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\\USER\SHOULDER\ROUTINE\ROUTINE\localizer AXIAL \*

TA: 0:13 PM: REF Voxel size: 0.9×0.9×10.0 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 preparation	On
Wait for user to start	Off
Start measurements	Single measurement

**Resolution - iPAT**

PAT mode	None
Matrix Coil Mode	Auto (CP)

**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

**Routine**

Slice group	1
Slices	6
Dist. factor	50 %
Position	L150.0 A28.3 H19.7 mm
Orientation	Transversal
Phase enc. dir.	A >> P
AutoAlign	---
Phase oversampling	38 %
FoV read	440 mm
FoV phase	75.0 %
Slice thickness	10.0 mm
TR	7.8 ms
TE	3.69 ms
Averages	1
Concatenations	6
Filter	Distortion Corr.(2D), Prescan Normalize, Elliptical filter
Coil elements	SHL

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	On

**Geometry - Common**

Slice group	1
Slices	6
Dist. factor	50 %
Position	L150.0 A28.3 H19.7 mm
Orientation	Transversal
Phase enc. dir.	A >> P
FoV read	440 mm
FoV phase	75.0 %
Slice thickness	10.0 mm
TR	7.8 ms
Multi-slice mode	Sequential
Series	Interleaved
Concatenations	6

**Contrast - Common**

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

**Geometry - AutoAlign**

Slice group	1
Position	L150.0 A28.3 H19.7 mm
Orientation	Transversal
Phase enc. dir.	A >> P
AutoAlign	---
Initial Position	L150.0 A28.3 H19.7
L	150.0 mm
A	28.3 mm
H	19.7 mm
Initial Rotation	0.00 deg
Initial Orientation	Transversal

**Contrast - Dynamic**

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

**Geometry - Saturation**

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

**Resolution - Common**

FoV read	440 mm
FoV phase	75.0 %
Slice thickness	10.0 mm
Base resolution	256
Phase resolution	90 %
Phase partial Fourier	Off
Interpolation	On

**System - Miscellaneous**

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

**System - Miscellaneous**

Save uncombined	Off
Matrix Coil Mode	Auto (CP)
AutoAlign	---
Coil Select Mode	Off - AutoCoilSelect

**System - Adjustments**

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

**System - Adjust Volume**

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

**System - Tx/Rx**

Frequency 1H	123.253636 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	6
Segments	1

**Physio - Cardiac**

Magn. preparation	None
Fat suppr.	None
Dark blood	Off
FoV read	440 mm
FoV phase	75.0 %
Phase resolution	90 %

**Physio - PACE**

Resp. control	Off
Concatenations	6

**Inline - Common**

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

**Inline - MIP**

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

**Inline - Soft Tissue**

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

**Inline - Composing**

Distortion Corr.	On
Mode	2D
Unfiltered images	Off

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

**Sequence - Assistant**

Mode	Off
Allowed delay	0 s

## \\USER\SHOULDER\ROUTINE\ROUTINE\localizer 3 PLANE \*

TA: 0:34 PM: REF Voxel size: 0.5×0.5×10.0 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 preparation	Off
Wait for user to start	Off
Start measurements	Single measurement

**Routine**

Slice group	1
Slices	3
Dist. factor	50 %
Position	L150.0 A28.3 H19.7 mm
Orientation	Transversal
Phase enc. dir.	A >> P
Slice group	2
Slices	5
Dist. factor	50 %
Position	L129.5 A23.2 H19.7 mm
Orientation	C > S-42.1
Phase enc. dir.	R >> L
Slice group	3
Slices	5
Dist. factor	50 %
Position	L131.4 A28.4 H26.7 mm
Orientation	S > C43.4 > T0.5
Phase enc. dir.	A >> P
AutoAlign	---
Phase oversampling	38 %
FoV read	280 mm
FoV phase	100.0 %
Slice thickness	10.0 mm
TR	7.8 ms
TE	3.69 ms
Averages	1
Concatenations	13
Filter	Distortion Corr.(2D), Prescan Normalize, Elliptical filter
Coil elements	SHL

**Contrast - Common**

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

**Contrast - Dynamic**

Averages	1
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1

**Contrast - Dynamic**

Multiple series	Each measurement
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**Resolution - Common**

FoV read	280 mm
FoV phase	100.0 %
Slice thickness	10.0 mm
Base resolution	256
Phase resolution	90 %
Phase partial Fourier	Off
Interpolation	On

**Resolution - iPAT**

PAT mode	None
Matrix Coil Mode	Auto (CP)

**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	3
Dist. factor	50 %
Position	L150.0 A28.3 H19.7 mm
Orientation	Transversal
Phase enc. dir.	A >> P
Slice group	2
Slices	5
Dist. factor	50 %
Position	L129.5 A23.2 H19.7 mm
Orientation	C > S-42.1
Phase enc. dir.	R >> L
Slice group	3
Slices	5
Dist. factor	50 %
Position	L131.4 A28.4 H26.7 mm
Orientation	S > C43.4 > T0.5
Phase enc. dir.	A >> P
FoV read	280 mm
FoV phase	100.0 %
Slice thickness	10.0 mm
TR	7.8 ms
Multi-slice mode	Sequential
Series	Interleaved
Concatenations	13

**Geometry - AutoAlign**

Slice group	1
Position	L150.0 A28.3 H19.7 mm
Orientation	Transversal

**Geometry - AutoAlign**

Phase enc. dir.	A >> P
Slice group	2
Position	L129.5 A23.2 H19.7 mm
Orientation	C > S-42.1
Phase enc. dir.	R >> L
Slice group	3
Position	L131.4 A28.4 H26.7 mm
Orientation	S > C43.4 > T0.5
Phase enc. dir.	A >> P
AutoAlign	---
Initial Position	L150.0 A28.3 H19.7
L	150.0 mm
A	28.3 mm
H	19.7 mm
Initial Rotation	0.00 deg
Initial Orientation	Transversal

**Geometry - Saturation**

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

**System - Miscellaneous**

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	L >> R
Coronal	P >> A
Transversal	H >> F
Coil Combine Mode	Adaptive Combine
Save uncombined	Off
Matrix Coil Mode	Auto (CP)
AutoAlign	---
Coil Select Mode	Off - AutoCoilSelect

**System - Adjustments**

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

**System - Adjust Volume**

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

**System - Tx/Rx**

Frequency 1H	123.253636 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	13
Segments	1

**Physio - Cardiac**

Magn. preparation	None
Fat suppr.	None
Dark blood	Off
FoV read	280 mm
FoV phase	100.0 %
Phase resolution	90 %

**Physio - PACE**

Resp. control	Off
Concatenations	13

**Inline - Common**

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

**Inline - MIP**

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

**Inline - Soft Tissue**

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

**Inline - Composing**

Distortion Corr.	On
Mode	2D
Unfiltered images	Off

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

**Sequence - Assistant**

Mode	Off
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**Sequence - Assistant**

Allowed delay	0 s
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## \\USER\SHOULDER\ROUTINE\ROUTINE\AX PD FS \*

TA: 4:23 PM: ISO Voxel size: 0.5×0.5×3.0 mmPAT: 2 Rel. SNR: 1.00 : tse\_rs

**Properties**

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

**Routine**

Slice group	1
Slices	32
Dist. factor	15 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
AutoAlign	---
Phase oversampling	30 %
FoV read	160 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	3400.0 ms
TE	37 ms
Averages	3
Concatenations	1
Filter	Distortion Corr.(2D), Prescan Normalize, Elliptical filter
Coil elements	SHS

**Contrast - Common**

TR	3400.0 ms
TE	37 ms
MTC	Off
Magn. preparation	None
Flip angle	150 deg
Fat suppr.	Fat sat.
Fat sat. mode	Weak
Water suppr.	None
Restore magn.	Off

**Contrast - Dynamic**

Averages	3
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

**Resolution - Common**

FoV read	160 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
Base resolution	320
Phase resolution	70 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	Off

**Resolution - iPAT**

PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	32
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Self-calibration

**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	32
Dist. factor	15 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
FoV read	160 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	3400.0 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
H	0.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Transversal

