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## \\USER neuromod generic 2019-01-22\_anat localizer acq-0.8mm\_T1w acq-0.8mm\_T2w acq-s3-ap\_b0 acq-s3-pa\_dwi dMRI\_dir98\_AP\_test\_cmrr dMRI\_dir98\_PA\_test\_cmrr gre\_3d\_MTw gre\_3d\_PDw gre\_3d\_T1w tfl\_b1map\_6mm t1\_mp2rage t2\_swi\_tra\_p2\_1.5mm Localizer T2w **DWI GRE-MT1 GRE-MT0** GRE-T1w **GRE-ME**

## \\USER\neuromod\generic\2019-01-22\_anat\localizer

TA: 0:12 PM: ISO Voxel size: 0.5×0.5×7.0 mmPAT: Off Rel. SNR: 1.00 : fl

#### **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

Noutine	
Slice group	1
Slices	1
Dist. factor	20 %
Position	L0.0 A20.0 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	2
Slices	1
Dist. factor	20 %
Position	L0.0 A20.0 H0.0 mm
Orientation	Transversal
Phase enc. dir.	A >> P
Slice group	3
Slices	1
Dist. factor	20 %
Position	L0.0 A20.0 H0.0 mm
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	7.5 ms
TE	3.69 ms
Averages	2
Concatenations	3
Filter	Distortion Corr.(2D),
	Prescan Normalize,
Cail alamanta	Elliptical filter
Coil elements	HC1-7;NC1,2

#### **Contrast - Common**

Contract Common	
TR	7.5 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

#### **Contrast - Dynamic**

Measurements	1
Multiple series	Each measurement

#### **Resolution - Common**

FoV read	250 mm
FoV phase	100.0 %
Slice thickness	7.0 mm
Base resolution	256
Phase resolution	91 %
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	On
Unfiltered images	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	L0.0 A20.0 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	2
Slices	1
Dist. factor	20 %
Position	L0.0 A20.0 H0.0 mm
Orientation	Transversal
Phase enc. dir.	A >> P
Slice group	3
Slices	1
Dist. factor	20 %
Position	L0.0 A20.0 H0.0 mm
Orientation	Coronal
Phase enc. dir.	R >> L
FoV read	250 mm
FoV phase	100.0 %
Slice thickness	7.0 mm
TR	7.5 ms
Multi-slice mode	Sequential
Series	Interleaved
Concatenations	3

### Geometry - AutoAlign

Slice group	1
Position	L0.0 A20.0 H0.0 mm
Orientation	Sagittal

### **Geometry - AutoAlign**

Phase enc. dir.	A >> P
Slice group	2
Position	L0.0 A20.0 H0.0 mm
Orientation	Transversal
Phase enc. dir.	A >> P
Slice group	3
Position	L0.0 A20.0 H0.0 mm
Orientation	Coronal
Phase enc. dir.	R >> L
AutoAlign	
Initial Position	L0.0 A20.0 H0.0
L	0.0 mm
A	20.0 mm
Н	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 Planning Suite**

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

#### **System - Miscellaneous**

-,	
Positioning mode	ISO
Table position	Н
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	Off - AutoCoilSelect

### **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	123.259601 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	7.5 ms
Concatenations	3
Segments	1

## Physio - Cardiac

Tagging	None
Magn. preparation	None
Fat suppr.	None
Dark blood	Off
FoV read	250 mm
FoV phase	100.0 %
Phase resolution	91 %

## **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**

Inline Composing	Off
Distortion Corr.	On
Mode	2D
Unfiltered images	Off

## 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

## SIEMENS MAGNETOM Prisma\_fit

## Sequence - Part 2

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

Mode	Off
Allowed delay	0 s

## \\USER\neuromod\generic\2019-01-22\_anat\acq-0.8mm\_T1w

TA: 6:38 PM: REF Voxel size: 0.8×0.8×0.8 mmPAT: 2 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	Off
preparation	
Wait for user to start	On
Start measurements	Single measurement

### Routine

Slab group	1
Slabs	1
Dist. factor	50 %
Position	L0.0 A29.6 H9.5 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	
Phase oversampling	0 %
Slice oversampling	23.1 %
Slices per slab	208
FoV read	256 mm
FoV phase	93.8 %
Slice thickness	0.80 mm
TR	2400.0 ms
TE	2.22 ms
Averages	1
Concatenations	1
Filter	Prescan Normalize
Coil elements	HC1-7;NC1,2

#### **Contrast - Common**

TR	2400.0 ms
TE	2.22 ms
Magn. preparation	Non-sel. IR
TI	1000 ms
Flip angle	8 deg
Fat suppr. Water 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	256 mm	
FoV phase	93.8 %	
Slice thickness	0.80 mm	
Base resolution	320	
Phase resolution	100 %	
Slice resolution	100 %	
Phase partial Fourier	Off	
Slice partial Fourier	Off	
Interpolation	Off	

#### **Resolution - iPAT**

PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	32
Accel. factor 3D	1
Reference scan mode	Integrated

### **Resolution - Filter Image**

Image Filter	Off	
Distortion Corr.	Off	
Prescan Normalize	On	
Unfiltered images	On	
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 A29.6 H9.5 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice oversampling	23.1 %
Slices per slab	208
FoV read	256 mm
FoV phase	93.8 %
Slice thickness	0.80 mm
TR	2400.0 ms
Multi-slice mode	Single shot
Series	Interleaved
Concatenations	1

#### Geometry - AutoAlign

1
L0.0 A29.6 H9.5 mm
Sagittal
A >> P
L0.0 A29.6 H9.5
0.0 mm
29.6 mm
9.5 mm
0.00 deg
Sagittal

## **Geometry - Navigator**

## **Geometry - Tim Planning Suite**

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

### **System - Miscellaneous**

Positioning mode	REF
Table position	Н
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	Off - All

### **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 A18.7 H22.3 mm
! Orientation	T > C-20.0
! Rotation	0.00 deg
! A >> P	208 mm
! R >> L	208 mm
! F >> H	144 mm
Reset	Off

## System - pTx Volumes

B1 Shim mode	TrueForm
Excitation	Non-sel.

## System - Tx/Rx

Frequency 1H	123.259601 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	5.000
Reset	Off
? Ref. amplitude 1H	0.000 V

## Physio - Signal1

1st Signal/Mode	None
TR	2400.0 ms
Concatenations	1

## Physio - Cardiac

Magn. preparation	Non-sel. IR
TI	1000 ms
Fat suppr.	Water excit. fast
Dark blood	Off
FoV read	256 mm
FoV phase	93.8 %
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	

## 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	7.5 ms
Bandwidth	220 Hz/Px

### Sequence - Part 2

RF pulse type	Fast
Gradient mode	Performance
Excitation	Non-sel.
RF spoiling	On
Incr. Gradient spoiling	Off
Turbo factor	256

Mode	Off	
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## \\USER\neuromod\generic\2019-01-22\_anat\acq-0.8mm\_T2w

TA: 5:57 PM: REF Voxel size: 0.8×0.8×0.8 mmPAT: 2 Rel. SNR: 1.00 : spc

#### **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	On
Start measurements	Single measurement

### Routine

Slab group	1
Slabs	1
Position	L0.0 A29.6 H9.5 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	208
FoV read	256 mm
FoV phase	93.8 %
Slice thickness	0.80 mm
TR	3200 ms
TE	563 ms
Averages	1.0
Concatenations	1
Filter	Prescan Normalize
Coil elements	HC1-7;NC1,2

## **Contrast - Common**

TR	3200 ms
TE	563 ms
MTC	Off
Magn. preparation	None
Fat suppr.	None
Blood suppr.	Off
Restore magn.	Off

### **Contrast - Dynamic**

Averages	1.0
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

#### **Resolution - Common**

FoV read	256 mm
FoV phase	93.8 %
Slice thickness	0.80 mm
Base resolution	320
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Allowed
Slice partial Fourier	Off
Interpolation	Off

#### **Resolution - iPAT**

PAT mode	GRAPPA	
Accel. factor PE	2	
Ref. lines PE	32	
Accel. factor 3D	1	
Reference scan mode	Integrated	

### **Resolution - Filter Image**

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

#### **Resolution - Filter Rawdata**

Raw filter	Off	
Elliptical filter	Off	

#### **Geometry - Common**

Slab group	1
Slabs	1
Position	L0.0 A29.6 H9.5 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice oversampling	0.0 %
Slices per slab	208
FoV read	256 mm
FoV phase	93.8 %
Slice thickness	0.80 mm
TR	3200 ms
Series	Interleaved
Concatenations	1

#### Geometry - AutoAlign

Slab group	1
Position	L0.0 A29.6 H9.5 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	
Initial Position	L0.0 A29.6 H9.5
L	0.0 mm
A	29.6 mm
Н	9.5 mm
Initial Rotation	0.00 deg
Initial Orientation	Sagittal

### **Geometry - Saturation**

Fat suppr.	None
Restore magn.	Off
Special sat.	None

### **Geometry - Navigator**

### **Geometry - Tim Planning Suite**

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

Positioning mode	REF
Table position	Н
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	Off - All

## **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 A13.5 H20.8 mm
! Orientation	T > C-20.0
! Rotation	0.00 deg
! A >> P	208 mm
! R >> L	208 mm
! F >> H	144 mm
Reset	Off

### System - pTx Volumes

B1 Shim mode	TrueForm
Excitation	Non-sel.

