\\USER\UserProtocols\Renzo\V1_template\Quin_pilot_250_V1

TA: 1:05

PAT: Off

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

SIEMENS: tfl

		Interpolation	Off
Properties		Interpolation	OII
Prio Recon	Off	PAT mode	None
Before measurement		Image Filter	Off
After measurement	_	Distortion Corr.	Off
Load to viewer	On	Prescan Normalize	Off
Inline movie	Off	Normalize	Off
Auto store images	On	B1 filter	Off
Load to stamp segments	Off	Raw filter	Off
Load images to graphic	Off	Elliptical filter	Off
segments		Liliptical litter	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		
Dist. factor	80 %	System	Off
Position	R4.0 A16.1 F1.1	V32	
Orientation	Sagittal	A32	On
Phase enc. dir.	A >> P	Positioning mode	REF
Rotation	0.00 deg	MSMA	S - C - T
Slice group 2	0.00 409	Sagittal	R >> L
Slices	5	Coronal	A >> P
Dist. factor	80 %	Transversal	F >> H
Position	L0.0 A16.7 H16.4	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	7	Shim mode	Tune up
Dist. factor	80 %	Adjust with body coil	Off
I DISL IACIDI		Confirm freq. adjustment	Off
Position	10000000		
Position Orientation	L0.0 P29.8 F0.6	Assume Silicone	Off
Orientation	Coronal	Assume Silicone ! Ref. amplitude 1H	Off 220.000 V
Orientation Phase enc. dir.	Coronal R >> L	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance	_
Orientation Phase enc. dir. Rotation	Coronal R >> L 0.00 deg	Assume Silicone ! Ref. amplitude 1H	220.000 V
Orientation Phase enc. dir. Rotation Phase oversampling	Coronal R >> L 0.00 deg 0 %	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance	220.000 V
Orientation Phase enc. dir. Rotation Phase oversampling FoV read	Coronal R >> L 0.00 deg 0 % 200 mm	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume	220.000 V Auto
Orientation Phase enc. dir. Rotation Phase oversampling FoV read FoV phase	Coronal R >> L 0.00 deg 0 % 200 mm 100.0 %	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume Position	220.000 V Auto
Orientation Phase enc. dir. Rotation Phase oversampling FoV read FoV phase Slice thickness	Coronal R >> L 0.00 deg 0 % 200 mm 100.0 % 5.0 mm	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume Position Orientation	220.000 V Auto Isocenter Transversal
Orientation Phase enc. dir. Rotation Phase oversampling FoV read FoV phase Slice thickness TR	Coronal R >> L 0.00 deg 0 % 200 mm 100.0 % 5.0 mm 3000 ms	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume Position Orientation Rotation R >> L A >> P	220.000 V Auto Isocenter Transversal 0.00 deg 350 mm 263 mm
Orientation Phase enc. dir. Rotation Phase oversampling FoV read FoV phase Slice thickness TR TE	Coronal R >> L 0.00 deg 0 % 200 mm 100.0 % 5.0 mm 3000 ms 3.17 ms	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume Position Orientation Rotation R >> L	220.000 V Auto Isocenter Transversal 0.00 deg 350 mm
Orientation Phase enc. dir. Rotation Phase oversampling FoV read FoV phase Slice thickness TR TE Averages	Coronal R >> L 0.00 deg 0 % 200 mm 100.0 % 5.0 mm 3000 ms 3.17 ms 1	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume Position Orientation Rotation R >> L A >> P F >> H	220.000 V Auto Isocenter Transversal 0.00 deg 350 mm 263 mm
Orientation Phase enc. dir. Rotation Phase oversampling FoV read FoV phase Slice thickness TR TE Averages Concatenations	Coronal R >> L 0.00 deg 0 % 200 mm 100.0 % 5.0 mm 3000 ms 3.17 ms 1	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume Position Orientation Rotation R >> L A >> P F >> H Physio	220.000 V Auto Isocenter Transversal 0.00 deg 350 mm 263 mm 350 mm
Orientation Phase enc. dir. Rotation Phase oversampling FoV read FoV phase Slice thickness TR TE Averages Concatenations Filter	Coronal R >> L 0.00 deg 0 % 200 mm 100.0 % 5.0 mm 3000 ms 3.17 ms 1 21 None	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume Position Orientation Rotation R >> L A >> P F >> H	220.000 V Auto Isocenter Transversal 0.00 deg 350 mm 263 mm
Orientation Phase enc. dir. Rotation Phase oversampling FoV read FoV phase Slice thickness TR TE Averages Concatenations Filter Coil elements	Coronal R >> L 0.00 deg 0 % 200 mm 100.0 % 5.0 mm 3000 ms 3.17 ms 1	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume Position Orientation Rotation R >> L A >> P F >> H Physio	220.000 V Auto Isocenter Transversal 0.00 deg 350 mm 263 mm 350 mm
Orientation Phase enc. dir. Rotation Phase oversampling FoV read FoV phase Slice thickness TR TE Averages Concatenations Filter Coil elements Contrast	Coronal R >> L 0.00 deg 0 % 200 mm 100.0 % 5.0 mm 3000 ms 3.17 ms 1 21 None A32	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume Position Orientation Rotation R >> L A >> P F >> H Physio 1st Signal/Mode Dark blood	220.000 V Auto Isocenter Transversal 0.00 deg 350 mm 263 mm 350 mm None Off
Orientation Phase enc. dir. Rotation Phase oversampling FoV read FoV phase Slice thickness TR TE Averages Concatenations Filter Coil elements	Coronal R >> L 0.00 deg 0 % 200 mm 100.0 % 5.0 mm 3000 ms 3.17 ms 1 21 None	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume Position Orientation Rotation R >> L A >> P F >> H Physio 1st Signal/Mode	220.000 V Auto Isocenter Transversal 0.00 deg 350 mm 263 mm 350 mm
Orientation Phase enc. dir. Rotation Phase oversampling FoV read FoV phase Slice thickness TR TE Averages Concatenations Filter Coil elements Contrast	Coronal R >> L 0.00 deg 0 % 200 mm 100.0 % 5.0 mm 3000 ms 3.17 ms 1 21 None A32 0 ms Slice-sel. IR	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume Position Orientation Rotation R >> L A >> P F >> H Physio 1st Signal/Mode Dark blood	220.000 V Auto Isocenter Transversal 0.00 deg 350 mm 263 mm 350 mm None Off
Orientation Phase enc. dir. Rotation Phase oversampling FoV read FoV phase Slice thickness TR TE Averages Concatenations Filter Coil elements Contrast TD Magn. preparation TI	Coronal R >> L 0.00 deg 0 % 200 mm 100.0 % 5.0 mm 3000 ms 3.17 ms 1 21 None A32	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume Position Orientation Rotation R >> L A >> P F >> H Physio 1st Signal/Mode Dark blood Resp. control	220.000 V Auto Isocenter Transversal 0.00 deg 350 mm 263 mm 350 mm None Off
Orientation Phase enc. dir. Rotation Phase oversampling FoV read FoV phase Slice thickness TR TE Averages Concatenations Filter Coil elements Contrast TD Magn. preparation	Coronal R >> L 0.00 deg 0 % 200 mm 100.0 % 5.0 mm 3000 ms 3.17 ms 1 21 None A32 0 ms Slice-sel. IR	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume Position Orientation Rotation R >> L A >> P F >> H Physio 1st Signal/Mode Dark blood Resp. control Inline Subtract	220.000 V Auto Isocenter Transversal 0.00 deg 350 mm 263 mm 350 mm None Off
Orientation Phase enc. dir. Rotation Phase oversampling FoV read FoV phase Slice thickness TR TE Averages Concatenations Filter Coil elements Contrast TD Magn. preparation TI	Coronal R >> L 0.00 deg 0 % 200 mm 100.0 % 5.0 mm 3000 ms 3.17 ms 1 21 None A32 0 ms Slice-sel. IR 1100 ms	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume Position Orientation Rotation R >> L A >> P F >> H Physio 1st Signal/Mode Dark blood Resp. control Inline	220.000 V Auto Isocenter Transversal 0.00 deg 350 mm 263 mm 350 mm None Off Off