**Geometry - Saturation**

Fat suppr.	Fat sat.
Fat sat. mode	Weak
Water suppr.	None
Restore magn.	Off
Special sat.	None

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

Positioning mode	ISO
Table position	H

**System - Miscellaneous**

Table position	0 mm
MSMA	S - C - T
Sagittal	L >> R
Coronal	P >> A
Transversal	H >> F
Coil Combine Mode	Adaptive Combine
Save uncombined	Off
Matrix Coil Mode	Auto (Triple)
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	160 mm
R >> L	160 mm
F >> H	110 mm
Reset	Off

**System - Tx/Rx**

Frequency 1H	123.253636 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	3400.0 ms
Concatenations	1

**Physio - Cardiac**

Magn. preparation	None
Fat suppr.	Fat sat.
Dark blood	Off
FoV read	160 mm
FoV phase	100.0 %
Phase resolution	70 %
Trajectory	Cartesian

**Physio - PACE**

Resp. control	Off
Concatenations	1

**Inline - Common**

Subtract	Off
Measurements	1
StdDev	Off
Save original images	On

**Inline - MIP**

MIP-Sag	Off
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**Inline - MIP**

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

**Inline - Composing**

Distortion Corr.	On
Mode	2D
Unfiltered images	Off

**Sequence - Part 1**

Introduction	On
Dimension	2D
Compensate T2 decay	Off
Reduce Motion Sens.	Off
Contrasts	1
Flow comp.	Slice
Multi-slice mode	Interleaved
Echo spacing	12.4 ms
Bandwidth	200 Hz/Px

**Sequence - Part 2**

Define	Turbo factor
Echo trains per slice	25
Phase correction	Automatic
RF pulse type	Normal
Gradient mode	Fast
Hyperecho	Off
WARP	Off
Red. EC sensitivity	Off
Turbo factor	6

**Sequence - Assistant**

Mode	Off
Allowed delay	30 s



## \USER\SHOULDER\ROUTINE\ROUTINE\COR T2 FS \*

TA: 4:08 PM: ISO Voxel size: 0.5×0.5×3.0 mmPAT: 2 Rel. SNR: 1.00 : tse\_rs

**Properties**

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

**Routine**

Slice group	1
Slices	30
Dist. factor	15 %
Position	L138.6 P2.6 H6.1 mm
Orientation	S > C-43.0 > T-17.9
Phase enc. dir.	H >> F
AutoAlign	---
Phase oversampling	60 %
FoV read	160 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	6000.0 ms
TE	87 ms
Averages	3
Concatenations	1
Filter	Distortion Corr.(2D), Prescan Normalize, Elliptical filter
Coil elements	SHS

**Contrast - Common**

TR	6000.0 ms
TE	87 ms
MTC	Off
Magn. preparation	None
Flip angle	150 deg
Fat suppr.	Fat sat.
Fat sat. mode	Weak
Water suppr.	None
Restore magn.	Off

**Contrast - Dynamic**

Averages	3
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

**Resolution - Common**

FoV read	160 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
Base resolution	320
Phase resolution	60 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	Off

**Resolution - iPAT**

PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	32
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Self-calibration

**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	30
Dist. factor	15 %
Position	L138.6 P2.6 H6.1 mm
Orientation	S > C-43.0 > T-17.9
Phase enc. dir.	H >> F
FoV read	160 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	6000.0 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

**Geometry - AutoAlign**

Slice group	1
Position	L138.6 P2.6 H6.1 mm
Orientation	S > C-43.0 > T-17.9
Phase enc. dir.	H >> F
AutoAlign	---
Initial Position	L138.6 P2.6 H6.1
L	138.6 mm
P	2.6 mm
H	6.1 mm
Initial Rotation	90.00 deg
Initial Orientation	S > C
S > C	-43.0
> T	-17.9

**Geometry - Saturation**

Fat suppr.	Fat sat.
Fat sat. mode	Weak
Water suppr.	None
Restore magn.	Off
Special sat.	None

**Geometry - Navigator**

**System - Miscellaneous**

Positioning mode	ISO
Table position	H
Table position	6 mm
MSMA	S - C - T
Sagittal	L >> R
Coronal	P >> A
Transversal	H >> F
Coil Combine Mode	Adaptive Combine
Save uncombined	Off
Matrix Coil Mode	Auto (Triple)
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	L138.6 P2.6 H6.1 mm
Orientation	S > C-43.0 > T-17.9
Rotation	90.00 deg
F >> H	160 mm
A >> P	160 mm
R >> L	104 mm
Reset	Off

**System - Tx/Rx**

Frequency 1H	123.253636 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	6000.0 ms
Concatenations	1

**Physio - Cardiac**

Magn. preparation	None
Fat suppr.	Fat sat.
Dark blood	Off
FoV read	160 mm
FoV phase	100.0 %
Phase resolution	60 %
Trajectory	Cartesian

**Physio - PACE**

Resp. control	Off
Concatenations	1

**Inline - Common**

Subtract	Off
Measurements	1
StdDev	Off
Save original images	On

**Inline - MIP**

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

**Inline - Composing**

Distortion Corr.	On
Mode	2D
Unfiltered images	Off

**Sequence - Part 1**

Introduction	On
Dimension	2D
Compensate T2 decay	Off
Reduce Motion Sens.	Off
Contrasts	1
Flow comp.	Slice
Multi-slice mode	Interleaved
Echo spacing	12.4 ms
Bandwidth	200 Hz/Px

**Sequence - Part 2**

Define	Turbo factor
Echo trains per slice	13
Phase correction	Automatic
RF pulse type	Normal
Gradient mode	Fast
Hyperecho	Off
WARP	Off
Red. EC sensitivity	Off
Turbo factor	12

**Sequence - Assistant**

Mode	Off
Allowed delay	30 s

**\\USER\SHOULDER\ROUTINE\ROUTINE\SAG T2 FS \***

TA: 4:03 PM: ISO Voxel size: 0.5×0.5×3.0 mmPAT: 2 Rel. SNR: 1.00 : tse\_rs

**Properties**

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

**Routine**

Slice group	1
Slices	32
Dist. factor	15 %
Position	L138.6 A2.3 H9.2 mm
Orientation	C > S44.8 > T0.5
Phase enc. dir.	F >> H
AutoAlign	---
Phase oversampling	70 %
FoV read	160 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	5490.0 ms
TE	87 ms
Averages	3
Concatenations	1
Filter	Distortion Corr.(2D), Prescan Normalize, Elliptical filter
Coil elements	SHS

**Contrast - Common**

TR	5490.0 ms
TE	87 ms
MTC	Off
Magn. preparation	None
Flip angle	150 deg
Fat suppr.	Fat sat.
Fat sat. mode	Weak
Water suppr.	None
Restore magn.	Off

**Contrast - Dynamic**

Averages	3
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

**Resolution - Common**

FoV read	160 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
Base resolution	320
Phase resolution	60 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	Off

**Resolution - iPAT**

PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	32
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Self-calibration

**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	32
Dist. factor	15 %
Position	L138.6 A2.3 H9.2 mm
Orientation	C > S44.8 > T0.5
Phase enc. dir.	F >> H
FoV read	160 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	5490.0 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

**Geometry - AutoAlign**

Slice group	1
Position	L138.6 A2.3 H9.2 mm
Orientation	C > S44.8 > T0.5
Phase enc. dir.	F >> H
AutoAlign	---
Initial Position	L138.6 A2.3 H9.2
L	138.6 mm
A	2.3 mm
H	9.2 mm
Initial Rotation	90.00 deg
Initial Orientation	C > S
C > S	44.8
> T	0.5

**Geometry - Saturation**

Fat suppr.	Fat sat.
Fat sat. mode	Weak
Water suppr.	None
Restore magn.	Off
Special sat.	None

**Geometry - Navigator**

**System - Miscellaneous**

Positioning mode	ISO
Table position	H
Table position	9 mm
MSMA	S - C - T
Sagittal	L >> R
Coronal	P >> A
Transversal	H >> F
Coil Combine Mode	Adaptive Combine
Save uncombined	Off
Matrix Coil Mode	Auto (Triple)
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	L138.6 A2.3 H9.2 mm
Orientation	C > S44.8 > T0.5
Rotation	90.00 deg
F >> H	160 mm
R >> L	160 mm
A >> P	110 mm
Reset	Off

