

\\NSI_MR_Research\final_studies\3D_EPI_Spielplatz\Ausprobiert_invivo\RL14_26slices_0.8_1sgm_I PAT3_vis for BOLD
TA: 1:58 PM: REF Voxel size: 0.8×0.8×0.8 mmPAT: 3 Rel. SNR: 1.00 : RENZLAY_14

### Properties

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

### Routine

Slab group	1
Slabs	1
Position	L1.4 A13.1 H55.5 mm
Orientation	T > C-3.6 > S-3.5
Phase enc. dir.	A >> P
AutoAlign	---
Slice oversampling	0.0 %
Slices per slab	26
FoV read	177 mm
FoV phase	100.0 %
Slice thickness	0.82 mm
TR 1	84.66 ms
TR 2	2201.000 ms
TE 1	28.0 ms
Averages	1
TE segmentation	1
Filter	Prescan Normalize
Coil elements	HC1-6

### Contrast - Common

TR 1	84.66 ms
TR 2	2201.000 ms
TE 1	28.0 ms
Multi-echo dTE	60.0 ms
MTC	Off
Magn. preparation	None
TI 1	0 ms
TI 2	0 ms
TI 3	0 ms
Flip angle	33 deg
Fat suppr.	None

### Contrast - Dynamic

Averages	1
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	50
Pause after meas. 1	0.0 s
Pause after meas. 2	0.0 s
Pause after meas. 3	0.0 s
Pause after meas. 4	0.0 s
Pause after meas. 5	0.0 s
Pause after meas. 6	0.0 s
Pause after meas. 7	0.0 s
Pause after meas. 8	0.0 s

### Contrast - Dynamic

Pause after meas. 9	0.0 s
Pause after meas. 10	0.0 s
Pause after meas. 11	0.0 s
Pause after meas. 12	0.0 s
Pause after meas. 13	0.0 s
Pause after meas. 14	0.0 s
Pause after meas. 15	0.0 s
Pause after meas. 16	0.0 s
Pause after meas. 17	0.0 s
Pause after meas. 18	0.0 s
Pause after meas. 19	0.0 s
Pause after meas. 20	0.0 s
Pause after meas. 21	0.0 s
Pause after meas. 22	0.0 s
Pause after meas. 23	0.0 s
Pause after meas. 24	0.0 s
Pause after meas. 25	0.0 s
Pause after meas. 26	0.0 s
Pause after meas. 27	0.0 s
Pause after meas. 28	0.0 s
Pause after meas. 29	0.0 s
Pause after meas. 30	0.0 s
Pause after meas. 31	0.0 s
Pause after meas. 32	0.0 s
Pause after meas. 33	0.0 s
Pause after meas. 34	0.0 s
Pause after meas. 35	0.0 s
Pause after meas. 36	0.0 s
Pause after meas. 37	0.0 s
Pause after meas. 38	0.0 s
Pause after meas. 39	0.0 s
Pause after meas. 40	0.0 s
Pause after meas. 41	0.0 s
Pause after meas. 42	0.0 s
Pause after meas. 43	0.0 s
Pause after meas. 44	0.0 s
Pause after meas. 45	0.0 s
Pause after meas. 46	0.0 s
Pause after meas. 47	0.0 s
Pause after meas. 48	0.0 s
Pause after meas. 49	0.0 s

### Resolution - Common

FoV read	177 mm
FoV phase	100.0 %
Slice thickness	0.82 mm
Base resolution	216
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	6/8
Slice partial Fourier	Off
Interpolation	Off

### Resolution - iPAT

PAT mode	CAIPIRINHA
Acc. factor PE	3
Ref. lines PE	45
Acc. factor 3D	1
Ref. lines 3D	24

**Resolution - iPAT**

CAIPI 3D Shift	0
Reference scan mode	GRE/separate
CAIPIRINHA mode	Free

**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
Position	L1.4 A13.1 H55.5 mm
Orientation	T > C-3.6 > S-3.5
Phase enc. dir.	A >> P
Slice oversampling	0.0 %
Slices per slab	26
FoV read	177 mm
FoV phase	100.0 %
Slice thickness	0.82 mm
TR 1	84.66 ms
TR 2	2201.000 ms
Multi-slice mode	Interleaved
Series	Ascending
TE segmentation	1