## System - Tx/Rx

Frequency 1H	123.259601 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	5.000
Reset	Off
? Ref. amplitude 1H	0.000 V

## Physio - Signal1

1st Signal/Mode	None
Trigger delay	0 ms
TR	3200 ms
Concatenations	1

## Physio - Cardiac

Magn. preparation	None
Fat suppr.	None
Dark blood	Off
FoV read	256 mm
FoV phase	93.8 %
Phase resolution	100 %

### **Physio - PACE**

Resp. control	Off	
Concatenations	1	

## Inline - Common

Subtract	Off

#### **Inline - Common**

Measurements	1
StdDev	Off
Save original images	On

#### Inline - MIP

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

### **Inline - Composing**

Inline Composing	Off
Distortion Corr.	Off

## Sequence - Part 1

Introduction	On
Dimension	3D
Elliptical scanning	Off
Reordering	Linear
Flow comp.	No
Echo spacing	3.52 ms
Adiabatic-mode	Off
Bandwidth	744 Hz/Px

### Sequence - Part 2

Echo train duration	1102 ms
RF pulse type	Fast
Gradient mode	Performance
Excitation	Non-sel.
Flip angle mode	T2 var
Turbo factor	314

Allowed delay	0 s
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### \\USER\neuromod\generic\2019-01-22\_anat\acq-s3-ap\_b0

TA: 0:26 PM: ISO Voxel size: 2.0×2.0×2.0 mmPAT: 6 Rel. SNR: 1.00 : epse

#### **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	57
Dist. factor	0 %
Position	R2.0 A9.5 H21.4 mm
Orientation	T > C-12.0 > S3.1
Phase enc. dir.	A >> P
AutoAlign	
Phase oversampling	0 %
FoV read	220 mm
FoV phase	100.0 %
Slice thickness	2.0 mm
TR	2200 ms
TE	71.0 ms
Concatenations	1
Filter	None
Coil elements	HC1-6

#### **Contrast - Common**

TR	2200 ms
TE	71.0 ms
MTC	Off
Magn. preparation	None
Fat suppr.	Fat sat.
Fat sat. mode	Strong

#### **Contrast - Dynamic**

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

#### **Resolution - Common**

FoV read	220 mm
FoV phase	100.0 %
Slice thickness	2.0 mm
Base resolution	110
Phase resolution	100 %
Phase partial Fourier	7/8
Interpolation	Off

## Resolution - iPAT

Accel. mode	Slice accel.
Accel. factor PE	2
Ref. lines PE	40
Accel. factor slice	3

# Resolution - iPAT Reference scan mode

Dynamic Field Corr.

Resolution - Filter Image		
Distortion Corr.	Off	
Prescan Normalize	Off	

EPI/separate

Off

### **Resolution - Filter Rawdata**

Raw filter	Off	
Elliptical filter	Off	

#### **Geometry - Common**

Slice group	1
Slices	57
Dist. factor	0 %
Position	R2.0 A9.5 H21.4 mm
Orientation	T > C-12.0 > S3.1
Phase enc. dir.	A >> P
FoV read	220 mm
FoV phase	100.0 %
Slice thickness	2.0 mm
TR	2200 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

### Geometry - AutoAlign

Slice group	1
Position	R2.0 A9.5 H21.4 mm
Orientation	T > C-12.0 > S3.1
Phase enc. dir.	A >> P
AutoAlign	
Initial Position	R2.0 A9.5 H21.4
R	2.0 mm
Α	9.5 mm
Н	21.4 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-12.0
> S	3.1

#### **Geometry - Saturation**

Fat suppr.	Fat sat.
Fat sat. mode	Strong
Special sat.	None

## **Geometry - Navigator**

## **Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	Н
Table position	21 mm
Inline Composing	Off

#### **System - Miscellaneous**

Positioning mode	ISO
Table position	Н
Table position	21 mm
MSMA	S - C - T

Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Adaptive Combine
Matrix Optimization	Performance
AutoAlign	
Coil Select Mode	On - AutoCoilSelect

## **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	R2.0 A9.5 H21.4 mm
Orientation	T > C-12.0 > S3.1
Rotation	0.00 deg
A >> P	220 mm
R >> L	220 mm
F >> H	114 mm
Reset	Off

## System - pTx Volumes

B1 Shim mode	TrueForm
Excitation	Standard

## System - Tx/Rx

Frequency 1H	123.259601 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	2200 ms
Concatenations	1

### Physio - PACE

Resp. control	Off
Concatenations	1

#### **Diff - Neuro**

Diffusion mode	MDDW
Diff. directions	64
Diffusion Scheme	Monopolar
Diff. weightings	1
b-value	0 s/mm <sup>2</sup>
b-value	5
Diff. weighted images	On
Trace weighted images	Off
ADC maps	Off
FA maps	Off
Mosaic	Off
Tensor	Off
Noise level	30

## Diff - Body

Diffusion mode	MDDW
Diff. directions	64
Diffusion Scheme	Monopolar
Diff. weightings	1
b-value	0 s/mm²
b-value	5
Diff. weighted images	On
Trace weighted images	Off
ADC maps	Off
Exponential ADC Maps	Off
FA maps	Off
Invert Gray Scale	Off
Calculated Image	Off
b-Value >=	0 s/mm²
Noise level	30

## **Diff - Composing**

Inline Composing	Off	
Distortion Corr.	Off	

## Sequence - Part 1

Introduction	On
Optimization	None
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	0.54 ms
Bandwidth	2272 Hz/Px

## Sequence - Part 2

EPI factor	110
RF pulse type	Low SAR
Gradient mode	Performance
Excitation	Standard

### **Sequence - pTX Pulses**

### \\USER\neuromod\generic\2019-01-22\_anat\acq-s3-pa\_dwi

TA: 7:41 PM: FIX Voxel size: 2.0×2.0×2.0 mmPAT: 6 Rel. SNR: 1.00 : epse

#### **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	Off
preparation	
Wait for user to start	Off
Start measurements	Single measurement

#### **Routine**

Slice group	1
Slices	57
Dist. factor	0 %
Position	R2.0 A9.5 H21.4 mm
Orientation	T > C-12.0 > S3.1
Phase enc. dir.	A >> P
AutoAlign	
Phase oversampling	0 %
FoV read	220 mm
FoV phase	100.0 %
Slice thickness	2.0 mm
TR	2300 ms
TE	71.0 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	HC1-6

#### **Contrast - Common**

TR	2300 ms
TE	71.0 ms
MTC	Off
Magn. preparation	None
Fat suppr.	Fat sat.
Fat sat. mode	Strong

#### **Contrast - Dynamic**

Averages	1
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

#### **Resolution - Common**

FoV read	220 mm
FoV phase	100.0 %
Slice thickness	2.0 mm
Base resolution	110
Phase resolution	100 %
Phase partial Fourier	7/8
Interpolation	Off

### **Resolution - iPAT**

Accel. mode	Slice accel.
Accel. factor PE	2

#### **Resolution - iPAT**

Ref. lines PE	40
Accel. factor slice	3
Reference scan mode	EPI/separate

#### **Resolution - Filter Image**

Distortion Corr.	Off
Prescan Normalize	Off
Dynamic Field Corr.	Off

#### **Resolution - Filter Rawdata**

Raw filter	Off	
Elliptical filter	Off	

### **Geometry - Common**

Slice group	1
Slices	57
Dist. factor	0 %
Position	R2.0 A9.5 H21.4 mm
Orientation	T > C-12.0 > S3.1
Phase enc. dir.	A >> P
FoV read	220 mm
FoV phase	100.0 %
Slice thickness	2.0 mm
TR	2300 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

### Geometry - AutoAlign

Slice group	1
Position	R2.0 A9.5 H21.4 mm
Orientation	T > C-12.0 > S3.1
Phase enc. dir.	A >> P
AutoAlign	
Initial Position	R2.0 A9.5 H21.4
R	2.0 mm
A	9.5 mm
Н	21.4 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-12.0
> S	3.1

## **Geometry - Saturation**

Fat suppr.	Fat sat.
Fat sat. mode	Strong
Special sat.	None

### **Geometry - Navigator**

### **Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	Н
Table position	21 mm
Inline Composing	Off

#### **System - Miscellaneous**

Positioning mode	FIX
Table position	Н

Table position	21 mm
MSMA	S-C-T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Adaptive Combine
Matrix Optimization	Performance
AutoAlign	
Coil Select Mode	On - AutoCoilSelect

### **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	R2.0 A9.5 H21.4 mm
Orientation	T > C-12.0 > S3.1
Rotation	0.00 deg
A >> P	220 mm
R >> L	220 mm
F >> H	114 mm
Reset	Off

## System - pTx Volumes

B1 Shim mode	TrueForm
Excitation	Standard

## System - Tx/Rx

Frequency 1H	123.259601 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	2300 ms
Concatenations	1

