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\USER

Renzo

Multi-echo

20220407\_KEN

[localizer\\_fct146TRs](#)  
[vaso4f\\_ME\\_PF\\_Seg6\\_run3](#)

\\USER\Renzo\Multi-echo\20220407\_KEN\localizer\_fct146TRs

TA: 0:25 PM: FIX Voxel size: 0.5×0.5×7.0 mmPAT: Off Rel. SNR: 1.00 : fl

**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	On
Wait for user to start	Off
Start measurements	Single measurement

**Routine**

Slice group	1
Slices	3
Dist. factor	50 %
Position	L0.6 P7.0 F6.3 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	2
Slices	2
Dist. factor	50 %
Position	L0.0 A4.4 H27.2 mm
Orientation	Transversal
Phase enc. dir.	A >> P
Slice group	3
Slices	1
Dist. factor	20 %
Position	Isocenter
Orientation	Coronal
Phase enc. dir.	R >> L
AutoAlign	---
Phase oversampling	0 %
FoV read	250 mm
FoV phase	100.0 %
Slice thickness	7.0 mm
TR	8.6 ms
TE	4.00 ms
Averages	2
Concatenations	6
Filter	Distortion Corr.(2D), Normalize, Elliptical filter
Coil elements	HC1-7;NC1

**Contrast - Common**

TR	8.6 ms
TE	4.00 ms
TD	0 ms
MTC	Off
Magn. preparation	None
Flip angle	20 deg
Fat suppr.	None
Water suppr.	None
SWI	Off

**Contrast - Dynamic**

Averages	2
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1

**Contrast - Dynamic**

Multiple series	Each measurement
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**Resolution - Common**

FoV read	250 mm
FoV phase	100.0 %
Slice thickness	7.0 mm
Base resolution	256
Phase resolution	90 %
Phase partial Fourier	Off
Interpolation	On

**Resolution - iPAT**

PAT mode	None
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**Resolution - Filter Image**

Image Filter	Off
Distortion Corr.	On
Mode	2D
Unfiltered images	Off
Prescan Normalize	Off
Normalize	On
B1 filter	Off

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	On

**Geometry - Common**

Slice group	1
Slices	3
Dist. factor	50 %
Position	L0.6 P7.0 F6.3 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	2
Slices	2
Dist. factor	50 %
Position	L0.0 A4.4 H27.2 mm
Orientation	Transversal
Phase enc. dir.	A >> P
Slice group	3
Slices	1
Dist. factor	20 %
Position	Isocenter
Orientation	Coronal
Phase enc. dir.	R >> L
FoV read	250 mm
FoV phase	100.0 %
Slice thickness	7.0 mm
TR	8.6 ms
Multi-slice mode	Sequential
Series	Interleaved
Concatenations	6

**Geometry - AutoAlign**

Slice group	1
Position	L0.6 P7.0 F6.3 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	2

**Geometry - AutoAlign**

Position	L0.0 A4.4 H27.2 mm
Orientation	Transversal
Phase enc. dir.	A >> P
Slice group	3
Position	Isocenter
Orientation	Coronal
Phase enc. dir.	R >> L
AutoAlign	---
Initial Position	L0.6 P7.0 F6.3
L	0.6 mm
P	7.0 mm
F	6.3 mm
Initial Rotation	0.00 deg
Initial Orientation	Sagittal

**Geometry - Saturation**

Saturation mode	Standard
Fat suppr.	None
Water suppr.	None
Special sat.	None

**System - Miscellaneous**

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

**System - Adjustments**

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

**System - Adjust Volume**

Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
A >> P	263 mm
R >> L	350 mm
F >> H	350 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Slice-sel.

**System - Tx/Rx**

Frequency 1H	123.250754 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	8.6 ms
Concatenations	6
Segments	1

**Physio - Cardiac**

Magn. preparation	None
Fat suppr.	None
Dark blood	Off
FoV read	250 mm
FoV phase	100.0 %
Phase resolution	90 %

**Physio - PACE**

Resp. control	Off
Concatenations	6

**Inline - Common**

Subtract	Off
Measurements	1
StdDev	Off
Liver registration	Off
Save original images	On

**Inline - MIP**

MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On

**Inline - Soft Tissue**

Wash - In	Off
Wash - Out	Off
TTP	Off
PEI	Off
MIP - time	Off
Measurements	1

**Inline - Composing**

Distortion Corr.	On
Mode	2D
Unfiltered images	Off

**Inline - MapIt**

Save original images	On
MapIt	None
Flip angle	20 deg
Measurements	1
Contrasts	1
TR	8.6 ms
TE	4.00 ms