**System - Tx/Rx**

Frequency 1H	123.253636 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	5490.0 ms
Concatenations	1

**Physio - Cardiac**

Magn. preparation	None
Fat suppr.	Fat sat.
Dark blood	Off
FoV read	160 mm
FoV phase	100.0 %
Phase resolution	60 %
Trajectory	Cartesian

**Physio - PACE**

Resp. control	Off
Concatenations	1

**Inline - Common**

Subtract	Off
Measurements	1
StdDev	Off
Save original images	On

**Inline - MIP**

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

**Inline - Composing**

Distortion Corr.	On
Mode	2D
Unfiltered images	Off

**Sequence - Part 1**

Introduction	On
Dimension	2D
Compensate T2 decay	Off
Reduce Motion Sens.	Off
Contrasts	1
Flow comp.	Slice
Multi-slice mode	Interleaved
Echo spacing	12.4 ms
Bandwidth	200 Hz/Px

**Sequence - Part 2**

Define	Turbo factor
Echo trains per slice	14
Phase correction	Automatic
RF pulse type	Normal
Gradient mode	Fast
Hyperecho	Off
WARP	Off
Red. EC sensitivity	Off
Turbo factor	12

**Sequence - Assistant**

Mode	Off
Allowed delay	30 s

## \USER\SHOULDER\ROUTINE\ROUTINE\SAG T1 \*

TA: 3:01 PM: ISO Voxel size: 0.4×0.4×3.0 mmPAT: 2 Rel. SNR: 1.00 : tse

**Properties**

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

**Routine**

Slice group	1
Slices	32
Dist. factor	15 %
Position	L138.6 A2.3 H9.2 mm
Orientation	C > S44.8 > T0.5
Phase enc. dir.	F >> H
AutoAlign	---
Phase oversampling	70 %
FoV read	160 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	495.0 ms
TE	11 ms
Averages	2
Concatenations	2
Filter	Distortion Corr.(2D), Prescan Normalize, Elliptical filter
Coil elements	SHS

**Contrast - Common**

TR	495.0 ms
TE	11 ms
TD	0.0 ms
MTC	Off
Magn. preparation	None
Flip angle	150 deg
Fat suppr.	None
Water suppr.	None
Restore magn.	Off

**Contrast - Dynamic**

Averages	2
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

**Resolution - Common**

FoV read	160 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
Base resolution	384
Phase resolution	55 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	Off

**Resolution - iPAT**

PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	32
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Self-calibration

**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	32
Dist. factor	15 %
Position	L138.6 A2.3 H9.2 mm
Orientation	C > S44.8 > T0.5
Phase enc. dir.	F >> H
FoV read	160 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	495.0 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	2

**Geometry - AutoAlign**

Slice group	1
Position	L138.6 A2.3 H9.2 mm
Orientation	C > S44.8 > T0.5
Phase enc. dir.	F >> H
AutoAlign	---
Initial Position	L138.6 A2.3 H9.2
L	138.6 mm
A	2.3 mm
H	9.2 mm
Initial Rotation	90.00 deg
Initial Orientation	C > S
C > S	44.8
> T	0.5

**Geometry - Saturation**

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

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

Positioning mode	ISO
------------------	-----

**System - Miscellaneous**

Table position	H
Table position	9 mm
MSMA	S - C - T
Sagittal	L >> R
Coronal	P >> A
Transversal	H >> F
Coil Combine Mode	Adaptive Combine
Save uncombined	Off
Matrix Coil Mode	Auto (Triple)
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	L138.6 A2.3 H9.2 mm
Orientation	C > S44.8 > T0.5
Rotation	90.00 deg
F >> H	160 mm
R >> L	160 mm
A >> P	110 mm
Reset	Off

**System - Tx/Rx**

Frequency 1H	123.253636 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	495.0 ms
Concatenations	2

**Physio - Cardiac**

Magn. preparation	None
Fat suppr.	None
Dark blood	Off
FoV read	160 mm
FoV phase	100.0 %
Phase resolution	55 %
Trajectory	Cartesian

**Physio - PACE**

Resp. control	Off
Concatenations	2

**Inline - Common**

Subtract	Off
Measurements	1
StdDev	Off
Save original images	On

**Inline - MIP**

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

**Inline - Composing**

Distortion Corr.	On
Mode	2D
Unfiltered images	Off

**Sequence - Part 1**

Introduction	On
Dimension	2D
Compensate T2 decay	Off
Reduce Motion Sens.	Off
Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Echo spacing	11.1 ms
Bandwidth	200 Hz/Px

**Sequence - Part 2**

Define	Turbo factor
Echo trains per slice	90
Phase correction	Automatic
RF pulse type	Normal
Gradient mode	Fast
Hyperecho	Off
WARP	Off
Red. EC sensitivity	Off
Turbo factor	2

**Sequence - Assistant**

Mode	Off
Allowed delay	30 s

\\USER\SHOULDER\ROUTINE\ROUTINE\localizer AXIAL \*

TA: 0:13 PM: REF Voxel size: 0.9×0.9×10.0 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 preparation	On
Wait for user to start	Off
Start measurements	Single measurement

**Resolution - iPAT**

PAT mode	None
Matrix Coil Mode	Auto (CP)

**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

**Routine**

Slice group	1
Slices	6
Dist. factor	50 %
Position	R150.0 A28.3 H19.7 mm
Orientation	Transversal
Phase enc. dir.	A >> P
AutoAlign	---
Phase oversampling	38 %
FoV read	440 mm
FoV phase	75.0 %
Slice thickness	10.0 mm
TR	7.8 ms
TE	3.69 ms
Averages	1
Concatenations	6
Filter	Distortion Corr.(2D), Prescan Normalize, Elliptical filter
Coil elements	SHL

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	On

**Geometry - Common**

Slice group	1
Slices	6
Dist. factor	50 %
Position	R150.0 A28.3 H19.7 mm
Orientation	Transversal
Phase enc. dir.	A >> P
FoV read	440 mm
FoV phase	75.0 %
Slice thickness	10.0 mm
TR	7.8 ms
Multi-slice mode	Sequential
Series	Interleaved
Concatenations	6

**Contrast - Common**

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

**Geometry - AutoAlign**

Slice group	1
Position	R150.0 A28.3 H19.7 mm
Orientation	Transversal
Phase enc. dir.	A >> P
AutoAlign	---
Initial Position	R150.0 A28.3 H19.7
R	150.0 mm
A	28.3 mm
H	19.7 mm
Initial Rotation	0.00 deg
Initial Orientation	Transversal

**Contrast - Dynamic**

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

**Geometry - Saturation**

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

**Resolution - Common**

FoV read	440 mm
FoV phase	75.0 %
Slice thickness	10.0 mm
Base resolution	256
Phase resolution	90 %
Phase partial Fourier	Off
Interpolation	On

**System - Miscellaneous**

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

**System - Miscellaneous**

Save uncombined	Off
Matrix Coil Mode	Auto (CP)
AutoAlign	---
Coil Select Mode	Off - AutoCoilSelect

**System - Adjustments**

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

**System - Adjust Volume**

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

**System - Tx/Rx**

Frequency 1H	123.253636 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	6
Segments	1

**Physio - Cardiac**

Magn. preparation	None
Fat suppr.	None
Dark blood	Off
FoV read	440 mm
FoV phase	75.0 %
Phase resolution	90 %

**Physio - PACE**

Resp. control	Off
Concatenations	6

**Inline - Common**

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

**Inline - MIP**

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

**Inline - Soft Tissue**

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

**Inline - Composing**

Distortion Corr.	On
Mode	2D
Unfiltered images	Off

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

**Sequence - Assistant**

Mode	Off
Allowed delay	0 s



## \\USER\SHOULDER\ROUTINE\ROUTINE\localizer 3 PLANE \*

TA: 0:34 PM: REF Voxel size: 0.5×0.5×10.0 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 preparation	Off
Wait for user to start	Off
Start measurements	Single measurement