**Geometry - AutoAlign**

Slab group	1
Position	L1.4 A13.1 H55.5 mm
Orientation	T > C-3.6 > S-3.5
Phase enc. dir.	A >> P
AutoAlign	---
Initial Position	L1.4 A13.1 H55.5
L	1.4 mm
A	13.1 mm
H	55.5 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-3.6
> S	-3.5

**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	REF
Table position	H
Table position	0 mm
MSMA	S - C - T

**System - Miscellaneous**

Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	---
Coil Select Mode	Default

**System - Adjustments**

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

**System - Adjust Volume**

Position	L1.4 A13.1 H55.5 mm
Orientation	T > C-3.6 > S-3.5
Rotation	0.00 deg
A >> P	177 mm
R >> L	177 mm
F >> H	22 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Slab-sel.

**System - Tx/Rx**

Frequency 1H	123.247829 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**BOLD**

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	On
Temp. highpass filter	On
Threshold	4.00
Paradigm size	3
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Active
Motion correction	Off
Spatial filter	Off
Measurements	50

**Sequence - Part 1**

Introduction	On
Dimension	3D
Reordering	Linear
Asymmetric echo	Off
Contrasts	1
Multi-slice mode	Interleaved
Echo spacing	1.36 ms
Bandwidth	798 Hz/Px

**Sequence - Part 2**

EPI factor	54
Segmentation	1
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slab-sel.
RF spoiling	On
Turbo factor	26

**Sequence - Special**

PATRef FA	3 deg
RF duration	1500 us
RF BWT product	12
Slab Scale	90 %
Ernst T1	1200 ms
PATRef prep. shots	10
Volume dummy shots	0
Dummy Measurements	0
Invert PE	Off
Invert 3D	Off
Min. TE if PF	On
Are you Renzo?	On
Echo Time Shift	On
Water Exc.	Long bino-11
External PC	per Series
varflip option	0
Inversion Delay	0 us
Relaxation Delay	0 us

**Sequence - Assistant**

Mode	Off
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# \\NSI\_MR\_Research\\final\_studies\\3D\_EPI\_Spielplatz\\Ausprobiert\_invivo\\RL14\_26slices\_0.8\_1sgm\_I PAT3\_vis\_VASO

TA: 3:49 PM: FIX Voxel size: 0.8x0.8x0.8 mmPAT: 3 Rel. SNR: 1.00 : RenzLa8

## Properties

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

## Routine

Slab group	1
Slabs	1
Position	L1.4 A13.1 H55.5 mm
Orientation	T > C-3.6 > S-3.5
Phase enc. dir.	A >> P
AutoAlign	---
Slice oversampling	0.0 %
Slices per slab	26
FoV read	177 mm
FoV phase	100.0 %
Slice thickness	0.82 mm
TR 1	84.66 ms
TR 2	4422.000 ms
TE 1	28.0 ms
Averages	1
TE segmentation	1
Filter	Distortion Corr.(3D), Prescan Normalize
Coil elements	HC1-6

## Contrast - Common

TR 1	84.66 ms
TR 2	4422.000 ms
TE 1	28.0 ms
Multi-echo dTE	60.0 ms
MTC	Off
Magn. preparation	Non-sel. IR T1map
Flip angle	18 deg
Fat suppr.	None
Number of TIs	2

this is for best anatomical contrast,  
for functional sensitivity, use 45 instead

## Contrast - Dynamic

Averages	1
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	50
Pause after meas. 1	0.0 s
Pause after meas. 2	0.0 s
Pause after meas. 3	0.0 s
Pause after meas. 4	0.0 s
Pause after meas. 5	0.0 s
Pause after meas. 6	0.0 s
Pause after meas. 7	0.0 s
Pause after meas. 8	0.0 s
Pause after meas. 9	0.0 s

