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\\USER\Test\Renzo\WholeBrain_invivo20220710\renzo_IR_localizer_visual_20220710

TA: 1:05 PM: REF Voxel size: 1.3×1.3×3.0 mmPAT: Off 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	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

Slice group	1
Slices	7
Dist. factor	50 %
Position	R2.2 P81.4 H0.0 mm
Orientation	Coronal
Phase enc. dir.	R >> L
Slice group	2
Slices	7
Dist. factor	150 %
Position	R0.2 P2.0 F12.7 mm
Orientation	Transversal
Phase enc. dir.	A >> P
Slice group	3
Slices	7
Dist. factor	120 %
Position	L0.0 P2.6 F10.2 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	---
Phase oversampling	0 %
FoV read	240 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	3000.0 ms
TE	2.34 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	R96

Contrast - Common

TR	3000.0 ms
TE	2.34 ms
Magn. preparation	Slice-sel. IR
TI	1100 ms
Flip angle	6.0 deg
Fat suppr.	None
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	3.0 mm
Base resolution	192
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off

Resolution - iPAT

PAT mode	None

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

Slice group	1
Slices	7
Dist. factor	50 %
Position	R2.2 P81.4 H0.0 mm
Orientation	Coronal
Phase enc. dir.	R >> L
Slice group	2
Slices	7
Dist. factor	150 %
Position	R0.2 P2.0 F12.7 mm
Orientation	Transversal
Phase enc. dir.	A >> P
Slice group	3
Slices	7
Dist. factor	120 %
Position	L0.0 P2.6 F10.2 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
FoV read	240 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	3000.0 ms
Multi-slice mode	Single shot
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slice group	1
Position	R2.2 P81.4 H0.0 mm
Orientation	Coronal
Phase enc. dir.	R >> L
Slice group	2
Position	R0.2 P2.0 F12.7 mm
Orientation	Transversal
Phase enc. dir.	A >> P
Slice group	3
Position	L0.0 P2.6 F10.2 mm

Geometry - AutoAlign

Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	---
Initial Position	R2.2 P81.4 H0.0
R	2.2 mm
P	81.4 mm
H	0.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Coronal

Geometry - Navigator

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	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	297.192191 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

Physio - Signal1

TR	3000.0 ms
Concatenations	1

Physio - Cardiac

Magn. preparation	Slice-sel. IR
TI	1100 ms
Fat suppr.	None
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

Inline Composing	Off
Distortion Corr.	Off

Inline - MapIt

Save original images	On
MapIt	None
Flip angle	6.0 deg
Measurements	1
TR	3000.0 ms
TE	2.34 ms

Sequence - Part 1

Introduction	On
Dimension	2D
Asymmetric echo	Allowed
Flow comp.	No
Multi-slice mode	Single shot
Echo spacing	6.2 ms
Bandwidth	240 Hz/Px

Sequence - Part 2

RF pulse type	Normal
Gradient mode	Normal
Excitation	Slice-sel.
RF spoiling	On
Incr. Gradient spoiling	Off
Turbo factor	192

Sequence - Assistant

Mode	Off

\\USER\Test\Renzo\WholeBrain_invivo20220710\WB_0p6_ipat12_S3

TA: 0:28 PM: FIX Voxel size: 0.6×0.6×0.6 mmPAT: 12 Rel. SNR: 1.00 : 8036cbcd

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 P4.1 H16.3 mm
Orientation	T > C-31.7
Phase enc. dir.	A >> P
AutoAlign	---
Slab Scale	-10 %
Slices per slab	180
FoV read	190 mm
FoV phase	100.0 %
Slice thickness	0.63 mm
TR 1	31.2 ms
TR 2	6956 ms
TE 1	11.10 ms
Averages	1
Multi-echo Shots	1
Filter	Distortion Corr.(3D)
Coil elements	R96

Contrast - Common

TR 1	31.2 ms
TR 2	6956 ms
TE 1	11.10 ms
Multi-echo spacing	26.36 ms
Magn. preparation	Non-sel. HSN IR
TI 1	1346.4 ms
TI 2	2750.4 ms
Flip angle	10 deg
Fat suppr.	None
Magn. Prep. Shots	2

Contrast - Dynamic

Averages	1
Averaging mode	Long term
Reconstruction	Magn./Phase
Measurements	3
Pause after meas. 1	0.0 s
Pause after meas. 2	0.0 s

