\\USER\UserProtocols\Renzo\190903_CELMAR\Quin_pilot_250_V1

TA: 1:05 F	PAT: Off Voxel size: 1.0x	1.0×3.0 mm Rel. SNR: 1.00	SIEMENS: tfl
Properties		Interpolation	Off
Prio Recon	Off	PAT mode	None
Before measurement	011		
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
	Off	Raw filter	Off
Load images to graphic 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	Н
Routine		Table position	0 mm
Slice group 1		Inline Composing	Off
Slice group 1	9	1	-
Dist. factor	20 %	System	~
Position	R4.0 A23.3 F1.6	V32	Off
	S > C-3.6	A32	On
Orientation	S > C-3.6 A >> P	Positioning mode	REF
Phase enc. dir. Rotation		MSMA	S-C-T
	0.00 deg	Sagittal	R >> L
Slice group 2	_	Coronal	A >> P
Slices	5	Transversal	F >> H
Dist. factor	80 %	Save uncombined	F >> F
Position	L0.0 A31.9 F4.8		
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	7	Adjust with body coil	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	Rotation R >> L	350 mm
TR	3000 ms	A >> P	263 mm
TE	3.22 ms	F >> H	350 mm
Averages	1	r >> п	330 IIIII
Concatenations	21	Physio	
Filter	None	1st Signal/Mode	None
Coil elements	A32	Dark blood	Off
Contrast TD	0 ms	Resp. control	Off
Magn. preparation	Slice-sel. IR	•	
TI	1100 ms	Inline	O#
Flip angle	6 deg	Subtract	Off O#
Fat suppr.	None	Std-Dev-Sag	Off
Water suppr.	None	Std-Dev-Cor	Off
vvalei suppi.		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		Save original images	On
Base resolution	192		
Phase resolution	100 %	Sequence	

Phase partial Fourier

Off

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

\\USER\UserProtocols\Renzo\190903_CELMAR\RENZO_GRE7_setup_GRAPPA_2

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			
Load to viewer	On	Saturation mode	Standard
Inline movie	Off	Special sat.	None
Auto store images	On		
Load to stamp segments	Off	Table position	H
Load images to graphic	Off	Table position	0 mm
segments		Inline Composing	Off
Auto open inline display	Off	Tim CT mode	Off
Start measurement without	On	ı	.
further preparation		System	
Wait for user to start	Off	V32	Off
Start measurements	single	A32	On
Routine		Positioning mode	FIX
Slice group 1		─	S - C - T
Slices	30	Sagittal	R >> L
Dist. factor	0 %	Coronal	A >> P
Position	R2.9 A15.2 H17.7	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	
Phase oversampling	0 %	Auto Coil Select	Default
FoV read	192 mm		
FoV phase	75.0 %	Shim mode	Standard
Slice thickness	0.5 mm	Adjust with body coil	Off
TR	783 ms	Confirm freq. adjustment	Off
TE	15.0 ms	Assume Silicone	Off
Averages	2	! Ref. amplitude 1H	220.000 V
Concatenations	1	Adjustment Tolerance	Auto
Filter	None	Adjust volume	
Coil elements	A32	! Position	R1.9 A15.0 H20.4
ı	7102	! Orientation	T > C-23.3 > S0.2
Contrast		! Rotation	89.78 deg
MTC	Off	- ! A >> P	178 mm
Magn. preparation	None	! R >> L	133 mm
Flip angle	40 deg	! F >> H	39 mm
Fat suppr.	None	Physio	
Water suppr.	None	1st Signal/Mode	None
SWI	Off	Segments	1
Averaging mode	Short term		
Reconstruction	Magn./Phase	Tagging	None
Measurements	1	Dark blood	Off
Multiple series	Each measurement	Resp. control	Off
Resolution		'	
Base resolution	960	Inline Subtract	Off
Phase resolution	100 %	Liver registration	Off
Phase partial Fourier	Off	Std-Dev-Sag	Off
Interpolation	Off	Std-Dev-Sag Std-Dev-Cor	Off
·······································	·····	Std-Dev-Col	Off
PAT mode	GRAPPA	Std-Dev-Time	Off
Accel. factor PE	2	MIP-Sag	Off
Ref. lines PE	45	MIP-Cor	Off
Reference scan mode	Integrated	MIP-Tra	Off
Imaga Filter	Off	MIP-Time	Off
Image Filter	Off	Save original images	On
Distortion Corr.	Off	Save Original Illiages	OII
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
		į.	

