\\USER\UserProtocols\Renzo\JiaJia\use_me_12_slices_0.68_3DVASO_ONE_Hemisphere_GRAPPA2_PF68
TA: 28:12 PAT: 2 Voxel size: 0.7×0.7×1.8 mm Rel. SNR: 1.00 USER: VASO_109

Properties		PAT mode	GRAPPA
Prio Recon	Off	Accel. factor PE	2
Before measurement	OII	Ref. lines PE	24
After measurement		Accel. factor 3D	1
Load to viewer	On	Ref. lines 3D	8
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
1	3 -	Gap	25.0 mm
Routine		Thickness	100 mm
Slab group 1			
Slabs	1	Table position	Н
Dist. factor	50 %	Table position	0 mm
Position	R35.5 A18.0 H44.7	Inline Composing	Off
Orientation	T > S38.3	System	
Phase enc. dir.	R >> L	V32	Off
Rotation	60.00 deg	A32	On
Phase oversampling	0 %	A32	
Slice oversampling	0.0 %	Positioning mode	FIX
Slices per slab	12	MSMA	S - C - T
FoV read	32.7 mm	Sagittal	R >> L
FoV phase	300.0 %	Coronal	A >> P
Slice thickness	1.80 mm	Transversal	F >> H
TR	1756.70 ms	Save uncombined	Off
TE	25 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	Picore Q2TIPS	Confirm freq. adjustment Assume Silicone	Off
TI2	800 ms		Off
TI1	50 ms	! Ref. amplitude 1H	220.000 V
TI1s	50 ms	Adjustment Tolerance	Auto
Flip angle	29 deg	Adjust volume	D24 0 A40 0 H22 5
Fat suppr.	Fat sat.	! Position	R34.0 A18.8 H32.5
Fat sat. mode	Strong	! Orientation	Transversal
		! Rotation	0.00 deg
Averaging mode	Long term	! R >> L ! A >> P	89 mm 64 mm
Reconstruction	Magnitude		-
Measurements	963	! F >> H	58 mm
Delay in TR	0 ms	Physio	
Multiple series	Off	1st Signal/Mode	None
Perfusion mode	PICORE Q2T	BOLD	
Inversion time 1	50 ms		0#
Saturation stop time	50 ms	Motion correction	Off
Inversion time 2	800.0 ms	Spatial filter	Off
Flow limit	100.0 cm/s	Sequence	
	. 55.6 511//5	Introduction	On
Resolution		Dimension	3D
Base resolution	46	Reordering	Linear
Phase resolution	100 %	Contrasts	1
Slice resolution	100 %	Bandwidth	1026 Hz/Px
Phase partial Fourier	6/8	Free echo spacing	Off
Slice partial Fourier	Off	Echo spacing	1.1 ms
Interpolation	Off		
I		EPI factor	138

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 FlashRef BaseRes FlashRef BW FlashRef TE FlashRef FA use CAIPI	110 150 3.1kHz 30 Off Off Off Off 1.00 3 s 0.00 mT/m*ms 1250 us 25.0 21080 ms 12 local Flash 46 1000 Hz/px 4800 us 5 deg Off

