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NIMH

[XT-ID:93-M-0170]Renzo

20230728\_MAR\_T123

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\\USER\NIMH\XT-ID:93-M-0170\Renzo\20230728\_MAR\_T123\localizer

TA: 0:15 PM: REF Voxel size: 0.5×0.5×5.0 mmPAT: Off Rel. SNR: 1.00 : qfl

**Properties**

Prio recon	On
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	On
Load images to graphic segments	On
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**

Slice group	1
Slices	1
Dist. factor	20 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	2
Slices	1
Dist. factor	20 %
Position	Isocenter
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	5.0 mm
TR	8.6 ms
TE	3.69 ms
Averages	2
Concatenations	3
Filter	Elliptical filter
Coil elements	A32

**Contrast - Common**

TR	8.6 ms
TE	3.69 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	5.0 mm
Base resolution	256
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	On

**Resolution - iPAT**

PAT mode	None
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**Resolution - Filter Image**

Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	On

**Geometry - Common**

Slice group	1
Slices	1
Dist. factor	20 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	2
Slices	1
Dist. factor	20 %
Position	Isocenter
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	5.0 mm
TR	8.6 ms
Multi-slice mode	Sequential
Series	Interleaved
Concatenations	3

**Geometry - AutoAlign**

Slice group	1
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	2
Position	Isocenter
Orientation	Transversal

**Geometry - AutoAlign**

Phase enc. dir.	A >> P
Slice group	3
Position	Isocenter
Orientation	Coronal
Phase enc. dir.	R >> L
AutoAlign	---
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
H	0.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Sagittal

**Geometry - Saturation**

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

**Geometry - Tim CT**

Tim CT mode	Off
Slices	1
Slice thickness	5.0 mm
Dist. factor	20 %
FoV read	250 mm
FoV phase	100.0 %
Segments	1

**System - Miscellaneous**

Positioning mode	REF
Table position	F
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	Off - AutoCoilSelect

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

**System - Tx/Rx**

Frequency 1H	297.188232 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000

**System - Tx/Rx**

Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	8.6 ms
Concatenations	3
Segments	1

**Physio - Cardiac**

Magn. preparation	None
Fat suppr.	None
Dark blood	Off
FoV read	250 mm
FoV phase	100.0 %
Phase resolution	100 %

**Physio - PACE**

Resp. control	Off
Concatenations	3

**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.	Off
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**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	Active
RF pulse type	Normal
Gradient mode	Normal
Excitation	Slice-sel.
RF spoiling	On

**Sequence - Nuclei**

TX/RX Nucleus	1H
TX/RX delta frequency	0 Hz
TX Nucleus	None
TX delta frequency	0 Hz
Coil elements	A32

**Sequence - Assistant**

Mode	Off
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\\USER\NIMH\XT-ID:93-M-0170\Renzo\20230728\_MAR\_T123\nih5n\_14seg\_FA1110

TA: 8:32 PM: REF Voxel size: 0.8×0.8×0.8 mmPAT: 3 Rel. SNR: 1.00 : nih5m

**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 A12.1 F18.2 mm
Orientation	Sagittal
Phase enc. dir.	P >> A
AutoAlign	---
Slices per slab	186
FoV read	190 mm
FoV phase	100.0 %
Slice thickness	0.82 mm
TR 1	27.2 ms
TR 2	50303 ms
TE 1	7.81 ms
Averages	1
Filter	None
Coil elements	A32

**Contrast - Common**

TR 1	27.2 ms
TR 2	50303 ms
TE 1	7.81 ms
Multi-echo spacing	18 ms
Magn. preparation	Non-sel. HSN IR
T1 1	1053.2 ms
T1 2	2739.6 ms
Flip angle	11 deg
Fat suppr.	None
Magn. Prep. Shots	14

**Contrast - Dynamic**

Averages	1
Averaging mode	Short term
Reconstruction	Magn./Phase
Measurements	10
Pause after meas. 1	0.0 s
Pause after meas. 2	0.0 s
Pause after meas. 3	0.0 s
Pause after meas. 4	0.0 s
Pause after meas. 5	0.0 s
Pause after meas. 6	0.0 s
Pause after meas. 7	0.0 s
Pause after meas. 8	0.0 s
Pause after meas. 9	0.0 s

**Resolution - Common**

FoV read	190 mm
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**Resolution - Common**

FoV phase	100.0 %
Slice thickness	0.82 mm
Base resolution	232
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	39
CAIPI 3D Shift	1
Reference Scan Mode	GRE/separate
CAIPI Mode (tooltip)	Skipped-CAIPI
Total PAT factor	3

**Resolution - Filter Image**

Image Filter	Off
Distortion Corr.	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 A12.1 F18.2 mm
Orientation	Sagittal
Phase enc. dir.	P >> A
Slices per slab	186
FoV read	190 mm
FoV phase	100.0 %
Slice thickness	0.82 mm
TR 1	27.2 ms
TR 2	50303 ms

**Geometry - AutoAlign**

Slab group	1
Position	L0.0 A12.1 F18.2 mm
Orientation	Sagittal
Phase enc. dir.	P >> A
AutoAlign	---
Initial Position	L0.0 A12.1 F18.2
L	0.0 mm
A	12.1 mm
F	18.2 mm
Initial Rotation	180.00 deg
Initial Orientation	Sagittal

**Geometry - Saturation**

Saturation mode	Standard
Fat suppr.	None

**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	Brain
B1 Shim mode	TrueForm
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

! Position	L0.0 A0.6 H19.4 mm
! Orientation	T > C-15.5
! Rotation	0.00 deg
! A >> P	210 mm
! R >> L	210 mm
! F >> H	120 mm
Reset	Off

**System - Tx/Rx**

Frequency 1H	297.188232 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	1.000
Reset	Off
! Ref. amplitude 1H	220.000 V

**Sequence - Part 1**

Introduction	On
Dimension	3D
Reordering	Linear
Contrasts	1
Echo spacing	1.29 ms
Bandwidth	938 Hz/Px

**Sequence - Part 2**

EPI factor	13
Segmentation	14
RF pulse type	Normal
Gradient mode	Normal
Excitation	Non-sel.
RF spoiling	On
Turbo factor	62

**Sequence - Special**

PATRef FA	3 deg
RF duration	340 us
Ernst T1	1200 ms
PATRef prep. shots	10
Volume dummy shots	0
Dummy Measurements	0
ETL per RTEB	1
Invert PE	Off

**Sequence - Special**

Min. TE if PF	On
Echo Time Shift	On
Ramp Sampling	On
NORDIC	Off
SVDPC	On
Sym VASO	Off
Dual-pol. EPI	On
Invert RO	Off
Invert 3D	Off
Disable PF reco	Off
Disable PF reco	Off
Save sampling	Off
PE VComp	Off
Water Exc.	Binomial-11
External PC	per Series
FIDNavs	-none-
EPI rise time factor	1.10
Mosaic DICOMs	On
Modify Ice Config	Off
HSN RF power scale	3.00
Inversion Delay	200 ms
Relaxation Delay	0 ms
Var. FA /MAGEC	7
MAGEC FA ratio	89