MapIt	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	\UserProto	ocols\Renzo\190903_CELM	AR\VASO_139M	AGECSSSI_setup	
TA: 0:41	PAT: 3	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	1
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	1	
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	
Dist. factor	50 %	Table position	H 0 mm
Position	R4.7 A17.5 H25.5	Table position Inline Composing	0 mm Off
Orientation	T > C-10.7 > S0.7	I mine Composing	OII
Phase enc. dir.	A >> P	System	
Rotation	0.00 deg	V32	Off
Phase oversampling	0 %	A32	On
Slice oversampling	8.3 %	Docitioning mode	DEE
Slices per slab	96	Positioning mode	REF
FoV read	133.0 mm	MSMA Societal	S - C - T R >> L
FoV phase	133.3 %	Sagittal Coronal	A >> P
Slice thickness	0.80 mm	Transversal	F >> H
TR	8288.20 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
	SS-SI VASO	Confirm freq. adjustment	Off
Perfusion mode TI2	650 ms	Assume Silicone	Off
TI12	50 ms	! Ref. amplitude 1H	220.000 V
TI1s	50 ms	Adjustment Tolerance	Auto
Flip angle	4 deg	Adjust volume	
Fat suppr.	Fat sat.	! Position	R4.8 A15.5 H22.2
Fat sat. mode	Strong	! Orientation	T > C-9.9 > S0.6
ı aı saı. moue		! Rotation	90.00 deg
Averaging mode	Long term	! A >> P	190 mm
Reconstruction	Magnitude	! R >> L	140 mm
Measurements	5	! F >> H	77 mm
Delay in TR	0 ms	Physio	
Multiple series	Off	1st Signal/Mode	None
Perfusion mode	PICORE Q2T	1	
Inversion time 1	50 ms	BOLD	0#
Saturation stop time	50 ms	Motion correction	Off Off
Inversion time 2	650.0 ms	Spatial filter	Off
Flow limit	100 cm/s	Sequence	
l ·		Introduction	On
Resolution		Dimension	3D
Base resolution	162	Reordering	Linear
Phase resolution	100 %	Contrasts	1
Slice resolution	100 %	Bandwidth	1188 Hz/Px
Phase partial Fourier	6/8	Free echo spacing	Off
Slice partial Fourier	Off	Echo spacing	0.97 ms
Interpolation	Off		216
1		·· EPI factor	216
		F1.	

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 30 On Off Off Off 1.00 3 s 0.00 mT/m*ms 2000 us 25.0 71 ms 861972 ms 104 local Flash 162 100 Hz/px 7000 us 5 deg Off

\\USER\UserProtocols\Renzo\190903_CELMAR\VASO_135_128slices				
TA: 14:07	PAT: 3	Voxel size: 0.8×0.8×0.8 mm	Rel. SNR: 1.00	USER: VASO_135

		PAT mode	GRAPPA
Properties		Accel. factor PE	3
Prio Recon	Off	Ref. lines PE	45
Before measurement		Accel. factor 3D	1
After measurement	0-	Ref. lines 3D	24
Load to viewer	On Off	Reference scan mode	Separate
Inline movie	Off	December 11	
Auto store images	On Off	Prescan Normalize	Off
Load to stamp segments	Off	Raw filter Elliptical filter	Off Off
Load images to graphic segments	Oli	Hamming	Off
Auto open inline display	Off	Паппппу	Oil
Start measurement without	On	Geometry	
further preparation	011	Multi-slice mode	Interleaved
Wait for user to start	Off	Series	Ascending
Start measurements	single	Special sat.	Parallel F
1	onigio	Gap	25.0 mm
Routine		Thickness	100 mm
Slab group 1			
Slabs	1	Table position	Н
Dist. factor	50 %	Table position	0 mm
Position	R4.7 A17.5 H25.5	Inline Composing	Off
Orientation	T > C-10.7 > S0.7	System	
Phase enc. dir.	A >> P	V32	Off
Rotation	0.00 deg 0 %	A32	On
Phase oversampling Slice oversampling			
Slice oversampling Slices per slab	8.3 % 96	Positioning mode	FIX
FoV read	133.0 mm	MSMA	S - C - T
FoV read FoV phase	133.3 %	Sagittal	R >> L
Slice thickness	0.80 mm	Coronal	A >> P
TR	8389.00 ms	Transversal	F >> H
TE TE	24 ms	Save uncombined	Off
Averages	1	Coil Combine Mode	Sum of Squares
Concatenations	1	AutoAlign	 D-f!t
Filter	None	Auto Coil Select	Default
Coil elements	A32	Shim mode	Standard
		Adjust with body coil	Off
Contrast	00.01.14.00	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	R4.8 A15.5 H22.2
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	101	! F >> H	77 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	
!	100 011/0	Introduction	On
Resolution		Dimension	3D
Base resolution	162	Reordering	Linear
Phase resolution	100 %	Contrasts	1
Slice resolution	100 %	Bandwidth	1188 Hz/Px
Phase partial Fourier	6/8	Free echo spacing	Off
Slice partial Fourier	Off	Echo spacing	0.97 ms
Interpolation	Off		246
1		EPI factor	216