**Routine**

Slice group	1
Slices	3
Dist. factor	50 %
Position	R150.0 A28.3 H19.7 mm
Orientation	Transversal
Phase enc. dir.	A >> P
Slice group	2
Slices	5
Dist. factor	50 %
Position	R105.5 A28.3 H19.7 mm
Orientation	Coronal
Phase enc. dir.	R >> L
Slice group	3
Slices	5
Dist. factor	50 %
Position	R129.3 A28.3 H26.7 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	---
Phase oversampling	38 %
FoV read	280 mm
FoV phase	100.0 %
Slice thickness	10.0 mm
TR	7.8 ms
TE	3.69 ms
Averages	1
Concatenations	13
Filter	Distortion Corr.(2D), Prescan Normalize, Elliptical filter
Coil elements	SHL

**Contrast - Common**

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

**Contrast - Dynamic**

Averages	1
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1

**Contrast - Dynamic**

Multiple series	Each measurement
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**Resolution - Common**

FoV read	280 mm
FoV phase	100.0 %
Slice thickness	10.0 mm
Base resolution	256
Phase resolution	90 %
Phase partial Fourier	Off
Interpolation	On

**Resolution - iPAT**

PAT mode	None
Matrix Coil Mode	Auto (CP)

**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	3
Dist. factor	50 %
Position	R150.0 A28.3 H19.7 mm
Orientation	Transversal
Phase enc. dir.	A >> P
Slice group	2
Slices	5
Dist. factor	50 %
Position	R105.5 A28.3 H19.7 mm
Orientation	Coronal
Phase enc. dir.	R >> L
Slice group	3
Slices	5
Dist. factor	50 %
Position	R129.3 A28.3 H26.7 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
FoV read	280 mm
FoV phase	100.0 %
Slice thickness	10.0 mm
TR	7.8 ms
Multi-slice mode	Sequential
Series	Interleaved
Concatenations	13

**Geometry - AutoAlign**

Slice group	1
Position	R150.0 A28.3 H19.7 mm
Orientation	Transversal

**Geometry - AutoAlign**

Phase enc. dir.	A >> P
Slice group	2
Position	R105.5 A28.3 H19.7 mm
Orientation	Coronal
Phase enc. dir.	R >> L
Slice group	3
Position	R129.3 A28.3 H26.7 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	---
Initial Position	R129.3 A28.3 H26.7
R	129.3 mm
A	28.3 mm
H	26.7 mm
Initial Rotation	0.00 deg
Initial Orientation	Sagittal

**Geometry - Saturation**

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

**System - Miscellaneous**

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	L >> R
Coronal	P >> A
Transversal	H >> F
Coil Combine Mode	Adaptive Combine
Save uncombined	Off
Matrix Coil Mode	Auto (CP)
AutoAlign	---
Coil Select Mode	Off - AutoCoilSelect

**System - Adjustments**

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

**System - Adjust Volume**

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

**System - Tx/Rx**

Frequency 1H	123.253636 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	13
Segments	1

**Physio - Cardiac**

Magn. preparation	None
Fat suppr.	None
Dark blood	Off
FoV read	280 mm
FoV phase	100.0 %
Phase resolution	90 %

**Physio - PACE**

Resp. control	Off
Concatenations	13

**Inline - Common**

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

**Inline - MIP**

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

**Inline - Soft Tissue**

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

**Inline - Composing**

Distortion Corr.	On
Mode	2D
Unfiltered images	Off

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

**Sequence - Assistant**

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

**Sequence - Assistant**

Allowed delay	0 s
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**\\USER\SHOULDER\ROUTINE\ROUTINE\AX PD FS \***

TA: 4:23 PM: ISO Voxel size: 0.5×0.5×3.0 mmPAT: 2 Rel. SNR: 1.00 : tse\_rs

**Properties**

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

**Routine**

Slice group	1
Slices	32
Dist. factor	15 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
AutoAlign	---
Phase oversampling	30 %
FoV read	160 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	3400.0 ms
TE	37 ms
Averages	3
Concatenations	1
Filter	Distortion Corr.(2D), Prescan Normalize, Elliptical filter
Coil elements	SHS

**Contrast - Common**

TR	3400.0 ms
TE	37 ms
MTC	Off
Magn. preparation	None
Flip angle	150 deg
Fat suppr.	Fat sat.
Fat sat. mode	Weak
Water suppr.	None
Restore magn.	Off

**Contrast - Dynamic**

Averages	3
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

**Resolution - Common**

FoV read	160 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
Base resolution	320
Phase resolution	70 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	Off

**Resolution - iPAT**

PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	32
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Self-calibration

**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	32
Dist. factor	15 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
FoV read	160 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	3400.0 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
H	0.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Transversal

**Geometry - Saturation**

Fat suppr.	Fat sat.
Fat sat. mode	Weak
Water suppr.	None
Restore magn.	Off
Special sat.	None

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

Positioning mode	ISO
Table position	H

**System - Miscellaneous**

Table position	0 mm
MSMA	S - C - T
Sagittal	L >> R
Coronal	P >> A
Transversal	H >> F
Coil Combine Mode	Adaptive Combine
Save uncombined	Off
Matrix Coil Mode	Auto (Triple)
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	160 mm
R >> L	160 mm
F >> H	110 mm
Reset	Off

**System - Tx/Rx**

Frequency 1H	123.253636 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	3400.0 ms
Concatenations	1

**Physio - Cardiac**

Magn. preparation	None
Fat suppr.	Fat sat.
Dark blood	Off
FoV read	160 mm
FoV phase	100.0 %
Phase resolution	70 %
Trajectory	Cartesian

**Physio - PACE**

Resp. control	Off
Concatenations	1

**Inline - Common**

Subtract	Off
Measurements	1
StdDev	Off
Save original images	On

**Inline - MIP**

MIP-Sag	Off
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**Inline - MIP**

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

**Inline - Composing**

Distortion Corr.	On
Mode	2D
Unfiltered images	Off

**Sequence - Part 1**

Introduction	On
Dimension	2D
Compensate T2 decay	Off
Reduce Motion Sens.	Off
Contrasts	1
Flow comp.	Slice
Multi-slice mode	Interleaved
Echo spacing	12.4 ms
Bandwidth	200 Hz/Px

**Sequence - Part 2**

Define	Turbo factor
Echo trains per slice	25
Phase correction	Automatic
RF pulse type	Normal
Gradient mode	Fast
Hyperecho	Off
WARP	Off
Red. EC sensitivity	Off
Turbo factor	6

**Sequence - Assistant**

Mode	Off
Allowed delay	30 s

## \USER\SHOULDER\ROUTINE\ROUTINE\COR T2 FS \*

TA: 4:08 PM: ISO Voxel size: 0.5×0.5×3.0 mmPAT: 2 Rel. SNR: 1.00 : tse\_rs

**Properties**

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

**Routine**

Slice group	1
Slices	30
Dist. factor	15 %
Position	R148.5 P5.8 F1.1 mm
Orientation	S > C38.9 > T19.6
Phase enc. dir.	H >> F
AutoAlign	---
Phase oversampling	60 %
FoV read	160 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	6000.0 ms
TE	87 ms
Averages	3
Concatenations	1
Filter	Distortion Corr.(2D), Prescan Normalize, Elliptical filter
Coil elements	SHS

**Contrast - Common**

TR	6000.0 ms
TE	87 ms
MTC	Off
Magn. preparation	None
Flip angle	150 deg
Fat suppr.	Fat sat.
Fat sat. mode	Weak
Water suppr.	None
Restore magn.	Off

**Contrast - Dynamic**

Averages	3
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

**Resolution - Common**

FoV read	160 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
Base resolution	320
Phase resolution	60 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	Off

**Resolution - iPAT**

PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	32
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Self-calibration

**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	30
Dist. factor	15 %
Position	R148.5 P5.8 F1.1 mm
Orientation	S > C38.9 > T19.6
Phase enc. dir.	H >> F
FoV read	160 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	6000.0 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

**Geometry - AutoAlign**

Slice group	1
Position	R148.5 P5.8 F1.1 mm
Orientation	S > C38.9 > T19.6
Phase enc. dir.	H >> F
AutoAlign	---
Initial Position	R148.5 P5.8 F1.1
R	148.5 mm
P	5.8 mm
F	1.1 mm
Initial Rotation	90.00 deg
Initial Orientation	S > C
S > C	38.9
> T	19.6