\\USER\UserProtocols\Renzo\JiaJia\MP2RAGE_0.70iso_withPF_double_echo

TA: 10:08 PAT	: 3 Voxel size: 0.7×0.7×	:0.7 mm Rel. SNR: 1.00 USE	ER: tfl_wip900b17a
5		Image Filter	Off
Properties		— Distortion Corr.	On
Prio Recon	Off	Mode	3D
Before measurement		Unfiltered images	Off
After measurement	_	Prescan Normalize	Off
Load to viewer	On	Raw filter	Off
Inline movie	Off	Elliptical filter	Off
Auto store images	On	· ·	
Load to stamp segments	Off	Geometry	
Load images to graphic	Off	Multi-slice mode	Single shot
segments		Series	Interleaved
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			Off
Slab group 1		V32 A32	Off
Slabs	1	M32	On
Dist. factor	50 %	Positioning mode	REF
Position	L0.3 A25.2 F13.8	MSMA	S - C - T
Orientation	Sagittal	Sagittal	R >> L
Phase enc. dir.	Sagillai A >> P	Coronal	A >> P
Rotation	0.00 deg	Transversal	F >> H
Phase oversampling	0.00 deg 0 %	Save uncombined	Off
Slice oversampling	7.1 %	Coil Combine Mode	Adaptive Combine
Slices per slab	224	AutoAlign	
FoV read	224 mm	Auto Coil Select	Default
FoV phase	100.0 %	Shim mode	Standard
Slice thickness	0.70 mm	Adjust with body coil	Off
TR TE 1	6000 ms 2.96 ms	Confirm freq. adjustment	Off
		Assume Silicone	Off
TE 2	7.28 ms	! Ref. amplitude 1H	277.000 V
Averages	1	Adjustment Tolerance	Auto
Concatenations	Distantian Com (OD)	Adjust volume	
Filter	Distortion Corr.(3D)	! Position	R36.8 A22.8 H42.9
Coil elements	A32	! Orientation	Transversal
Contrast		! Rotation	0.00 deg
Magn. preparation	Non-sel. IR	! R >> L	79 mm
TI 1	750 ms	! A >> P	152 mm
TI 2	2800 ms	! F >> H	52 mm
Flip angle 1	4 deg	Physio	
Flip angle 2	5 deg		None
Fat suppr.	None	1st Signal/Mode	None
Water suppr.	None	Dark blood	Off
2nd Inversion Contrast	On		
		Resp. control	Off
Averaging mode	Long term	Composing	
Reconstruction	Magn./Phase		
Measurements	1	Sequence	
Multiple series	Each measurement	Introduction	On
Resolution		Dimension	3D
Base resolution	320	Elliptical scanning	Off
Phase resolution	320 100 %	Asymmetric echo	Off
		Contrasts	2
Slice resolution	100 %	Bandwidth 1	250 Hz/Px
Phase partial Fourier	6/8	Bandwidth 2	240 Hz/Px
Slice partial Fourier	6/8	Flow comp.	No
PAT mode	GRAPPA	Readout mode	Bipolar
Accel, factor PE	3	Echo spacing	11.3 ms
Ref. lines PE	32		
Accel. factor 3D	1	RF pulse type	Fast
Reference scan mode	Integrated	Gradient mode	Fast*
		Excitation	Non-sel.

RF spoiling	On
FFT Scale Factor	150 %
Morphometry Analysis	Off
FID MoCo Logging	Off
FID Coil Phase Corr.	On
LIN/PAR Swap	Off
Ext. INV Pulse	On
Flip Angle	700
Phase Filter	48 px
Uniform Image	On
Head Mask on UNI	On
T1 Map	On
Complex Div. Image	On
Denoise Weighting	300
FLAWS	Off
Echo Averaging	On

\\USER\UserProtocols\Renzo\JiaJia\MP2RAGE_slab_0.4x04x1.2_T1

USER: tfl_wip900b17a

Voxel size: 0.4×0.4×1.2 mm Rel. SNR: 1.00

PAT: 2

TA: 2:26

			_ ,
Properties		Distortion Corr. Prescan Normalize	Off Off
Prio Recon	Off	Raw filter	Off
Before measurement After measurement		Elliptical filter	Off
Load to viewer	On	Geometry	
Inline movie	Off	Multi-slice mode	Single shot
Auto store images	On	Series	Interleaved
Load to stamp segments	Off		
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	Inline Composing	Oli
further preparation	.	System	
Wait for user to start	Off	V32	Off
Start measurements	single	A32	On
ı	og.o	Destination and	FIV
Routine		Positioning mode	FIX
Slab group 1		MSMA	S - C - T
Slabs	1	Sagittal	R >> L
Dist. factor	50 %	Coronal	A >> P
Position	R30.1 P0.3 H28.1	Transversal	F >> H
Orientation	T > S30.8 > C-11.5	Save uncombined	Off
Phase enc. dir.	R >> L	Coil Combine Mode	Adaptive Combine
Rotation	60.00 deg	AutoAlign	
Phase oversampling	0 %	Auto Coil Select	Default
Slice oversampling	0.0 %	Shim mode	Standard
Slices per slab	32	Adjust with body coil	Off
FoV read	140 mm	Confirm freq. adjustment	Off
FoV phase	100.0 %	Assume Silicone	Off
Slice thickness	1.20 mm	! Ref. amplitude 1H	277.000 V
TR	6000 ms	Adjustment Tolerance	Auto
TE	4.23 ms	Adjust volume	Auto
Averages	1	! Position	R26.7 A7.7 H20.0
Concatenations	1	! Orientation	
Filter	None		Transversal
Coil elements	A32	! Rotation	0.00 deg
1	,	! R >> L	89 mm
Contrast			64 mm
Magn. preparation	Non-sel. IR	!F>> H	58 mm
TI 1	900 ms	Physio	
TI 2	2900 ms	1st Signal/Mode	None
Flip angle 1	6 deg		
Flip angle 2	7 deg	Dark blood	Off
Fat suppr.	None	Resp. control	Off
Water suppr.	None	· '	O.I.
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
Decelution		Asymmetric echo	Off
Resolution		Contrasts	1
Base resolution	320	Bandwidth	190 Hz/Px
Phase resolution	100 %	Flow comp.	No
Slice resolution	100 %	Echo spacing	8.6 ms
Phase partial Fourier	Off		
Slice partial Fourier	6/8	RF pulse type	Fast
PAT mode	GRAPPA	Gradient mode	Fast
Accel, factor PE	2	Excitation	Slab-sel.
Ref. lines PE	24	RF spoiling	On
Accel. factor 3D	∠ 1 1	FET Scale Factor	150 %
	Integrated	FFT Scale Factor	
Reference scan mode	Integrated	Morphometry Analysis	Off Off
Image Filter	Off	FID MoCo Logging FID Coil Phase Corr.	Off Off
		FID Coll Phase Coff.	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