Resolution - Common

FoV read	190 mm
FoV phase	100.0 %
Slice thickness	0.63 mm
Base resolution	300
Phase resolution	100 %
Slice resolution	100 %

Resolution - Common

Phase partial Fourier	6/8
Slice partial Fourier	Off
Interpolation	Off

Resolution - iPAT

PAT mode	CAIPIRINHA
Acc. factor PE	2
Ref. lines PE	75
Acc. factor 3D	6
Ref. lines 3D	24
CAIPI 3D Shift	4
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 P4.1 H16.3 mm
Orientation	T > C-31.7
Phase enc. dir.	A >> P
Slab Scale	-10 %
Slices per slab	180
FoV read	190 mm
FoV phase	100.0 %
Slice thickness	0.63 mm
TR 1	31.2 ms
TR 2	6956 ms
Multi-slice mode	Interleaved
Series	Ascending
Multi-echo Shots	1

Geometry - AutoAlign

Slab group	1
Position	L0.0 P4.1 H16.3 mm
Orientation	T > C-31.7
Phase enc. dir.	A >> P
AutoAlign	---
Initial Position	L0.0 P4.1 H16.3
L	0.0 mm
P	4.1 mm
H	16.3 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-31.7
> S	0.0

Geometry - Saturation

Saturation mode	Standard
Fat suppr.	None

Geometry - Tim Planning Suite

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

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	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	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	Slab-sel.

System - Tx/Rx

Frequency 1H	297.192191 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	1.000
Reset	Off
! Ref. amplitude 1H	300.000 V

Sequence - Part 1

Introduction	On
Dimension	3D
Reordering	Linear
Asymmetric echo	Off
Contrasts	1
Multi-slice mode	Interleaved
Echo spacing	0.68 ms
Bandwidth	1666 Hz/Px

Sequence - Part 2

EPI factor	38
Segmentation	3
RF pulse type	Normal
Gradient mode	Normal
Excitation	Slab-sel.
RF spoiling	On
Turbo factor	45

Sequence - Special

PATRef FA	3 deg
RF duration	1400 us
RF BWT product	8
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
SVDPC	On
Invert 3D	Off
Invert RO	Off
Alternate RO	On
Disable PF reco	Off
Disable PF reco	Off
Save sampling	Off
PE VComp	Off
Water Exc.	Long bino-11
External PC	per Series
EPI rise time factor	1.10
Mosaic DICOMs	On
Modify Ice Config	Off
HSN RF power scale	3.00
Inversion Delay	650 ms
Relaxation Delay	0 ms
Var. FA /MAGEC	1

Sequence - Assistant

Mode	Off

\\USER\Test\Renzo\WholeBrain_invivo20220710\WB_0p8_ipat12_S3

TA: 0:18 PM: FIX Voxel size: 0.8×0.8×0.8 mmPAT: 12 Rel. SNR: 1.00 : 8036cbcd

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 P4.1 H16.3 mm
Orientation	T > C-31.7
Phase enc. dir.	A >> P
AutoAlign	---
Slab Scale	-10 %
Slices per slab	120
FoV read	190 mm
FoV phase	100.0 %
Slice thickness	0.80 mm
TR 1	26.0 ms
TR 2	3790 ms
TE 1	9.53 ms
Averages	1
Multi-echo Shots	1
Filter	Distortion Corr.(3D)
Coil elements	R96

Contrast - Common

TR 1	26.0 ms
TR 2	3790 ms
TE 1	9.53 ms
Multi-echo spacing	21.44 ms
Magn. preparation	Non-sel. HSN IR
TI 1	1440 ms
TI 2	3000 ms
Flip angle	10 deg
Fat suppr.	None
Magn. Prep. Shots	1

Contrast - Dynamic

Averages	1
Averaging mode	Long term
Reconstruction	Magn./Phase
Measurements	3
Pause after meas. 1	0.0 s
Pause after meas. 2	0.0 s

Resolution - Common

FoV read	190 mm
FoV phase	100.0 %
Slice thickness	0.80 mm
Base resolution	238
Phase resolution	100 %
Slice resolution	100 %

Resolution - Common

Phase partial Fourier	6/8
Slice partial Fourier	Off
Interpolation	Off

Resolution - iPAT

PAT mode	CAIPIRINHA
Acc. factor PE	2
Ref. lines PE	75
Acc. factor 3D	6
Ref. lines 3D	24
CAIPI 3D Shift	4
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 P4.1 H16.3 mm
Orientation	T > C-31.7
Phase enc. dir.	A >> P
Slab Scale	-10 %
Slices per slab	120
FoV read	190 mm
FoV phase	100.0 %
Slice thickness	0.80 mm
TR 1	26.0 ms
TR 2	3790 ms
Multi-slice mode	Interleaved
Series	Ascending
Multi-echo Shots	1

