

\\USER\Test\Joseph\20210920\_VASOremote\rslh\_ep3d\_vaso\_p5\_protocol\_Renzo\_20211011

TA: 14:54 PM: REF Voxel size: 0.5×0.5×0.4 mmPAT: 3 Rel. SNR: 1.00 : d238999c

**Properties**

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	Off
Start measurements	Single measurement

**Routine**

Slab group	1
Slabs	1
Position	L0.0 P40.5 H20.0 mm
Orientation	C > T-44.3
Phase enc. dir.	R >> L
AutoAlign	---
Slab Scale	-10 %
Slices per slab	18
FoV read	170 mm
FoV phase	100.0 %
Slice thickness	0.45 mm
TR 1	54.4 ms
TR 2	5912 ms
TE 1	19.00 ms
Averages	1
Multi-echo Shots	1
Filter	Distortion Corr.(3D)
Coil elements	R96

**Contrast - Common**

TR 1	54.4 ms
TR 2	5912 ms
TE 1	19.00 ms
Multi-echo spacing	50.67 ms
Magn. preparation	Non-sel. HSN IR
TI 1	1149.6 ms
TI 2	2128.8 ms
Flip angle	40 deg make this 15
Fat suppr.	Fat sat.
Magn. Prep. Shots	2

**Contrast - Dynamic**

Averages	1
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	150 make this 50
Pause after meas.	0.0 s

**Resolution - Common**

FoV read	170 mm
FoV phase	100.0 %
Slice thickness	0.45 mm
Base resolution	374
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	6/8

**Resolution - Common**

Slice partial Fourier	Off
Interpolation	Off

**Resolution - iPAT**

PAT mode	CAIPIRINHA vary this
Acc. factor PE	3 vary this
Ref. lines PE	75
Acc. factor 3D	1
Ref. lines 3D	16
CAIPI 3D Shift	0
Reference Scan Mode	GRE/separate
CAIPIRINHA mode	Free

**Resolution - Filter Image**

Image Filter	Off
Distortion Corr.	On
Mode	3D
Unfiltered images	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off

**Geometry - Common**

Slab group	1
Slabs	1
Position	L0.0 P40.5 H20.0 mm
Orientation	C > T-44.3
Phase enc. dir.	R >> L
Slab Scale	-10 %
Slices per slab	18
FoV read	170 mm
FoV phase	100.0 %
Slice thickness	0.45 mm
TR 1	54.4 ms
TR 2	5912 ms
Multi-slice mode	Interleaved
Series	Ascending
Multi-echo Shots	1

**Geometry - AutoAlign**

Slab group	1
Position	L0.0 P40.5 H20.0 mm
Orientation	C > T-44.3
Phase enc. dir.	R >> L
AutoAlign	---
Initial Position	L0.0 P40.5 H20.0
L	0.0 mm
P	40.5 mm
H	20.0 mm
Initial Rotation	0.00 deg
Initial Orientation	C > T
C > T	-44.3
> S	0.0

**Geometry - Saturation**

Saturation mode	Standard
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**Geometry - Saturation**

Fat suppr.	Fat sat.
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**Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

**System - Miscellaneous**

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	---
Coil Select Mode	Default

**System - Adjustments**

B0 Shim mode	Tune up
B1 Shim mode	TrueForm
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

! Position	L0.0 P39.5 H14.9 mm
! Orientation	T > C-43.8
! Rotation	0.00 deg
! A >> P	167 mm
! R >> L	350 mm
! F >> H	33 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Slab-sel.

**System - Tx/Rx**

Frequency 1H	297.210683 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	0.600
Reset	Off
! Ref. amplitude 1H	280.000 V

**Sequence - Part 1**

Introduction	On
Dimension	3D
Reordering	Linear
Asymmetric echo	Off
Contrasts	1
Multi-slice mode	Interleaved
Echo spacing	1.06 ms
Bandwidth	1028 Hz/Px

**Sequence - Part 2**

EPI factor	47
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**Sequence - Part 2**

Segmentation	2	vary this
RF pulse type	Normal	
Gradient mode	Fast	
Excitation	Slab-sel.	
RF spoiling	On	
Turbo factor	18	

**Sequence - Special**

PATRef FA	3 deg
RF duration	2000 us
RF BWT product	15
Ernst T1	1200 ms
PATRef prep. shots	10
Volume dummy shots	0
Dummy Measurements	0
Invert PE	Off
Min. TE if PF	On
Echo Time Shift	On
Ramp Sampling	On
NORDIC	On
Water Exc.	-none-
External PC	per Series
Saturation RF	per Shot
EPI rise time factor	1.00
Mosaic DICOMs	On
Modify Ice Config	On
GRAPPA Regularization	50000 10^-6
HSN RF power scale	2.50
Inversion Delay	650 ms
Relaxation Delay	0 ms
Var. FA /MAGEC	4

make this 0

**Sequence - Assistant**

Mode	Off
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