## Physio - PACE

Resp. control	Off
Concatenations	1

#### **Diff - Neuro**

Diffusion mode	MDDW
Diff. directions	64
Diffusion Scheme	Monopolar
Diff. weightings	4
b-value 1	0 s/mm²
b-value 2	1000 s/mm <sup>2</sup>
b-value 3	2000 s/mm <sup>2</sup>
b-value 4	3000 s/mm <sup>2</sup>
b-value 1	1
b-value 2	1
b-value 3	1
b-value 4	1
Diff. weighted images	On

#### **Diff - Neuro**

Trace weighted images	On	
ADC maps	On	
FA maps	On	
Mosaic	On	
Tensor	On	
Noise level	30	

### Diff - Body

Diffusion mode	MDDW
Diff. directions	64
Diffusion Scheme	Monopolar
Diff. weightings	4
b-value 1	0 s/mm²
b-value 2	1000 s/mm²
b-value 3	2000 s/mm <sup>2</sup>
b-value 4	3000 s/mm <sup>2</sup>
b-value 1	1
b-value 2	1
b-value 3	1
b-value 4	1
Diff. weighted images	On
Trace weighted images	On
ADC maps	On
Exponential ADC Maps	Off
FA maps	On
Invert Gray Scale	Off
Calculated Image	Off
b-Value >=	0 s/mm²
Noise level	30

## **Diff - Composing**

Inline Composing	Off
Distortion Corr.	Off

## Sequence - Part 1

Introduction	On
Optimization	None
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	0.54 ms
Bandwidth	2272 Hz/Px

## Sequence - Part 2

EPI factor	110
RF pulse type	Low SAR
Gradient mode	Performance
Excitation	Standard

## **Sequence - pTX Pulses**

## \\USER\neuromod\generic\2019-01-22\_anat\dMRI\_dir98\_AP\_test\_cmrr

TA: 4:04 PM: REF Voxel size: 2.0×2.0×2.0 mmPAT: Off Rel. SNR: 1.00 : epse

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

### Routine

Slice group	1
Slices	57
Dist. factor	0 %
Position	R1.8 A6.5 H22.1 mm
Orientation	T > C-19.6
Phase enc. dir.	A >> P
AutoAlign	
Phase oversampling	0 %
FoV read	220 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	2334 ms
TE	81.60 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HC1-6

#### **Contrast - Common**

-	
TR	2334 ms
TE	81.60 ms
MTC	Off
Magn. preparation	None
Flip angle	78 deg
Refocus flip angle	160 deg
Fat suppr.	None
Grad. rev. fat suppr.	Enabled

#### **Contrast - Dynamic**

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

#### **Resolution - Common**

Interpolation	O/6 Off
Phase partial Fourier	6/8
Phase resolution	100 %
Base resolution	110
Slice thickness	2.00 mm
FoV phase	100.0 %
FoV read	220 mm

### **Resolution - iPAT**

#### **Resolution - Filter Image**

Distortion Corr.	Off	
Prescan Normalize	Off	
Dynamic Field Corr.	Off	

#### **Resolution - Filter Rawdata**

Raw filter	Off	
Elliptical filter	Off	

#### **Geometry - Common**

Slice group	1
Slices	57
Dist. factor	0 %
Position	R1.8 A6.5 H22.1 mm
Orientation	T > C-19.6
Phase enc. dir.	A >> P
FoV read	220 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	2334 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	3

### Geometry - AutoAlign

Slice group	1
Position	R1.8 A6.5 H22.1 mm
Orientation	T > C-19.6
Phase enc. dir.	A >> P
AutoAlign	
Initial Position	R1.8 A6.5 H22.1
R	1.8 mm
Α	6.5 mm
Н	22.1 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-19.6
> S	0.0

### **Geometry - Saturation**

Fat suppr.	None
Grad. rev. fat suppr.	Enabled
Special sat.	None

#### **Geometry - Navigator**

### **Geometry - Tim Planning Suite**

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

#### **System - Miscellaneous**

Positioning mode	REF
Table position	Н
Table position	0 mm
MSMA	S-C-T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares

Matrix Optimization	Off
AutoAlign	
Coil Select Mode	Off - All

## **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	R1.8 A6.5 H22.1 mm
Orientation	T > C-19.6
Rotation	0.00 deg
A >> P	220 mm
R >> L	220 mm
F >> H	114 mm
Reset	Off

## System - pTx Volumes

B1 Shim mode	TrueForm
Excitation	Standard

### System - Tx/Rx

Frequency 1H	123.259601 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	2334 ms
Multi-band accel. factor	3

## Physio - PACE

Resp. control	Off
Multi-band accel. factor	3

### **Diff - Neuro**

Diffusion mode	Free
Diff. directions	98
Diffusion Scheme	Monopolar
Diff. weightings	2
b-value 1	0 s/mm <sup>2</sup>
b-value 2	3000 s/mm <sup>2</sup>
b-value 1	1
b-value 2	1
Diff. weighted images	On
Trace weighted images	Off
ADC maps	Off
FA maps	Off
Mosaic	On
Tensor	On
Noise level	40

## Diff - Body

Diffusion mode	Free
Diff. directions	98

## Diff - Body

Diffusion Scheme	Monopolar
Diff. weightings	2
b-value 1	0 s/mm²
b-value 2	3000 s/mm <sup>2</sup>
b-value 1	1
b-value 2	1
Diff. weighted images	On
Trace weighted images	Off
ADC maps	Off
Exponential ADC Maps	Off
FA maps	Off
Invert Gray Scale	Off
Calculated Image	Off
b-Value >=	0 s/mm²
Noise level	40

## **Diff - Composing**

Inline Composing	Off	
Distortion Corr.	Off	

## Sequence - Part 1

Introduction	On
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	0.7 ms
Bandwidth	1684 Hz/Px

### Sequence - Part 2

EPI factor	110
Gradient mode	Performance
Excitation	Standard
RF spoiling	Off

## Sequence - Special

Excite pulse duration	3840 us
Refocus pulse duration	7680 us
Single-band images	On
MB LeakBlock kernel	On
MB dual kernel	Off
MB RF phase scramble	Off
Time-shifted MB RF	Off
SENSE1 coil combine	On
Invert RO/PE polarity	Off
PF omits higher k-space	Off
Disable freq. update	Off
Force equal slice timing	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	DICOM

## \\USER\neuromod\generic\2019-01-22\_anat\dMRI\_dir98\_PA\_test\_cmrr

TA: 4:04 PM: FIX Voxel size: 2.0×2.0×2.0 mmPAT: Off Rel. SNR: 1.00 : epse

#### **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	On
Start measurements	Single measurement

### Routine

Slice group	1
Slices	57
Dist. factor	0 %
Position	R1.8 A6.5 H22.1 mm
Orientation	T > C-19.6
Phase enc. dir.	A >> P
AutoAlign	
Phase oversampling	0 %
FoV read	220 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	2334 ms
TE	81.60 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HC1-6

#### **Contrast - Common**

334 ms
1.60 ms
Off
lone
8 deg
60 deg
lone
nabled
1

#### **Contrast - Dynamic**

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

#### **Resolution - Common**

Interpolation	Off
Phase partial Fourier	6/8
Phase resolution	100 %
Base resolution	110
Slice thickness	2.00 mm
FoV phase	100.0 %
FoV read	220 mm

### **Resolution - iPAT**

PAT mode	None
I A I IIIoue	None

#### **Resolution - Filter Image**

Distortion Corr.	Off
Prescan Normalize	Off
Dynamic Field Corr.	Off

#### **Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off

### **Geometry - Common**

Slice group	1
Slices	57
Dist. factor	0 %
Position	R1.8 A6.5 H22.1 mm
Orientation	T > C-19.6
Phase enc. dir.	A >> P
FoV read	220 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	2334 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	3

### Geometry - AutoAlign

Slice group	1
Position	R1.8 A6.5 H22.1 mm
Orientation	T > C-19.6
Phase enc. dir.	A >> P
AutoAlign	
Initial Position	R1.8 A6.5 H22.1
R	1.8 mm
Α	6.5 mm
Н	22.1 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-19.6
> S	0.0

### **Geometry - Saturation**

Fat suppr.	None
Grad. rev. fat suppr.	Enabled
Special sat.	None

#### **Geometry - Navigator**

### **Geometry - Tim Planning Suite**

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

#### **System - Miscellaneous**

Positioning mode	FIX
Table position	Н
Table position	0 mm
MSMA	S-C-T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares

Matrix Optimization	Off
AutoAlign	
Coil Select Mode	Off - All

## **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	R1.8 A6.5 H22.1 mm
Orientation	T > C-19.6
Rotation	0.00 deg
A >> P	220 mm
R >> L	220 mm
F >> H	114 mm
Reset	Off

## System - pTx Volumes

B1 Shim mode	TrueForm
Excitation	Standard

### System - Tx/Rx

Frequency 1H	123.259601 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	2334 ms
Multi-band accel. factor	3

## Physio - PACE

Resp. control	Off
Multi-band accel. factor	3

### **Diff - Neuro**

Diffusion mode	Free
Diff. directions	98
Diffusion Scheme	Monopolar
Diff. weightings	2
b-value 1	0 s/mm <sup>2</sup>
b-value 2	3000 s/mm <sup>2</sup>
b-value 1	1
b-value 2	1
Diff. weighted images	On
Trace weighted images	Off
ADC maps	Off
FA maps	Off
Mosaic	On
Tensor	On
Noise level	40

