX/RX delta frequency 0 Hz None TX Nucleus TX delta frequency 0 Hz

\\USER\UserProtocols\Renzo\T1_3D_EPI_setup\MP2RAGE_0.70iso_800_2700_from_Kanny Voxel size: 0.7×0.7×0.7 mm Rel. SNR: 1.00

USER: tfl_wip900b17a

TA: 10:08

PAT: 3

1A. 10.06 PA1	. 5 VOXELSIZE. U.7XU.7X	.u./ IIIII Kei. SINK. 1.00 USE	:R. III_WIP900D17a
		Distortion Corr.	On
Properties		—— Mode	On 3D
Prio Recon	Off	Unfiltered images	Off
Before measurement		Prescan Normalize	Off
After measurement		Raw filter	Off
Load to viewer	On	Elliptical filter	Off
Inline movie	Off	· ·	Oll
Auto store images	On	Geometry	
Load to stamp segments	Off	Multi-slice mode	Single shot
Load images to graphic	Off	Series	Interleaved
segments			
Auto open inline display	Off	Table position	Н
Start measurement without	On	Table position	0 mm
further preparation		Inline Composing	Off
Wait for user to start	Off	System	
Start measurements	single	System V32	Off
Routine			
Slab group 1		A32	On
Slabs	1	Positioning mode	REF
Dist. factor	50 %	MSMA	S - C - T
Position	L0.3 A41.3 F37.9	Sagittal	R >> L
Orientation	Sagittal	Coronal	A >> P
Phase enc. dir.	A >> P	Transversal	F >> H
Rotation	0.00 deg	Save uncombined	Off
Phase oversampling	0 %	Coil Combine Mode	Adaptive Combine
Slice oversampling	7.1 %	AutoAlign	·
Slices per slab	224	Auto Coil Select	Default
FoV read	224 mm	Obias as a de	04
FoV phase	100.0 %	Shim mode	Standard
Slice thickness	0.70 mm	Adjust with body coil	Off
TR	6000 ms	Confirm freq. adjustment	Off
TE	3.02 ms	Assume Silicone	Off
Averages	1	! Ref. amplitude 1H	277.000 V
Concatenations	1	Adjustment Tolerance	Auto
Filter	Distortion Corr.(3D)	Adjust volume	D4 0 405 0 114 0
Coil elements	A32	! Position	R1.3 A35.6 H4.8
	7.10=	! Orientation	T > C-2.0
Contrast		! Rotation ! R >> L	0.00 deg 160 mm
Magn. preparation	Non-sel. IR	! K >> L ! A >> P	196 mm
TI 1	800 ms		. =
TI 2	2700 ms	!F>> H	49 mm
Flip angle 1	4 deg	Physio	
Flip angle 2	5 deg	1st Signal/Mode	None
Fat suppr.	None	Doub blood	O#
Water suppr.	None	Dark blood	Off
2nd Inversion Contrast	On	Resp. control	Off
Averaging mode	Long term	Commonina	
Reconstruction	Magn./Phase	Composing	
Measurements	1	Sequence	
Multiple series	Each measurement	Introduction	On
•		Dimension	3D
Resolution		Elliptical scanning	Off
Base resolution	320	Asymmetric echo	Off
Phase resolution	100 %	Contrasts	1
Slice resolution	100 %	Bandwidth	240 Hz/Px
Phase partial Fourier	6/8	Flow comp.	No
Slice partial Fourier	6/8	Echo spacing	7.1 ms
PAT mode	GRAPPA		
Accel. factor PE	3	RF pulse type	Fast
Ref. lines PE	32	Gradient mode	Fast*
Accel. factor 3D	1	Excitation	Non-sel.
Reference scan mode	Integrated	RF spoiling	On
		FFT Scale Factor	150 %
Image Filter	Off	Morphometry Analysis	Off
		, , , , , , , , , , , , , , , , , , , ,	