## Contrast - Dynamic

Pause after meas. 10	0.0 s
Pause after meas. 11	0.0 s
Pause after meas. 12	0.0 s
Pause after meas. 13	0.0 s
Pause after meas. 14	0.0 s
Pause after meas. 15	0.0 s
Pause after meas. 16	0.0 s
Pause after meas. 17	0.0 s
Pause after meas. 18	0.0 s
Pause after meas. 19	0.0 s
Pause after meas. 20	0.0 s
Pause after meas. 21	0.0 s
Pause after meas. 22	0.0 s
Pause after meas. 23	0.0 s
Pause after meas. 24	0.0 s
Pause after meas. 25	0.0 s
Pause after meas. 26	0.0 s
Pause after meas. 27	0.0 s
Pause after meas. 28	0.0 s
Pause after meas. 29	0.0 s
Pause after meas. 30	0.0 s
Pause after meas. 31	0.0 s
Pause after meas. 32	0.0 s
Pause after meas. 33	0.0 s
Pause after meas. 34	0.0 s
Pause after meas. 35	0.0 s
Pause after meas. 36	0.0 s
Pause after meas. 37	0.0 s
Pause after meas. 38	0.0 s
Pause after meas. 39	0.0 s
Pause after meas. 40	0.0 s
Pause after meas. 41	0.0 s
Pause after meas. 42	0.0 s
Pause after meas. 43	0.0 s
Pause after meas. 44	0.0 s
Pause after meas. 45	0.0 s
Pause after meas. 46	0.0 s
Pause after meas. 47	0.0 s

FoV read	177 mm
FoV phase	100.0 %
Slice thickness	0.82 mm
Base resolution	216
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	6/8
Slice partial Fourier	Off
Interpolation	Off

## Resolution - iPAT

PAT mode	CAIPIRINHA
Acc. factor PE	3
Ref. lines PE	45
Acc. factor 3D	1
Ref. lines 3D	24
CAIPI 3D Shift	0

**Resolution - iPAT**

Reference scan mode	GRE/separate
CAIPIRINHA mode	Free

**Resolution - Filter Image**

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

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off

**Geometry - Common**

Slab group	1
Slabs	1
Position	L1.4 A13.1 H55.5 mm
Orientation	T > C-3.6 > S-3.5
Phase enc. dir.	A >> P
Slice oversampling	0.0 %
Slices per slab	26
FoV read	177 mm
FoV phase	100.0 %
Slice thickness	0.82 mm
TR 1	84.66 ms
TR 2	4422.000 ms
Multi-slice mode	Interleaved
Series	Ascending
TE segmentation	1

**Geometry - AutoAlign**

Slab group	1
Position	L1.4 A13.1 H55.5 mm
Orientation	T > C-3.6 > S-3.5
Phase enc. dir.	A >> P
AutoAlign	---
Initial Position	L1.4 A13.1 H55.5
L	1.4 mm
A	13.1 mm
H	55.5 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-3.6
> S	-3.5

**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

**System - Miscellaneous**

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

**System - Adjustments**

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

**System - Adjust Volume**

Position	L1.4 A13.1 H55.5 mm
Orientation	T > C-3.6 > S-3.5
Rotation	0.00 deg
A >> P	177 mm
R >> L	177 mm
F >> H	22 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Slab-sel.

**System - Tx/Rx**

Frequency 1H	123.247829 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**BOLD**

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	On
Temp. highpass filter	On
Threshold	4.00
Paradigm size	3
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Active
Motion correction	Off
Spatial filter	Off
Measurements	50

**Sequence - Part 1**

Introduction	On
Dimension	3D
Reordering	Linear
Asymmetric echo	Off
Contrasts	1
Multi-slice mode	Interleaved
Echo spacing	1.36 ms

**Sequence - Part 1**

Bandwidth	798 Hz/Px
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**Sequence - Part 2**

EPI factor	54
Segmentation	1
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slab-sel.
RF spoiling	On
Turbo factor	26

**Sequence - Special**

PATRef FA	3 deg
RF duration	1500 us
RF BWT product	12
Slab Scale	90 %
Ernst T1	1200 ms
PATRef prep. shots	10
Volume dummy shots	0
Dummy Measurements	0
Invert PE	Off
Invert 3D	Off
Min. TE if PF	On
Are you Renzo?	On
Echo Time Shift	On
Water Exc.	Long bino-11
External PC	per Series
varflip option	6
HSN RF power scale	3.00
Inversion Delay	0 us
Relaxation Delay	0 us

**Sequence - Assistant**

Mode	Off
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in C:\Medcom\Config\IceConfig.evp change the  
Parameter "IcePATReadIniFile" to 1

Then in PATConfigurator.ini (in the same folder): change  
change: dGrappaRegularizationWeight: 0.1

Note that the PATConfigurator.ini file is not overwritten after on registers a new participant