### Diff - Body

Diffusion mode	Free
Diff. directions	98

#### Diff - Body

Diffusion Scheme	Monopolar
Diff. weightings	2
b-value 1	0 s/mm <sup>2</sup>
b-value 2	3000 s/mm <sup>2</sup>
b-value 1	1
b-value 2	1
Diff. weighted images	On
Trace weighted images	Off
ADC maps	Off
Exponential ADC Maps	Off
FA maps	Off
Invert Gray Scale	Off
Calculated Image	Off
b-Value >=	0 s/mm <sup>2</sup>
Noise level	40

## **Diff - Composing**

Inline Composing	Off	
Distortion Corr.	Off	

## Sequence - Part 1

Introduction	On
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	0.7 ms
Bandwidth	1684 Hz/Px

### Sequence - Part 2

EPI factor	110
Gradient mode	Performance
Excitation	Standard
RF spoiling	Off

## Sequence - Special

Excite pulse duration	3840 us
Refocus pulse duration	7680 us
Single-band images	On
MB LeakBlock kernel	On
MB dual kernel	Off
MB RF phase scramble	Off
Time-shifted MB RF	Off
SENSE1 coil combine	On
Invert RO/PE polarity	On
PF omits higher k-space	Off
Disable freq. update	Off
Force equal slice timing	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	DICOM

## \\USER\neuromod\generic\2019-01-22\_anat\gre\_3d\_MTw

TA: 3:34 PM: ISO Voxel size: 1.5×1.5×1.5 mmPAT: 2 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	Off
preparation	
Wait for user to start	On
Start measurements	Single measurement

### Routine

Slab group	1
Slabs	1
Dist. factor	20 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	R >> L
AutoAlign	
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	96
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	1.50 mm
TR	28.0 ms
TE	3.30 ms
Averages	1
Concatenations	1
Filter	Raw filter, Distortion
	Corr.(3D)
Coil elements	HEA;HEP

#### **Contrast - Common**

TR	28.0 ms
TE	3.30 ms
MTC	On
Magn. preparation	None
Flip angle	6 deg
Fat suppr.	None
Water suppr.	None
SWI	Off

### **Contrast - Dynamic**

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

#### **Resolution - Common**

FoV read	192 mm
FoV phase	100.0 %
Slice thickness	1.50 mm
Base resolution	128
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Off

#### **Resolution - Common**

Slice partial Fourier	Off	
Interpolation	Off	

#### **Resolution - iPAT**

PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	32
Accel. factor 3D	1
Reference scan mode	Integrated

### **Resolution - Filter Image**

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

#### **Resolution - Filter Rawdata**

Raw filter	On
Elliptical filter	Off

#### **Geometry - Common**

Slab group	1
Slabs	1
Dist. factor	20 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	R >> L
Slice oversampling	0.0 %
Slices per slab	96
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	1.50 mm
TR	28.0 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

## Geometry - AutoAlign

Slab group	1
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	R >> L
AutoAlign	
Initial Position	Isocenter
L	0.0 mm
Р	0.0 mm
Н	0.0 mm
Initial Rotation	90.00 deg
Initial Orientation	Transversal

## **Geometry - Saturation**

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

## **Geometry - Tim Planning Suite**

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

### System - Miscellaneous

Positioning mode	ISO
Table position	Н
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	Off - AutoCoilSelect

### **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	Isocenter
Orientation	Transversal
Rotation	90.00 deg
R >> L	192 mm
A >> P	192 mm
F >> H	144 mm
Reset	Off

## System - pTx Volumes

B1 Shim mode	TrueForm
Excitation	Slab-sel.

## System - Tx/Rx

Frequency 1H	123.259601 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	5.000
Reset	Off
? Ref. amplitude 1H	0.000 V

## Physio - Signal1

1st Signal/Mode	None
TR	28.0 ms
Concatenations	1
Segments	1

### Physio - Cardiac

Tagging	None
Magn. preparation	None
Fat suppr.	None
Dark blood	Off
FoV read	192 mm
FoV phase	100.0 %
Phase resolution	100 %

### **Physio - PACE**

Resp. control	Off
Concatenations	1

## Inline - Common

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

#### Inline - MIP

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

### Inline - Soft Tissue

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

### **Inline - Composing**

Inline Composing	Off
Distortion Corr.	On
Mode	3D
Unfiltered images	On

## Sequence - Part 1

Introduction	On
Dimension	3D
Elliptical scanning	Off
Phase stabilisation	Off
Asymmetric echo	Allowed
Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Bandwidth	210 Hz/Px

### Sequence - Part 2

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

Mode	Off	
Allowed delay	0 s	

## \\USER\neuromod\generic\2019-01-22\_anat\gre\_3d\_PDw

TA: 3:34 PM: ISO Voxel size: 1.5×1.5×1.5 mmPAT: 2 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	Off
preparation	
Wait for user to start	Off
Start measurements	Single measurement

### Routine

Slab group	1
Slabs	1
Dist. factor	20 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	R >> L
AutoAlign	
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	96
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	1.50 mm
TR	28.0 ms
TE	3.30 ms
Averages	1
Concatenations	1
Filter	Raw filter, Distortion
	Corr.(3D)
Coil elements	HEA;HEP

#### **Contrast - Common**

TR	28.0 ms
TE	3.30 ms
MTC	Off
Magn. preparation	None
Flip angle	6 deg
Fat suppr.	None
Water suppr.	None
SWI	Off

### **Contrast - Dynamic**

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

#### **Resolution - Common**

FoV read	192 mm
FoV phase	100.0 %
Slice thickness	1.50 mm
Base resolution	128
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Off

#### **Resolution - Common**

Slice partial Fourier	Off	
Interpolation	Off	

#### **Resolution - iPAT**

PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	32
Accel. factor 3D	1
Reference scan mode	Integrated

### **Resolution - Filter Image**

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

#### **Resolution - Filter Rawdata**

Raw filter	On
Elliptical filter	Off

#### **Geometry - Common**

Slab group	1
Slabs	1
Dist. factor	20 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	R >> L
Slice oversampling	0.0 %
Slices per slab	96
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	1.50 mm
TR	28.0 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

## Geometry - AutoAlign

Slab group	1
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	R >> L
AutoAlign	
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
Н	0.0 mm
Initial Rotation	90.00 deg
Initial Orientation	Transversal

## **Geometry - Saturation**

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

## **Geometry - Tim Planning Suite**

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

### **System - Miscellaneous**

Positioning mode	ISO
Table position	Н
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	Off - AutoCoilSelect

### **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	Isocenter
Orientation	Transversal
Rotation	90.00 deg
R >> L	192 mm
A >> P	192 mm
F >> H	144 mm
Reset	Off

## System - pTx Volumes

B1 Shim mode	TrueForm
Excitation	Slab-sel.

## System - Tx/Rx

Frequency 1H	123.259601 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	5.000
Reset	Off
? Ref. amplitude 1H	0.000 V

### Physio - Signal1

1st Signal/Mode	None
TR	28.0 ms
Concatenations	1
Segments	1

### Physio - Cardiac

Tagging	None
Magn. preparation	None
Fat suppr.	None
Dark blood	Off
FoV read	192 mm
FoV phase	100.0 %
Phase resolution	100 %

### **Physio - PACE**

Resp. control	Off
Concatenations	1

#### **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 MIP - time	Off
MIP - time	Off
Measurements	1

### **Inline - Composing**

Inline Composing	Off	
Distortion Corr.	On	
Mode	3D	
Unfiltered images	On	

## Sequence - Part 1

Introduction	On
Dimension	3D
Elliptical scanning	Off
Phase stabilisation	Off
Asymmetric echo	Allowed
Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Bandwidth	210 Hz/Px

### Sequence - Part 2

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

Mode	Off	
Allowed delay	0 s	

## \\USER\neuromod\generic\2019-01-22\_anat\gre\_3d\_T1w

TA: 2:18 PM: ISO Voxel size: 1.5×1.5×1.5 mmPAT: 2 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	Off
preparation	
Wait for user to start	Off
Start measurements	Single measurement

### Routine

Slab group	1
Slabs	1
Dist. factor	20 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	R >> L
AutoAlign	
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	96
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	1.50 mm
TR	18.0 ms
TE	3.30 ms
Averages	1
Concatenations	1
Filter	Raw filter, Distortion
	Corr.(3D)
Coil elements	HEA;HEP

#### **Contrast - Common**

TR	18.0 ms	
TE	3.30 ms	
MTC	Off	
Magn. preparation	None	
Flip angle	20 deg	
Fat suppr.	None	
Water suppr.	None	
SWI	Off	

### **Contrast - Dynamic**

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

#### **Resolution - Common**

FoV read	192 mm
FoV phase	100.0 %
Slice thickness	1.50 mm
Base resolution	128
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Off

#### **Resolution - Common**

Slice partial Fourier	Off	
Interpolation	Off	

#### **Resolution - iPAT**

PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	32
Accel. factor 3D	1
Reference scan mode	Integrated

### **Resolution - Filter Image**

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

#### **Resolution - Filter Rawdata**

Raw filter	On
Elliptical filter	Off

#### **Geometry - Common**

Slab group	1
Slabs	1
Dist. factor	20 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	R >> L
Slice oversampling	0.0 %
Slices per slab	96
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	1.50 mm
TR	18.0 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

## Geometry - AutoAlign

Slab group	1
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	R >> L
AutoAlign	
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
Н	0.0 mm
Initial Rotation	90.00 deg
Initial Orientation	Transversal

## **Geometry - Saturation**

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

## **Geometry - Tim Planning Suite**

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

### **System - Miscellaneous**

Positioning mode	ISO
Table position	Н
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	Off - AutoCoilSelect

### **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	Isocenter
Orientation	Transversal
Rotation	90.00 deg
R >> L	192 mm
A >> P	192 mm
F >> H	144 mm
Reset	Off

### System - pTx Volumes

B1 Shim mode	TrueForm
Excitation	Slab-sel.