FID MoCo Logging	Off
FID Coil Phase Corr.	Off
LIN/PAR Swap	Off
Ext. INV Pulse	On
Flip Angle	700
Phase Filter	0 px
Uniform Image	On
Head Mask on UNI	Off
T1 Map	On
Complex Div. Image	On
Denoise Weighting	150
FLAWS	Off

\\USER\UserProtocols\Renzo\T1_3D_EPI_setup\VASO_T1_39_slices_SMS3_GMRAPPA3

TA: 13:54	PAT: 3 Voxel size: 1.2x1.2	2×1.6 mm Rel. SNR: 1.00	UNKNOWN:
Properties		Prescan Normalize Raw filter	Off Off
Prio Recon	Off	Elliptical filter	Off
Before measurement		Hamming	Off
After measurement		1	○ II
Load to viewer	On	Geometry	
Inline movie	Off	Multi-slice mode	Interleaved
Auto store images	On	Series	Descending
Load to stamp segments	Off	Special act	Parallel F
Load images to graphic	Off	Special sat.	
segments		Gap	25.0 mm 100 mm
Auto open inline display	Off	Thickness	
Start measurement without	On	Table position	Н
further preparation		Table position	0 mm
Wait for user to start	Off	Inline Composing	Off
Start measurements	single		
Pouting	-	System	0"
Routine Clina group 1		_ V32	Off
Slice group 1	30	A32	On
Slices	39	Positioning mode	FIX
Dist. factor	40 %	MSMA	S - C - T
Position	R1.0 A17.7 H20.2	Sagittal	8 - C - 1 R -> L
Orientation	T > C-15.3	Coronal	A >> P
Phase enc. dir.	A >> P	Transversal	F >> H
Rotation	0.00 deg	Save uncombined	r >> n Off
Phase oversampling	0 %	Coil Combine Mode	Sum of Squares
FoV read	192 mm	AutoAlign	
FoV phase	100.0 %	Auto Align Auto Coil Select	 Default
Slice thickness	1.6 mm	Auto Coii Select	Delaul
TR	1716.3 ms	Shim mode	Standard
TE	24 ms	Adjust with body coil	Off
Averages	1	Confirm freq. adjustment	Off
Concatenations	1	Assume Silicone	Off
Filter	None	! Ref. amplitude 1H	220.000 V
Coil elements	A32	Adjustment Tolerance	Auto
Contrast		Adjust volume	
Perf / VASO mode	SS-SI VASO	Position	R1.4 A21.6 H19.4
TI2	950 ms	! Orientation	Sagittal
TI12	50 ms	! Rotation	14.27 deg
TI1s	50 ms	! F >> H	85 mm
Flip angle		! A >> P	191 mm
	90 deg	! R >> L	157 mm
Fat suppr.	Fat sat.	Į.	
Fat sat. mode	Strong	Physio	
Averaging mode	Long term	1st Signal/Mode	None
Reconstruction	Magnitude	BOLD	
Measurements	483		_
Delay in TR	0 ms	Sequence	
Multiple series	Off	Introduction	On
·		- Contrasts	1
Perfusion mode	PICORE Q2T	Bandwidth	1420 Hz/Px
Inversion time 1	50 ms	Free echo spacing	Off
Saturation stop time	50 ms	Echo spacing	0.81 ms
Inversion time 2	950 ms		400
Flow limit	100.0 cm/s	EPI factor	160
Resolution		RF pulse type	Normal
Base resolution	160	Gradient mode	Normal
Phase resolution	100 %	Ampl	90
Phase partial Fourier	7/8	BWDTH	300 3.1kHz
Interpolation	Off	thickness	100
interpolation	∪ II 	Phase skip	1
PAT mode	GRAPPA	Opt. TI2	1235
Accel. factor PE	3	Volumes per TI	1233
Ref. lines PE	90	FatSat flip angle	70 deg
Reference scan mode	Separate	SMS factor	70 deg 3
1	•	CIVIC IUCICI	•