Geometry - AutoAlign

Slab group	1
Position	L0.0 P4.1 H16.3 mm
Orientation	T > C-31.7
Phase enc. dir.	A >> P
AutoAlign	---
Initial Position	L0.0 P4.1 H16.3
L	0.0 mm
P	4.1 mm
H	16.3 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-31.7
> S	0.0

Geometry - Saturation

Saturation mode	Standard
Fat suppr.	None

Geometry - Tim Planning Suite

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

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	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	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	Slab-sel.

System - Tx/Rx

Frequency 1H	297.192191 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	1.000
Reset	Off
! Ref. amplitude 1H	300.000 V

Sequence - Part 1

Introduction	On
Dimension	3D
Reordering	Linear
Asymmetric echo	Off
Contrasts	1
Multi-slice mode	Interleaved
Echo spacing	0.7 ms
Bandwidth	1616 Hz/Px

Sequence - Part 2

EPI factor	30
Segmentation	3
RF pulse type	Normal
Gradient mode	Normal
Excitation	Slab-sel.
RF spoiling	On
Turbo factor	60

Sequence - Special

PATRef FA	3 deg
RF duration	1400 us
RF BWT product	8
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
SVDPC	On
Invert 3D	Off
Invert RO	Off
Alternate RO	On
Disable PF reco	Off
Disable PF reco	Off
Save sampling	Off
PE VComp	Off
Water Exc.	Long bino-11
External PC	per Series
EPI rise time factor	1.10
Mosaic DICOMs	On
Modify Ice Config	Off
HSN RF power scale	3.00
Inversion Delay	650 ms
Relaxation Delay	0 ms
Var. FA /MAGEC	1

Sequence - Assistant

Mode	Off

\\USER\Test\Renzo\WholeBrain_invivo20220710\WB_0p6_ipat8_S2

TA: 0:32 PM: FIX Voxel size: 0.6×0.6×0.6 mmPAT: 8 Rel. SNR: 1.00 : 8036cbcd

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 P4.1 H16.3 mm
Orientation	T > C-31.7
Phase enc. dir.	A >> P
AutoAlign	---
Slab Scale	-10 %
Slices per slab	180
FoV read	190 mm
FoV phase	100.0 %
Slice thickness	0.63 mm
TR 1	38.7 ms
TR 2	8306 ms
TE 1	13.70 ms
Averages	1
Multi-echo Shots	1
Filter	Distortion Corr.(3D)
Coil elements	R96

Contrast - Common

TR 1	38.7 ms
TR 2	8306 ms
TE 1	13.70 ms
Multi-echo spacing	34.12 ms
Magn. preparation	Non-sel. HSN IR
TI 1	1511.4 ms
TI 2	3252.9 ms
Flip angle	12 deg
Fat suppr.	None
Magn. Prep. Shots	2

Contrast - Dynamic

Averages	1
Averaging mode	Long term
Reconstruction	Magn./Phase
Measurements	3
Pause after meas. 1	0.0 s
Pause after meas. 2	0.0 s

Resolution - Common

FoV read	190 mm
FoV phase	100.0 %
Slice thickness	0.63 mm
Base resolution	300
Phase resolution	100 %
Slice resolution	100 %

Resolution - Common

Phase partial Fourier	6/8
Slice partial Fourier	Off
Interpolation	Off

Resolution - iPAT

PAT mode	CAIPIRINHA
Acc. factor PE	2
Ref. lines PE	75
Acc. factor 3D	4
Ref. lines 3D	24
CAIPI 3D Shift	2
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 P4.1 H16.3 mm
Orientation	T > C-31.7
Phase enc. dir.	A >> P
Slab Scale	-10 %
Slices per slab	180
FoV read	190 mm
FoV phase	100.0 %
Slice thickness	0.63 mm
TR 1	38.7 ms
TR 2	8306 ms
Multi-slice mode	Interleaved
Series	Ascending
Multi-echo Shots	1

Geometry - AutoAlign

Slab group	1
Position	L0.0 P4.1 H16.3 mm
Orientation	T > C-31.7
Phase enc. dir.	A >> P
AutoAlign	---
Initial Position	L0.0 P4.1 H16.3
L	0.0 mm
P	4.1 mm
H	16.3 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-31.7
> S	0.0

Geometry - Saturation

Saturation mode	Standard
Fat suppr.	None

Geometry - Tim Planning Suite

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

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	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	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	Slab-sel.