\\USER\UserProtocols\Renzo\JiaJia\Checklist_ok

TA: 1:12 PAT: Off Voxel size: 1.0×1.0×5.0 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 and it an	
ı	onigio	Table position	Н
Routine		Table position	0 mm
Slice group 1		Inline Composing	Off
Slices	7	System	
Dist. factor	180 %	V32	Off
Position	R1.0 A29.5 F23.2	A32	On
Orientation	Sagittal		
Phase enc. dir.	A >> P	Positioning mode	REF
Rotation	0.00 deg	MSMA	S - C - T
Slice group 2	Ğ	Sagittal	R >> L
Slices	8	Coronal	A >> P
Dist. factor	75 %	Transversal	F >> H
Position	R3.5 A29.4 H30.5	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	0.00 deg		
Slices	5	Shim mode	Tune up
Dist. factor	100 %	Adjust with body coil	Off
Position	L0.0 A6.8 F24.4	Confirm freq. adjustment	Off
Orientation	Coronal	Assume Silicone	Off
Phase enc. dir.	R >> L	! Ref. amplitude 1H	220.000 V
Rotation	0.00 deg	Adjustment Tolerance	Auto
Phase oversampling	0.00 deg 0 %	Adjust volume	
Foldse oversampling	200 mm	Position	Isocenter
		Orientation	Transversal
FoV phase	100.0 %	Rotation	0.00 deg
Slice thickness	5.0 mm	R >> L	350 mm
TR	3500 ms	A >> P	263 mm
TE	3.17 ms	F >> H	350 mm
Averages	1	Physic	
Concatenations	20	Physio	Name
Filter	None	1st Signal/Mode	None
Coil elements	A32	Dark blood	Off
Contrast			
TD	0 ms	Resp. control	Off
Magn. preparation	Slice-sel. IR	Inline	
Т	1100 ms	Subtract	Off
Flip angle	5 deg	Std-Dev-Sag	Off
Fat suppr.	None	Std-Dev-Gag Std-Dev-Cor	Off
Water suppr.	None	Std-Dev-Col	Off
		Std-Dev-Tra	Off
Averaging mode	Long term		Off
Reconstruction	Magnitude	MIP-Sag	_
Measurements	1	MIP-Cor	Off
Multiple series	Each measurement	MIP-Tra	Off
· ·		MIP-Time	Off
Resolution	102	Save original images	On
Base resolution	192	1	
Phase resolution	100 %	Sequence	
Phase partial Fourier	Off		

Phase partial Fourier

Off

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\JiaJia\MP2RAGE_slab_0.4x04x1.2_T1