**Geometry - Saturation**

Fat suppr.	Fat sat.
Fat sat. mode	Weak
Water suppr.	None
Restore magn.	Off
Special sat.	None

**Geometry - Navigator**

**System - Miscellaneous**

Positioning mode	ISO
Table position	F
Table position	1 mm
MSMA	S - C - T
Sagittal	L >> R
Coronal	P >> A
Transversal	H >> F
Coil Combine Mode	Adaptive Combine
Save uncombined	Off
Matrix Coil Mode	Auto (Triple)
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	R148.5 P5.8 F1.1 mm
Orientation	S > C38.9 > T19.6
Rotation	90.00 deg
F >> H	160 mm
A >> P	160 mm
R >> L	104 mm
Reset	Off

**System - Tx/Rx**

Frequency 1H	123.253636 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	6000.0 ms
Concatenations	1

**Physio - Cardiac**

Magn. preparation	None
Fat suppr.	Fat sat.
Dark blood	Off
FoV read	160 mm
FoV phase	100.0 %
Phase resolution	60 %
Trajectory	Cartesian

**Physio - PACE**

Resp. control	Off
Concatenations	1

**Inline - Common**

Subtract	Off
Measurements	1
StdDev	Off
Save original images	On

**Inline - MIP**

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

**Inline - Composing**

Distortion Corr.	On
Mode	2D
Unfiltered images	Off

**Sequence - Part 1**

Introduction	On
Dimension	2D
Compensate T2 decay	Off
Reduce Motion Sens.	Off
Contrasts	1
Flow comp.	Slice
Multi-slice mode	Interleaved
Echo spacing	12.4 ms
Bandwidth	200 Hz/Px

**Sequence - Part 2**

Define	Turbo factor
Echo trains per slice	13
Phase correction	Automatic
RF pulse type	Normal
Gradient mode	Fast
Hyperecho	Off
WARP	Off
Red. EC sensitivity	Off
Turbo factor	12

**Sequence - Assistant**

Mode	Off
Allowed delay	30 s

## \\USER\SHOULDER\ROUTINE\ROUTINE\SAG T2 FS \*

TA: 4:03 PM: ISO Voxel size: 0.5×0.5×3.0 mmPAT: 2 Rel. SNR: 1.00 : tse\_rs

**Properties**

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

**Routine**

Slice group	1
Slices	32
Dist. factor	15 %
Position	R149.5 P1.8 H3.4 mm
Orientation	C > S-41.4 > T0.6
Phase enc. dir.	F >> H
AutoAlign	---
Phase oversampling	70 %
FoV read	160 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	5490.0 ms
TE	87 ms
Averages	3
Concatenations	1
Filter	Distortion Corr.(2D), Prescan Normalize, Elliptical filter
Coil elements	SHS

**Contrast - Common**

TR	5490.0 ms
TE	87 ms
MTC	Off
Magn. preparation	None
Flip angle	150 deg
Fat suppr.	Fat sat.
Fat sat. mode	Weak
Water suppr.	None
Restore magn.	Off

**Contrast - Dynamic**

Averages	3
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

**Resolution - Common**

FoV read	160 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
Base resolution	320
Phase resolution	60 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	Off

**Resolution - iPAT**

PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	32
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Self-calibration

**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	32
Dist. factor	15 %
Position	R149.5 P1.8 H3.4 mm
Orientation	C > S-41.4 > T0.6
Phase enc. dir.	F >> H
FoV read	160 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	5490.0 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

**Geometry - AutoAlign**

Slice group	1
Position	R149.5 P1.8 H3.4 mm
Orientation	C > S-41.4 > T0.6
Phase enc. dir.	F >> H
AutoAlign	---
Initial Position	R149.5 P1.8 H3.4
R	149.5 mm
P	1.8 mm
H	3.4 mm
Initial Rotation	90.00 deg
Initial Orientation	C > S
C > S	-41.4
> T	0.6

**Geometry - Saturation**

Fat suppr.	Fat sat.
Fat sat. mode	Weak
Water suppr.	None
Restore magn.	Off
Special sat.	None

**Geometry - Navigator**



**System - Miscellaneous**

Positioning mode	ISO
Table position	H
Table position	3 mm
MSMA	S - C - T
Sagittal	L >> R
Coronal	P >> A
Transversal	H >> F
Coil Combine Mode	Adaptive Combine
Save uncombined	Off
Matrix Coil Mode	Auto (Triple)
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	R149.5 P1.8 H3.4 mm
Orientation	C > S-41.4 > T0.6
Rotation	90.00 deg
F >> H	160 mm
R >> L	160 mm
A >> P	110 mm
Reset	Off

**System - Tx/Rx**

Frequency 1H	123.253636 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	5490.0 ms
Concatenations	1

**Physio - Cardiac**

Magn. preparation	None
Fat suppr.	Fat sat.
Dark blood	Off
FoV read	160 mm
FoV phase	100.0 %
Phase resolution	60 %
Trajectory	Cartesian

**Physio - PACE**

Resp. control	Off
Concatenations	1

**Inline - Common**

Subtract	Off
Measurements	1
StdDev	Off
Save original images	On

**Inline - MIP**

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

**Inline - Composing**

Distortion Corr.	On
Mode	2D
Unfiltered images	Off

**Sequence - Part 1**

Introduction	On
Dimension	2D
Compensate T2 decay	Off
Reduce Motion Sens.	Off
Contrasts	1
Flow comp.	Slice
Multi-slice mode	Interleaved
Echo spacing	12.4 ms
Bandwidth	200 Hz/Px

**Sequence - Part 2**

Define	Turbo factor
Echo trains per slice	14
Phase correction	Automatic
RF pulse type	Normal
Gradient mode	Fast
Hyperecho	Off
WARP	Off
Red. EC sensitivity	Off
Turbo factor	12

**Sequence - Assistant**

Mode	Off
Allowed delay	30 s

## \USER\SHOULDER\ROUTINE\ROUTINE\SAG T1 \*

TA: 3:01 PM: ISO Voxel size: 0.4×0.4×3.0 mmPAT: 2 Rel. SNR: 1.00 : tse

**Properties**

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

**Routine**

Slice group	1
Slices	32
Dist. factor	15 %
Position	R149.5 P1.8 H3.4 mm
Orientation	C > S-41.4 > T0.6
Phase enc. dir.	F >> H
AutoAlign	---
Phase oversampling	70 %
FoV read	160 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	495.0 ms
TE	11 ms
Averages	2
Concatenations	2
Filter	Distortion Corr.(2D), Prescan Normalize, Elliptical filter
Coil elements	SHS

**Contrast - Common**

TR	495.0 ms
TE	11 ms
TD	0.0 ms
MTC	Off
Magn. preparation	None
Flip angle	150 deg
Fat suppr.	None
Water suppr.	None
Restore magn.	Off

**Contrast - Dynamic**

Averages	2
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

**Resolution - Common**

FoV read	160 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
Base resolution	384
Phase resolution	55 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	Off

**Resolution - iPAT**

PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	32
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Self-calibration

**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	32
Dist. factor	15 %
Position	R149.5 P1.8 H3.4 mm
Orientation	C > S-41.4 > T0.6
Phase enc. dir.	F >> H
FoV read	160 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	495.0 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	2

**Geometry - AutoAlign**

Slice group	1
Position	R149.5 P1.8 H3.4 mm
Orientation	C > S-41.4 > T0.6
Phase enc. dir.	F >> H
AutoAlign	---
Initial Position	R149.5 P1.8 H3.4
R	149.5 mm
P	1.8 mm
H	3.4 mm
Initial Rotation	90.00 deg
Initial Orientation	C > S
C > S	-41.4
> T	0.6

**Geometry - Saturation**

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

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

Positioning mode	ISO
------------------	-----

**System - Miscellaneous**

Table position	H
Table position	3 mm
MSMA	S - C - T
Sagittal	L >> R
Coronal	P >> A
Transversal	H >> F
Coil Combine Mode	Adaptive Combine
Save uncombined	Off
Matrix Coil Mode	Auto (Triple)
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	R149.5 P1.8 H3.4 mm
Orientation	C > S-41.4 > T0.6
Rotation	90.00 deg
F >> H	160 mm
R >> L	160 mm
A >> P	110 mm
Reset	Off