**Sequence - Part 1**

Introduction	On
Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Allowed
Contrasts	1
Flow comp.	No
Multi-slice mode	Sequential
Bandwidth	320 Hz/Px

**Sequence - Part 2**

Segments	1
Acoustic noise reduction	None
RF pulse type	Normal
Gradient mode	Normal
Excitation	Slice-sel.
RF spoiling	On

**Sequence - Assistant**

Mode	Off
Allowed delay	0 s

\\USER\Renzo\Multi-echo\20220407\_KEN\vaso4f\_ME\_PF\_Seg6\_run3

TA: 12:47 PM: REF Voxel size: 0.9×0.9×0.9 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	L1.8 P30.4 H11.6 mm
Orientation	C > T-43.8
Phase enc. dir.	F >> H
AutoAlign	---
Slab Scale	-10 %
Slices per slab	12
FoV read	200 mm
FoV phase	100.0 %
Slice thickness	0.93 mm
TR 1	68.7 ms
TR 2	5223 ms
TE 1	12.30 ms
TE 2	48.27 ms
Averages	1
Multi-echo Shots	1
Filter	Distortion Corr.(3D), Prescan Normalize
Coil elements	HC1-6

**Contrast - Common**

TR 1	68.7 ms
TR 2	5223 ms
TE 1	12.30 ms
TE 2	48.27 ms
Multi-echo spacing	35.97 ms
Magn. preparation	Non-sel. HSN IR
TI 1	1072.2 ms
TI 2	1896.6 ms
Flip angle	60 deg
Fat suppr.	Fat sat.
Magn. Prep. Shots	2

**Contrast - Dynamic**

Averages	1
Averaging mode	Long term
Reconstruction	Magn./Phase
Measurements	146
Pause after meas.	0.0 s

**Resolution - Common**

FoV read	200 mm
FoV phase	100.0 %
Slice thickness	0.93 mm
Base resolution	216

**Resolution - Common**

Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	6/8
Slice partial Fourier	Off
Interpolation	Off

**Resolution - iPAT**

PAT mode	CAIPIRINHA
Acc. factor PE	1
Ref. lines PE	48
Acc. factor 3D	3
Ref. lines 3D	9
CAIPI 3D Shift	1
Reference Scan Mode	GRE/separate
CAIPIRINHA mode	Free

**Resolution - Filter Image**

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

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off

**Geometry - Common**

Slab group	1
Slabs	1
Position	L1.8 P30.4 H11.6 mm
Orientation	C > T-43.8
Phase enc. dir.	F >> H
Slab Scale	-10 %
Slices per slab	12
FoV read	200 mm
FoV phase	100.0 %
Slice thickness	0.93 mm
TR 1	68.7 ms
TR 2	5223 ms
Multi-slice mode	Interleaved
Series	Ascending
Multi-echo Shots	1

**Geometry - AutoAlign**

Slab group	1
Position	L1.8 P30.4 H11.6 mm
Orientation	C > T-43.8
Phase enc. dir.	F >> H
AutoAlign	---
Initial Position	L1.8 P30.4 H11.6
L	1.8 mm
P	30.4 mm
H	11.6 mm
Initial Rotation	90.00 deg
Initial Orientation	C > T
C > T	-43.8

**Geometry - AutoAlign**

> S	0.0
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**Geometry - Saturation**

Saturation mode	Standard
Fat suppr.	Fat sat.

**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	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

! Position	L0.0 P24.7 H10.5 mm
! Orientation	T > C-37.8
! Rotation	0.00 deg
! A >> P	210 mm
! R >> L	210 mm
! F >> H	44 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Slab-sel.

**System - Tx/Rx**

Frequency 1H	123.250754 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Sequence - Part 1**

Introduction	On
Dimension	3D
Reordering	Linear
Asymmetric echo	Off
Contrasts	2
Multi-slice mode	Interleaved
Echo spacing	0.97 ms
Bandwidth	1218 Hz/Px

**Sequence - Part 2**

EPI factor	27
Segmentation	6

**Sequence - Part 2**

RF pulse type	Normal
Gradient mode	Performance
Excitation	Slab-sel.
RF spoiling	On
Turbo factor	12

**Sequence - Special**

PATRef FA	3 deg
RF duration	3000 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	1.10
Mosaic DICOMs	On
Modify Ice Config	On
GRAPPA Regularization	50000 10 <sup>-6</sup>
HSN RF power scale	2.00
Inversion Delay	650 ms
Relaxation Delay	0 ms
Var. FA /MAGEC	4

**Sequence - Assistant**

Mode	Off
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