## System - Tx/Rx

Frequency 1H	123.259601 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	5.000
Reset	Off
? Ref. amplitude 1H	0.000 V

## Physio - Signal1

1st Signal/Mode	None
TR	18.0 ms
Concatenations	1
Segments	1

### Physio - Cardiac

Tagging	None
Magn. preparation	None
Fat suppr.	None
Dark blood	Off
FoV read	192 mm
FoV phase	100.0 %
Phase resolution	100 %

### **Physio - PACE**

Resp. control	Off
Concatenations	1

#### **Inline - Common**

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

#### Inline - MIP

MIP-Sag	Off	
MIP-Cor MIP-Tra MIP-Time	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

Inline Composing	Off
Distortion Corr.	On
Mode	3D
Unfiltered images	On

## Sequence - Part 1

Introduction	On
Dimension	3D
Elliptical scanning	Off
Phase stabilisation	Off
Asymmetric echo	Allowed
Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Bandwidth	210 Hz/Px

### Sequence - Part 2

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

Mode	Off	
Allowed delay	0 s	

## \\USER\neuromod\generic\2019-01-22\_anat\tfl\_b1map\_6mm

TA: 0:20 PM: ISO Voxel size: 6.0×6.0×6.0 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	Off
preparation	
Wait for user to start	Off
Start measurements	Single measurement

### Routine

Slice group	1
Slices	20
Dist. factor	20 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
AutoAlign	
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	6.0 mm
TR	10000.0 ms
TE	1.84 ms
Averages	1
Concatenations	1
Filter	Distortion Corr.(2D)
Coil elements	HEA;HEP

#### **Contrast - Common**

TR	10000.0 ms
TE	1.84 ms
Magn. preparation	None
Flip angle	8 deg
Fat suppr.	None
Water suppr.	None

### **Contrast - Dynamic**

Averages	1
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

#### **Resolution - Common**

FoV read	192 mm
FoV phase	100.0 %
Slice thickness	6.0 mm
Base resolution	32
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off

#### **Resolution - iPAT**

PAT mode	None
FAT IIIOUE	INOTIE

## Resolution - Filter Image

#### **Resolution - Filter Image**

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

#### **Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off

### **Geometry - Common**

Slice group	1
Slices	20
Dist. factor	20 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	6.0 mm
TR	10000.0 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

### Geometry - AutoAlign

Slice group	1
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
AutoAlign	
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
Н	0.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Transversal

#### **Geometry - Tim Planning Suite**

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

### **System - Miscellaneous**

Positioning mode	ISO
Table position	Н
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

## Sequence - Assistant

Mode Off
----------

## System - Adjust Volume

Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
A >> P	192 mm
R >> L	192 mm
F >> H	143 mm
Reset	Off

## System - pTx Volumes

B1 Shim mode	TrueForm
Excitation	Slice-sel.

## System - Tx/Rx

Frequency 1H	123.259601 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

### 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.	On
	Mode	2D
L	Unfiltered images	Off

## Sequence - Part 1

Introduction	Off
Dimension	2D
Asymmetric echo	Allowed
Flow comp.	No
Multi-slice mode	Interleaved
Echo spacing	4.1 ms
Bandwidth	490 Hz/Px

### Sequence - Part 2

RF pulse type	Low SAR
Gradient mode	Normal
Excitation	Slice-sel.
RF spoiling	On
Turbo factor	32

## \\USER\neuromod\generic\2019-01-22\_anat\t1\_mp2rage

TA: 7:26 PM: ISO Voxel size: 1.2×1.2×1.2 mmPAT: 2 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	Off
preparation	
Wait for user to start	Off
Start measurements	Single measurement

### Routine

Fac. 1	
Slab group	1
Slabs	1
Dist. factor	50 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	176
FoV read	230 mm
FoV phase	100.0 %
Slice thickness	1.20 mm
TR	4000.0 ms
TE	1.51 ms
Averages	1
Concatenations	1
Filter	Distortion Corr.(3D)
Coil elements	HEA;HEP

#### **Contrast - Common**

TR	4000.0 ms
TE	1.51 ms
Magn. preparation	Non-sel. IR
TI 1	700 ms
TI 2	1500 ms
Flip angle 1	7 deg
Flip angle 2	5 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	230 mm
FoV phase	100.0 %
Slice thickness	1.20 mm
Base resolution	192
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	2
Ref. lines PE	32
Accel. factor 3D	1
Reference scan mode	Integrated

### **Resolution - Filter Image**

Image Filter	Off	
Distortion Corr.	On	
Mode	3D	
Unfiltered images	On	
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	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice oversampling	0.0 %
Slices per slab	176
FoV read	230 mm
FoV phase	100.0 %
Slice thickness	1.20 mm
TR	4000.0 ms
Multi-slice mode	Single shot
Series	Interleaved
Concatenations	1

### **Geometry - AutoAlign**

Slab group	1
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
Н	0.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Sagittal

### **Geometry - Navigator**

### **Geometry - Tim Planning Suite**

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

Positioning mode	ISO
Table position	Н
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	On - AutoCoilSelect

## **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	Isocenter
Orientation	Sagittal
Rotation	0.00 deg
A >> P	230 mm
F >> H	230 mm
R >> L	212 mm
Reset	Off

## System - pTx Volumes

B1 Shim mode	TrueForm
Excitation	Slab-sel.

## System - Tx/Rx

Frequency 1H	123.259601 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	10.000
Reset	Off
? Ref. amplitude 1H	0.000 V

## Physio - Signal1

1st Signal/Mode	None
TR	4000.0 ms
Concatenations	1

## Physio - Cardiac

Magn. preparation	Non-sel. IR
TI 1	700 ms
TI 2	1500 ms
Fat suppr.	None
Dark blood	Off
FoV read	230 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
	<del>-</del>
MIP-Tra	Off
MIP-Time	Off
Save original images	On

## **Inline - Composing**

Inline Composing	Off
Distortion Corr.	On
Mode	3D
Unfiltered images	On

## 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	3.5 ms
Bandwidth	740 Hz/Px

### Sequence - Part 2

RF pulse type	Fast
Gradient mode	Fast
Excitation	Slab-sel.
RF spoiling	On
Incr. Gradient spoiling	Off
Turbo factor	132

Mode	Off

## \\USER\neuromod\generic\2019-01-22\_anat\t2\_swi\_tra\_p2\_1.5mm

TA: 4:54 PM: REF Voxel size: 0.9×0.9×1.5 mmPAT: 2 Rel. SNR: 1.00 : swi\_r

#### **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
Dist. factor	20 %
Position	L0.0 A14.4 H27.8 mm
Orientation	T > C-1.1
Phase enc. dir.	R >> L
AutoAlign	
Phase oversampling	0 %
Slice oversampling	10.0 %
Slices per slab	80
FoV read	220 mm
FoV phase	90.6 %
Slice thickness	1.50 mm
TR	27.0 ms
TE	20.00 ms
Averages	1
Concatenations	1
Filter	Prescan Normalize
Coil elements	HC1-7;NC1,2

#### **Contrast - Common**

TR	27.0 ms
TE	20.00 ms
MTC	Off
Magn. preparation	None
Flip angle	15 deg
Fat suppr.	None
Water suppr.	None
SWI	On

### **Contrast - Dynamic**

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

#### **Resolution - Common**

FoV read	220 mm
FoV phase	90.6 %
Slice thickness	1.50 mm
Base resolution	256
Phase resolution	96 %
Slice resolution	100 %
Phase partial Fourier	Off
Slice partial Fourier	Off

#### **Resolution - Common**

Interpolation	Off
,	

#### **Resolution - iPAT**

PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	24
Accel. factor 3D	1
Reference scan mode	Integrated

### **Resolution - Filter Image**

Image Filter	Off
Distortion Corr.	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
Dist. factor	20 %
Position	L0.0 A14.4 H27.8 mm
Orientation	T > C-1.1
Phase enc. dir.	R >> L
Slice oversampling	10.0 %
Slices per slab	80
FoV read	220 mm
FoV phase	90.6 %
Slice thickness	1.50 mm
TR	27.0 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

### **Geometry - AutoAlign**

Slab group	1
Position	L0.0 A14.4 H27.8 mm
Orientation	T > C-1.1
Phase enc. dir.	R >> L
AutoAlign	
Initial Position	L0.0 A14.4 H27.8
L	0.0 mm
A	14.4 mm
Н	27.8 mm
Initial Rotation	90.00 deg
Initial Orientation	T > C
T > C	-1.1
> S	0.0

## **Geometry - Saturation**

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

## **Geometry - Tim Planning Suite**

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

### System - Miscellaneous

Positioning mode	REF
Table position	Н
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	Off - AutoCoilSelect

### **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 A14.4 H27.8 mm
Orientation	T > C-1.1
Rotation	90.00 deg
R >> L	200 mm
A >> P F >> H	220 mm
F >> H	120 mm
Reset	Off

## System - pTx Volumes

B1 Shim mode	TrueForm
Excitation	Slab-sel.