**System - Tx/Rx**

Frequency 1H	123.253636 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	495.0 ms
Concatenations	2

**Physio - Cardiac**

Magn. preparation	None
Fat suppr.	None
Dark blood	Off
FoV read	160 mm
FoV phase	100.0 %
Phase resolution	55 %
Trajectory	Cartesian

**Physio - PACE**

Resp. control	Off
Concatenations	2

**Inline - Common**

Subtract	Off
Measurements	1
StdDev	Off
Save original images	On

**Inline - MIP**

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

**Inline - Composing**

Distortion Corr.	On
Mode	2D
Unfiltered images	Off

**Sequence - Part 1**

Introduction	On
Dimension	2D
Compensate T2 decay	Off
Reduce Motion Sens.	Off
Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Echo spacing	11.1 ms
Bandwidth	200 Hz/Px

**Sequence - Part 2**

Define	Turbo factor
Echo trains per slice	90
Phase correction	Automatic
RF pulse type	Normal
Gradient mode	Fast
Hyperecho	Off
WARP	Off
Red. EC sensitivity	Off
Turbo factor	2

**Sequence - Assistant**

Mode	Off
Allowed delay	30 s

## \\USER\SHOULDER\ROUTINE\ROUTINE\COR STIR \*

TA: 2:43 PM: ISO Voxel size: 0.3×0.3×3.0 mmPAT: 2 Rel. SNR: 1.00 : tir

**Properties**

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

**Routine**

Slice group	1
Slices	30
Dist. factor	15 %
Position	R148.5 P5.8 F1.1 mm
Orientation	S > C38.9 > T19.6
Phase enc. dir.	H >> F
AutoAlign	---
Phase oversampling	80 %
FoV read	160 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	2790.0 ms
TE	31 ms
Averages	2
Concatenations	2
Filter	Distortion Corr.(2D), Prescan Normalize, Elliptical filter
Coil elements	SHS

**Contrast - Common**

TR	2790.0 ms
TE	31 ms
TD	0.0 ms
MTC	Off
Magn. preparation	Slice-sel. IR
TI	210 ms
Flip angle	130 deg
Fat suppr.	None
Water suppr.	None
Restore magn.	Off
Freeze suppressed tissue	Off

**Contrast - Dynamic**

Averages	2
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

**Resolution - Common**

FoV read	160 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
Base resolution	256
Phase resolution	75 %
Phase partial Fourier	Off

**Resolution - Common**

Trajectory	Cartesian
Interpolation	On

**Resolution - iPAT**

PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	32
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Self-calibration

**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	30
Dist. factor	15 %
Position	R148.5 P5.8 F1.1 mm
Orientation	S > C38.9 > T19.6
Phase enc. dir.	H >> F
FoV read	160 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	2790.0 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	2

**Geometry - AutoAlign**

Slice group	1
Position	R148.5 P5.8 F1.1 mm
Orientation	S > C38.9 > T19.6
Phase enc. dir.	H >> F
AutoAlign	---
Initial Position	R148.5 P5.8 F1.1
R	148.5 mm
P	5.8 mm
F	1.1 mm
Initial Rotation	90.00 deg
Initial Orientation	S > C
S > C	38.9
> T	19.6

**Geometry - Saturation**

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

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

Positioning mode	ISO
Table position	F
Table position	1 mm
MSMA	S - C - T
Sagittal	L >> R
Coronal	P >> A
Transversal	H >> F
Coil Combine Mode	Adaptive Combine
Save uncombined	Off
Matrix Coil Mode	Auto (Triple)
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 - Tx/Rx**

Frequency 1H	123.253636 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	2790.0 ms
Concatenations	2

**Physio - Cardiac**

Magn. preparation	Slice-sel. IR
TI	210 ms
Fat suppr.	None
Dark blood	Off
FoV read	160 mm
FoV phase	100.0 %
Phase resolution	75 %
Trajectory	Cartesian

**Physio - PACE**

Resp. control	Off
Concatenations	2

**Inline - Common**

Subtract	Off
Measurements	1

**Inline - Common**

StdDev	Off
Save original images	On

**Inline - MIP**

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

**Inline - Composing**

Distortion Corr.	On
Mode	2D
Unfiltered images	Off

**Sequence - Part 1**

Introduction	On
Dimension	2D
Compensate T2 decay	Off
Reduce Motion Sens.	On
Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Echo spacing	10.2 ms
Bandwidth	326 Hz/Px

**Sequence - Part 2**

Define	Turbo factor
Echo trains per slice	14
Phase correction	Automatic
RF pulse type	Low SAR
Gradient mode	Normal
Hyperecho	Off
WARP	Off
Red. EC sensitivity	Off
Turbo factor	13

**Sequence - Assistant**

Mode	Off
Allowed delay	60 s

## \\USER\SHOULDER\ROUTINE\ROUTINE\AX STIR \*

TA: 3:47 PM: FIX Voxel size: 0.3×0.3×3.0 mmPAT: Off Rel. SNR: 1.00 : tirV

**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	On
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	Off
Start measurements	Single measurement

**Routine**

Slice group	1
Slices	32
Dist. factor	15 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	R >> L
AutoAlign	---
Phase oversampling	40 %
FoV read	160 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	6100.0 ms
TE	36.0 ms
Averages	2
Concatenations	1
Filter	Normalize, Elliptical filter
Coil elements	SHS

**Contrast - Common**

TR	6100.0 ms
TE	36.0 ms
MTC	Off
Magn. preparation	Slice-sel. IR
T1	220 ms
Flip angle	150 deg
Fat suppr.	None
Water suppr.	None
Restore magn.	Off
Freeze suppressed tissue	Off

**Contrast - Dynamic**

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

**Resolution - Common**

FoV read	160 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
Base resolution	256
Phase resolution	75 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	On

**Resolution - iPAT**

PAT mode	None
Matrix Coil Mode	Auto (CP)

**Resolution - Filter Image**

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

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	On

**Geometry - Common**

Slice group	1
Slices	32
Dist. factor	15 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	R >> L
FoV read	160 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	6100.0 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

**Geometry - AutoAlign**

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

**Geometry - Saturation**

Fat suppr.	None
Water suppr.	None
Restore magn.	Off
Special sat.	Parallel H
Gap	10 mm
Thickness	50 mm

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

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

**System - Miscellaneous**

Transversal	H >> F
Coil Combine Mode	Adaptive Combine
Save uncombined	Off
Matrix Coil Mode	Auto (CP)
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 - Tx/Rx**

Frequency 1H	123.253636 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	6100.0 ms
Concatenations	1

**Physio - Cardiac**

Magn. preparation	Slice-sel. IR
TI	220 ms
Fat suppr.	None
Dark blood	Off
FoV read	160 mm
FoV phase	100.0 %
Phase resolution	75 %
Trajectory	Cartesian

**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

**Inline - MIP**

Save original images	On
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**Inline - Composing**

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

Introduction	On
Dimension	2D
Compensate T2 decay	Off
Reduce Motion Sens.	Off
Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Echo spacing	8.88 ms
Bandwidth	501 Hz/Px

**Sequence - Part 2**

Define	Turbo factor
Echo trains per slice	18
Phase correction	Automatic
RF pulse type	Fast
Gradient mode	Fast
Hyperecho	Off
WARP	On
VAT	50 %
Red. EC sensitivity	Off
Turbo factor	15

**Sequence - Assistant**

Mode	Min flip angle
Min flip angle	140 deg
Allowed delay	5 s

\\USER\SHOULDER\ROUTINE\ROUTINE\AX T1 FS PRE \*

TA: 4:14 PM: ISO Voxel size: 0.6×0.6×3.0 mmPAT: 2 Rel. SNR: 1.00 : tse

**Properties**

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

**Routine**

Slice group	1
Slices	38
Dist. factor	15 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
AutoAlign	---
Phase oversampling	30 %
FoV read	160 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	877.0 ms
TE	10.0 ms
Averages	2
Concatenations	2
Filter	Distortion Corr.(2D), Prescan Normalize, Elliptical filter
Coil elements	SHS