USER: tfl_wip900b17a

Voxel size: 0.4×0.4×1.2 mm Rel. SNR: 1.00

PAT: 2

TA: 2:26

			_ ,
Properties		Distortion Corr. Prescan Normalize	Off Off
Prio Recon	Off	Raw filter	Off
Before measurement After measurement		Elliptical filter	Off
Load to viewer	On	Geometry	
Inline movie	Off	Multi-slice mode	Single shot
Auto store images	On	Series	Interleaved
Load to stamp segments	Off		
Load images to graphic	Off	Table position	H
segments		Table position	0 mm
Auto open inline display	Off	Inline Composing	Off
Start measurement without	On		Oli
further preparation	-	System	
Wait for user to start	Off	V32	Off
Start measurements	single	A32	On
Doubles	3	Positioning mode	FIX
Routine		MSMA	S - C - T
Slab group 1	_	Sagittal	R >> L
Slabs	1	Coronal	A >> P
Dist. factor	50 %	Transversal	F >> H
Position	R30.1 P0.3 H28.1	Save uncombined	Off
Orientation	T > S30.8 > C-11.5	Coil Combine Mode	- · · ·
Phase enc. dir.	R >> L		Adaptive Combine
Rotation	60.00 deg	AutoAlign Auto Coil Select	 Default
Phase oversampling	0 %	Auto Coil Select	Default
Slice oversampling	0.0 %	Shim mode	Standard
Slices per slab	32	Adjust with body coil	Off
FoV read	140 mm	Confirm freq. adjustment	Off
FoV phase	100.0 %	Assume Silicone	Off
Slice thickness	1.20 mm	! Ref. amplitude 1H	277.000 V
TR	6000 ms	Adjustment Tolerance	Auto
TE	4.23 ms	Adjust volume	
Averages	1	! Position	R26.7 A7.7 H20.0
Concatenations	1	! Orientation	Transversal
Filter	None	! Rotation	0.00 deg
Coil elements	A32	! R >> L	89 mm
Contrast		! A >> P	64 mm
Magn. preparation	Non-sel. IR		58 mm
TI 1	900 ms	1	33
TI 2	2900 ms	Physio	
Flip angle 1	6 deg	1st Signal/Mode	None
Flip angle 2	7 deg	Dark blood	Off
Fat suppr.	None		
Water suppr.	None	Resp. control	Off
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
Resolution		Asymmetric echo	Off
	200	Contrasts	1
Base resolution	320	Bandwidth	190 Hz/Px
Phase resolution	100 %	Flow comp.	No
Slice resolution	100 %	Echo spacing	8.6 ms
Phase partial Fourier	Off		
Slice partial Fourier	6/8	RF pulse type	Fast
PAT mode	GRAPPA	Gradient mode	Fast
Accel. factor PE	2	Excitation	Slab-sel.
Ref. lines PE	24	RF spoiling	On
Accel. factor 3D	_ · 1	FFT Scale Factor	150 %
Reference scan mode	Integrated	Morphometry Analysis	Off
		FID MoCo Logging	Off
Image Filter	Off	FID Coil Phase Corr.	Off
		1 1.5 0011 11036 0011.	5 11

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

\\USER\UserProtocols\Renzo\JiaJia\predition_run

TA: 15:01 PAT: 2 Voxel size: 0.7×0.7×1.8 mm Rel. SNR: 1.00 USER: VASO_109			
.		PAT mode	GRAPPA
Properties		Accel. factor PE	2
Prio Recon	Off	Ref. lines PE	24
Before measurement		Accel. factor 3D	1
After measurement Load to viewer	On	Ref. lines 3D	8
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		5
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		Gap	25.0 mm
Slab group 1		Thickness	100 mm
Slabs	1	Table position	H
Dist. factor	50 %	Table position Table position	П 0 mm
Position	R33.7 A7.8 H20.4	Inline Composing	Off
Orientation	T > S35.9	I milite Composing	Oll
Phase enc. dir.	R >> L	System	
Rotation	60.00 deg	V32	Off
Phase oversampling	0 %	A32	On
Slice oversampling	0.0 %	Positioning mode	FIX
Slices per slab	12	MSMA	S - C - T
FoV read	32.7 mm	Sagittal	R >> L
FoV phase	300.0 %	Coronal	A >> P
Slice thickness	1.80 mm	Transversal	F >> H
TR	1756.70 ms	Save uncombined	Off
TE	25 ms	Coil Combine Mode	Sum of Squares
Averages	1	AutoAlign	·
Concatenations	1	Auto Coil Select	Default
Filter	None	Shim mode	Ctandard
Coil elements	A32	Adjust with body coil	Standard Off
Contrast		Confirm freq. adjustment	Off
Perfusion mode	Picore Q2TIPS	Assume Silicone	Off
TI2	800 ms	! Ref. amplitude 1H	220.000 V
TI1	50 ms	Adjustment Tolerance	Auto
TI1s	50 ms	Adjust volume	riate
Flip angle	29 deg	! Position	R28.2 A11.1 H12.7
Fat suppr.	Fat sat.	! Orientation	Transversal
Fat sat. mode	Strong	! Rotation	0.00 deg
Averaging mode	Long term	! R >> L	89 mm ਁ
Reconstruction	Magnitude	! A >> P	81 mm
Measurements	513	! F >> H	58 mm
Delay in TR	0 ms	Physio	
Multiple series	Off	1st Signal/Mode	None
Dorfusion mode	DICORE OCT		140110
Perfusion mode Inversion time 1	PICORE Q2T 50 ms	BOLD	
Saturation stop time	50 ms	Motion correction	Off
Inversion time 2	800.0 ms	Spatial filter	Off
Flow limit	100.0 cm/s	Sequence	
		•	
I .	100.0 CH/S	Introduction	On
Resolution		Introduction Dimension	On 3D
Resolution Base resolution	46		
Resolution Base resolution Phase resolution	46 100 %	Dimension	3D
Resolution Base resolution Phase resolution Slice resolution	46 100 % 100 %	Dimension Reordering Contrasts Bandwidth	3D Linear
Resolution Base resolution Phase resolution Slice resolution Phase partial Fourier	46 100 % 100 % 6/8	Dimension Reordering Contrasts Bandwidth Free echo spacing	3D Linear 1 1026 Hz/Px Off
Resolution Base resolution Phase resolution Slice resolution	46 100 % 100 %	Dimension Reordering Contrasts Bandwidth	3D Linear 1 1026 Hz/Px