RF pulse type Gradient mode Excitation RF spoiling	Normal Normal Slab-sel. On
Ampl BWDTH ph.skip 4 Robert (the one) are you Renzo? 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	100 150 3.1kHz 1 On Off Off Off 1.00 3 s 0.00 mT/m*ms 2000 us 25.0 72 ms 872456 ms 104 local Flash 162 100 Hz/px 7000 us 5 deg Off

\\USE	R\UserPro	otocols\Renzo\190903_CEL	.MAR\VASO_137_	_VAPERANAT
TA: 20:39	PAT: 3	Voxel size: 0.8×0.8×0.8 mm	Rel. SNR: 1.00	USER: VASO_137

PAT mode **GRAPPA Properties** Accel. factor PE Off Prio Recon Ref. lines PE 45 Before measurement Accel. factor 3D 1 After measurement Ref. lines 3D 24 On Load to viewer Reference scan mode Separate Inline movie Off Prescan Normalize Auto store images On Off Load to stamp segments Off Off Raw filter 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 Ascending Off Wait for user to start Start measurements single Parallel F Special sat. Gap 25.0 mm Routine 100 mm **Thickness** Slab group 1 Slabs 1 Table position Н Dist. factor 50 % Table position 0 mm Position R4.7 A17.5 H25.5 Inline Composing Off Orientation T > C-10.7 > S0.7System A >> P Phase enc. dir. Off V32 Rotation 0.00 deg A32 On Phase oversampling 0 % Slice oversampling 8.3 % Positioning mode FIX Slices per slab 96 S-C-T **MSMA** FoV read 180.0 mm Sagittal R >> L FoV phase 100.0 % Coronal A >> P 0.80 mm Slice thickness Transversal F >> H TR 12269.1 ms Save uncombined Off ΤE 24 ms Coil Combine Mode Sum of Squares Averages AutoAlign Concatenations 1 **Auto Coil Select** Default Filter None Coil elements Shim mode Standard A32 Adjust with body coil Off Contrast Confirm freq. adjustment Off Picore Q2TIPS Perfusion mode Assume Silicone Off 1100 ms ? Ref. amplitude 1H 0.000 V TI1 50 ms Adjustment Tolerance Auto TI1s 50 ms Adjust volume 26.9 dea Flip angle ! Position R4.8 A15.5 H22.2 Fat suppr. Fat sat. ! Orientation T > C-9.9 > S0.6Fat sat. mode Strong ! Rotation 90.00 deg 190 mm ! A >> P Averaging mode Long term ! R >> L 140 mm Reconstruction Magnitude !F>>H 77 mm Measurements 101 Delay in TR 0 ms Physio Multiple series Off 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 1100.0 ms Sequence Flow limit 100 cm/s Introduction On Resolution Dimension 3D 224 Base resolution Reordering Linear Phase resolution 100 % Contrasts 100 % Slice resolution 1174 Hz/Px Bandwidth Phase partial Fourier 6/8 Free echo spacing Off Slice partial Fourier Off Echo spacing 0.99 ms Interpolation Off EPI factor 224

RF pulse type Normal
Gradient mode Normal
Excitation Slab-sel.
RF spoiling On

Read Diff Amp

Phase Diff Amp

O.0 mT/m

O.1 mT/m

O.2 mT/m

O.2 mT/m

O.3 mT/m

O.3 mT/m

O.4 mT/m

O.5 mT/m

O.5 mT/m

O.6 mT/m

O.7 mT/m

O.8 mT/m

O.8 mT/m

O.9 m

Pulses FA in DANTE 11.9 degree
TAU in DANTE 1100 us
Vari readFA 0
Blank bef/aft DANTE-RF 50 us
Grad # bef DANTE 0
DANTE-RF dur 180 us
use Ernst angle Off
Maxwell Correction Off
log physic files Off

Maxwell Correction Off log physio files Off FFT scale 2.00 dummy prepscan time 3 s

0.00 mT/m*ms z shim 2200 us RF duration **RF BWTP** 25.0 **EFFECTIVE TR** 113 ms **PatPartitions** 104 EPI phase correction local Flash PAT refscan mode FlashRef BaseRes 224 FlashRef BW 200 Hz/px FlashRef TE 4800 us FlashRef FA 5 deg use CAIPI Off