**Sequence - Assistant**

Mode	Off
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\\USER\NIMH\XT-ID:93-M-0170\Renzo\20230728\_MAR\_T123\nih5n\_14seg\_FA1105

TA: 8:32 PM: REF Voxel size: 0.8×0.8×0.8 mmPAT: 3 Rel. SNR: 1.00 : nih5m

**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 A12.1 F18.2 mm
Orientation	Sagittal
Phase enc. dir.	P >> A
AutoAlign	---
Slices per slab	186
FoV read	190 mm
FoV phase	100.0 %
Slice thickness	0.82 mm
TR 1	27.2 ms
TR 2	50303 ms
TE 1	7.81 ms
Averages	1
Filter	None
Coil elements	A32

**Contrast - Common**

TR 1	27.2 ms
TR 2	50303 ms
TE 1	7.81 ms
Multi-echo spacing	18 ms
Magn. preparation	Non-sel. HSN IR
T1 1	1053.2 ms
T1 2	2739.6 ms
Flip angle	11 deg
Fat suppr.	None
Magn. Prep. Shots	14

**Contrast - Dynamic**

Averages	1
Averaging mode	Short term
Reconstruction	Magn./Phase
Measurements	10
Pause after meas. 1	0.0 s
Pause after meas. 2	0.0 s
Pause after meas. 3	0.0 s
Pause after meas. 4	0.0 s
Pause after meas. 5	0.0 s
Pause after meas. 6	0.0 s
Pause after meas. 7	0.0 s
Pause after meas. 8	0.0 s
Pause after meas. 9	0.0 s

**Resolution - Common**

FoV read	190 mm
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**Resolution - Common**

FoV phase	100.0 %
Slice thickness	0.82 mm
Base resolution	232
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	39
CAIPI 3D Shift	1
Reference Scan Mode	GRE/separate
CAIPI Mode (tooltip)	Skipped-CAIPI
Total PAT factor	3

**Resolution - Filter Image**

Image Filter	Off
Distortion Corr.	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 A12.1 F18.2 mm
Orientation	Sagittal
Phase enc. dir.	P >> A
Slices per slab	186
FoV read	190 mm
FoV phase	100.0 %
Slice thickness	0.82 mm
TR 1	27.2 ms
TR 2	50303 ms

**Geometry - AutoAlign**

Slab group	1
Position	L0.0 A12.1 F18.2 mm
Orientation	Sagittal
Phase enc. dir.	P >> A
AutoAlign	---
Initial Position	L0.0 A12.1 F18.2
L	0.0 mm
A	12.1 mm
F	18.2 mm
Initial Rotation	-180.00 deg
Initial Orientation	Sagittal

**Geometry - Saturation**

Saturation mode	Standard
Fat suppr.	None

**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	Brain
B1 Shim mode	TrueForm
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

! Position	L0.0 A0.6 H19.4 mm
! Orientation	T > C-15.5
! Rotation	0.00 deg
! A >> P	210 mm
! R >> L	210 mm
! F >> H	120 mm
Reset	Off

**System - Tx/Rx**

Frequency 1H	297.188232 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	1.000
Reset	Off
! Ref. amplitude 1H	220.000 V

**Sequence - Part 1**

Introduction	On
Dimension	3D
Reordering	Linear
Contrasts	1
Echo spacing	1.29 ms
Bandwidth	938 Hz/Px

**Sequence - Part 2**

EPI factor	13
Segmentation	14
RF pulse type	Normal
Gradient mode	Normal
Excitation	Non-sel.
RF spoiling	On
Turbo factor	62

**Sequence - Special**

PATRef FA	3 deg
RF duration	340 us
Ernst T1	1200 ms
PATRef prep. shots	10
Volume dummy shots	0
Dummy Measurements	0
ETL per RTEB	1
Invert PE	Off

**Sequence - Special**

Min. TE if PF	On
Echo Time Shift	On
Ramp Sampling	On
NORDIC	Off
SVDPC	On
Sym VASO	Off
Dual-pol. EPI	On
Invert RO	Off
Invert 3D	Off
Disable PF reco	Off
Disable PF reco	Off
Save sampling	Off
PE VComp	Off
Water Exc.	Binomial-11
External PC	per Series
FIDNavs	-none-
EPI rise time factor	1.10
Mosaic DICOMs	On
Modify Ice Config	Off
HSN RF power scale	3.00
Inversion Delay	200 ms
Relaxation Delay	0 ms
Var. FA /MAGEC	7
MAGEC FA ratio	50

**Sequence - Assistant**

Mode	Off
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\\USER\NIMH\XT-ID:93-M-0170\Renzo\20230728\_MAR\_T123\nih5n\_14seg\_FA1111

TA: 8:32 PM: REF Voxel size: 0.8×0.8×0.8 mmPAT: 3 Rel. SNR: 1.00 : nih5m

**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 A12.1 F18.2 mm
Orientation	Sagittal
Phase enc. dir.	P >> A
AutoAlign	---
Slices per slab	186
FoV read	190 mm
FoV phase	100.0 %
Slice thickness	0.82 mm
TR 1	27.2 ms
TR 2	50303 ms
TE 1	7.81 ms
Averages	1
Filter	None
Coil elements	A32

**Contrast - Common**

TR 1	27.2 ms
TR 2	50303 ms
TE 1	7.81 ms
Multi-echo spacing	18 ms
Magn. preparation	Non-sel. HSN IR
T1 1	1053.2 ms
T1 2	2739.6 ms
Flip angle	11 deg
Fat suppr.	None
Magn. Prep. Shots	14

**Contrast - Dynamic**

Averages	1
Averaging mode	Short term
Reconstruction	Magn./Phase
Measurements	10
Pause after meas. 1	0.0 s
Pause after meas. 2	0.0 s
Pause after meas. 3	0.0 s
Pause after meas. 4	0.0 s
Pause after meas. 5	0.0 s
Pause after meas. 6	0.0 s
Pause after meas. 7	0.0 s
Pause after meas. 8	0.0 s
Pause after meas. 9	0.0 s

**Resolution - Common**

FoV read	190 mm
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**Resolution - Common**

FoV phase	100.0 %
Slice thickness	0.82 mm
Base resolution	232
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	39
CAIPI 3D Shift	1
Reference Scan Mode	GRE/separate
CAIPI Mode (tooltip)	Skipped-CAIPI
Total PAT factor	3

**Resolution - Filter Image**

Image Filter	Off
Distortion Corr.	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 A12.1 F18.2 mm
Orientation	Sagittal
Phase enc. dir.	P >> A
Slices per slab	186
FoV read	190 mm
FoV phase	100.0 %
Slice thickness	0.82 mm
TR 1	27.2 ms
TR 2	50303 ms