Orientation Phase enc. dir. Rotation Phase oversampling FoV read FoV phase Slice thickness TR TE Averages Concatenations Filter Coil elements Contrast TD Magn. preparation TI Flip angle	Coronal R >> L 0.00 deg 0 % 200 mm 100.0 % 5.0 mm 3000 ms 3.17 ms 1 21 None A32 0 ms Slice-sel. IR 1100 ms 6 deg	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume Position Orientation Rotation R >> L A >> P F >> H Physio 1st Signal/Mode Dark blood Resp. control Inline Subtract Std-Dev-Sag	220.000 V Auto Isocenter Transversal 0.00 deg 350 mm 263 mm 350 mm None Off Off Off
Orientation Phase enc. dir. Rotation Phase oversampling FoV read FoV phase Slice thickness TR TE Averages Concatenations Filter Coil elements Contrast TD Magn. preparation TI Flip angle Fat suppr. Water suppr.	Coronal R >> L 0.00 deg 0 % 200 mm 100.0 % 5.0 mm 3000 ms 3.17 ms 1 21 None A32 0 ms Slice-sel. IR 1100 ms 6 deg None None	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume Position Orientation Rotation R >> L A >> P F >> H Physio 1st Signal/Mode Dark blood Resp. control Inline Subtract Std-Dev-Sag Std-Dev-Cor	220.000 V Auto Isocenter Transversal 0.00 deg 350 mm 263 mm 350 mm None Off Off Off Off
Orientation Phase enc. dir. Rotation Phase oversampling FoV read FoV phase Slice thickness TR TE Averages Concatenations Filter Coil elements Contrast TD Magn. preparation TI Flip angle Fat suppr. Water suppr. Averaging mode	Coronal R >> L 0.00 deg 0 % 200 mm 100.0 % 5.0 mm 3000 ms 3.17 ms 1 21 None A32 0 ms Slice-sel. IR 1100 ms 6 deg None None Long term	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume Position Orientation Rotation R >> L A >> P F >> H Physio 1st Signal/Mode Dark blood Resp. control Inline Subtract Std-Dev-Sag Std-Dev-Cor Std-Dev-Tra	220.000 V Auto Isocenter Transversal 0.00 deg 350 mm 263 mm 350 mm None Off Off Off Off Off Off
Orientation Phase enc. dir. Rotation Phase oversampling FoV read FoV phase Slice thickness TR TE Averages Concatenations Filter Coil elements Contrast TD Magn. preparation TI Flip angle Fat suppr. Water suppr. Averaging mode Reconstruction	Coronal R >> L 0.00 deg 0 % 200 mm 100.0 % 5.0 mm 3000 ms 3.17 ms 1 21 None A32 0 ms Slice-sel. IR 1100 ms 6 deg None None	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume Position Orientation Rotation R >> L A >> P F >> H Physio 1st Signal/Mode Dark blood Resp. control Inline Subtract Std-Dev-Sag Std-Dev-Cor Std-Dev-Tra Std-Dev-Time	220.000 V Auto Isocenter Transversal 0.00 deg 350 mm 263 mm 350 mm None Off Off Off Off Off Off Off O
Orientation Phase enc. dir. Rotation Phase oversampling FoV read FoV phase Slice thickness TR TE Averages Concatenations Filter Coil elements Contrast TD Magn. preparation TI Flip angle Fat suppr. Water suppr. Averaging mode Reconstruction Measurements	Coronal R >> L 0.00 deg 0 % 200 mm 100.0 % 5.0 mm 3000 ms 3.17 ms 1 21 None A32 0 ms Slice-sel. IR 1100 ms 6 deg None None Long term Magnitude 1	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume Position Orientation Rotation R >> L A >> P F >> H Physio 1st Signal/Mode Dark blood Resp. control Inline Subtract Std-Dev-Sag Std-Dev-Cor Std-Dev-Tra Std-Dev-Time MIP-Sag	220.000 V Auto Isocenter Transversal 0.00 deg 350 mm 263 mm 350 mm None Off Off Off Off Off Off Off O
Orientation Phase enc. dir. Rotation Phase oversampling FoV read FoV phase Slice thickness TR TE Averages Concatenations Filter Coil elements Contrast TD Magn. preparation TI Flip angle Fat suppr. Water suppr. Averaging mode Reconstruction	Coronal R >> L 0.00 deg 0 % 200 mm 100.0 % 5.0 mm 3000 ms 3.17 ms 1 21 None A32 0 ms Slice-sel. IR 1100 ms 6 deg None None Long term	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume Position Orientation Rotation R >> L A >> P F >> H Physio 1st Signal/Mode Dark blood Resp. control Inline Subtract Std-Dev-Sag Std-Dev-Cor Std-Dev-Tra Std-Dev-Time MIP-Sag MIP-Cor	220.000 V Auto Isocenter Transversal 0.00 deg 350 mm 263 mm 350 mm None Off Off Off Off Off Off Off O
Orientation Phase enc. dir. Rotation Phase oversampling FoV read FoV phase Slice thickness TR TE Averages Concatenations Filter Coil elements Contrast TD Magn. preparation TI Flip angle Fat suppr. Water suppr. Averaging mode Reconstruction Measurements	Coronal R >> L 0.00 deg 0 % 200 mm 100.0 % 5.0 mm 3000 ms 3.17 ms 1 21 None A32 0 ms Slice-sel. IR 1100 ms 6 deg None None Long term Magnitude 1	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume Position Orientation Rotation R >> L A >> P F >> H Physio 1st Signal/Mode Dark blood Resp. control Inline Subtract Std-Dev-Sag Std-Dev-Cor Std-Dev-Tra Std-Dev-Time MIP-Sag MIP-Cor MIP-Tra MIP-Time	220.000 V Auto Isocenter Transversal 0.00 deg 350 mm 263 mm 350 mm None Off Off Off Off Off Off Off O
Orientation Phase enc. dir. Rotation Phase oversampling FoV read FoV phase Slice thickness TR TE Averages Concatenations Filter Coil elements Contrast TD Magn. preparation TI Flip angle Fat suppr. Water suppr. Averaging mode Reconstruction Measurements Multiple series	Coronal R >> L 0.00 deg 0 % 200 mm 100.0 % 5.0 mm 3000 ms 3.17 ms 1 21 None A32 0 ms Slice-sel. IR 1100 ms 6 deg None None Long term Magnitude 1	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume Position Orientation Rotation R >> L A >> P F >> H Physio 1st Signal/Mode Dark blood Resp. control Inline Subtract Std-Dev-Sag Std-Dev-Cor Std-Dev-Tra Std-Dev-Time MIP-Sag MIP-Cor MIP-Tra	220.000 V Auto Isocenter Transversal 0.00 deg 350 mm 263 mm 350 mm None Off Off Off Off Off Off Off O
Orientation Phase enc. dir. Rotation Phase oversampling FoV read FoV phase Slice thickness TR TE Averages Concatenations Filter Coil elements Contrast TD Magn. preparation TI Flip angle Fat suppr. Water suppr. Water suppr. Averaging mode Reconstruction Measurements Multiple series Resolution	Coronal R >> L 0.00 deg 0 % 200 mm 100.0 % 5.0 mm 3000 ms 3.17 ms 1 21 None A32 0 ms Slice-sel. IR 1100 ms 6 deg None None Long term Magnitude 1 Each measurement	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume Position Orientation Rotation R >> L A >> P F >> H Physio 1st Signal/Mode Dark blood Resp. control Inline Subtract Std-Dev-Sag Std-Dev-Cor Std-Dev-Tra Std-Dev-Time MIP-Sag MIP-Cor MIP-Tra MIP-Time Save original images	220.000 V Auto Isocenter Transversal 0.00 deg 350 mm 263 mm 350 mm None Off Off Off Off Off Off Off O
Orientation Phase enc. dir. Rotation Phase oversampling FoV read FoV phase Slice thickness TR TE Averages Concatenations Filter Coil elements Contrast TD Magn. preparation TI Flip angle Fat suppr. Water suppr. Water suppr. Averaging mode Reconstruction Measurements Multiple series Resolution Base resolution	Coronal R >> L 0.00 deg 0 % 200 mm 100.0 % 5.0 mm 3000 ms 3.17 ms 1 21 None A32 0 ms Slice-sel. IR 1100 ms 6 deg None None Long term Magnitude 1 Each measurement	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume Position Orientation Rotation R >> L A >> P F >> H Physio 1st Signal/Mode Dark blood Resp. control Inline Subtract Std-Dev-Sag Std-Dev-Cor Std-Dev-Tra Std-Dev-Time MIP-Sag MIP-Cor MIP-Tra MIP-Time	220.000 V Auto Isocenter Transversal 0.00 deg 350 mm 263 mm 350 mm None Off Off Off Off Off Off Off O