System - Tx/Rx

Frequency 1H	297.192191 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	1
Multi-slice mode	Interleaved
Echo spacing	0.6 ms
Bandwidth	1852 Hz/Px

Sequence - Part 2

EPI factor	56
Segmentation	2
RF pulse type	Normal
Gradient mode	Normal
Excitation	Slab-sel.
RF spoiling	On
Turbo factor	45

Sequence - Special

PATRef FA	3 deg
RF duration	1400 us
RF BWT product	8
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
SVDPC	On
Invert 3D	Off
Invert RO	Off
Alternate RO	On
Disable PF reco	Off
Disable PF reco	Off
Save sampling	Off
PE VComp	Off
Water Exc.	Long bino-11
External PC	per Series
EPI rise time factor	1.10
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	1

Sequence - Assistant

Mode	Off

\\USER\Test\Renzo\WholeBrain_invivo20220710\WB_0p8_ipat12_S3_nolce_movie

TA: 14:28 PM: FIX Voxel size: 0.8×0.8×0.8 mmPAT: 12 Rel. SNR: 1.00 : 8036cbcd

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 P17.4 H29.1 mm
Orientation	T > C-12.8
Phase enc. dir.	A >> P
AutoAlign	---
Slab Scale	-10 %
Slices per slab	120
FoV read	200 mm
FoV phase	100.0 %
Slice thickness	0.80 mm
TR 1	25.6 ms
TR 2	3742 ms
TE 1	9.40 ms
Averages	1
Multi-echo Shots	1
Filter	Distortion Corr.(3D)
Coil elements	R96

Contrast - Common

TR 1	25.6 ms
TR 2	3742 ms
TE 1	9.40 ms
Multi-echo spacing	21.12 ms
Magn. preparation	Non-sel. HSN IR
TI 1	1428 ms
TI 2	2964 ms
Flip angle	10 deg
Fat suppr.	None
Magn. Prep. Shots	1

Contrast - Dynamic

Averages	1
Averaging mode	Long term
Reconstruction	Magn./Phase
Measurements	230
Pause after meas.	0.0 s

Resolution - Common

FoV read	200 mm
FoV phase	100.0 %
Slice thickness	0.80 mm
Base resolution	240
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	6/8

Resolution - Common

Slice partial Fourier	Off
Interpolation	Off

Resolution - iPAT

PAT mode	CAIPIRINHA
Acc. factor PE	2
Ref. lines PE	75
Acc. factor 3D	6
Ref. lines 3D	24
CAIPI 3D Shift	4
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 P17.4 H29.1 mm
Orientation	T > C-12.8
Phase enc. dir.	A >> P
Slab Scale	-10 %
Slices per slab	120
FoV read	200 mm
FoV phase	100.0 %
Slice thickness	0.80 mm
TR 1	25.6 ms
TR 2	3742 ms
Multi-slice mode	Interleaved
Series	Ascending
Multi-echo Shots	1

Geometry - AutoAlign

Slab group	1
Position	L0.0 P17.4 H29.1 mm
Orientation	T > C-12.8
Phase enc. dir.	A >> P
AutoAlign	---
Initial Position	L0.0 P17.4 H29.1
L	0.0 mm
P	17.4 mm
H	29.1 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-12.8
> S	0.0

Geometry - Saturation

Saturation mode	Standard

Geometry - Saturation

Fat suppr.	None

Geometry - Tim Planning Suite

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

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	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 P21.6 H33.0 mm
! Orientation	T > C-16.2
! Rotation	0.00 deg
! A >> P	199 mm
! R >> L	189 mm
! F >> H	107 mm
Reset	Off

System - pTx Volumes

B1 Shim mode	TrueForm
Excitation	Slab-sel.