## System - Tx/Rx

259601 MHz
)
) V

## Physio - Signal1

1st Signal/Mode	None
TR	27.0 ms
Concatenations	1
Segments	1

### Physio - Cardiac

Tagging	None
Magn. preparation	None
Fat suppr.	None
Dark blood	Off
FoV read	220 mm
FoV phase	90.6 %
Phase resolution	96 %

### **Physio - PACE**

Resp. control	Off
Concatenations	1

### **Inline - Common**

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

### Inline - MIP

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

#### Inline - Soft Tissue

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

### **Inline - Composing**

Inline Composing	Off
Distortion Corr.	Off

### Sequence - Part 1

Introduction	On
Dimension	3D
Elliptical scanning	Off
Phase stabilisation	Off
Asymmetric echo	Off
Contrasts	1
Flow comp.	Yes
Multi-slice mode	Interleaved
Bandwidth	120 Hz/Px

### Sequence - Part 2

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

Mode	Off
Allowed delay	30 s

## \\USER\neuromod\generic\2019-01-22\_anat\Localizer

TA: 0:19 PM: ISO Voxel size: 1.0×1.0×6.0 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	On
Load images to graphic segments	On
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further	Off
preparation	
Wait for user to start	Off
Start measurements	Single measurement

### Routine

Slice group	1
Slices	5
Dist. factor	300 %
Position	L0.0 P10.0 H0.0 mm
Orientation	Coronal
Phase enc. dir.	R >> L
Slice group	2
Slices	3
Dist. factor	50 %
Position	L0.0 P2.6 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	
Phase oversampling	38 %
FoV read	500 mm
FoV phase	100.0 %
Slice thickness	6.0 mm
TR	7.8 ms
TE	3.69 ms
Averages	1
Concatenations	8
Filter	Distortion Corr.(2D),
	Prescan Normalize
Coil elements	HC1,3-7;NC1,2;SP1

### **Contrast - Common**

TE       3.69 ms         TD       0 ms         MTC       Off         Magn. preparation       None         Flip angle       20 deg         Fat suppr.       None         Water suppr.       None		
TD 0 ms MTC Off Magn. preparation None Flip angle 20 deg Fat suppr. None Water suppr. None	TR	7.8 ms
MTC Off Magn. preparation None Flip angle 20 deg Fat suppr. None Water suppr. None	TE	3.69 ms
Magn. preparation None Flip angle 20 deg Fat suppr. None Water suppr. None	TD	0 ms
Flip angle 20 deg Fat suppr. None Water suppr. None	MTC	Off
Fat suppr. None Water suppr. None	Magn. preparation	None
Water suppr. None	Flip angle	20 deg
· ·	Fat suppr.	None
SWI Off	Water suppr.	None
	SWI	Off

## **Contrast - Dynamic**

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

### **Resolution - Common**

FoV read	500 mm
FoV phase	100.0 %

#### **Resolution - Common**

Slice thickness	6.0 mm
Base resolution	256
Phase resolution	80 %
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	On
Unfiltered images	Off
Normalize	Off
B1 filter	Off

#### **Resolution - Filter Rawdata**

Raw filter	Off	
Elliptical filter	Off	

#### **Geometry - Common**

ocometry - common	
Slice group	1
Slices	5
Dist. factor	300 %
Position	L0.0 P10.0 H0.0 mm
Orientation	Coronal
Phase enc. dir.	R >> L
Slice group	2
Slices	3
Dist. factor	50 %
Position	L0.0 P2.6 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
FoV read	500 mm
FoV phase	100.0 %
Slice thickness	6.0 mm
TR	7.8 ms
Multi-slice mode	Sequential
Series	Interleaved
Concatenations	8

#### **Geometry - AutoAlign**

Slice group	1
Position	L0.0 P10.0 H0.0 mm
Orientation	Coronal
Phase enc. dir.	R >> L
Slice group	2
Position	L0.0 P2.6 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	
Initial Position	L0.0 P10.0 H0.0
L	0.0 mm
P	10.0 mm
Н	0.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Coronal

### **Geometry - Saturation**

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

## **Geometry - Tim Planning Suite**

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

### **System - Miscellaneous**

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

### 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	123.259601 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	7.8 ms	
Concatenations	8	
Seaments	1	

### Physio - Cardiac

Tagging	None
Magn. preparation	None
Fat suppr.	None
Dark blood	Off
FoV read	500 mm
FoV phase	100.0 %
Phase resolution	80 %

## Physio - PACE

Resp. control	Off
Concatenations	8

#### 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**

Inline Composing	Off
Distortion Corr.	On
Mode	2D
Unfiltered images	Off

### Sequence - Part 1

Introduction	On
Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Off
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

Mode	Off
Allowed delay	0 s

## \\USER\neuromod\generic\2019-01-22\_anat\T2w

TA: 4:02 PM: ISO Voxel size: 0.8×0.8×0.8 mmPAT: 3 Rel. SNR: 1.00 : spcR

#### **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	Off
preparation	
Wait for user to start	Off
Start measurements	Single measurement

### Routine

Slab group	1
Slabs	1
Position	L1.2 P10.8 H6.0 mm
Orientation	Sagittal
Phase enc. dir.	H >> F
AutoAlign	
Phase oversampling	80 %
Slice oversampling	12.5 %
Slices per slab	64
FoV read	256 mm
FoV phase	100.0 %
Slice thickness	0.80 mm
TR	1500 ms
TE	120 ms
Averages	1.4
Concatenations	1
Filter	Raw filter, Distortion
	Corr.(3D), Prescan
	Normalize
Coil elements	HC5-7;NC1,2;SP1

#### **Contrast - Common**

TR	1500 ms
TE	120 ms
MTC	Off
Magn. preparation	None
Flip angle	120 deg
Fat suppr.	None
Blood suppr.	Off
Restore magn.	On

#### **Contrast - Dynamic**

Averages	1.4
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

#### **Resolution - Common**

FoV read	256 mm
FoV phase	100.0 %
Slice thickness	0.80 mm
Base resolution	320
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Allowed
Slice partial Fourier	6/8
Interpolation	Off

#### **Resolution - iPAT**

PAT mode	GRAPPA	
Accel. factor PE	3	
Ref. lines PE	32	
Accel. factor 3D	1	
Reference scan mode	Integrated	

### **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	On	
Elliptical filter	Off	

### **Geometry - Common**

Slab group	1
Slabs	1
Position	L1.2 P10.8 H6.0 mm
Orientation	Sagittal
Phase enc. dir.	H >> F
Slice oversampling	12.5 %
Slices per slab	64
FoV read	256 mm
FoV phase	100.0 %
Slice thickness	0.80 mm
TR	1500 ms
Series	Interleaved
Concatenations	1

### **Geometry - AutoAlign**

Slab group	1
Position	L1.2 P10.8 H6.0 mm
Orientation	Sagittal
Phase enc. dir.	H >> F
AutoAlign	
Initial Position	L1.2 P10.8 H6.0
L	1.2 mm
Р	10.8 mm
Н	6.0 mm
Initial Rotation	90.00 deg
Initial Orientation	Sagittal

### **Geometry - Saturation**

Fat suppr.	None
Restore magn.	On
Special sat.	None

#### **Geometry - Navigator**

### **Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	Н
Table position	6 mm
Inline Composing	Off

Positioning mode	ISO
Table position	Н
Table position	6 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	H >> F
Coil Combine Mode	Adaptive Combine
Save uncombined	Off
Matrix Optimization	Off
Coil Focus	Flat
AutoAlign	
Coil Select Mode	On - AutoCoilSelect

## **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	Slab-sel.

## System - Tx/Rx

Frequency 1H	123.259601 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	4.000
Reset	Off
? Ref. amplitude 1H	0.000 V

## Physio - Signal1

1st Signal/Mode	None
Trigger delay	0 ms
TR	1500 ms
Concatenations	1

## Physio - Cardiac

Magn. preparation	None
Fat suppr.	None
Dark blood	Off
FoV read	256 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
	<del>-</del>
MIP-Tra	Off
MIP-Time	Off
Save original images	On

### **Inline - Composing**

Inline Composing	Off
Distortion Corr.	On
Mode	3D
Unfiltered images	Off

## Sequence - Part 1

Introduction	On
Dimension	3D
Elliptical scanning	Off
Reordering	Linear
Flow comp.	No
Echo spacing	3.99 ms
Adiabatic-mode	Off
Bandwidth	625 Hz/Px