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\V1_template\26_slices_assym_TR5s_Version_129_291trs
TA: 0:14 PAT: 3 Voxel size: 0.8×0.8×0.8 mm Rel. SNR: 1.00 USER: VASO_124

Properties Properties	O#	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	22
	Off	Reference scan mode	Separate
Inline movie		Dragge Normaliza	O#
Auto store images Load to stamp segments	On Off	Prescan Normalize Raw filter	Off Off
Load images to graphic	Off		Off
segments	Oli	Elliptical filter	
	Off	Hamming	Off
Auto open inline display Start measurement without	On	Geometry	
	Oli	Multi-slice mode	Interleaved
further preparation Wait for user to start	Off	Series	Ascending
Start measurements	single	Special sat.	Parallel F
Routine		Gap Thickness	25.0 mm 100 mm
Slab group 1 Slabs	1		
	1 50 %	Table position	Н
Dist. factor		Table position	0 mm
Position	R1.4 A21.2 F2.4	Inline Composing	Off
Orientation	T > C-15.9	System	
Phase enc. dir.	A >> P	V32	Off
Rotation	0.00 deg	A32	On
Phase oversampling	0 %		011
Slice oversampling	7.7 %	Positioning mode	REF
Slices per slab	26	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	2837.90 ms	Save uncombined	Off
TE	25 ms	Coil Combine Mode	Sum of Squares
Averages	1	AutoAlign	
Concatenations	1	Auto Coil Select	Default
Filter	None	Ob in a de	04
Coil elements	A32	Shim mode	Standard
Contrast		Adjust with body coil	Off
		Confirm freq. adjustment	Off
Perfusion mode	SS-SI VASO	A a a coma a Cilia a ma	
Perfusion mode TI2	SS-SI VASO 650 ms	Assume Silicone	Off
TI2	650 ms	! Ref. amplitude 1H	220.000 V
TI2 TI1	650 ms 50 ms	! Ref. amplitude 1H Adjustment Tolerance	=
TI2 TI1 TI1s	650 ms 50 ms 50 ms	! Ref. amplitude 1H Adjustment Tolerance Adjust volume	220.000 V Auto
TI2 TI1 TI1s Flip angle	650 ms 50 ms 50 ms 26 deg	! Ref. amplitude 1H Adjustment Tolerance Adjust volume ! Position	220.000 V Auto
TI2 TI1 TI1s Flip angle Fat suppr.	650 ms 50 ms 50 ms 26 deg Fat sat.	! Ref. amplitude 1H Adjustment Tolerance Adjust volume ! Position ! Orientation	220.000 V Auto Isocenter Transversal
TI2 TI1 TI1s Flip angle Fat suppr. Fat sat. mode	650 ms 50 ms 50 ms 50 ms 26 deg Fat sat. Strong	! Ref. amplitude 1H Adjustment Tolerance Adjust volume ! Position ! Orientation ! Rotation	220.000 V Auto Isocenter Transversal 90.00 deg
TI2 TI1 TI1s Flip angle Fat suppr. Fat sat. mode Averaging mode	650 ms 50 ms 50 ms 50 ms 26 deg Fat sat. Strong	! Ref. amplitude 1H Adjustment Tolerance Adjust volume ! Position ! Orientation ! Rotation ! A >> P	220.000 V Auto Isocenter Transversal 90.00 deg 178 mm
TI2 TI1 TI1s Flip angle Fat suppr. Fat sat. mode Averaging mode Reconstruction	650 ms 50 ms 50 ms 26 deg Fat sat. Strong Long term Magnitude	! Ref. amplitude 1H Adjustment Tolerance Adjust volume ! Position ! Orientation ! Rotation ! A >> P ! R >> L	220.000 V Auto Isocenter Transversal 90.00 deg 178 mm 133 mm
TI2 TI1 TI1s Flip angle Fat suppr. Fat sat. mode Averaging mode Reconstruction Measurements	650 ms 50 ms 50 ms 26 deg Fat sat. Strong Long term Magnitude 5	! Ref. amplitude 1H Adjustment Tolerance Adjust volume ! Position ! Orientation ! Rotation ! A >> P	220.000 V Auto Isocenter Transversal 90.00 deg 178 mm
TI2 TI1 TI1s Flip angle Fat suppr. Fat sat. mode Averaging mode Reconstruction Measurements Delay in TR	650 ms 50 ms 50 ms 26 deg Fat sat. Strong Long term Magnitude 5 0 ms	! Ref. amplitude 1H Adjustment Tolerance Adjust volume ! Position ! Orientation ! Rotation ! A >> P ! R >> L	220.000 V Auto Isocenter Transversal 90.00 deg 178 mm 133 mm
TI2 TI1 TI1s Flip angle Fat suppr. Fat sat. mode Averaging mode Reconstruction Measurements	650 ms 50 ms 50 ms 26 deg Fat sat. Strong Long term Magnitude 5	! Ref. amplitude 1H Adjustment Tolerance Adjust volume ! Position ! Orientation ! Rotation ! A >> P ! R >> L ! F >> H	220.000 V Auto Isocenter Transversal 90.00 deg 178 mm 133 mm
TI2 TI1 TI1s Flip angle Fat suppr. Fat sat. mode Averaging mode Reconstruction Measurements Delay in TR Multiple series	650 ms 50 ms 50 ms 26 deg Fat sat. Strong Long term Magnitude 5 0 ms Off	! Ref. amplitude 1H Adjustment Tolerance Adjust volume ! Position ! Orientation ! Rotation ! A >> P ! R >> L ! F >> H Physio 1st Signal/Mode	220.000 V Auto Isocenter Transversal 90.00 deg 178 mm 133 mm 22 mm
TI2 TI1 TI1s Flip angle Fat suppr. Fat sat. mode Averaging mode Reconstruction Measurements Delay in TR Multiple series Perfusion mode	650 ms 50 ms 50 ms 26 deg Fat sat. Strong Long term Magnitude 5 0 ms Off PICORE Q2T	! Ref. amplitude 1H Adjustment Tolerance Adjust volume ! Position ! Orientation ! Rotation ! A >> P ! R >> L ! F >> H Physio 1st Signal/Mode BOLD	220.000 V Auto Isocenter Transversal 90.00 deg 178 mm 133 mm 22 mm
TI2 TI1 TI1s Flip angle Fat suppr. Fat sat. mode Averaging mode Reconstruction Measurements Delay in TR Multiple series Perfusion mode Inversion time 1	650 ms 50 ms 50 ms 26 deg Fat sat. Strong Long term Magnitude 5 0 ms Off PICORE Q2T 50 ms	! Ref. amplitude 1H Adjustment Tolerance Adjust volume ! Position ! Orientation ! Rotation ! A >> P ! R >> L ! F >> H Physio 1st Signal/Mode BOLD Motion correction	220.000 V Auto Isocenter Transversal 90.00 deg 178 mm 133 mm 22 mm None
TI2 TI1 TI1s Flip angle Fat suppr. Fat sat. mode Averaging mode Reconstruction Measurements Delay in TR Multiple series Perfusion mode Inversion time 1 Saturation stop time	650 ms 50 ms 50 ms 50 ms 26 deg Fat sat. Strong Long term Magnitude 5 0 ms Off PICORE Q2T 50 ms 50 ms	! Ref. amplitude 1H Adjustment Tolerance Adjust volume ! Position ! Orientation ! Rotation ! A >> P ! R >> L ! F >> H Physio 1st Signal/Mode BOLD	220.000 V Auto Isocenter Transversal 90.00 deg 178 mm 133 mm 22 mm