**Geometry - AutoAlign**

Slab group	1
Position	L0.0 A12.1 F18.2 mm
Orientation	Sagittal
Phase enc. dir.	P >> A
AutoAlign	---
Initial Position	L0.0 A12.1 F18.2
L	0.0 mm
A	12.1 mm
F	18.2 mm
Initial Rotation	-180.00 deg
Initial Orientation	Sagittal

**Geometry - Saturation**

Saturation mode	Standard
Fat suppr.	None

**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	Brain
B1 Shim mode	TrueForm
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

! Position	L0.0 A0.6 H19.4 mm
! Orientation	T > C-15.5
! Rotation	0.00 deg
! A >> P	210 mm
! R >> L	210 mm
! F >> H	120 mm
Reset	Off

**System - Tx/Rx**

Frequency 1H	297.188232 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	1.000
Reset	Off
! Ref. amplitude 1H	220.000 V

**Sequence - Part 1**

Introduction	On
Dimension	3D
Reordering	Linear
Contrasts	1
Echo spacing	1.29 ms
Bandwidth	938 Hz/Px

**Sequence - Part 2**

EPI factor	13
Segmentation	14
RF pulse type	Normal
Gradient mode	Normal
Excitation	Non-sel.
RF spoiling	On
Turbo factor	62

**Sequence - Special**

PATRef FA	3 deg
RF duration	340 us
Ernst T1	1200 ms
PATRef prep. shots	10
Volume dummy shots	0
Dummy Measurements	0
ETL per RTEB	1
Invert PE	Off

**Sequence - Special**

Min. TE if PF	On
Echo Time Shift	On
Ramp Sampling	On
NORDIC	Off
SVDPC	On
Sym VASO	Off
Dual-pol. EPI	On
Invert RO	Off
Invert 3D	Off
Disable PF reco	Off
Disable PF reco	Off
Save sampling	Off
PE VComp	Off
Water Exc.	Binomial-11
External PC	per Series
FIDNavs	-none-
EPI rise time factor	1.10
Mosaic DICOMs	On
Modify Ice Config	Off
HSN RF power scale	3.00
Inversion Delay	200 ms
Relaxation Delay	0 ms
Var. FA /MAGEC	0
MAGEC FA ratio	100

**Sequence - Assistant**

Mode	Off
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\\USER\NIMH\XT-ID:93-M-0170\Renzo\20230728\_MAR\_T123\nih5n\_14seg\_FA1111\_with\_ICE\_config

TA: 8:32 PM: REF Voxel size: 0.8×0.8×0.8 mmPAT: 3 Rel. SNR: 1.00 : nih5m

**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 A12.1 F18.2 mm
Orientation	Sagittal
Phase enc. dir.	P >> A
AutoAlign	---
Slices per slab	186
FoV read	190 mm
FoV phase	100.0 %
Slice thickness	0.82 mm
TR 1	27.2 ms
TR 2	50303 ms
TE 1	7.81 ms
Averages	1
Filter	None
Coil elements	A32

**Contrast - Common**

TR 1	27.2 ms
TR 2	50303 ms
TE 1	7.81 ms
Multi-echo spacing	18 ms
Magn. preparation	Non-sel. HSN IR
T1 1	1053.2 ms
T1 2	2739.6 ms
Flip angle	11 deg
Fat suppr.	None
Magn. Prep. Shots	14

**Contrast - Dynamic**

Averages	1
Averaging mode	Short term
Reconstruction	Magn./Phase
Measurements	10
Pause after meas. 1	0.0 s
Pause after meas. 2	0.0 s
Pause after meas. 3	0.0 s
Pause after meas. 4	0.0 s
Pause after meas. 5	0.0 s
Pause after meas. 6	0.0 s
Pause after meas. 7	0.0 s
Pause after meas. 8	0.0 s
Pause after meas. 9	0.0 s

**Resolution - Common**

FoV read	190 mm
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**Resolution - Common**

FoV phase	100.0 %
Slice thickness	0.82 mm
Base resolution	232
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	39
CAIPI 3D Shift	1
Reference Scan Mode	GRE/separate
CAIPI Mode (tooltip)	Skipped-CAIPI
Total PAT factor	3

**Resolution - Filter Image**

Image Filter	Off
Distortion Corr.	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 A12.1 F18.2 mm
Orientation	Sagittal
Phase enc. dir.	P >> A
Slices per slab	186
FoV read	190 mm
FoV phase	100.0 %
Slice thickness	0.82 mm
TR 1	27.2 ms
TR 2	50303 ms

**Geometry - AutoAlign**

Slab group	1
Position	L0.0 A12.1 F18.2 mm
Orientation	Sagittal
Phase enc. dir.	P >> A
AutoAlign	---
Initial Position	L0.0 A12.1 F18.2
L	0.0 mm
A	12.1 mm
F	18.2 mm
Initial Rotation	-180.00 deg
Initial Orientation	Sagittal

**Geometry - Saturation**

Saturation mode	Standard
Fat suppr.	None

**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	Brain
B1 Shim mode	TrueForm
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

! Position	L0.0 A0.6 H19.4 mm
! Orientation	T > C-15.5
! Rotation	0.00 deg
! A >> P	210 mm
! R >> L	210 mm
! F >> H	120 mm
Reset	Off

**System - Tx/Rx**

Frequency 1H	297.188232 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	1.000
Reset	Off
! Ref. amplitude 1H	220.000 V

**Sequence - Part 1**

Introduction	On
Dimension	3D
Reordering	Linear
Contrasts	1
Echo spacing	1.29 ms
Bandwidth	938 Hz/Px

**Sequence - Part 2**

EPI factor	13
Segmentation	14
RF pulse type	Normal
Gradient mode	Normal
Excitation	Non-sel.
RF spoiling	On
Turbo factor	62

**Sequence - Special**

PATRef FA	3 deg
RF duration	340 us
Ernst T1	1200 ms
PATRef prep. shots	10
Volume dummy shots	0
Dummy Measurements	0
ETL per RTEB	1
Invert PE	Off

**Sequence - Special**

Min. TE if PF	On
Echo Time Shift	On
Ramp Sampling	On
NORDIC	Off
SVDPC	On
Sym VASO	Off
Dual-pol. EPI	On
Invert RO	Off
Invert 3D	Off
Disable PF reco	Off
Disable PF reco	Off
Save sampling	Off
PE VComp	Off
Water Exc.	Binomial-11
External PC	per Series
FIDNavs	-none-
EPI rise time factor	1.10
Mosaic DICOMs	On
Modify Ice Config	On
G-factor map	Off
GRAPPA Regularization	50000 10^-6
HSN RF power scale	3.00
Inversion Delay	200 ms
Relaxation Delay	0 ms
Var. FA /MAGEC	0
MAGEC FA ratio	100

**Sequence - Assistant**

Mode	Off
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\\USER\NIMH\XT-ID:93-M-0170\Renzo\20230728\_MAR\_T123\nih5n\_14seg\_FA1110\_seg1\_magnsho7