EPI factor

138

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 FlashRef BaseRes FlashRef BW FlashRef TE FlashRef FA use CAIPI	110 150 3.1kHz 30 Off Off Off Off 1.00 3 s 0.00 mT/m*ms 1250 us 25.0 21080 ms 12 local Flash 46 143 Hz/px 4800 us 5 deg Off

\\USER\UserProtocols\Renzo\JiaJia\localicer

TA: 10:20 PA	T: 2 Voxel size: 0.7x0.7x1.8	mm Rel. SNR: 1.00 US	SER: VASO_109
Properties Prio Recon Before measurement After measurement Load to viewer Inline movie Auto store images	Off On Off On	PAT mode Accel. factor PE Ref. lines PE Accel. factor 3D Ref. lines 3D Reference scan mode Prescan Normalize	GRAPPA 2 24 1 8 Separate
Load to stamp segments Off Load images to graphic Off segments Auto open inline display Off Start measurement without On further preparation Wait for user to start Off Start measurements single Routine	Off	Raw filter Elliptical filter Hamming Geometry	Off Off Off
	Multi-slice mode Series Special sat. Gap	Interleaved Ascending Parallel F 25.0 mm	
Slab group 1 Slabs Dist. factor Position Orientation	1 50 % R33.7 A7.8 H20.4	Thickness Table position Table position Inline Composing	H 0 mm Off
Phase enc. dir. Rotation Phase oversampling Slice oversampling	T > S35.9 R >> L 60.00 deg 0 % 0.0 %	System V32 A32 Positioning mode	Off On FIX
Slices per slab 12 FoV read 32.7 mm FoV phase 300.0 % Slice thickness 1.80 mm TR 1756.70 ms TE 25 ms	MSMA Sagittal Coronal Transversal Save uncombined Coil Combine Mode	S - C - T R >> L A >> P F >> H Off Sum of Squares	
Averages Concatenations Filter Coil elements	1 1 None A32	AutoAlign Auto Coil Select Shim mode Adjust with body coil	 Default Standard Off
Contrast Perfusion mode TI2 TI1 TI1s Flip angle Fat suppr. Fat sat. mode	Picore Q2TIPS 800 ms 50 ms 50 ms 29 deg Fat sat. Strong	Confirm freq. adjustment Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume ! Position ! Orientation ! Rotation	Off Off 220.000 V Auto R28.2 A11.1 H12.7 Transversal 0.00 deg
Averaging mode Reconstruction Measurements Delay in TR Multiple series	Long term Magnitude 353 0 ms Off	! R >> L ! A >> P ! F >> H Physio 1st Signal/Mode	89 mm 81 mm 58 mm
Perfusion mode Inversion time 1 Saturation stop time Inversion time 2 Flow limit	PICORE Q2T 50 ms 50 ms 800.0 ms 100.0 cm/s	BOLD Motion correction Spatial filter Sequence	Off Off
Resolution Base resolution Phase resolution Slice resolution Phase partial Fourier Slice partial Fourier Interpolation	46 100 % 100 % 6/8 Off	Introduction Dimension Reordering Contrasts Bandwidth Free echo spacing Echo spacing	On 3D Linear 1 1026 Hz/Px Off 1.1 ms