TI2 TI1 TI1s Flip angle Fat suppr. Fat sat. mode Averaging mode Reconstruction Measurements Delay in TR Multiple series Perfusion mode Inversion time 1 Saturation stop time Inversion time 2	650 ms 50 ms 50 ms 26 deg Fat sat. Strong Long term Magnitude 5 0 ms Off PICORE Q2T 50 ms 50 ms 650.0 ms	! Ref. amplitude 1H Adjustment Tolerance Adjust volume ! Position ! Orientation ! Rotation ! A >> P ! R >> L ! F >> H Physio 1st Signal/Mode BOLD Motion correction Spatial filter	220.000 V Auto Isocenter Transversal 90.00 deg 178 mm 133 mm 22 mm None
TI2 TI1 TI1s Flip angle Fat suppr. Fat sat. mode Averaging mode Reconstruction Measurements Delay in TR Multiple series Perfusion mode Inversion time 1 Saturation stop time Inversion time 2 Flow limit	650 ms 50 ms 50 ms 50 ms 26 deg Fat sat. Strong Long term Magnitude 5 0 ms Off PICORE Q2T 50 ms 50 ms	! Ref. amplitude 1H Adjustment Tolerance Adjust volume ! Position ! Orientation ! Rotation ! A >> P ! R >> L ! F >> H Physio 1st Signal/Mode BOLD Motion correction Spatial filter Sequence	220.000 V Auto Isocenter Transversal 90.00 deg 178 mm 133 mm 22 mm None
TI2 TI1 TI1s Flip angle Fat suppr. Fat sat. mode Averaging mode Reconstruction Measurements Delay in TR Multiple series Perfusion mode Inversion time 1 Saturation stop time Inversion time 2	650 ms 50 ms 50 ms 26 deg Fat sat. Strong Long term Magnitude 5 0 ms Off PICORE Q2T 50 ms 50 ms 650.0 ms	! Ref. amplitude 1H Adjustment Tolerance Adjust volume ! Position ! Orientation ! Rotation ! A >> P ! R >> L ! F >> H Physio 1st Signal/Mode BOLD Motion correction Spatial filter Sequence Introduction	220.000 V Auto Isocenter Transversal 90.00 deg 178 mm 133 mm 22 mm None Off Off
TI2 TI1 TI1s Flip angle Fat suppr. Fat sat. mode Averaging mode Reconstruction Measurements Delay in TR Multiple series Perfusion mode Inversion time 1 Saturation stop time Inversion time 2 Flow limit	650 ms 50 ms 50 ms 26 deg Fat sat. Strong Long term Magnitude 5 0 ms Off PICORE Q2T 50 ms 50 ms 650.0 ms	! Ref. amplitude 1H Adjustment Tolerance Adjust volume ! Position ! Orientation ! Rotation ! A >> P ! R >> L ! F >> H Physio 1st Signal/Mode BOLD Motion correction Spatial filter Sequence Introduction Dimension	220.000 V Auto Isocenter Transversal 90.00 deg 178 mm 133 mm 22 mm None Off Off Off
TI2 TI1 TI1s Flip angle Fat suppr. Fat sat. mode Averaging mode Reconstruction Measurements Delay in TR Multiple series Perfusion mode Inversion time 1 Saturation stop time Inversion time 2 Flow limit Resolution	650 ms 50 ms 50 ms 26 deg Fat sat. Strong Long term Magnitude 5 0 ms Off PICORE Q2T 50 ms 50 ms 650.0 ms 100 cm/s	! Ref. amplitude 1H Adjustment Tolerance Adjust volume ! Position ! Orientation ! Rotation ! A >> P ! R >> L ! F >> H Physio 1st Signal/Mode BOLD Motion correction Spatial filter Sequence Introduction Dimension Reordering	220.000 V Auto Isocenter Transversal 90.00 deg 178 mm 133 mm 22 mm None Off Off Off Off Linear
TI2 TI1 TI1s Flip angle Fat suppr. Fat sat. mode Averaging mode Reconstruction Measurements Delay in TR Multiple series Perfusion mode Inversion time 1 Saturation stop time Inversion time 2 Flow limit Resolution Base resolution	650 ms 50 ms 50 ms 50 ms 26 deg Fat sat. Strong Long term Magnitude 5 0 ms Off PICORE Q2T 50 ms 50 ms 650.0 ms 100 cm/s	! Ref. amplitude 1H Adjustment Tolerance Adjust volume ! Position ! Orientation ! Rotation ! A >> P ! R >> L ! F >> H Physio 1st Signal/Mode BOLD Motion correction Spatial filter Sequence Introduction Dimension Reordering Contrasts	220.000 V Auto Isocenter Transversal 90.00 deg 178 mm 133 mm 22 mm None Off Off Off Off Indian and Indian a
TI2 TI1 TI1s Flip angle Fat suppr. Fat sat. mode Averaging mode Reconstruction Measurements Delay in TR Multiple series Perfusion mode Inversion time 1 Saturation stop time Inversion time 2 Flow limit Resolution Base resolution Phase resolution	650 ms 50 ms 50 ms 50 ms 26 deg Fat sat. Strong Long term Magnitude 5 0 ms Off PICORE Q2T 50 ms 50 ms 650.0 ms 100 cm/s	! Ref. amplitude 1H Adjustment Tolerance Adjust volume ! Position ! Orientation ! Rotation ! A >> P ! R >> L ! F >> H Physio 1st Signal/Mode BOLD Motion correction Spatial filter Sequence Introduction Dimension Reordering Contrasts Bandwidth	220.000 V Auto Isocenter Transversal 90.00 deg 178 mm 133 mm 22 mm None Off Off Off Off 1000 On 3D Linear 1 1064 Hz/Px
TI2 TI1 TI1s Flip angle Fat suppr. Fat sat. mode Averaging mode Reconstruction Measurements Delay in TR Multiple series Perfusion mode Inversion time 1 Saturation stop time Inversion time 2 Flow limit Resolution Base resolution Phase resolution Slice resolution	650 ms 50 ms 50 ms 50 ms 26 deg Fat sat. Strong Long term Magnitude 5 0 ms Off PICORE Q2T 50 ms 50 ms 650.0 ms 100 cm/s	! Ref. amplitude 1H Adjustment Tolerance Adjust volume ! Position ! Orientation ! Rotation ! A >> P ! R >> L ! F >> H Physio 1st Signal/Mode BOLD Motion correction Spatial filter Sequence Introduction Dimension Reordering Contrasts Bandwidth Free echo spacing	220.000 V Auto Isocenter Transversal 90.00 deg 178 mm 133 mm 22 mm None Off Off Off Off Off Off Off Off Off O
TI2 TI1 TI1s Flip angle Fat suppr. Fat sat. mode Averaging mode Reconstruction Measurements Delay in TR Multiple series Perfusion mode Inversion time 1 Saturation stop time Inversion time 2 Flow limit Resolution Base resolution Phase partial Fourier	650 ms 50 ms 50 ms 50 ms 26 deg Fat sat. Strong Long term Magnitude 5 0 ms Off PICORE Q2T 50 ms 50 ms 650.0 ms 100 cm/s	! Ref. amplitude 1H Adjustment Tolerance Adjust volume ! Position ! Orientation ! Rotation ! A >> P ! R >> L ! F >> H Physio 1st Signal/Mode BOLD Motion correction Spatial filter Sequence Introduction Dimension Reordering Contrasts Bandwidth	220.000 V Auto Isocenter Transversal 90.00 deg 178 mm 133 mm 22 mm None Off Off Off On 3D Linear 1 1064 Hz/Px