TA: 4:48 PM: REF Voxel size: 0.8×0.8×0.8 mmPAT: 3 Rel. SNR: 1.00 : nih5m

**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 A12.1 F18.2 mm
Orientation	Sagittal
Phase enc. dir.	P >> A
AutoAlign	---
Slices per slab	186
FoV read	190 mm
FoV phase	100.0 %
Slice thickness	0.82 mm
TR 1	210.0 ms
TR 2	28002 ms
TE 1	67.90 ms
Averages	1
Filter	None
Coil elements	A32

**Contrast - Common**

TR 1	210.0 ms
TR 2	28002 ms
TE 1	67.90 ms
Multi-echo spacing	197.5 ms
Magn. preparation	Non-sel. HSN IR
TI 1	1050 ms
TI 2	2940 ms
Flip angle	11 deg
Fat suppr.	None
Magn. Prep. Shots	7

**Contrast - Dynamic**

Averages	1
Averaging mode	Short term
Reconstruction	Magn./Phase
Measurements	10
Pause after meas. 1	0.0 s
Pause after meas. 2	0.0 s
Pause after meas. 3	0.0 s
Pause after meas. 4	0.0 s
Pause after meas. 5	0.0 s
Pause after meas. 6	0.0 s
Pause after meas. 7	0.0 s
Pause after meas. 8	0.0 s
Pause after meas. 9	0.0 s

**Resolution - Common**

FoV read	190 mm
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**Resolution - Common**

FoV phase	100.0 %
Slice thickness	0.82 mm
Base resolution	232
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	39
CAIPI 3D Shift	0
Reference Scan Mode	GRE/separate
CAIPI Mode (tooltip)	Skipped-CAIPI
Total PAT factor	3

**Resolution - Filter Image**

Image Filter	Off
Distortion Corr.	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 A12.1 F18.2 mm
Orientation	Sagittal
Phase enc. dir.	P >> A
Slices per slab	186
FoV read	190 mm
FoV phase	100.0 %
Slice thickness	0.82 mm
TR 1	210.0 ms
TR 2	28002 ms

**Geometry - AutoAlign**

Slab group	1
Position	L0.0 A12.1 F18.2 mm
Orientation	Sagittal
Phase enc. dir.	P >> A
AutoAlign	---
Initial Position	L0.0 A12.1 F18.2
L	0.0 mm
A	12.1 mm
F	18.2 mm
Initial Rotation	-180.00 deg
Initial Orientation	Sagittal

**Geometry - Saturation**

Saturation mode	Standard
Fat suppr.	None

**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	Brain
B1 Shim mode	TrueForm
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

! Position	L0.0 A0.6 H19.4 mm
! Orientation	T > C-15.5
! Rotation	0.00 deg
! A >> P	210 mm
! R >> L	210 mm
! F >> H	120 mm
Reset	Off

**System - Tx/Rx**

Frequency 1H	297.188232 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	1.000
Reset	Off
! Ref. amplitude 1H	220.000 V

**Sequence - Part 1**

Introduction	On
Dimension	3D
Reordering	Linear
Contrasts	1
Echo spacing	1.13 ms
Bandwidth	938 Hz/Px

**Sequence - Part 2**

EPI factor	174
Segmentation	1
RF pulse type	Normal
Gradient mode	Normal
Excitation	Non-sel.
RF spoiling	On
Turbo factor	9

**Sequence - Special**

PATRef FA	3 deg
RF duration	340 us
Ernst T1	1200 ms
PATRef prep. shots	10
Volume dummy shots	0
Dummy Measurements	0
ETL per RTEB	1
Invert PE	Off

**Sequence - Special**

Min. TE if PF	On
Echo Time Shift	On
Ramp Sampling	On
NORDIC	Off
SVDPC	On
Sym VASO	Off
Dual-pol. EPI	On
Invert RO	Off
Invert 3D	Off
Disable PF reco	Off
Disable PF reco	Off
Save sampling	Off
PE VComp	Off
Water Exc.	Binomial-11
External PC	per Series
FIDNavs	-none-
EPI rise time factor	1.10
Mosaic DICOMs	On
Modify Ice Config	Off
HSN RF power scale	3.00
Inversion Delay	200 ms
Relaxation Delay	0 ms
Var. FA /MAGEC	7
MAGEC FA ratio	89

**Sequence - Assistant**

Mode	Off
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\\USER\NIMH\XT-ID:93-M-0170\Renzo\20230728\_MAR\_T123\nih5n\_14seg\_FA1110\_seg2\_magnsho9

TA: 5:31 PM: REF Voxel size: 0.8×0.8×0.8 mmPAT: 3 Rel. SNR: 1.00 : nih5m

**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 A12.1 F18.2 mm
Orientation	Sagittal
Phase enc. dir.	P >> A
AutoAlign	---
Slices per slab	186
FoV read	190 mm
FoV phase	100.0 %
Slice thickness	0.82 mm
TR 1	120.0 ms
TR 2	32223 ms
TE 1	36.40 ms
Averages	1
Filter	None
Coil elements	A32

**Contrast - Common**

TR 1	120.0 ms
TR 2	32223 ms
TE 1	36.40 ms
Multi-echo spacing	103 ms
Magn. preparation	Non-sel. HSN IR
TI 1	1050 ms
TI 2	2730 ms
Flip angle	11 deg
Fat suppr.	None
Magn. Prep. Shots	9

**Contrast - Dynamic**

Averages	1
Averaging mode	Short term
Reconstruction	Magn./Phase
Measurements	10
Pause after meas. 1	0.0 s
Pause after meas. 2	0.0 s
Pause after meas. 3	0.0 s
Pause after meas. 4	0.0 s
Pause after meas. 5	0.0 s
Pause after meas. 6	0.0 s
Pause after meas. 7	0.0 s
Pause after meas. 8	0.0 s
Pause after meas. 9	0.0 s

**Resolution - Common**

FoV read	190 mm
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**Resolution - Common**

FoV phase	100.0 %
Slice thickness	0.82 mm
Base resolution	232
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	39
CAIPI 3D Shift	1
Reference Scan Mode	GRE/separate
CAIPI Mode (tooltip)	Skipped-CAIPI
Total PAT factor	3

**Resolution - Filter Image**

Image Filter	Off
Distortion Corr.	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 A12.1 F18.2 mm
Orientation	Sagittal
Phase enc. dir.	P >> A
Slices per slab	186
FoV read	190 mm
FoV phase	100.0 %
Slice thickness	0.82 mm
TR 1	120.0 ms
TR 2	32223 ms

**Geometry - AutoAlign**

Slab group	1
Position	L0.0 A12.1 F18.2 mm
Orientation	Sagittal
Phase enc. dir.	P >> A
AutoAlign	---
Initial Position	L0.0 A12.1 F18.2
L	0.0 mm
A	12.1 mm
F	18.2 mm
Initial Rotation	-180.00 deg
Initial Orientation	Sagittal

**Geometry - Saturation**

Saturation mode	Standard
Fat suppr.	None

**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	Brain
B1 Shim mode	TrueForm
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