System - Tx/Rx

Frequency 1H	297.192191 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	1.000
Reset	Off
! Ref. amplitude 1H	300.000 V

Sequence - Part 1

Introduction	On
Dimension	3D
Reordering	Linear
Asymmetric echo	Off
Contrasts	1
Multi-slice mode	Interleaved
Echo spacing	0.69 ms
Bandwidth	1602 Hz/Px

Sequence - Part 2

EPI factor	30

Sequence - Part 2

Segmentation	3
RF pulse type	Normal
Gradient mode	Normal
Excitation	Slab-sel.
RF spoiling	On
Turbo factor	60

Sequence - Special

PATRef FA	3 deg
RF duration	1400 us
RF BWT product	8
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
SVDPC	On
Invert 3D	Off
Invert RO	Off
Alternate RO	On
Disable PF reco	Off
Disable PF reco	Off
Save sampling	Off
PE VComp	Off
Water Exc.	Long bino-11
External PC	per Series
EPI rise time factor	1.10
Mosaic DICOMs	On
Modify Ice Config	Off
HSN RF power scale	3.00
Inversion Delay	650 ms
Relaxation Delay	0 ms
Var. FA /MAGEC	1

Sequence - Assistant

Mode	Off

\\USER\Test\Renzo\WholeBrain_invivo20220710\WB_0p6_ipat8_S2_nolce_movie

TA: 14:32 PM: FIX Voxel size: 0.6×0.6×0.6 mmPAT: 8 Rel. SNR: 1.00 : 8036cbcd

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 P17.4 H29.1 mm
Orientation	T > C-12.8
Phase enc. dir.	A >> P
AutoAlign	---
Slab Scale	-10 %
Slices per slab	180
FoV read	200 mm
FoV phase	100.0 %
Slice thickness	0.63 mm
TR 1	45.9 ms
TR 2	9402 ms
TE 1	16.10 ms
Averages	1
Multi-echo Shots	1
Filter	Distortion Corr.(3D)
Coil elements	R96

Contrast - Common

TR 1	45.9 ms
TR 2	9402 ms
TE 1	16.10 ms
Multi-echo spacing	41.39 ms
Magn. preparation	Non-sel. HSN IR
TI 1	1569.8 ms
TI 2	3635.3 ms
Flip angle	12 deg
Fat suppr.	None
Magn. Prep. Shots	2

Contrast - Dynamic

Averages	1
Averaging mode	Long term
Reconstruction	Magn./Phase
Measurements	92
Pause after meas.	0.0 s

Resolution - Common

FoV read	200 mm
FoV phase	100.0 %
Slice thickness	0.63 mm
Base resolution	314
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	6/8

Resolution - Common

Slice partial Fourier	Off
Interpolation	Off

Resolution - iPAT

PAT mode	CAIPIRINHA
Acc. factor PE	2
Ref. lines PE	75
Acc. factor 3D	4
Ref. lines 3D	24
CAIPI 3D Shift	2
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 P17.4 H29.1 mm
Orientation	T > C-12.8
Phase enc. dir.	A >> P
Slab Scale	-10 %
Slices per slab	180
FoV read	200 mm
FoV phase	100.0 %
Slice thickness	0.63 mm
TR 1	45.9 ms
TR 2	9402 ms
Multi-slice mode	Interleaved
Series	Ascending
Multi-echo Shots	1

Geometry - AutoAlign

Slab group	1
Position	L0.0 P17.4 H29.1 mm
Orientation	T > C-12.8
Phase enc. dir.	A >> P
AutoAlign	---
Initial Position	L0.0 P17.4 H29.1
L	0.0 mm
P	17.4 mm
H	29.1 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-12.8
> S	0.0

Geometry - Saturation

Saturation mode	Standard

Geometry - Saturation

Fat suppr.	None

Geometry - Tim Planning Suite

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

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	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 P21.6 H33.0 mm
! Orientation	T > C-16.2
! Rotation	0.00 deg
! A >> P	199 mm
! R >> L	189 mm
! F >> H	107 mm
Reset	Off

System - pTx Volumes

B1 Shim mode	TrueForm
Excitation	Slab-sel.

System - Tx/Rx

Frequency 1H	297.192191 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	1
Multi-slice mode	Interleaved
Echo spacing	0.69 ms
Bandwidth	1592 Hz/Px

Sequence - Part 2

EPI factor	59

Sequence - Part 2

Segmentation	2
RF pulse type	Normal
Gradient mode	Normal
Excitation	Slab-sel.
RF spoiling	On
Turbo factor	45

Sequence - Special

PATRef FA	3 deg
RF duration	1400 us
RF BWT product	8
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
SVDPC	On
Invert 3D	Off
Invert RO	Off
Alternate RO	On
Disable PF reco	Off
Disable PF reco	Off
Save sampling	Off
PE VComp	Off
Water Exc.	Long bino-11
External PC	per Series
EPI rise time factor	1.10
Mosaic DICOMs	On
Modify Ice Config	Off
HSN RF power scale	2.50
Inversion Delay	550 ms
Relaxation Delay	0 ms
Var. FA /MAGEC	1