RF pulse type Gradient mode Excitation RF spoiling	Normal Normal Slab-sel. On
Ampl BWDTH ph.skip 4 Robert (the one) use Ernst angle 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	150 150 3.1kHz 1 Off Off Off Off 3.00 3 s 0.00 mT/m*ms 2000 us 25.0 75 ms 79461 ms 28 local Flash 162 100 Hz/px 6500 us 5 deg Off

TA: 16:14 PAT: 2 Voxel size: 0.5×0.5×0.5 mm Rel. SNR: 1.00 USER: tfl_wip900b17a	

5			
Properties		Image Filter	Off
Prio Recon	Off	Distortion Corr.	Off
Before measurement		Prescan Normalize	Off
After measurement		Raw filter	Off
Load to viewer	On	Elliptical filter	Off
Inline movie	Off	Geometry	
Auto store images	On	Multi-slice mode	Single shot
Load to stamp segments	Off	Series	Interleaved
Load images to graphic	Off	Selles	·····
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	V32	Off
1	9	A32	On
Routine		_ A32	On
Slab group 1		Positioning mode	FIX
Slabs	1	MSMA	S - C - T
Dist. factor	50 %	Sagittal	R >> L
Position	R1.4 A23.8 F4.1	Coronal	A >> P
Orientation	T > C-14.0		F >> H
Phase enc. dir.	A >> P	Transversal	
Rotation	0.00 deg	Save uncombined	Off
Phase oversampling	0 %	Coil Combine Mode	Adaptive Combine
	0.0 %	AutoAlign	
Slice oversampling		Auto Coil Select	Default
Slices per slab	72	Chim mada	Ctondord
FoV read	191 mm	Shim mode	Standard
FoV phase	100.0 %	Adjust with body coil	Off
Slice thickness	0.50 mm	Confirm freq. adjustment	Off
TR	6000 ms	Assume Silicone	Off
TE	4.16 ms	! Ref. amplitude 1H	277.000 V
Averages	1	Adjustment Tolerance	Auto
Concatenations	1	Adjust volume	
Filter	None	! Position	L0.0 A28.5 F2.6
Coil elements	A32	! Orientation	T > C-12.8
1		! Rotation	90.00 deg
Contrast		_ ! A >> P	178 mm
Magn. preparation	Non-sel. IR	! R >> L	133 mm
TI1	900 ms	! F >> H	36 mm
TI 2	2900 ms	:1 >>11	30 111111
Flip angle 1	6 deg	Physio	
Flip angle 2	7 deg	1st Signal/Mode	None
Fat suppr.	None		
Water suppr.	None	Dark blood	Off
2nd Inversion Contrast	On	Resp. control	Off
		į ,	Oli
Averaging mode	Long term	Composing	
Reconstruction	Magn./Phase	Saguence	_
Measurements	3	Sequence	On
Pause after meas. 1	0.0 s	Introduction	On
Pause after meas, 2	0.0 s	Dimension	3D
Multiple series	Each measurement	Elliptical scanning	Off
•	Lacii illoacarollicii.	Asymmetric echo	Off
Resolution		Contrasts	1
Base resolution	380	Bandwidth	190 Hz/Px
Phase resolution	100 %	Flow comp.	No
Slice resolution	100 %	Echo spacing	8.5 ms
Phase partial Fourier	Off		
Slice partial Fourier	6/8	RF pulse type	Fast
		Gradient mode	Fast
PAT mode	GRAPPA	Excitation	Slab-sel.
Accel. factor PE	2	RF spoiling	On
Ref. lines PE	24	FFT Cools Foots	450.0/
Accel. factor 3D	1	FFT Scale Factor	150 %
Reference scan mode	Integrated	Morphometry Analysis	Off
i	-		