! Position	L0.0 A0.6 H19.4 mm
! Orientation	T > C-15.5
! Rotation	0.00 deg
! A >> P	210 mm
! R >> L	210 mm
! F >> H	120 mm
Reset	Off

**System - Tx/Rx**

Frequency 1H	297.188232 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	1.000
Reset	Off
! Ref. amplitude 1H	220.000 V

**Sequence - Part 1**

Introduction	On
Dimension	3D
Reordering	Linear
Contrasts	1
Echo spacing	1.17 ms
Bandwidth	938 Hz/Px

**Sequence - Part 2**

EPI factor	87
Segmentation	2
RF pulse type	Normal
Gradient mode	Normal
Excitation	Non-sel.
RF spoiling	On
Turbo factor	14

**Sequence - Special**

PATRef FA	3 deg
RF duration	340 us
Ernst T1	1200 ms
PATRef prep. shots	10
Volume dummy shots	0
Dummy Measurements	0
ETL per RTEB	1
Invert PE	Off

**Sequence - Special**

Min. TE if PF	On
Echo Time Shift	On
Ramp Sampling	On
NORDIC	Off
SVDPC	On
Sym VASO	Off
Dual-pol. EPI	On
Invert RO	Off
Invert 3D	Off
Disable PF reco	Off
Disable PF reco	Off
Save sampling	Off
PE VComp	Off
Water Exc.	Binomial-11
External PC	per Series
FIDNavs	-none-
EPI rise time factor	1.10
Mosaic DICOMs	On
Modify Ice Config	Off
HSN RF power scale	3.00
Inversion Delay	200 ms
Relaxation Delay	0 ms
Var. FA /MAGEC	7
MAGEC FA ratio	89

**Sequence - Assistant**

Mode	Off
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\\USER\NIMH\XT-ID:93-M-0170\Renzo\20230728\_MAR\_T123\nih5n\_14seg\_FA1110\_seg7\_magpershot11

TA: 6:30 PM: REF Voxel size: 0.8×0.8×0.8 mmPAT: 3 Rel. SNR: 1.00 : nih5m

### 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 A12.1 F18.2 mm
Orientation	Sagittal
Phase enc. dir.	P >> A
AutoAlign	---
Slices per slab	186
FoV read	190 mm
FoV phase	100.0 %
Slice thickness	0.82 mm
TR 1	40.6 ms
TR 2	38151 ms
TE 1	12.60 ms
Averages	1
Filter	None
Coil elements	A32

### Contrast - Common

TR 1	40.6 ms
TR 2	38151 ms
TE 1	12.60 ms
Multi-echo spacing	31.4 ms
Magn. preparation	Non-sel. HSN IR
TI 1	1022 ms
TI 2	2646 ms
Flip angle	11 deg
Fat suppr.	None
Magn. Prep. Shots	11

### Contrast - Dynamic

Averages	1
Averaging mode	Short term
Reconstruction	Magn./Phase
Measurements	10
Pause after meas. 1	0.0 s
Pause after meas. 2	0.0 s
Pause after meas. 3	0.0 s
Pause after meas. 4	0.0 s
Pause after meas. 5	0.0 s
Pause after meas. 6	0.0 s
Pause after meas. 7	0.0 s
Pause after meas. 8	0.0 s
Pause after meas. 9	0.0 s

### Resolution - Common

FoV read	190 mm
FoV phase	100.0 %
Slice thickness	0.82 mm
Base resolution	232
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	39
CAIPI 3D Shift	1
Reference Scan Mode	GRE/separate
CAIPI Mode (tooltip)	Skipped-CAIPI
Total PAT factor	3

### Resolution - Filter Image

Image Filter	Off
Distortion Corr.	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 A12.1 F18.2 mm
Orientation	Sagittal
Phase enc. dir.	P >> A
Slices per slab	186
FoV read	190 mm
FoV phase	100.0 %
Slice thickness	0.82 mm
TR 1	40.6 ms
TR 2	38151 ms

### Geometry - AutoAlign

Slab group	1
Position	L0.0 A12.1 F18.2 mm
Orientation	Sagittal
Phase enc. dir.	P >> A
AutoAlign	---
Initial Position	L0.0 A12.1 F18.2
L	0.0 mm
A	12.1 mm
F	18.2 mm
Initial Rotation	-180.00 deg
Initial Orientation	Sagittal

**Geometry - Saturation**

Saturation mode	Standard
Fat suppr.	None

**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	Brain
B1 Shim mode	TrueForm
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

! Position	L0.0 A0.6 H19.4 mm
! Orientation	T > C-15.5
! Rotation	0.00 deg
! A >> P	210 mm
! R >> L	210 mm
! F >> H	120 mm
Reset	Off

**System - Tx/Rx**

Frequency 1H	297.188232 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	1.000
Reset	Off
! Ref. amplitude 1H	220.000 V

**Sequence - Part 1**

Introduction	On
Dimension	3D
Reordering	Linear
Contrasts	1
Echo spacing	1.21 ms
Bandwidth	938 Hz/Px

**Sequence - Part 2**

EPI factor	25
Segmentation	7
RF pulse type	Normal
Gradient mode	Normal
Excitation	Non-sel.
RF spoiling	On
Turbo factor	40

**Sequence - Special**

PATRef FA	3 deg
RF duration	340 us
Ernst T1	1200 ms

**Sequence - Special**

PATRef prep. shots	10
Volume dummy shots	0
Dummy Measurements	0
ETL per RTEB	1
Invert PE	Off
Min. TE if PF	On
Echo Time Shift	On
Ramp Sampling	On
NORDIC	Off
SVDPC	On
Sym VASO	Off
Dual-pol. EPI	On
Invert RO	Off
Invert 3D	Off
Disable PF reco	Off
Disable PF reco	Off
Save sampling	Off
PE VComp	Off
Water Exc.	Binomial-11
External PC	per Series
FIDNavs	-none-
EPI rise time factor	1.10
Mosaic DICOMs	On
Modify Ice Config	Off
HSN RF power scale	3.00
Inversion Delay	200 ms
Relaxation Delay	0 ms
Var. FA /MAGEC	7
MAGEC FA ratio	89

**Sequence - Assistant**

Mode	Off
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\\USER\NIMH\XT-ID:93-M-0170\Renzo\20230728\_MAR\_T123\nih5n\_14seg\_FA1110\_seg4\_magpershot9

TA: 5:43 PM: REF Voxel size: 0.8×0.8×0.8 mmPAT: 3 Rel. SNR: 1.00 : nih5m

### 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 A12.1 F18.2 mm
Orientation	Sagittal
Phase enc. dir.	P >> A
AutoAlign	---
Slices per slab	186
FoV read	190 mm
FoV phase	100.0 %
Slice thickness	0.82 mm
TR 1	62.5 ms
TR 2	33483 ms
TE 1	19.70 ms
Averages	1
Filter	None
Coil elements	A32

### Contrast - Common

TR 1	62.5 ms
TR 2	33483 ms
TE 1	19.70 ms
Multi-echo spacing	53.3 ms
Magn. preparation	Non-sel. HSN IR
TI 1	1085 ms
TI 2	2835 ms
Flip angle	11 deg
Fat suppr.	None
Magn. Prep. Shots	9