CAIPI shift	2
SMS online recon	On
SMS-RF phase optim.	On
log physio files	Off
altern z-shim	0 uT/m
fixed z-shim	0 uT/m
EPI phase correction	local
PAT refscan mode	FLEET
FLEET dummies	15
FLEET flip angle	15
RF pulse duration	5120 us
FFT scale	8.0

\\USER\User	Protocols	\Renzo\T1_3D_EPI_setup\3	DVASO_2x3_flas	sh_CAIPI_PF_low_res	
TA: 12:16	PAT: 6	Voxel size: 3.0×3.0×3.0 mm	Rel. SNR: 1.00	USER: VASO_109	

Properties		PAT mode	GRAPPA
Prio Recon	Off	Accel. factor PE	3
Before measurement	Oli	Ref. lines PE	36
After measurement		Accel. factor 3D	2
Load to viewer	On	Ref. lines 3D	12
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	Oll	Hamming	Off
Auto open inline display	Off		Oll
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
1	J9.0	Gap	25.0 mm
Routine Slab group 1		Thickness	100 mm
Slabs	1	T 11 32	
Dist. factor	50 %	Table position	H
Position	L0.0 A23.4 H16.2	Table position	0 mm
Orientation	T > C-9.1	Inline Composing	Off
Phase enc. dir.	1 > C-9.1 A >> P	System	
Rotation	0.00 deg	V32	Off
Phase oversampling	0.00 deg 0 %	A32	On
Slice oversampling	0.0 %		
Slice oversampling Slices per slab	32	Positioning mode	FIX
FoV read	180.0 mm	MSMA	<u>S</u> - C - T
FoV phase	100.0 %	Sagittal	R >> L
Slice thickness	3.00 mm	Coronal	A >> P
TR	1524.0 ms	Transversal	F >> H
TE	1324.0 ms	Save uncombined	Off
Averages	12 1115	Coil Combine Mode	Sum of Squares
Concatenations	1	AutoAlign	
Filter	None	Auto Coil Select	Default
Coil elements	A32	Shim mode	Standard
ı	A32	Adjust with body coil	Off
Contrast		Confirm freq. adjustment	Off
Perfusion mode	Picore Q2TIPS	Assume Silicone	Off
TI2	1050 ms	! Ref. amplitude 1H	220.000 V
TI1	50 ms	Adjustment Tolerance	Auto
TI1s	50 ms	Adjust volume	
Flip angle	17 deg	! Position	R1.4 A21.6 H19.4
Fat suppr.	Fat sat.	! Orientation	Sagittal
Fat sat. mode	Strong	! Rotation	14.27 deg
Averaging mode	Long term	! F >> H	85 mm
Reconstruction	Magnitude	! A >> P	191 mm
Measurements	483	! R >> L	157 mm
Delay in TR	0 ms	Dhusia	
Multiple series	Off	Physio	
	-	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	1050.0 ms	1 ·	
Flow limit	100.0 cm/s	Sequence	0.75
Resolution		Introduction	On
Base resolution	60	Dimension Paordoring	3D Linear
Phase resolution	100 %	Reordering	Linear
Slice resolution	100 %	Contrasts	1 1952 H=/Dy
Phase partial Fourier	7/8	Bandwidth	1852 Hz/Px
Slice partial Fourier	7/8	Free echo spacing	Off
Interpolation	Off	Echo spacing	0.64 ms
	- **	EPI factor	60

RF pulse type Gradient mode Excitation RF spoiling	Normal Normal Slab-sel. On
Ampl BWDTH thickness use Ernst angle Maxwell Correction log physio files FFT scale dummy prepscan time z shim RF duration RF BWTP EFFECTIVE TR PatPartitions EPI phase correction PAT refscan mode use CAIPI CAIPI shift kz CAIPI shift ky	95 150 3.1kHz 30 Off Off Off 0.50 3 s 0.00 mT/m*ms 5120 us 25.0 21336 ms 14 local segm LIN->PAR On 0
CAIPI Shift Ky	1