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

\\USER\UserProtocols\Renzo\V1_template\not_the_best_VASO_127_26_slices_5sTR

TA: 0:20 PAT: 3 Voxel size: 0.8×0.8×0.8 mm Rel. SNR: 1.00 USER: VASO_127

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
		Dragge Normaliza	O#
Auto store images	On Off	Prescan Normalize	Off Off
Load to stamp segments	Off	Raw filter	Off
Load images to graphic	Oli	Elliptical filter	Off
segments	0#	Hamming	Off
Auto open inline display	Off	Geometry	
Start measurement without	On	Multi-slice mode	Interleaved
further preparation	0"	Series	Ascending
Wait for user to start	Off		
Start measurements	single	Special sat.	Parallel F
Routine		Gap Thickness	25.0 mm 100 mm
Slab group 1			
Slabs	1	Table position	Н
Dist. factor	50 %	Table position	0 mm
Position	R5.2 P0.0 H36.6	Inline Composing	Off
Orientation	Transversal	1	
Phase enc. dir.	A >> P	System	0#
Rotation	0.00 deg	V32	Off
Phase oversampling	0 %	A32	On
Slice oversampling	7.7 %	Positioning mode	REF
Slices per slab	26	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	2836.40 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
Contrast		Confirm freq. adjustment	Off
Darfusian made			
Perfusion mode	SS-SI VASO	Assume Silicone	Off
TI2	650 ms		
TI2 TI1	650 ms 50 ms	Assume Silicone	Off
TI2 TI1 TI1s	650 ms 50 ms 50 ms	Assume Silicone ! Ref. amplitude 1H	Off 220.000 V
TI2 TI1 TI1s Flip angle	650 ms 50 ms 50 ms 4 deg	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance	Off 220.000 V
TI2 TI1 TI1s Flip angle Fat suppr.	650 ms 50 ms 50 ms 4 deg Fat sat.	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume	Off 220.000 V Auto R5.2 P0.0 H36.6 Transversal
TI2 TI1 TI1s Flip angle	650 ms 50 ms 50 ms 4 deg	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume Position	Off 220.000 V Auto R5.2 P0.0 H36.6
TI2 TI1 TI1s Flip angle Fat suppr. Fat sat. mode	650 ms 50 ms 50 ms 4 deg Fat sat. Strong	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume Position Orientation Rotation A >> P	Off 220.000 V Auto R5.2 P0.0 H36.6 Transversal 90.00 deg 178 mm
TI2 TI1 TI1s Flip angle Fat suppr.	650 ms 50 ms 50 ms 4 deg Fat sat. Strong	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume Position Orientation Rotation	Off 220.000 V Auto R5.2 P0.0 H36.6 Transversal 90.00 deg
TI2 TI1 TI1s Flip angle Fat suppr. Fat sat. mode Averaging mode	650 ms 50 ms 50 ms 4 deg Fat sat. Strong	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume Position Orientation Rotation A >> P	Off 220.000 V Auto R5.2 P0.0 H36.6 Transversal 90.00 deg 178 mm
TI2 TI1 TI1s Flip angle Fat suppr. Fat sat. mode Averaging mode Reconstruction Measurements	650 ms 50 ms 50 ms 4 deg Fat sat. Strong Long term Magnitude 7	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume Position Orientation Rotation A >> P R >> L F >> H	Off 220.000 V Auto R5.2 P0.0 H36.6 Transversal 90.00 deg 178 mm 133 mm
TI2 TI1 TI1s Flip angle Fat suppr. Fat sat. mode Averaging mode Reconstruction Measurements Delay in TR	650 ms 50 ms 50 ms 4 deg Fat sat. Strong Long term Magnitude	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume Position Orientation Rotation A >> P R >> L F >> H Physio	Off 220.000 V Auto R5.2 P0.0 H36.6 Transversal 90.00 deg 178 mm 133 mm 22 mm
TI2 TI1 TI1s Flip angle Fat suppr. Fat sat. mode Averaging mode Reconstruction Measurements Delay in TR Multiple series	650 ms 50 ms 50 ms 4 deg Fat sat. Strong Long term Magnitude 7 0 ms Off	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume Position Orientation Rotation A >> P R >> L F >> H	Off 220.000 V Auto R5.2 P0.0 H36.6 Transversal 90.00 deg 178 mm 133 mm
TI2 TI1 TI1s Flip angle Fat suppr. Fat sat. mode Averaging mode Reconstruction Measurements Delay in TR Multiple series Perfusion mode	650 ms 50 ms 50 ms 4 deg Fat sat. Strong Long term Magnitude 7 0 ms Off	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume Position Orientation Rotation A >> P R >> L F >> H Physio	Off 220.000 V Auto R5.2 P0.0 H36.6 Transversal 90.00 deg 178 mm 133 mm 22 mm
TI2 TI1 TI1s Flip angle Fat suppr. Fat sat. mode Averaging mode Reconstruction Measurements Delay in TR Multiple series Perfusion mode Inversion time 1	650 ms 50 ms 50 ms 4 deg Fat sat. Strong Long term Magnitude 7 0 ms Off PICORE Q2T 50 ms	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume Position Orientation Rotation A >> P R >> L F >> H Physio 1st Signal/Mode	Off 220.000 V Auto R5.2 P0.0 H36.6 Transversal 90.00 deg 178 mm 133 mm 22 mm
TI2 TI1 TI1s Flip angle Fat suppr. Fat sat. mode Averaging mode Reconstruction Measurements Delay in TR Multiple series Perfusion mode Inversion time 1 Saturation stop time	650 ms 50 ms 50 ms 4 deg Fat sat. Strong Long term Magnitude 7 0 ms Off PICORE Q2T 50 ms 50 ms	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume Position Orientation Rotation A >> P R >> L F >> H Physio 1st Signal/Mode BOLD	Off 220.000 V Auto R5.2 P0.0 H36.6 Transversal 90.00 deg 178 mm 133 mm 22 mm
TI2 TI1 TI1s Flip angle Fat suppr. Fat sat. mode Averaging mode Reconstruction Measurements Delay in TR Multiple series Perfusion mode Inversion time 1 Saturation stop time Inversion time 2	650 ms 50 ms 50 ms 4 deg Fat sat. Strong Long term Magnitude 7 0 ms Off PICORE Q2T 50 ms 50 ms 650.0 ms	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume Position Orientation Rotation A >> P R >> L F >> H Physio 1st Signal/Mode BOLD Motion correction Spatial filter	Off 220.000 V Auto R5.2 P0.0 H36.6 Transversal 90.00 deg 178 mm 133 mm 22 mm None
TI2 TI1 TI1s Flip angle Fat suppr. Fat sat. mode Averaging mode Reconstruction Measurements Delay in TR Multiple series Perfusion mode Inversion time 1 Saturation stop time	650 ms 50 ms 50 ms 4 deg Fat sat. Strong Long term Magnitude 7 0 ms Off PICORE Q2T 50 ms 50 ms	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume Position Orientation Rotation A >> P R >> L F >> H Physio 1st Signal/Mode BOLD Motion correction Spatial filter Sequence	Off 220.000 V Auto R5.2 P0.0 H36.6 Transversal 90.00 deg 178 mm 133 mm 22 mm None