### Contrast - Dynamic

Averages	1
Averaging mode	Short term
Reconstruction	Magn./Phase
Measurements	10
Pause after meas. 1	0.0 s
Pause after meas. 2	0.0 s
Pause after meas. 3	0.0 s
Pause after meas. 4	0.0 s
Pause after meas. 5	0.0 s
Pause after meas. 6	0.0 s
Pause after meas. 7	0.0 s
Pause after meas. 8	0.0 s
Pause after meas. 9	0.0 s

### Resolution - Common

FoV read	190 mm
FoV phase	100.0 %
Slice thickness	0.82 mm
Base resolution	232
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	39
CAIPI 3D Shift	1
Reference Scan Mode	GRE/separate
CAIPI Mode (tooltip)	Skipped-CAIPI
Total PAT factor	3

### Resolution - Filter Image

Image Filter	Off
Distortion Corr.	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 A12.1 F18.2 mm
Orientation	Sagittal
Phase enc. dir.	P >> A
Slices per slab	186
FoV read	190 mm
FoV phase	100.0 %
Slice thickness	0.82 mm
TR 1	62.5 ms
TR 2	33483 ms

### Geometry - AutoAlign

Slab group	1
Position	L0.0 A12.1 F18.2 mm
Orientation	Sagittal
Phase enc. dir.	P >> A
AutoAlign	---
Initial Position	L0.0 A12.1 F18.2
L	0.0 mm
A	12.1 mm
F	18.2 mm
Initial Rotation	-180.00 deg
Initial Orientation	Sagittal

**Geometry - Saturation**

Saturation mode	Standard
Fat suppr.	None

**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	Brain
B1 Shim mode	TrueForm
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

! Position	L0.0 A0.6 H19.4 mm
! Orientation	T > C-15.5
! Rotation	0.00 deg
! A >> P	210 mm
! R >> L	210 mm
! F >> H	120 mm
Reset	Off

**System - Tx/Rx**

Frequency 1H	297.188232 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	1.000
Reset	Off
! Ref. amplitude 1H	220.000 V

**Sequence - Part 1**

Introduction	On
Dimension	3D
Reordering	Linear
Contrasts	1
Echo spacing	1.19 ms
Bandwidth	938 Hz/Px

**Sequence - Part 2**

EPI factor	44
Segmentation	4
RF pulse type	Normal
Gradient mode	Normal
Excitation	Non-sel.
RF spoiling	On
Turbo factor	28

**Sequence - Special**

PATRef FA	3 deg
RF duration	340 us
Ernst T1	1200 ms

**Sequence - Special**

PATRef prep. shots	10
Volume dummy shots	0
Dummy Measurements	0
ETL per RTEB	1
Invert PE	Off
Min. TE if PF	On
Echo Time Shift	On
Ramp Sampling	On
NORDIC	Off
SVDPC	On
Sym VASO	Off
Dual-pol. EPI	On
Invert RO	Off
Invert 3D	Off
Disable PF reco	Off
Disable PF reco	Off
Save sampling	Off
PE VComp	Off
Water Exc.	Binomial-11
External PC	per Series
FIDNavs	-none-
EPI rise time factor	1.10
Mosaic DICOMs	On
Modify Ice Config	Off
HSN RF power scale	3.00
Inversion Delay	200 ms
Relaxation Delay	0 ms
Var. FA /MAGEC	7
MAGEC FA ratio	89

**Sequence - Assistant**

Mode	Off
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\\USER\NIMH\XT-ID:93-M-0170\Renzo\20230728\_MAR\_T123\nih5n\_14seg\_FA1110\_seg3\_magpershot9

TA: 5:22 PM: REF Voxel size: 0.8×0.8×0.8 mmPAT: 3 Rel. SNR: 1.00 : nih5m

### 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 A12.1 F18.2 mm
Orientation	Sagittal
Phase enc. dir.	P >> A
AutoAlign	---
Slices per slab	186
FoV read	190 mm
FoV phase	100.0 %
Slice thickness	0.82 mm
TR 1	77.8 ms
TR 2	31391 ms
TE 1	25.00 ms
Averages	1
Filter	None
Coil elements	A32

### Contrast - Common

TR 1	77.8 ms
TR 2	31391 ms
TE 1	25.00 ms
Multi-echo spacing	68.8 ms
Magn. preparation	Non-sel. HSN IR
TI 1	988 ms
TI 2	2621.8 ms
Flip angle	11 deg
Fat suppr.	None
Magn. Prep. Shots	9

### Contrast - Dynamic

Averages	1
Averaging mode	Short term
Reconstruction	Magn./Phase
Measurements	10
Pause after meas. 1	0.0 s
Pause after meas. 2	0.0 s
Pause after meas. 3	0.0 s
Pause after meas. 4	0.0 s
Pause after meas. 5	0.0 s
Pause after meas. 6	0.0 s
Pause after meas. 7	0.0 s
Pause after meas. 8	0.0 s
Pause after meas. 9	0.0 s

### Resolution - Common

FoV read	190 mm
FoV phase	100.0 %
Slice thickness	0.82 mm
Base resolution	232
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	39
CAIPI 3D Shift	1
Reference Scan Mode	GRE/separate
CAIPI Mode (tooltip)	Skipped-CAIPI
Total PAT factor	3

### Resolution - Filter Image

Image Filter	Off
Distortion Corr.	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 A12.1 F18.2 mm
Orientation	Sagittal
Phase enc. dir.	P >> A
Slices per slab	186
FoV read	190 mm
FoV phase	100.0 %
Slice thickness	0.82 mm
TR 1	77.8 ms
TR 2	31391 ms

### Geometry - AutoAlign

Slab group	1
Position	L0.0 A12.1 F18.2 mm
Orientation	Sagittal
Phase enc. dir.	P >> A
AutoAlign	---
Initial Position	L0.0 A12.1 F18.2
L	0.0 mm
A	12.1 mm
F	18.2 mm
Initial Rotation	-180.00 deg
Initial Orientation	Sagittal

**Geometry - Saturation**

Saturation mode	Standard
Fat suppr.	None

**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	Brain
B1 Shim mode	TrueForm
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

! Position	L0.0 A0.6 H19.4 mm
! Orientation	T > C-15.5
! Rotation	0.00 deg
! A >> P	210 mm
! R >> L	210 mm
! F >> H	120 mm
Reset	Off

**System - Tx/Rx**

Frequency 1H	297.188232 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	1.000
Reset	Off
! Ref. amplitude 1H	220.000 V

**Sequence - Part 1**

Introduction	On
Dimension	3D
Reordering	Linear
Contrasts	1
Echo spacing	1.17 ms
Bandwidth	938 Hz/Px

**Sequence - Part 2**

EPI factor	58
Segmentation	3
RF pulse type	Normal
Gradient mode	Normal
Excitation	Non-sel.
RF spoiling	On
Turbo factor	21