\\USER\UserProtocols\Renzo\T1 3D EPI setup\VASO 79 SMSfor 3DEPIcomparison1.3x1.3x1.3 TA: 12:09 PAT: 3 Voxel size: 2.8×2.8×3.0 mm Rel. SNR: 1.00 **UNKNOWN:** Prescan Normalize Off **Properties** Raw filter Off Off Prio Recon Elliptical filter Off Before measurement Hamming Off After measurement On Geometry Load to viewer Inline movie Off Multi-slice mode Interleaved Auto store images On Series Ascending Load to stamp segments Off Parallel F Special sat. Load images to graphic Off 25.0 mm Gap segments **Thickness** 100 mm Auto open inline display Off Start measurement without On Table position Н further preparation Table position 0 mm Wait for user to start Off Inline Composing Off Start measurements single System Routine V32 Off Slice group 1 A32 On Slices 33 Positioning mode FIX Dist. factor 0 % **MSMA** S-C-T Position L0.0 A23.4 H16.2 Sagittal R >> L Orientation T > C-9.1Coronal A >> P Phase enc. dir. A >> P Transversal F >> H Rotation 0.00 deg Save uncombined Off Phase oversampling 0 % Coil Combine Mode Sum of Squares FoV read 180 mm AutoAlign FoV phase 100.0 % **Auto Coil Select** Default Slice thickness 3.0 mm TR 1500.0 ms Standard Shim mode ΤE 14 ms Adjust with body coil Off **Averages** 1 Confirm freq. adjustment Off Concatenations Assume Silicone Off Filter None ! Ref. amplitude 1H 220,000 V Coil elements A32 Adjustment Tolerance Auto Adjust volume Contrast ! Position R1.4 A21.6 H19.4 Perf / VASO mode SS-SI VASO ! Orientation Sagittal TI2 1100 ms 14.27 deg ! Rotation TI1 50 ms !F>>H 85 mm TI1s 50 ms ! A >> P 191 mm Flip angle 90 deg ! R >> L 157 mm Fat suppr. Fat sat. Fat sat. mode Strong Physio 1st Signal/Mode None Long term Averaging mode Reconstruction Magnitude **BOLD** 483 Measurements Sequence Delay in TR 0 ms Introduction On Multiple series Off Contrasts 1 Perfusion mode PICORE Q2T Bandwidth 1860 Hz/Px Inversion time 1 50 ms Free echo spacing Off Saturation stop time 50 ms 0.64 ms Echo spacing Inversion time 2 1100 ms EPI factor 64 Flow limit 100.0 cm/s RF pulse type Normal Resolution Gradient mode Normal Base resolution 64 IgmA 100 % 90 Phase resolution **BWDTH** 300 3.1kHz Phase partial Fourier Off thickness 100 Interpolation Off Phase skip 30 **GRAPPA** PAT mode

Accel. factor PE

Reference scan mode

Ref. lines PE

3

36

Separate

Opt. TI2

Volumes per TI

FatSat flip angle

SMS factor

1106

110 deg

1

3

CAIPI shift	2
SMS online recon	On
SMS-RF phase optim.	On
log physio files	Off
altern z-shim	0 uT/m
fixed z-shim	0 uT/m
EPI phase correction	normal
PAT refscan mode	FLEET
FLEET dummies	15
FLEET flip angle	15
RF pulse duration	7680 us
FFT scale	8.0