### Sequence - Part 2

Echo train duration	311 ms
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slab-sel.
Flip angle mode	Constant
Turbo factor	100

Allowed delay	30 s
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### \\USER\neuromod\generic\2019-01-22\_anat\DWI

TA: 2:04 PM: ISO Voxel size: 0.9×0.9×5.0 mmPAT: Off Rel. SNR: 1.00 : ezse

#### **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	Off
preparation	
Wait for user to start	Off
Start measurements	Single measurement

### Routine

Slice group	1
Slices	15
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
AutoAlign	
Phase oversampling	0 %
FoV read	86 mm
FoV phase	37.5 %
Slice thickness	5.0 mm
TR	610 ms
TE	60.0 ms
Concatenations	5
Filter	None
Coil elements	HC5-7;NC1,2

#### **Contrast - Common**

TR TE	610 ms
	60.0 ms
MTC	Off
Magn. preparation	None
Fat suppr. Fat sat. mode	SPAIR
Fat sat. mode	Strong

#### **Contrast - Dynamic**

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

#### **Resolution - Common**

FoV read	86 mm	
FoV phase	37.5 %	
Slice thickness	5.0 mm	
Base resolution	96	
Phase resolution	100 %	
Phase partial Fourier	7/8	
Interpolation	Off	

#### **Resolution - iPAT**

Accel, mode	None

### **Resolution - Filter Image**

Distortion Corr.	Off

#### **Resolution - Filter Image**

Prescan Normalize	Off	
Dynamic Field Corr.	Off	

#### **Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off

#### **Geometry - Common**

Slice group	1
Slices	15
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
FoV read	86 mm
FoV phase	37.5 %
Slice thickness	5.0 mm
TR	610 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	5

### Geometry - AutoAlign

Slice group	1
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
AutoAlign	
Initial Position	L0.0 P0.0 H11.0
L	0.0 mm
Р	0.0 mm
Н	11.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Transversal

### **Geometry - Saturation**

Fat suppr.	SPAIR
Fat sat. mode	Strong
Special sat	None

### **Geometry - Navigator**

### **Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	Н
Table position	11 mm
Inline Composing	Off

#### **System - Miscellaneous**

<u> </u>	
Positioning mode	ISO
Table position	Н
Table position	11 mm
MSMA	S-C-T
Sagittal	R >> L
Coronal	A >> P
Transversal	H >> F
Coil Combine Mode	Adaptive Combine
Matrix Optimization	Off
AutoAlign	
Coil Select Mode	On - AutoCoilSelect

## System - Adjustments

B0 Shim mode		Standard	
B1 Shim mode		TrueForm	
Adjust with body	y coil	Off	
Confirm freq. ac	ljustment	Off	
Assume Domina	ant Fat	Off	
Assume Silicon	е	Off	
Adjustment Tole	erance	Auto	

## System - Adjust Volume

Position	Isocenter
Orientation	Transversal
Rotation	90.00 deg
R >> L	86 mm
A >> P	250 mm
F >> H	75 mm
Reset	Off
Couple to	pTx Volume

## System - pTx Volumes

B1 Shim mode	TrueForm
Excitation	ZOOMit
pTx Volume	1
Vol. Property	Optimization Vol.
Position	Isocenter
Orientation	Transversal
Rotation	0 deg
A >> P	250 mm
R >> L	86 mm
F >> H	75 mm
Vol. Visibility	On

## System - Tx/Rx

Frequency 1H	123.259601 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	10.000
Reset	Off
? Ref. amplitude 1H	0.000 V

## Physio - Signal1

1st Signal/Mode	Pulse/Trigger
Average cycle	891 ± 142 ms
Average cycle	No Signal ms
Acquisition window	3600 ms
Trigger pulse	1
Trigger delay	0 ms
TR	610 ms
Concatenations	5
Phases	1

### Physio - PACE

Resp. control	Off
Concatenations	5

#### Diff - Neuro

Diffusion mode	MDDW
Diff. directions	30
Diffusion Scheme	Monopolar
Diff. weightings	2
b-value 1	0 s/mm²
b-value 2	800 s/mm <sup>2</sup>
b-value 1	5
b-value 2	1
Diff. weighted images	On

### Diff - Neuro

Trace weighted images	Off	
ADC maps	Off	
FA maps	Off	
Mosaic	On	
Tensor	Off	
Noise level	8	

## Diff - Body

Diffusion mode	MDDW
Diff. directions	30
Diffusion Scheme	Monopolar
Diff. weightings	2
b-value 1	0 s/mm²
b-value 2	800 s/mm²
b-value 1	5
b-value 2	1
Diff. weighted images	On
Trace weighted images	Off
ADC maps	Off
Exponential ADC Maps	Off
FA maps	Off
Invert Gray Scale	Off
Calculated Image	Off
b-Value >=	0 s/mm²
Noise level	8

## **Diff - Composing**

Inline Composing	Off
Distortion Corr.	Off

## Sequence - Part 1

Introduction	On
Optimization	None
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	0.94 ms
Bandwidth	1270 Hz/Px

## Sequence - Part 2

EPI factor	36
RF pulse type	Normal
Gradient mode	Performance
Excitation	ZOOMit

## Sequence - pTX Pulses

pTX Pulse	1	
TX acceleration	1.0	

## \\USER\neuromod\generic\2019-01-22\_anat\GRE-MT1

TA: 2:12 PM: ISO Voxel size: 0.9×0.9×5.0 mmPAT: 2 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	Off
Wait for user to start	Off
Start measurements	Single measurement

#### Routine

Slab group	1
Slabs	1
Dist. factor	20 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
AutoAlign	
Phase oversampling	0 %
Slice oversampling	18.2 %
Slices per slab	22
FoV read	230 mm
FoV phase	100.0 %
Slice thickness	5.00 mm
TR	35.0 ms
TE	3.13 ms
Averages	1
Concatenations	1
Filter	Distortion Corr.(2D)
Coil elements	HC5-7;NC1,2

#### **Contrast - Common**

TR	35.0 ms
TE	3.13 ms
MTC	On
Magn. preparation	None
Flip angle	9 deg
Fat suppr.	None
Water suppr.	None
SWI	Off

### **Contrast - Dynamic**

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

#### **Resolution - Common**

FoV read	230 mm
FoV phase	100.0 %
Slice thickness	5.00 mm
Base resolution	256
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Off
Slice partial Fourier	Off

#### **Resolution - Common**

interpolation On	Interpolation	Off	
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#### **Resolution - iPAT**

PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	32
Accel. factor 3D	1
Reference scan mode	Integrated

### **Resolution - Filter Image**

Image Filter	Off
Distortion Corr.	On
Mode	2D
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
Dist. factor	20 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Slice oversampling	18.2 %
Slices per slab	22
FoV read	230 mm
FoV phase	100.0 %
Slice thickness	5.00 mm
TR	35.0 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

### Geometry - AutoAlign

Slab group	1
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
AutoAlign	
Initial Position	L0.0 P0.0 H11.0
L	0.0 mm
P	0.0 mm
Н	11.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Transversal

## **Geometry - Saturation**

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

### **Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off	
1 SEL-11-GO FTOLOCOI	Oli	

### **Geometry - Tim Planning Suite**

Table position	Н
Table position	11 mm
Inline Composing	Off

### **System - Miscellaneous**

Positioning mode	ISO
Table position	Н
Table position	11 mm
MSMA	S-C-T
Sagittal	R >> L
Coronal	A >> P
Transversal	H >> F
Coil Combine Mode	Adaptive Combine
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	
Coil Select Mode	On - AutoCoilSelect

## **System - Adjustments**

B0 Shim mode	Standard Neck
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	58 mm
R >> L	230 mm
F >> H	110 mm
Reset	Off

## System - pTx Volumes

B1 Shim mode	TrueForm
Excitation	Slab-sel.