Sequence - Assistant

Mode	Off

\\USER\Test\Renzo\WholeBrain_invivo20220710\WB_0p6_ipat12_S3

TA: 0:29 PM: FIX Voxel size: 0.6×0.6×0.6 mmPAT: 12 Rel. SNR: 1.00 : 8036cbcd

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 P17.4 H29.1 mm
Orientation	T > C-12.8
Phase enc. dir.	A >> P
AutoAlign	---
Slab Scale	-10 %
Slices per slab	180
FoV read	200 mm
FoV phase	100.0 %
Slice thickness	0.63 mm
TR 1	33.0 ms
TR 2	7280 ms
TE 1	11.70 ms
Averages	1
Multi-echo Shots	1
Filter	Distortion Corr.(3D)
Coil elements	R96

Contrast - Common

TR 1	33.0 ms
TR 2	7280 ms
TE 1	11.70 ms
Multi-echo spacing	28.12 ms
Magn. preparation	Non-sel. HSN IR
TI 1	1386 ms
TI 2	2871 ms
Flip angle	10 deg
Fat suppr.	None
Magn. Prep. Shots	2

Contrast - Dynamic

Averages	1
Averaging mode	Long term
Reconstruction	Magn./Phase
Measurements	3
Pause after meas. 1	0.0 s
Pause after meas. 2	0.0 s

Resolution - Common

FoV read	200 mm
FoV phase	100.0 %
Slice thickness	0.63 mm
Base resolution	314
Phase resolution	100 %
Slice resolution	100 %

Resolution - Common

Phase partial Fourier	6/8
Slice partial Fourier	Off
Interpolation	Off

Resolution - iPAT

PAT mode	CAIPIRINHA
Acc. factor PE	2
Ref. lines PE	75
Acc. factor 3D	6
Ref. lines 3D	24
CAIPI 3D Shift	4
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 P17.4 H29.1 mm
Orientation	T > C-12.8
Phase enc. dir.	A >> P
Slab Scale	-10 %
Slices per slab	180
FoV read	200 mm
FoV phase	100.0 %
Slice thickness	0.63 mm
TR 1	33.0 ms
TR 2	7280 ms
Multi-slice mode	Interleaved
Series	Ascending
Multi-echo Shots	1

Geometry - AutoAlign

Slab group	1
Position	L0.0 P17.4 H29.1 mm
Orientation	T > C-12.8
Phase enc. dir.	A >> P
AutoAlign	---
Initial Position	L0.0 P17.4 H29.1
L	0.0 mm
P	17.4 mm
H	29.1 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-12.8
> S	0.0

Geometry - Saturation

Saturation mode	Standard
Fat suppr.	None

Geometry - Tim Planning Suite

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

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	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 P21.6 H33.0 mm
! Orientation	T > C-16.2
! Rotation	0.00 deg
! A >> P	199 mm
! R >> L	189 mm
! F >> H	107 mm
Reset	Off

System - pTx Volumes

B1 Shim mode	TrueForm
Excitation	Slab-sel.

System - Tx/Rx

Frequency 1H	297.192191 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	1.000
Reset	Off
! Ref. amplitude 1H	300.000 V

Sequence - Part 1

Introduction	On
Dimension	3D
Reordering	Linear
Asymmetric echo	Off
Contrasts	1
Multi-slice mode	Interleaved
Echo spacing	0.69 ms
Bandwidth	1592 Hz/Px

Sequence - Part 2

EPI factor	40
Segmentation	3
RF pulse type	Normal
Gradient mode	Normal
Excitation	Slab-sel.
RF spoiling	On
Turbo factor	45

Sequence - Special

PATRef FA	3 deg
RF duration	1400 us
RF BWT product	8
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
SVDPC	On
Invert 3D	Off
Invert RO	Off
Alternate RO	On
Disable PF reco	Off
Disable PF reco	Off
Save sampling	Off
PE VComp	Off
Water Exc.	Long bino-11
External PC	per Series
EPI rise time factor	1.10
Mosaic DICOMs	On
Modify Ice Config	Off
HSN RF power scale	3.00
Inversion Delay	650 ms
Relaxation Delay	0 ms
Var. FA /MAGEC	1

Sequence - Assistant

Mode	Off