\\USER\UserProtocols\Renzo\T1_3D_EPI_setup\MP2RAGE_Recon_FAIL

USER: tfl_wip900b17a

Voxel size: 0.7x0.7x0.7 mm Rel. SNR: 1.00

TA: 2:44

1A. 2.44 FAT	. 5 VOXEI SIZE. U.7XU.7X	0.7 IIIII Rei. SINR. 1:00 USE	K. III_WIP900017a
5		Distortion Corr.	On
Properties	~"	Mode	3D
Prio Recon	Off	Unfiltered images	Off
Before measurement		Prescan Normalize	Off
After measurement		Raw filter	Off
Load to viewer	On	Elliptical filter	Off
Inline movie	Off	· ·	
Auto store images	On	Geometry	
Load to stamp segments	Off	Multi-slice mode	Single shot
Load images to graphic	Off	Series	Interleaved
segments			
Auto open inline display	Off	Table position	Н
Start measurement without	On	Table position	0 mm
further preparation		Inline Composing	Off
Wait for user to start	Off	Cyptom	
Start measurements	single	System	0#
Routine		V32	Off
		A32	On
Slab group 1 Slabs	1	Positioning mode	REF
Dist. factor	50 %	MSMA	S - C - T
Position	50 % L2.2 A23.6 H41.1	Sagittal	R >> L
		Coronal	A >> P
Orientation	T > S-7.2	Transversal	F >> H
Phase enc. dir.	A >> P	Save uncombined	Off
Rotation	0.00 deg	Coil Combine Mode	Adaptive Combine
Phase oversampling	0 %	AutoAlign	
Slice oversampling	20.0 %	Auto Coil Select	Default
Slices per slab	30	Auto Coil Select	Delault
FoV read	224 mm	Shim mode	Standard
FoV phase	100.0 %	Adjust with body coil	Off
Slice thickness	0.70 mm	Confirm freq. adjustment	Off
TR	6000 ms	Assume Silicone	Off
TE	3.47 ms	! Ref. amplitude 1H	277.000 V
Averages	1	Adjustment Tolerance	Auto
Concatenations	1	Adjust volume	
Filter	Distortion Corr.(3D)	! Position	R1.3 A22.3 H35.8
Coil elements	A32	! Orientation	T > C-2.0
Contrast		! Rotation	0.00 deg
	Non-sel. IR		160 mm
Magn. preparation		! A >> P	196 mm
TI 1 TI 2	800 ms 2700 ms	! F >> H	49 mm
		ı	
Flip angle 1	4 deg	Physio	
Flip angle 2	5 deg	1st Signal/Mode	None
Fat suppr.	None	Dark blood	Off
Water suppr.	None	Dark blood	Off
2nd Inversion Contrast	On	Resp. control	Off
Averaging mode	Long term	•	
Reconstruction	Magn./Phase	Composing	
Measurements	1	Sequence	
Multiple series	Each measurement	Introduction	On
· ·		Dimension	3D
Resolution		Elliptical scanning	Off
Base resolution	320	Asymmetric echo	Off
Phase resolution	100 %	Contrasts	1
Slice resolution	100 %	Bandwidth	240 Hz/Px
Phase partial Fourier	6/8	Flow comp.	No
Slice partial Fourier	6/8	Echo spacing	7.2 ms
PAT mode	GRAPPA	RF pulse type	Fast
Accel. factor PE	3	Gradient mode	Fast*
Ref. lines PE	32	Excitation	Slab-sel.
Accel. factor 3D	1	RF spoiling	On On
Reference scan mode	Integrated		
Image Filter	Off	FFT Scale Factor	150 %
inage i illei	Oil	Morphometry Analysis	Off

FID MoCo Logging	Off
FID Coil Phase Corr.	Off
LIN/PAR Swap	On
Ext. INV Pulse	Off
Phase Filter	0 px
Uniform Image	Off
Head Mask on UNI	Off
T1 Map	On
Complex Div. Image	Off
Denoise Weighting	150
FLAWS	Off