EPI factor

138

RF pulse type Gradient mode Excitation RF spoiling	Normal Normal Slab-sel. On
 Ampl	110
BWDTH	150 3.1kHz
thickness	30
use Ernst angle Maxwell Correction	Off Off
log physio files	Off
FFT scale	1.00
dummy prepscan time	3 s
z shim	0.00 mT/m*ms
RF duration	1250 us
RF BWTP	25.0
EFFECTIVE TR	21080 ms
PatPartitions	12
EPI phase correction	local
PAT refscan mode	Flash
FlashRef BaseRes	46
FlashRef BW	143 Hz/px
FlashRef TE	4800 us
FlashRef FA use CAIPI	5 deg
USE CAIPI	Off

\\USER\UserProtocols\Renzo\JiaJia\columns check phdir			
TA: 26:11 P/	AT: 2 Voxel size: 0.7×0.7×1.0	mm Rel. SNR: 1.00 U	JSER: VASO_109
Properties		PAT mode Accel, factor PE	GRAPPA 2
Prio Recon	Off	Ref. lines PE	24
Before measurement		Accel. factor 3D	1
After measurement		Ref. lines 3D	8
Load to viewer	On	Reference scan mode	Separate
Inline movie	Off		
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	Geometry	
Start measurement without	On	Multi-slice mode	Interleaved
further preparation		Series	
Wait for user to start	Off	Series	Ascending
Start measurements	single	Special sat.	Parallel F
Routine		Gap	25.0 mm
		Thickness	100 mm
Slab group 1	4		
Slabs	1 50 %	Table position	Н
Dist. factor		Table position	0 mm
Position	R33.7 A7.8 H20.4	Inline Composing	Off
Orientation	T > S35.9	System	
Phase enc. dir.	R >> L	V32	Off
Rotation	60.00 deg	A32	On
Phase oversampling	0 %		
Slice oversampling	0.0 %	Positioning mode	FIX
Slices per slab	12	MSMA	S - C - T
FoV read	32.7 mm	Sagittal	R >> L
FoV phase	300.0 %	Coronal	A >> P
Slice thickness	0.99 mm	Transversal	F >> H
TR	1702.40 ms	Save uncombined	Off
TE	26 ms	Coil Combine Mode	Sum of Squares
Averages	1	AutoAlign	
Concatenations	1	Auto Coil Select	Default
Filter	None	China mada	Chandord
Coil elements	A32	Shim mode	Standard
Contrast		Adjust with body coil	Off
Perfusion mode	Picore Q2TIPS	Confirm freq. adjustment Assume Silicone	Off
TI2	750 ms	! Ref. amplitude 1H	Off
TI1	50 ms	Adjustment Tolerance	220.000 V
TI1s	50 ms		Auto
Flip angle	34 deg	Adjust volume ! Position	R28.2 A11.1 H12.7
Fat suppr.	Fat sat.	! Orientation	
Fat sat. mode	Strong	! Rotation	Transversal
		! Rotation ! R >> L	0.00 deg
Averaging mode	Long term		89 mm 81 mm
Reconstruction	Magnitude	! A >> P	
Measurements	923	! F >> H	58 mm
Delay in TR	0 ms	Physio	
Multiple series	Off	1st Signal/Mode	None
Perfusion mode	PICORE Q2T		
Inversion time 1	50 ms	BOLD	0"
Saturation stop time	50 ms	Motion correction	Off
Inversion time 2	750.0 ms	Spatial filter	Off
Flow limit	100.0 cm/s	Sequence	
1	100.0 011//3	Introduction	On
Resolution		Dimension	3D
Base resolution	46	Reordering	Linear
Phase resolution	100 %	Contrasts	1
Slice resolution	100 %	Bandwidth	1026 Hz/Px
Phase partial Fourier	6/8	Free echo spacing	Off

Free echo spacing

Echo spacing

EPI factor

Off

138

1.1 ms

Off

Off

Slice partial Fourier

Interpolation

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 FlashRef BaseRes FlashRef BW FlashRef TE FlashRef FA use CAIPI	110 150 3.1kHz 30 Off Off Off 1.00 3 s 0.00 mT/m*ms 1456 us 25.0 20428 ms 12 local Flash 46 107 Hz/px 7000 us 5 deg Off