### System - Tx/Rx

Frequency 1H	123.259601 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	10.000
Reset	Off
? Ref. amplitude 1H	0.000 V

### Physio - Signal1

1st Signal/Mode	None
TR	35.0 ms
Concatenations	1
Segments	1

### Physio - Cardiac

Tagging	None
Magn. preparation	None
Fat suppr.	None
Dark blood	Off
FoV read	230 mm
FoV phase	100.0 %
Phase resolution	100 %

#### **Physio - PACE**

Resp. control	Off
Concatenations	1

### **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**

Inline Composing	Off
Distortion Corr.	On
Mode	2D
Unfiltered images	Off

### Sequence - Part 1

On
3D
Off
Off
Allowed
1
No
Interleaved
260 Hz/Px

### Sequence - Part 2

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

Mode	Off	
Allowed delay	0 s	

## \\USER\neuromod\generic\2019-01-22\_anat\GRE-MT0

TA: 2:12 PM: ISO Voxel size: 0.9×0.9×5.0 mmPAT: 2 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	Off
preparation	
Wait for user to start	Off
Start measurements	Single measurement

### Routine

Slab group	1
Slabs	1
Dist. factor	20 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
AutoAlign	
Phase oversampling	0 %
Slice oversampling	18.2 %
Slices per slab	22
FoV read	230 mm
FoV phase	100.0 %
Slice thickness	5.00 mm
TR	35.0 ms
TE	3.13 ms
Averages	1
Concatenations	1
Filter	Distortion Corr.(2D)
Coil elements	HC5-7;NC1,2

#### **Contrast - Common**

TR	35.0 ms
TE	3.13 ms
MTC	Off
Magn. preparation	None
Flip angle	9 deg
Fat suppr.	None
Water suppr.	None
SWI	Off

### **Contrast - Dynamic**

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

#### **Resolution - Common**

FoV read	230 mm
FoV phase	100.0 %
Slice thickness	5.00 mm
Base resolution	256
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Off
Slice partial Fourier	Off

#### **Resolution - Common**

Interpolation	Off	
ii koi poiatioii	•	

#### **Resolution - iPAT**

PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	32
Accel. factor 3D	1
Reference scan mode	Integrated

### **Resolution - Filter Image**

Image Filter	Off	
Distortion Corr.	On	
Mode	2D	
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
Dist. factor	20 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Slice oversampling	18.2 %
Slices per slab	22
FoV read	230 mm
FoV phase	100.0 %
Slice thickness	5.00 mm
TR	35.0 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

### Geometry - AutoAlign

Slab group	1
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
AutoAlign	
Initial Position	L0.0 P0.0 H11.0
L	0.0 mm
Р	0.0 mm
Н	11.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Transversal

### **Geometry - Saturation**

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

### **Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off	

### **Geometry - Tim Planning Suite**

Table position	Н
Table position	11 mm
Inline Composing	Off

### **System - Miscellaneous**

Positioning mode	ISO
Table position	Н
Table position	11 mm
MSMA	S-C-T
Sagittal	R >> L
Coronal	A >> P
Transversal	H >> F
Coil Combine Mode	Adaptive Combine
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	
Coil Select Mode	On - AutoCoilSelect

## **System - Adjustments**

B0 Shim mode	Standard Neck
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	58 mm
R >> L	230 mm
F >> H	110 mm
Reset	Off

## System - pTx Volumes

B1 Shim mode	TrueForm
Excitation	Slab-sel.

### System - Tx/Rx

Frequency 1H	123.259601 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	10.000
Reset	Off
? Ref. amplitude 1H	0.000 V

## Physio - Signal1

1st Signal/Mode	None
TR	35.0 ms
Concatenations	1
Segments	1

## Physio - Cardiac

Tagging	None
Magn. preparation	None
Fat suppr.	None
Dark blood	Off
FoV read	230 mm
FoV phase	100.0 %
Phase resolution	100 %

## **Physio - PACE**

Resp. control	Off
Concatenations	1

#### **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**

Inline Composing	Off
Distortion Corr.	On
Mode	2D
Unfiltered images	Off

### Sequence - Part 1

On
3D
Off
Off
Allowed
1
No
Interleaved
260 Hz/Px

### Sequence - Part 2

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

Mode	Off
Allowed delay	0 s

## \\USER\neuromod\generic\2019-01-22\_anat\GRE-T1w

TA: 0:57 PM: ISO Voxel size: 0.9×0.9×5.0 mmPAT: 2 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	Off
Wait for user to start	Off
Start measurements	Single measurement

### Routine

Slab group	1
Slabs	1
Dist. factor	20 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
AutoAlign	
Phase oversampling	0 %
Slice oversampling	18.2 %
Slices per slab	22
FoV read	230 mm
FoV phase	100.0 %
Slice thickness	5.00 mm
TR	15.0 ms
TE	3.13 ms
Averages	1
Concatenations	1
Filter	Distortion Corr.(2D)
Coil elements	HC5-7;NC1,2

#### **Contrast - Common**

TR	15.0 ms
TE	3.13 ms
MTC	Off
Magn. preparation	None
Flip angle	15 deg
Fat suppr.	None
Water suppr.	None
SWI	Off

### **Contrast - Dynamic**

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

#### **Resolution - Common**

FoV read	230 mm
FoV phase	100.0 %
Slice thickness	5.00 mm
Base resolution	256
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Off
Slice partial Fourier	Off

#### **Resolution - Common**

Interpolation	Off	
Interpolation	Oli	

#### **Resolution - iPAT**

PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	32
Accel. factor 3D	1
Reference scan mode	Integrated

### **Resolution - Filter Image**

Image Filter	Off	
Distortion Corr.	On	
Mode	2D	
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
Dist. factor	20 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Slice oversampling	18.2 %
Slices per slab	22
FoV read	230 mm
FoV phase	100.0 %
Slice thickness	5.00 mm
TR	15.0 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

## Geometry - AutoAlign

Slab group	1
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
AutoAlign	
Initial Position	L0.0 P0.0 H11.0
L	0.0 mm
Р	0.0 mm
Н	11.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Transversal

## **Geometry - Saturation**

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

### **Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off	
1 SEL-11-GO FTOLOCOI	Oli	

### **Geometry - Tim Planning Suite**

Table position	Н
Table position	11 mm
Inline Composing	Off

#### **System - Miscellaneous**

Positioning mode	ISO
Table position	Н
Table position	11 mm
MSMA	S-C-T
Sagittal	R >> L
Coronal	A >> P
Transversal	H >> F
Coil Combine Mode	Adaptive Combine
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	
Coil Select Mode	On - AutoCoilSelect

## **System - Adjustments**

B0 Shim mode	Standard Neck
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	58 mm
R >> L	230 mm
F >> H	110 mm
Reset	Off

## System - pTx Volumes

B1 Shim mode	TrueForm
Excitation	Slab-sel.

### System - Tx/Rx

Frequency 1H	123.259601 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	10.000
Reset	Off
? Ref. amplitude 1H	0.000 V

## Physio - Signal1

1st Signal/Mode	None
TR	15.0 ms
Concatenations	1
Segments	1

## Physio - Cardiac

-	
Tagging	None
Magn. preparation	None
Fat suppr.	None
Dark blood	Off
FoV read	230 mm
FoV phase	100.0 %
Phase resolution	100 %

## **Physio - PACE**

Resp. control	Off
Concatenations	1

### **Inline - Common**

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

#### Inline - MIP

MIP-Sag	Off
MIP-Sag MIP-Cor MIP-Tra MIP-Time	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**

Inline Composing	Off	
Distortion Corr.	On	
Mode	2D	
Unfiltered images	Off	

### Sequence - Part 1

-	
Introduction	On
Dimension	3D
Elliptical scanning	Off
Phase stabilisation	Off
Asymmetric echo	Allowed
Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Bandwidth	260 Hz/Px

### Sequence - Part 2

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

Mode	Off	
Allowed delay	0 s	

## \\USER\neuromod\generic\2019-01-22\_anat\GRE-ME

TA: 4:45 PM: ISO Voxel size: 0.5×0.5×5.0 mmPAT: 2 Rel. SNR: 1.00 : me\_r

#### **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	15
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
AutoAlign	
Phase oversampling	0 %
FoV read	224 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	600.0 ms
TE	14.0 ms
Averages	2
Concatenations	1
Filter	Distortion Corr.(2D),
	Prescan Normalize, Elliptical filter
Coil elements	HC5-7;NC1,2

### **Contrast - Common**

Fat suppr. Water suppr.	None None
Flip angle	30 deg
MTC	Off
TE	14.0 ms
TR	600.0 ms

### **Contrast - Dynamic**

Averages	2
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Multiple series	Off

### **Resolution - Common**

FoV read	224 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
Base resolution	448
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off

## **Resolution - iPAT**

PAT mode GRAPPA

#### **Resolution - iPAT**

Accel. factor PE	2
Ref. lines PE	24
Reference scan mode	Integrated

#### **Resolution - Filter Image**

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

#### **Resolution - Filter Rawdata**

Raw filter	Off	
Elliptical filter	On	

#### **Geometry - Common**

Slice group	1
Slices	15
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
FoV read	224 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	600.0 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

### **Geometry - AutoAlign**

Slice group	1
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
AutoAlign	
Initial Position	L0.0 P0.0 H11.0
L	0.0 mm
P	0.0 mm
Н	11.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Transversal

### **Geometry - Saturation**

Sat. region	1
Thickness	100 mm
Position	L0.0 A100.0 H0.0 mm
Orientation	Coronal
Water suppr.	None
Special sat.	None

## **Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	Н
Table position	11 mm
Inline Composing	Off

Positioning mode	ISO
Table position	Н
Table position	11 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	H >> F
Coil Combine Mode	Adaptive Combine
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	
Coil Select Mode	Off - AutoCoilSelect

## 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	Isocenter
Orientation	Transversal
Rotation	0.00 deg
A >> P	224 mm
R >> L	224 mm
F >> H	75 mm
Reset	Off

## System - pTx Volumes

B1 Shim mode	TrueForm
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## System - Tx/Rx

Frequency 1H	123.259601 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	600.0 ms
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.	On	

### **Inline - Composing**

Mode	2D	
Unfiltered images	Off	

## Sequence - Part 1

Introduction	On
Dimension	2D
Combined echoes	3
Flow comp.	Yes
Multi-slice mode	Interleaved
Bandwidth	260 Hz/Px

## Sequence - Part 2

RF pulse type	Fast
Gradient mode	Normal
RF spoiling	On

Mode	Off	