\\USER\UserProt	tocols\Renzo\T1_3D_EP	I_setup\MP2RAGE_slab_0.70i	so_800_2700_slab
TA: 23:02 PA1	Γ: 2 Voxel size: 0.7×0.7×	0.7 mm Rel. SNR: 1.00 USE	ER: tfl_wip900b17a
- ·		Phase partial Fourier	6/8
Properties	0"	Slice partial Fourier	6/8
Prio Recon	Off		004004
Before measurement		PAT mode	GRAPPA
After measurement		Accel. factor PE	2
Load to viewer	On O"	Ref. lines PE	32
Inline movie	Off	Accel. factor 3D	1
Auto store images	On O"	Reference scan mode	Integrated
Load to stamp segments	Off	Image Filter	Off
Load images to graphic	Off	Distortion Corr.	Off
segments		Prescan Normalize	Off
Auto open inline display	Off	Raw filter	Off
Start measurement without	On	Elliptical filter	Off
further preparation		Linptical litter	Oli
Wait for user to start	Off	Geometry	
Start measurements	single	Multi-slice mode	Single shot
Routine		Series	Interleaved
Slab group 1			
Slabs	1	Table position	H
Dist. factor	50 %	Table position	0 mm
		Inline Composing	Off
Position Orientation	L2.2 A23.6 H41.1 T > S-7.2		
	_	System	
Phase enc. dir.	A >> P	V32	Off
Rotation	0.00 deg	A32	On
Phase oversampling	0 %	Desitioning made	REF
Slice oversampling	0.0 %	Positioning mode	
Slices per slab	30	MSMA	S - C - T R >> L
FoV read	192 mm	Sagittal	
FoV phase	100.0 %	Coronal	A >> P
Slice thickness	0.70 mm	Transversal	F >> H
TR	6000 ms	Save uncombined	Off
TE 1	3.44 ms	Coil Combine Mode	Adaptive Combine
TE 2	7.75 ms	AutoAlign	 D ()
Averages	1	Auto Coil Select	Default
Concatenations	1	Shim mode	Standard
Filter	None	Adjust with body coil	Off
Coil elements	A32	Confirm freq. adjustment	Off
Contrast		Assume Silicone	Off
Magn. preparation	Non-sel. IR	! Ref. amplitude 1H	277.000 V
TI 1	800 ms	Adjustment Tolerance	Auto
TI 2	2700 ms	Adjust volume	Adio
Flip angle 1	4 deg	! Position	R1.3 A22.3 H35.8
Flip angle 2	5 deg	! Orientation	T > C-2.0
	_	! Rotation	0.00 deg
Fat suppr. Water suppr.	None None	! Rotation	160 mm
		! A >> P	196 mm
2nd Inversion Contrast	On	! F>> H	
Averaging mode	Long term	:r <i>>></i>	49 mm
Reconstruction	Magn./Phase	Physio	
Measurements	10	1st Signal/Mode	None
Pause after meas. 1	0.0 s		
Pause after meas. 2	0.0 s	Dark blood	Off
Pause after meas. 3	0.0 s	Resp. control	Off
Pause after meas. 4	0.0 s	ı ·	5
Pause after meas. 5	0.0 s	Composing	
Pause after meas. 6	0.0 s	Seguence	
Pause after meas. 7	0.0 s	Sequence	00
Pause after meas. 8	0.0 s	Introduction	On
Pause after meas. 9	0.0 s 0.0 s	Dimension	3D Off
Multiple series	Each measurement	Elliptical scanning	Off
I maniple series	Lacii ilicasulcillelli	Asymmetric echo	Off
Resolution		Contrasts	2
Base resolution	276	Bandwidth 1	240 Hz/Px
Phase resolution	100 %	Bandwidth 2	240 Hz/Px

Flow comp.

No

100 %

Slice resolution

Readout mode Echo spacing	Bipolar 11.4 ms
RF pulse type Gradient mode Excitation RF spoiling	Fast* Fast* Slab-sel. On
FFT Scale Factor Morphometry Analysis FID MoCo Logging FID Coil Phase Corr. LIN/PAR Swap Ext. INV Pulse Flip Angle Phase Filter Uniform Image Head Mask on UNI T1 Map Complex Div. Image Denoise Weighting FLAWS Echo Averaging	150 % On Off Off On On 1400 0 px On On On On On On Off Off Off