TI2 TI1 TI1s Flip angle Fat suppr. Fat sat. mode Averaging mode Reconstruction Measurements Delay in TR Multiple series Perfusion mode Inversion time 1 Saturation stop time Inversion time 2 Flow limit	650 ms 50 ms 50 ms 4 deg Fat sat. Strong Long term Magnitude 7 0 ms Off PICORE Q2T 50 ms 50 ms 650.0 ms	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume Position Orientation Rotation A >> P R >> L F >> H Physio 1st Signal/Mode BOLD Motion correction Spatial filter Sequence Introduction	Off 220.000 V Auto R5.2 P0.0 H36.6 Transversal 90.00 deg 178 mm 133 mm 22 mm None Off Off
TI2 TI1 TI1s Flip angle Fat suppr. Fat sat. mode Averaging mode Reconstruction Measurements Delay in TR Multiple series Perfusion mode Inversion time 1 Saturation stop time Inversion time 2 Flow limit Resolution	650 ms 50 ms 50 ms 4 deg Fat sat. Strong Long term Magnitude 7 0 ms Off PICORE Q2T 50 ms 50 ms 650.0 ms 100 cm/s	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume Position Orientation Rotation A >> P R >> L F >> H Physio 1st Signal/Mode BOLD Motion correction Spatial filter Sequence Introduction Dimension	Off 220.000 V Auto R5.2 P0.0 H36.6 Transversal 90.00 deg 178 mm 133 mm 22 mm None Off Off Off
TI2 TI1 TI1s Flip angle Fat suppr. Fat sat. mode Averaging mode Reconstruction Measurements Delay in TR Multiple series Perfusion mode Inversion time 1 Saturation stop time Inversion time 2 Flow limit Resolution Base resolution	650 ms 50 ms 50 ms 4 deg Fat sat. Strong Long term Magnitude 7 0 ms Off PICORE Q2T 50 ms 50 ms 650.0 ms 100 cm/s	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume Position Orientation Rotation A >> P R >> L F >> H Physio 1st Signal/Mode BOLD Motion correction Spatial filter Sequence Introduction Dimension Reordering	Off 220.000 V Auto R5.2 P0.0 H36.6 Transversal 90.00 deg 178 mm 133 mm 22 mm None Off Off Off Off On 3D Linear
TI2 TI1 TI1s Flip angle Fat suppr. Fat sat. mode Averaging mode Reconstruction Measurements Delay in TR Multiple series Perfusion mode Inversion time 1 Saturation stop time Inversion time 2 Flow limit Resolution Base resolution Phase resolution	650 ms 50 ms 50 ms 4 deg Fat sat. Strong Long term Magnitude 7 0 ms Off PICORE Q2T 50 ms 50 ms 650.0 ms 100 cm/s	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume Position Orientation Rotation A >> P R >> L F >> H Physio 1st Signal/Mode BOLD Motion correction Spatial filter Sequence Introduction Dimension Reordering Contrasts	Off 220.000 V Auto R5.2 P0.0 H36.6 Transversal 90.00 deg 178 mm 133 mm 22 mm None Off Off Off On 3D Linear 1
TI2 TI1 TI1s Flip angle Fat suppr. Fat sat. mode Averaging mode Reconstruction Measurements Delay in TR Multiple series Perfusion mode Inversion time 1 Saturation stop time Inversion time 2 Flow limit Resolution Base resolution Phase resolution Slice resolution	650 ms 50 ms 50 ms 4 deg Fat sat. Strong Long term Magnitude 7 0 ms Off PICORE Q2T 50 ms 50 ms 650.0 ms 100 cm/s	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume Position Orientation Rotation A >> P R >> L F >> H Physio 1st Signal/Mode BOLD Motion correction Spatial filter Sequence Introduction Dimension Reordering Contrasts Bandwidth	Off 220.000 V Auto R5.2 P0.0 H36.6 Transversal 90.00 deg 178 mm 133 mm 22 mm None Off Off Off Off On 3D Linear 1 1064 Hz/Px
TI2 TI1 TI1s Flip angle Fat suppr. Fat sat. mode Averaging mode Reconstruction Measurements Delay in TR Multiple series Perfusion mode Inversion time 1 Saturation stop time Inversion time 2 Flow limit Resolution Base resolution Phase partial Fourier	650 ms 50 ms 50 ms 50 ms 4 deg Fat sat. Strong Long term Magnitude 7 0 ms Off PICORE Q2T 50 ms 50 ms 650.0 ms 100 cm/s	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume Position Orientation Rotation A >> P R >> L F >> H Physio 1st Signal/Mode BOLD Motion correction Spatial filter Sequence Introduction Dimension Reordering Contrasts Bandwidth Free echo spacing	Off 220.000 V Auto R5.2 P0.0 H36.6 Transversal 90.00 deg 178 mm 133 mm 22 mm None Off Off Off Off Off Off Off Off Off O
TI2 TI1 TI1s Flip angle Fat suppr. Fat sat. mode Averaging mode Reconstruction Measurements Delay in TR Multiple series Perfusion mode Inversion time 1 Saturation stop time Inversion time 2 Flow limit Resolution Base resolution Phase resolution Slice resolution Phase partial Fourier Slice partial Fourier	650 ms 50 ms 50 ms 50 ms 4 deg Fat sat. Strong Long term Magnitude 7 0 ms Off PICORE Q2T 50 ms 50 ms 650.0 ms 100 cm/s	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume Position Orientation Rotation A >> P R >> L F >> H Physio 1st Signal/Mode BOLD Motion correction Spatial filter Sequence Introduction Dimension Reordering Contrasts Bandwidth	Off 220.000 V Auto R5.2 P0.0 H36.6 Transversal 90.00 deg 178 mm 133 mm 22 mm None Off Off Off Off On 3D Linear 1 1064 Hz/Px
TI2 TI1 TI1s Flip angle Fat suppr. Fat sat. mode Averaging mode Reconstruction Measurements Delay in TR Multiple series Perfusion mode Inversion time 1 Saturation stop time Inversion time 2 Flow limit Resolution Base resolution Phase partial Fourier	650 ms 50 ms 50 ms 50 ms 4 deg Fat sat. Strong Long term Magnitude 7 0 ms Off PICORE Q2T 50 ms 50 ms 650.0 ms 100 cm/s	Assume Silicone ! Ref. amplitude 1H Adjustment Tolerance Adjust volume Position Orientation Rotation A >> P R >> L F >> H Physio 1st Signal/Mode BOLD Motion correction Spatial filter Sequence Introduction Dimension Reordering Contrasts Bandwidth Free echo spacing	Off 220.000 V Auto R5.2 P0.0 H36.6 Transversal 90.00 deg 178 mm 133 mm 22 mm None Off Off Off Off Off Off Off Off Off O