**Sequence - Special**

PATRef FA	3 deg
RF duration	340 us
Ernst T1	1200 ms

**Sequence - Special**

PATRef prep. shots	10
Volume dummy shots	0
Dummy Measurements	0
ETL per RTEB	1
Invert PE	Off
Min. TE if PF	On
Echo Time Shift	On
Ramp Sampling	On
NORDIC	Off
SVDPC	On
Sym VASO	Off
Dual-pol. EPI	On
Invert RO	Off
Invert 3D	Off
Disable PF reco	Off
Disable PF reco	Off
Save sampling	Off
PE VComp	Off
Water Exc.	Binomial-11
External PC	per Series
FIDNavs	-none-
EPI rise time factor	1.10
Mosaic DICOMs	On
Modify Ice Config	Off
HSN RF power scale	3.00
Inversion Delay	200 ms
Relaxation Delay	0 ms
Var. FA /MAGEC	7
MAGEC FA ratio	89

**Sequence - Assistant**

Mode	Off
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\\USER\NIMH\XT-ID:93-M-0170\Renzo\20230728\_MAR\_T123\nih5n\_14seg\_FA2401

TA: 8:32 PM: REF Voxel size: 0.8×0.8×0.8 mmPAT: 3 Rel. SNR: 1.00 : nih5m

**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 A12.1 F18.2 mm
Orientation	Sagittal
Phase enc. dir.	P >> A
AutoAlign	---
Slices per slab	186
FoV read	190 mm
FoV phase	100.0 %
Slice thickness	0.82 mm
TR 1	27.2 ms
TR 2	50303 ms
TE 1	7.81 ms
Averages	1
Filter	None
Coil elements	A32

**Contrast - Common**

TR 1	27.2 ms
TR 2	50303 ms
TE 1	7.81 ms
Multi-echo spacing	18 ms
Magn. preparation	Non-sel. HSN IR
T1 1	1053.2 ms
T1 2	2739.6 ms
Flip angle	24 deg
Fat suppr.	None
Magn. Prep. Shots	14

**Contrast - Dynamic**

Averages	1
Averaging mode	Short term
Reconstruction	Magn./Phase
Measurements	10
Pause after meas. 1	0.0 s
Pause after meas. 2	0.0 s
Pause after meas. 3	0.0 s
Pause after meas. 4	0.0 s
Pause after meas. 5	0.0 s
Pause after meas. 6	0.0 s
Pause after meas. 7	0.0 s
Pause after meas. 8	0.0 s
Pause after meas. 9	0.0 s

**Resolution - Common**

FoV read	190 mm
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**Resolution - Common**

FoV phase	100.0 %
Slice thickness	0.82 mm
Base resolution	232
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	39
CAIPI 3D Shift	1
Reference Scan Mode	GRE/separate
CAIPI Mode (tooltip)	Skipped-CAIPI
Total PAT factor	3

**Resolution - Filter Image**

Image Filter	Off
Distortion Corr.	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 A12.1 F18.2 mm
Orientation	Sagittal
Phase enc. dir.	P >> A
Slices per slab	186
FoV read	190 mm
FoV phase	100.0 %
Slice thickness	0.82 mm
TR 1	27.2 ms
TR 2	50303 ms

**Geometry - AutoAlign**

Slab group	1
Position	L0.0 A12.1 F18.2 mm
Orientation	Sagittal
Phase enc. dir.	P >> A
AutoAlign	---
Initial Position	L0.0 A12.1 F18.2
L	0.0 mm
A	12.1 mm
F	18.2 mm
Initial Rotation	-180.00 deg
Initial Orientation	Sagittal

**Geometry - Saturation**

Saturation mode	Standard
Fat suppr.	None

**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	Brain
B1 Shim mode	TrueForm
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

! Position	L0.0 A0.6 H19.4 mm
! Orientation	T > C-15.5
! Rotation	0.00 deg
! A >> P	210 mm
! R >> L	210 mm
! F >> H	120 mm
Reset	Off

**System - Tx/Rx**

Frequency 1H	297.188232 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	1.000
Reset	Off
! Ref. amplitude 1H	220.000 V

**Sequence - Part 1**

Introduction	On
Dimension	3D
Reordering	Linear
Contrasts	1
Echo spacing	1.29 ms
Bandwidth	938 Hz/Px

**Sequence - Part 2**

EPI factor	13
Segmentation	14
RF pulse type	Normal
Gradient mode	Normal
Excitation	Non-sel.
RF spoiling	On
Turbo factor	62

**Sequence - Special**

PATRef FA	3 deg
RF duration	340 us
Ernst T1	1200 ms
PATRef prep. shots	10
Volume dummy shots	0
Dummy Measurements	0
ETL per RTEB	1
Invert PE	Off

**Sequence - Special**

Min. TE if PF	On
Echo Time Shift	On
Ramp Sampling	On
NORDIC	Off
SVDPC	On
Sym VASO	Off
Dual-pol. EPI	On
Invert RO	Off
Invert 3D	Off
Disable PF reco	Off
Disable PF reco	Off
Save sampling	Off
PE VComp	Off
Water Exc.	Binomial-11
External PC	per Series
FIDNavs	-none-
EPI rise time factor	1.10
Mosaic DICOMs	On
Modify Ice Config	Off
HSN RF power scale	3.00
Inversion Delay	200 ms
Relaxation Delay	0 ms
Var. FA /MAGEC	7
MAGEC FA ratio	4

**Sequence - Assistant**

Mode	Off
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\\USER\NIMH\XT-ID:93-M-0170\Renzo\20230728\_MAR\_T123\t1\_mp2rage\_sag\_p3\_0p75mm

TA: 9:58 PM: FIX Voxel size: 0.8×0.8×0.8 mmPAT: 3 Rel. SNR: 1.00 : tfl

**Properties**

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	On
Load images to graphic segments	On
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
Dist. factor	50 %
Position	L0.0 A12.1 F18.2 mm
Orientation	Sagittal
Phase enc. dir.	H >> F
AutoAlign	---
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	240
FoV read	240 mm
FoV phase	100.0 %
Slice thickness	0.75 mm
TR	4550.0 ms
TE	1.94 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	A32

**Contrast - Common**

TR	4550.0 ms
TE	1.94 ms
Magn. preparation	Non-sel. IR
TI 1	840 ms
TI 2	2370 ms
Flip angle 1	5.0 deg
Flip angle 2	6.0 deg
Fat suppr.	Water excit. fast
Water suppr.	None

**Contrast - Dynamic**

Averages	1
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

**Resolution - Common**

FoV read	240 mm
FoV phase	100.0 %
Slice thickness	0.75 mm
Base resolution	320
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Off

**Resolution - Common**

Slice partial Fourier	6/8
Interpolation	Off

**Resolution - iPAT**

PAT mode	GRAPPA
Accel. factor PE	3
Ref. lines PE	37
Accel. factor 3D	1
Reference scan mode	Integrated