**Contrast - Common**

TR	877.0 ms
TE	10.0 ms
TD	0.0 ms
MTC	Off
Magn. preparation	None
Flip angle	150 deg
Fat suppr.	Fat sat.
Fat sat. mode	Strong
Water suppr.	None
Restore magn.	Off

**Contrast - Dynamic**

Averages	2
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

**Resolution - Common**

FoV read	160 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
Base resolution	256
Phase resolution	85 %
Phase partial Fourier	Off
Trajectory	Cartesian

**Resolution - Common**

Interpolation	Off
---------------	-----

**Resolution - iPAT**

PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	32
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Self-calibration

**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	38
Dist. factor	15 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
FoV read	160 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	877.0 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	2

**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
F	0.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Transversal

**Geometry - Saturation**

Fat suppr.	Fat sat.
Fat sat. mode	Strong
Water suppr.	None
Restore magn.	Off
Special sat.	None

**Geometry - Navigator**



**System - Miscellaneous**

Positioning mode	ISO
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	L >> R
Coronal	P >> A
Transversal	H >> F
Coil Combine Mode	Adaptive Combine
Save uncombined	Off
Matrix Coil Mode	Auto (Triple)
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	160 mm
R >> L	160 mm
F >> H	131 mm
Reset	Off

**System - Tx/Rx**

Frequency 1H	123.253636 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	877.0 ms
Concatenations	2

**Physio - Cardiac**

Magn. preparation	None
Fat suppr.	Fat sat.
Dark blood	Off
FoV read	160 mm
FoV phase	100.0 %
Phase resolution	85 %
Trajectory	Cartesian

**Physio - PACE**

Resp. control	Off
Concatenations	2

**Inline - Common**

Subtract	Off
Measurements	1
StdDev	Off
Save original images	On

**Inline - MIP**

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

**Inline - Composing**

Distortion Corr.	On
Mode	2D
Unfiltered images	Off

**Sequence - Part 1**

Introduction	On
Dimension	2D
Compensate T2 decay	Off
Reduce Motion Sens.	Off
Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Echo spacing	9.76 ms
Bandwidth	199 Hz/Px

**Sequence - Part 2**

Define	Turbo factor
Echo trains per slice	71
Phase correction	Automatic
RF pulse type	Normal
Gradient mode	Fast
Hyperecho	Off
WARP	Off
Red. EC sensitivity	Off
Turbo factor	2

**Sequence - Assistant**

Mode	Off
Allowed delay	30 s

**\\USER\SHOULDER\ROUTINE\ROUTINE\AX T1 FS POST \***

TA: 4:14 PM: ISO Voxel size: 0.6×0.6×3.0 mmPAT: 2 Rel. SNR: 1.00 : tse

**Properties**

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

**Routine**

Slice group	1
Slices	38
Dist. factor	15 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
AutoAlign	---
Phase oversampling	30 %
FoV read	160 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	877.0 ms
TE	10.0 ms
Averages	2
Concatenations	2
Filter	Distortion Corr.(2D), Prescan Normalize, Elliptical filter
Coil elements	SHS

**Contrast - Common**

TR	877.0 ms
TE	10.0 ms
TD	0.0 ms
MTC	Off
Magn. preparation	None
Flip angle	150 deg
Fat suppr.	Fat sat.
Fat sat. mode	Strong
Water suppr.	None
Restore magn.	Off

**Contrast - Dynamic**

Averages	2
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

**Resolution - Common**

FoV read	160 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
Base resolution	256
Phase resolution	85 %
Phase partial Fourier	Off
Trajectory	Cartesian

**Resolution - Common**

Interpolation	Off
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**Resolution - iPAT**

PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	32
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Self-calibration

**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	38
Dist. factor	15 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
FoV read	160 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	877.0 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	2

**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
F	0.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Transversal

**Geometry - Saturation**

Fat suppr.	Fat sat.
Fat sat. mode	Strong
Water suppr.	None
Restore magn.	Off
Special sat.	None

**Geometry - Navigator**

**System - Miscellaneous**

Positioning mode	ISO
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	L >> R
Coronal	P >> A
Transversal	H >> F
Coil Combine Mode	Adaptive Combine
Save uncombined	Off
Matrix Coil Mode	Auto (Triple)
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	Isocenter
Orientation	Transversal
Rotation	0.00 deg
A >> P	160 mm
R >> L	160 mm
F >> H	131 mm
Reset	Off

**System - Tx/Rx**

Frequency 1H	123.253636 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	877.0 ms
Concatenations	2

**Physio - Cardiac**

Magn. preparation	None
Fat suppr.	Fat sat.
Dark blood	Off
FoV read	160 mm
FoV phase	100.0 %
Phase resolution	85 %
Trajectory	Cartesian

**Physio - PACE**

Resp. control	Off
Concatenations	2

**Inline - Common**

Subtract	Off
Measurements	1
StdDev	Off
Save original images	On

**Inline - MIP**

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

**Inline - Composing**

Distortion Corr.	On
Mode	2D
Unfiltered images	Off

**Sequence - Part 1**

Introduction	On
Dimension	2D
Compensate T2 decay	Off
Reduce Motion Sens.	Off
Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Echo spacing	9.76 ms
Bandwidth	199 Hz/Px

**Sequence - Part 2**

Define	Turbo factor
Echo trains per slice	71
Phase correction	Automatic
RF pulse type	Normal
Gradient mode	Fast
Hyperecho	Off
WARP	Off
Red. EC sensitivity	Off
Turbo factor	2

**Sequence - Assistant**

Mode	Off
Allowed delay	30 s

**\\USER\SHOULDER\ROUTINE\ROUTINE\COR T1 FS POST \***

TA: 4:44 PM: FIX Voxel size: 0.5×0.5×3.0 mmPAT: 2 Rel. SNR: 1.00 : tse

**Properties**

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

**Routine**

Slice group	1
Slices	38
Dist. factor	15 %
Position	R145.9 P6.8 H1.3 mm
Orientation	S > C28.3 > T16.3
Phase enc. dir.	A >> P
AutoAlign	---
Phase oversampling	100 %
FoV read	160 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	826.0 ms
TE	21 ms
Averages	2
Concatenations	3
Filter	Distortion Corr.(2D), Prescan Normalize, Elliptical filter
Coil elements	SHL

**Contrast - Common**

TR	826.0 ms
TE	21 ms
TD	0.0 ms
MTC	Off
Magn. preparation	None
Flip angle	150 deg
Fat suppr.	Fat sat.
Fat sat. mode	Weak
Water suppr.	None
Restore magn.	Off

**Contrast - Dynamic**

Averages	2
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

**Resolution - Common**

FoV read	160 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
Base resolution	320
Phase resolution	70 %
Phase partial Fourier	Off
Trajectory	Cartesian

**Resolution - Common**

Interpolation	Off
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**Resolution - iPAT**

PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	32
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Self-calibration

**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	38
Dist. factor	15 %
Position	R145.9 P6.8 H1.3 mm
Orientation	S > C28.3 > T16.3
Phase enc. dir.	A >> P
FoV read	160 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	826.0 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	3

**Geometry - AutoAlign**

Slice group	1
Position	R145.9 P6.8 H1.3 mm
Orientation	S > C28.3 > T16.3
Phase enc. dir.	A >> P
AutoAlign	---
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
H	0.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Transversal

**Geometry - Saturation**

Fat suppr.	Fat sat.
Fat sat. mode	Weak
Water suppr.	None
Restore magn.	Off
Special sat.	None

**Geometry - Navigator**

**System - Miscellaneous**

Positioning mode	FIX
Table position	H
Table position	1 mm
MSMA	S - C - T
Sagittal	L >> R
Coronal	P >> A
Transversal	H >> F
Coil Combine Mode	Adaptive Combine
Save uncombined	Off
Matrix Coil Mode	Auto (Triple)
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	R145.9 P6.8 H1.3 mm
Orientation	S > C28.3 > T16.3
Rotation	0.00 deg
A >> P	160 mm
F >> H	160 mm
R >> L	131 mm
Reset	Off