RF pulse type Gradient mode Excitation RF spoiling	Normal Fast 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	150 150 3.1kHz 1 Off Off Off Off 3.00 3 s 0.00 mT/m*ms 2000 us 25.0 75 ms 79419 ms 28 local Flash 162 100 Hz/px 6500 us 5 deg Off

\\USER\Use	rProtocol	s\Renzo\V1_template\not_th	ne_best_22_slices	s_isotropic_TR5s	
TA: 76 c	р∆т∙з	Voval siza: 0.8×0.8×0.8 mm	RAL SNR: 1 00	LINKNOWN	

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 as a War	
Dist. factor	50 %	Table position	H
Position	R6.8 P9.4 H36.8	Table position	0 mm
Orientation	T > C-31.2	Inline Composing	Off
Phase enc. dir.	A >> P	System	
Rotation	-0.00 deg	V32	Off
Phase oversampling	24 %	A32	On
Slice oversampling	9.1 %	Do attioning and a	FIV
Slices per slab	22	Positioning mode	FIX
FoV read	130.0 mm	MSMA Societal	S - C - T R >> L
FoV phase	100.0 %	Sagittal Coronal	A >> P
Slice thickness	0.80 mm	Transversal	F >> H
TR	2549.80 ms	Save uncombined	C >> II
TE	25 ms	Coil Combine Mode	Sum of Squares
Averages	1	AutoAlign	
Concatenations	1	Auto Coil Select	Default
Filter	None	Auto Coli Select	Delault
Coil elements	A32	Shim mode	Standard
Contract		Adjust with body coil	Off
Contrast	SS-SI VASO	Confirm freq. adjustment	Off
Perfusion mode TI2	700 ms	Assume Silicone	Off
TI1	50 ms	! Ref. amplitude 1H	220.000 V
TI1s		Adjustment Tolerance	Auto
Flip angle	50 ms 4 deg	Adjust volume	
Fat suppr.	Fat sat.	! Position	Isocenter
Fat sat. mode	Strong	! Orientation	Transversal
		! Rotation	90.00 deg
Averaging mode	Long term	! A >> P	178 mm
Reconstruction	Magnitude	! R >> L	133 mm
Measurements	3	! F >> H	22 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	700.0 ms	Spatial filter	Off
Flow limit	100 cm/s	Sequence	
į.	. 30 3.1.,, 0	Introduction	On
Resolution		Dimension	3D
Base resolution	162	Reordering	Linear
Phase resolution	100 %	Contrasts	1
Slice resolution	100 %	Bandwidth	1028 Hz/Px
Phase partial Fourier	6/8	Free echo spacing	Off
Slice partial Fourier	Off	Echo spacing	1.1 ms
Interpolation	Off	1	
	Oli	EPI factor	162

RF pulse type Gradient mode Excitation RF spoiling	Normal Fast Slab-sel. On
Ampl BWDTH ph.skip 4 Robert (the one) use Ernst angle 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	150 125 3.1kHz 1 Off Off Off Off 3.00 3 s 0.00 mT/m*ms 2000 us 25.0 74 ms 60192 ms 24 local Flash 162 100 Hz/px 8000 us 5 deg Off