**Resolution - Filter Image**

Image Filter	Off
Distortion Corr.	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
Dist. factor	50 %
Position	L0.0 A12.1 F18.2 mm
Orientation	Sagittal
Phase enc. dir.	H >> F
Slice oversampling	0.0 %
Slices per slab	240
FoV read	240 mm
FoV phase	100.0 %
Slice thickness	0.75 mm
TR	4550.0 ms
Multi-slice mode	Single shot
Series	Interleaved
Concatenations	1

**Geometry - AutoAlign**

Slab group	1
Position	L0.0 A12.1 F18.2 mm
Orientation	Sagittal
Phase enc. dir.	H >> F
AutoAlign	---
Initial Position	L0.0 A12.1 F18.2
L	0.0 mm
A	12.1 mm
F	18.2 mm
Initial Rotation	90.00 deg
Initial Orientation	Sagittal

**Geometry - Navigator****System - Miscellaneous**

Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P

**System - Miscellaneous**

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

**System - Adjust Volume**

! Position	L0.0 A0.6 H19.4 mm
! Orientation	T > C-15.5
! Rotation	0.00 deg
! A >> P	210 mm
! R >> L	210 mm
! F >> H	120 mm
Reset	Off

**System - Tx/Rx**

Frequency 1H	297.188232 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
! Ref. amplitude 1H	250.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	4550.0 ms
Concatenations	1

**Physio - Cardiac**

Magn. preparation	Non-sel. IR
TI 1	840 ms
TI 2	2370 ms
Fat suppr.	Water excit. fast
Dark blood	Off
FoV read	240 mm
FoV phase	100.0 %
Phase resolution	100 %

**Physio - PACE**

Resp. control	Off
Concatenations	1

**Inline - Common**

Subtract	Off
Measurements	1
StdDev	Off
Save original images	On

**Inline - MIP**

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

**Inline - Composing**

Distortion Corr.	Off
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**Sequence - Part 1**

Introduction	On
Dimension	3D
Elliptical scanning	Off
Reordering	Linear
Asymmetric echo	Allowed
Flow comp.	No
Multi-slice mode	Single shot
Echo spacing	6.3 ms
Bandwidth	250 Hz/Px

**Sequence - Part 2**

RF pulse type	Fast
Gradient mode	Fast
Excitation	Non-sel.
RF spoiling	On
Incr. Gradient spoiling	Off
Turbo factor	180

**Sequence - Nuclei**

TX/RX Nucleus	1H
TX/RX delta frequency	0 Hz
TX Nucleus	None
TX delta frequency	0 Hz
Coil elements	A32

**Sequence - Assistant**

Mode	Off
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\\USER\NIMH\XT-ID:93-M-0170\Renzo\20230728\_MAR\_T123\nih5n\_15seg\_FA1110

TA: 8:32 PM: REF Voxel size: 0.8×0.8×0.8 mmPAT: 3 Rel. SNR: 1.00 : nih5m

**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 A12.1 F18.2 mm
Orientation	Sagittal
Phase enc. dir.	P >> A
AutoAlign	---
Slices per slab	186
FoV read	190 mm
FoV phase	100.0 %
Slice thickness	0.82 mm
TR 1	27.2 ms
TR 2	50303 ms
TE 1	7.81 ms
Averages	1
Filter	None
Coil elements	A32

**Contrast - Common**

TR 1	27.2 ms
TR 2	50303 ms
TE 1	7.81 ms
Multi-echo spacing	18 ms
Magn. preparation	Non-sel. HSN IR
T1 1	1053.2 ms
T1 2	2739.6 ms
Flip angle	11 deg
Fat suppr.	None
Magn. Prep. Shots	14

**Contrast - Dynamic**

Averages	1
Averaging mode	Short term
Reconstruction	Magn./Phase
Measurements	10
Pause after meas. 1	0.0 s
Pause after meas. 2	0.0 s
Pause after meas. 3	0.0 s
Pause after meas. 4	0.0 s
Pause after meas. 5	0.0 s
Pause after meas. 6	0.0 s
Pause after meas. 7	0.0 s
Pause after meas. 8	0.0 s
Pause after meas. 9	0.0 s

**Resolution - Common**

FoV read	190 mm
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**Resolution - Common**

FoV phase	100.0 %
Slice thickness	0.82 mm
Base resolution	232
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	39
CAIPI 3D Shift	1
Reference Scan Mode	GRE/separate
CAIPI Mode (tooltip)	Skipped-CAIPI
Total PAT factor	3

**Resolution - Filter Image**

Image Filter	Off
Distortion Corr.	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 A12.1 F18.2 mm
Orientation	Sagittal
Phase enc. dir.	P >> A
Slices per slab	186
FoV read	190 mm
FoV phase	100.0 %
Slice thickness	0.82 mm
TR 1	27.2 ms
TR 2	50303 ms

**Geometry - AutoAlign**

Slab group	1
Position	L0.0 A12.1 F18.2 mm
Orientation	Sagittal
Phase enc. dir.	P >> A
AutoAlign	---
Initial Position	L0.0 A12.1 F18.2
L	0.0 mm
A	12.1 mm
F	18.2 mm
Initial Rotation	180.00 deg
Initial Orientation	Sagittal

**Geometry - Saturation**

Saturation mode	Standard
Fat suppr.	None

**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	Brain
B1 Shim mode	TrueForm
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

! Position	L0.0 A0.6 H19.4 mm
! Orientation	T > C-15.5
! Rotation	0.00 deg
! A >> P	210 mm
! R >> L	210 mm
! F >> H	120 mm
Reset	Off

**System - Tx/Rx**

Frequency 1H	297.188232 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	1.000
Reset	Off
! Ref. amplitude 1H	220.000 V

**Sequence - Part 1**

Introduction	On
Dimension	3D
Reordering	Linear
Contrasts	1
Echo spacing	1.29 ms
Bandwidth	938 Hz/Px

**Sequence - Part 2**

EPI factor	13
Segmentation	14
RF pulse type	Normal
Gradient mode	Normal
Excitation	Non-sel.
RF spoiling	On
Turbo factor	62

**Sequence - Special**

PATRef FA	3 deg
RF duration	340 us
Ernst T1	1200 ms
PATRef prep. shots	10
Volume dummy shots	0
Dummy Measurements	0
ETL per RTEB	1
Invert PE	Off

**Sequence - Special**

Min. TE if PF	On
Echo Time Shift	On
Ramp Sampling	On
NORDIC	Off
SVDPC	On
Sym VASO	Off
Dual-pol. EPI	On
Invert RO	Off
Invert 3D	Off
Disable PF reco	Off
Disable PF reco	Off
Save sampling	Off
PE VComp	Off
Water Exc.	Binomial-11
External PC	per Series
FIDNavs	-none-
EPI rise time factor	1.10
Mosaic DICOMs	On
Modify Ice Config	Off
HSN RF power scale	3.00
Inversion Delay	200 ms
Relaxation Delay	0 ms
Var. FA /MAGEC	7
MAGEC FA ratio	89

**Sequence - Assistant**

Mode	Off
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