**System - Tx/Rx**

Frequency 1H	123.253636 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	826.0 ms
Concatenations	3

**Physio - Cardiac**

Magn. preparation	None
Fat suppr.	Fat sat.
Dark blood	Off
FoV read	160 mm
FoV phase	100.0 %
Phase resolution	70 %
Trajectory	Cartesian

**Physio - PACE**

Resp. control	Off
Concatenations	3

**Inline - Common**

Subtract	Off
Measurements	1
StdDev	Off
Save original images	On

**Inline - MIP**

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

**Inline - Composing**

Distortion Corr.	On
Mode	2D
Unfiltered images	Off

**Sequence - Part 1**

Introduction	On
Dimension	2D
Compensate T2 decay	Off
Reduce Motion Sens.	Off
Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Echo spacing	10.6 ms
Bandwidth	252 Hz/Px

**Sequence - Part 2**

Define	Turbo factor
Echo trains per slice	56
Phase correction	Automatic
RF pulse type	Low SAR
Gradient mode	Fast
Hyperecho	Off
WARP	Off
Red. EC sensitivity	Off
Turbo factor	4

**Sequence - Assistant**

Mode	Off
Allowed delay	60 s

\\USER\SHOULDER\ROUTINE\ROUTINE\COR T2 FS 2 \*

TA: 3:41 PM: ISO Voxel size: 0.5×0.5×3.0 mmPAT: 2 Rel. SNR: 1.00 : tseB

**Properties**

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

**Routine**

Slice group	1
Slices	27
Dist. factor	15 %
Position	R119.5 A36.5 F4.0 mm
Orientation	C > S-39.4 > T25.0
Phase enc. dir.	R >> L
AutoAlign	---
Phase oversampling	100.0 %
FoV read	140 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	3920.0 ms
TE	67 ms
Averages	1
Concatenations	1
Filter	Distortion Corr.(2D), Prescan Normalize
Coil elements	SHL

**Contrast - Common**

TR	3920.0 ms
TE	67 ms
MTC	Off
Magn. preparation	None
Flip angle	134 deg
Fat suppr.	Fat sat.
Fat sat. mode	Weak
Water suppr.	None
Restore magn.	Off

**Contrast - Dynamic**

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

**Resolution - Common**

FoV read	140 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
Base resolution	256
BLADE coverage	122.2 %
Trajectory	BLADE
Interpolation	Off

**Resolution - iPAT**

PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	8
Matrix Coil Mode	Auto (Triple)
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	Off

**Geometry - Common**

Slice group	1
Slices	27
Dist. factor	15 %
Position	R119.5 A36.5 F4.0 mm
Orientation	C > S-39.4 > T25.0
Phase enc. dir.	R >> L
FoV read	140 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	3920.0 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

**Geometry - AutoAlign**

Slice group	1
Position	R119.5 A36.5 F4.0 mm
Orientation	C > S-39.4 > T25.0
Phase enc. dir.	R >> L
AutoAlign	---
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
F	0.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Transversal

**Geometry - Saturation**

Fat suppr.	Fat sat.
Fat sat. mode	Weak
Water suppr.	None
Restore magn.	Off
Special sat.	None

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

Positioning mode	ISO
Table position	F

**System - Miscellaneous**

Table position	4 mm
MSMA	S - C - T
Sagittal	L >> R
Coronal	P >> A
Transversal	H >> F
Coil Combine Mode	Adaptive Combine
Save uncombined	Off
Matrix Coil Mode	Auto (Triple)
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	R119.5 A36.5 F4.0 mm
Orientation	C > S-39.4 > T25.0
Rotation	0.00 deg
R >> L	140 mm
F >> H	140 mm
A >> P	93 mm
Reset	Off

**System - Tx/Rx**

Frequency 1H	123.253636 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	3920.0 ms
Concatenations	1

**Physio - Cardiac**

Magn. preparation	None
Fat suppr.	Fat sat.
Dark blood	Off
FoV read	140 mm
FoV phase	100.0 %
BLADE coverage	122.2 %
Trajectory	BLADE

**Physio - PACE**

Resp. control	Off
Concatenations	1

**Inline - Common**

Subtract	Off
Measurements	1
StdDev	Off
Save original images	On

**Inline - MIP**

MIP-Sag	Off
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**Inline - MIP**

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

**Inline - Composing**

Distortion Corr.	On
Mode	2D
Unfiltered images	Off

**Sequence - Part 1**

Introduction	On
Dimension	2D
Compensate T2 decay	Off
Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Echo spacing	9.54 ms
Bandwidth	250 Hz/Px

**Sequence - Part 2**

Define	Turbo factor
Echo trains per slice	55
Phase correction	Automatic
RF pulse type	Normal
Gradient mode	Fast
Hyperecho	Off
WARP	Off
Motion correction	Off
Red. EC sensitivity	Off
Turbo factor	13

**Sequence - Assistant**

Mode	Off
Allowed delay	60 s

**\\USER\SHOULDER\ROUTINE\ROUTINE\SAG T1 2 \***

TA: 1:54 PM: ISO Voxel size: 0.6×0.6×3.0 mmPAT: 2 Rel. SNR: 1.00 : tse

**Properties**

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

**Routine**

Slice group	1
Slices	27
Dist. factor	15 %
Position	R119.5 A36.5 F4.0 mm
Orientation	C > S-39.4 > T25.0
Phase enc. dir.	F >> H
AutoAlign	---
Phase oversampling	100 %
FoV read	150 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	726.0 ms
TE	9.5 ms
Averages	2
Concatenations	1
Filter	Distortion Corr.(2D), Prescan Normalize, Elliptical filter
Coil elements	SHL

**Contrast - Common**

TR	726.0 ms
TE	9.5 ms
MTC	Off
Magn. preparation	None
Flip angle	134 deg
Fat suppr.	None
Water suppr.	None
Restore magn.	Off

**Contrast - Dynamic**

Averages	2
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

**Resolution - Common**

FoV read	150 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
Base resolution	256
Phase resolution	60 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	Off

**Resolution - iPAT**

PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	32
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Self-calibration

**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	27
Dist. factor	15 %
Position	R119.5 A36.5 F4.0 mm
Orientation	C > S-39.4 > T25.0
Phase enc. dir.	F >> H
FoV read	150 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	726.0 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

**Geometry - AutoAlign**

Slice group	1
Position	R119.5 A36.5 F4.0 mm
Orientation	C > S-39.4 > T25.0
Phase enc. dir.	F >> H
AutoAlign	---
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
F	0.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Transversal

**Geometry - Saturation**

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

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

Positioning mode	ISO
Table position	F
Table position	4 mm



**System - Miscellaneous**

MSMA	S - C - T
Sagittal	L >> R
Coronal	P >> A
Transversal	H >> F
Coil Combine Mode	Adaptive Combine
Save uncombined	Off
Matrix Coil Mode	Auto (Triple)
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	R119.5 A36.5 F4.0 mm
Orientation	C > S-39.4 > T25.0
Rotation	90.00 deg
F >> H	150 mm
R >> L	150 mm
A >> P	93 mm
Reset	Off

**System - Tx/Rx**

Frequency 1H	123.253636 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	726.0 ms
Concatenations	1

**Physio - Cardiac**

Magn. preparation	None
Fat suppr.	None
Dark blood	Off
FoV read	150 mm
FoV phase	100.0 %
Phase resolution	60 %
Trajectory	Cartesian

**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

**Inline - MIP**

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

**Inline - Composing**

Distortion Corr.	On
Mode	2D
Unfiltered images	Off

**Sequence - Part 1**

Introduction	On
Dimension	2D
Compensate T2 decay	Off
Reduce Motion Sens.	Off
Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Echo spacing	9.54 ms
Bandwidth	250 Hz/Px

**Sequence - Part 2**

Define	Turbo factor
Echo trains per slice	77
Phase correction	Automatic
RF pulse type	Normal
Gradient mode	Fast
Hyperecho	Off
WARP	Off
Red. EC sensitivity	Off
Turbo factor	2

**Sequence - Assistant**

Mode	Off
Allowed delay	30 s